
we-ef

WE-EF LIGHTING

General Catalogue

Asia Pacific Edition





70 YEARS

WE-EF LEUCHTEN

1950-2020

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It takes the brightest to create more than just brightness

Somewhere on the globe it is always about to get dark – and the setting sun sets the stage for a new, shining play. When the streets and squares of a city, and when boulevards, buildings and parks are transformed by a new, atmospheric light, this mesmerising shift is often the work of WE-EF. For many years we have been designing and producing exterior lighting technology that is more than just bright.



Design and Technology

Ever since its foundation in 1950, the WE-EF brand has set standards in professional exterior lighting with unique design and innovative technology.

From day one, our thoughts and actions have been true to the ways and values of a family business – creative and close to the customer, flexible and focused on solutions. Driven by this spirit, we have created a product portfolio for lighting urban spaces as well as architecture – timeless designed and exceptional in its functionality.



Transforming Atmosphere

A Worldwide Perspective

For WE-EF, creating and listening are one. The ongoing dialogue with our customers and partners helps us know what counts. Our core competencies are built on two essential premises. On the one hand, it is the uncompromising performance and efficiency delivered by the LED modules and optical systems we design in-house.

On the other hand, it is the first-class materials, sophisticated construction and the exclusive processes that WE-EF employs in manufacturing highly reliable, long-lasting products – offering peace of mind to project owners and other stakeholders. The qualities of German engineering are held in high regard the world over. WE-EF products combine these qualities with the experience and cultural perspective of a truly international group of companies. This diversity is one of our core strengths.

Crystal-clear Values

For ideas and products to shine, the atmosphere in which they are created has to match the atmosphere they create. Respect and open-mindedness are key to innovation – and central pillars of our corporate culture.

We are proud that many of the brightest minds in lighting have joined the ranks of our employees, customers and partners.

We will continue to break new ground – creating individual solutions for a wide range of exterior lighting projects, perfectly honed for their purpose.





Markets and applications: Cities thrive in open spaces We create the atmosphere

To speak the same language. All over the world.

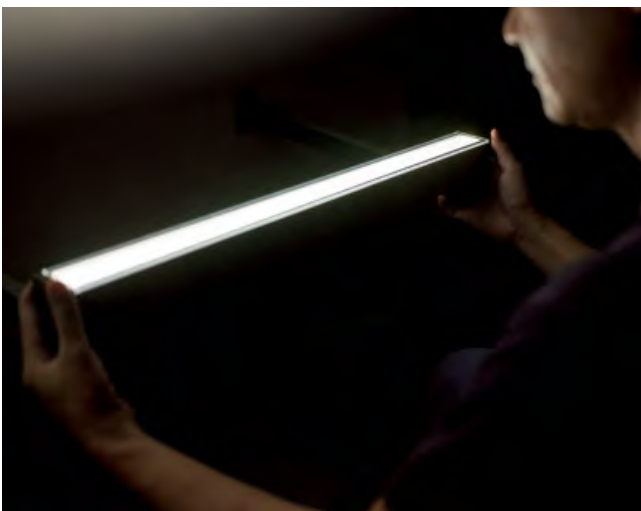
In addition to WE-EF's head office in Bisingen, Germany and the company's second factory in Neuendorf (Brandenburg, Germany), the WE-EF Group of Companies includes subsidiaries in France, Switzerland, the United States, Thailand and Australia.

As a consequence, customers from all parts of the world find the perfect contact at WE-EF – people who not only speak their language, but who are also intimately familiar with the specific regional conditions – from rules and regulations to requirements arising from the local climate.

What makes man-made environments worth living in? The planners and architects of today's urban cityscapes have all the answers – public spaces that make you feel welcome; parks and landscapes that embrace you with their atmosphere; places of encounter that feel vibrant and safe to everyone; and buildings as beacons of identity, impressive in scale and iconic in design. At the centre of it all, a profound sense of humanity and purpose.

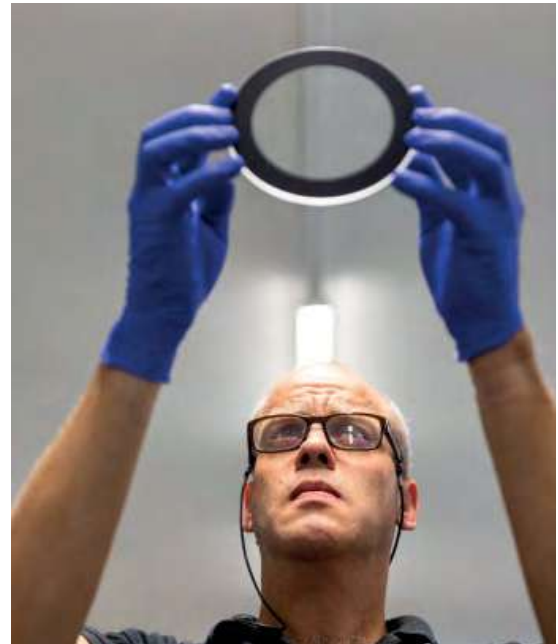
All these qualities can be extended – and even expanded – after dark by the intelligence of light, i.e., sophisticated lighting concepts that accentuate existing design dimensions and add a whole new world of possibilities. The result is a distinctive nocturnal identity, from functional efficiency to atmospheric enchantment.

This is what WE-EF is all about – setting the stage for great architecture with exterior luminaires, systems and accessories for opening up landscapes, and enlivening the streets and squares of cities and making them safe. Every single product and the entire structure of our portfolio have been thoroughly considered from a real-life planning perspective, and it shows – down to the tiniest technical detail of our luminaires. And in the new, application-centred structure of this catalogue.



Design and engineering: Intelligence in every detail

Timeless. Purist. Clean. Shaped by an organic precision – WE-EF luminaires look their part for a number of reasons. One is that they are designed for seamless integration into a wide variety of architectural and urban contexts by day as well as by night. Today – and for many years to come.



Longevity – in both aesthetics and technology – is at the core of our products' DNA. It is the result of an unusually close alliance of designers, lighting technicians and engineers in WE-EF's product development – fostered over many years and strengthened by short distances between research and development laboratories and production.

This well-established collaboration leads to products that are thoroughly considered down to the last detail, with construction optimised for consistent excellence in manufacturing as well as easy maintenance and recycling. In addition, they are produced with materials and processes that help to protect our environment.

In order to minimise the ecological footprint, however, each luminaire must be perfectly honed to its purpose. In street and area lighting, finding the perfect combination of beam angle, glare limitation and efficiency not only leads to improved lighting comfort, but also to significantly reduced cost and less CO₂ – fewer light points, faster installation, lower maintenance. It's a promise WE-EF gladly gives in writing. As one of the first manufacturers of street and area lighting, WE-EF publishes life cycle assessments for select products in the form of Environmental Product Declarations (EPDs) in accordance with ISO 14025 and EN 15804.



More than a phrase: Made by WE-EF

It's not just what you do. It's how you do it. For this reason, the continuous training of our staff is just as elementary to WE-EF as our investments in research and development, tools and production facilities.

This is all the more important because there is quite a few things we rather do ourselves than to have them outsourced, as others do. Our production depth is high, and proudly so. We design, engineer and manufacture our own LED optics OLC® One LED Concept, according to WE-EF's IOS® Innovative Optical Systems philosophy. We build our own tools for die-casting and injection moulding – accurate to one thousandth of a millimetre.

We manufacture components from profiles and sheet metal on state-of-the-art CNC machines. We protect surfaces against corrosion, applying our industry-leading 5CE system. All in all, we design, produce, assemble and test our luminaires according to certified processes. That's why every WE-EF product is a purpose-built performance package that will not be found anywhere else.

- For more information on technologies applied, refer to page 356

1950

1950: A young man graduates as a master electrician. Aided by his wife Gisela, he establishes an electrical installation company in Bispingen, Lower Saxony, a small town in northern Germany. His name is Wolfgang Fritzsche.

The idea that his initials – 'W' and 'F' – will one day christen a global brand is, as yet, beyond his wildest dreams. Yet, he still has the courage to take his first steps as an entrepreneur. Driven by his desire for independence and self-determination, he goes his own way, encouraged by the unwavering belief that anything is possible – as long as you are truly determined and work hard for your goals.

As an electrician, Wolfgang Fritzsche is often called to install luminaires from various manufacturers on farms and in the communities around Bispingen. He senses an opportunity for business – and says to himself:

1955

"When others can do this, so can I! Why not create our own luminaires?" A few years later, this vision becomes reality, with the first luminaires carrying the 'WE-EF' sign.

Right from the start, growth and shared knowledge are important ingredients of WE-EF's corporate philosophy – in the customer's best interest, but also in the name of social responsibility. WE-EF has been training apprentices since 1955. In more than six decades, about 170 apprentices have been trained and started into their careers at WE-EF.

Many stay long-term. To this day, company affiliations of 15, 25 or even 40 years are nothing out of the ordinary at WE-EF.



01

Wolfgang Fritzsche
Elektronmeister
Bispingen
(Geschäftszeichen)

Bispingen 3. 12. 1949
Gewerbeliste – Nr. 13V

Anmeldung - Abmeldung - eines Gewerbebetriebes

Bezeichnung des Gewerbebetriebes (Firmenbezeichnung) Elektroinstallations
Geschäft

Inhaber des Gewerbebetriebes Wolfgang Fritzsche
Elektronmeister

Art des Gewerbes Elektroninstallateur-Handwerk

Sitz der Betriebsleitung Bispingen

Ort des Hauptbetriebes Bispingen

Betriebsstätten am Ort der Anmeldung keine

Betriebsstätten außerhalb dieses Ortes keine

Geschäftsvorgänger – Geschäftsnachfolger _____

Tag der Eröffnung – Übernahme – Übergabe – Einstellung – des Gewerbebetriebes 1. Jan. 1950

Grund der Abmeldung _____

Mitteilung - Bescheinigung
an Herrn
Wolfgang Fritzsche
Bispingen

8. 10
9. 10

Der Gemeindevorstand
Bispingen
Der Gemeindevorstand
Hels Solte

Bestell-Nr. 1302. - Mitteilung - Bescheinigung - über Gewerbe-An- oder Abmeldung. (Durchschreibebewährtes)
Gemeindevorstand, Verlag. - 34950

02



03



04

1960-1970

Innovative technology. Exemplary design. High-quality materials. Uncompromising customer orientation. These are the four pillars of urban light development at WE-EF – from the company’s earliest days to the present.

WE-EF builds its first aluminium sand-casting foundry in 1960. By the mid-1960s, the transition to aluminium gravity die-casting is complete. Subsequently, 1972 marks the operational start of the first aluminium high-pressure die-casting machines. At the same time, WE-EF establishes its in-house tool design and construction department.

To this day, most of WE-EF’s aluminium luminaire housings are produced in one of its three company-owned aluminium foundries in Germany and Thailand.

Tool-making expertise is one of several areas consciously kept in-house. WE-EF develops and manufactures moulds for aluminium gravity die-casting and pressure casting as well as injection moulds for plastic components – right up to the highly complex injection moulds for all optical lens systems currently used at WE-EF. Without exception.

The formative decade from 1960-1970 is also marked by the publication of the first WE-EF catalogue – a first which will be followed by many more. True to WE-EF’s down-to-earth-spirit, its initial format is a modest DIN A5. During the course of the 1970s, the steadily increasing volume of the WE-EF catalogue becomes an impressive metaphor for the company’s growth – finally making the leap to the current A4 format.

Then, as now, WE-EF remained committed to realising any customer request for customisation in a straightforward and competent manner. The key to keeping this commitment is sophisticated design – prepared for change, right from the start.



05



06



07



08

1970

Marked by the 1973 oil crisis, the 1970s are an unforgiving environment for business. But for WE-EF, they are a period of substantial growth. A major driver – increasing exports to many Middle Eastern countries.

As WE-EF's international trade thrives, there are also advances in R&D: The all-new technical and test laboratories set up in 1975 are testaments to WE-EF's determination to drive progress through science – and to make lasting contributions to the global development of lighting technology. After all, urban light is no job for tinkers.

1975

Today, WE-EF runs almost all tests required for luminaire certification in-house in these labs, which are continuously updated and kept up to speed.

Accredited to, and compliant with all relevant norms, they measure every imaginable aspect of light as well as heat, dust, water and impact resistance – and many more aspects.



01



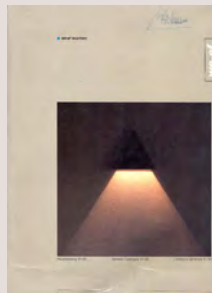
02



03



04



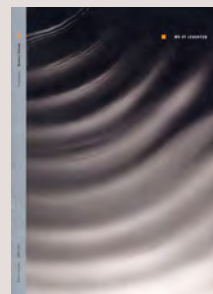
05



06



07



08



09

01 Lighting laboratory

02 Water test

03 Catalogue 1972-1973

04 Catalogue 1981

05 Catalogue 1991-1993

06 Catalogue 1996-1998

07 Catalogue 2002-2004

08 Catalogue 2004-2007

09 Catalogue 2006-2009

1980

In quick succession, both Thomas and Stephan Fritzsche join their father's company, and WE-EF's corporate strategy receives further refinement.



10

The aesthetic and functional demands of lighting designers, architects and engineers get centre stage; the required service, including consulting and training, is a vital aspect.

Meanwhile, WE-EF's reference portfolio grows – not only in number, but also in scope, complexity and impact. A central principle remains untouched – every job gets the same attention. No matter how big or small. On an equal footing with technology and function, WE-EF establishes design as a key corporate value. As off-the-peg solutions gradually fade in volume, modularity becomes a cornerstone of WE-EF's development process.

By the mid-1980s, the formal language and train of thought shaping WE-EF's products increasingly show their ties to the philosophy of Bauhaus and HfG Ulm: Functional, plain design as a fusion of the very best in craftsmanship, industrial production and progressive technology.

10 Thomas and Stephan Fritzsche

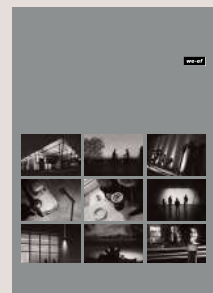
1982

Thanks to this approach, WE-EF luminaires retain their aesthetic and functional value over their entire life cycle. Systematically thought through in every detail long before production, their design remains a fresh and timeless part of public space, in streets, squares and pathways.

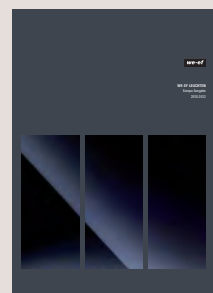
As the successor to its Asian regional office, WE-EF establishes a dedicated Thailand branch in 1982. The goal – local manufacturing of WE-EF products for the Asia Pacific region and Australia/New Zealand. Today, WE-EF Thailand employs a staff of 145.

Little by little, telex and typewriters make way for fax machines and computers. However, the first ERP system for computer-aided production planning is still years in the future.

During this decade, lighting-specific software is rare and expensive – too expensive for WE-EF. Undaunted, WE-EF's engineers turn necessity into virtue and develop their own. Their code for calculating the statics of lighting columns and planning lighting projects, created as a side project, remains in use for many years, with convincing results.



11



13



12



14



15

11 Catalogue 2008

12 Catalogue 2012-2013

13 Catalogue 2010-2012

14 Catalogue 2014-2016

15 Catalogue 2016-2018

1990

At the start of the 1990s, WE-EF founder Wolfgang Fritzsche gradually withdraws from day-to-day business.

He continues to serve the company as chairman and valued advisor. Thomas and Stephan Fritzsche become co-owners of the company.

WE-EF continues to grow. Alongside Bispingen (Lower Saxony), a second production facility is created in Neuendorf im Sande (Brandenburg). Finally, there is some space – a rare commodity in Bispingen; 70,000 square metres of land offer plenty of opportunities for growth. As a consequence, WE-EF's pole production (including the associated powder coating line) and, later, all sheet metal processing are relocated. Not a single job in Bispingen is lost, while new ones are created in Neuendorf. WE-EF's growth makes it possible.

In 1994, WE-EF LUMIERE turns the lights on at the new branch in France. Founded in Strasbourg, the company later moves to Lyon. Today, France is not only WE-EF's most successful export destination, but also its biggest national market. What a success story – chapeau!

Also in 1994, Australia sees the foundation of WE-EF LIGHTING. The chosen location 'Down-Under' is Melbourne in the State of Victoria. WE-EF's service now covers the entire continent of Australia and Oceania.



01

01 Office and Lightbox, Neuendorf im Sande

1994

1996

1998

The 2000 Olympic Summer Games in Sydney become a showcase for WE-EF. Many buildings and facilities of the world's first green Olympic Games are illuminated by WE-EF, using sustainable concepts.

Only six years after the foundation of WE-EF Australia, the brand has established a strong position in the public image of Australia's major cities.

In 1994, WE-EF replaces wet with powder coating, resulting in a more environmentally-friendly process. One year later, the first CNC milling machines are put into operation.

Another milestone is the iF Product Design Award for the first luminaire jointly developed by WE-EF Germany and WE-EF Thailand.

In 1996, WE-EF's design departments in Germany and Thailand fully transition to 3D CAD technology – in a very short time frame. A few years later, all processes in luminaire and tool design as well as tool construction will have been seamlessly digitized.

From the late 1960s onwards, WE-EF has regularly exhibited at the World Light Show in Hanover – at the time the world's largest lighting technology fair. When the first Light + Building trade fair takes place in Frankfurt on the Main in 2000, it replaces Hanover as the lighting industry's premier international gathering place – and, of course, WE-EF is there, right from the start (and up to the present).

In 1998, WE-EF's trademark reliability is finally awarded an official letter and seal. The basis? A comprehensive quality management system according to ISO 9001, tailored to monitor and evaluate all company processes according to national and international standards. This not only includes production and engineering, but also training, qualification, motivation and environmental protection.

2000

In 2000, WE-EF crosses the Atlantic. WE-EF LIGHTING, the new North American branch, is founded in Pittsburgh, Pennsylvania.

Big country, big challenges: America demands a long breath. However, time has proven the decision right, and WE-EF is proud to have stuck to its goals and beliefs. America offers a world of opportunity. Not only, but also, for WE-EF.

The year 2006 marks the beginning of a new technological era for WE-EF. At an early stage, the company recognises the potential of Light Emitting Diodes (LEDs) for exterior lighting.



02



03



04

2005

2006

2008

At the Light + Building fair 2008, WE-EF introduces the very first 'butterfly' lens for LED street lights. Greeted with reservations at the time, it is the nucleus of a concept that has long since been patented and recognised as the state-of-the-art in almost all street lights around the world – WE-EF's OLC® One LED Concept.

The beginning of the 2000s also marks the start of WE-EF's 'Lightboxes' – next-generation training centres at various locations.

Differing in size, shape and equipment, they are all designed for one common goal – showing what light can do. Once experienced, it is never forgotten. Today, WE-EF Lightboxes have been installed in Bangkok, Melbourne, Sydney, Lyon and Neuendorf im Sande.

In the latter part of the new millennium's first decade, WE-EF Germany aluminium pressure casting foundry moves in 2008 from Bispingen to Neuendorf im Sande – bigger, more modern and more productive than ever.



05

- 02 Lens samples
- 03 One® One LED Concept
- 04 Butterfly lens

05 Lightbox

2010

In 2010, WE-EF creates its Swiss branch, WE-EF HELVETICA. Since then, a small but dedicated sales team has taken care of the wishes and needs of local customers and partners. Its commitment and reliability pay off – two crucial factors for success in Switzerland. WE-EF has it.

A life cycle analysis provides the framework for WE-EF's first Environmental Product Declarations (EPDs) in 2013 – a quantitative description of the environmental life cycle of WE-EF luminaires, from production to operation and recycling. For an effective conservation of resources, both longevity and energy efficiency are of the essence. This view has always been at the core of WE-EF's DNA.

In 2014, WE-EF LEUCHTEN in Bispingen opens its new head office – a modern office and laboratory building of glass and concrete, with edges and corners and a clear functional language. An architectural statement that truly expresses WE-EF's corporate self.

A short while after, in 2015, WE-EF LUMIERE moves to its new premises on the outskirts of Lyon – a move made inevitable by the sustained growth in the previous decades. With its sophisticated architecture, the Lyon building is not only perfectly adapted to today's workplace requirements, but also incorporates active environmental protection.

One year after WE-EF's workforce moves in, the first bee colonies follow, inhabiting the factory premises and bringing the French head office in touch with mother nature. In summer, sheep graze in the meadows.



In 2015, company founder Wolfgang Fritzsche dies aged 91. His extraordinary character, as well as his profound impact on the company and its culture, are felt and appreciated to this day – much like the initials 'W' and 'F' that will continue to mark the WE-EF brand for many years to come.

2014

2015

2017

2018



01



02

End of 2015, the Fritzsche family and other shareholders of the WE-EF Group decide to take a major step for securing the long-term future of the Company. They accept an invitation for negotiations to join Sweden's Fagerhult Group. The agreement is signed in 2017

In August 2018, Thomas Fritzsche resigns as Managing Director of WE-EF LIGHTING Thailand, ending his professional career after a total of 42 years at WE-EF, 36 of them in Thailand.

01 Inauguration of new WE-EF LEUCHTEN head office and laboratory building in Bispingen

02 New head office of WE-EF LUMIERE near Lyon

2019

2020+



In 2019, Gisela Fritzsche, wife to company founder Wolfgang, dies in Bisingen at the age of 96 – in the very house that was once home to WE-EF’s first production site. She never wanted to move.

WE-EF is more than a loose association of national companies carrying the same name. We are one family, one brand, worldwide.

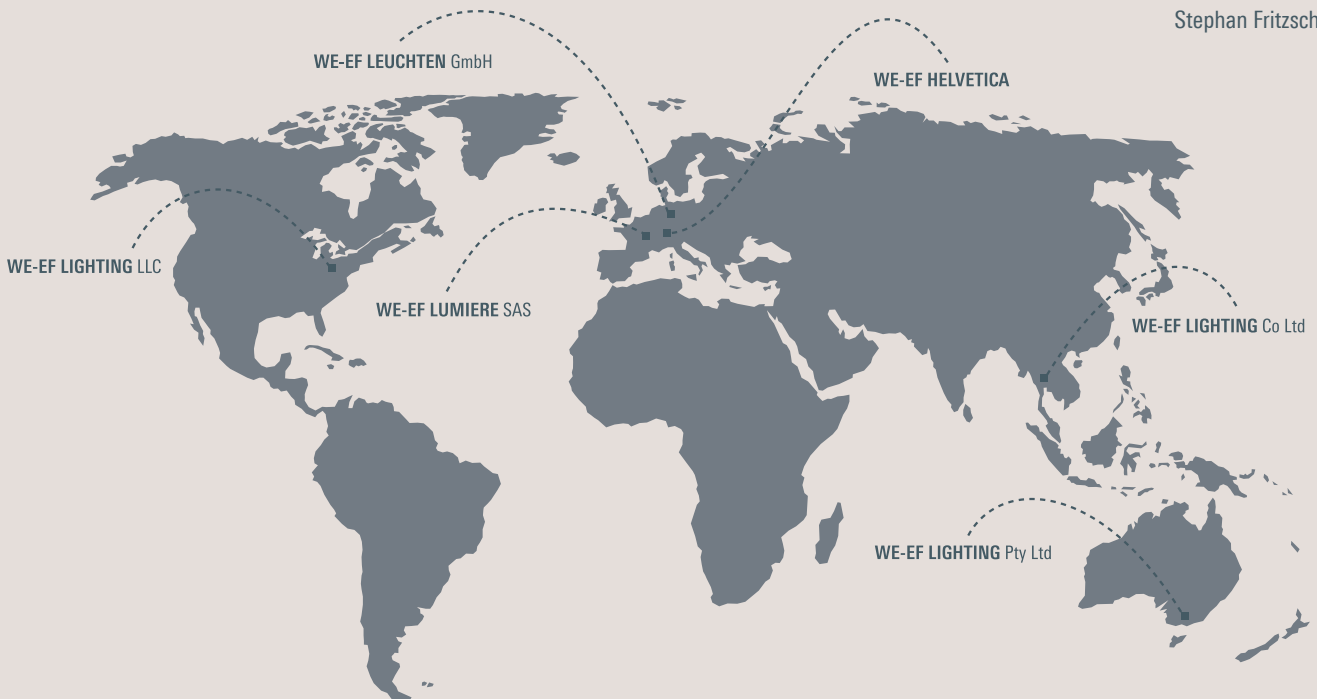
One Family, One Brand – this is the joint motto for WE-EF’s international network from 2020 onwards.

All the WE-EF Group’s activities in product policy and communication focus on our corporate values of innovation, functionality and design. To us at WE-EF, this means a commitment to excellence in everything we do. The new corporate design connects the elements of the brand closer than ever, around the globe, for the entire WE-EF family.

Today, about 500 employees at six locations all over the world work for the WE-EF brand. They are the basis for everything we are and the foundation on which our success is built. Our sincerest gratitude and respect go out to them.

1950-2020: 70 years WE-EF.

Congratulations!
Stephan Fritzsche



Architecture

Inground luminaires

Round



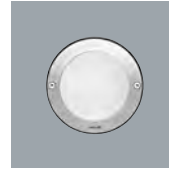
ETC300-GB 30
Gimbal



ETC300-GB TW 32
Gimbal
Tunable white



ETC300-GB CC 34
Gimbal
Colour changer



ETC300-FS 38
Marker light



EVC300-FS 38
Marker light



ETC300-FS 40
Fixed optics



EVC300-FS 40
Fixed optics



ETC300-FS TW 42
Fixed optics
Tunable white



EVC300-FS TW 42
Fixed optics
Tunable white



ETC300-FS CC 46
Fixed optics
Colour changer



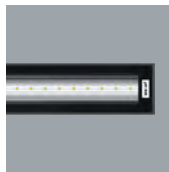
EVC300-FS CC 46
Fixed optics
Colour changer

Inground luminaires

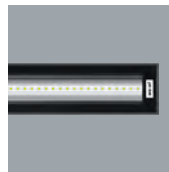
Linear



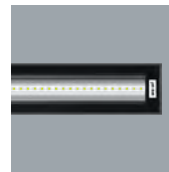
ETV100 56
Marker light



ETV100 58



ETV100-TW 62
Tunable white



ETV100-CC 64
Colour changer

Wall luminaires

Recessed



STL100 74



SVL100 76



STO100 78



STI100 80



QR0300 84



QRI300 86

Architecture

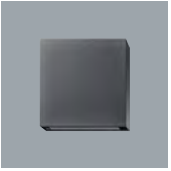
Wall luminaires
Surface mounted



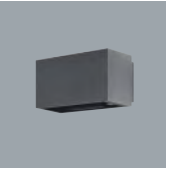
VLR100 92



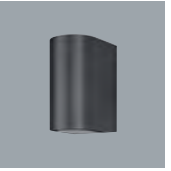
PLS400 96



QLS400 100



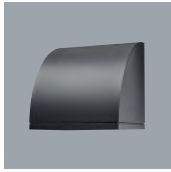
RLS400 104



SLS400 106



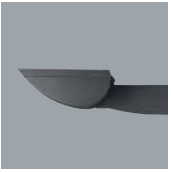
VLS400 106



OLV300 110



FLC102 112



FLA400 114



PIA200 116

Wall bracket



XLO200 118



DLO200 118



DLG200 118



DLS200 118



DLB200 118



QLO200 120

Ceiling luminaires



DOR100 126



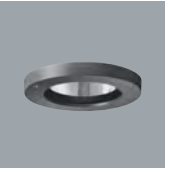
DOC100 128



DAC100 128



DOC100-FT 130
Darklight



DOC200-FT 130
Darklight



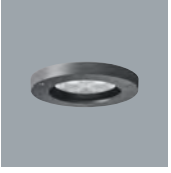
DOC100-FT TW 134
Darklight
Tunable white



DOC200-GB 136
Gimbal



DAC200-GB 136
Gimbal



DOC200 138



DAC200 138

Architecture

Projectors



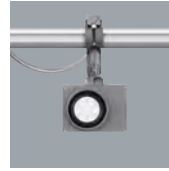
FLD100 146
Spigot mounted



FLD100 148
Surface mounted



FLD100 150
Wall bracket



FLD100 152
RAIL66 /
Space frame



FLB100 158
Spigot mounted



FLB100 158
Surface mounted



FLB100 158
Wall bracket



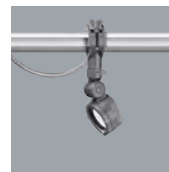
FLB100 160
RAIL66 /
Space frame



FLC100 166
Surface mounted



FLC100 168
Wall bracket



FLC100 170
RAIL66 /
Space frame



FLC200 174



FLC200-TW 178
Tunable white



FLC200-CC 184
Colour changer



FLC200 PP 192
Profile projector



FLC200-TW PP 194
Profile projector
Tunable white



FLC200-CC PP 196
Profile projector
Colour changer



FLC300 206
Spigot mounted



FLC300 206
Surface mounted



FLC300 206
Wall bracket



FLC300 210
RAIL66 /
Space frame

Landscape

Bollards and pathway
luminaires

PSY400 220



PTY400 222



MRY200 226



KTX200 228



KTY200 228

Landscape

Bollards and pathway luminaires



ZFY200 230



CFY200 234



NTY100 238



QSI200 240

Light columns



LTP400 246



LTM400 248

City

Catenary mounted luminaires



ZFS400 256



RFS500 258



CFS500 260



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Pole mounted luminaires



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City

Pole mounted
luminaires

RFL500-SE 298



VFL500 302



VFL500-SE 306



PFL500 308



PFL200 310

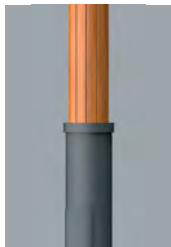
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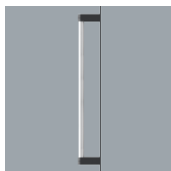
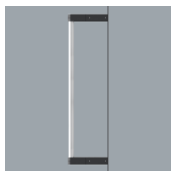
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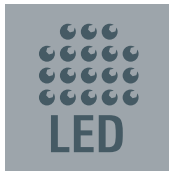


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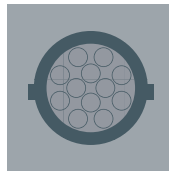
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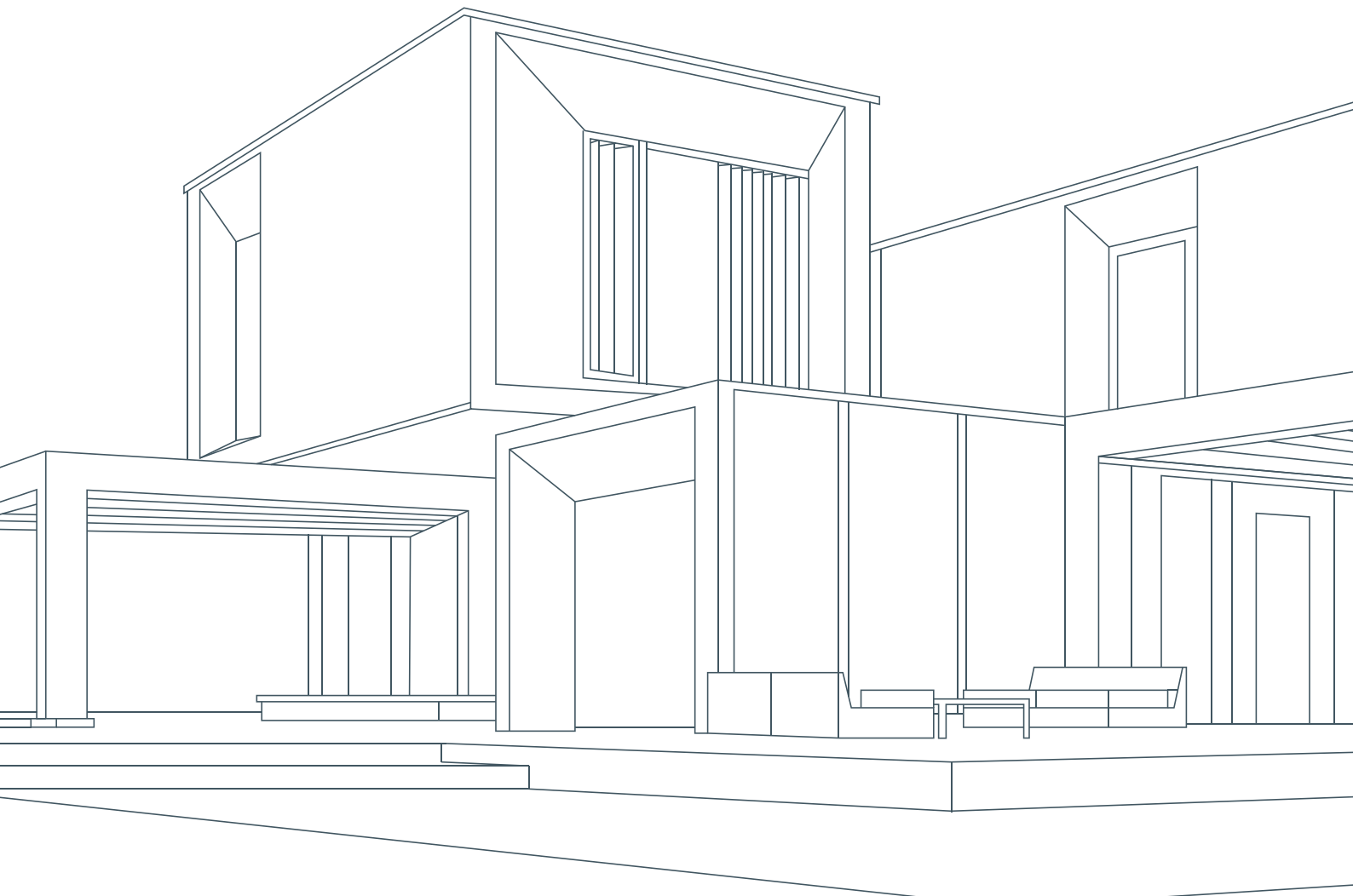
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Architecture

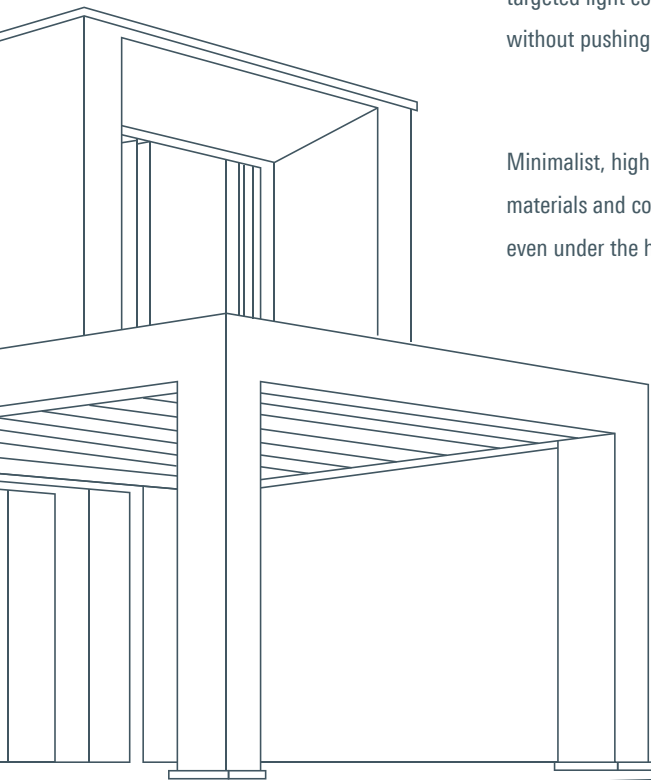


No urban lightscape can ever be complete without artfully illuminated architecture that turns lighting concepts into holistic experiences.

When we navigate cities great and small, it is their landmarks that help us find our way. They are anchors in the urban sea, a fact that any contemporary lighting concept ought to reflect – illuminated façades mark spaces and their confines. Accentuated details turn buildings into landmarks – signature elements that bolster a city's image.

The luminaires in WE-EF's architectural lighting portfolio give planners all they need for covering the entire spectrum of exterior architectural lighting – from planar to focused, from functional to creative, for everyday uses as well as for special occasions. Innovative lighting technology ensures targeted light control with high efficiency and minimum stray light – luminaires that are powerful tools, without pushing themselves to the fore.

Minimalist, highly precise shapes join forces with the superior quality and workmanship of WE-EF's materials and corrosion-resistant surfaces – giving maximum longevity in both technology and aesthetics, even under the harshest environmental conditions.



Inground luminaires

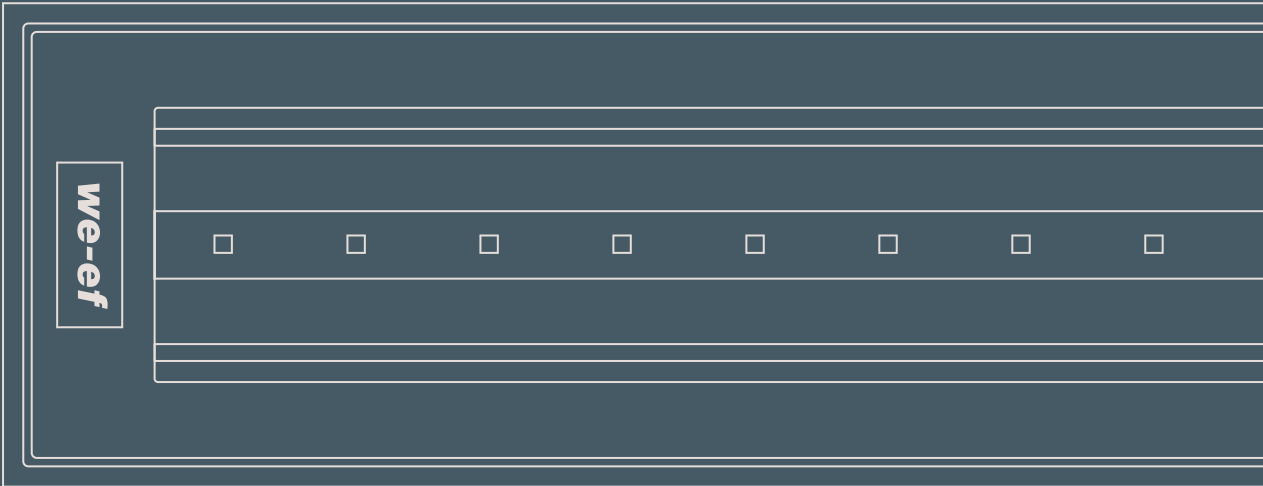
we-ef

A wide range of applications for recessed inground luminaires is available – washing façades, tracing contours or providing orientation.

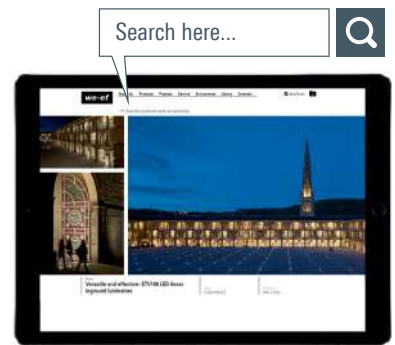
Their distinctive bottom-to-top light direction guarantees an impressive look.

When it comes to inground installations, classic WE-EF qualities such as 5CE Superior Corrosion Protection and maintained sealing come into full play.

With their varied range of round and linear designs and broad choice of light distributions and power levels, right up to highly versatile gimbal versions, the luminaires in this product group are flexible and essential tools for all planning professionals in designing architecture and urban spaces with light.



ETC300-GB	30-31
ETC300-GB TW	32-33
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Inground luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

The Piece Hall

A Piece of Timeless Grandeur

For centuries, this unique eighteenth century complex, with its four colonnaded wings embracing a central plaza, served as a market hall for fabrics and cloth – and a symbol of civic pride. Widely regarded as one of Britain's most outstanding buildings of the Georgian period, Piece Hall underwent major conservation and transformation in 2017. Its appealing blend of restaurants, shops, offices and cultural events attracts a diverse and international mix of visitors.

Recessed inground luminaires by WE-EF create effective sidelights on the columns and set an impressive scene for the hall's main gate – with flexible alignment achieved by their built-in gimbal feature. RAIL66 system with FLC121 projectors placed by the roof edges help to emphasise architectural details while illuminating the corner areas of the grand plaza.





The Piece Hall

Halifax (UK)

Owner: The Piece Hall Trust

Architect: LDN Architects

Lighting design: Happold Lighting



Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Installation blockout and sealable junction box included
Control options:	ON/OFF, 1-10 V, DALI

IP67

IK10+

Monash University
Melbourne (AU)
Landscape architect: Taylor Cullity Lethlean
Lighting design: Electrolight

Available distributions:
[B] [M] [EE] [EES]

Standard colour



Stainless steel



- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'

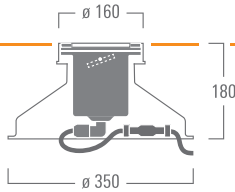


Rotation



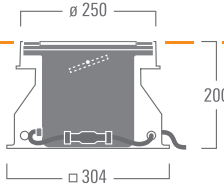
Tilt angle

ETC320-GB



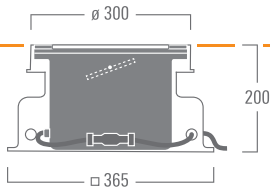
[M] [EE]	[EES]
6-9 W	6 W
550-960 lm	590 lm
Max. 2 internal accessories	

ETC330-GB



[B] [M] [EE]	[EES]
12-18 W	12 W
1160-1960 lm	1380 lm
Max. 3 internal accessories	

ETC340-GB



[B] [M] [EE]	[EES]
24-36 W	24 W
2230-3920 lm	2570 lm
Max. 3 internal accessories	



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 51



Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Installation blockout and sealable junction box included
Technology:	WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 366
Control option:	DALI

IP67

IK10+

Available distributions:
[B] [M]

Standard colour



Stainless steel

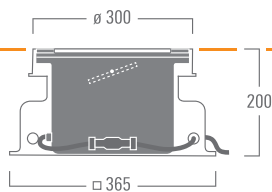


[B] Symmetric, wide beam
 [M] Symmetric, medium beam



Horizontal (355°) and vertical (0°-20°) aiming of the gimbal is a straightforward, intuitive task. The rock-solid mechanics help ensure precise and sustained aiming towards the target surface.

ETC340-GB TW



[B] [M]
 27.5 W
 2650-2770 lm
 Max. 2 internal accessories



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 51



Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Installation blockout and sealable junction box included
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 367
Control options:	DMX, DMX wireless; refer to page 52

IP67

IK10+

Optional wireless node
for DMX communication

Available distributions:
[B] [M]

Standard colour



Stainless steel



[B] Symmetric, wide beam
 [M] Symmetric, medium beam

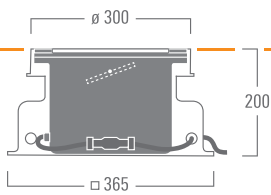


Rotation



Tilt angle

ETC340-GB CC



[B] [M]
 25 W
 1740-1750 lm
 Max. 2 internal accessories



RGBW

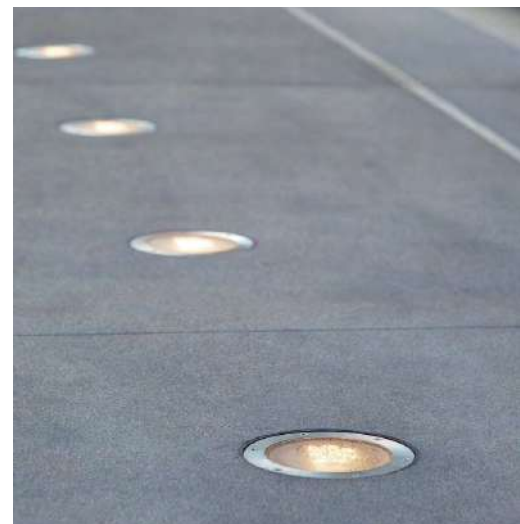
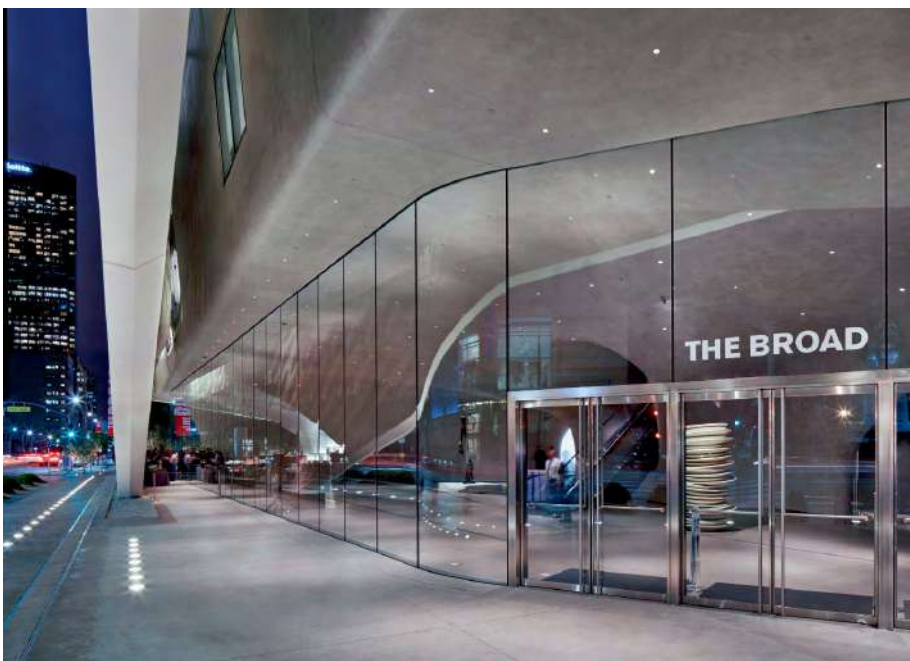
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 51

The Broad Museum

The Art of Illumination. From the Ground Up

This world-renowned museum for contemporary art on Los Angeles' premier cultural mile, the Grand Avenue, welcomes more than 900,000 international visitors per year. Its strikingly perforated concrete façade serves as a daylight filter for the exhibition spaces inside, and at the same time shapes the Broad's architectural identity – by day and by night.

Arranged like a string of pearls around the building, an ensemble of 180 recessed inground luminaires by WE-EF enhance the Broad's architectural magic. At the corners of the building, additional rows of luminaires below the façade sections feature sculpture lenses to widen the light distribution. The bright contours accentuate the entrance and help to attract visitors in the evening hours.





The Broad Museum

Los Angeles (US)

Architects: Diller Scofidio + Renfro

in collaboration with Gensler Architects

Light planning: Tillotson Design Associates





Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass with opal diffuser; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout and sealable junction box included
Control options:	ON/OFF, 1-10 V, DALI (applicable for most versions)

IP67

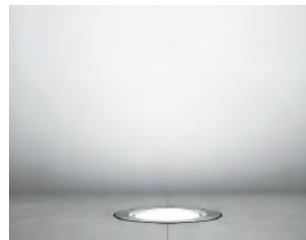
IK10+



ETC300-FS



EVC300-FS

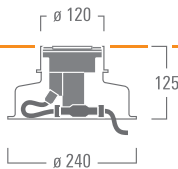


Flush with surface

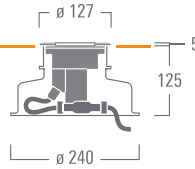


Proud of surface

ETC319-FS



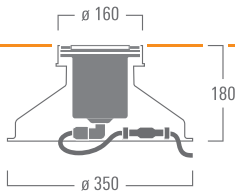
EVC319-FS



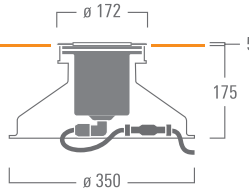
Diffused

3 W
120 lm

ETC329-FS



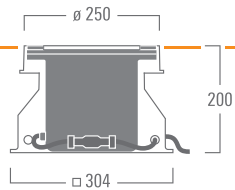
EVC329-FS



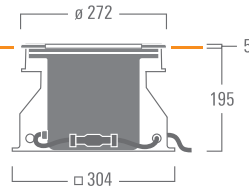
Diffused

6 W
170 lm

ETC339-FS



EVC339-FS



Diffused

12 W
310 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 51



Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout and sealable junction box included
Control options:	ON/OFF, 1-10 V, DALI (applicable for most versions)

IP67

IK10+

200 George street
Sydney (AU)
Architect: FJMT
Lighting design: Arup

Available distributions:
[B] [M] [EE] [EES]

Standard colour



Stainless steel



- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'

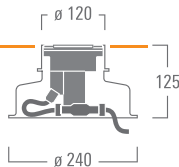


ETC300-FS
(flush with surface)

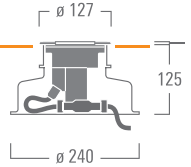


EVC300-FS
(proud of surface)

ETC310-FS



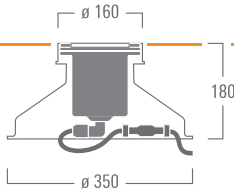
EVC310-FS



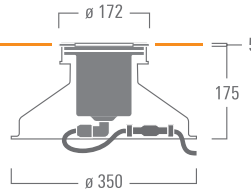
[M] [EE] [EES]

6 W
550-590 lm
Max. 1 internal accessory

ETC320-FS



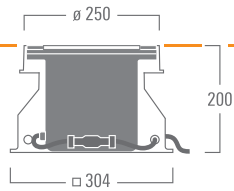
EVC320-FS



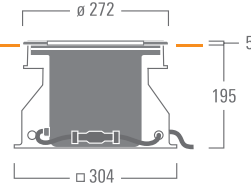
[B] [M] [EE] [EES]

12 W
1160-1380 lm
Max. 1 internal accessory

ETC330-FS



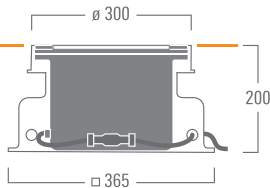
EVC330-FS



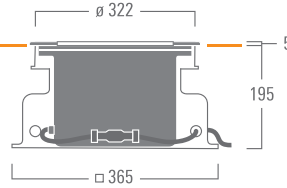
[B] [M] [EE] [EES]

24 W
2230-2570 lm
Max. 1 internal accessory

ETC340-FS



EVC340-FS



[B] [M] [EE] [EES]

36 W
3480-4140 lm
Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 51



Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout and sealable junction box included
Technology:	WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 366
Control option:	DALI

IP67

IK10+

Available distributions:
[B] [M]

Standard colour



Stainless steel



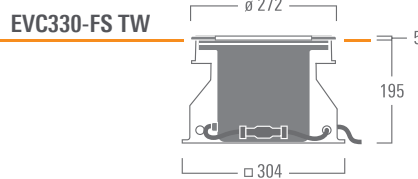
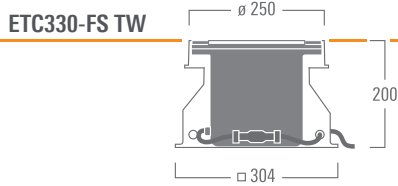
[B] Symmetric, wide beam
[M] Symmetric, medium beam



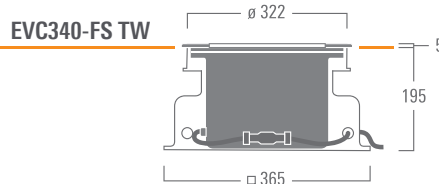
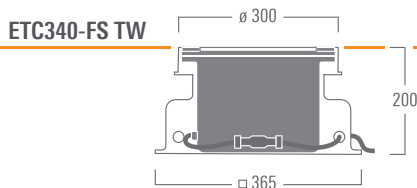
ETC300-FS TW
(flush with surface)



EVC300-FS TW
(proud of surface)



[B] [M]
19 W
1930-2010 lm
Max. 1 internal accessory



[B] [M]
30 W
3020-3150 lm
Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 51

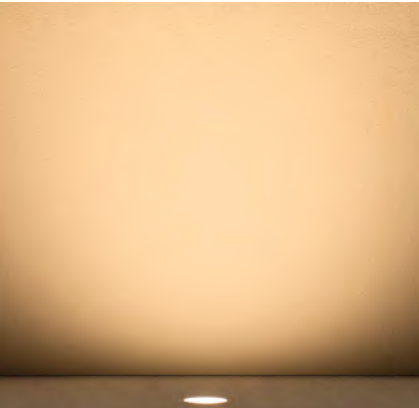
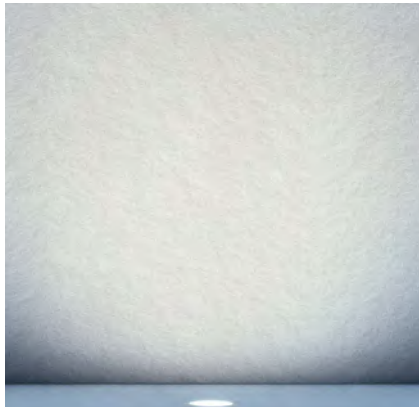
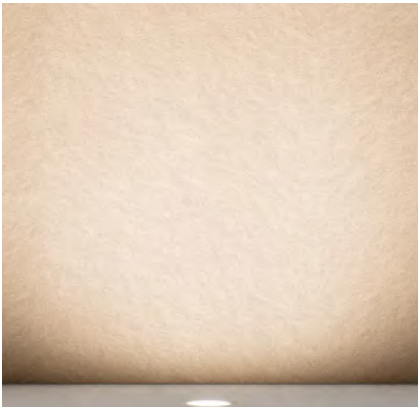
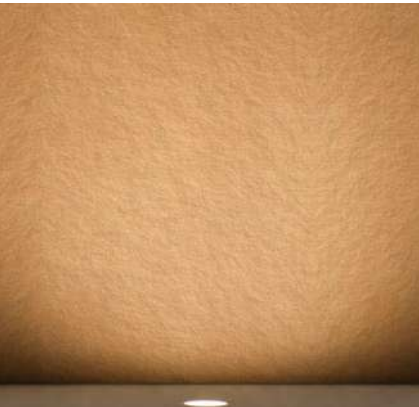
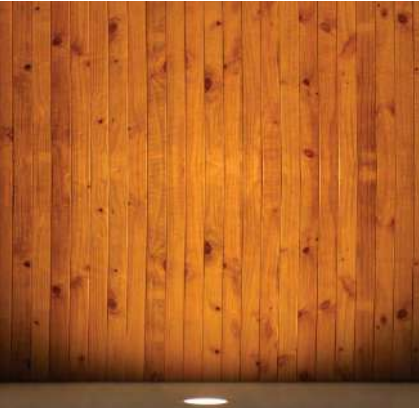


Wall Grazing

Fixed optics uplights, in close vicinity to the vertical target surfaces, are used as 'wallgrazers'. The intentional 'scaloping' effects just above ground level, combined with the fading luminance towards the top, enhance the building's polygon design. In addition, mood changes can be achieved by 'smooth tuning' of the colour temperature from 2700 K to 6000 K.

Tunable White

WE-EF's industry-leading technology facilitates 'smooth tuning' from a warm 2700 K to a cool 6000 K while maintaining consistent luminous flux. Three typical colour temperatures within this range are shown here, demonstrating the visual effects they have on a variety of surface materials and colours.



2700 K

5000 K

6000 K



Luminaire housing:	Stainless steel construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass; max load 5 tonnes
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout and sealable junction box included
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 367
Control options:	DMX, DMX wireless; refer to page 52

IP67

IK10+

Available distributions:
[B] [M]

Standard colour



Stainless steel



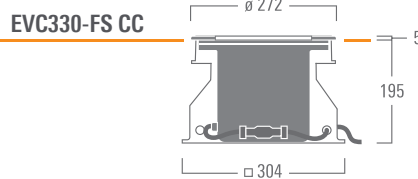
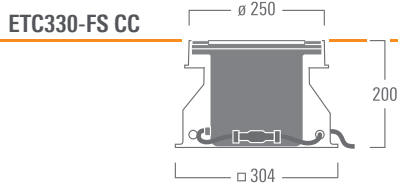
[B] Symmetric, wide beam
 [M] Symmetric, medium beam



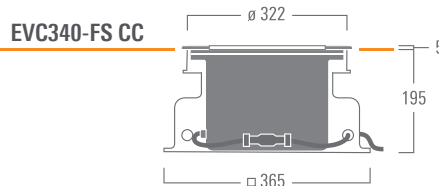
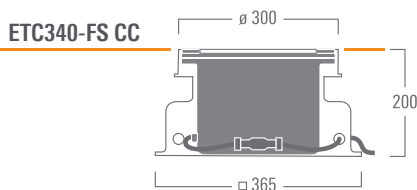
ETC300-FS CC
 (flush with surface)



EVC300-FS CC
 (proud of surface)



[B] [M]
 19 W
 1330 lm
 Max. 1 internal accessory



[B] [M]
 30 W
 2120-2200 lm
 Max. 1 internal accessory

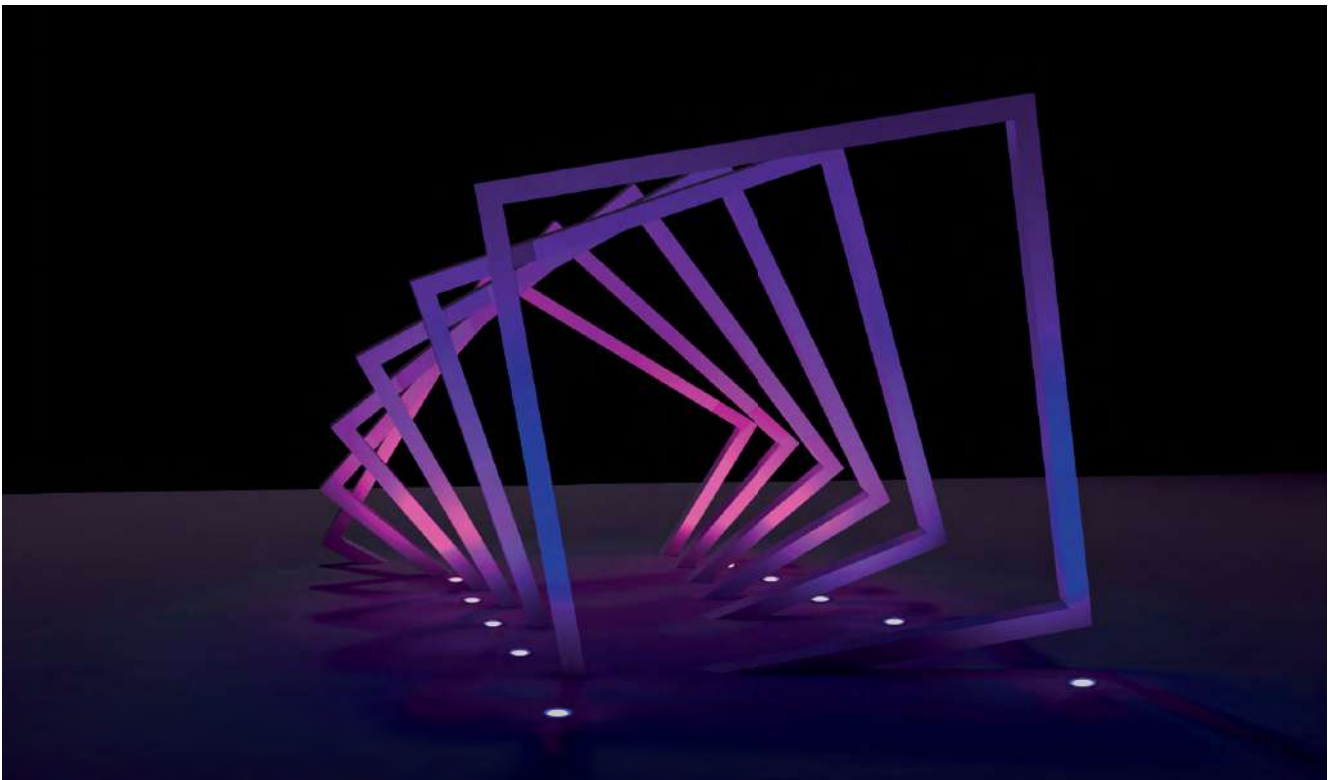
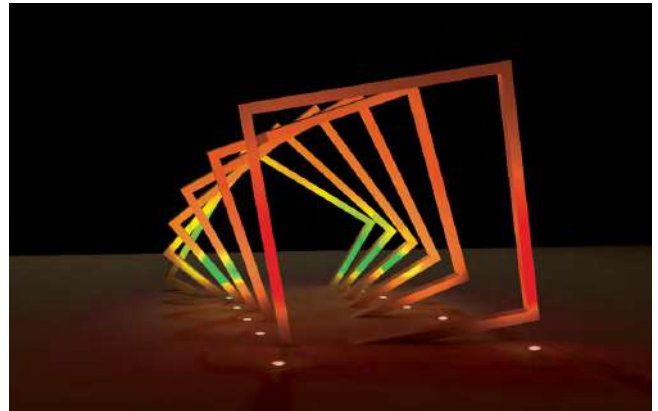
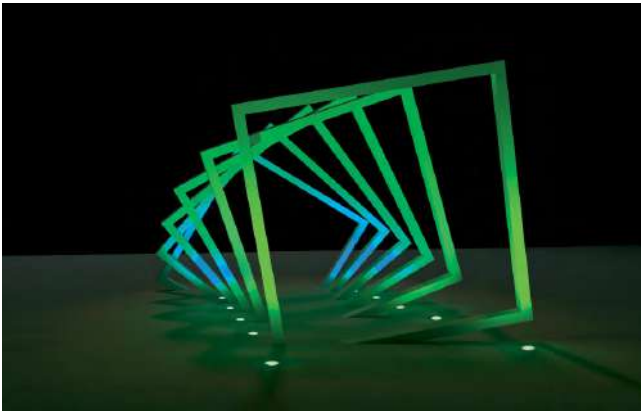


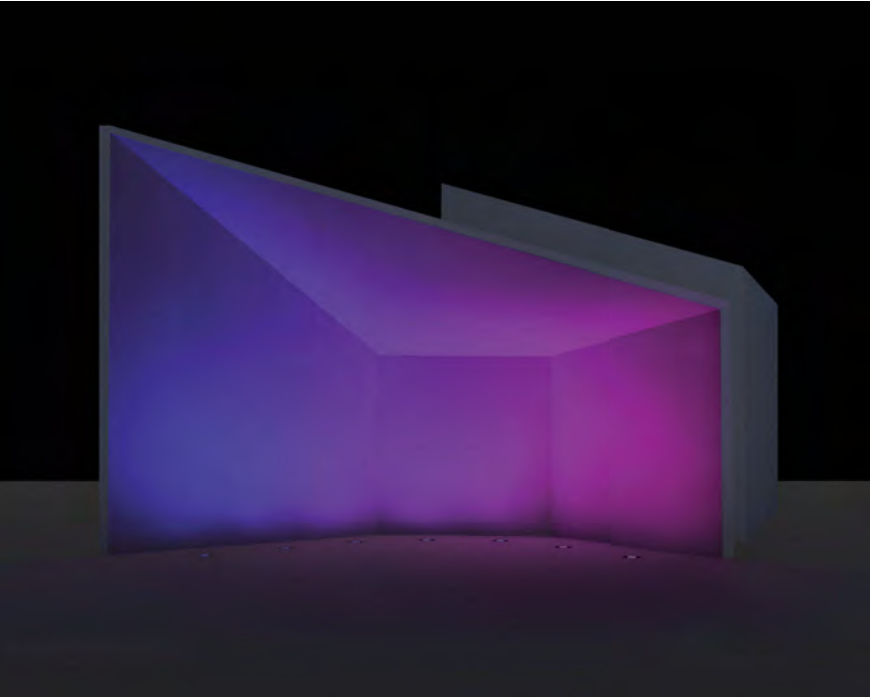
RGBW

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 51

How to Light a Sculpture

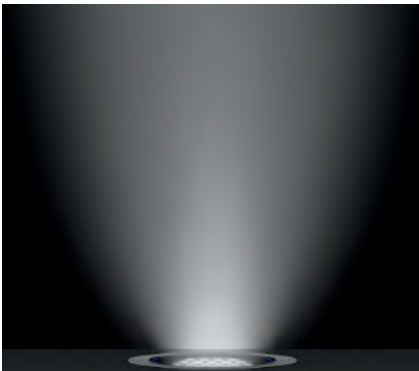
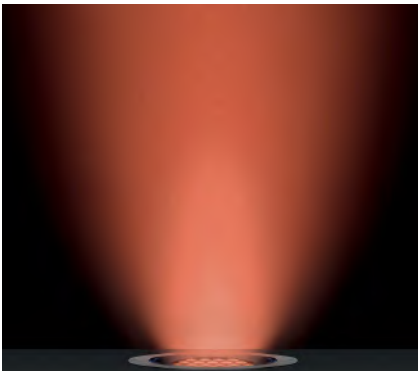
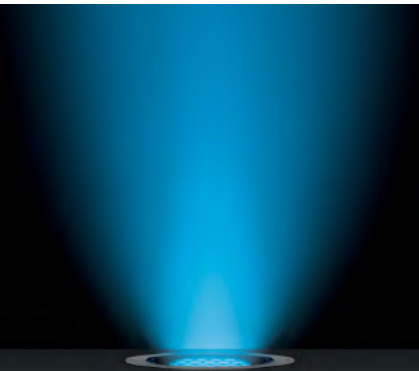
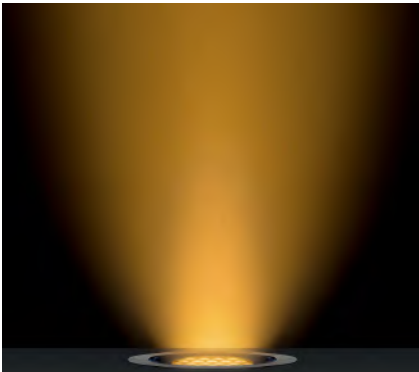
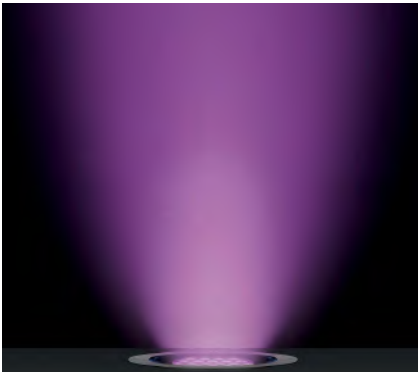
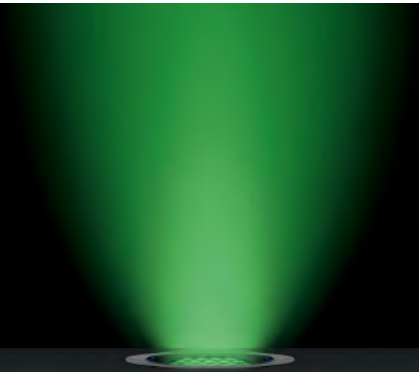
Free-standing sculptures pose possibly one of the ultimate challenges to a lighting designer. The ETC300-GB series has a gimbal mounted optical system that enables precise alignment. A great advantage, especially when illuminating free-standing sculptures.





Industry-Leading Performance

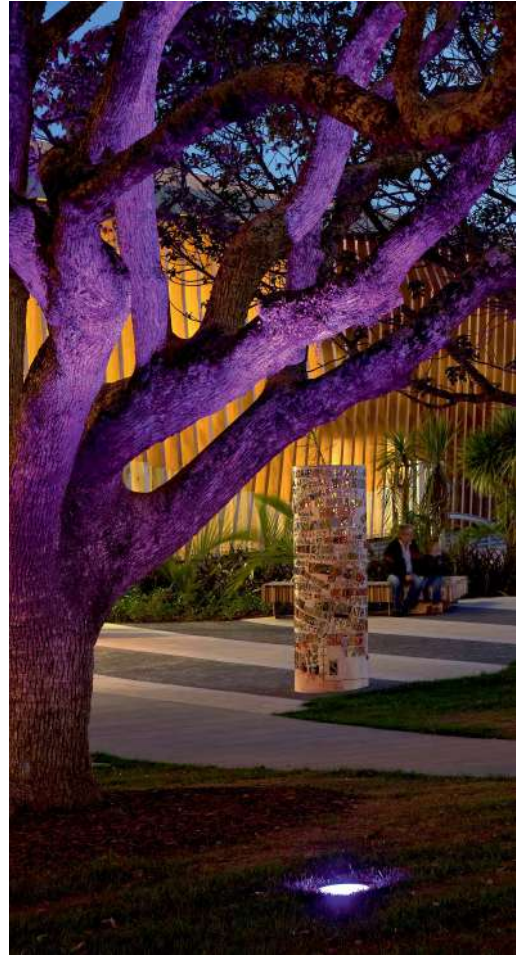
Dynamic colour change schemes, when professionally executed, can create sensational, eye-catching effects, e.g., on commercial and public buildings. WE-EF's Colour Boost Technology, in combination with CAD-optimised optical lenses, ensure smooth beam overlaps as well as high illuminance intensities wherever desired. Refer to WE-EF Colour Boost Technology page 367.





ETC300-TW Tunable White

The shown application features uplights in close vicinity to a vertical structure, creating a 'column grazing' effect. Mood changes are achieved through 'smooth tuning' from 2700 K to 6000 K.



ETC300-CC Colour Changer

The application of coloured light on trees and other plants always carries a risk. With a clearly defined objective, however, the resulting eye-catching effects may just be what is needed to draw people's attention to a project's key area or feature.



ETC300-GB / ETC300-GB TW / ETC300-GB CC
 ETC300-FS / ETC300-FS TW / ETC300-FS CC
 EVC300-FS / EVC300-FS TW / EVC300-FS CC

Internal optical accessories

Max. 1-2 accessories depending on luminaire

Wallwash lens

for [M], fixed-optics versions only



Honeycomb louvre

for [M] [EE] [EES]



Linear louvre

for [B] [M] [EE] [EES]



Flood lens

for [M] [EE] [EES]



Linear spread lens

for [M] [EE] [EES]



Optical adaptor

holds any of the above accessories,
 for gimbal versions only



Mounting accessories

Installation cover

optional



Installation blackout

included in luminaire supply



Hardwired vs. wireless DMX

Each ETC300 CC / EVC300 CC Colour Changer features a DMX control interface. While the standard luminaires require a hardwired connection, dedicated ETC300-GB CC / ETC300-FS CC / EVC300-FS CC versions for wireless data transmission are available on request. Such a requirement must be specified at the time of ordering. WE-EF can assist with the selection of third-party support equipment such as DMX controllers etc.



DMX Wireless Antenna



DMX Wireless Transceiver

Wireless transmission of signal up to 100 m for inground luminaires

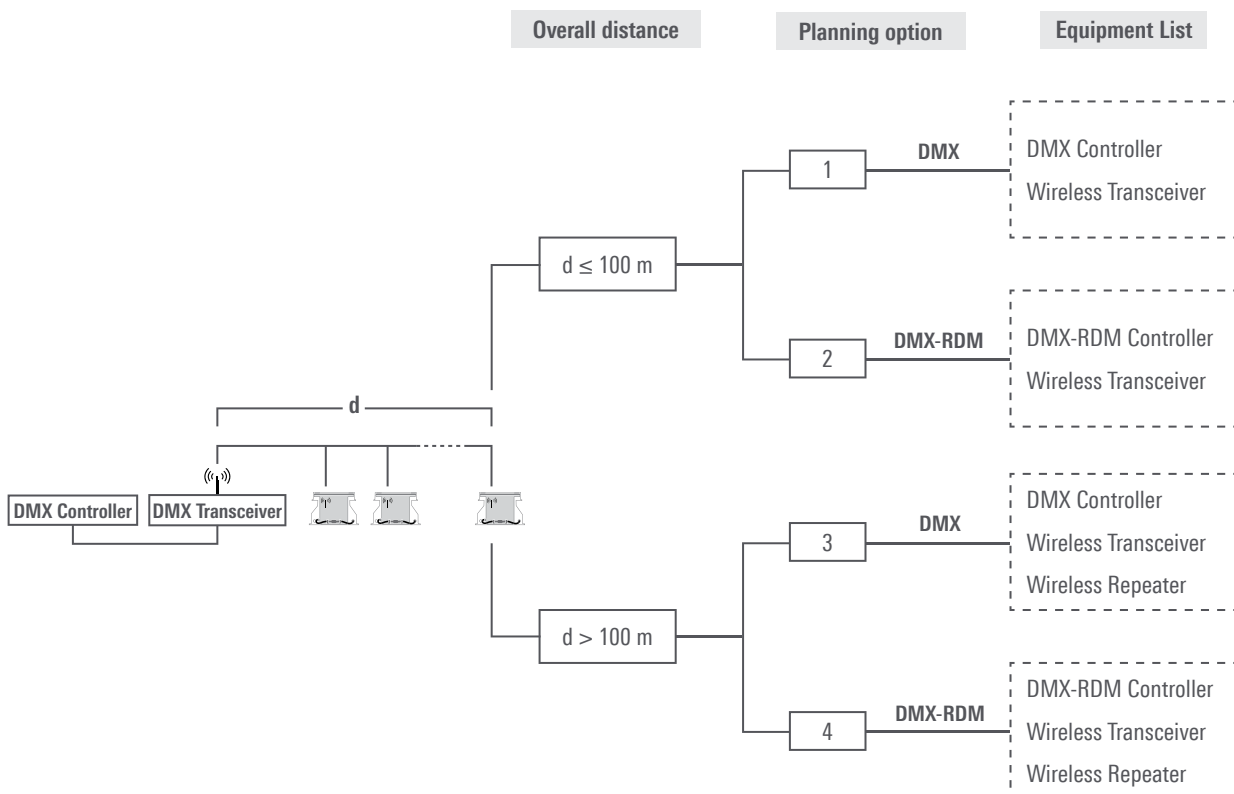


DMX Wireless Repeater

Amplifies and extends range of DMX signal

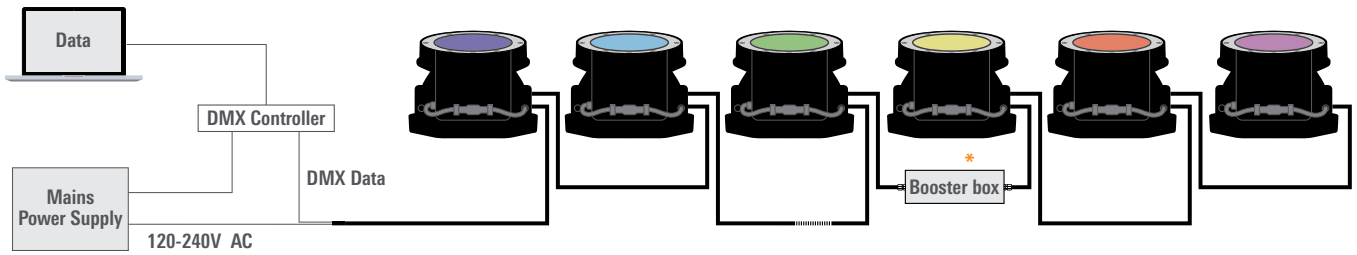
Planning a wireless DMX system

This simple planning guide takes into consideration the overall distance to be covered between the main transceiver at the control station and the last luminaire as well as the requirement for either standard DMX control or DMX-RDM.



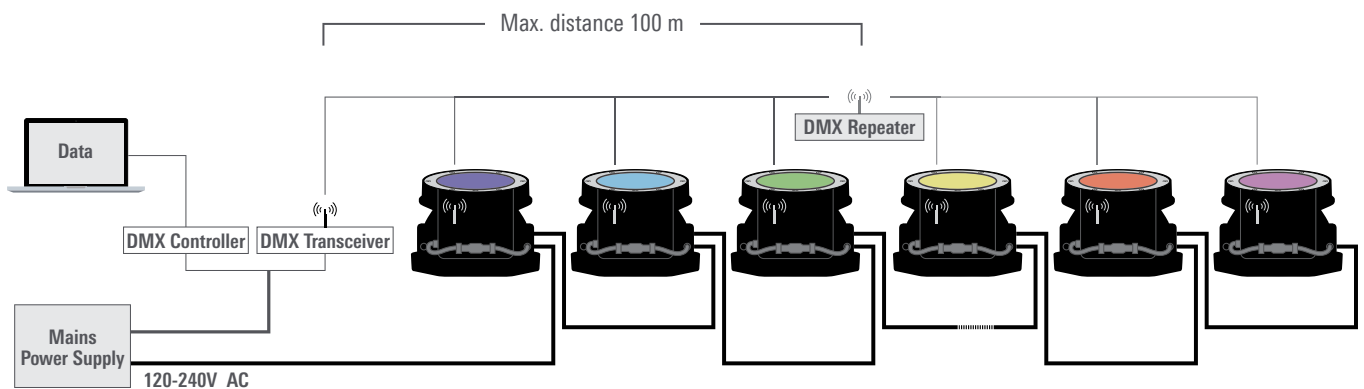
ETC300 CC / EVC300 CC Colour Changer, hardwired for DMX data communication

This standard luminaire version is supplied with a sealable junction box, for the connection of both, mains power supply and DMX data cables.



ETC300 CC / EVC300 CC Colour Changer for wireless DMX data communication

This optional luminaire variant is equipped with an antenna and a transceiver. Depending on the number of luminaires used as well as the distance and topography, a maximum of one wireless repeater may be used for amplified and extended data transmission.



▪ Other accessories, available on request

* In AU/NZ, the booster box is available on request





Bayertor

Straight Into the City. Led by Linear Light.

Set in Landsberg, Bavaria, the Bayertor is deemed by many as one of the most striking and attractive medieval town gates in all southern Germany.

The new lighting introduced during its recent refurbishment has made the way in and through even safer and more convenient. During the planning stage, it became apparent that linear recessed inground luminaires, such as WE-EF's ETV130, deliver a better result with fewer luminaires in this particular situation than round alternatives.

An asymmetrical wallwash light pattern ensures the homogenous illumination of walls, ceilings and archways.

Bayertor
Landsberg (DE)
Planning: Stadt Landsberg



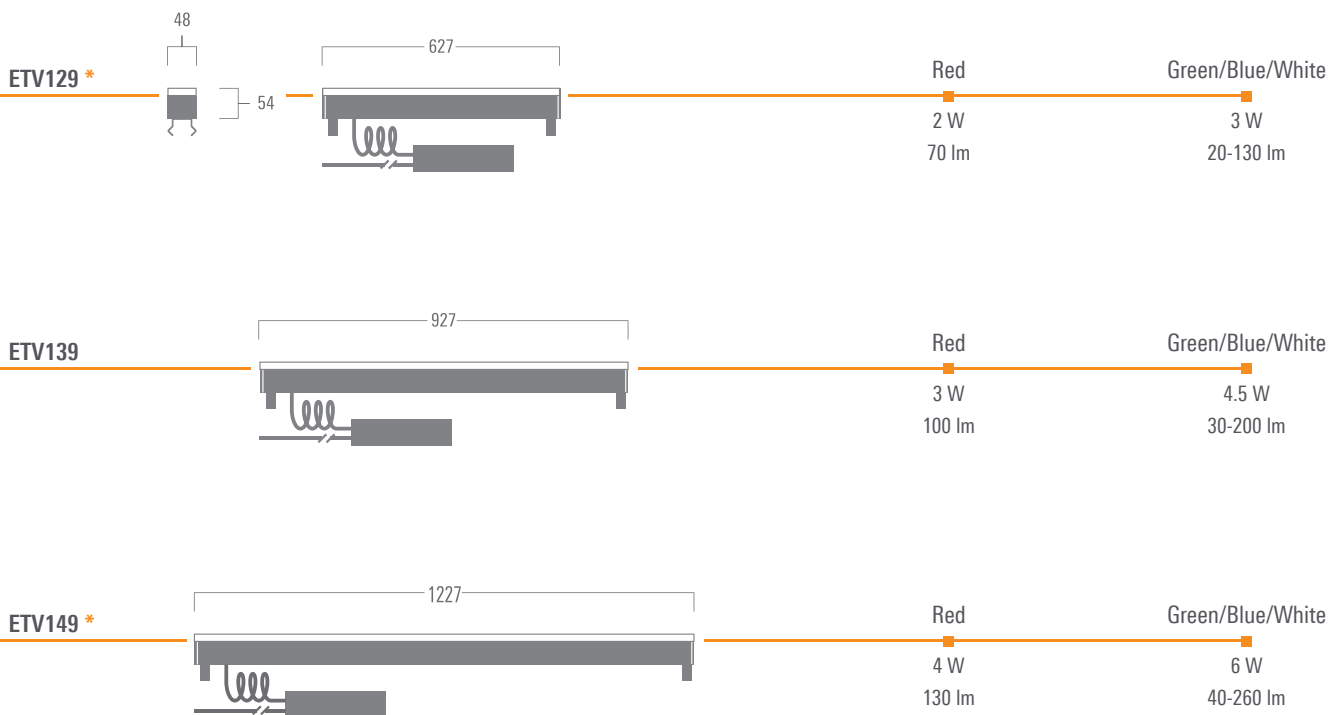
Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	EC electronic driver, in separate compartment, fits into installation blackout
Main lens:	Safety glass; max load 3 tonnes, driven over at low speed only, without accelerating or turning
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout (for single or multiple configuration); to be ordered separately
Control option:	DALI

IP67

IK08

Pedestrian zone
Elmshorn (DE)
Lighting design: Stadtwerke Elmshorn

Available distribution:
Diffused



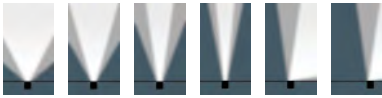
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 67
- * Not currently available in AU/NZ



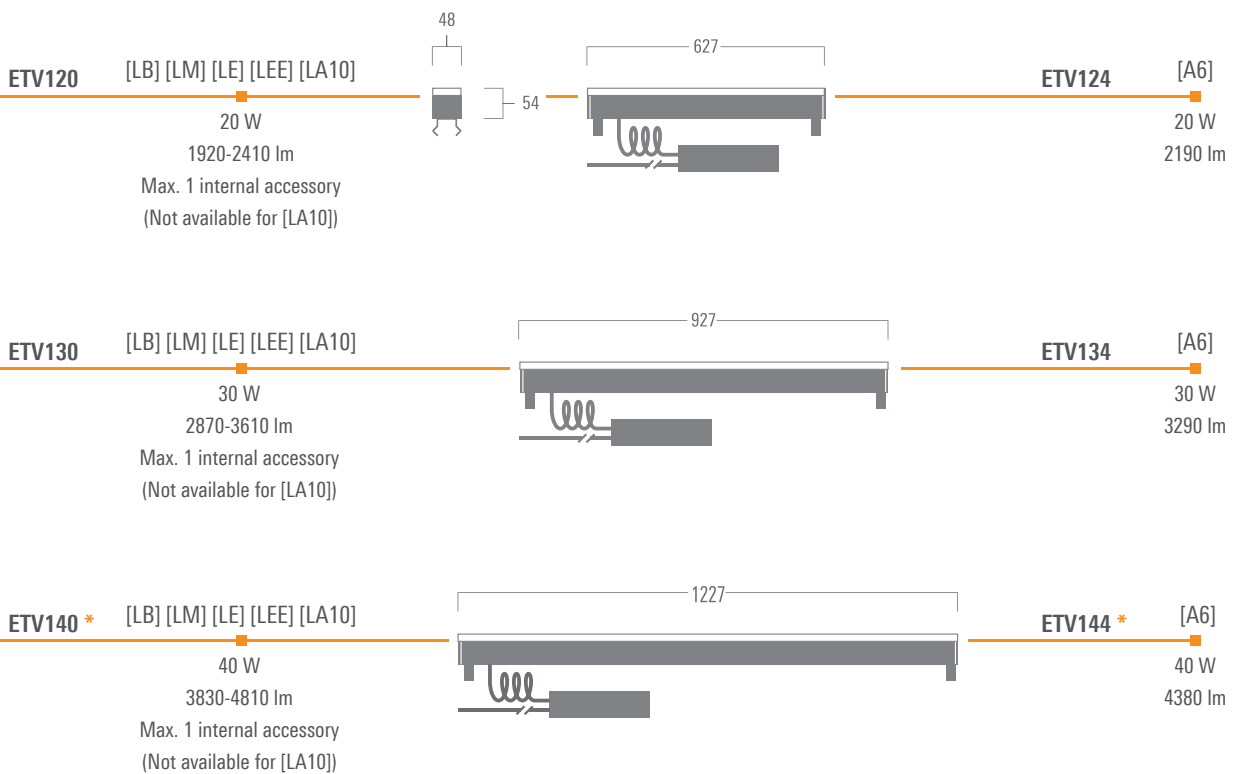
- Luminaire housing: Marine-grade, all-aluminium construction
- Corrosion protection: 5CE, including PCS hardware
- Driver: EC electronic driver, in separate compartment, fits into installation blockout
- Main lens: Safety glass; max load 3 tonnes, driven over at low speed only, without accelerating or turning
- Gasketing: Silicone rubber gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
Installation blockout (for single or multiple configuration); to be ordered separately
- Control option: DALI

IP67

IK08



- [LB] Symmetric linear, wide beam
- [LM] Symmetric linear, medium beam
- [LE] Symmetric linear, narrow beam
- [LEE] Symmetric linear, very narrow beam
- [LA10] Asymmetric linear, wallwash
- [A6] Asymmetric linear, wallgrazer



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 67
- * Not currently available in AU/NZ



ETV100 [LA10] for Wallwash Applications

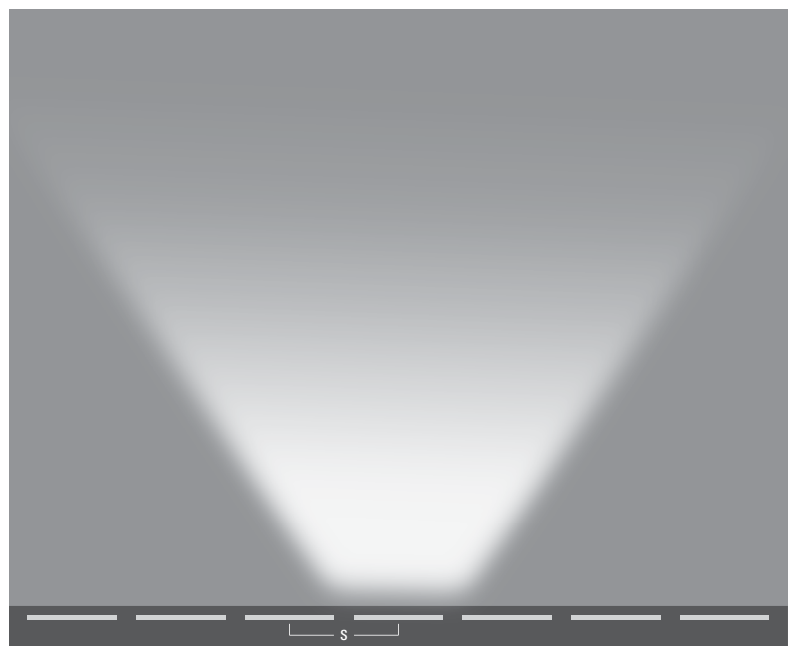
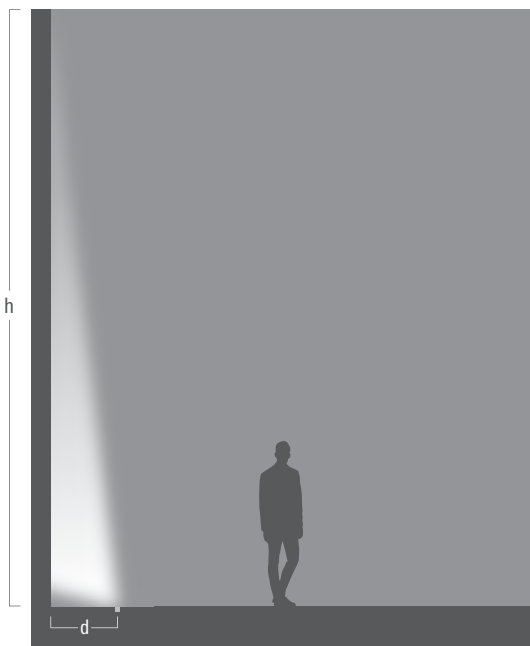
With the objective of using wallwashing to achieve the highest possible uniformity on a horizontal level, some gradual fading of light towards a wall's top is sometimes desirable for enhancing the three-dimensional visual effect.

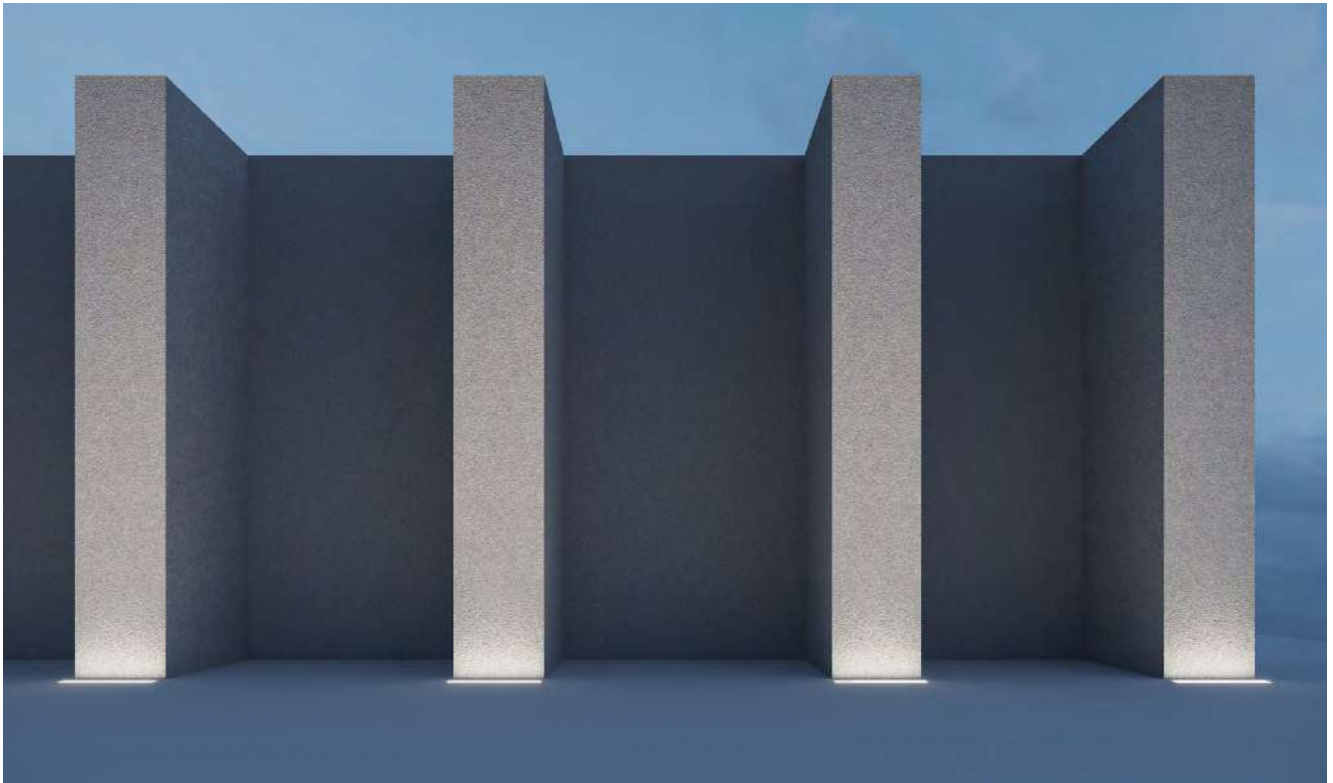
h = height of wall/target surface

d = distance from wall/target surface = $0.09 \times h$ to $0.125 \times h$

(close distance to wall enhances three-dimensional fading effect towards top; large distance delivers high overall uniformity)

s = spacing between luminaire centres = (length of luminaire) + $(0.6 \times d)$





ETV100 [A6] for Wall Grazing Applications

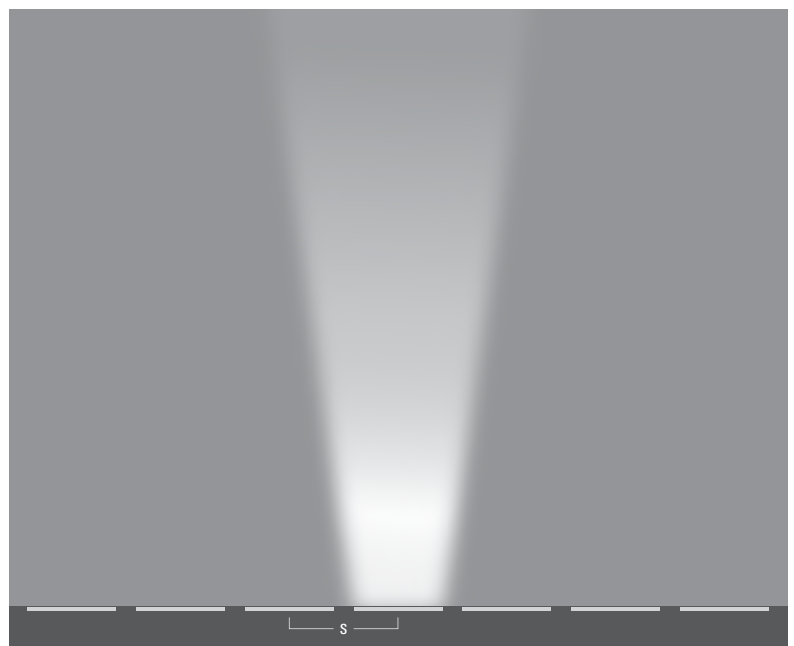
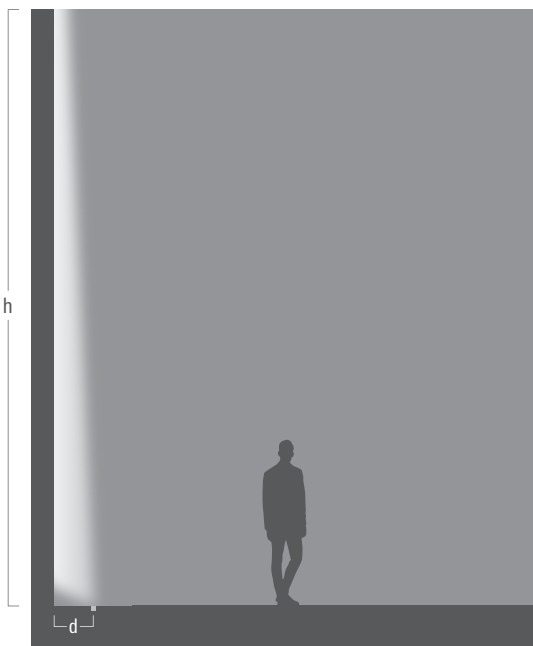
In wall grazing applications, luminaires are brought close to the vertical surface in order to reveal its texture and character. For this purpose, in linear luminaires, optics combining slight asymmetric and narrow beam characteristics have proved to work particularly well.

h = height of wall/target surface

d = distance from wall/target surface = $0.05 \times h$

(general guideline; best confirmed in practical tests)

s = spacing between luminaires (to be determined case-by-case, depending on project requirements)

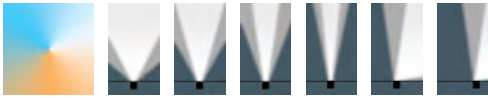




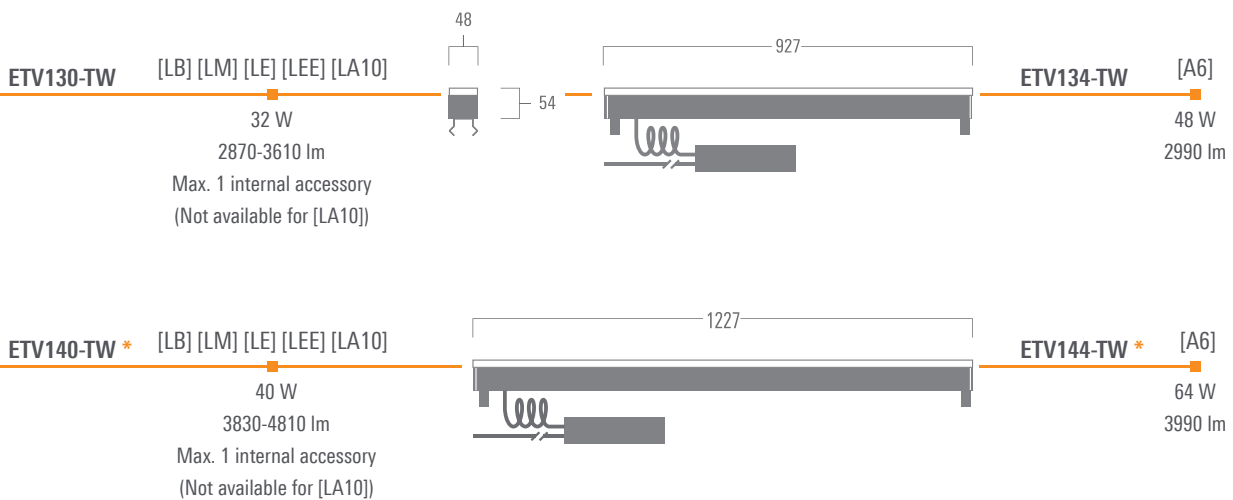
Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	EC electronic driver, in separate compartment, fits into installation blackout
Main lens:	Safety glass; max load 3 tonnes, driven over at low speed only, without accelerating or turning
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout (for single or multiple configuration); to be ordered separately
Technology:	WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 366
Control option:	DALI

IP67

IK08



- [LB] Symmetric linear, wide beam
- [LM] Symmetric linear, medium beam
- [LE] Symmetric linear, narrow beam
- [LEE] Symmetric linear, very narrow beam
- [LA10] Asymmetric linear, wallwash
- [A6] Asymmetric linear, wallgrazer



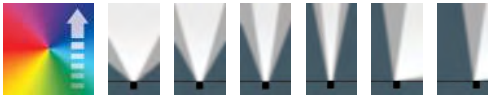
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 67
- * Not currently available in AU/NZ



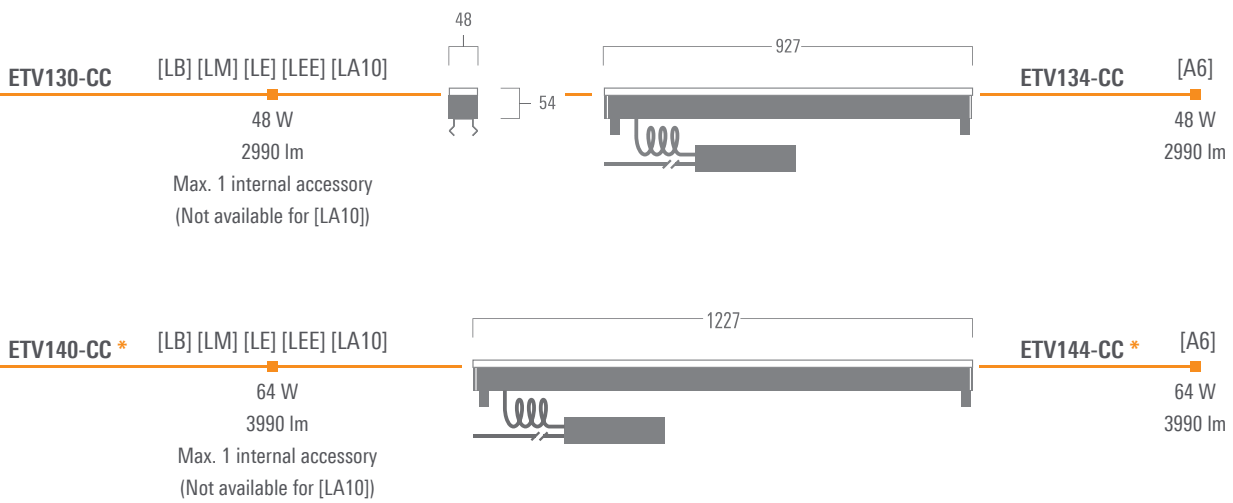
Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	EC electronic driver, in separate compartment, fits into installation blackout
Main lens:	Safety glass; max load 3 tonnes, driven over at low speed only, without accelerating or turning
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Installation blackout (for single or multiple configuration); to be ordered separately
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 367
Control options:	DMX

IP67

IK08



- [LB] Symmetric linear, wide beam
- [LM] Symmetric linear, medium beam
- [LE] Symmetric linear, narrow beam
- [LEE] Symmetric linear, very narrow beam
- [LA10] Asymmetric linear, wallwash
- [A6] Asymmetric linear, wallgrazer



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 67
- * Not currently available in AU/NZ

**Ease of maintenance**

Once installed, the luminaire can be easily accessed or replaced by releasing the spacers (shown) and applying a special tool provided by WE-EF.

**Light metal – Heavy duty**

The ETV100 series can be driven over at low speed, without accelerating or turning, by vehicles with air-filled tyres, at a weight up to 5 tonnes per wheel. Max. static load, 3 tonnes (according to DIN EN 60598-2-13).



Honeycomb louvre *

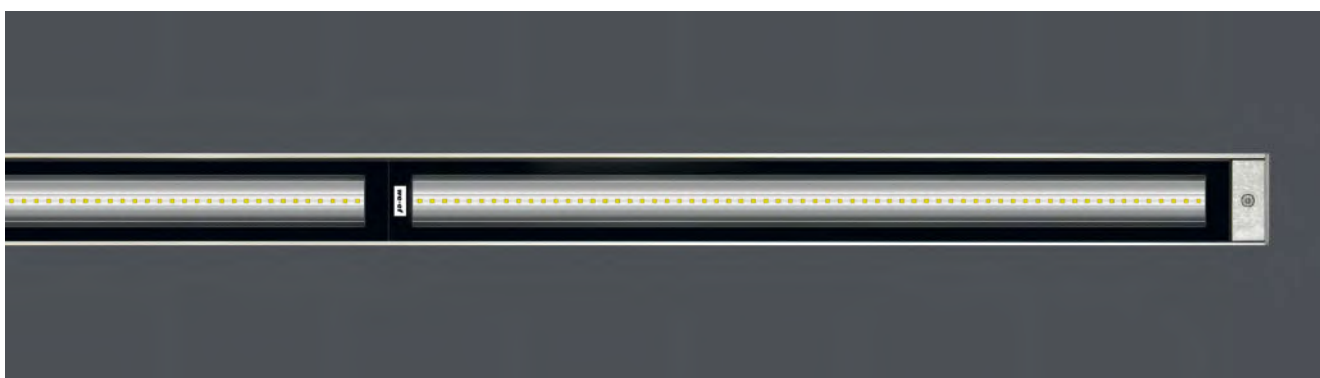
Optional; for luminaire versions with [LM] [LE] [LEE] distributions



Type I
Depth – 130 mm



Type II **
Depth – 160 mm



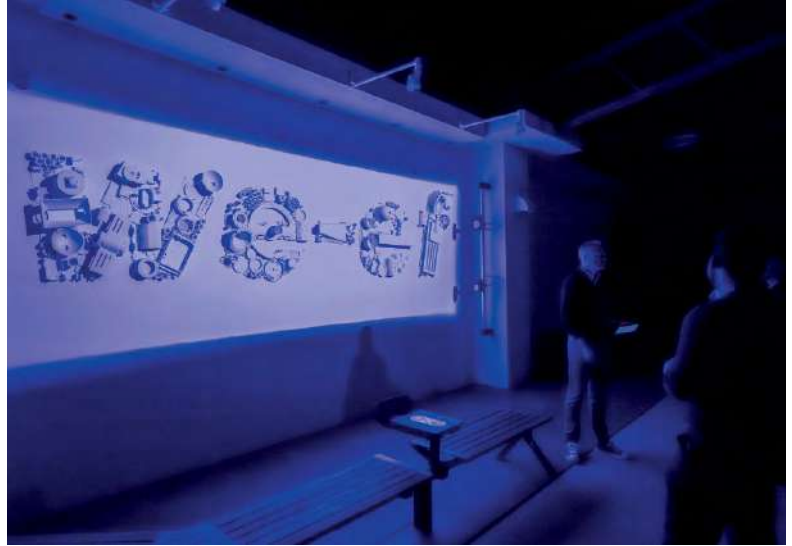
Installation blackout

Blockout versions for single and multiple luminaire configurations are available. Multiple versions allow for up to four luminaires to be installed in one continuous row, without any gaps between them.

It is installed using a BEV installation blackout in a gravel bed, with concrete poured in for stabilisation.

* Available on request for AU/NZ
** Not currently available in AU/NZ

▪ Linear louvre on request



WE-EF LIGHTBOX

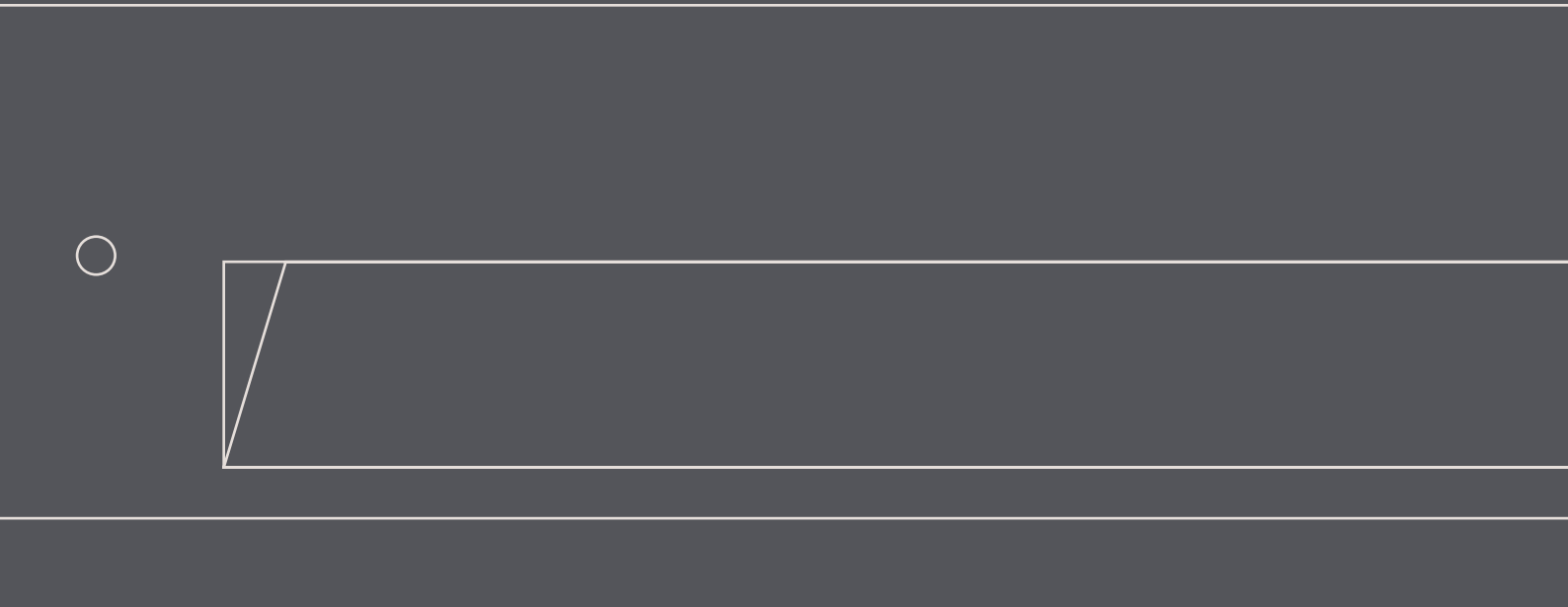
Hands-on Lighting Experience on Four Continents

Through its global network, the WE-EF group has established LIGHTBOX facilities in a number of countries on four continents. Each LIGHTBOX is used for a multitude of hands-on applications, be it for internal purposes such as product testing and performance verification or staff training, for community events and university student education, or for communication with lighting professionals, architects and project owners.



Shown here are images from a lighting designer workshop at WE-EF's Asia Pacific Head Office in Thailand.

An extensive variety of inground uplights, wall washers, downlights and projectors are on hand to test – individually or simultaneously – and experiment with a broad variety of lighting effects and moods. The crisp, high-intensity images of Muay Thai boxers are projected onto the LIGHTBOX feature wall by means of FLC200 [GP] gobo projectors.

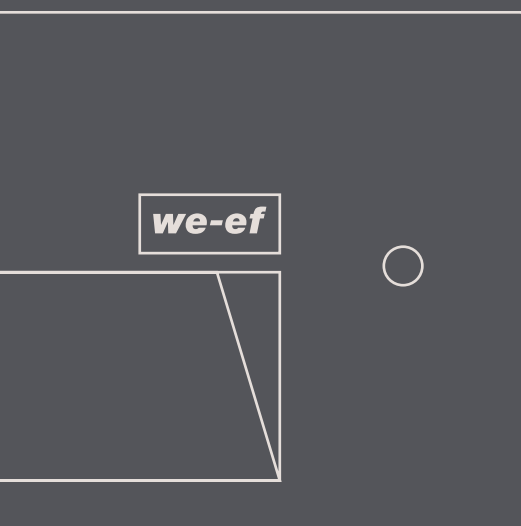


Whenever the elegant integration of lighting into architectural environments is called for, wall luminaires recessed offer many aesthetic and functional advantages.

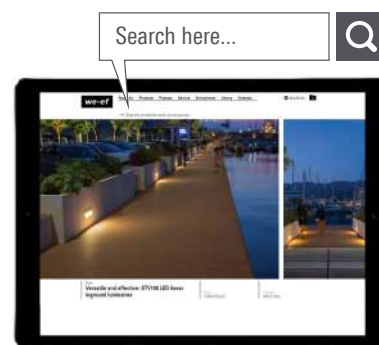
Walls, steps and landings. With wall luminaires recessed, planners can transform diverse structural elements into carriers of light. Because their lighting technology is concealed in the installation space, the luminaires' light emission is all that meets the eye – through diffusely-lit surfaces or as glare-free directional lighting, e.g., for stairs and paths.

For this type of luminaire, easy installation is a decisive factor, as are the effect of the lighting and the quality of the housing. To further ease the process, WE-EF offers installation blockouts for raised or flush mounting and other useful aids.

Wall luminaires recessed



STL100	74-75
SVL100	76-77
STO100	78-79
STI100	80-83
QRO300	84-85
QRI300	86-87



Wall luminaires recessed

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

Quai des Sous-Mariniers

Lighting the Way

Marking safe routes and providing guidance for pedestrians is an important aspect of public lighting. Orientation luminaires and steplights by WE-EF are just the right tools for the job. Mounted close to the ground and featuring excellent glare control, they offer a high level of visual comfort. Shining far into the target area, their light accentuates both the course and condition of paths and stairs. Installed in walls, retaining structures or urban furniture, these luminaires are an effective instrument for functional urban illumination.

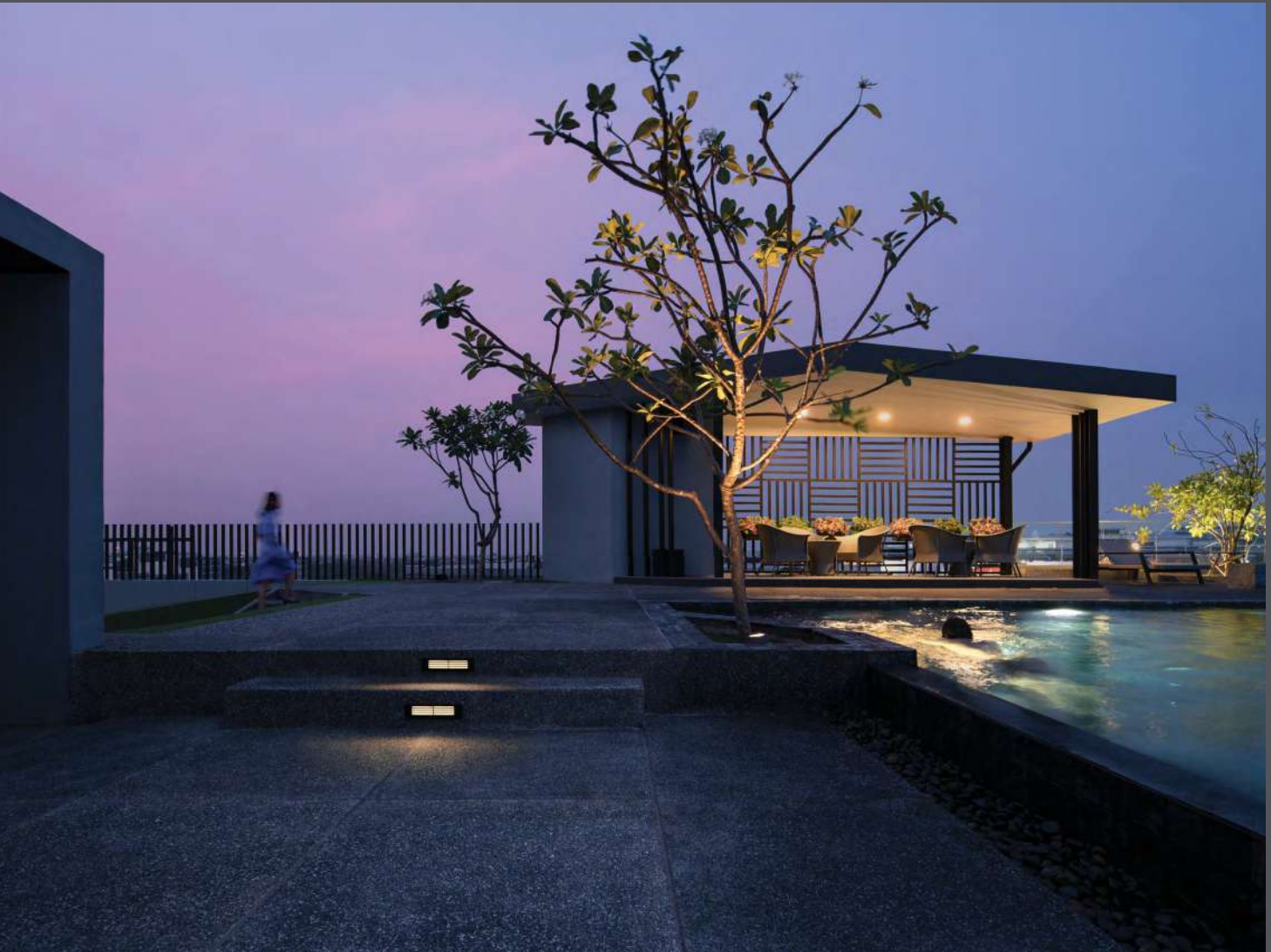
Quai des Sous-Mariniers

Toulon (FR)

Installer: Provelec







Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gasket
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Pre-installation blackout is recommended for mounting in cast concrete for standard version only; to be ordered separately
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK07

Available distribution:
Shielded

Standard colours – AU/NZ

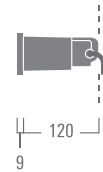
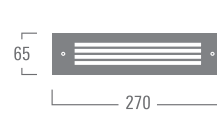


RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



Standard *



Reduced Depth (RD)



Shallow Depth (SD) *

STL134

Shielded

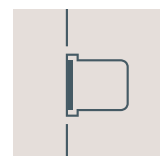
6 W
20 lm

Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate remains proud (9 mm) of wall surface



Type II:
For flush luminaire installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- * Not currently available in AU/NZ



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
Pre-installation blackout is recommended for mounting in cast concrete
for standard version only; to be ordered separately
- Control options: ON/OFF, 1-10 V, DALI

IP66

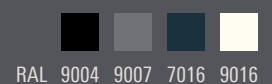
IK07

Available distribution:
Shielded

Standard colours – AU/NZ

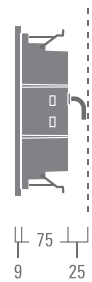


Standard colours – AP





Standard *



Reduced Depth (RD)



Shallow Depth (SD) *

SVL134

Shielded

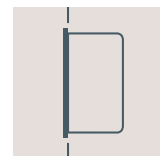
6 W
20 lm

Mounting accessories:

Pre-installation blockouts

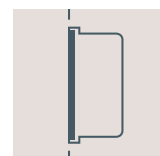
Type I:

Luminaire faceplate remains proud (9 mm) of wall surface



Type II:

For flush luminaire installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- * Not currently available in AU/NZ



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
Pre-installation blackout is recommended for mounting in cast concrete
for standard version only; to be ordered separately
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK07

Available distribution:
Diffused

Standard colours – AU/NZ



RAL 9004 9006 9007 9016 Stainless steel

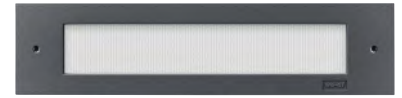
Standard colours – AP



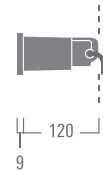
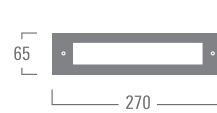
RAL 9004 9007 7016 9016 Stainless steel



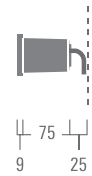
Stainless Steel



5CE Powdercoat finish



Standard *



Reduced Depth (RD)



Shallow Depth (SD) *

ST0134

Diffused

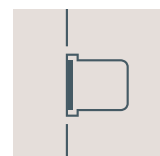
5 W
80 lm

Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate remains proud (9 mm) of wall surface



Type II:
For flush luminaire installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- * Not currently available in AU/NZ



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
Pre-installation blackout is recommended for mounting in cast concrete
for standard version only; to be ordered separately
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK07

Available distribution:
'Floor wash'

Standard colours – AU/NZ

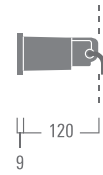


RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



Standard *



Reduced Depth (RD)



Shallow Depth (SD) *

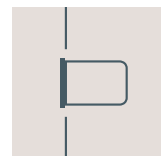
STI134

'Floor wash'

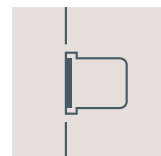
6 W
170 lm

Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate remains proud (9 mm) of wall surface



Type II:
For flush luminaire installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- * Not currently available in AU/NZ

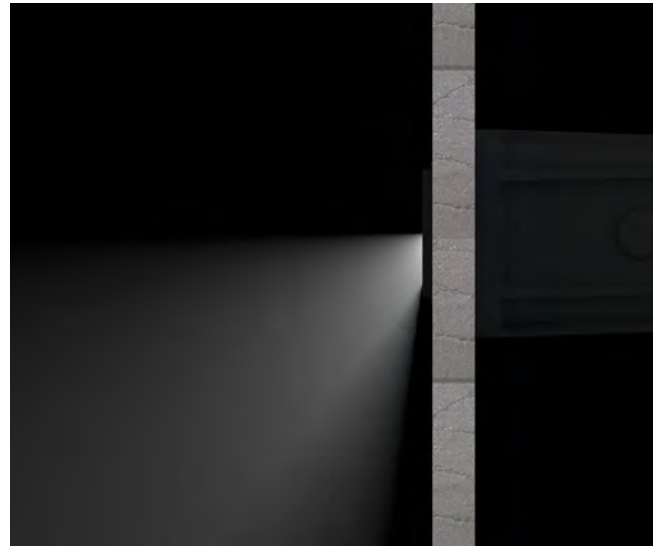
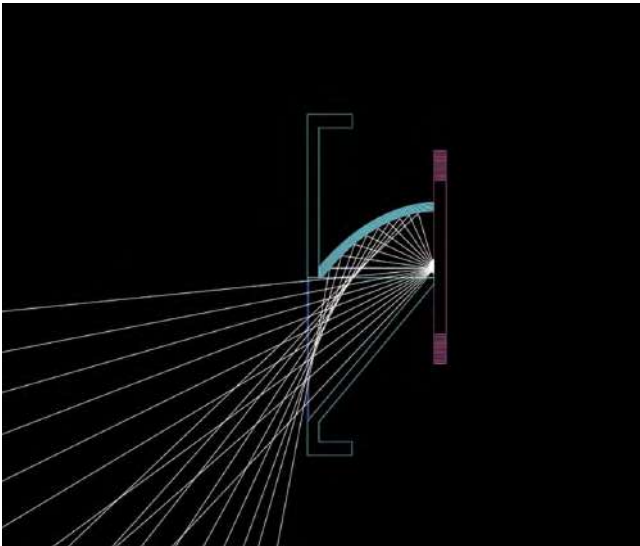
Steplight Variations

Depending on their respective areas of application, steplights are available in different shapes, forms and functions. Among the luminaires featured in this catalogue, the STI134 deserves special attention – its optical system has been designed to ensure glare-free visual comfort while delivering a broad 'floor wash'. Whether chosen for the illumination of stairs, terraces, pathways or otherwise, this steplight convinces users with its illumination qualities, minimalistic aesthetics, low energy consumption and longevity.



Steplight Performance

This illustration depicts the respective photometric performances of WE-EF steplights in terms of floor wash capabilities (illuminance) as well as glare potential (surface luminance).



STI134 Ray-tracing

This CAD ray-tracing simulation demonstrates the combined forward and downward distribution by the luminaire's unique reflector element. An additional refractor lens ensures simultaneous sideward distribution of the light.



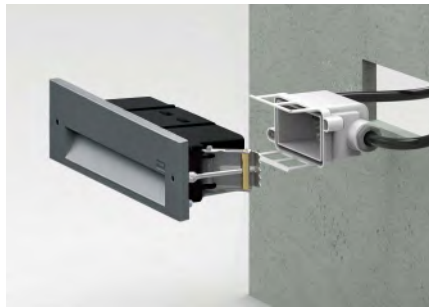
STI134 Application

This steplight, in particular, features an outstanding combination of floor wash and glare control qualities. (Performance varies, depending on powdercoat finish selection for the faceplate).



[Factory-sealed]

This unique feature is found in the majority of WE-EF's LED luminaires that consequently do not need to be opened during installation. A contractor's job has never been faster, more economical and straight-forward.



'Standard' version – Depth 120 mm

Control options: ON/OFF, 1-10 V, DALI

Installation: In stud walls, concrete niches or by means of optional BST installation blackout

Not currently available in AU/NZ



'Reduced Depth' (RD) version – Depth 100 mm

Control options: ON/OFF, 1-10 V, DALI

Installation: In stud walls and concrete niches



'Shallow Depth' (SD) version – Depth 50 mm

Control option: ON/OFF, 1-10 V, DALI

Installation: In stud walls and concrete niches

Not currently available in AU/NZ



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Installation: Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control options: ON/OFF, 1-10 V, DALI
Integral motion sensor; refer to www.we-ef.com

IP55

IK10



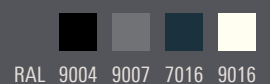
Train station Berlin Südkreuz
Berlin (DE)
Architect: J.S.K. GmbH
Lighting design: DE Consult

Available distribution:
Diffused

Standard colours – AU/NZ



Standard colours – AP





QR0359

Diffused
12 W
670 lm



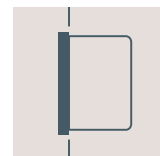
QR0379

Diffused
24 W
1380 lm

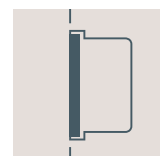


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (25 mm)
of wall surface



Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone rubber gasket
- Installation: Pre-installation blockout is recommended for mounting in cast concrete; to be ordered separately
- Control options: ON/OFF, 1-10 V, DALI

IP55

IK08

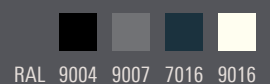
John Curtain School of Medical Research
 Canberra (AU)
 Architect: Lyons
 Lighting design: Umow Lai & Associates

Available distribution:
 'Forward throw'

Standard colours – AU/NZ



Standard colours – AP





QR1354

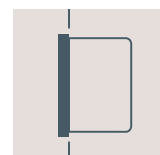
'Forward throw'

6-12 W
390-800 lm

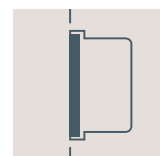


Mounting accessories:
Pre-installation blockouts

Type I:
Luminaire faceplate
remains proud (25 mm)
of wall surface

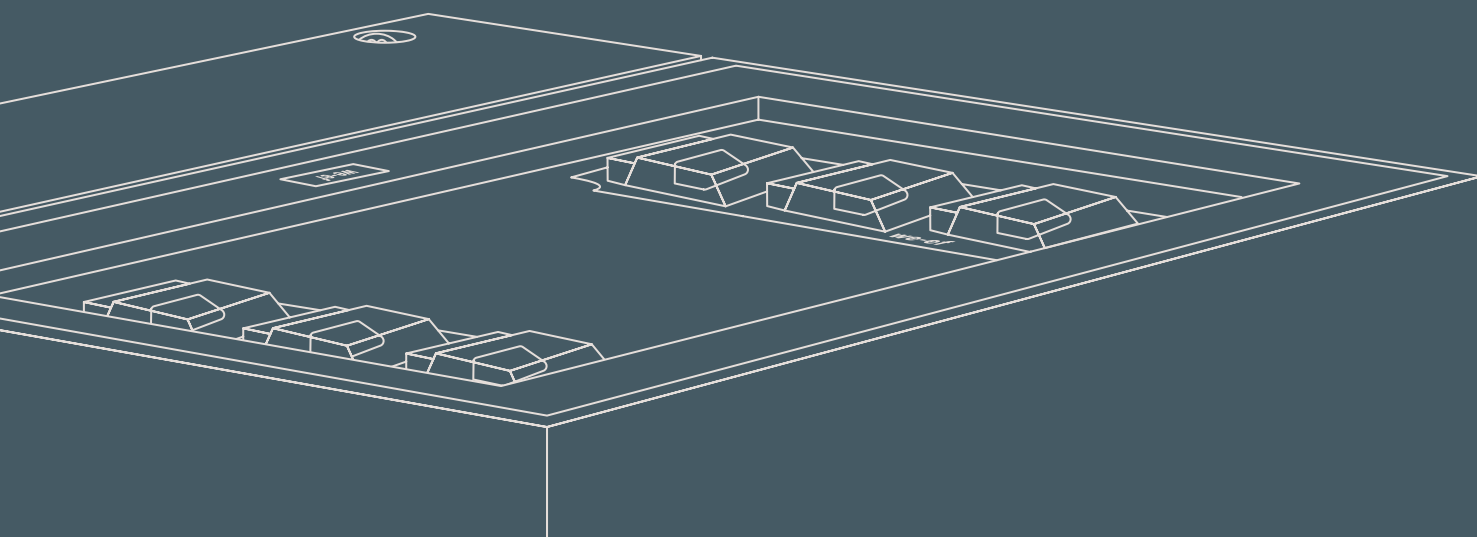


Type II:
For flush luminaire
installation



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$

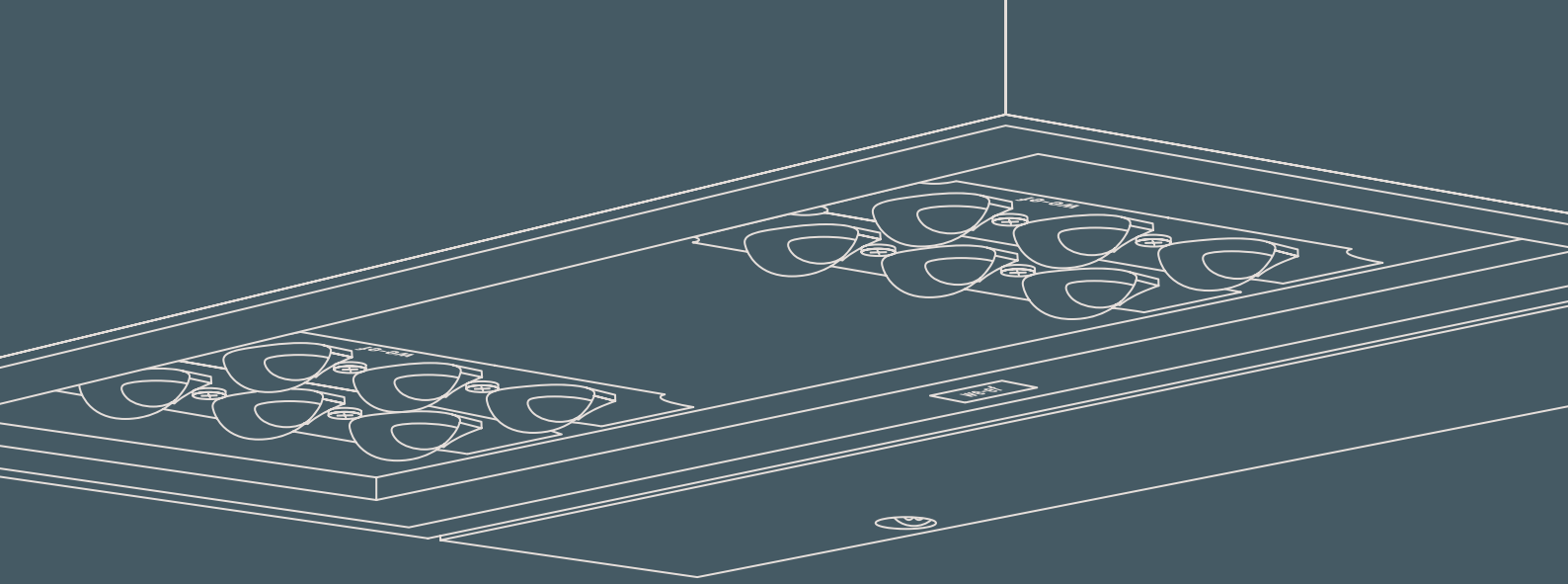
Wall luminaires surface mounted



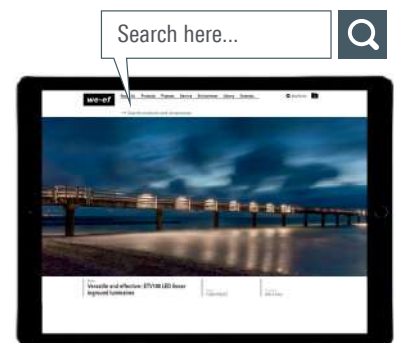
Versatile. Effective. Easily installed. Wall luminaires surface mounted by WE-EF are the straightforward way to excellent exterior lighting.

These multi-purpose lighting tools are perfect for a wide variety of tasks including setting the stage for architecture with linear lighting; flooding walls and ceilings; marking paths and walkways; and illuminating areas and passages with directional or diffused, glare-free light.

Their common denominator is hassle-free installation. A solid surface and a supply line are all that is needed. This ease of installation is what makes this type of luminaire particularly suitable for upgrading existing projects.



VLR100	92-95
PLS400	96-99
QLS400	100-103
RLS400	104-105
SLS400 / VLS400	106-107
OLV300	110-111
FLC102	112-113
FLA400 Wall bracket	114-115
PIA200	116-117
XLO200 / DLO200 / DLG200	118-119
DLS200 / DLB200	118-119
QLO200	120-121



Wall luminaires surface mounted

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

The Pier Heiligendamm

Lights Above the Sea

With its unique atmosphere, the famous pier of Baltic seaside resort Heiligendamm is a 200-metres-long invitation to promenade and linger. The lighting concept was exclusively implemented with WE-EF luminaires, known to withstand even the harshest weather conditions. Within the used lighting portfolio, VLR100 linear surface mounted luminaires feature prominently; integrated into the bridge railing, their asymmetrically distributed light provides targeted illumination for the pier's traffic layer.





The Pier

Heiligendamm (DE)

Light planning: Institut für Gebäude + Energie + Licht Planung,
Prof. Dr.-Ing. Thomas Römhild, Wismar



- Luminaire housing: Marine-grade, all-aluminium construction
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: PMMA
- Gasketing: Silicone rubber gasket
- Optic: IOS® Innovative Optical System
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control option: DALI

IP66

IK09

The Pier

Heiligendamm (DE)

Lighting design: Institut für Gebäude + Energie
+ Licht Planung, Prof. Dr. Ing. Thomas Röhmhild**Available distributions:**

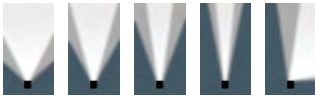
[LB] [LM] [LE] [LEE] [LA10]

Standard colours – AU/NZ

RAL 9004 9006 9007 9016

Standard colours – AP

RAL 9004 9007 7016 9016



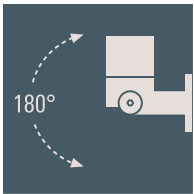
- [LB] Symmetric linear, wide beam
- [LM] Symmetric linear, medium beam
- [LE] Symmetric linear, narrow beam
- [LEE] Symmetric linear, very narrow beam
- [LA10] Asymmetric linear, wallwash



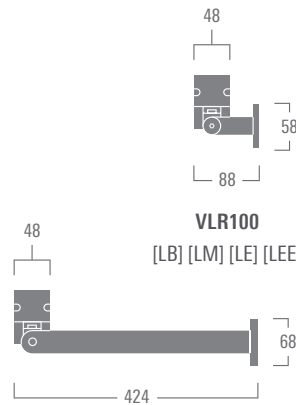
VLR100
[LB] [LM] [LE] [LEE]



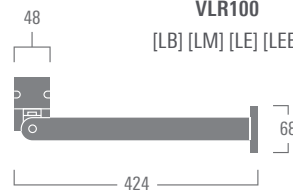
VLR100
[LA10]



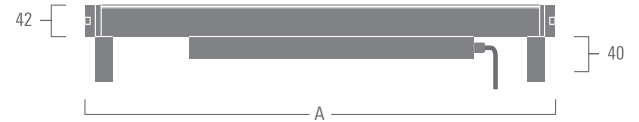
180° Vertical aiming range



VLR100
[LB] [LM] [LE] [LEE]



VLR100
[LA10]



	A
VLR110	328
VLR120	628
VLR130	928
VLR140	1228
VLR150	1528

VLR110

[LB] [LM] [LE] [LEE]

10 W
960-1200 lm

VLR120/130/140

[LB] [LM] [LE] [LEE] [LA10]

20 W
1920-2410 lm

[LB] [LM] [LE] [LEE] [LA10]

30 W
2870-3610 lm

[LB] [LM] [LE] [LEE] [LA10]

40 W
3830-4810 lm

VLR150

[LB] [LM] [LE] [LEE]

50 W
4790-6010 lm

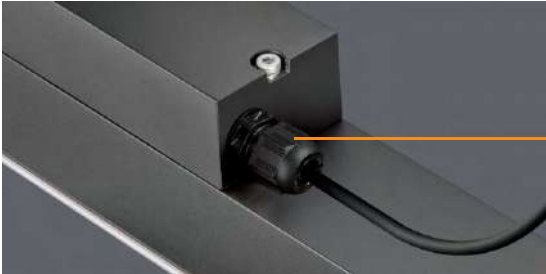


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$

Linear Luminaires – Ideal for Wallwashing

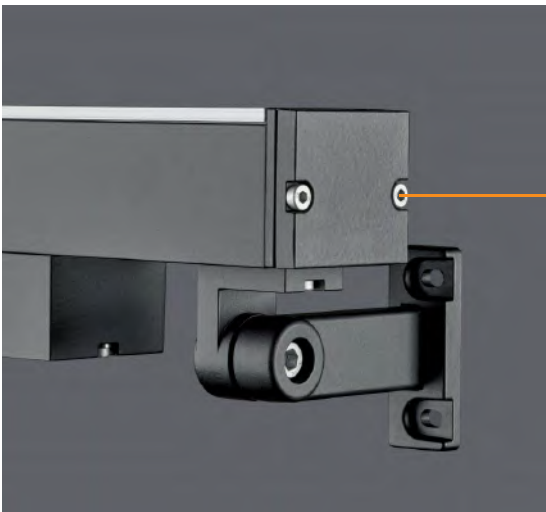
Whether it is straightforward uniformity of light that is required for a feature wall, or highly creative lighting effects on an embellished vertical surface, linear luminaires often deliver – or are at least part of – the solution. With a choice of five distinctly different light distributions, the VLR100 series luminaires offer lighting professionals unprecedented planning freedom while working on either small- or large-scale projects.





[Factory-sealed]

Luminaire does not need to be opened during installation.
IP68 cable gland.



PCS Polymer Coated Stainless Steel

WE-EF's PCS fasteners protect against galvanic corrosion,
thereby enhancing product longevity and serviceability.



180° Vertical Aiming Range

This linear wall luminaire offers vast flexibility when it
comes to precisely directing the light to fulfill project and
on-site requirements.



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK08

Available distributions:
[M] [E] [S70] [A60] [R65]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



- [M] Symmetric, medium beam
- [E] Symmetric, narrow beam
- [S70] Asymmetric 'side throw'
- [A60] Asymmetric 'forward throw'
- [R65] Rectangular 'side throw'



Suitable for downlighting, façade and uplighting applications

PLS420

[M] [E] [S70] [A60] [R65]

12-26 W
800-2400 lm
Max. 1 internal accessory



PLS430

[M] [E] [S70] [A60] [R65]

24-52 W
1600-4800 lm
Max. 1 internal accessory

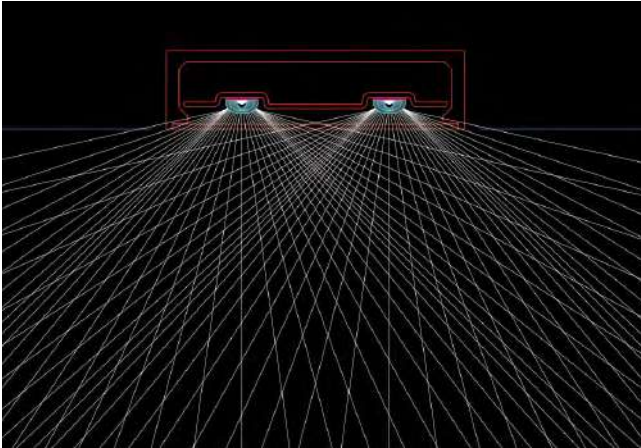


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

**PLS400 [A60] Typical Uplighting Application**

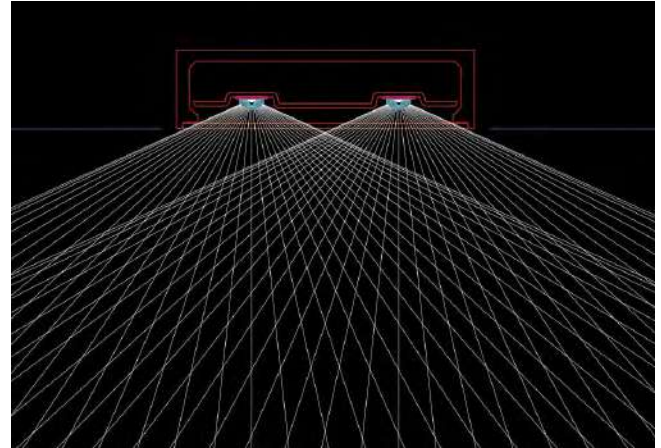
With five different light distributions to choose from, the PLS400 series luminaires are ideal tools for a large variety of façade and area lighting applications, especially in an architectural setting.





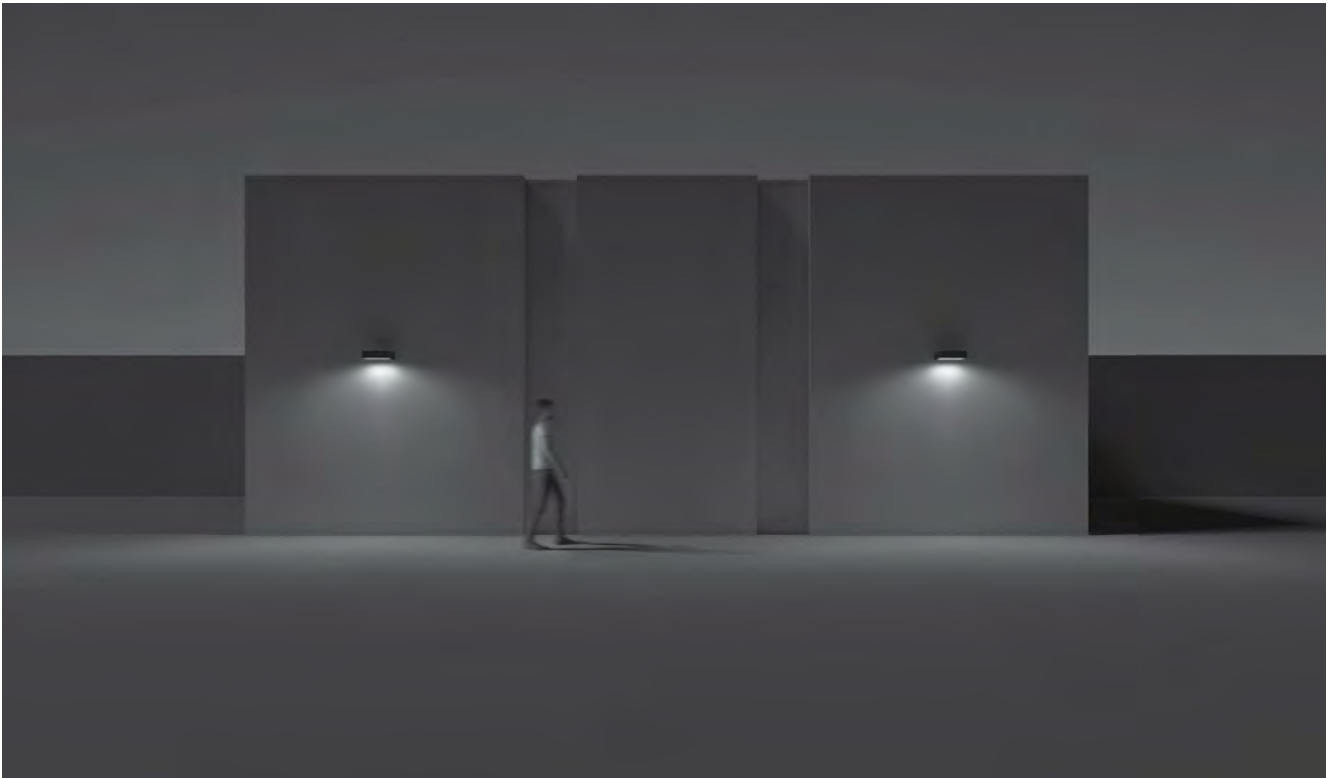
PLS420 [S70] Ray-tracing

This CAD ray-tracing simulation demonstrates the outstanding [S70] Asymmetric 'side throw' light distribution as well as its glare control qualities.



PLS420 [R65] Ray-tracing

The [R65] optics deliver rectangular 'side throw' distribution for applications where larger area coverage is required.



PLS420 [S70]

The [S70] optical system allows for large spacing intervals between luminaires, as demonstrated in this typical application example.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK07

Available distributions:

[R45] [M] [E] [S]
 [R45/R45] [M/R45] [E/R45]
 [M/M] [E/M] [E/E] [M/S] [E/S]

Standard colours – AU/NZ


 RAL 9004 9006 9007 9016

Standard colours – AP


 RAL 9004 9007 7016 9016



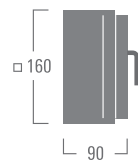
[R45] Rectangular 'side throw'
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam
 [S] Asymmetric 'side throw'



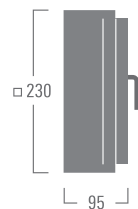
[R45/R45] 'Side throw', up and down
 [M/R45] Medium beam up, 'side throw' down
 [E/R45] Narrow beam up, 'side throw' down
 [M/M] Medium beam, up and down
 [E/M] Narrow beam up, medium beam down
 [E/E] Narrow beam, up and down
 [M/S] Medium beam up, 'side throw' down
 [E/S] Narrow beam up, 'side throw' down

Suitable for downlighting, façade and uplighting applications

QLS410	One-sided	Two-sided
	[R45] [M] [E] [S]	[R45/R45] [M/R45] [E/R45] [M/M] [E/M] [E/E] [M/S] [E/S]
	6-13 W 470-1130 lm	12-26 W 970-2260 lm



QLS420	One-sided	Two-sided
	[R45] [M] [E] [S]	[R45/R45] [M/R45] [E/R45] [M/M] [E/M] [E/E] [M/S] [E/S]
	12-26 W 940-2260 lm	24-52 W 1930-4520 lm



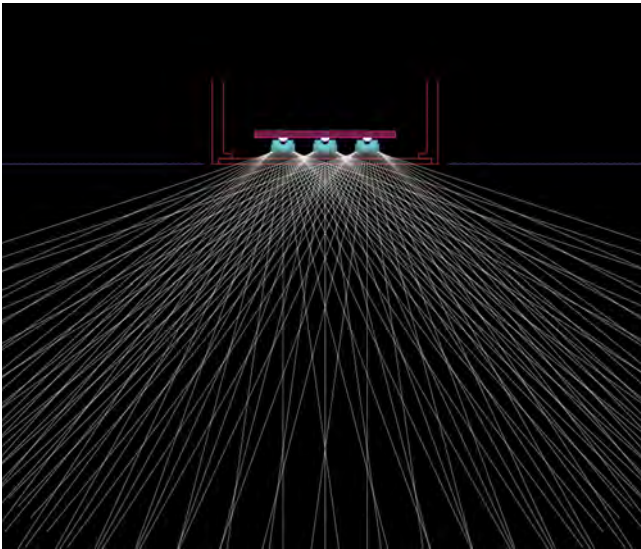
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

▪ ADA (American Disability Act) compliant



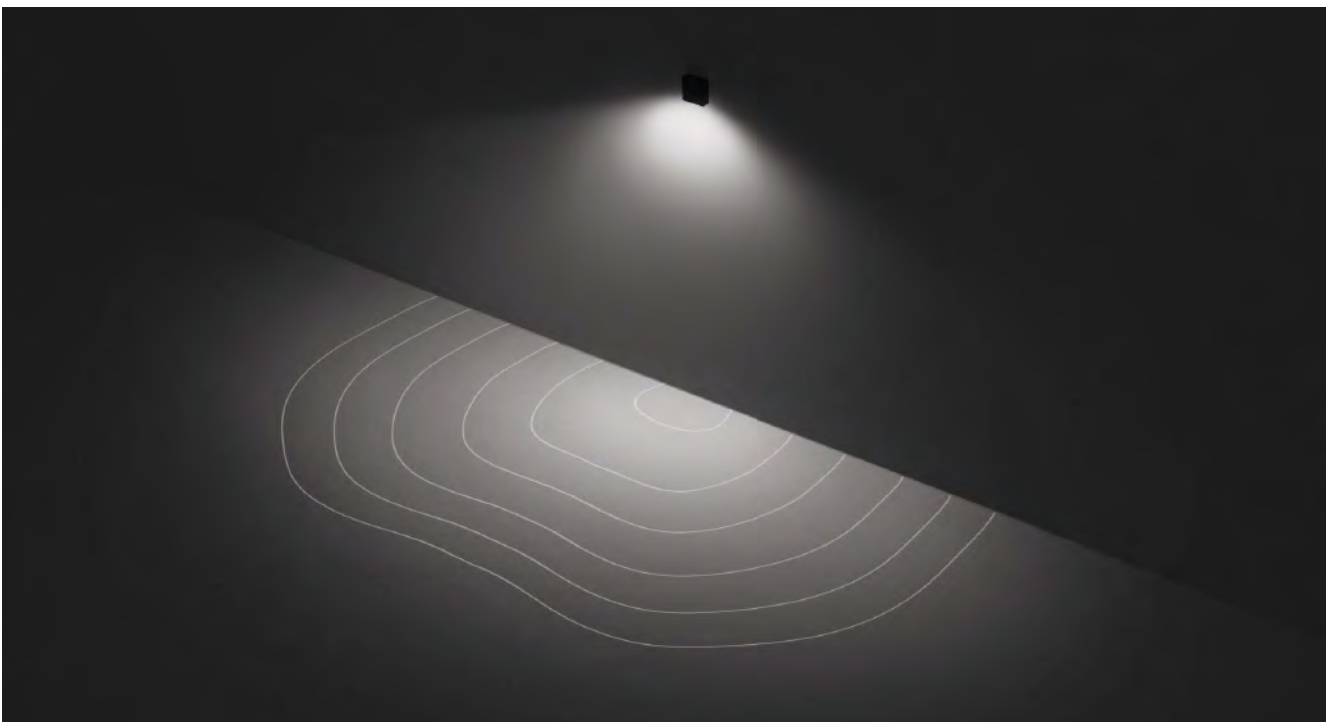
Minimalist Aesthetics

The luminaire can be seamlessly integrated into architecture to provide functional lighting for various applications ranging from illuminating buildings, façades and more. Shown on this page is an example of a QLS410 [R45] installation.



QLS410 [R45] Ray-tracing

This CAD ray-tracing simulation demonstrates the [R45] optics' broad downward light distribution as well as its glare control qualities. The combined 'side throw' and 'forward throw' of light delivers uniform coverage for large areas.



Area and Pathway Lighting Qualities

Typical isolux diagram of a single-unit QLS410 [R45] installation. Several luminaires installed in a row provide excellent illumination for a building's passageways, its perimeter etc.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK08

Available distributions:
[R45] [M] [E]

Standard colours – AU/NZ



Standard colours – AP





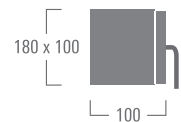
[R45] Rectangular 'side throw'
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam



Suitable for downlighting, façade and uplighting applications

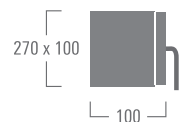
RLS410

[R45] [M] [E]
 6-13 W
 460-1200 lm
 Max. 1 internal accessory



RLS420

[R45] [M] [E]
 12-26 W
 930-2400 lm
 Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

- ADA (American Disability Act) compliant



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone rubber gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK07

Available distributions:
[M] [E] [A60]
[M/M] [E/M] [E/E] [M/A60] [E/A60]

Standard colours – AU/NZ



Standard colours – AP





[M] Symmetric, medium beam
 [E] Symmetric, narrow beam
 [A60] Asymmetric 'forward throw'



[M/M] Medium beam, up and down
 [E/M] Narrow beam up, medium beam down
 [E/E] Narrow beam, up and down
 [M/A60] Medium beam up, 'forward throw' down
 [E/A60] Narrow beam up, 'forward throw' down



SLS400



VLS400

Suitable for downlighting, façade and uplighting applications

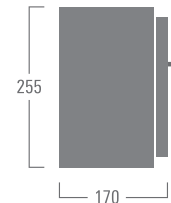
SLS410 / VLS410

One-sided
 [M] [E] [A60]

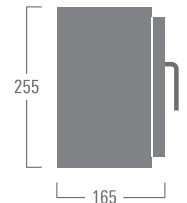
6-13 W
 220-1130 lm

Two-sided
 [M/M] [E/M] [E/E] [M/A60] [E/A60]

12-26 W
 720-2260 lm



SLS410



VLS410

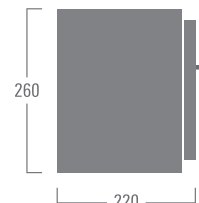
SLS420 / VLS420

One-sided
 [M] [E] [A60]

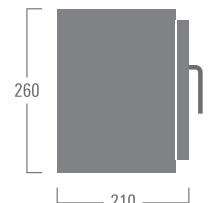
12-26 W
 720-2260 lm

Two-sided
 [M/M] [E/M] [E/E] [M/A60] [E/A60]

24-52 W
 1720-4520 lm



SLS420



VLS420



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Noltemeyer Bridge Urban Railway Station

Hannover (DE)

Light planning: Üstra Hannover



Noltemeyer Bridge Urban Railway Station

A Timely Blend of Functionality and Aesthetics

The distinct shape of WE-EF's OLV330 wall luminaires surface mounted perfectly matches the contemporary design of this highly frequented steel bridge across Hannover's Mittelland Canal, which also serves as a stop for the urban light rail system. While emphasising the structure of the bridge girders, the light distribution also fulfils all requirements for safe, pleasant and economical platform lighting.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass. Polycarbonate, UV-stabilised for IK10 – on request
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation
Control options:	ON/OFF, 1-10 V, DALI

OLV330 / OLV334

IP65

IK08

OLV340 / OLV344

IP65

IK07

Henry Rolland Park
Canberra (AU)
Lighting design: John Raineri & Associates

Available distributions:
[M] [EES]
[S70] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





- [M] Symmetric, medium beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'
- [S70] Asymmetric 'side throw'
- [A60] Asymmetric 'forward throw'
- [R65] Rectangular 'side throw'



Luminaire can be mounted for up or down lighting

OLV330

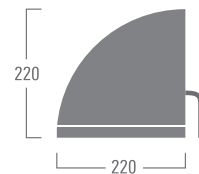
[M] [EES]

12-18 W
1390-1960 lm

OLV334

[S70] [A60] [R65]

12-24 W
1210-2340 lm



OLV330/334

OLV340

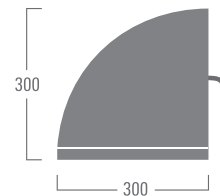
[M] [EES]

24-36 W
2800-4110 lm

OLV344

[S70] [A60] [R65]

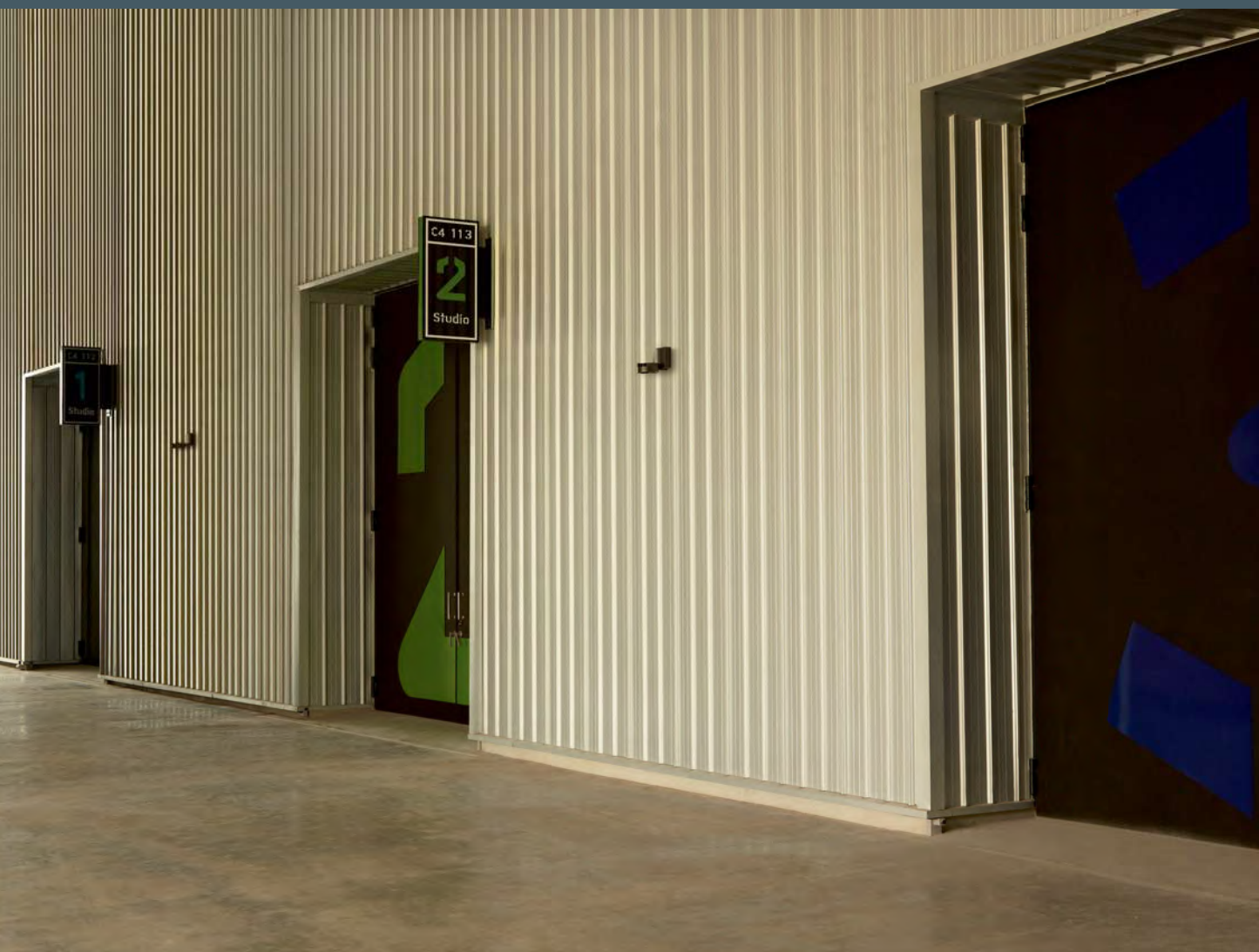
24-48 W
2420-4680 lm



OLV340/344



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Mains connection:	FLC122 – one cable entry FLC142 – two cable entries
Control options:	ON/OFF, 1-10 V, DALI

IP55

IK07

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



Standard colours – AP





- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'

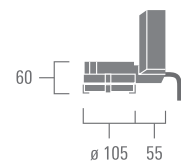


FLC122

[B] [M] [EE] [EES]

12 W

1140-1370 lm

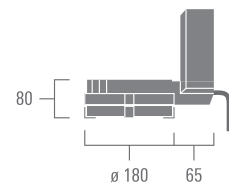


FLC142

[B] [M] [EE] [EES]

48 W

4570-5460 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: One cable gland
- Control options: ON/OFF, 1-10 V or DALI on request

IP66

IK08

O2 Arena
London (UK)
Architect: HOK Sports
Lighting design: ME Engineers

Available distributions:
[S65] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





[S65] Asymmetric 'side throw'

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



Suitable for downlighting, façade and uplighting applications

For matching pole mounted luminaires, refer to page 320

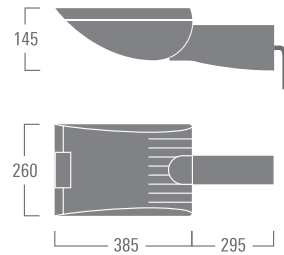
FLA441

[S65] [A60] [R65]

36-54 W

3230-5630 lm

Max. 1 internal accessory (36 W only)



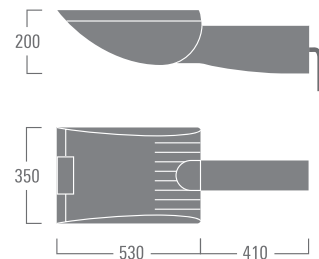
FLA461

[S65] [A60] [R65]

72-108 W

6460-11250 lm

Max. 1 internal accessory (72 W only)



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: Two cable entries
- Control options: ON/OFF, 1-10 V or DALI on request

IP66

IK08

McCarran International Airport Terminal 3
Las Vegas (US)
Lighting design: Horton Lees Brogden

Available distributions:
[S65] [A60] [R65]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



[S65] Asymmetric 'side throw'
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'

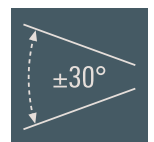
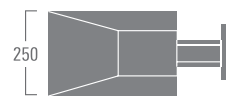
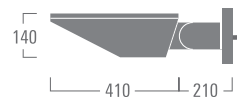


Suitable for downlighting and uplighting applications

PIA230

[S65] [A60] [R65]

24-36 W
 2060-3540 lm
 Max. 1 internal accessory

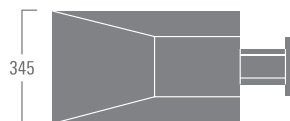
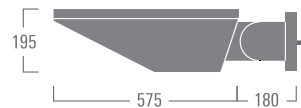


Tilt angle

PIA240

[S65] [A60] [R65]

54-72 W
 5240-7500 lm
 Max. 1 internal accessory



Tilt angle



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing: Marine-grade, die-cast aluminium alloy

Corrosion protection: 5CE, including PCS hardware

Driver: Integral EC electronic converter

Main lens: Polycarbonate, UV-stabilised

Gasketing: Silicone rubber gasket

Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept

Installation: FS Factory-sealed luminaire does not need to be opened during installation
Integral motion sensor is factory-installed, must be specified at time of ordering

Control options: ON/OFF, 1-10 V, DALI
Integral motion sensor; refer to www.we-ef.com

IP55

IK10



The National Museum of Liverpool
Liverpool (UK)
Architect: 3XN & AEW
Lighting design: Buro Happold Lighting

Available distribution:
Diffused

Standard colours – AU/NZ



Standard colours – AP





XLO200



DLO200



DLG200



DLS200



DLB200

XLO229

Diffused

12 W
1040 lm

XLO239

Diffused

24 W
2150 lm

DLO229 / DLG229

Diffused

12 W
1040 lm

DLO239 / DLG239

Diffused

24 W
2150 lm

DLS229 / DLB229

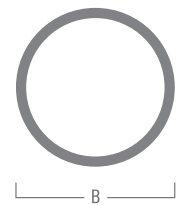
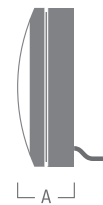
Diffused

12 W
730 lm

DLS239 / DLB239

Diffused

24 W
1510 lm



	A	B
XLO229	85	ø 300
XLO239	125	ø 400
DLO229	85	ø 262
DLO239	125	ø 350
DLG / DLS / DLB229	100	ø 262
DLG / DLS / DLB239	140	ø 350



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$

- ADA (American Disability Act) compliant; for listed versions only XLO229 / DLO229 / DLG229 / DLS229 / DLB229



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Optics: CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF, 1-10 V, DALI

IP55

IK10

Medienzentrum

Leipzig (DE)

Architect: Architekturbüro von Gerkan,
Marg und Partner

Lighting design: Ebert-Ingenieure

Available distribution:

Diffused

Standard colours – AU/NZ

RAL 9004 9006 9007 9016

Standard colours – AP

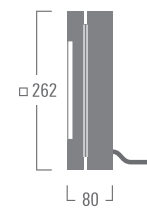
RAL 9004 9007 7016 9016



QL0229

Diffused

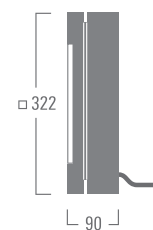
6 W
160 lm



QL0239

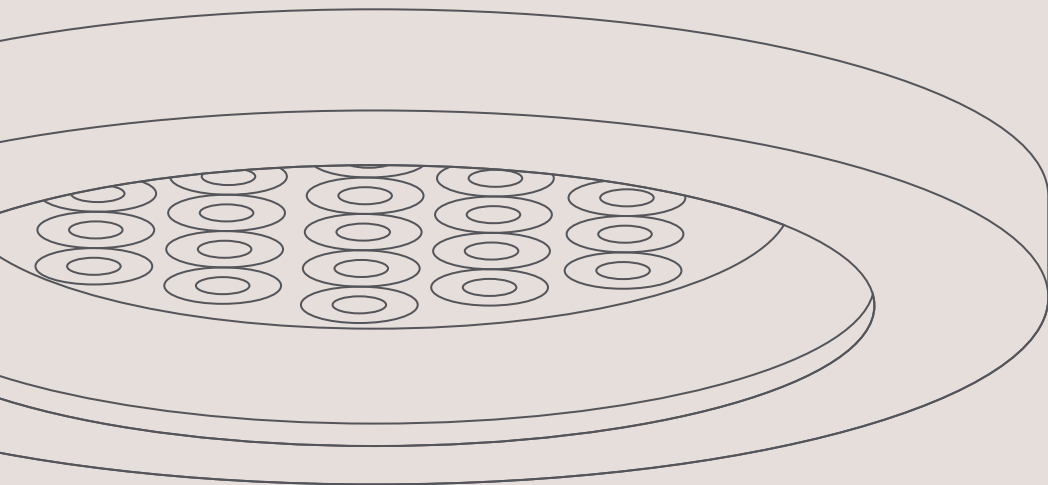
Diffused

8 W
290 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$

- ADA (American Disability Act) compliant

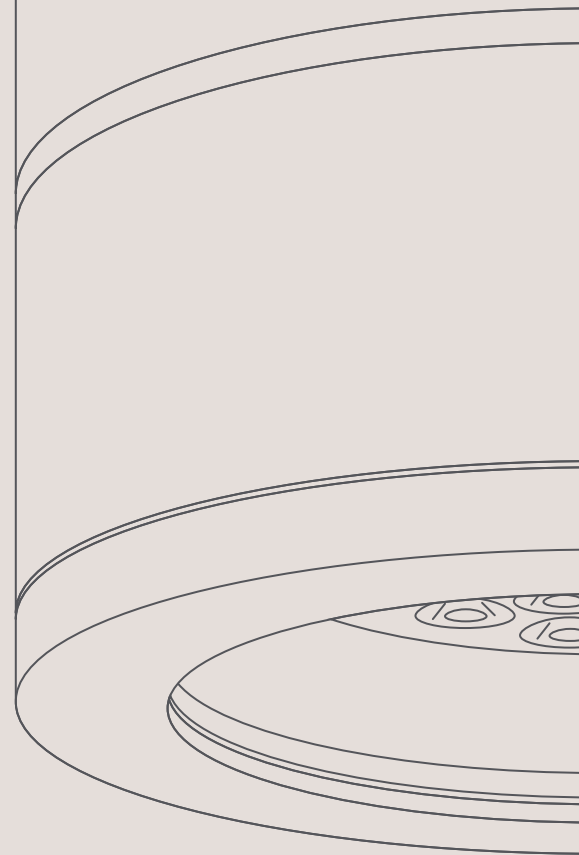


WE-EF ceiling luminaires enable the seamless continuation of lighting concepts from the interior to the exterior.

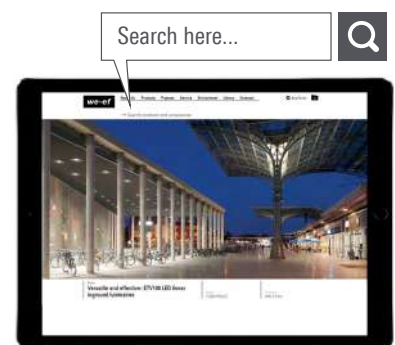
Indoors, ceiling luminaires are the tool of choice for all general lighting purposes – but there are also many mounting positions in architectural lighting exteriors, such as canopies, passageways or façade overhangs.

All of them are uncompromisingly designed for durability – no matter how challenging the conditions – with carefully sealed, closed housings, long-lasting materials and corrosion-resistant surfaces.

Ceiling luminaires

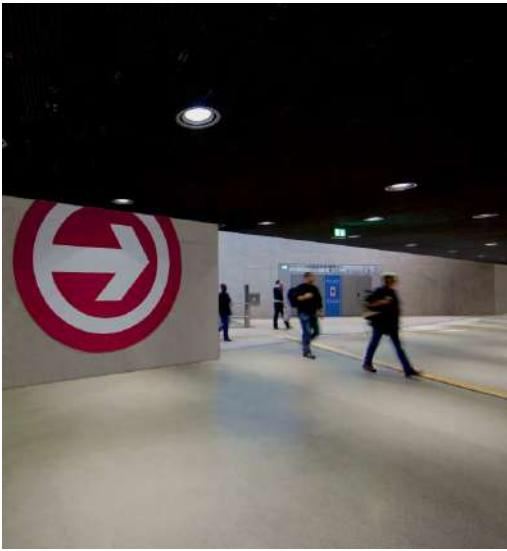


DOR100	126-127
DOC100 / DAC100	128-129
DOC100-FT / DOC200-FT	130-133
DOC100-FT TW	134-135
DOC200-GB / DAC200-GB	136-137
DOC200 / DAC200	138-141



Ceiling luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



Breslauer Platz Underground Station

A Brighter Day Underground

Located on the north side of Cologne's main railway hub, this newly-built underground station is marked by classic elegance and transparent architecture. To uphold and even enhance its bright and friendly atmosphere by night, more than 370 WE-EF luminaires are at work – a combination of DOC240 and DAC240 recessed and surface mounted ceiling luminaires deliver excellent visual conditions for passengers, passers-by and railway staff.

Breslauer Platz Underground Station

Cologne (DE)

Project owner: KVB Kölner Verkehrs-Betriebe

Architects: Büder + Menzel Architekten BDA

Light planning: Licht Kunst Licht AG





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Pre-installation blackout is recommended for mounting in cast concrete ceilings; to be ordered separately
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK08

Gaysorn Village
Bangkok (TH)
Lighting design: APLD & LPA

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



Standard colours – AP



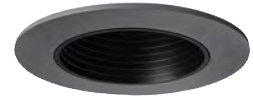


[B] Symmetric, wide beam

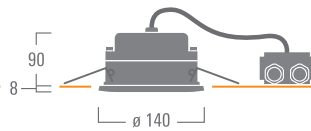
[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'



DOR120



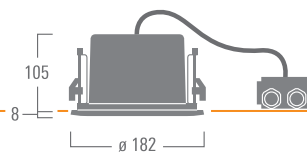
[B] [M] [EE] [EES]

12-18 W

1140-1960 lm

Max. 1 internal accessory

DOR130

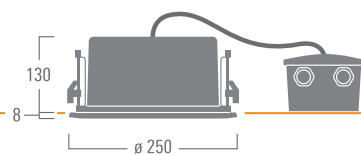


[B] [M] [EE] [EES]

24-36 W

2300-3920 lm

DOR140



[B] [M] [EE] [EES]

48-72 W

4570-7850 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 140-141



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Pre-installation blackout is recommended for mounting in cast concrete ceilings; to be ordered separately
Control options:	ON/OFF, DALI (on request)





IP66

IK07





Park Hyatt
Bangkok (TH)
Architect: AL_A London
Lighting design: Inverse Thailand / London

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ

			
RAL 9004	9006	9007	9016

Standard colours – AP

			
RAL 9004	9007	7016	9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

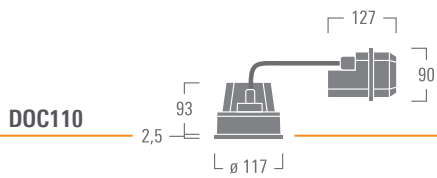
[EES] Symmetric, very narrow beam, 'sharp cut-off'



DOC100

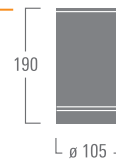


DAC100

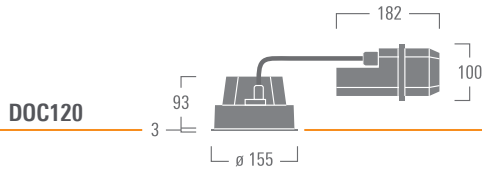


DOC110

DAC110

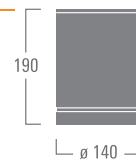


[B] [M] [EE] [EES]
6-12 W
550-1370 lm
Max. 1 internal accessory

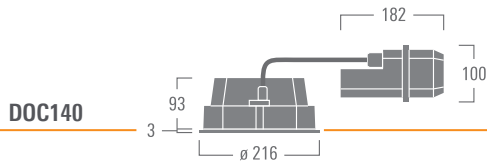


DOC120

DAC120

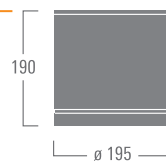


[B] [M] [EE] [EES]
24 W
2040-2610 lm
Max. 1 internal accessory

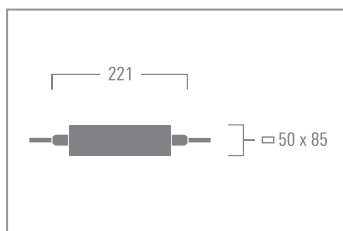


DOC140

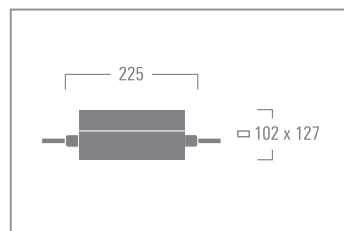
DAC140



[B] [M] [EE] [EES]
48 W
4570-5460 lm
Max. 1 internal accessory



Gear box for DOC110 / DOC120
AU/NZ version



Gear box for DOC140
AU/NZ version



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 140-141



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass DOC200 – Safety glass hinged, frame with safety catch
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimise darklight reflector, anodised aluminium
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Pre-installation blackout is recommended for mounting in cast concrete ceilings; to be ordered separately
Technology:	Darklight Reflector Technology, refer to page 368
Control options:	ON/OFF, DALI (on request)

IP66

IK07

Available distributions:
[B] [M] [E]

Standard colours – AU/NZ



Standard colours – AP





[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam

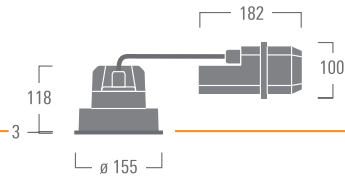


DOC100-FT



DOC200-FT

DOC120-FT

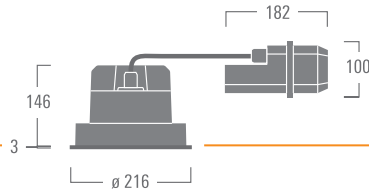


[B] [M] [E]

17-24 W
 820-2420 lm

Max. 1 internal accessory

DOC140-FT

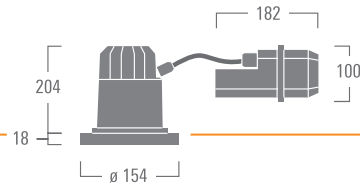


[B] [M] [E]

24-37 W
 1290-3430 lm

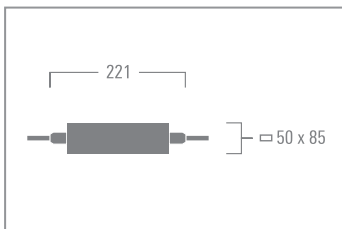
Max. 1 internal accessory

DOC220-FT

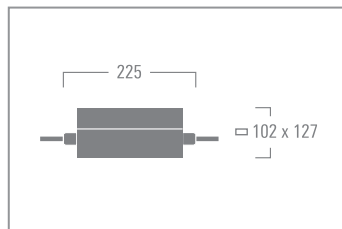


[B]

24 W
 2430 lm



Gear box for DOC120-FT / DOC220-FT
 AU/NZ version



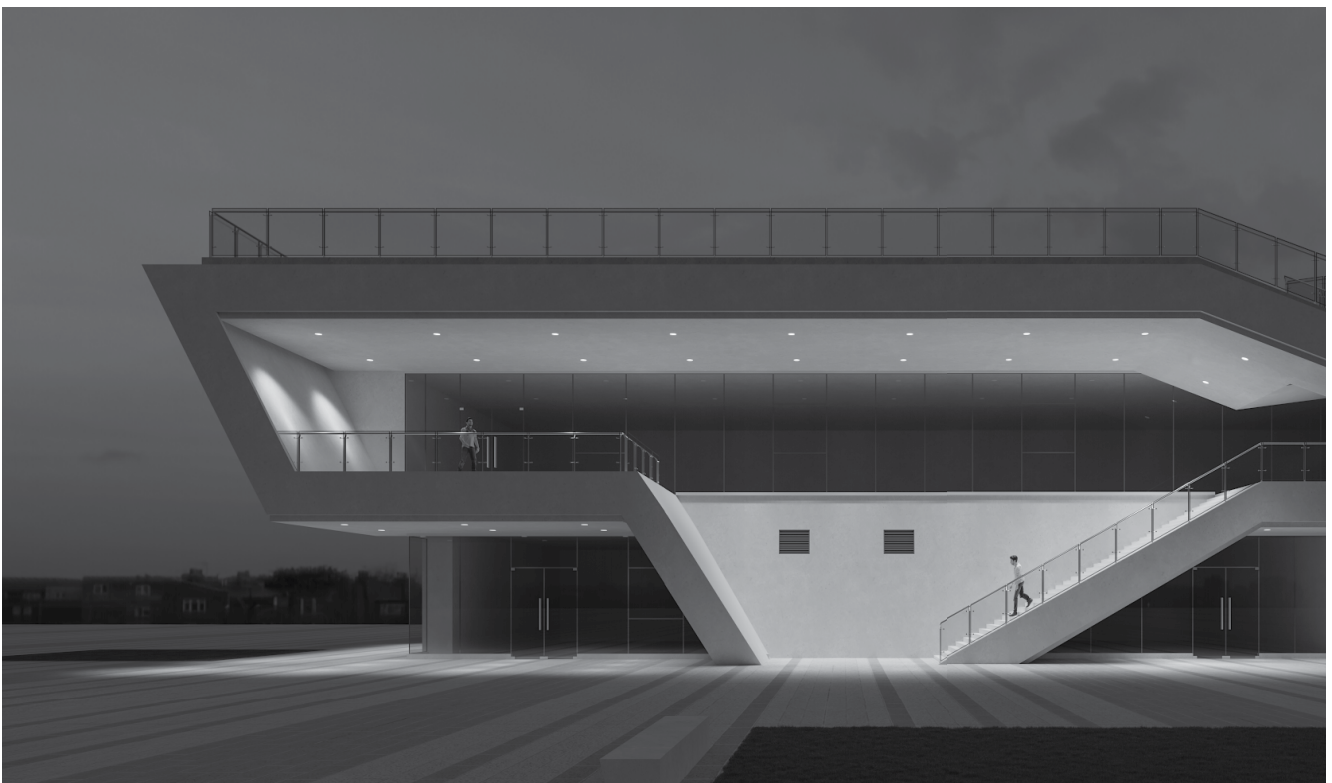
Gear box for DOC140-FT
 AU/NZ version

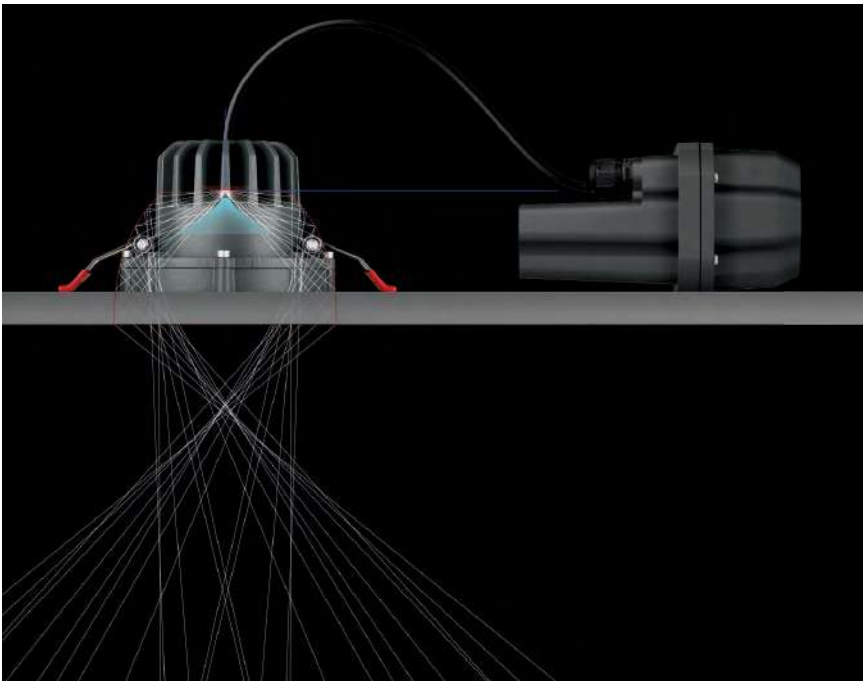


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 140-141

Architecture made to shine

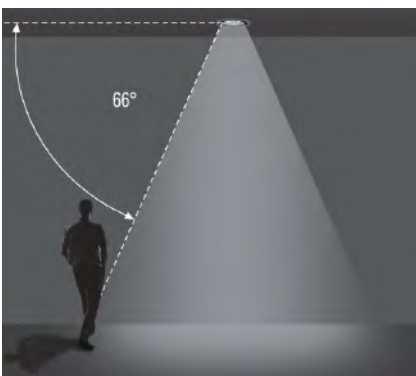
In modern architecture, exterior spaces are often an extension of the interior - and vice versa. Unobtrusive luminaires such as the WE-EF DOC100 downlight series are ideal tools for making the architecture take centre stage. A host of available light distributions and controls allow effective illumination of horizontal and vertical surfaces – bright where needed, subtle where desired – while ensuring excellent glare control and visual comfort.



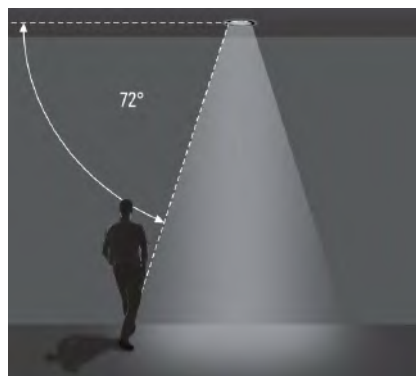


DOC100-FT Darklight ray-tracing

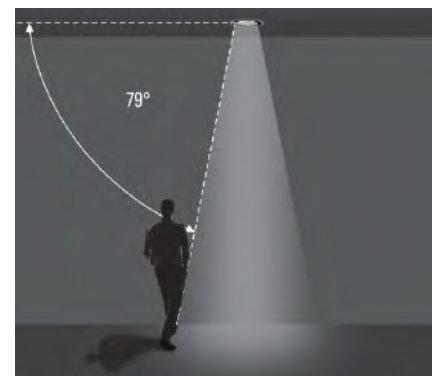
This CAD ray-tracing simulation demonstrates the darklight reflector's combined light control and shielding qualities. While the former quality ensures uniform illumination of the target surface, the latter prevents direct eye contact with the light source.



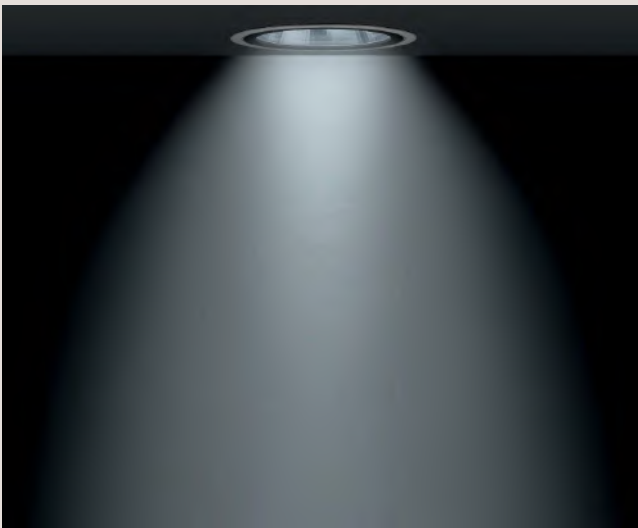
[B] Wide beam
66° shielding angle



[M] Medium beam
72° shielding angle



[E] Narrow beam
79° shielding angle



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised darklight reflector, anodised aluminium
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
Pre-installation blackout is recommended for mounting in cast concrete ceilings;
to be ordered separately
- Technology: WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K;
refer to page 366
Darklight Reflector Technology; refer to page 368
- Control option: DALI

IP66

IK07

Available distributions:
[B] [M] [E]

Standard colours – AU/NZ



Standard colours – AP





- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [E] Symmetric, narrow beam



DOC120-FT TW

[B] [M] [E]

17 W

480-1110 lm

Max. 1 internal accessory

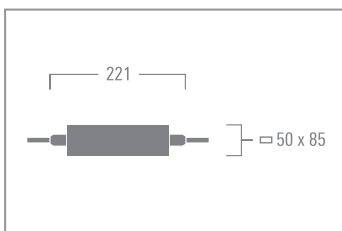
DOC140-FT TW

[B] [M] [E]

24 W

950-1860 lm

Max. 1 internal accessory



Gear box for DOC120-FT
AU/NZ version



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 140-141



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass hinged, frame with safety catch
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Pre-installation blockout is recommended for mounting in cast concrete ceilings; to be ordered separately
Control options:	ON/OFF, DALI (on request)

DOC240-GB

IP66

IK07

DAC240-GB

IP65

IK07

Steinmüller passage
Gummersbach (DE)

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



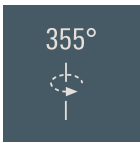
- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'



DOC200-GB



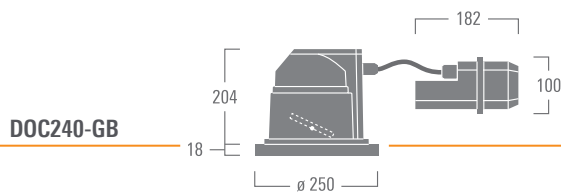
DAC200-GB



Rotation

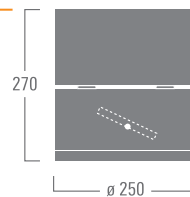


Tilt angle

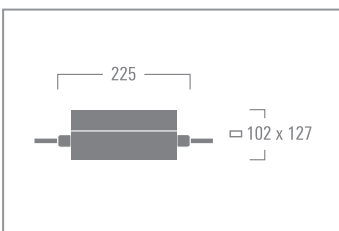


DOC240-GB

DAC240-GB



- [B] [M] [EE] [EES]
- 18 W
- 1720-2050 lm
- Max. 1 internal accessory



Gear box for DOC240-GB
AU/NZ version



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 140-141



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass hinged, frame with safety catch
Gasketing:	Silicone rubber gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Pre-installation blockout is recommended for mounting in cast concrete ceilings; to be ordered separately
Control options:	ON/OFF, DALI (on request)

IP65

IK07

Adelaide Oval Stadium
Adelaide (AU)

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ

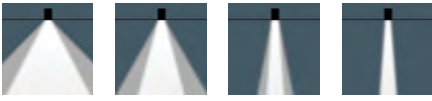


Standard colours – AP



RAL 9004 9006 9007 9016

RAL 9004 9007 7016 9016



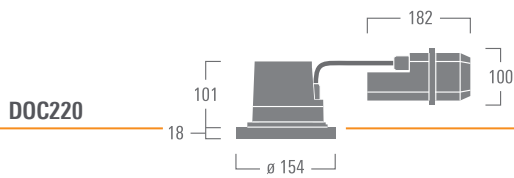
- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'



DOC200

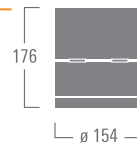


DAC200



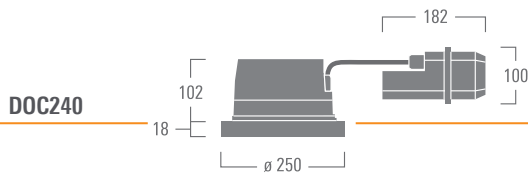
DOC220

DAC220



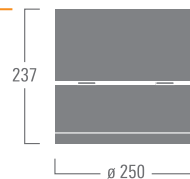
[B] [M] [EE] [EES]

24 W
2300-2610 lm
Max. 1 internal accessory



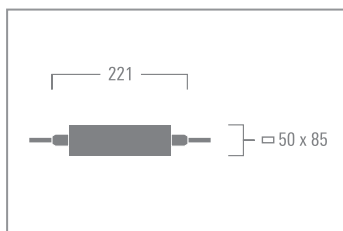
DOC240

DAC240

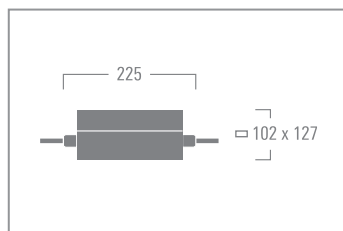


[B] [M] [EE] [EES]

48 W
4570-5460 lm
Max. 1 internal accessory



Gear box for DOC220
AU/NZ version



Gear box for DOC240
AU/NZ version



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 140-141

Installation accessories

The installation of recessed ceiling luminaires can be problematic due to rough site conditions during the civil construction phase.

WE-EF has developed this unique range of installation blockouts, to be integrated in concrete structures during the initial phase of construction.

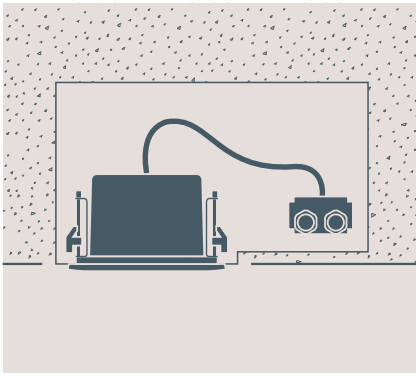
Later, after the site has been cleared of mortar, sand and debris, the electrician can unpack the luminaire for a fast, easy and cost-saving installation.

Installation blockouts:

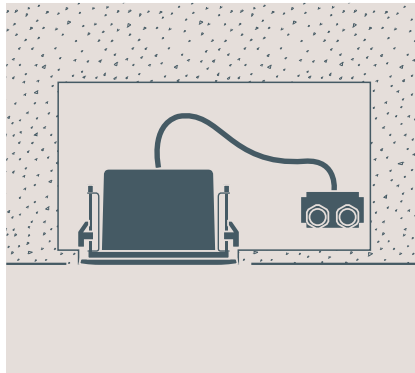
Type I – for DOR100

Type I / Type III – for DOC100

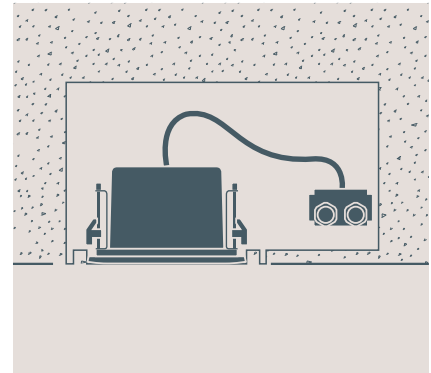
Type I / Type II / Type III – for DOC200



Type I – proud



Type II – flush



Type III – flush with shadow line



Installation Blockout Type I

When used with this blockout version, the luminaire frame remains proud of the ceiling surface.

Shown here is the DOR100 series downlight.

Internal optical accessories

Max. 1 internal accessory

Factory-installed. To be specified at time of ordering.

DOR100



DOR100

Honeycomb louvre

for DOR120 [M] [EE] [EES]



DOC100
DOC100-FT
DOC100-FT TW

DAC100

DOC200-GB
DOC200

DAC200-GB
DAC200



DOC200-GB / DOC200
DAC200-GB / DAC200

Honeycomb louvre

for [M] [EE] [EES]



DOC100 / DOC100-FT / DOC100-FT TW
DOC200-GB / DOC200
DAC100
DAC200-GB / DAC200

Linear spread lens

for [M] [EE] [EES]



Flood lens

for [M] [EE] [EES]

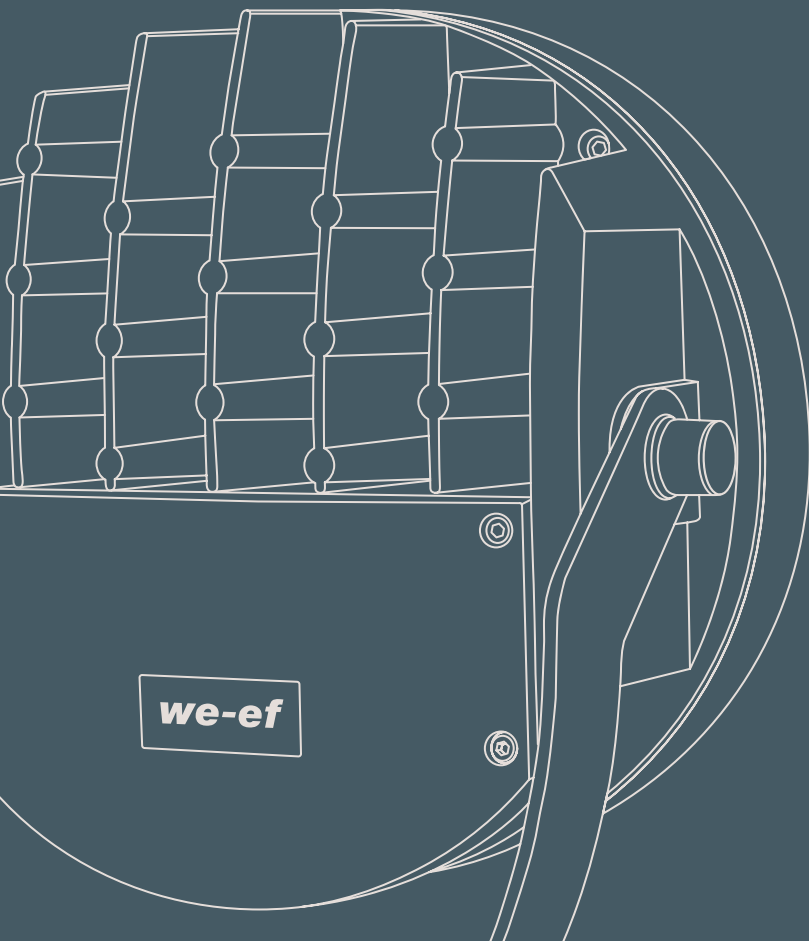


DOC100 / DOC100-FT / DOC100-FT TW
DOC200
DAC100
DAC200

Wallwash lens

for [M]



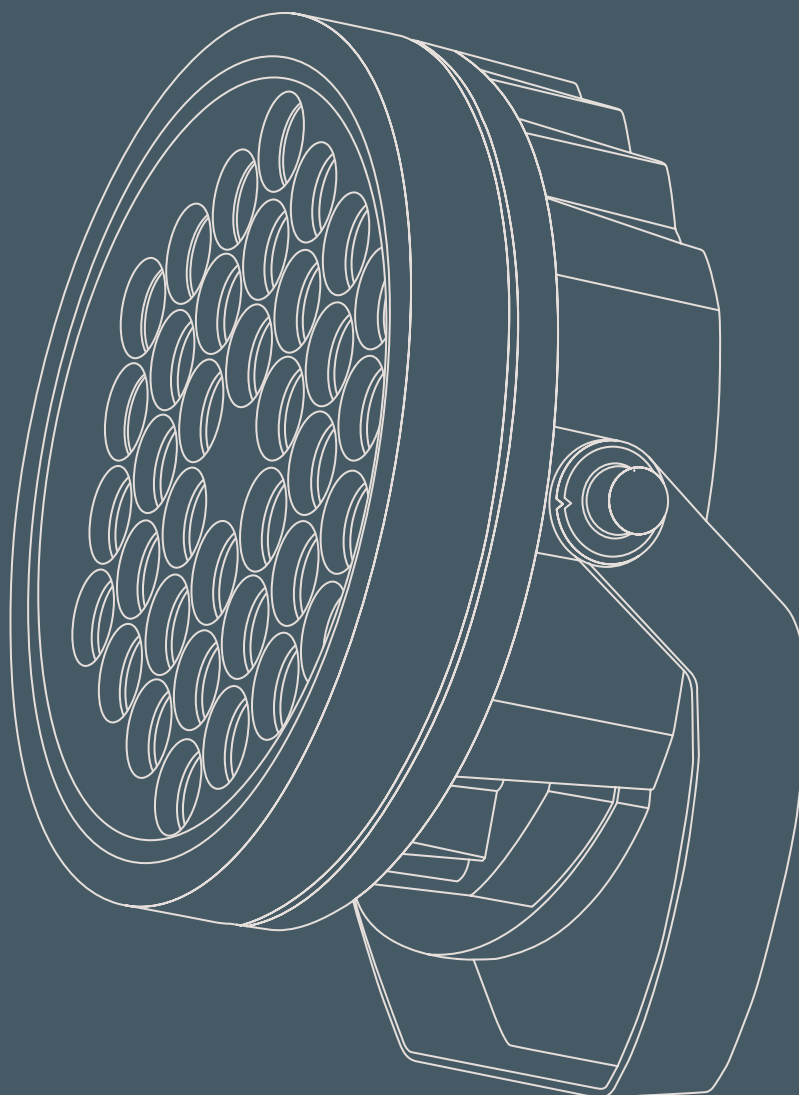


Versatility and precision – projectors are the ideal means for the setting in scene of buildings, façades, monuments and sculptures with directional light.

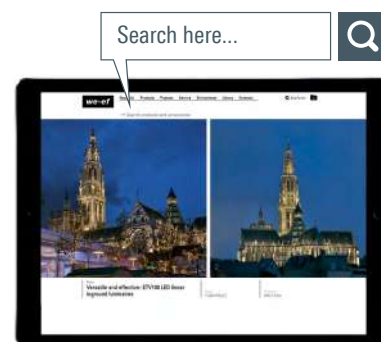
It is a boon to have such a comprehensive toolbox as the WE-EF projector range – ranging from compact spotlights for short distances to powerful projectors for monumental buildings and objects, and from extremely narrow beam to wide beam light distributions.

Luminaires for special effects, such as colour changers or profile projectors, complete the range. The functional design of WE-EF projectors is focused on easy and safe installation, durability and reliable operation.

Projectors



FLD100 Spigot mounted	146-147	FLC200	174-177
FLD100 Surface mounted	148-149	FLC200-TW	178-183
FLD100 Wall bracket	150-151	FLC200-CC	184-191
FLD100 RAIL66 / Space frame	152-155	FLC200 PP	192-193
FLB100 Spigot mounted	158-159	FLC200-TW PP	194-195
FLB100 Surface mounted	158-159	FLC200-CC PP	196-205
FLB100 Wall bracket	158-159	FLC300 Spigot mounted	206-209
FLB100 RAIL66 / Space frame	160-163	FLC300 Surface mounted	206-209
FLC100 Surface mounted	166-167	FLC300 Wall bracket	206-209
FLC100 Wall bracket	168-169	FLC300 RAIL66 / Space frame	210-213
FLC100 RAIL66 / Space frame	170-173		



Projectors

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



Our Lady's Cathedral

A Sculpturally Detailed Gem

How do you set the stage for a gem of Flemish-Brabantine architecture?

Antwerp's answer involves the skilful application of an ensemble of WE-EF FLC200 series, projectors. WE-EF ETC100-GB inground luminaires illuminate the buttresses of the naves and apse as well as the portals. Integrated via appropriate driver interfaces, the WE-EF luminaires are controlled by a DMX light management system for different lighting scenarios.



Our Lady's Cathedral

Antwerp (BE)

Project owner: City of Antwerp

Lighting design: Susanna Antico Lighting Design Studio, Milan,
in collaboration with arch. Gad Giladi, arch. Helena Gentili, Lighting
Designer, arch. George Balan, Lighting Designer and Mathieu Cieters



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
– with the exception of FLD111 spigot mounted, remote EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FLD121 and FLD131 are FS factory-sealed and do not need to be opened during installation
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK07

Mawson's Huts Replica Museum
Hobart (AU)

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

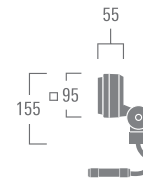
FLD111 Spigot mounted

[B] [M] [EE] [EES]

6-9 W

500-960 lm

Max. 1 internal accessory
Max. 2 external accessories



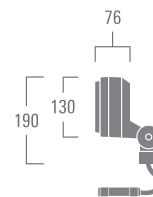
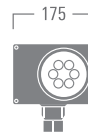
FLD121 Spigot mounted

[B] [M] [EE] [EES]

12-18 W

970-1960 lm

Max. 1 internal accessory
Max. 2 external accessories



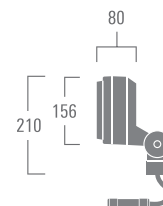
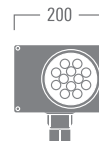
FLD131 Spigot mounted

[B] [M] [EE] [EES]

24-36 W

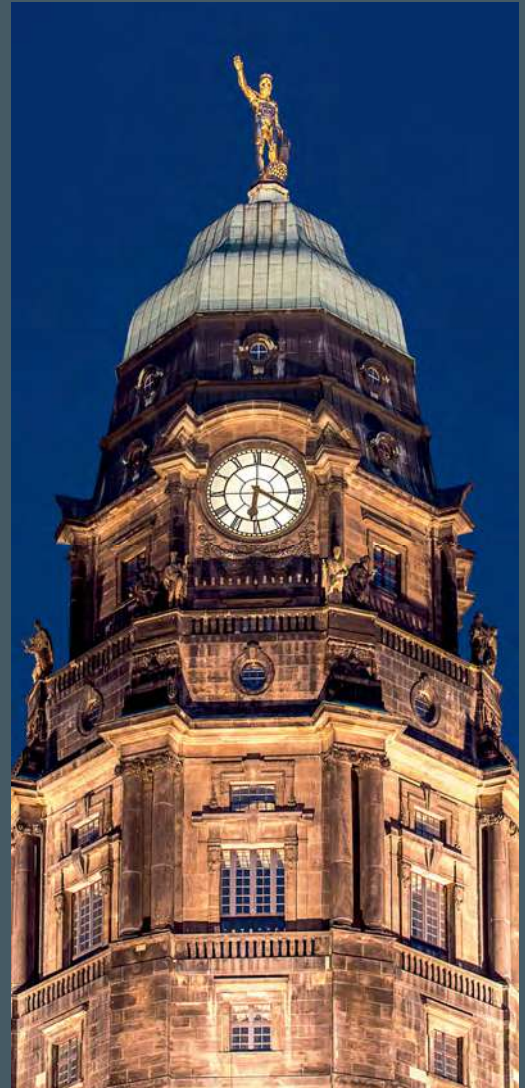
1950-3920 lm

Max. 1 internal accessory
Max. 2 external accessories



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 155





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
1-10 V, DALI (applicable for most versions)

IP66

IK07

Town hall
Dresden (DE)

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLD111 Surface mounted

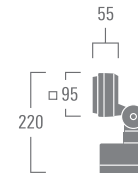
[B] [M] [EE] [EES]

6 W

500-590 lm

Max. 1 internal accessory

Max. 2 external accessories



FLD121 Surface mounted

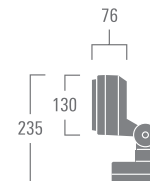
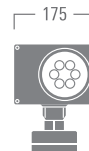
[B] [M] [EE] [EES]

12-18 W

970-1960 lm

Max. 1 internal accessory

Max. 2 external accessories



FLD131 Surface mounted

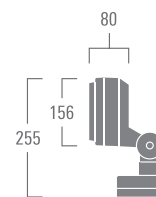
[B] [M] [EE] [EES]

24-36 W

1950-3920 lm

Max. 1 internal accessory

Max. 2 external accessories



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 155



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
1-10 V, DALI (applicable for most versions)

IP66

IK07

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

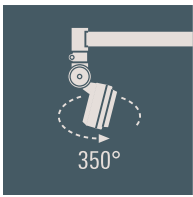
Standard colours – AP



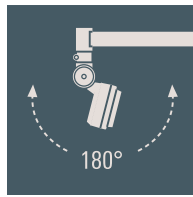
RAL 9004 9007 7016 9016



- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'



Horizontal aiming



Vertical aiming

FLD111 Wall bracket

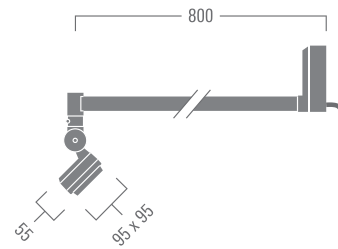
[B] [M] [EE] [EES]

6-9 W

500-960 lm

Max. 1 internal accessory

Max. 2 external accessories



FLD121 Wall bracket

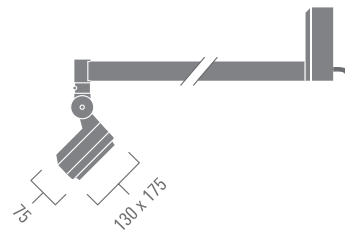
[B] [M] [EE] [EES]

12-18 W

970-1960 lm

Max. 1 internal accessory

Max. 2 external accessories



FLD131 Wall bracket

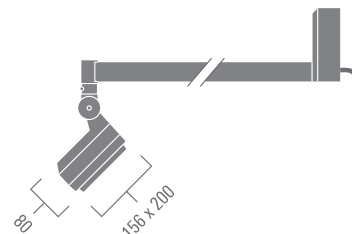
[B] [M] [EE] [EES]

24-36 W

1950-3920 lm

Max. 1 internal accessory

Max. 2 external accessories



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 155



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- RAIL66 versions: For mounting on the RAIL66 system, including 0.4 m of flexible cable enclosed in a stainless conduit, and in-line connector; refer to page 340
- Space frame versions: For mounting on \varnothing 48-60 mm pipes or space frames, including terminal box
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK07

Wilmot and Central Streets

Sydney (AU)

Lighting design: Lighting, Art + Science

Available distributions:

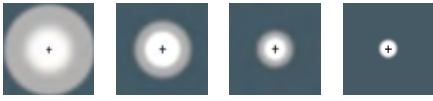
[B] [M] [EE] [EES]

Standard colours – AU/NZ

RAL 9004 9006 9007 9016

Standard colours – AP

RAL 9004 9007 7016 9016



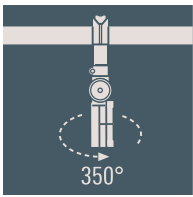
- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'



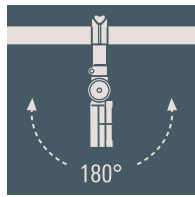
RAIL66



Space frame



Horizontal aiming



Vertical aiming

RAIL66

Space frame

FLD111 RAIL66 / Space frame

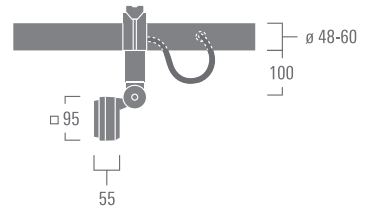
[B] [M] [EE] [EES]

6-9 W

500-960 lm

Max. 1 internal accessory

Max. 2 external accessories



FLD121 RAIL66 / Space frame

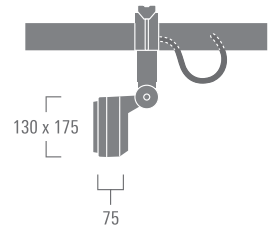
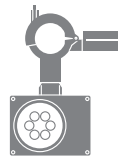
[B] [M] [EE] [EES]

12-18 W

970-1960 lm

Max. 1 internal accessory

Max. 2 external accessories



FLD131 RAIL66 / Space frame

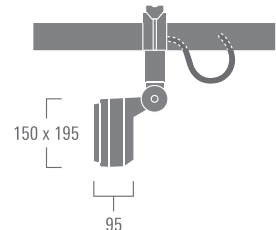
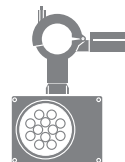
[B] [M] [EE] [EES]

24-36 W

1950-3920 lm

Max. 1 internal accessory

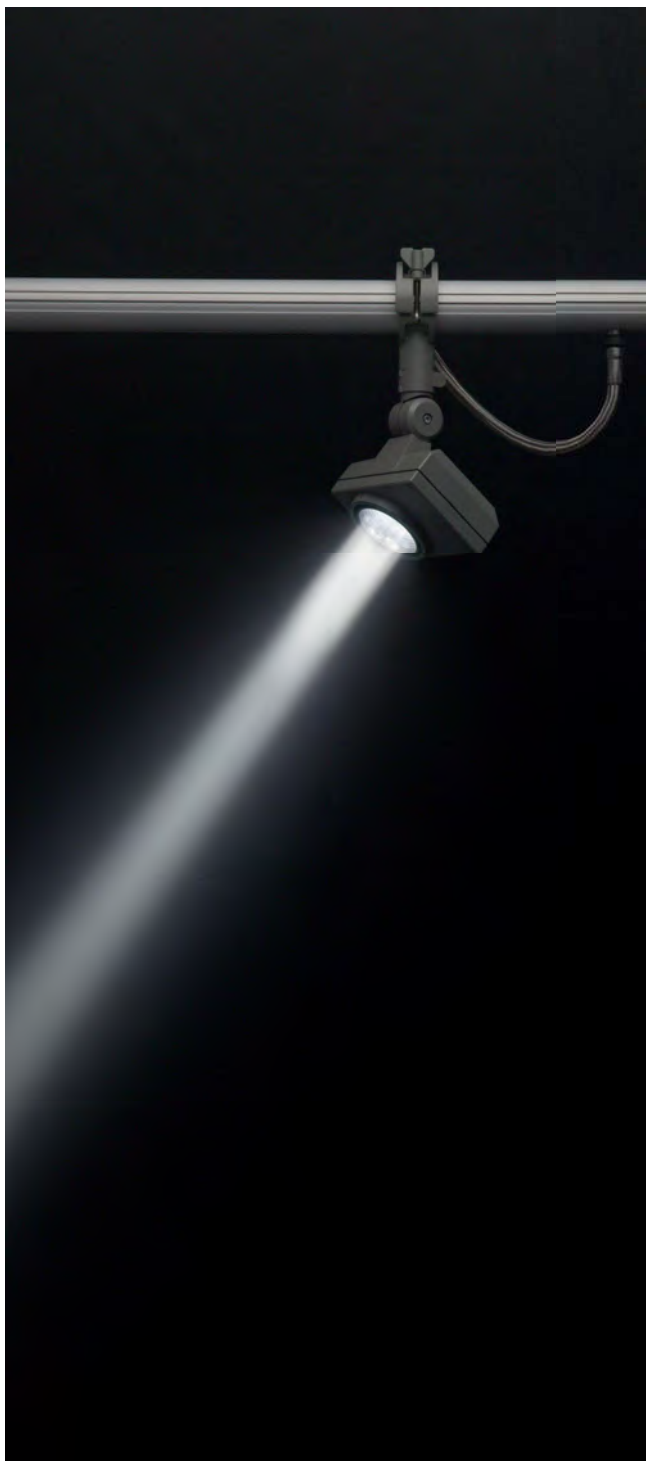
Max. 2 external accessories



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 155

RAIL66

These projectors are designed for mounting on the RAIL66 system, which features concealed, internal mains supply cabling and can accept up to six luminaires per unit (see pages 340-345). A die-cast aluminium clamp attaches to the rail, 0.4 m of flexible cable is enclosed in a stainless steel conduit and an IP-rated in-line connector plugs into one of the rail's countersunk receptacles. The overall system is rated IP66.

**Space Frame**

Space Frame projectors have been designed for mounting on 48-60 mm pipes or space frames. They are fitted with a die-cast aluminium clamp and a terminal box for mains connection. Protection rating IP66.



FLD100

Internal optical accessory

Max. 1 internal accessory



Wallwash lens
for [M]

External optical accessories

Max. 2 external accessories



Linear spread lens
for [M] [EE] [EES]



Flood lens
for [M] [EE] [EES]



Optical Adaptor
holds flood or (rotatable) spread lens



Glare shield
for [B] [M] [EE] [EES]



Snoot
for [B] [M] [EE] [EES]

Mounting accessories

for spigot mounted projectors



Flat surface fitter



Column fitter



Ground spike

Galvanised steel, powdercoat finish in black

for surface mounted projectors



Short post

Matching planted root to be ordered separately

Planted root

Galvanised steel



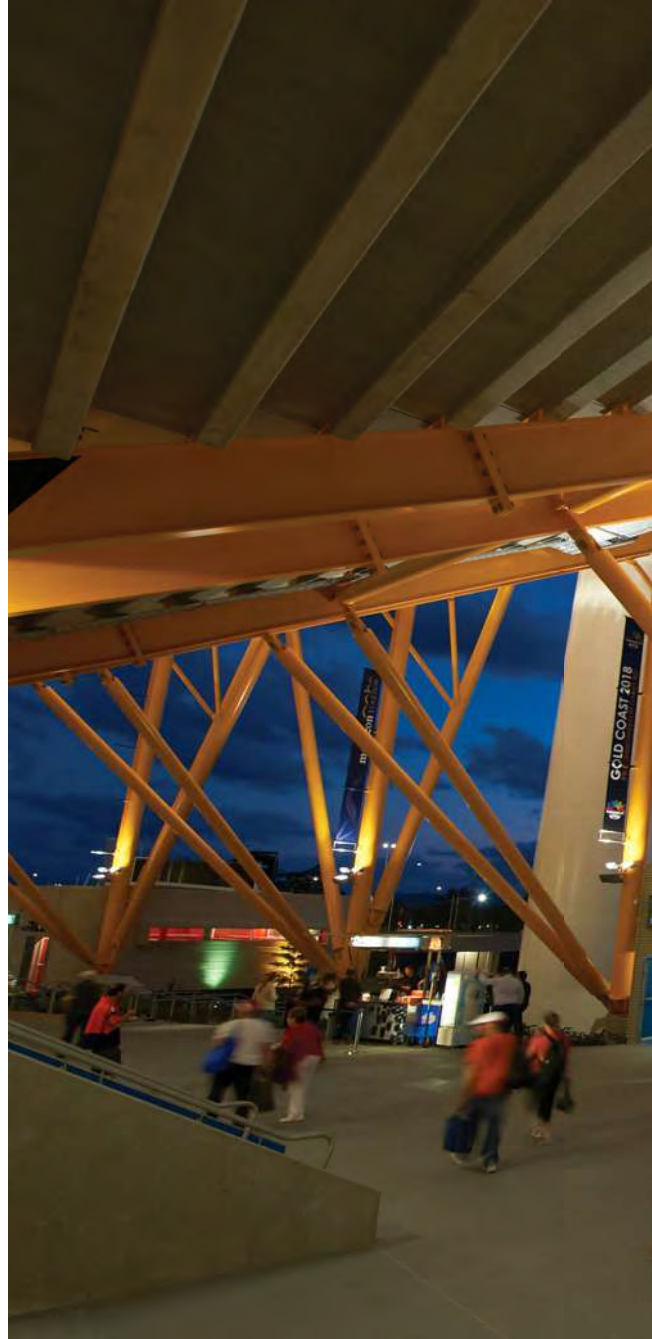
Ground spike

Galvanised steel, powdercoat finish in black

Metricon Stadium

A Sunny Perspective – Even in the Dark

Painted in bright yellow, the Metricon's sophisticated tubular steel construction, home of the "Gold Coast Suns" football team, is a shining example of stadium architecture. Thanks to the powerful light of WE-EF's FLB400 luminaires illuminating the supports and the undersides of the stands, it continues to shine even after dark, further enhancing the overall impression of floating lightness.



Metricon Stadium, Carrara, Queensland (AU)

Lighting design: NDY Brisbane

Architect: Populous

Sales partner: Raylinc Lighting





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-shielded compartment
Main lens:	Safety glass, hinged
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK08

Available distributions:

[B] [M] [EE]
[P65] [S70] [A60] [R65]

Standard colours – AU/NZ


 RAL 9004 9006 9007 9016

Standard colours – AP

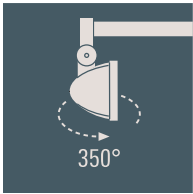

 RAL 9004 9007 7016 9016



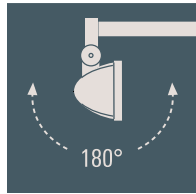
[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [EE] Symmetric, very narrow beam



[P65] Pedestrian/bicycle lane
 [S70] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'forward throw'



Horizontal aiming



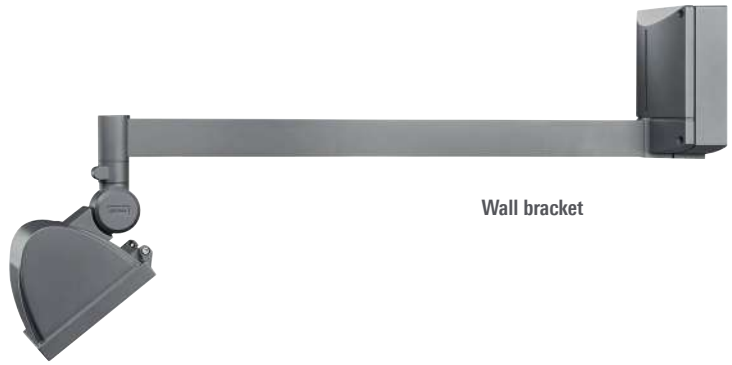
Vertical aiming



Spigot mounted



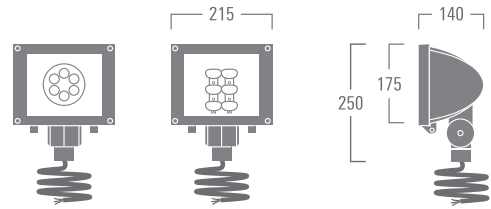
Surface mounted



Wall bracket

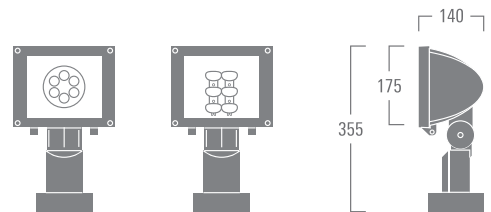
FLB141 Spigot mounted

[B] [M] [EE]
 [P65] [S70] [A60] [R65]
 18-26 W
 1320-2510 lm
 Max. 1 internal accessory
 Max. 1 external accessory



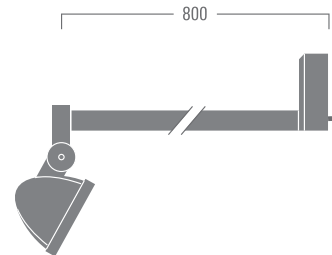
FLB141 Surface mounted

[B] [M] [EE]
 [P65] [S70] [A60] [R65]
 18-26 W
 1320-2510 lm
 Max. 1 internal accessory
 Max. 1 external accessory



FLB141 Wall bracket

[B] [M] [EE]
 [P65] [S70] [A60] [R65]
 18-26 W
 1320-2510 lm
 Max. 1 internal accessory
 Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 163




- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- RAIL66 versions: For mounting on the RAIL66 system, including 0.4 m of flexible cable enclosed in a stainless conduit, and in-line connector; refer to page 340
- Space frame versions: For mounting on \varnothing 48-60 mm pipes or space frames, including terminal box
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK08

Available distributions:
[B] [M] [EE]
[P65] [S70] [A60] [R65]

Standard colours – AU/NZ

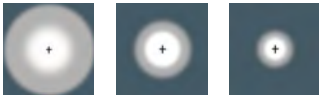


RAL 9004 9006 9007 9016

Standard colours – AP



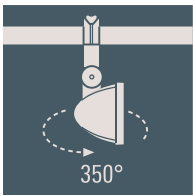
RAL 9004 9007 7016 9016



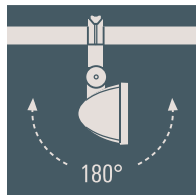
[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [EE] Symmetric, very narrow beam



[P65] Pedestrian/bicycle lane
 [S70] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'forward throw'



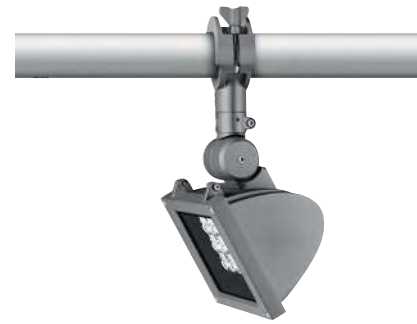
Horizontal aiming



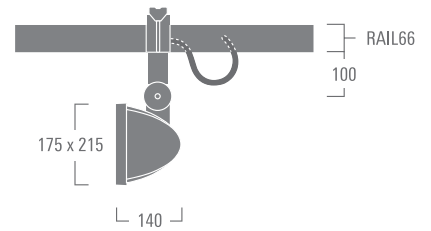
Vertical aiming



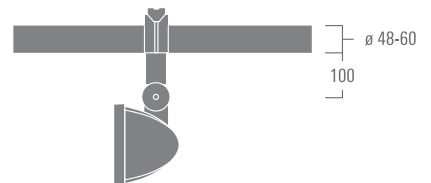
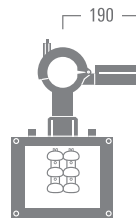
RAIL66



Space frame



RAIL66



Space frame

FLB141 RAIL66 / Space frame

[B] [M] [EE]
 [P65] [S70] [A60] [R65]

18-26 W
 1320-2510 lm
 Max. 1 internal accessory
 Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 163



FLB100 – versatility par excellence

With seven distinct light distributions to choose from, plus a choice of effective optical accessories, this single projector offers vast flexibility to the lighting professional when it comes to illuminating areas such as public plazas, façades and billboards, architectural features and landscapes. At the same time, product standardisation throughout a project allows for efficient facility management.

FLB100

Internal optical accessories

Max. 1 internal accessory

External optical accessories

Max. 1 external accessory



Wallwash lens
for [M]

Linear spread lens
for [M] [EE]

Flood lens
for [M] [EE]

Honeycomb louvre
for [EE]



Wire guard
for [B] [M] [EE]
[P65] [S70] [A60] [R65]

Glare shield
for [B] [M] [EE]

Snoot
for [B] [M] [EE]

Barn doors
for [B] [M] [EE]
[P65] [S70] [A60] [R65]

Mounting accessories

for spigot mounted projectors



Flat surface fitter



Column fitter



Ground spike

Galvanised steel, powdercoat finish in black

for surface mounted projectors



Pole clamp



Junction box



Short post

Matching planted root to be ordered separately

Planted root

Galvanised steel



ZOOM office and commercial building

A Brilliant Presence in Berlin's City West

ZOOM office and commercial building

Berlin (DE)

Project owner: Pondus GmbH & Co. KG c/o Hines Immobilien GmbH

Architect (design): Hascher Jehle Architecture

Architect (implementation planning): Aukett + Heese

Lighting design: Lichtvision



Staggered horizontal light bands accentuate the horizontal structures of this rounded building complex at the corner of West Berlin's Kantstrasse and Joachimsthaler Strasse. At the heart of the lighting concept is the building's bright crown, created by an ensemble of WE-EF FLC121 projectors strategically placed near the foot of the super-structure atop the Zoom building's flat roof. To achieve a homogeneous light distribution on the surface areas, the medium-emitting projectors are equipped with band-type diffusion lenses. The window reveals are illuminated by recessed ETC110 inground luminaires using symmetric, extreme narrow beam light distribution with 'sharp cut-off'.



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation
Control options:	ON/OFF

IP66

IK07

ZOOM Office Building
Berlin (DE)
Architects: Hascher und Jehle
Lighting design: Lichtvision Design

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



Standard colours – AP





[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC121 Surface mounted

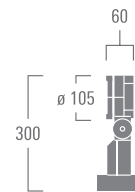
[B] [M] [EE] [EES]

12 W

1140-1370 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC131 Surface mounted

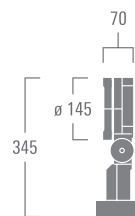
[B] [M] [EE] [EES]

24 W

2300-2610 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC141 Surface mounted

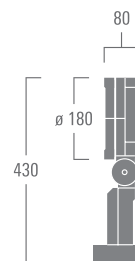
[B] [M] [EE] [EES]

48 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 173



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
1-10 V, DALI (applicable for most versions)

IP55

IK07

Concord City Place
(US)

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

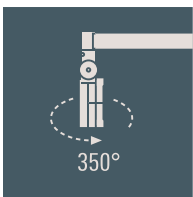
Standard colours – AP



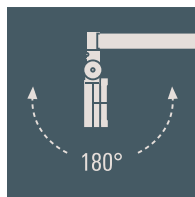
RAL 9004 9007 7016 9016



- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'



Horizontal aiming



Vertical aiming

FLC121 Wall bracket

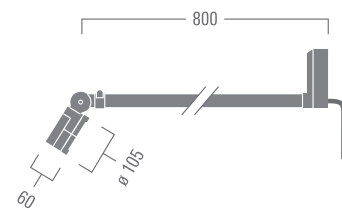
[B] [M] [EE] [EES]

12 W

1140-1370 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC131 Wall bracket

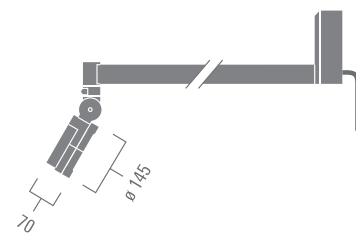
[B] [M] [EE] [EES]

24 W

2300-2610 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC141 Wall bracket

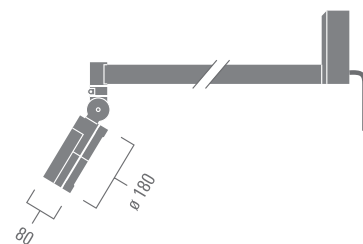
[B] [M] [EE] [EES]

48 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 173



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- RAIL66 versions: For mounting on the RAIL66 system, including 0.4 m of flexible cable enclosed in a stainless conduit, and in-line connector; refer to page 340
- Space frame versions: For mounting on \varnothing 48-60 mm pipes or space frames, including terminal box
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK07

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

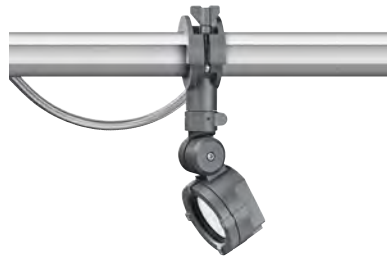
Standard colours – AP



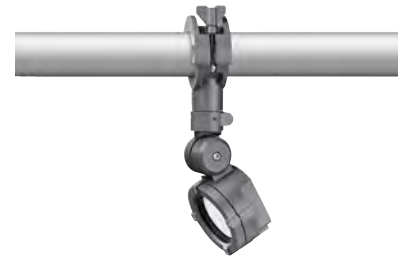
RAL 9004 9007 7016 9016



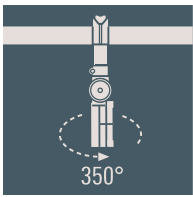
- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'



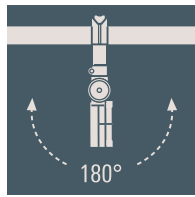
RAIL66



Space frame



Horizontal aiming



Vertical aiming

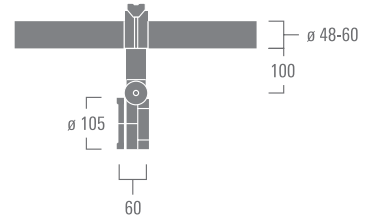
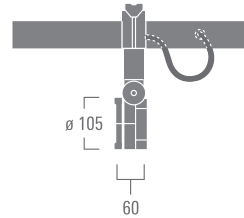
RAIL66

Space frame

FLC121

[B] [M] [EE] [EES]

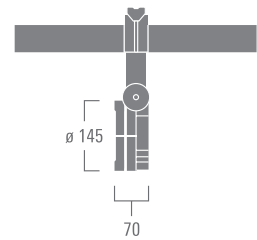
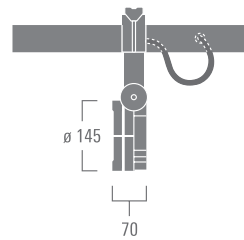
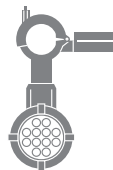
12 W
1140-1370 lm
Max. 1 internal accessory
Max. 1 external accessory



FLC131

[B] [M] [EE] [EES]

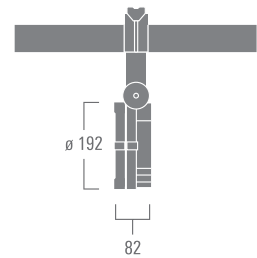
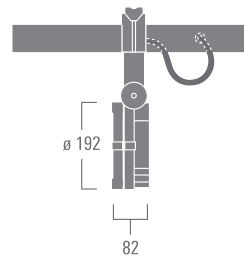
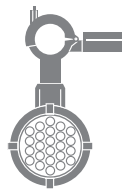
24 W
2300-2610 lm
Max. 1 internal accessory
Max. 1 external accessory



FLC141

[B] [M] [EE] [EES]

48 W
4570-5460 lm
Max. 1 internal accessory
Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 173

Spot-on

Projecting light precisely where it is needed. Minimal light spillage against the waste of energy and light pollution. An extensive optical toolkit allowing the lighting professional to customise beam spreads for special effects and project-specific requirements. Three compact projector sizes delivering a luminous flux of 1140 to 5460 lumens, at a colour temperature of 2700, 3000 or 4000 K, in four precisely controlled beam distributions ranging from [B] wide to [EES] very narrow with a sharp cut-off. The FLC100 series projector does all of that – and much more.

Shown here is just a small selection from a virtually unlimited variety of worldwide installations using the FLC100. Whether it is gentle column grazing on a traditional building, eye-catching illumination of a faceted façade in contemporary architecture or selective area lighting in a public plaza, this projector performs brilliantly.



Eastland Shopping Center
Melbourne (AUS)
Lighting design: Electrolight

Love Library
Omaha (US)
Lighting design: Morrissey Engineering

FLC100

Internal optical accessories

Max. 1 internal accessory

External optical accessories

Max. 1 external accessory



Wallwash lens
for [M]

Linear spread lens
for [M] [EE] [EES]

Flood lens
for [M] [EE] [EES]

Honeycomb louvre
for [EE] [EES]



Wire guard
for [B] [M] [EE] [EES]

Glare shield
for [B] [M] [EE] [EES]

Snoot
for [B] [M] [EE] [EES]

Mounting accessories



Ground spike
Galvanised steel, powdercoat finish in black



Pole clamp



Junction box



Short post
Matching planted root to be ordered separately

Planted root
Galvanised steel



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: Two cable glands for through wiring
- Control options: ON/OFF
1-10 V, DALI (applicable for most versions)

IP66

IK07

Leieboorden
Kortrijk (BE)

Available distributions:
[B] [M] [E] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC201

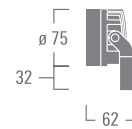
[B] [M] [E] [EE] [EES]

6 W

530-630 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC210

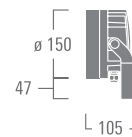
[B] [M] [E] [EE] [EES]

6-12 W

630-1410 lm

Max. 1 internal accessory

Max. 1 external accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 202-203



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC220

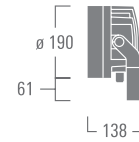
[B] [M] [E] [EE] [EES]

12-26 W

1230-2600 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC230

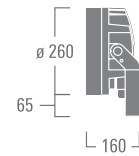
[B] [M] [E] [EE] [EES]

24-52 W

2460-5260 lm

Max. 1 internal accessory

Max. 1 external accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 202-203

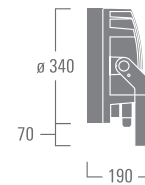


- [B] Symmetric, wide beam
- [M] Symmetric, medium beam
- [E] Symmetric, narrow beam
- [EE] Symmetric, very narrow beam
- [EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC240

[B] [M] [E] [EE] [EES]

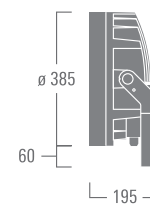
48-104 W
4930-10520 lm
Max. 1 internal accessory
Max. 1 external accessory



FLC260

[B] [M] [E] [EE] [EES]

72-155 W
7390-15780 lm
Max. 1 internal accessory
Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 202-203



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Mains connection:	Two cable glands for through wiring
Technology:	WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 366
Control option:	DALI

IP66

IK07

Kimpton Langsuan Village
Bangkok (TH)
Architect: Plan Architects

Available distributions:
[B] [M] [E]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016

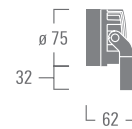


[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam

FLC201-TW

[B] [M] [E]

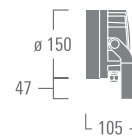
4 W
 350-360 lm
 Max. 1 internal accessory
 Max. 1 external accessory



FLC210-TW

[B] [M] [E]

11 W
 1040-1080 lm
 Max. 1 internal accessory
 Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 202-203



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[E] Symmetric, narrow beam

FLC220-TW

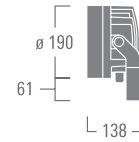
[B] [M] [E]

22 W

2220-2280 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC230-TW

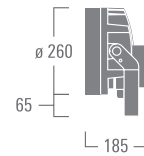
[B] [M] [E]

44 W

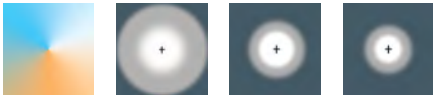
4180-4520 lm

Max. 1 internal accessory

Max. 1 external accessory



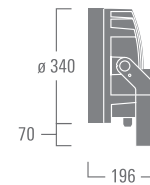
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 202-203



[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam

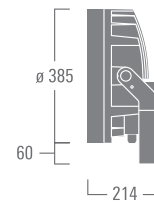
FLC240-TW

[B] [M] [E]
 88 W
 8360-9040 lm
 Max. 1 internal accessory
 Max. 1 external accessory



FLC260-TW

[B] [M] [E]
 132 W
 12540-13570 lm
 Max. 1 internal accessory
 Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 202-203

How to light a bridge

Any imposing daytime landmark such as a cable-stayed bridge deserves to be given an equally imposing presence after sunset.

Having access to projectors with a choice of high-precision optics allows the lighting professional to minimise light spillage while aiming the light selectively and precisely to where it is intended.

Light surface finishes are actually helpful for the illumination of any type of structure, and they lend themselves particularly well to tunable white applications.





WE-EF Tunable White Technology

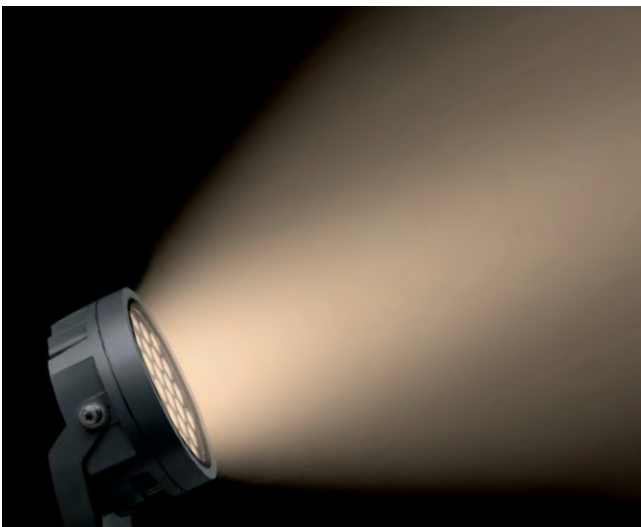
For optimum photometric performance, multiple arrays of white LEDs of different colour temperatures are joined into one optical system. Tuning these different types of LEDs through separate control channels allows infinite variation from warm to neutral to cool white light as well as smooth dimming at any chosen colour temperature.

As a consequence of higher luminous efficacy (i.e., lumens per watt) of cool white LEDs over their warm white counterparts, conventional systems typically display a noticeable drop or increase in brightness when the colour temperature is being adjusted. WE-EF Tunable White Technology

masters this problem through smart control circuitry that stabilises the luminous flux throughout the entire 2700 K - 6000 K tuning range.

Illuminated with different colour temperatures, the colours and textures of surfaces, vegetation and other media are perceived differently.

Tunable white luminaires can be used to showcase private and public spaces, architecture and landscapes, in ever-changing ways – be it for special events, during the course of a night or with the change of seasons.





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: Two cable glands for through wiring
- Technology: WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 367
- Control options: DMX, DMX wireless; refer to page 204

IP66

IK07

Feuerstein Arena

Schierke (DE)

Architects: Graft Gesellschaft von Architekten

Lighting design: Jackbenimble

Available distributions:

[B] [M] [E]

Standard colours – AU/NZ

RAL 9004 9006 9007 9016

Standard colours – AP

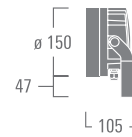
RAL 9004 9007 7016 9016



[B] Symmetric, wide beam

[M] Symmetric, medium beam

FLC210-CC	RGBW		RGBA	
	[B]	[M]	[B]	[M]
	12 W	12 W	12 W	12 W
	610-820 lm	610-820 lm	620-820 lm	620-820 lm
	Max. 1 internal accessory			
	Max. 1 external accessory			



RGBW / RGBA

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 202-203

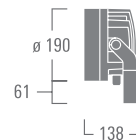


[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam

FLC220-CC

RGBW	RGBA
[B] [M] [E]	[B] [M] [E]
24 W	24 W
1510-1650 lm	1220-1330 lm

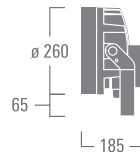
Max. 1 internal accessory
 Max. 1 external accessory



FLC230-CC

RGBW	RGBA
[B] [M] [E]	[B] [M] [E]
48 W	48 W
2980-3200 lm	2410-2590 lm

Max. 1 internal accessory
 Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 202-203

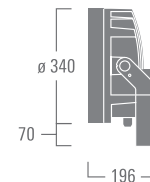


[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [E] Symmetric, narrow beam

FLC240-CC

RGBW [B] [M] [E]	RGBA [B] [M] [E]
96 W 5970-6410 lm	96 W 4830-5180 lm

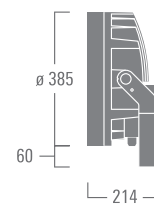
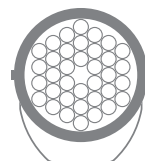
Max. 1 internal accessory
 Max. 1 external accessory



FLC260-CC

RGBW [B] [M] [E]	RGBA [B] [M] [E]
144 W 8950-9610 lm	144 W 7240-7780 lm

Max. 1 internal accessory
 Max. 1 external accessory

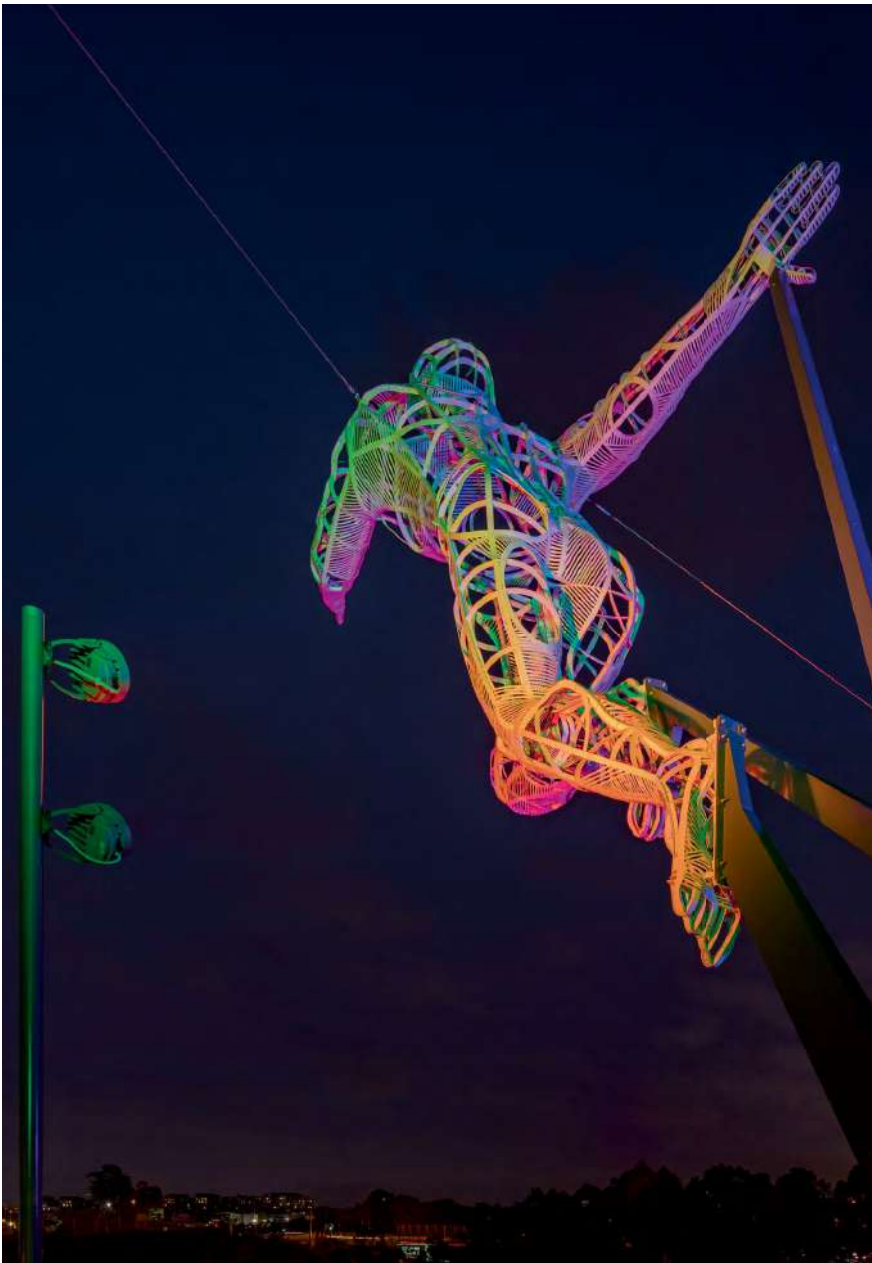


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 202-203

Olympic Spirit

Designed by artist Dominique Sutton, a 16-metre high sculpture was airlifted and installed atop Sydney's Centrepoint Tower prior to the 2000 Olympic Games. Fast forward to 2020 – The Gymnast and The Paralympic Basketballer have found a new home in Canberra, whereas The Sprinter made his/her way to the M4 East Legacy Project near Sydney Olympic Park.

Installing the eight-tonne sculpture on a steep hill posed challenges not only to the structural engineers, but also to the lighting consultants. The complexity of both, the sculpture and the terrain, called for high-performance projectors that had to meet a host of stringent criteria. With their sophisticated optics that deliver outstanding colour mixing as well as tight and precise beam control, WE-EF FLC200-CC RGBW colour changers were the obvious choice for this demanding installation.



The Sprinter Sculpture
Sydney (AU)
Artist: Dominique Sutton



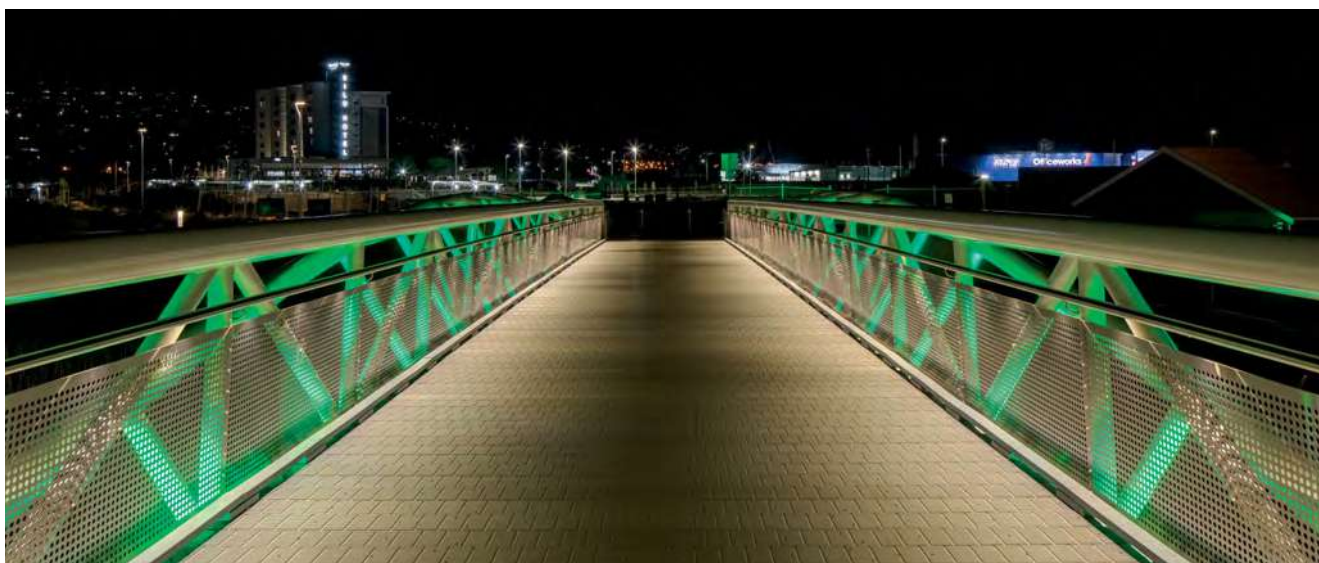
WE-EF Colour Boost Technology

WE-EF Colour Boost Technology enables four-channel colour mixing, With 30% to 40% higher overall luminous flux than the usual standard. The lens optics developed by WE-EF, and matched to the coloured LEDs, enable homogeneous colour mixing, smooth colour transitions, high efficiency and maximum control of the light.

With four-channel colour mixing, the available electrical power of the projector is normally distributed evenly across all four channels. This means that a maximum of 25% of the electrical power is available to each channel. As a rule, however, a maximum of three channels are used for colour mixing. This means that only a maximum of 75% of the electrical power is available to them.

This is where WE-EF Colour Boost Technology comes in. When only three channels are used, it distributes 100% of the electrical power to the three active channels, so that 33% instead of 25% of the total electrical power is available to each channel.

Depending on the colours used, this increases the overall luminous flux by up to 40%. In order to ensure optimum operating parameters for the LEDs at all times, and to avoid overloading, the built-in driver reliably limits the respective rated current per channel. If the maximum rated current per colour in a four-channel operation is set at 100%, dynamic power management can increase this to a maximum of 140%.



Riverbend Park

Tasmania (AU)

Landscape architect: Playstreet



Main lens

- Safety glass
- 'Flush sealing' helps prevent accumulation of water, dust and debris when aimed vertically upwards

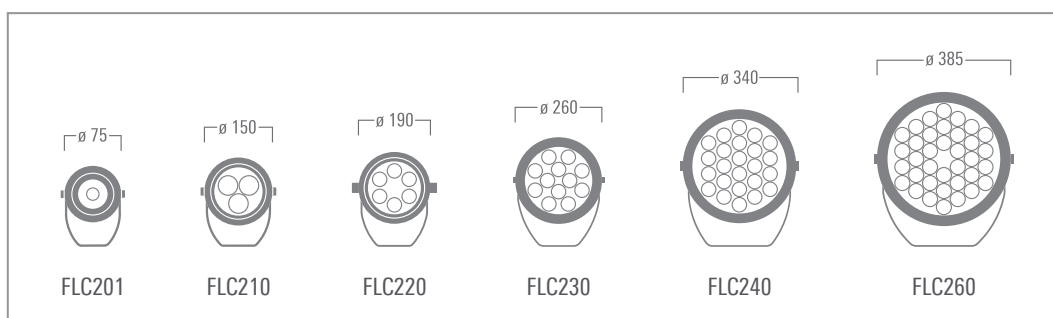
IOS® Innovative Optical System

- In-house CAD design
- Precision manufactured optical system
- High photometric performance, beam efficiency and control
- Superior glare control and visual comfort through appropriate shielding angles
- High efficiency within the 50% 'half beam' angle
- Minimum light spillage beyond the 10% 'field' angle

CCG® Controlled Compression Gasket

- Weatherproof, non-ageing, high temperature rated silicone rubber
- Provides long-term, maintained, high IP ratings

Available in 6 sizes





IOS® Innovative Optical System

All WE-EF lens systems are developed in-house.



OLC® One LED Concept

WE-EF's OLC® prevents shadowing from any obstruction on the main lens





Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	Spherical flat convex lens system
	Gobo motif for [GP] on request; to be ordered separately
Mains connection:	One cable gland; second cable gland for through wiring on request
Control options:	ON/OFF, DALI (on request)

IP66

IK07

Tramway T4
Lyon (FR)
Lighting design: Ilex

Available distributions:
[GP] [ZP] [FP]

Standard colours – AU/NZ



Standard colours – AP

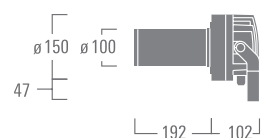




[GP] for gobo projections
 [ZP] for zoom-spot applications
 [FP] for polygon framing applications

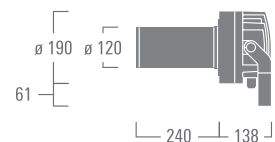
FLC210 PP

[GP]	[ZP] [FP]
18-26 W	18-26 W
800-1100 lm	1230-1830 lm



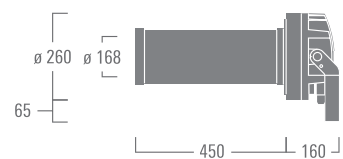
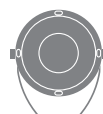
FLC220 PP

[GP] [ZP] [FP]
24-37 W
960-2590 lm

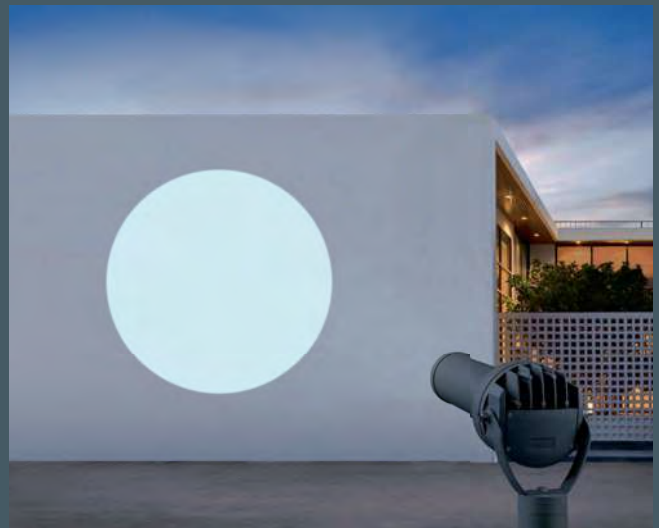
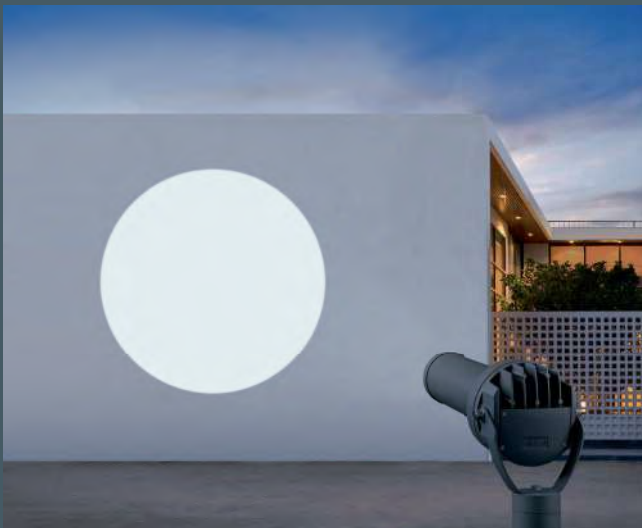
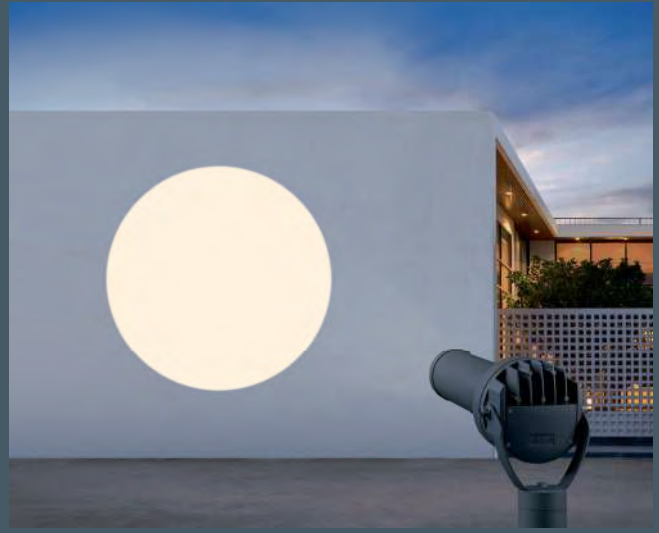
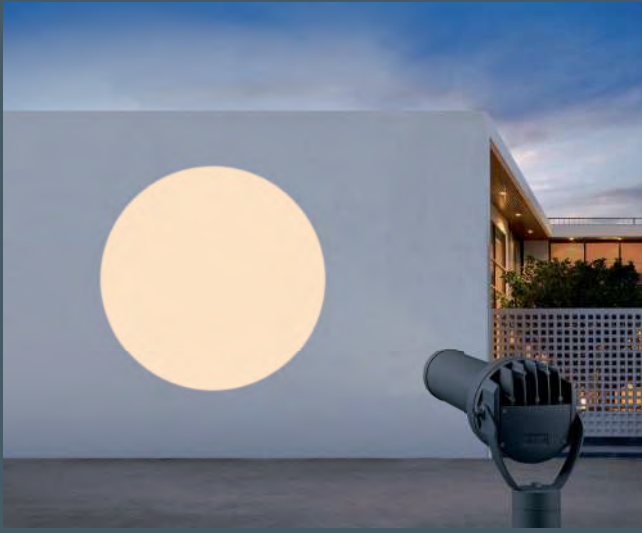


FLC230 PP

[GP] [ZP] [FP]
36-52 W
1260-3250 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 203



Luminaire housing: Marine-grade, die-cast aluminium alloy

Corrosion protection: 5CE, including PCS hardware

Driver: Integral EC electronic converter in thermally-separated compartment

Main lens: Safety glass

Gasketing: Silicone CCG® Controlled Compression Gasket

Optics: Spherical flat convex lens system

Gobo motif for [GP] on request; to be ordered separately

Mains connection: One cable gland; second cable gland for through wiring on request

Technology: WE-EF Tunable White Technology – stabilises luminous flux throughout 2700 K - 6000 K; refer to page 366

Control option: DALI

IP66

IK07

Available distributions:
[GP] [ZP] [FP]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



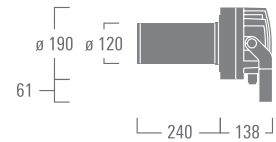
RAL 9004 9007 7016 9016



[GP] for gobo projections
 [ZP] for zoom-spot applications
 [FP] for polygon framing applications

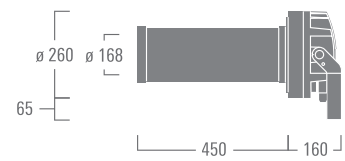
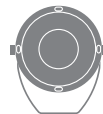
FLC220-TW PP

[GP] [ZP] [FP]
 21 W
 340-880 lm



FLC230-TW PP

[GP] [ZP] [FP]
 44 W
 1000-2170 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 203



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	Spherical flat convex lens system Gobo motif for [GP] on request; to be ordered separately
Mains connection:	One cable gland; second cable gland for through wiring on request
Technology:	WE-EF Colour Boost Technology – increases overall luminous flux by up to 40%; refer to page 367
Control option:	DMX; refer to page 204

IP66

IK07

Molitor Hotel
Paris (FR)

Available distributions:
[GP] [ZP] [FP]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



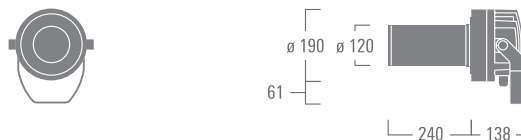
RAL 9004 9007 7016 9016



[GP] for gobo projections
 [ZP] for zoom-spot applications
 [FP] for polygon framing applications

FLC220-CC PP

RGBW	RGBA
[GP] [ZP] [FP]	[GP] [ZP] [FP]
24 W 260-670 lm	24 W 220-570 lm



FLC230-CC PP

RGBW	RGBA
[GP] [ZP] [FP]	[GP] [ZP] [FP]
48 W 740-1600 lm	48 W 600-1300 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- For accessories, refer to page 203

High-precision, spherical flat convex lens system, for versatile field adjustment

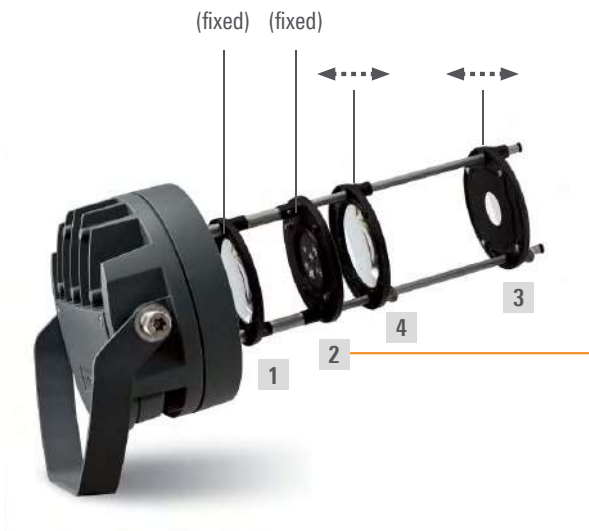
- The unique projector lens [1] delivers uniform illuminance across the projected image
- The projected image can be enlarged or reduced in size as well as focused on-site
- The dimensions of the projected image are dependent on the distance between the projector and target surface, the image or aperture size on the dedicated projection tool [2] as well as the setting of the zoom lens [3]

[1] Projector lens; fixed, factory-set position

[2] Dedicated projection tool; fixed, factory-set position

[3] Zoom lens; position on alignment rods can be field-adjusted, for reduced or enlarged image size

[4] Focusing lens; position on alignment rods can be field-adjusted for sharpening of the projected image



For each type of profile projector, one dedicated projection tool [2]

FLC200 PP [GP] Gobo Projector

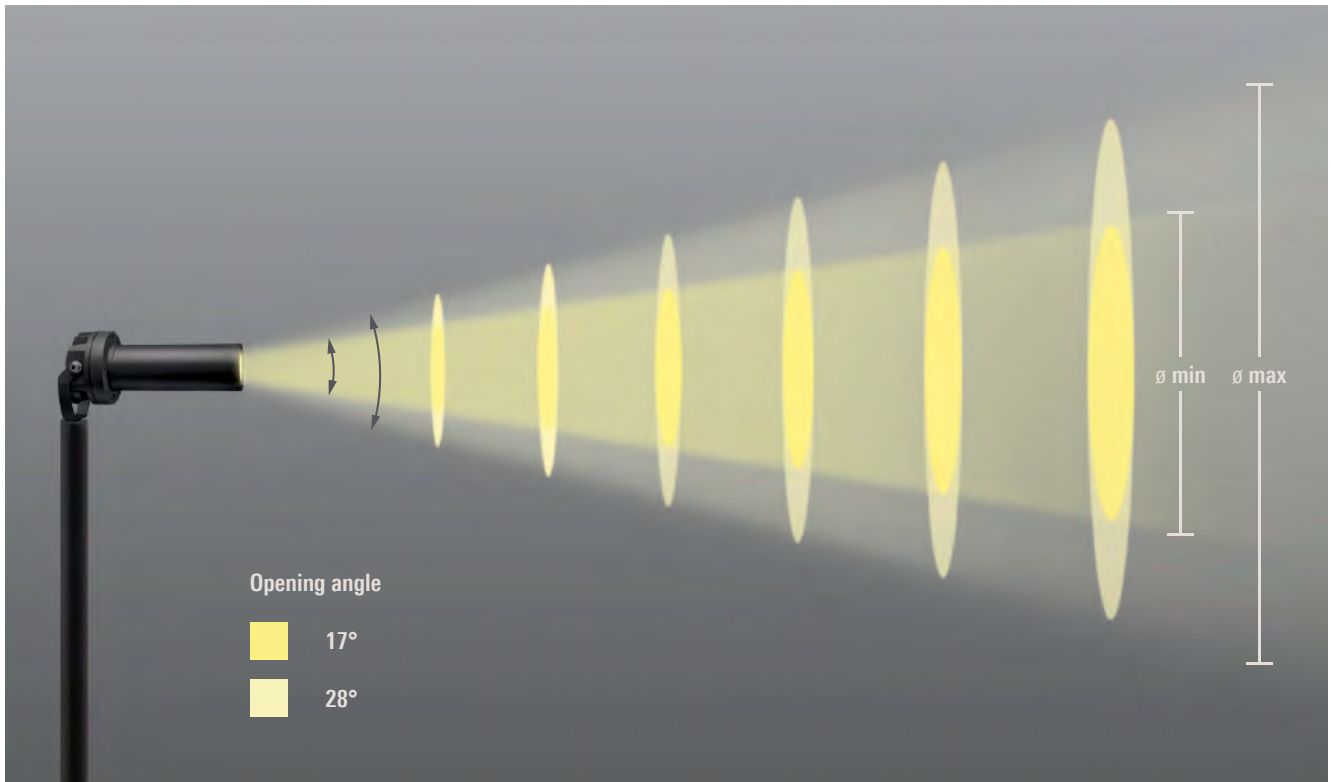
- Gobo motif; available on request (laser-cut steel or printed glass)
- Outside diameter 86 mm
- Image diameter max. 60 mm
- Factory-preset for a target surface distance of 10 m

FLC200 PP [ZP] Zoom-Spot Projector

- Factory-preset at an opening angle of 28°, for a target surface distance of 10 m

FLC200 PP [FP] Framing Projector

- Factory-preset for a target surface distance of 10 m



FLC200 PP [ZP] Projector

Diameter of projected spot in relation to distance between projector and target surface as well as opening angle (adjustable from 17 to 28 degrees by means of zoom lens [3])

Distance (m) Projector – spot	5	10	15	20	25	30
min. - max. diameter (m) Projected spot	1.5-2.5	3.0-5.0	4.5-7.5	6.0-10.0	7.5-12.5	9.0-15.0

**FLC200 PP [GP]**

Gobo Projectors

Gobo motifs available on request

**FLC200 PP [ZP]**

Zoom-Spot Projectors

17° - 28° adjustable opening angle

**FLC200 PP [FP]**

Framing Projectors

Adjustable polygon framing shutter



Saint Bruno Church of Voiron
Voiron (FR)

FLC230 PP [GP] Gobo Projectors
Project Manager: INGELUX
Installer: Lighting Service

FLC200
FLC200-TW
FLC200-CC

Internal optical accessories

Max. 1 internal accessory



Wallwash lens
for [M]

Linear spread lens
for [M] [E] [EE] [EES]

Flood lens
for [M] [E] [EE] [EES]

Honeycomb louvre
for [E] [EE] [EES]

External optical accessories

Max. 1 external accessory



Glare shield
for [B] [M] [E] [EE] [EES]

Snoot
for [B] [M] [E] [EE] [EES]



FLC200

Fitted with optional glare shield; provides cut-off glare control in one plane only; alignable in 90° steps



FLC200

Fitted with optional snoot; provides cut-off glare control in all planes; recommended for downward aiming only

FLC200
FLC200-TW
FLC200-CC

FLC200 PP
FLC200-TW PP
FLC200-CC PP

Mounting accessories



* Not available for FLC201



FLC200
Mounted on optional pole clamp PC; suits diameters of 70 to 133 mm



FLC200
Mounted on optional pole clamp SP; suits diameters of 76 to 89 mm

Hardwired vs. wireless DMX

Each FLC200-CC / FLC200-CC PP Colour Changer features a DMX control interface. While the standard projectors require a hardwired connection, dedicated FLC200-CC / FLC200-CC PP versions for wireless data

transmission are available on request. Such a requirement must be specified at the time of ordering. WE-EF can assist with the selection of third-party support equipment such as DMX controllers etc.



DMX Wireless Antenna



DMX Wireless Transceiver

Wireless transmission of signal up to 300 m for projectors

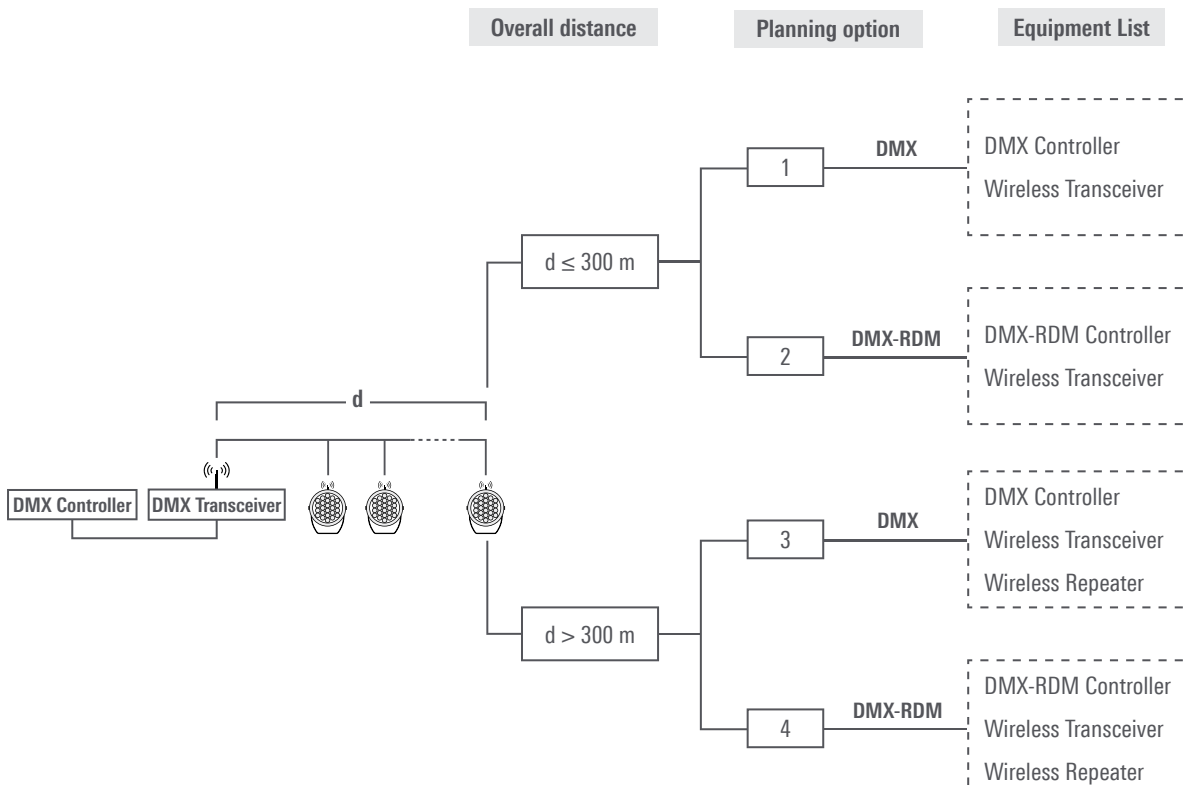


DMX Wireless Repeater

Amplifies and extends range of DMX signal

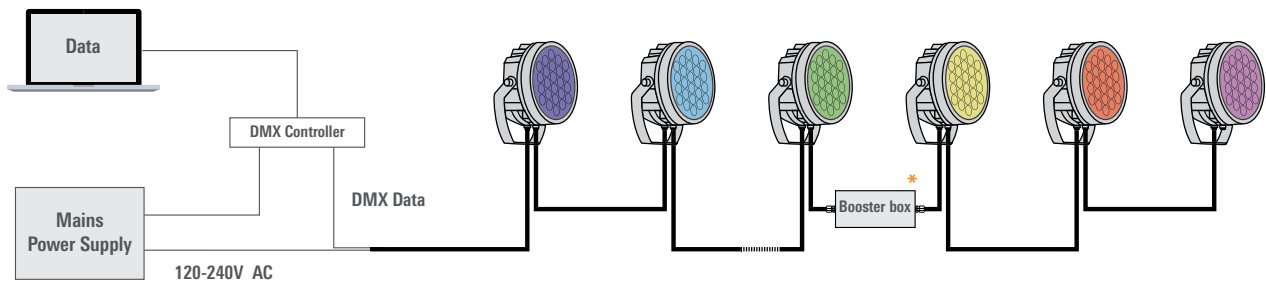
Planning a wireless DMX system

This simple planning guide takes into consideration the overall distance to be covered between the main transceiver at the control station and the last projector as well as the requirement for either standard DMX control or DMX-RDM.



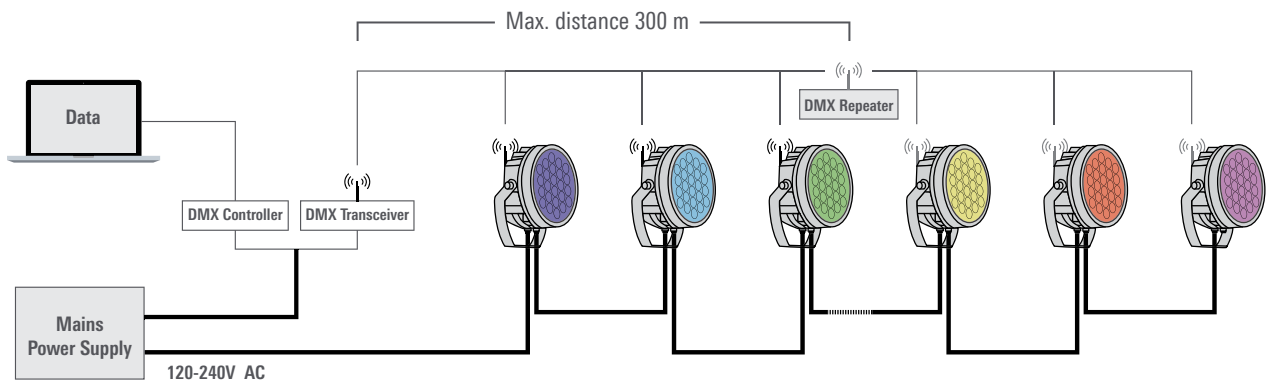
FLC200-CC / FLC200-CC PP Colour Changer, hardwired for DMX data communication

The rear terminal box of this standard projector version needs to be opened for the connection of both, mains power supply and DMX data cables.



FLC200-CC / FLC200-CC PP Colour Changer for wireless DMX data communication

This optional projector variant is equipped with an antenna and a transceiver. Depending on the number of projectors used as well as the distance and topography, a maximum of one wireless repeater may be used for amplified and extended data transmission.



▪ Other accessories, available on request

* In AU/NZ, the booster box is available on request



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK08

▪ For tunable white and colour changer versions refer to www.we-ef.com

Available distributions:
[B] [M] [E] [EE] [EES]

Standard colours – AU/NZ



Standard colours – AP





[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC301 Spigot mounted

[B] [M] [EE] [EES]

4 W

530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC311 Spigot mounted

[B] [M] [EE] [EES]

6-9 W

500-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC321 Spigot mounted

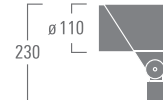
[B] [M] [EE] [EES]

12-18 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC331 Spigot mounted

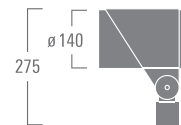
[B] [M] [EE] [EES]

24-36 W

1950-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC341 Spigot mounted

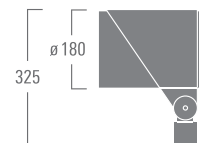
[B] [M] [EE] [EES]

48-72 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 213



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'

FLC301 Surface mounted

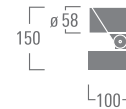
[B] [M] [EE] [EES]

4 W

530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC311 Surface mounted

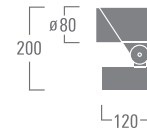
[B] [M] [EE] [EES]

6-9 W

500-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC321 Surface mounted

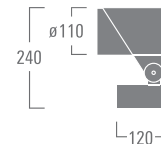
[B] [M] [EE] [EES]

12-18 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC331 Surface mounted

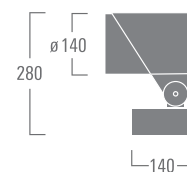
[B] [M] [EE] [EES]

24-36 W

1950-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC341 Surface mounted

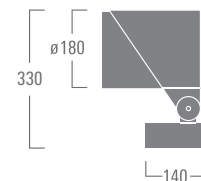
[B] [M] [EE] [EES]

48-72 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 213



[B] Symmetric, wide beam

[M] Symmetric, medium beam

[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'



FLC301 Wall bracket

[B] [M] [EE] [EES]

4 W

530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC311 Wall bracket

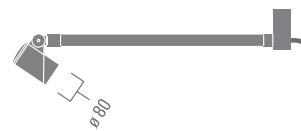
[B] [M] [EE] [EES]

6-9 W

500-590 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC321 Wall bracket

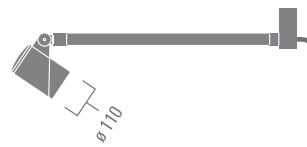
[B] [M] [EE] [EES]

12-18 W

970-1270 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC331 Wall bracket

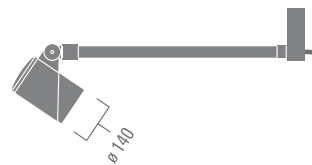
[B] [M] [EE] [EES]

24-36 W

1950-2530 lm

Max. 1 internal accessory

Max. 1 external accessory



FLC341 Wall bracket

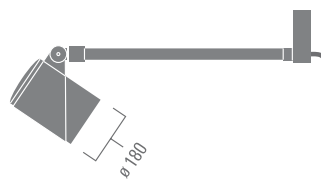
[B] [M] [EE] [EES]

48-72 W

4570-5460 lm

Max. 1 internal accessory

Max. 1 external accessory



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 213



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- RAIL66 versions: For mounting on the RAIL66 system, including 0.4 m of flexible cable enclosed in a stainless conduit, and in-line connector; refer to page 340
- Space frame versions: For mounting on \varnothing 48-60 mm pipes or space frames, including terminal box
- Control options: ON/OFF, 1-10 V, DALI

IP66

IK08

▪ For tunable white and colour changer versions refer to www.we-ef.com

Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

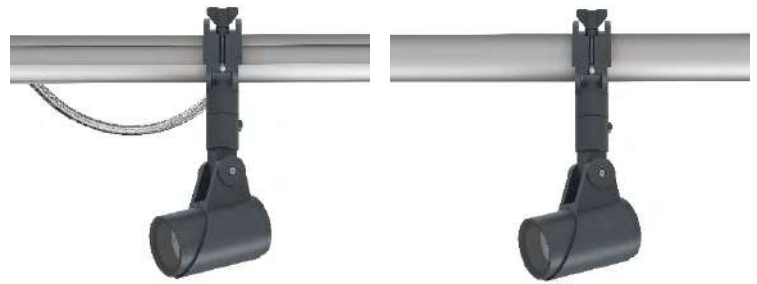
Standard colours – AP



RAL 9004 9007 7016 9016



[B] Symmetric, wide beam
 [M] Symmetric, medium beam
 [EE] Symmetric, very narrow beam
 [EES] Symmetric, very narrow beam, 'sharp cut-off'

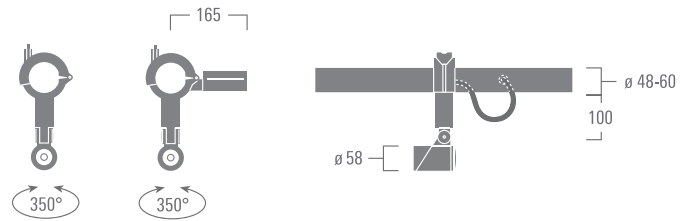


RAIL66

Space frame

FLC301 RAIL66 / Space frame

[B] [M] [EE] [EES]
 4 W
 530 lm
 Max. 1 internal accessory
 Max. 1 external accessory



FLC311 RAIL66 / Space frame

[B] [M] [EE] [EES]
 6-9 W
 500-590 lm
 Max. 1 internal accessory
 Max. 1 external accessory



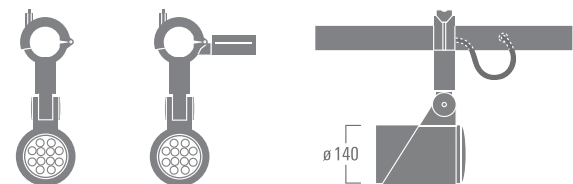
FLC321 RAIL66 / Space frame

[B] [M] [EE] [EES]
 12-18 W
 970-1270 lm
 Max. 1 internal accessory
 Max. 1 external accessory



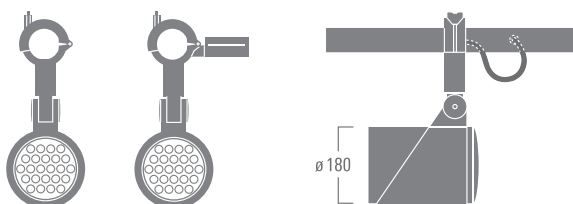
FLC331 RAIL66 / Space frame

[B] [M] [EE] [EES]
 24-36 W
 1950-2530 lm
 Max. 1 internal accessory
 Max. 1 external accessory



FLC341 RAIL66 / Space frame

[B] [M] [EE] [EES]
 48-72 W
 4570-5460 lm
 Max. 1 internal accessory
 Max. 1 external accessory



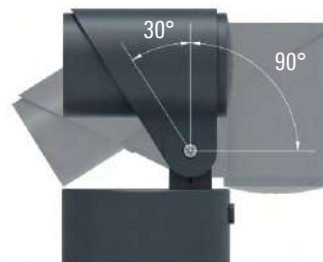
- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 213

CCG® Controlled Compression Gasket

- Weatherproof, non-ageing, high temperature rated NBR rubber
- Provides long-term, maintained, high IP ratings

IOS® Innovative Optical System

- In-house CAD design
- Precision manufactured optical system
- High photometric performance, beam efficiency and control
- Superior glare control and visual comfort through appropriate shielding angles
- High efficiency within the 50% 'half beam' angle
- Minimum light spillage beyond the 10% 'field' angle



Vertical aiming



Main lens

- Safety glass
- 'Flush sealing' helps prevent accumulation of water, dust and debris when aimed vertically upwards



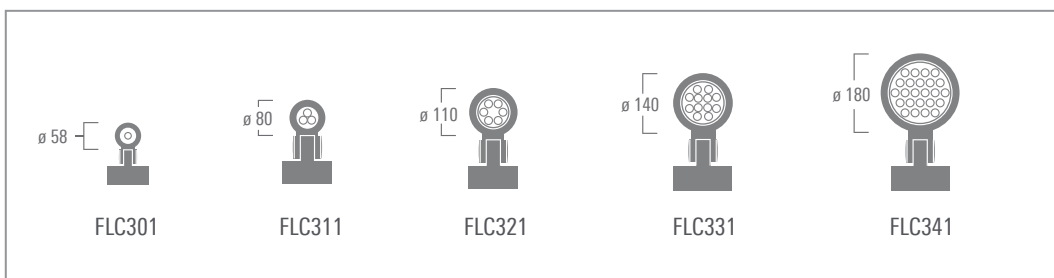
Driver

- Choice for AC mains or 24 VDC power supply
- Integral EC electronic converter in thermally-shielded compartment

LED circuit board

- High thermal conductivity material

Available in 5 sizes



FLC300

Internal optical accessories

Max. 1 internal accessory



- Honeycomb louvre
for [EE] [EES]
- Flood lens
for [M] [EE] [EES]
- Linear spread lens
for [M] [EE] [EES]
- Wallwash lens
for [M]

External optical accessories

Max. 1 external accessory



- Glare shield
for [B] [M] [EE] [EES]
- Snout
for [B] [M] [EE] [EES]

Mounting Accessories

for spigot mounted projectors



Flat surface fitter



Column fitter



Ground spike

Galvanised steel, powdercoat finish in black

for surface mounted projectors



Pole clamp



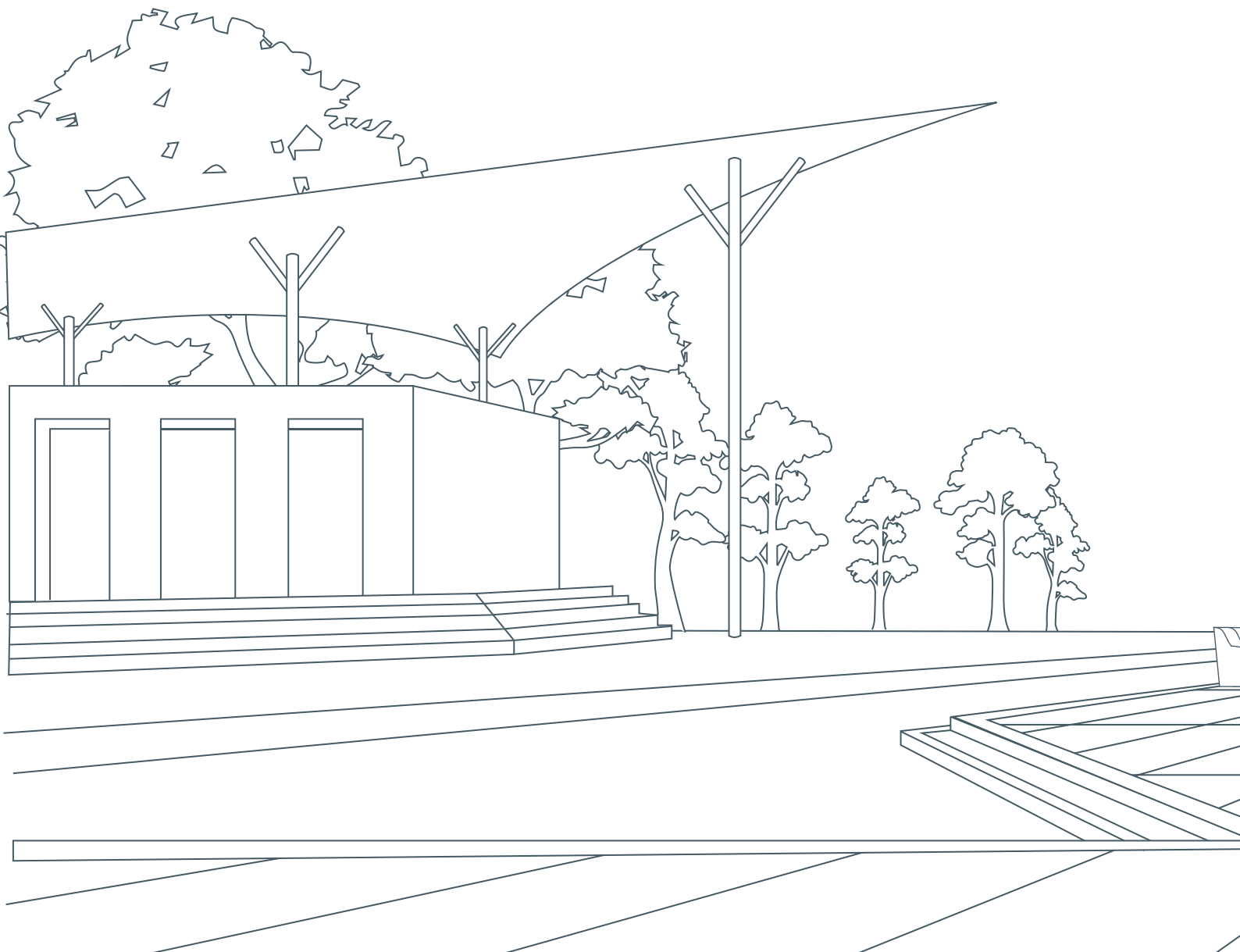
Short post

Matching planted root to be ordered separately

Planted root

Galvanised steel

Landscape



Visual comfort. Orientation. The creation of spaces that make us want to stay.

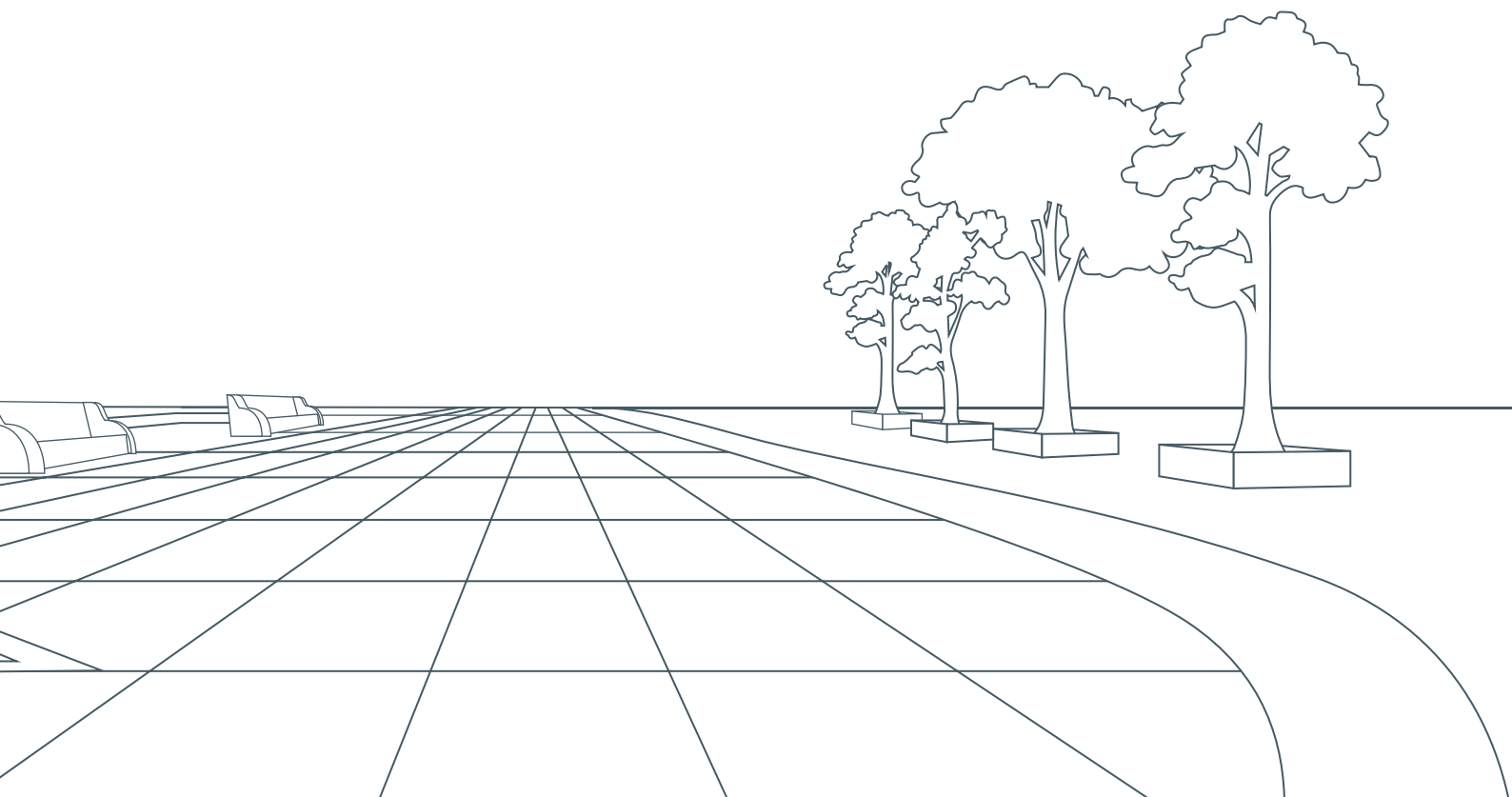
These are the decisive factors when it comes to attractively illuminating open areas, pathways, and walks in parks, gardens or around buildings.

These are the principles that guide us, in our work of designing bollards, pathway luminaires and light columns that ensure nuanced and pleasantly glare-free lighting.

The subtle, clearly proportioned shapes come in a multitude of styles and variations, adding further weight to our argument. After all, these luminaires are also present by day, so they should blend in smoothly with any environment.

After sunset, it's mostly WE-EF's lighting technology that counts, scoring high with the versatility, precision and efficiency of WE-EF lens systems.

Additionally, they remain effective and reliable for not just for one summer, but for many years, thanks to WE-EF's proven 5CE Superior Corrosion Protection system, no matter how bad the weather or how rough the conditions.



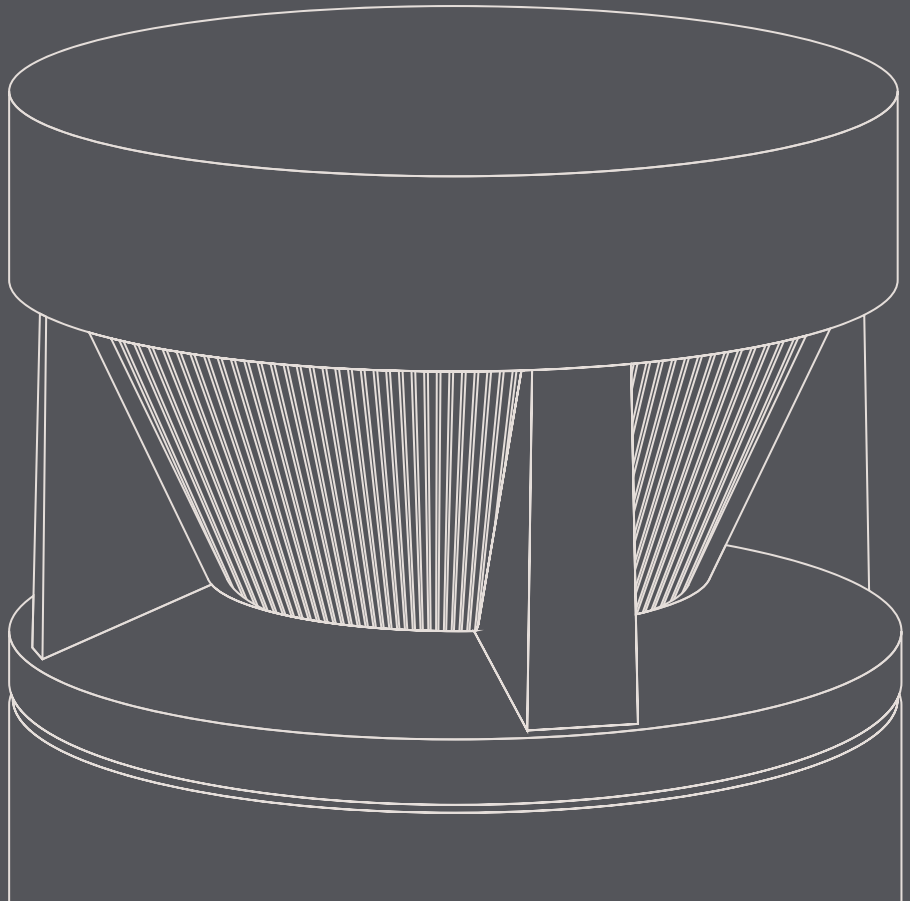


When it comes to creating an atmosphere in exterior areas, bollards and pathway luminaires by WE-EF are always a good choice.

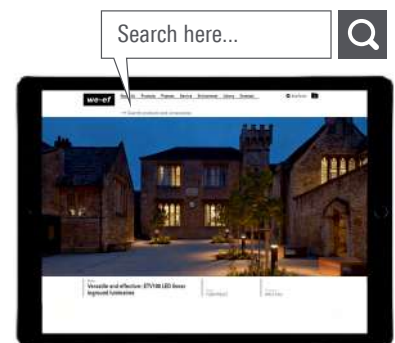
Whether single or in rows, their effective light and attractive shape guarantees a convincing impact. Bollards and pathway luminaires by WE-EF come in a wide variety of shapes and sizes. Well-proportioned and based on a range of clear fundamental geometries, they blend harmoniously with almost any environment. As great aids for ensuring good orientation and secure navigation, they illuminate public parks, paths and squares as well as hotels and housing estates, driveways and private gardens.

In the evening hours, their light makes a significant contribution to creating spaces where people like to spend their time – inviting, pleasant and with just the right amount of brightness. With a wide range of light distributions to choose from, they offer glare-free light for high visual comfort. Many even meet the 'Dark Sky' criteria. Due to their efficient lighting technology, the luminaires can be spaced with large intervals without impairing the effect and homogeneity of the light. Furthermore, WE-EF's very own 5CE Superior Corrosion Protection ensures a reliable and durable performance by the luminaires even under the harshest conditions, e.g., in the vicinity of seawater.

Bollards and pathway luminaires



PSY400	220-221
PTY400	222-225
MRY200	226-227
KTX200 / KTY200	228-229
ZFY200	230-233
CFY200	234-237
NTY100	238-239
OSI200	240-241



Bollards and pathway luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

King's Bruton Boarding School

Historic Campus. Modern Light



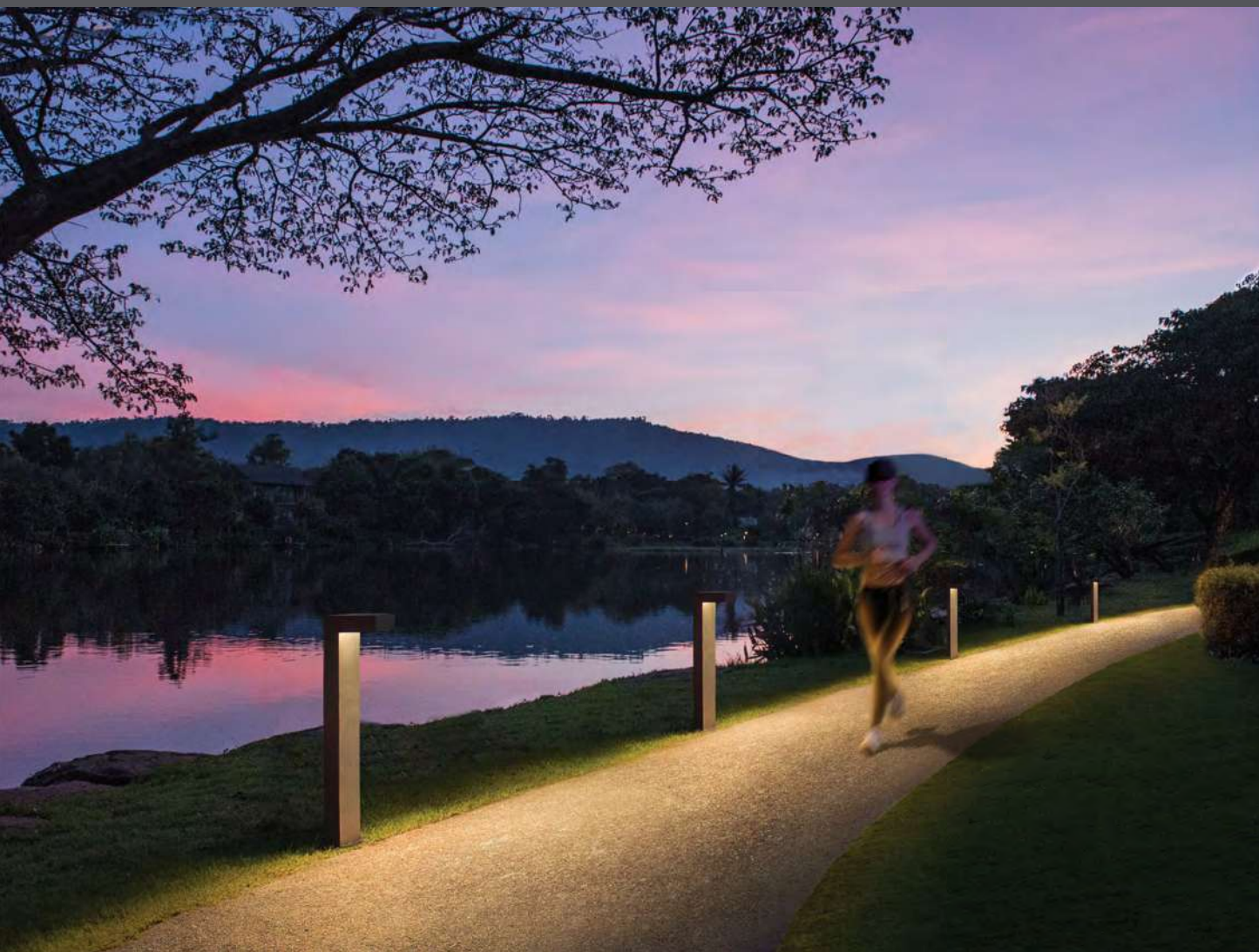


Even after more than 500 years, this boarding school in the county of Somerset has managed to keep its finger on the pulse of time, and it shows. The venerable school complex with its meticulously restored historical buildings, atmospheric open spaces and scenic paths is illuminated efficiently and glare control with ZFY230 bollard luminaires by WE-EF. Their unpretentious cylindrical shape is a perfect fit with the campus' harmonious blend of modern and historical elements.

King's Bruton Boarding School

Bruton (UK)

Architect: Levitt Bernstein



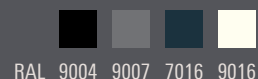
Luminaire housing:	Marine-grade, all-aluminium construction Pole section features galvanised steel reinforcement core	IP66	IK10
Corrosion protection:	5CE, including PCS hardware		
Driver:	Integral EC electronic converter		
Main lens:	RFC™ Reflection Free Contour		
Gasketing:	Silicone CCG® Controlled Compression Gasket		
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept		
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately		
Control options:	ON/OFF, 1-10 V, DALI		

Available distributions:
[R45] [S70] [A60] [R65]

Standard colours – AU/NZ

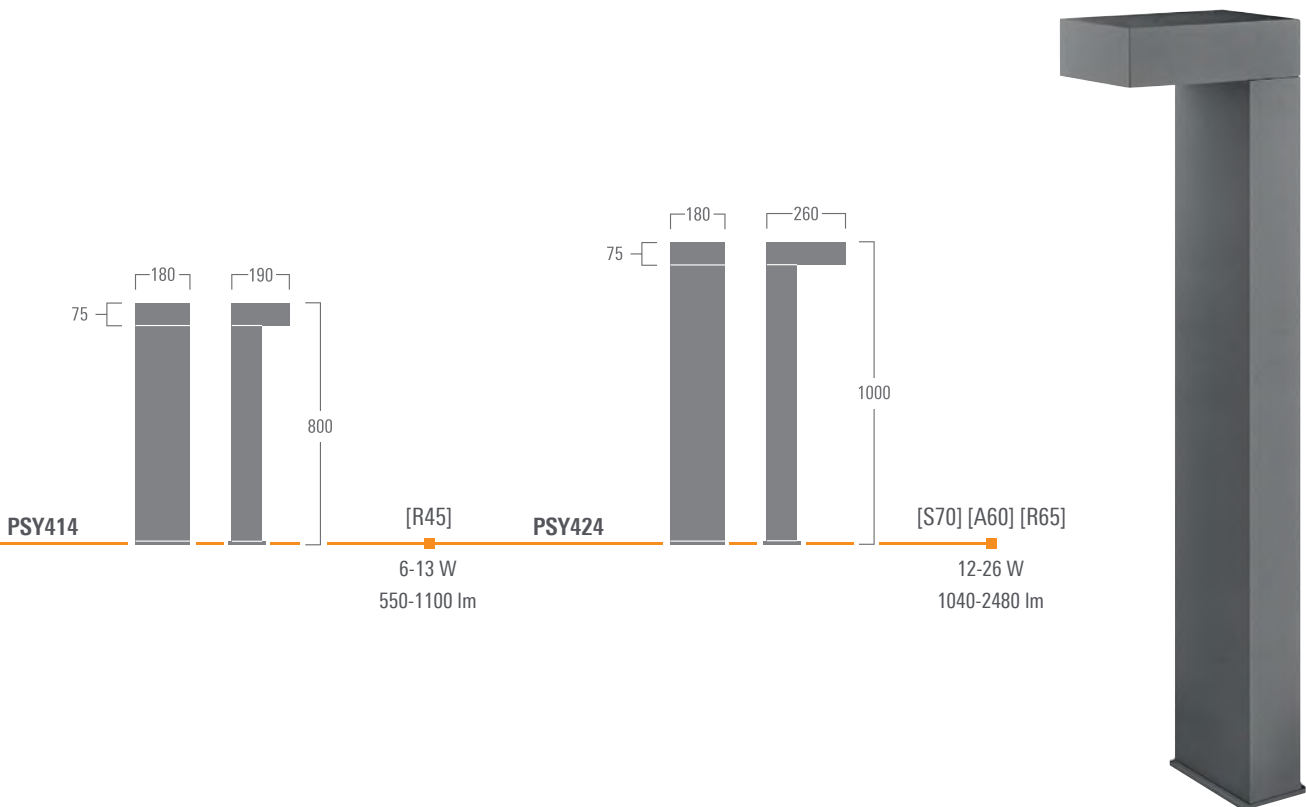


Standard colours – AP





[R45] Rectangular 'side throw'
 [S70] Asymmetric 'side throw'
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction Pole section features galvanised steel reinforcement core	IP66	IK10
Corrosion protection:	5CE, including PCS hardware		
Driver:	Integral EC electronic converter		
Main lens:	RFC™ Reflection Free Contour		
Gasketing:	Silicone CCG® Controlled Compression Gaskets		
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept		
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately		
Control options:	ON/OFF, 1-10 V, DALI		

Available distributions:
[R45/R45] [S70/S70]
[A60/A60] [R65/R65]

Standard colours – AU/NZ

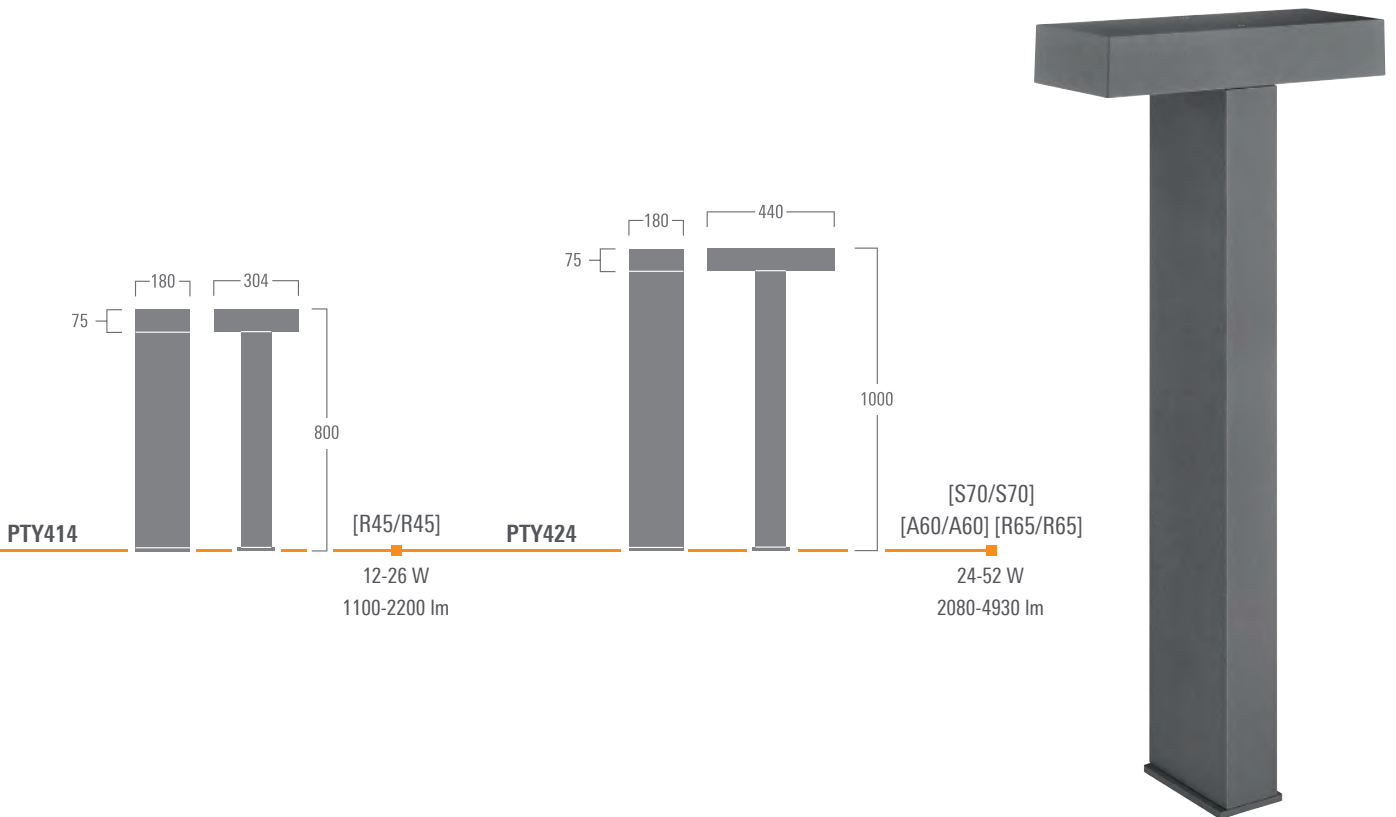


Standard colours – AP





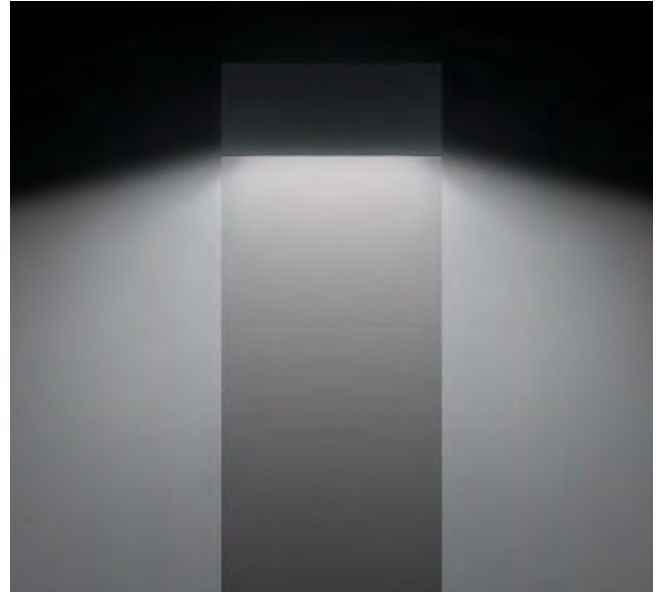
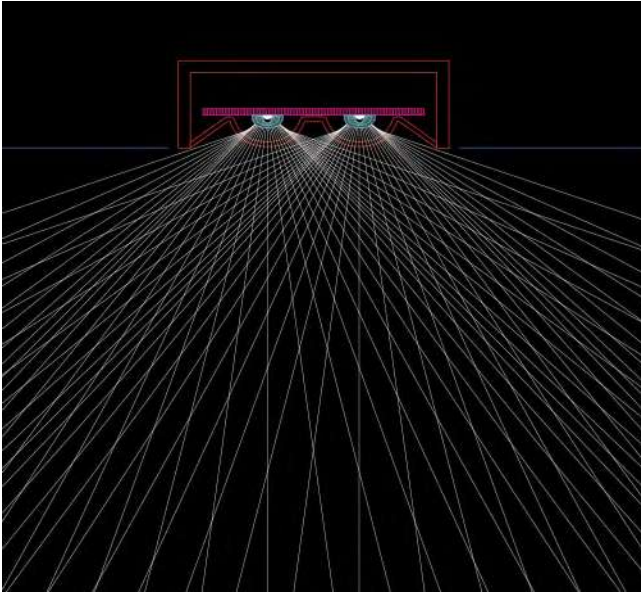
- [R45/R45] Rectangular 'side throw'
- [S70/S70] Asymmetric 'side throw'
- [A60/A60] Asymmetric 'forward throw'
- [R65/R65] Rectangular 'side throw'



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

Bright Walks, Dark Skies

WE-EF's versatile, high-performance street and area lighting optics – customised for bollards of 0.8 to 1.0 metre height – deliver first-class illumination for narrow driveways, landscapes, pathways etc. With four different light distributions to choose from – [R45] [S70] [A60] [R65] – a large variety of lighting challenges can be addressed and mastered. At the same time, 100 per cent horizontal cut-off addresses dark sky concerns and safeguards high visual comfort.



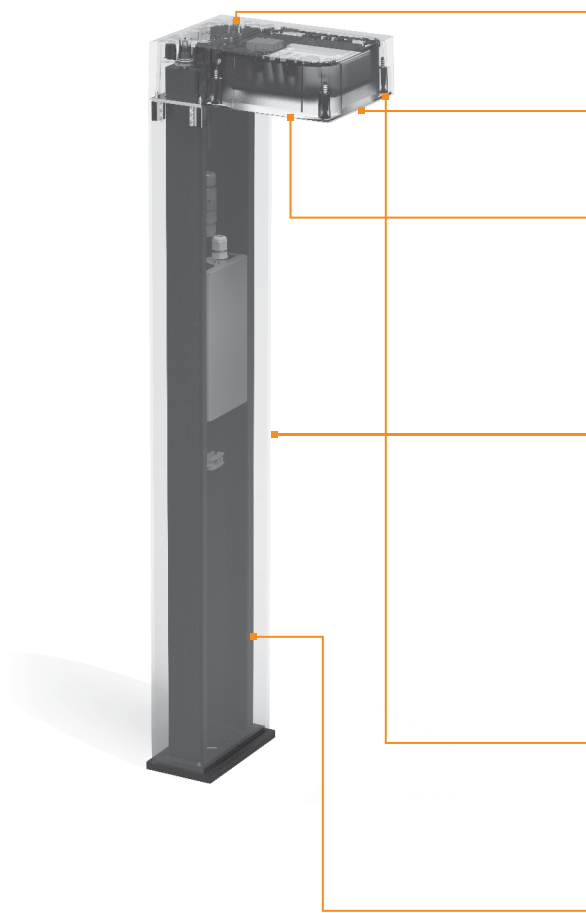
PSY424 [R65]

This CAD ray-tracing simulation demonstrates the [R65] optics' broad downward light distribution as well as its glare control qualities. The combined 'side throw' and 'forward throw' of light delivers uniform coverage for large areas.



Illuminance Footprint

Typical isolux diagram of a single-unit PSY424 [R65] installation. Several luminaires installed in a row provide excellent illumination for pathways, landscapes etc.



FS Factory-sealed

Luminaire does not need to be opened during installation



IOS® Innovative Optical System

CAD-optimised
Dark sky compliant



RFC™ Main Lens

Reflection Free Contour delivers high light transmission

Marine-grade All-aluminium Construction

Die-cast aluminium alloy luminaire body
Extruded aluminium alloy pole section



5CE Superior Corrosion Protection

Five Critical Elements provide outstanding and long-lasting anti-corrosion properties

- Substrate – marine-grade aluminium alloy
- Conversion coating – multi-step pre-treatment
- Powder coating – UV stabilised, architectural grade coating
- PCS hardware – refer to detail below
- Process Control – tightly controlled process and quality checks, up to 3,000-hour salt spray tests



PCS Hardware

- Austenitic stainless steel
- Tough, impregnated polymer coating
- Non-metallic barrier, protects against galvanic corrosion

Anti-vandalism Reinforcement

Core structure and surface mounting flange plate made from hot-dipped galvanised steel



Luminaire housing:	Marine-grade, all-aluminium construction Pole section features galvanised steel reinforcement core	IP66 IP67	IK10
Corrosion protection:	5CE, including PCS hardware		
Driver:	Integral EC electronic converter		
Main lens:	Polycarbonate, UV-stabilised		
Gasketing:	Silicone CCG® Controlled Compression Gasket		
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control		
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately		
Control options:	ON/OFF, 1-10 V, DALI		

Available distribution:
[C70]

Standard colours – AU/NZ



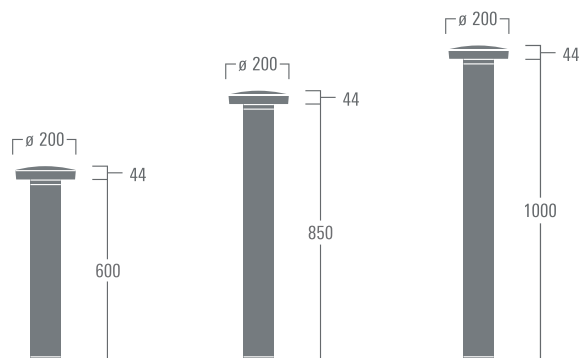
Standard colours – AP





[C70] Symmetric

MRV224



[C70]

11-15 W
840-1110 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK10

Available distributions:
[C60] [R65]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP

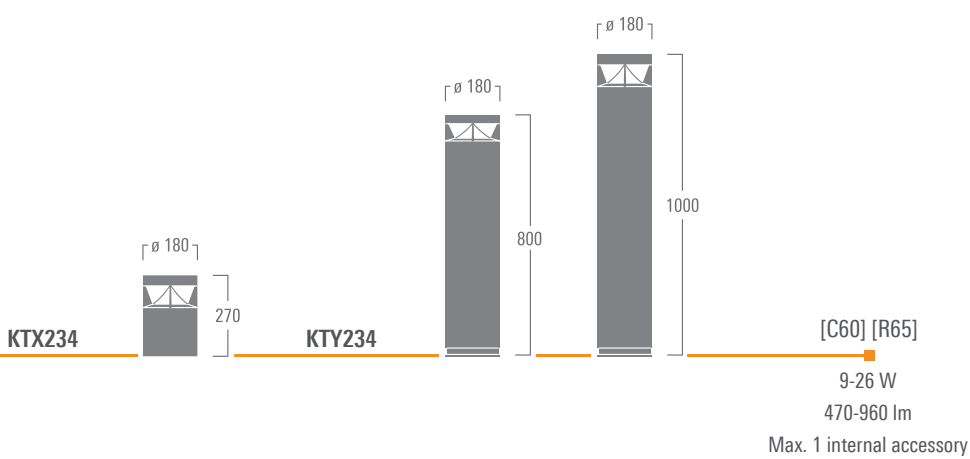


RAL 9004 9007 7016 9016



[C60] Symmetric

[R65] Rectangular 'side throw'



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Polycarbonate, UV-stabilised
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK10

Available distribution:
[C60]

Standard colours – AU/NZ



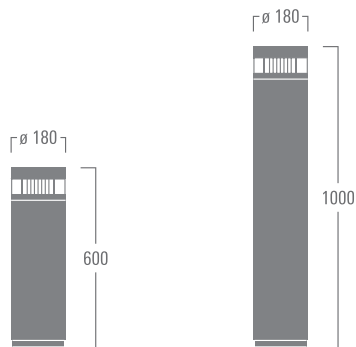
Standard colours – AP





[C60] Symmetric

ZFY230



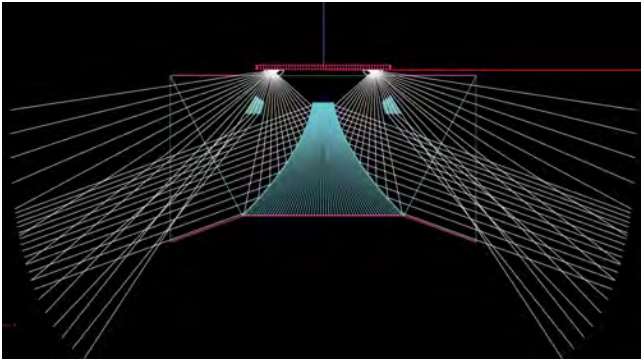
[C60]
12-17 W
760-1140 lm
Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

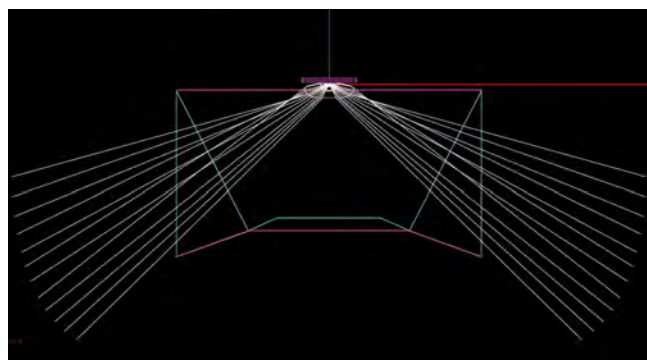
All-round Bollards for Controlled Horizontal and Vertical Illumination

WE-EF's IOS® Innovative Optical System features CAD-optimised optics that provide superior illumination and glare control. Two distinctly different light distributions are available for the luminaires introduced on the preceding pages. The [C60] symmetric distribution is the highly efficient result of a specifically designed reflector/lens combination. While the '60' refers to the nominal angle of peak intensity from nadir (downward vertical), highly uniform illuminance is achieved at ground level. The [R65] rectangular distribution combines controlled 'forward' with broad 'side throw', allowing for large spacing intervals between luminaires. In addition, a controlled amount of vertical illuminance facilitates facial recognition and similar viewing tasks in an otherwise dark environment, such as public parks etc.



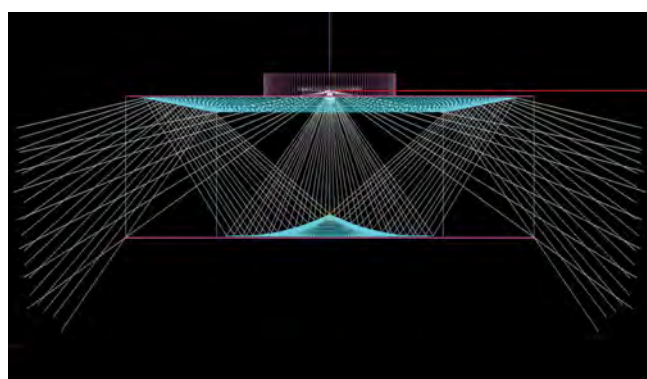
KTX200 / KTY200 [C60]

This CAD ray-tracing simulation demonstrates the controlled downward light distribution. The refractor lens simultaneously reduces surface brightness and provides a limited vertical illuminance component – facilitating facial recognition.



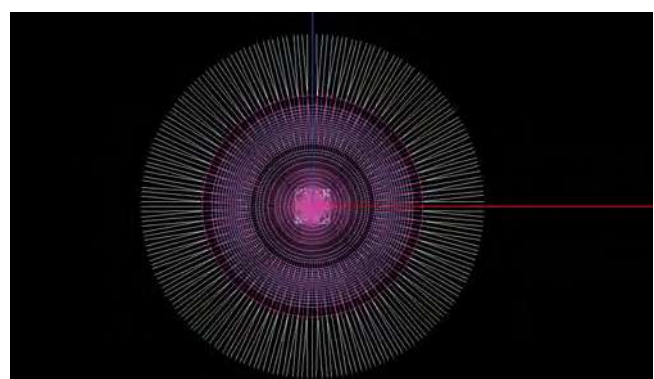
KTX200 / KTY200 [R65]

An array of highly effective optical lenses delivers uniform pathway lighting. The 'eyebrow' prisms restrict high-angle glare – ensuring high visual comfort.



ZFY200 [C60]

The luminaire's reflector elements produce a controlled downward distribution. An additional refractor lens reduces surface brightness while creating a limited amount of vertical illuminance – all contributing factors to ensuring high visual comfort, facial recognition and public safety.



180° Cut-off shield



KTY234 [R65] without.....



.....and with 180° cut-off shield.



KTX234 [R65]

Fitted with the 180° cut-off shield, this short bollard version casts extended, smooth pools of light along the pathway, as shown in this intimate setting.



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Safety glass
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	CAD-optimised for superior illumination and glare control
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately
Control option:	ON/OFF, 1-10 V, DALI

IP66

IK10

Available distribution:
'Forward throw'

Standard colours – AU/NZ



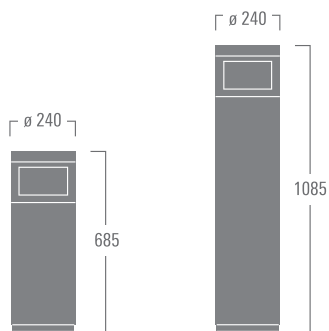
RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016

CFY259



One-sided 'Forward throw'	Two-sided 'Forward throw'
12-18 W	24-36 W
350-500 lm	690-990 lm



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

A Walk in the Park

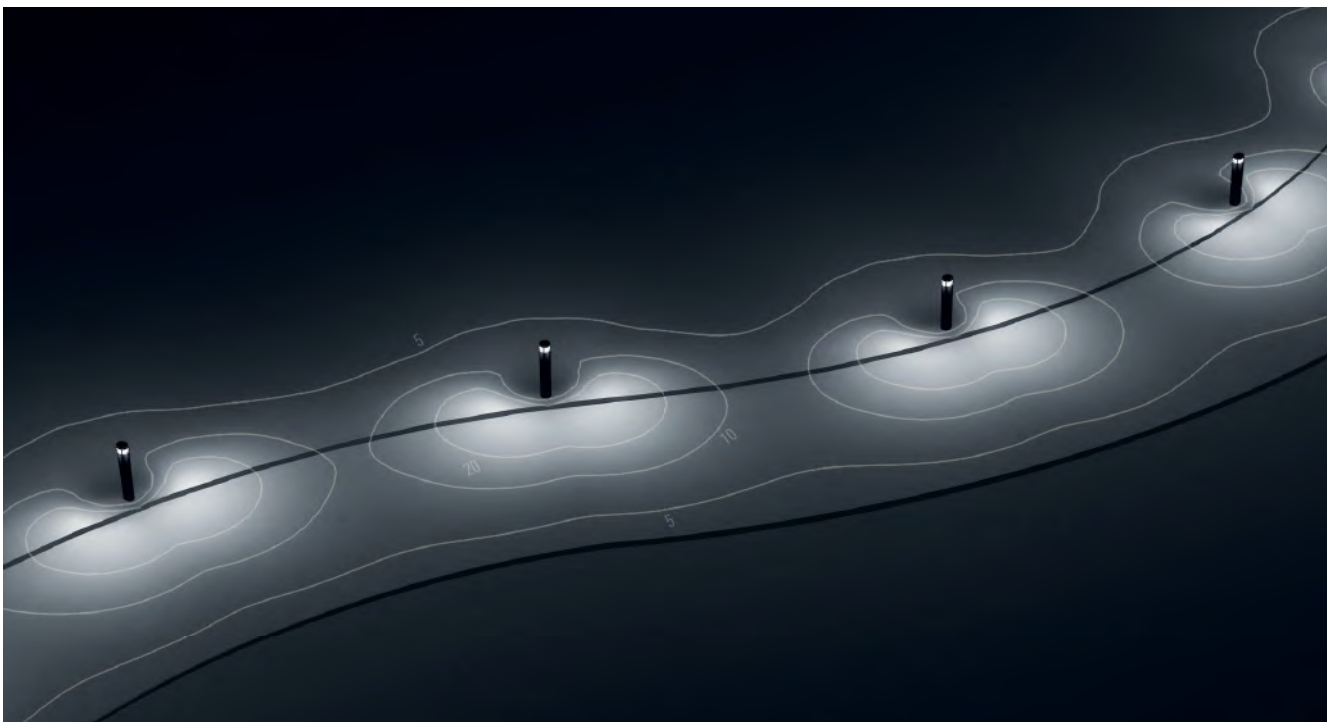
With their unobtrusive appearance, well-designed bollards are often the preferred 'human scale' lighting tool in park landscapes as well as in modern and traditional architectural settings. Engineered for mechanical strength, durability and high photometric performance, their below-eye level optics deliver either entirely glare-free, dark-sky compliant lighting, or include a controlled amount of vertical illuminance that facilitates facial recognition in an otherwise dark environment. Pathway lighting applications as shown here cover a typical path width of 1 to 4 metres and luminaire spacing from 5 to 10 metres.

Australian/New Zealand Standard AS/NZS 1158.3.1 details very specific minimum requirements for different types of pathway lighting applications – which WE-EF bollards meet with ease. Permissible spacing of the bollards featured here ranges between approx. 7 and 24 metres.

Please contact WE-EF for further details and planning support.

Bollard	Typical Application		AS/NZS 1158.3.1 P3 Pathway		AS/NZS 1158.3.1 P4 Pathway	
	Width of path	Luminaire spacing	Width	Spacing	Width	Spacing
KTY234 [R65] 13 W 4000 K	1-4 m	7-10 m	1-4 m	11.1 m (max)	1-4 m	19.3 m (max)
KTY234 [C60] 26 W 4000 K	1-4 m	7-10 m	1-4 m	18.8 m (max)	1-4 m	23.7 m (max)
ZFY230 [C60] 17 W 4000 K	1-4 m	5-10 m	1-4 m	8.2 m (max)	1-4 m	14.6 m (max)
PSY424 [S70] 26 W 4000 K	1-4 m	7-10 m	–	–	1-4 m	14.6 m (max)
PSY424 [R65] 26 W 4000 K	1-4 m	7-10 m	–	–	1-4 m	14.6 m (max)
MRY224 [C70] 15 W 4000 K	1-4 m	7-10 m	–	–	1-4 m	11.0 m (max)

AS/NZS 1158.3.1	P3 Pathway	P4 Pathway
E_{avg} (lux) \geq	1.75	0.85
E_{min} (lux) \geq	0.3	0.14
$E_{v_{min}}$ (lux) \geq	0.3	–
E_{max}/E_{min} (lux) \leq	10	10



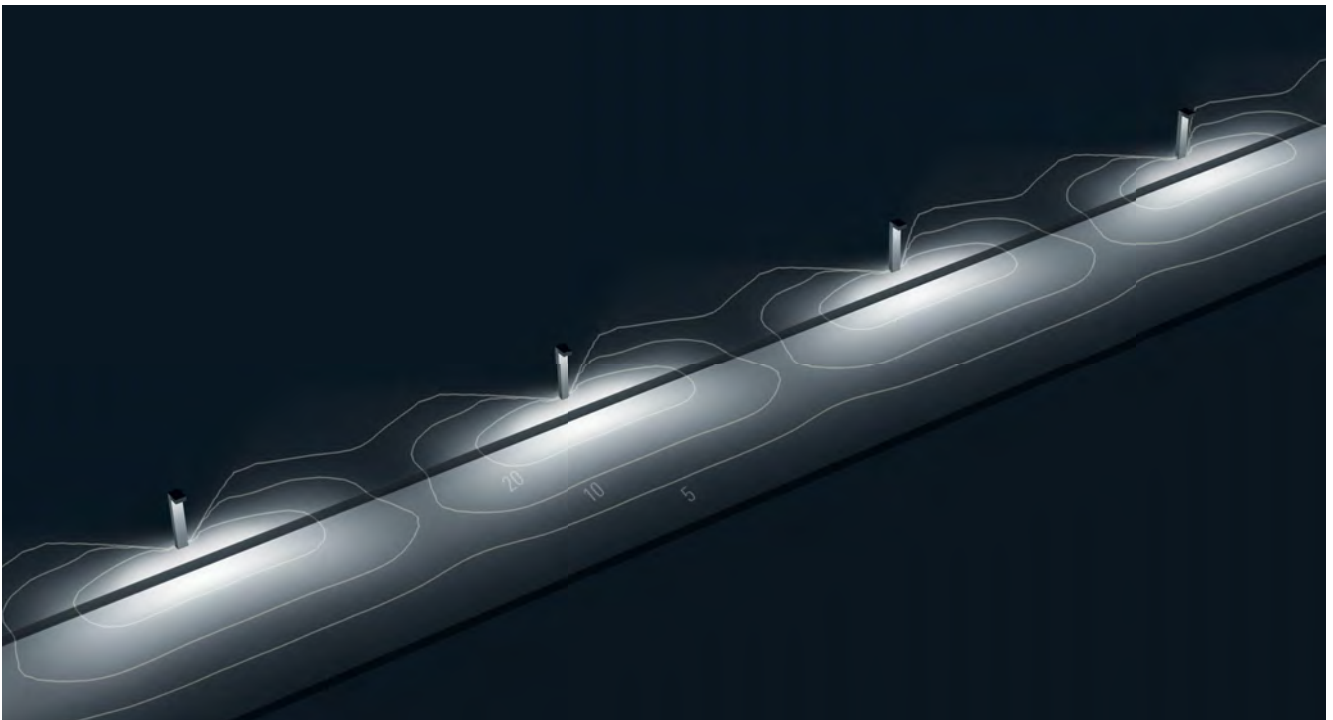
KTY234 [R65]

13 W 4000 K LLF = 0.9

Luminaire spacing 7.0 metres Path width 4.0 metres



ZFY230 [C60]
12 W 4000 K LLF = 0.9
Luminaire spacing 7.0 metres Path width 4.0 metres



PSY424 [S70]
26 W 4000 K LLF = 0.9
Luminaire spacing 7.0 metres Path width 4.0 metres



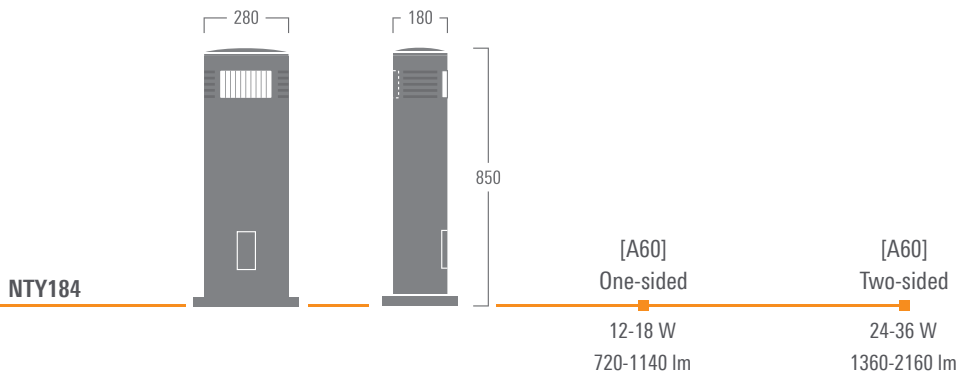
Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter in thermally-separated compartment
Main lens:	Prismatic polycarbonate, UV-stabilised
Gasketing:	Silicone rubber gaskets
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately
Control options:	ON/OFF, 1-10 V or DALI on request

IP65

IK10



[A60] Asymmetric 'forward throw'



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Safety glass
Gasketing:	Silicone rubber gasket
Installation:	FS Factory-sealed luminaire does not need to be opened during installation Surface mounting flange plate Planted root is available depending on site-specific requirements; to be ordered separately
Control options:	ON/OFF, 1-10 V, DALI

IP66

IK10

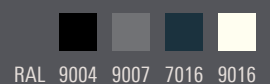
Scarborough Beach Pool
Scarborough (AU)
Architect: Christou Design Group
Lighting Design: ETC

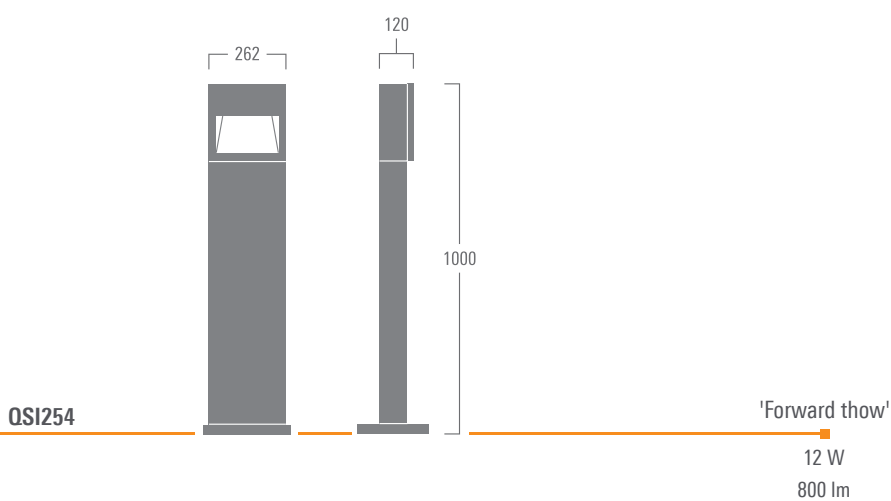
Available distribution:
'Forward throw'

Standard colours – AU/NZ



Standard colours – AP





- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

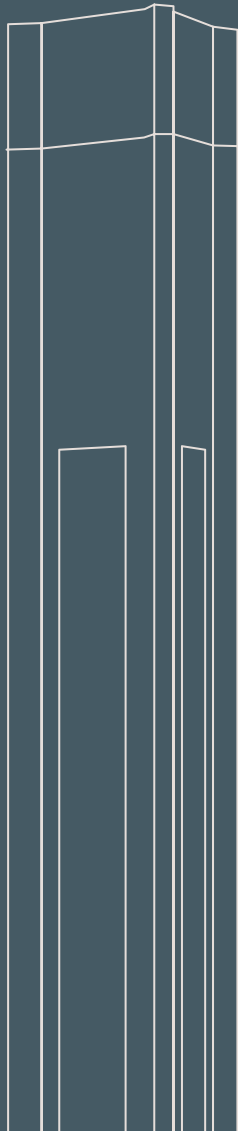


By day, WE-EF's light columns excel at structuring spaces. At night, the power of their purist design joins forces with the functional and atmospheric effect of their light.

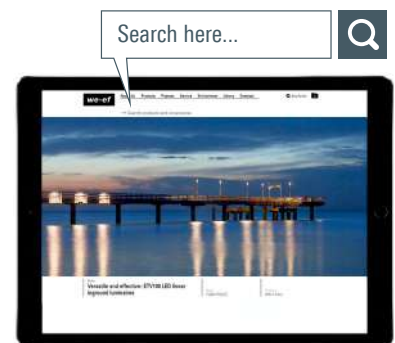
WE-EF light columns offer a wide variety of beam characteristics, from symmetrical and asymmetrical to diffused light distributions.

The functional design language of WE-EF light columns, their focus on basic geometric shapes, their high-quality materials as well as their sophisticated lighting technology all add to their popularity as instruments for lighting footpaths, parks and promenades.

Light columns



LTP400	246-247
LTM400	248-249



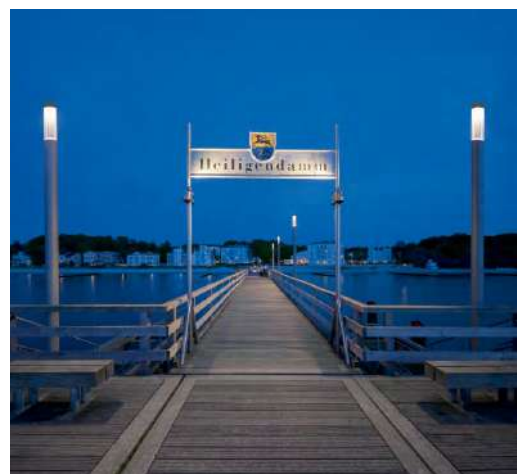
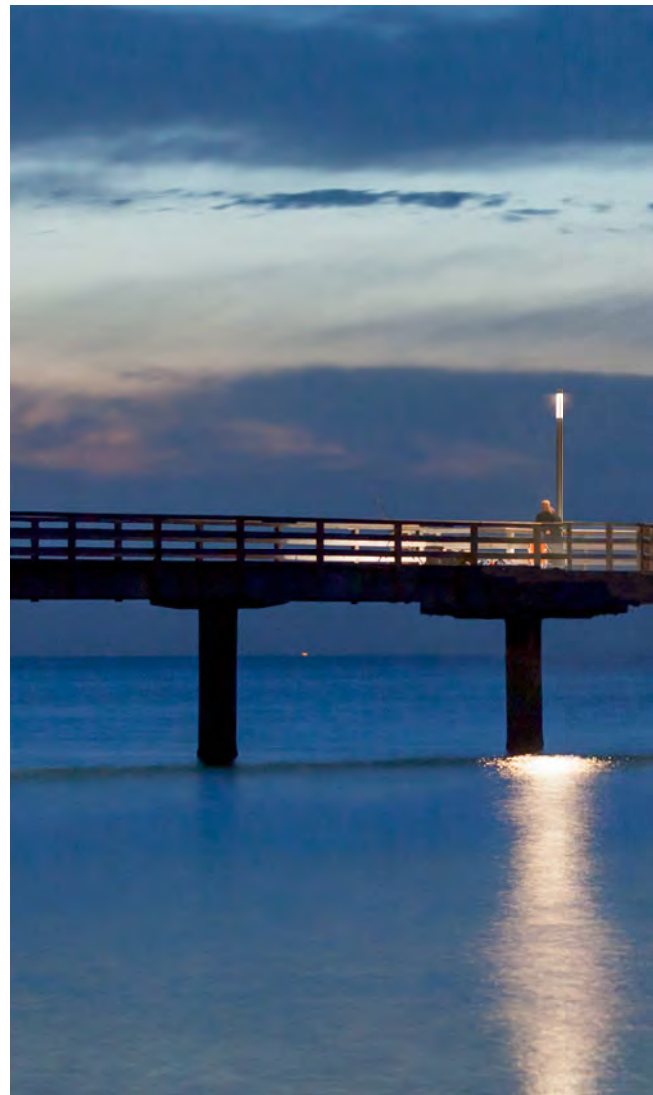
Light columns

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

The Pier Heiligendamm

A Bridge Marked by Light

The lighting concept for Heiligendamm's Baltic seaside pier involves linear WE-EF luminaires integrated into the railing as well as LTM440 light columns, modified for the special requirements of the project. The variation used here applies a ribbon-shaped lens to direct the light onto the pier and reduce stray light on the water surface. Furthermore, WE-EF overcomes the typical weathering and aggressive climate encountered by the sea with its five-stage 5CE Superior Corrosion Protection system.



The Pier

Heiligendamm (DE)

Light planning: Institut für Gebäude + Energie + Licht Planung,
Prof. Dr.-Ing. Thomas Römhild, Wismar





Luminaire housing:	Marine-grade, all-aluminium construction
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	Prismatic polycarbonate, UV-stabilised 3 x 120° offset
Gasketing:	Silicone rubber gaskets
Optics:	CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	Planted root is available depending on site-specific requirements; to be ordered separately
Mains connection:	Service door with fused cable connecting box
Control option:	ON/OFF

IP44

IK10

Eli and Edythe Broad Art Museum
Michigan State University, East Lansing (US)
Architect: Zaha Hadid Architects
Lighting design: ARUP & Peter Basso Associates

Available distribution:
Diffused

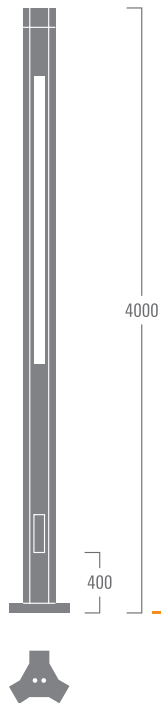
Standard colours – AU/NZ



Standard colours – AP



LTP444



Diffused
37 W
2550 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



Luminaire housing: Marine-grade, all-aluminium construction

Corrosion protection: 5CE, including PCS hardware

Driver: Integral EC electronic converter in thermally-separated compartment

Main lens: PMMA

Gasketing: Silicone rubber gaskets

Optics: IOS® Innovative Optical System

CAD-optimised for superior illumination and glare control

OLC® One LED Concept

Installation: Planted root is available depending on site-specific requirements; to be ordered separately

Mains connection: Service door with fused cable connecting box

Control option: ON/OFF

IP55

IK09

The University of Nottingham
Leicester (UK)

Available distributions:
[C50] [C60] [S65] [R65]

Standard colours – AU/NZ

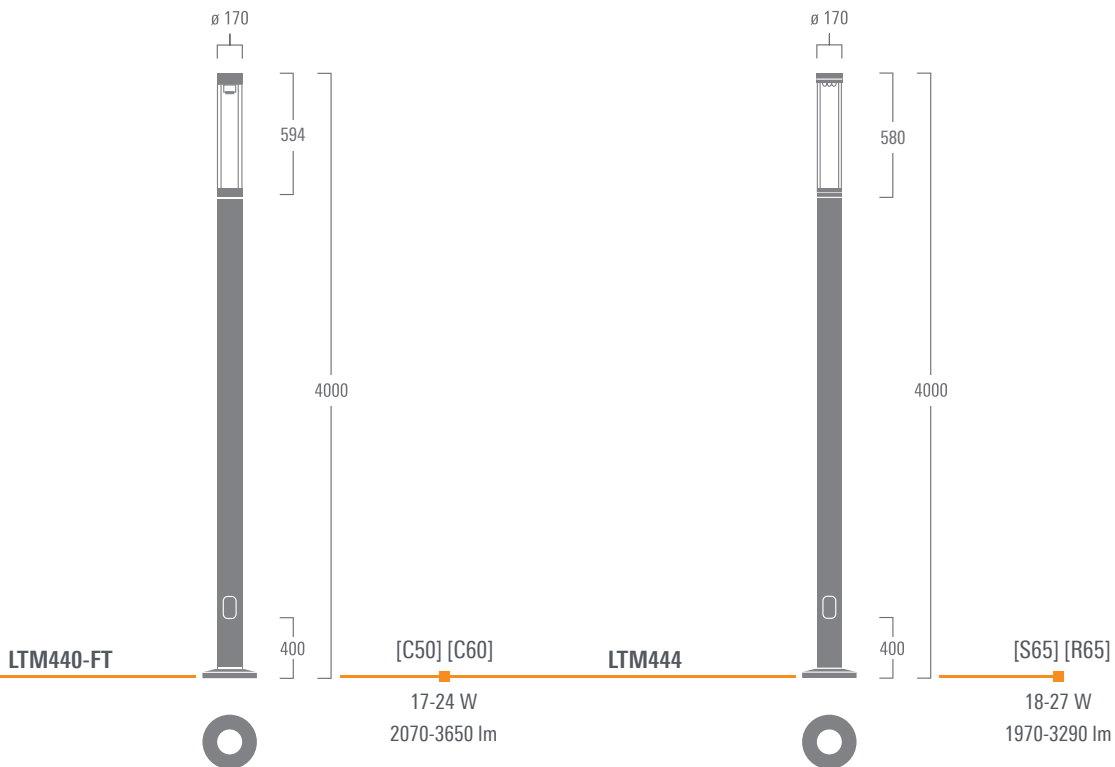


Standard colours – AP





- [C50] Symmetric, controlled
- [C60] Symmetric
- [S65] Streetlighting
- [R65] Rectangular 'forward throw'



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com



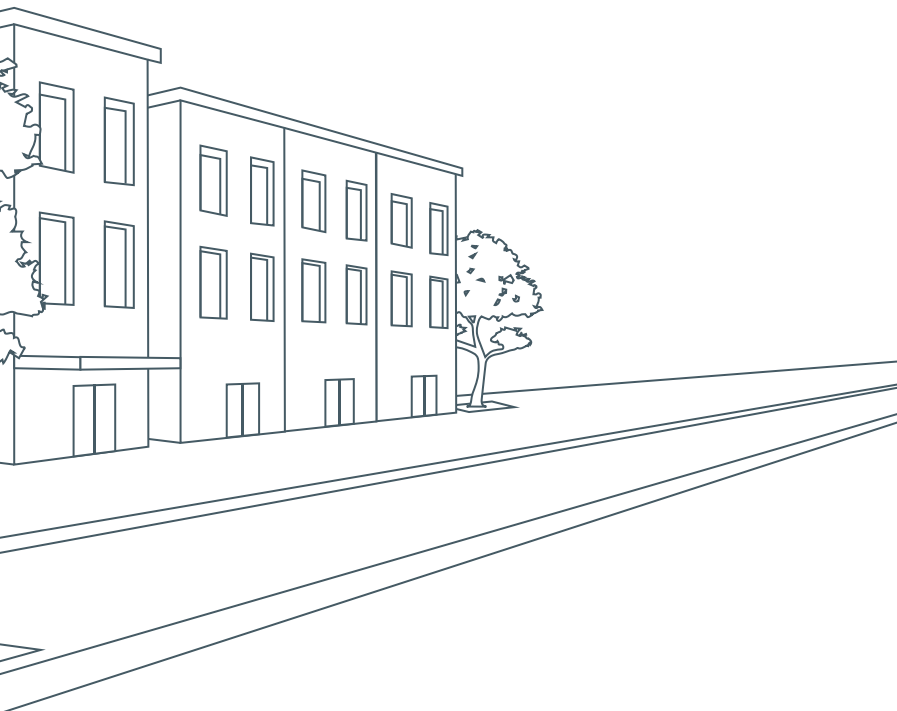
City

Safety and sustainability are imperative when lighting public streets and areas.

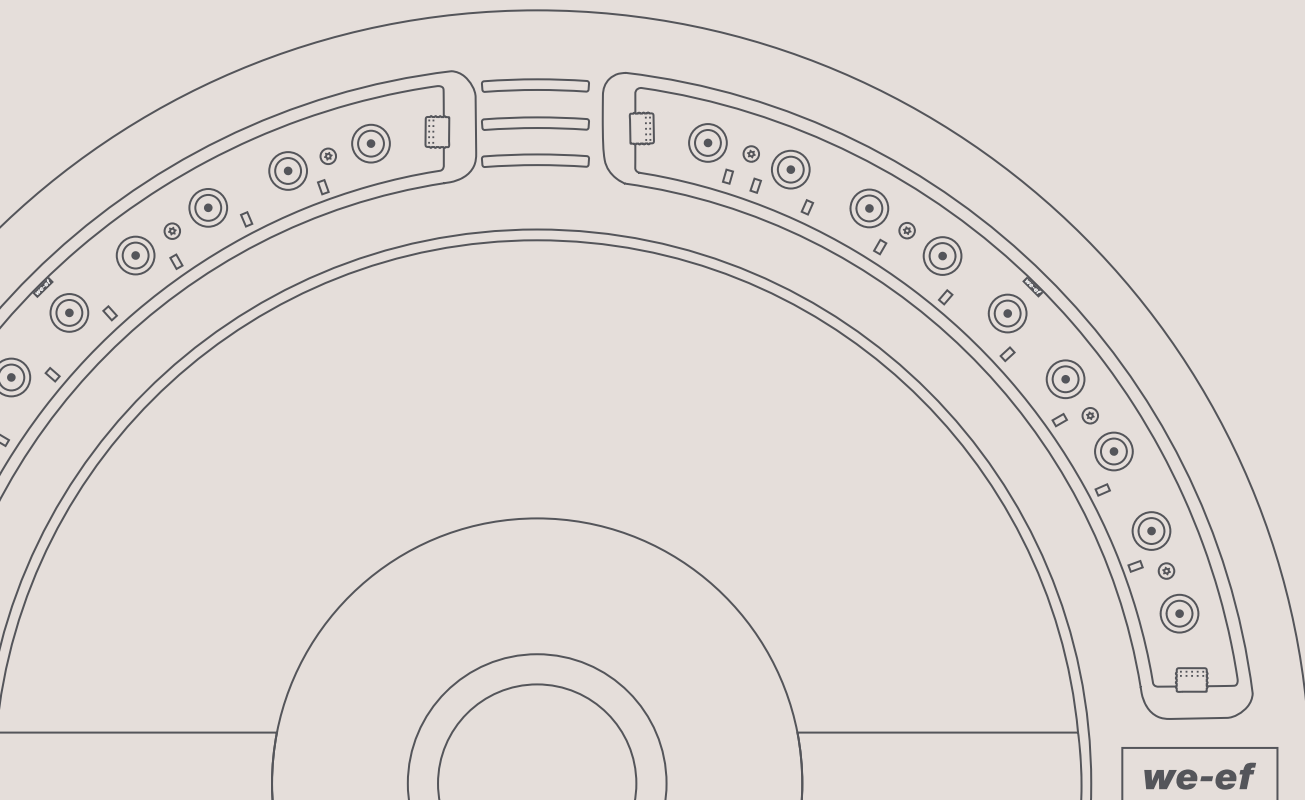
Municipal master plans for lighting and sustainability concepts are increasingly shifting the focus to night-time lighting of public streets and areas. After all, this promising field offers the double opportunity to not only save substantial amounts of energy and thus protect the climate, but also to change the cityscape in many positive ways.

With IOS® Innovative Optical System, state-of-the-art controls and high-quality design, WE-EF luminaires open up new opportunities for creative planners and architects.

With modern and classic designs that integrate seamlessly with a wide variety of environments, WE-EF luminaires help to create urban areas with exceptional quality of life, where people enjoy their stay by day and by night. Needless to say, longevity and economy go hand-in-hand.



Catenary mounted luminaires

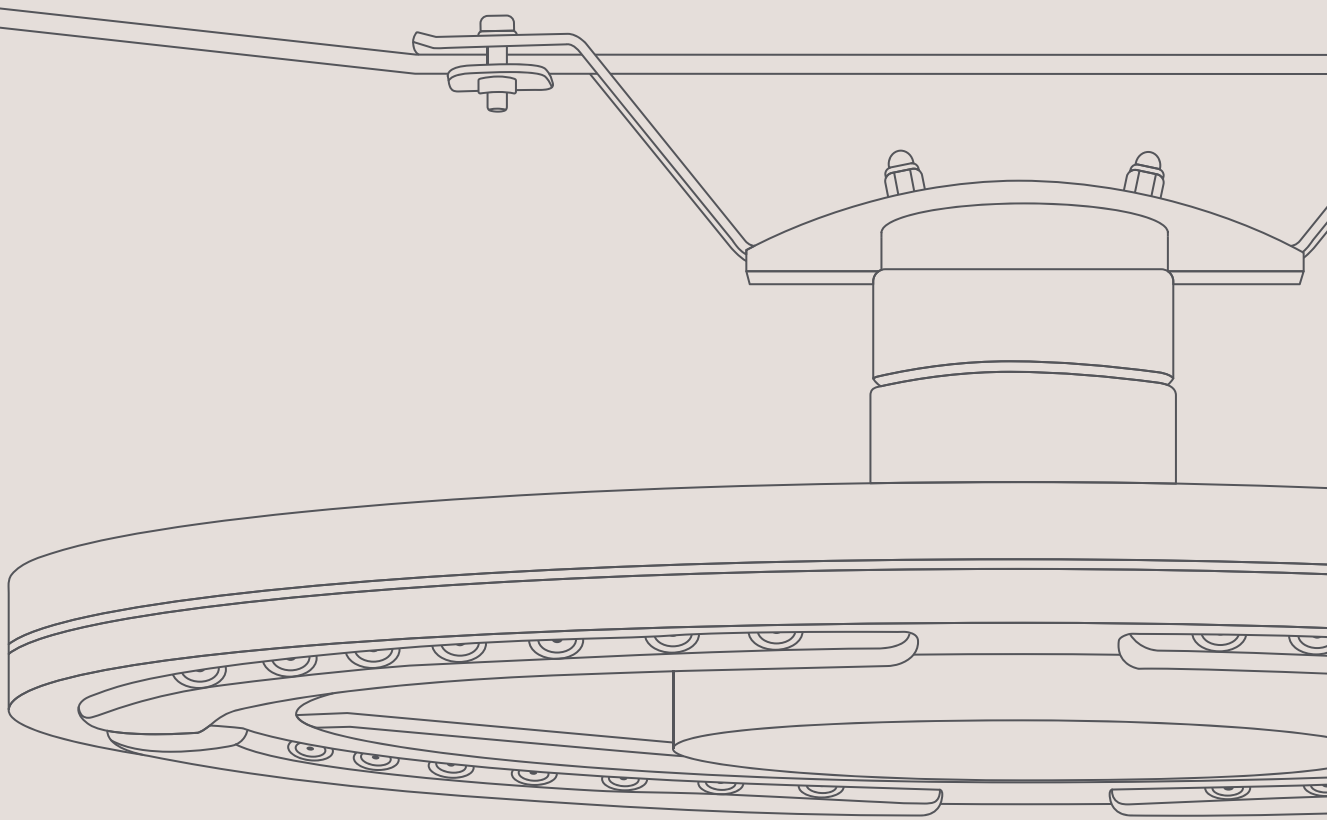


In historical and contemporary cityscapes, catenary luminaires have proven their potential as problem solvers. Mounted on suspension cables, they not only provide lighting, but also play a part in shaping their environment.

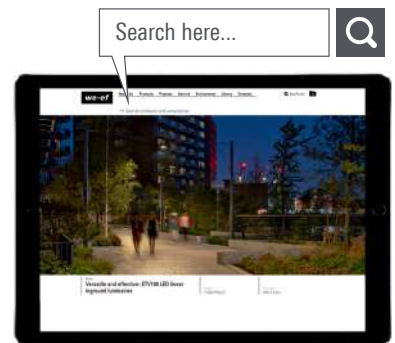
Catenary mounted luminaires allow for central installation above streets, paths, alleys or even squares – in many cases, the optimum lighting position.

In design language as well as in terms of housing quality and available light distributions, WE-EF catenary mounted luminaires are closely based on their respective sister models from the WE-EF pole mounted series.

This allows for the implementation of holistic urban lighting concepts with consistent design features, even in areas such as confined, narrow alleys and labyrinth-style areas with many corners.



ZFS400	256-257
RFS500	258-259
CFS500	260-261
DAS100	262-263



Catenary mounted luminaires
For detailed specifications, product codes and latest performance data, refer to www.we-ef.com



London City Island
London (UK)
Lighting designer: Zoe Faulkner of
Troup Bywaters + Anders



London City Island

Exclusive Location. Excellent Light

London City Island is a new, car-free quarter created in the loop of the River Lee, right before it flows into the Thames. The new home of the English National Ballet, the city island features many green areas and apartment high-rises. To give the area an attractive and safe feel even after dark, the planners decided to install WE-EF's elegantly shaped RFS500 catenary mounted luminaires as well as matching RFL500 pole mounted luminaires along the island's footpaths and promenades.



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass, hinged, frame with safety catch
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK07



Available distributions:
[C45] [C50] [C55]

Standard colours – AU/NZ

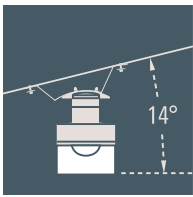


Standard colours – AP



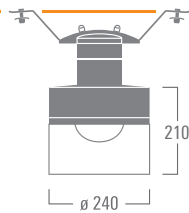


[C45] [C50] [C55] Symmetric, controlled



+/- 14° levelling bracket

ZFS460



[C45] [C50] [C55]

24-37 W
3438-5667 lm



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Non-reflecting safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352



IP66

IK07

Chadstone Shopping Center

Melbourne (AU)

Lighting design: Simpson Kotzman Engineer

Available distributions:

[S60] [S65] [S70]

Standard colours – AU/NZ

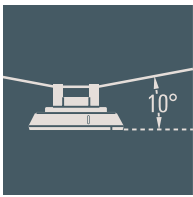
RAL 9004 9006 9007 9016

Standard colours – AP

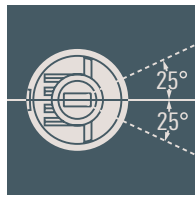
RAL 9004 9007 7016 9016



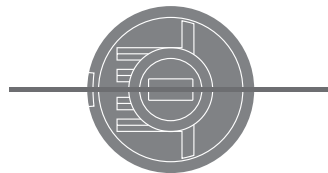
[S60] [S65] [S70] Streetlighting



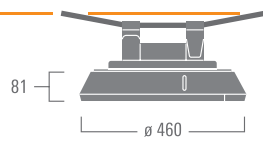
+/- 10° levelling bracket



+/- 25° rotatable



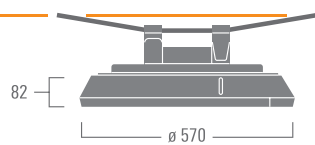
RFS530



[S60] [S65] [S70]

12-48 W
1400-5160 lm

RFS540



[S60] [S65] [S70]

36-96 W
4210-10310 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: PMMA. RFC™ Reflection Free Contour
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK08

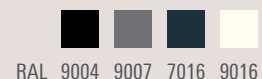


Available distributions:
[C50] [R]

Standard colours – AU/NZ

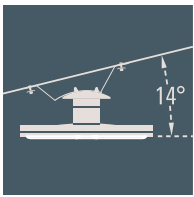


Standard colours – AP

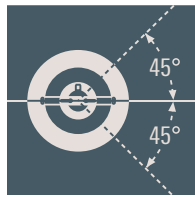




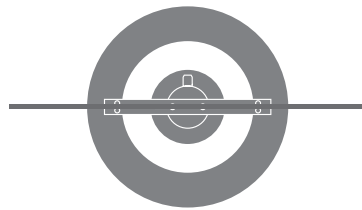
[C50] Symmetric, controlled
[R] Rectangular



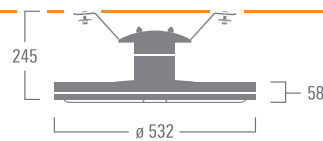
+/- 14° levelling bracket



+/- 45° rotatable



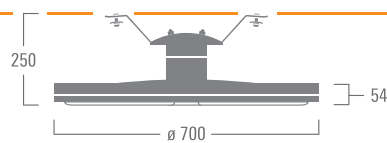
CFS530



[C50] [R]

24-48 W
3020-5300 lm

CFS540



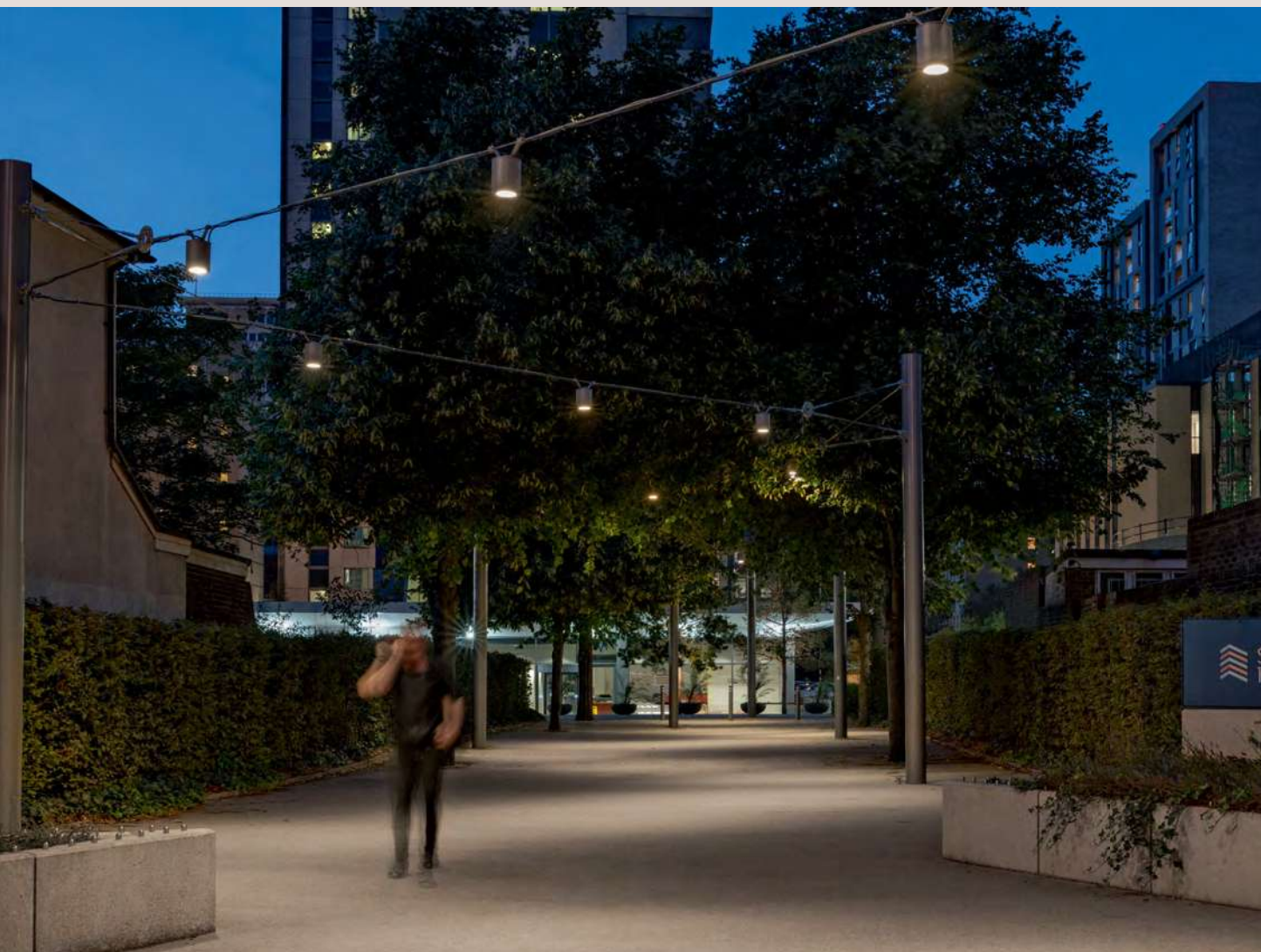
[C50] [R]

36-108 W
4520-12730 lm



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Safety glass, hinged, frame with safety catch
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK07



Available distributions:
[B] [M] [EE] [EES]

Standard colours – AU/NZ



Standard colours – AP



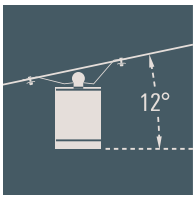


[B] Symmetric, wide beam

[M] Symmetric, medium beam

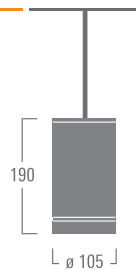
[EE] Symmetric, very narrow beam

[EES] Symmetric, very narrow beam, 'sharp cut-off'



+/- 12° levelling bracket

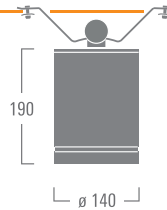
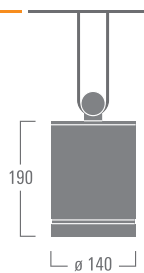
DAS110-PM



[B] [M] [EE] [EES]

6-12 W
550-1370 lm

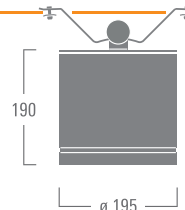
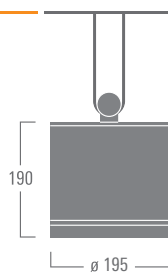
DAS120



[B] [M] [EE] [EES]

24 W
2040-2610 lm

DAS140



[B] [M] [EE] [EES]

48 W
4115-5460 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$

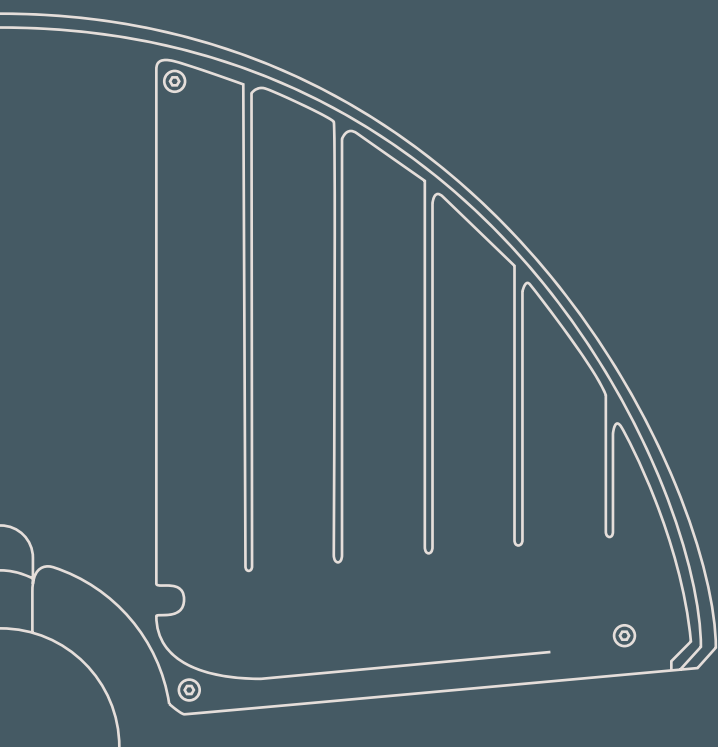


Consistent design language. Optimised, standard-compliant light distribution for almost any conceivable urban situation. Large choice of LED lens types. In terms of quality as well as versatility of the total package, pole mounted luminaires by WE-EF have much going for them.

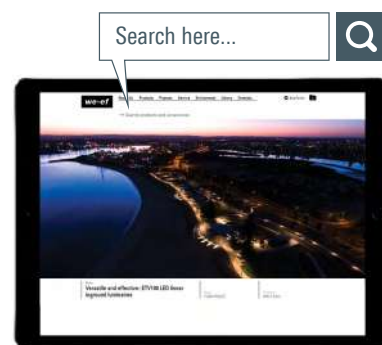
Pole mounted luminaires are the backbone of street and area lighting in urban spaces. Standard-compliant lighting is just as important here as are sophisticated lighting design, visual comfort and sustainability.

WE-EF's very own IOS® Innovative Optical System and OLC® One LED Concept with the multi-layer principle ensure high efficiency, light quality and visual comfort. The Environmental Product Declarations (EPDs) prove the sustainability of the WE-EF pole mounted luminaires.

Pole mounted luminaires



ZFT400-FT	268-269	RFL500-SE	298-299
ZFT400	270-271	VFL500	302-303
ZA600-FT	272-275	VFL500-SE	306-307
ZAT400	276-277	PFL500	308-309
RMT300	280-283	PFL200	310-317
RMM300	284-285	FLA400 Bracket version	320-321
RMC300	286-289	FLA400 Stirrup version	322-323
CFT500	292-295	FLA700	324-327



Pole mounted luminaires

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

Pole Mounted Luminaires

Light and Design in Urban Space

The effect of pole mounted luminaires on the urban spaces that they illuminate goes way beyond lighting.

By day and by night, their shapes are statements of design. They divide and link spaces and areas, underscore lines and reinforce structures. Designed with meticulous care in all their proportions and every single detail, it is the unobtrusiveness of WE-EF luminaires that makes them so effective. Based on a variety of clear geometric shapes, they blend harmoniously with both historical and modern environments, sporting a timeless design that is in every respect perfectly prepared for a very long lifecycle – including materials and surfaces.







- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: PMMA
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346



ZFT430-FT / ZFT440-FT

IP66

IK09

ZFT460-FT / ZFT470-FT

IP66

IK08

Pedestrian zone
Hof Bayern (DE)
Photo: Frieder Blickle

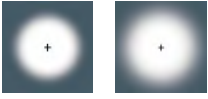
Available distributions:
[C50] [C60]

Standard colours – AU/NZ

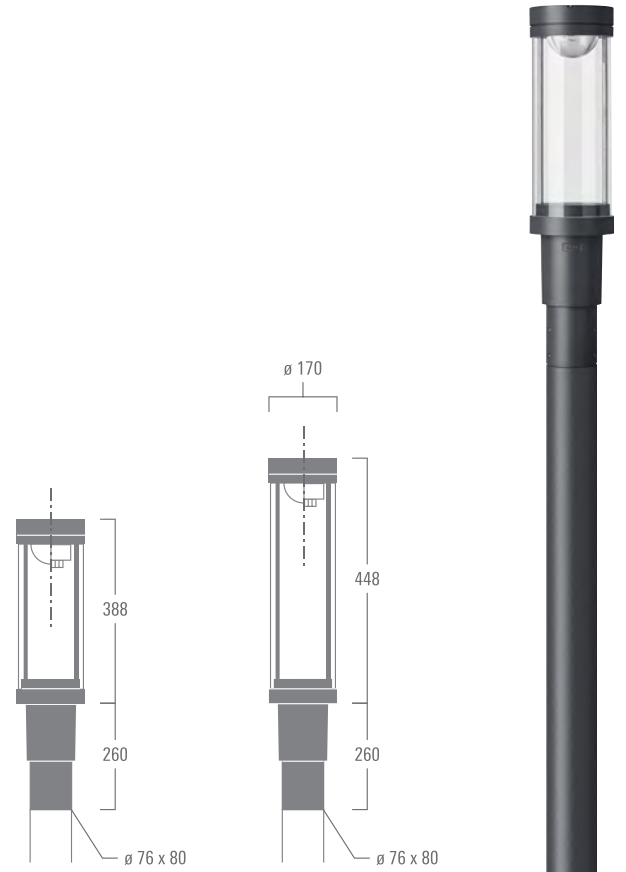


Standard colours – AP





[C50] Symmetric, controlled
[C60] Symmetric



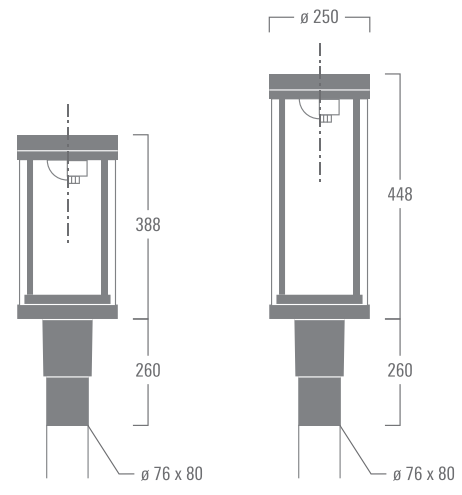
ZFT430-FT / ZFT440-FT

ZFT430-FT * / ZFT440-FT

[C50] [C60]
12-37 W
1270-5470 lm
Max. 1 internal accessory

ZFT460-FT * / ZFT470-FT

[C50] [C60]
24-37 W
3150-5150 lm
Max. 1 internal accessory



ZFT460-FT / ZFT470-FT



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 274

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature
- * Not currently available in AU/NZ





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: PMMA
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346



ZFT434 / ZFT444

IP66

IK09

ZFT464 / ZFT474

IP66

IK08

Brighton Jetty
Adelaide (AU)

Available distributions:
[S65] [R65]

Standard colours – AU/NZ

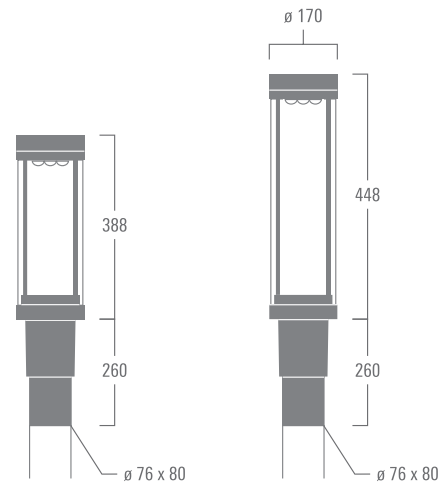


Standard colours – AP





[S65] Streetlighting
[R65] Rectangular 'side throw'



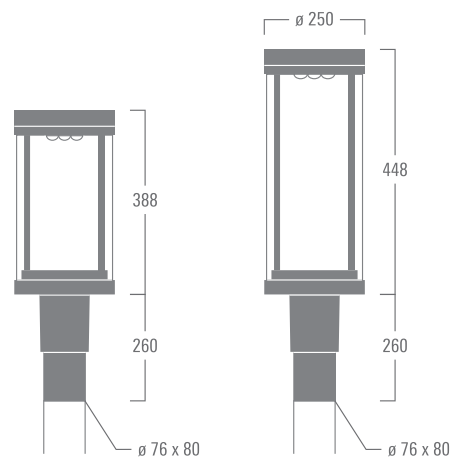
ZFT434 / ZFT444

ZFT434 * / ZFT444

[S65] [R65]
9-27 W
990-3040 lm

ZFT464 * / ZFT474

[S65] [R65]
36-54 W
3770-6340 lm



ZFT464 / ZFT474



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 274

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature
- * Not currently available in AU/NZ



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: Polycarbonate, UV-stabilised
- Gasketing: Silicone rubber gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346

IP55

IK10



Endeavour Bridge Whitianga
Sydney (AU)

Available distribution:
[C60]

Standard colours – AU/NZ

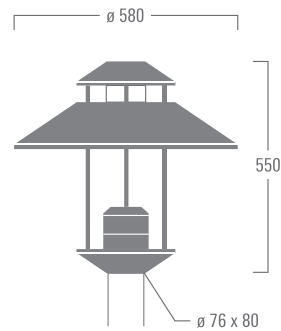
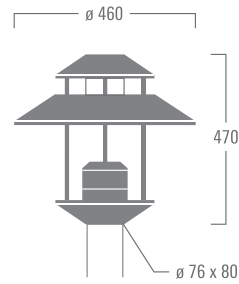


Standard colours – AP





[C60] Symmetric



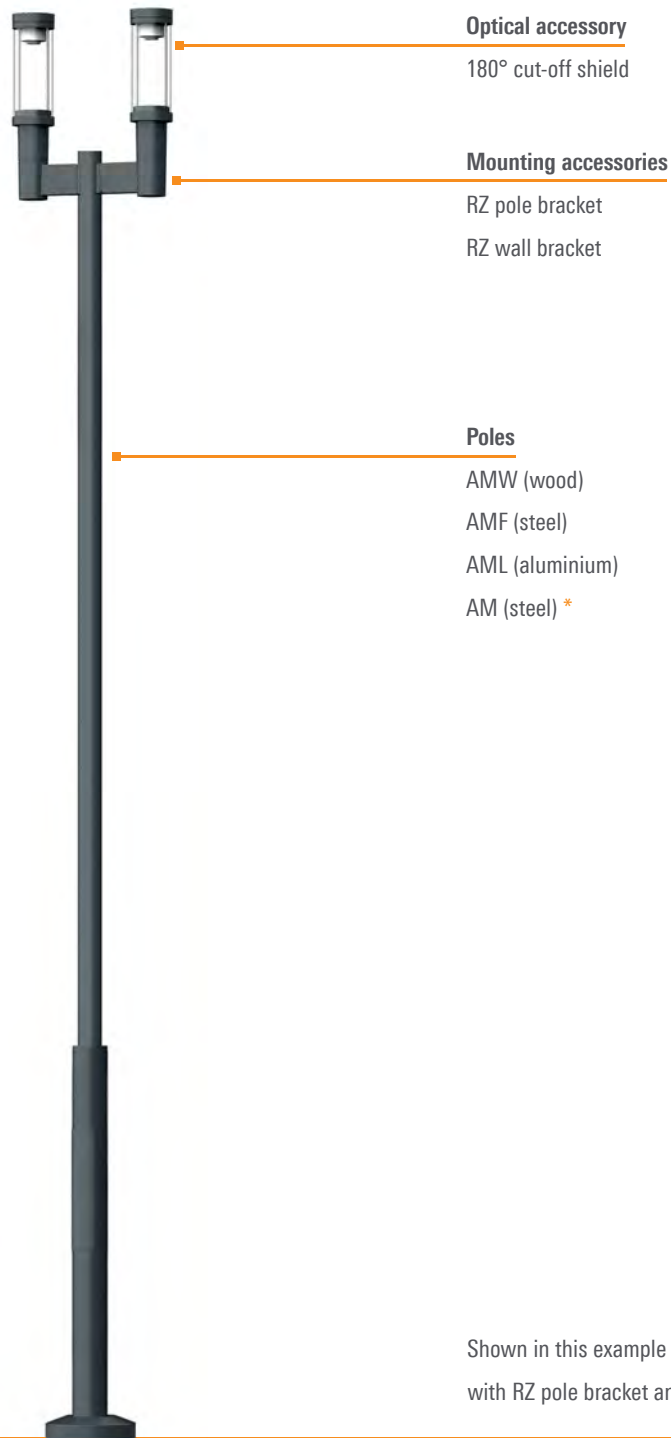
ZA630-FT / ZA640-FT

[C60]
 17-24 W
 1860-2560 lm
 Max. 1 internal accessory



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 275

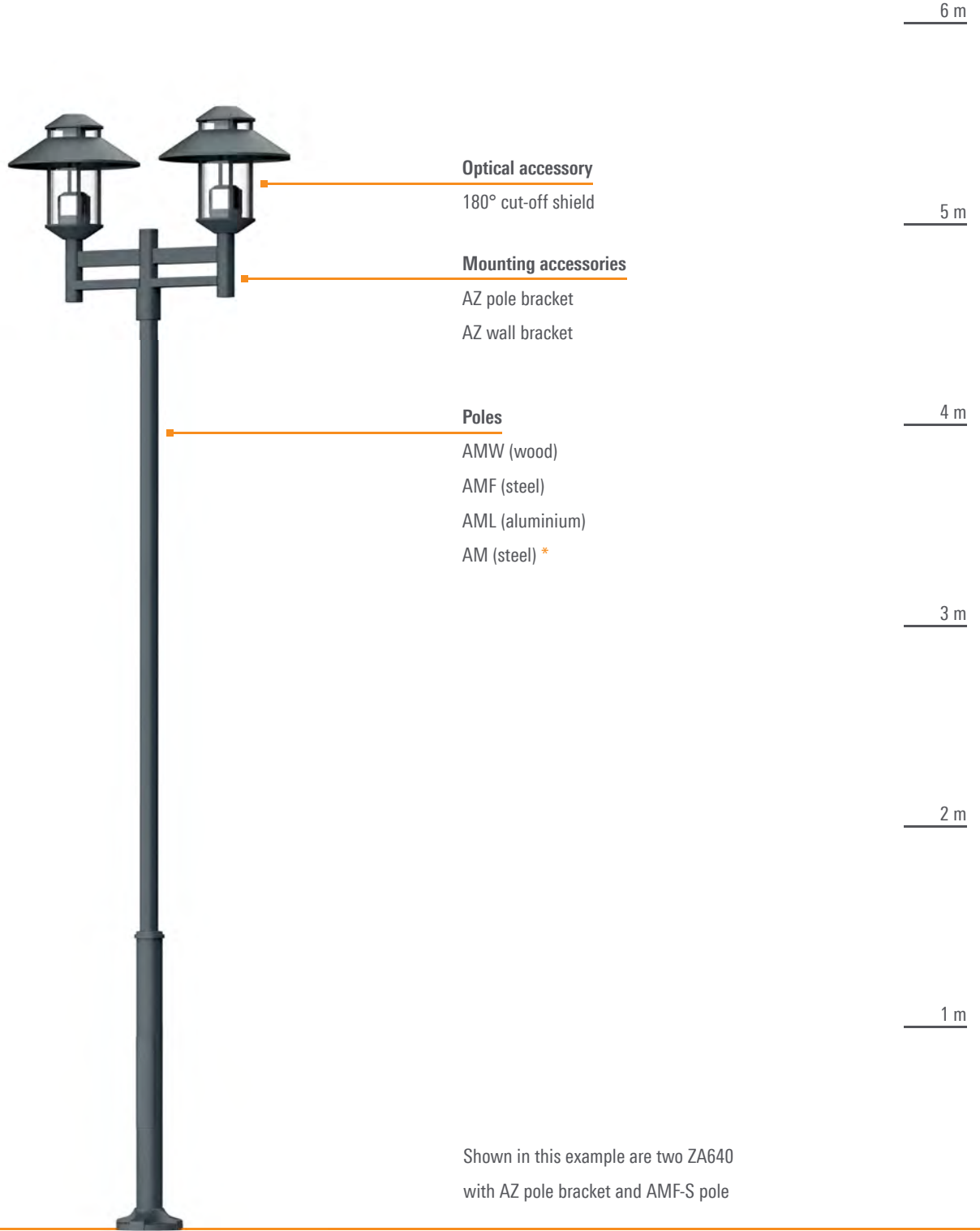
▪ In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



Shown in this example are two ZFT440
with RZ pole bracket and AML-S pole

▪ Recommended mounting height 3.0 - 6.0 m

* Not currently available in AU/NZ



Shown in this example are two ZA640 with AZ pole bracket and AMF-S pole

▪ Recommended mounting height 3.0 - 6.0 m

* Not currently available in AU/NZ

BILDUNGSZENTRUM



Luminaire housing:	Marine-grade, die-cast aluminium alloy
Corrosion protection:	5CE, including PCS hardware
Driver:	Integral EC electronic converter
Main lens:	PMMA
Gasketing:	Silicone CCG® Controlled Compression Gasket
Optics:	IOS® Innovative Optical System CAD-optimised for superior illumination and glare control OLC® One LED Concept
Installation:	FS Factory-sealed luminaire does not need to be opened during installation
Control options:	ON/OFF WE-EF Eco Step Dim®; refer to page 346



ZAT434 / ZAT444

IP66

IK09

ZAT464 / ZAT474

IP66

IK08

For ZAT430 / ZAT440-FT, refer to website

Available distributions:
[S65] [R65]

Standard colours – AU/NZ



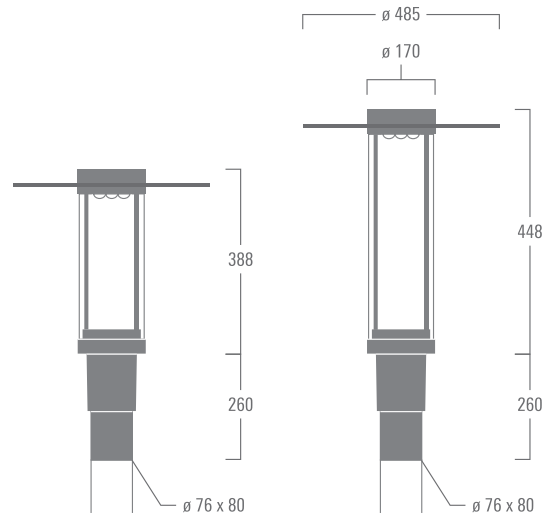
Standard colours – AP





[S65] Streetlighting

[R65] Rectangular 'side throw'



ZAT434 / ZAT444

ZAT434 / ZAT444

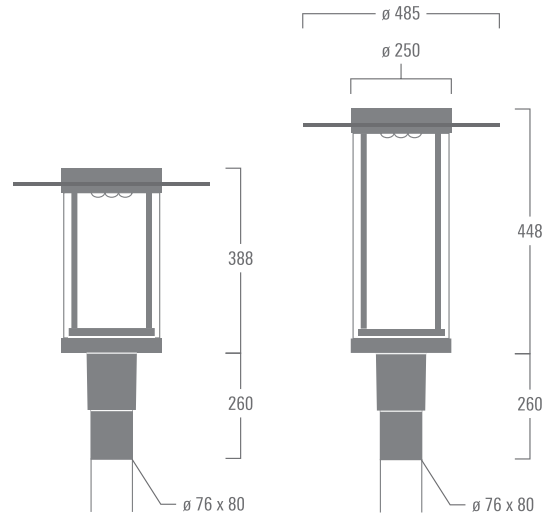
[S65] [R65]

9-27 W
990-3040 lm

ZAT464 / ZAT474

[S65] [R65]

36-54 W
3770-6340 lm



ZAT464 / ZAT474



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to www.we-ef.com

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature





RMC320 LED Pole Mounted Luminaires

Flexible and Precise

Just like WE-EF's LED street and area lighting, the RMC320 pole mounted luminaires use a multi-layered variant of WE-EF's specific OLC® One LED Concept technology. Depending on the given lighting task, the RMC320 can be equipped with five different lenses. The option of mounting several luminaire heads on one pole adds to the wealth of possible applications enabled by this approach. Even complex paths and areas can be illuminated with great precision and efficiency.





Luminaire housing: Marine-grade, die-cast aluminium alloy

Corrosion protection: 5CE, including PCS hardware

Driver: Integral EC electronic converter

Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised

Gasketing: Silicone CCG® Controlled Compression Gasket

Optics: IOS® Innovative Optical System

CAD-optimised for superior illumination and glare control

OLC® One LED Concept

Modular optical system allows for unparalleled customisation versatility

Installation: FS Factory-sealed luminaire does not need to be opened during installation

Control options: ON/OFF

WE-EF Eco Step Dim®; refer to page 346

R2C Ready to Connect; refer to page 352



IP66

IK09

Bondi Beach

Sydney (AU)

Lighting design: Lighting, Art + Science

Available distributions:

[P65] [S65] [S70] [R65]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP



RAL 9004 9007 7016 9016

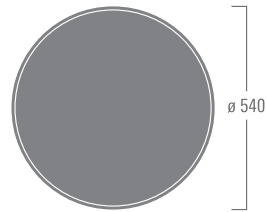


[P65] Pedestrian/bicycle lane
 [S65] [S70] Streetlighting
 [R65] Rectangular 'side throw'



RMT320

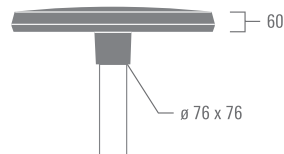
One-sided
 [P65] [S65] [S70] [R65]
 6-52 W
 700-5230 lm



RMT320

Two-sided – one circuit
 [P65] [S65] [S70] [R65]
 12-104 W
 1400-10500 lm

Two-sided – two circuits
 [P65] [S65] [S70] [R65]
 24-104 W
 2800-10500 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 288

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature

Multiple Choice

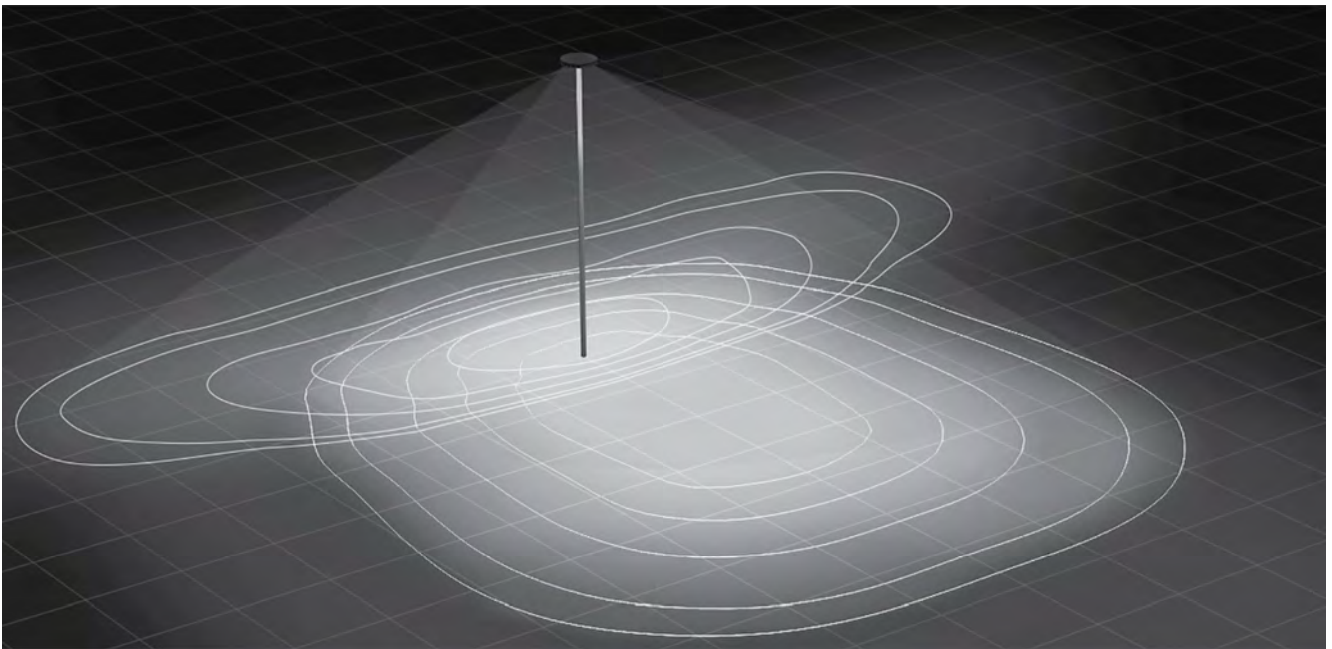
The RMT300 is clearly one of the most – possibly even 'the most' – versatile street and area lighting luminaires available these days. A choice of four standard, plus four custom light distributions can be configured for one-sided, or back-to-back two-sided, light output. In addition, one- or two-circuit switching arrangements allow for highly effective operation by delivering the right amount of light to different parts of a project – as and when needed. Maintaining daytime design consistency by using just one type of luminaire, even throughout a large-scale installation, has never been easier.



Modular optical system allows for unparalleled versatility and flexibility in street and area lighting applications

Typical customisation examples:

- One common direction
- Back-to-back aiming in opposite directions
- Different colour temperatures
- Different lumens packages
- One- or two-circuit arrangements



RMT320 customised with [S70] and [A60] modular lenses, aimed in opposite directions.





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK09



Haselünne (DE)

Available distributions:
[P65] [S65] [S70] [A60]

Standard colours – AU/NZ

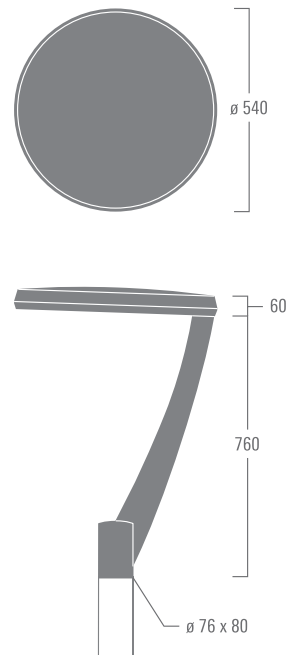


Standard colours – AP





[P65] Pedestrian/bicycle lane
 [S65] [S70] Streetlighting
 [A60] Asymmetric 'forward throw'



RMM320

[P65] [S65] [S70] [A60]

24-104 W
 2680-10470 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 289

▪ In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter
- Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352



IP66

IK08

Midland Railway Square

Perth (AU)

Lighting design: ETC

Landscape Architect: Place Laboratory

Available distributions:

[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ





 RAL 9004 9006 9007 9016

Standard colours – AP





 RAL 9004 9007 7016 9016



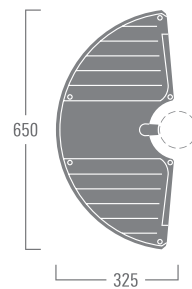
[P65] Pedestrian/bicycle lane
 [S60] [S65] [S70] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'



RMC320

[P65] [S60] [S65] [S70] [A60] [R65]

18-78 W
 1960-7870 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 289

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature





Poles

AMW (wood)

AMF (steel)

AML (aluminium)

AM (steel) *

Shown in this example is RMT320
with AML-A pole

▪ Recommended mounting height 3.0 - 6.0 m

* Not currently available in AU/NZ



▪ Recommended mounting height 4.0 - 8.0 m

* Not currently available in AU/NZ



Croxley Park

In Balance: Work, Life and Light

Croxley Park is a leading business park with high-quality buildings, amenities and landscaping. Conveniently located near the M25 motorway, Croxley Park is committed to offering the best imaginable work experience for modern businesses and start-ups. Of course, this mission does not neglect the right lighting – the carefully orchestrated illumination concept makes sure that the campus-like facilities are just as welcoming and safe by night as they are by day. WE-EF's CFT500 pole mounted luminaires play an integral role in providing natural-feeling, glare-free light along Croxley Park's many footpaths and open spaces.



Croxley Park
Watford (UK)
Architect: Esa Architects



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352



IP66

IK08

The Quadrant Mall
Launceston (AU)
Lighting Design: Engineering Solutions

Available distributions:
[C50] [R]

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

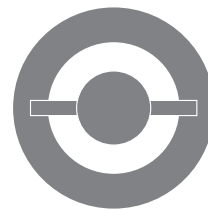
Standard colours – AP



RAL 9004 9007 7016 9016

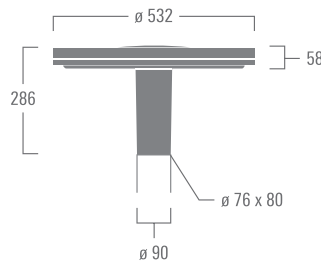


[C50] Symmetric, controlled
[R] Rectangular



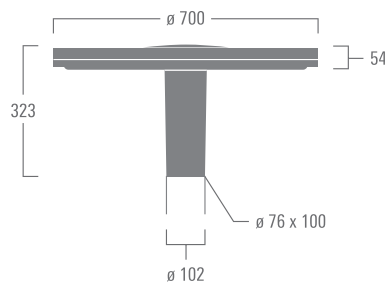
CFT530

[C50] [R]
24-48 W
3010-5300 lm



CFT540

[C50] [R]
36-108 W
4520-12730 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 295

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



Multiple Award Winner

As a recipient of four prestigious international design awards – Design Plus, Red Dot, Focus Silver, and the German Design Award – the CFT500 series luminaire not only convinces users through its futuristic yet timeless aesthetics; it is also packed with technological and environmental features that make it a first choice product for urban and suburban projects of the 21st century.

DESIGN
PLUS



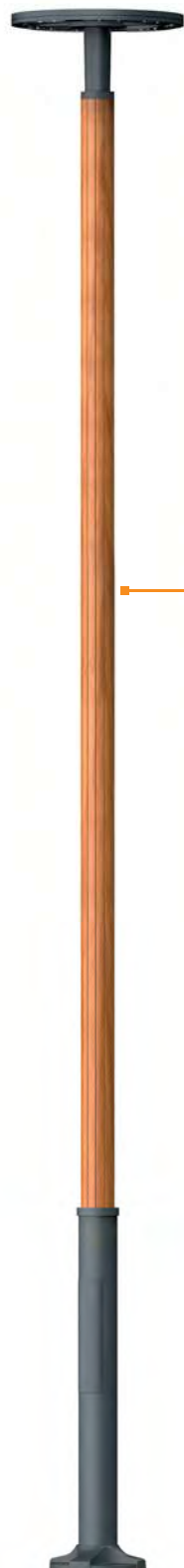
reddot design award
winner



Focus Open
Silver



GERMAN
DESIGN
AWARD



6 m

5 m

4 m

3 m

2 m

1 m

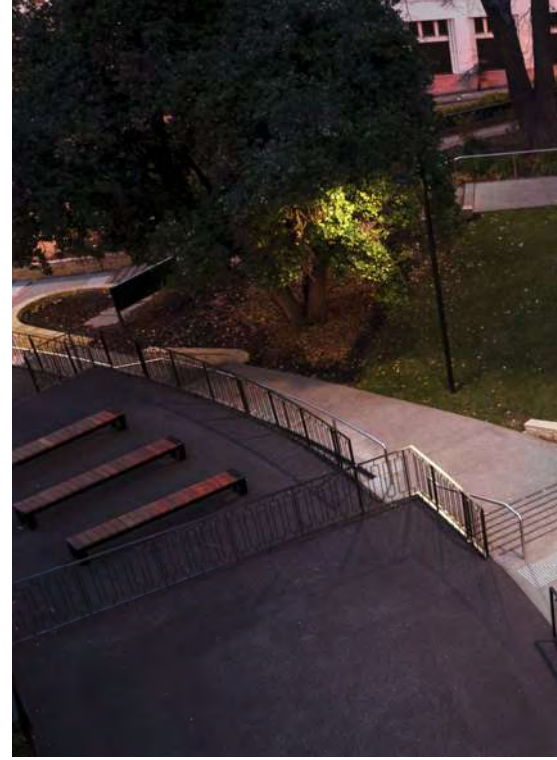
Poles

- AMW (wood)
- AMF (steel)
- AML (aluminium)
- AM (steel) *

Shown in this example is CFT540
with AMW-S pole

▪ Recommended mounting height 4.0 - 8.0 m

* Not currently available in AU/NZ





Franklin Square

A Piece of Urban Renaissance

All over the world, the renaissance of public parks and places as true spaces for living is in full swing. Whether in Copenhagen/Denmark/Boston/USA or Tasmania/Australia, locals and tourists alike rejoice in the new, open-air way of life until late at night. Needless to say, agreeable, efficient lighting is of the essence in conveying an inclusive spirit of security and welcome. The designers of Franklin Square took this to heart and chose to equip the park with high-quality, WE-EF LED pole mounted luminaires that master the challenge of boldly illuminating the park's many fountains, stairways, footpaths and ancient trees.

Franklin Square

Hobart (AU)

Landscape Architecture: City of Hobart

Sales Partner: Southern Lighting and Distribution



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Non-reflecting safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK07



Front de mer
Mers-les-Bains (FR)
Lighting design: Citelum Nord

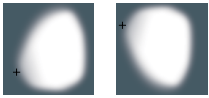
Available distributions:
[P45R] [P45L]
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





[P45R] Pedestrian crossing, for right-hand traffic
 [P45L] Pedestrian crossing, for left-hand traffic



[P65] Pedestrian/bicycle lane
 [S60] [S65] [S70] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'



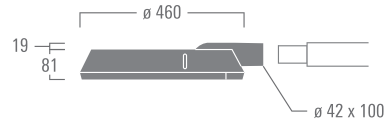
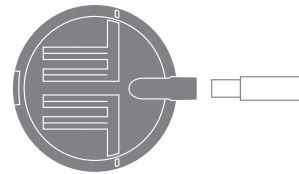
[P45R] [P45L]



RFL530-SE

[P65] [S60] [S65] [S70] [A60] [R65]

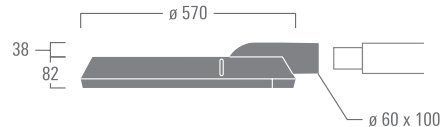
12-72 W
 1410-8720 lm



RFL540-SE

[P45R] [P45L]
 [S60] [S65] [S70] [A60] [R65]

36-144 W
 4230-17430 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 315

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



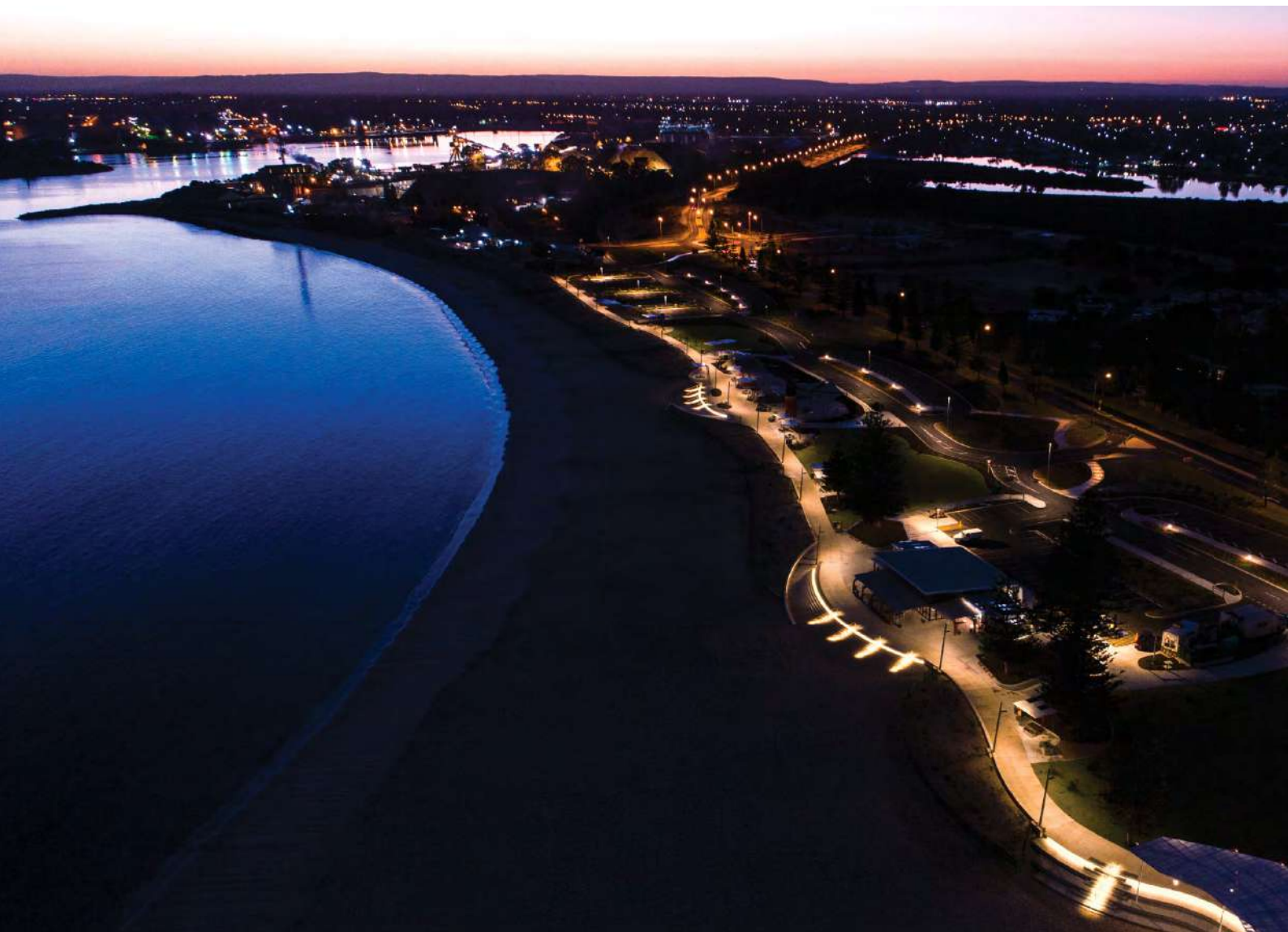


Boardwalk, Koombana Bay

Bunbury (AU)

Lighting Design and Engineering: ETC Consultants

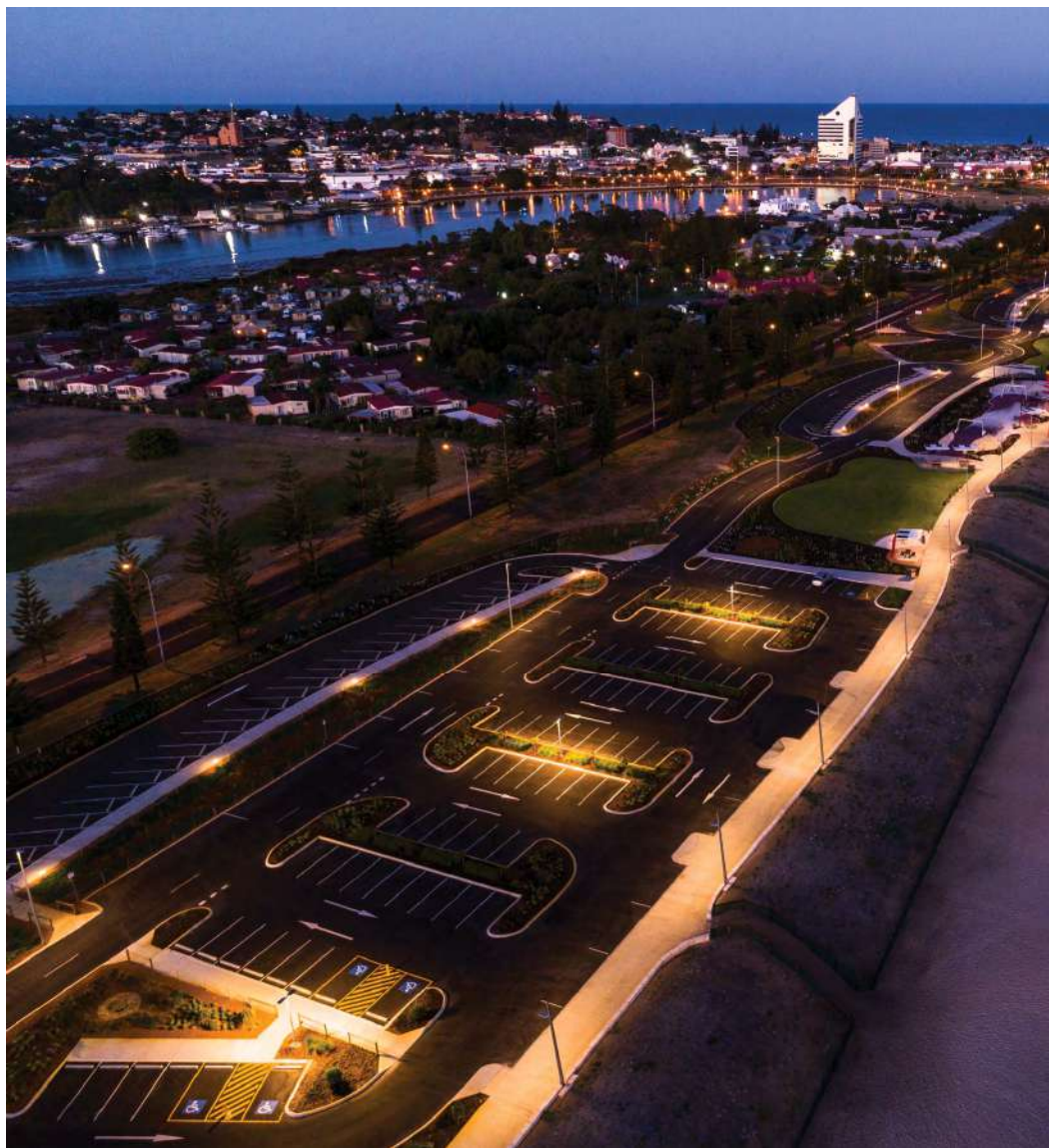
Sales Partner: HI Lighting



Boardwalk, Koombana Bay

A Beach as a City Figurehead

When planners began to open up Bunbury's Koombana Bay beach for local visitors and tourists, sophisticated landscape and lighting design were only two of three essentials. The third was light. Only a short walk from the city centre, the popular wide beach with its white sand invites strolling by day and by night – thanks to a smart arrangement involving various configurations of WE-EF's VFL540 street and area luminaires on custom-made, slightly inclined poles.





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK08



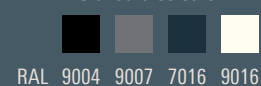
BMW Hauptstadtrepräsentanz am Messedamm
Berlin (DE)
Architect: Lanz Architekten

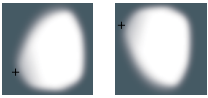
Available distributions:
[P45R] [P45L]
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

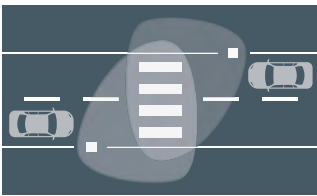


[P65] Pedestrian/bicycle lane

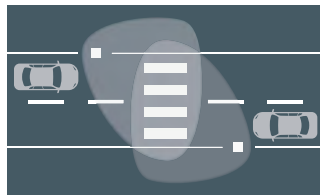
[S60] [S65] [S70] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]

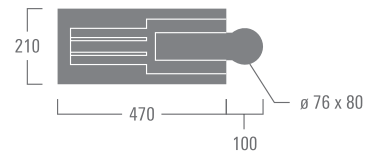


[P45L]

VFL520

[P65] [S60] [S65] [S70] [A60] [R65]

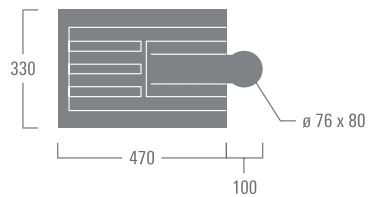
12-36 W
1420-4250 lm



VFL530

[P65] [S60] [S65] [S70] [A60] [R65]

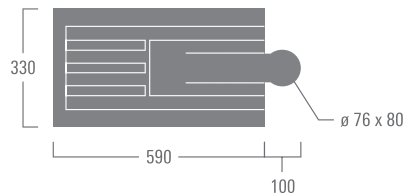
12-72 W
1410-8510 lm



VFL540

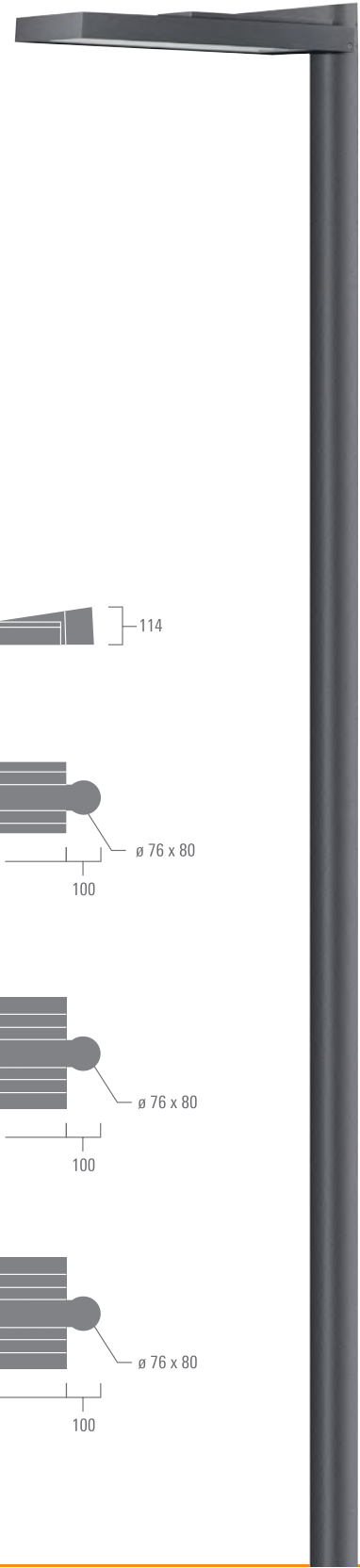
[P45R] [P45L]
[P65] [S60] [S65] [S70] [A60] [R65]

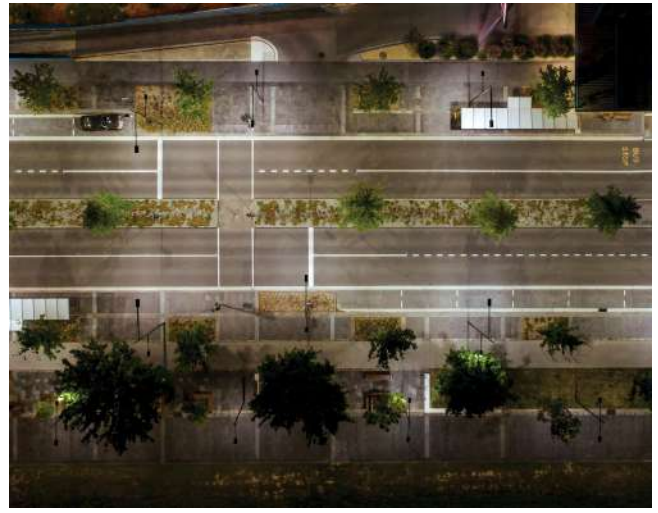
36-126 W
2820-14890 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 316

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature
- ADSA (Australian Dark Sky Alliance) certified





Constitution Avenue

A Boulevard's New Look

Remodelled and revitalised, Constitution Avenue has evolved into Canberra's premier address, with the highest density of commercial and residential buildings. A string of prestigious awards underscores the quality of its architectural and urban planning. An integral part of the realised vision is a novel lighting concept featuring different varieties of WE-EF's VFL500 luminaires on customised poles. In a perfect interplay with the larger VFL540-SE, which illuminate the streets from three-metre booms, WE-EF's VFL530-SE, mounted lower and on shorter booms on the same poles, make sure that cyclists and pedestrians enjoy a light that is every bit as perfect as that provided for motorists.

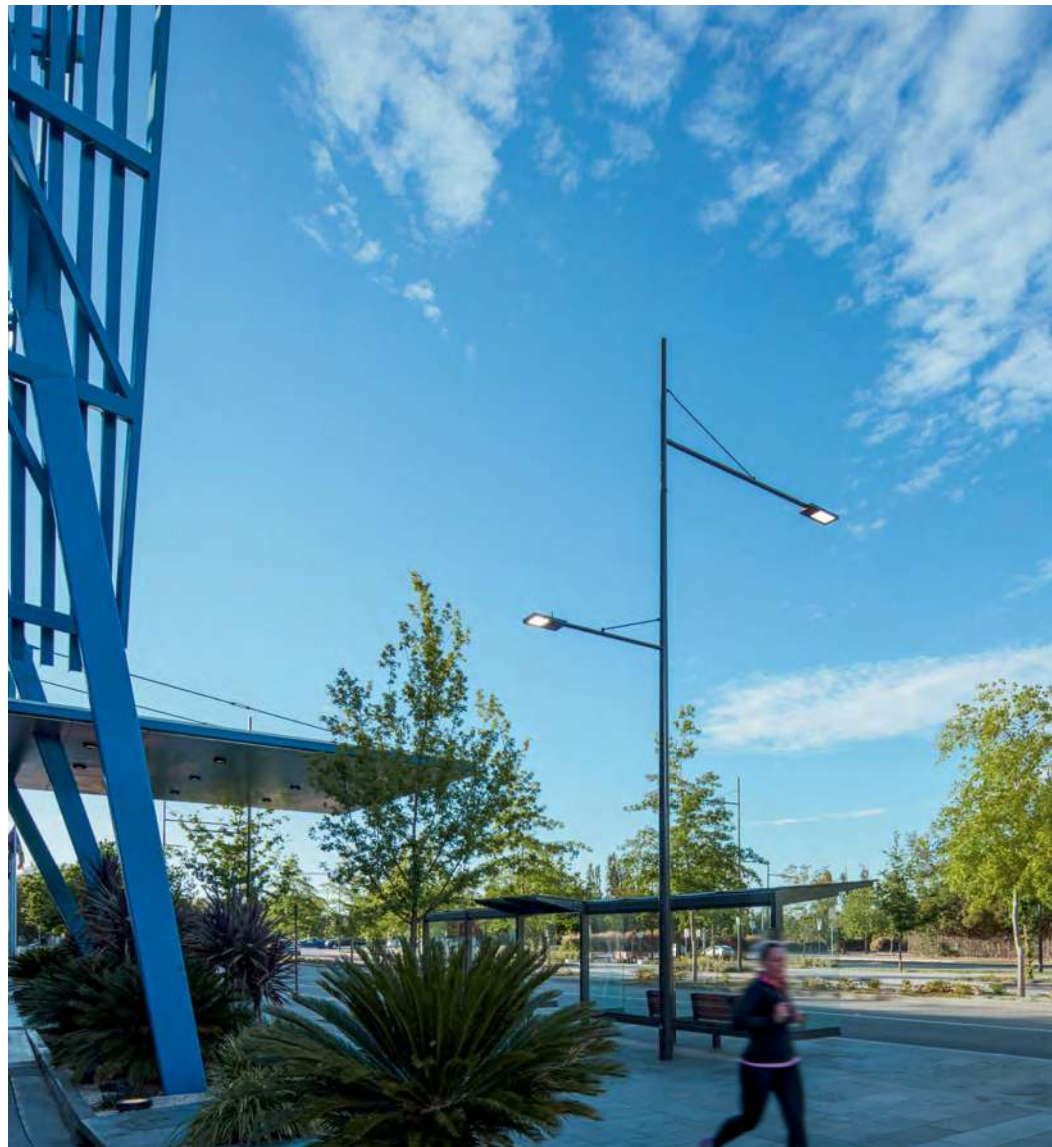
Constitution Avenue

Canberra (AU)

Lighting Designer: Lighting Art & Science

Electrical Engineer: Aecom Canberra

Sales Partner: Integral Lighting





- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK08

**Constitution Avenue**

Canberra (AU)

Lighting designer: Lighting Art & Science

Landscape Architect: Jane Irwin

Available distributions:

[P45R] [P45L]

[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ

RAL 9004 9006 9007 9016

Standard colours – AP

RAL 9004 9007 7016 9016



[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

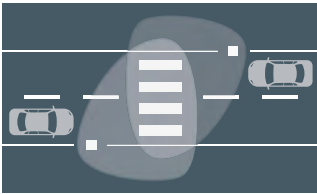


[P65] Pedestrian/bicycle lane

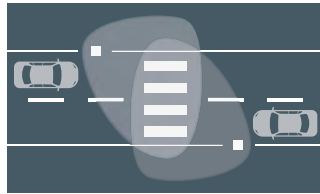
[S60] [S65] [S70] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]



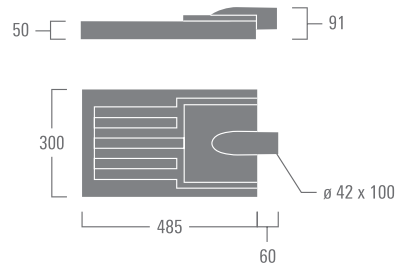
[P45L]



VFL530-SE

[P65] [S60] [S65] [S70] [A60] [R65]

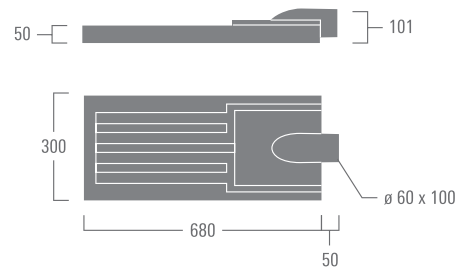
12-72 W
1380-8890 lm



VFL540-SE

[P45R] [P45L]
[P65] [S60] [S65] [S70] [A60] [R65]

36-144 W
4050-17790 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 316

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature
- ADSA (Australian Dark Sky Alliance) certified



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: RFC™ Reflection Free Contour
Polycarbonate, UV stabilised
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346
R2C Ready to Connect; refer to page 352

IP66

IK08



BMW Niederlassung Riller &
Schnack am Hindenburgdamm
Berlin (DE)

Available distributions:
[P45R] [P45L]
[S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP

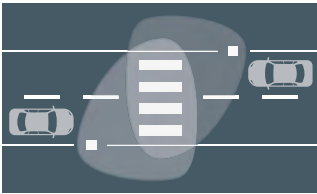




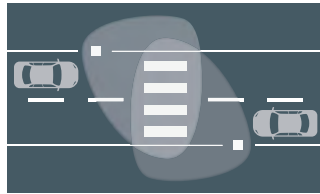
[P45R] Pedestrian crossing, for right-hand traffic
 [P45L] Pedestrian crossing, for left-hand traffic



[S60] [S65] [S70] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'



[P45R]

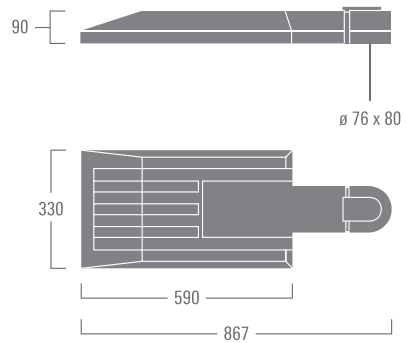


[P45L]

PFL540

[P45R] [P45L]
 [S60] [S65] [S70] [A60] [R65]

48-144 W
 4880-17020 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 317

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Installation: FS Factory-sealed luminaire does not need to be opened during installation
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346



IP66

IK08

Woody Point Jetty
Queensland (AU)

Available distributions:
[P45R] [P45L]
[P65] [S65] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





[P45R] Pedestrian crossing, for right-hand traffic

[P45L] Pedestrian crossing, for left-hand traffic

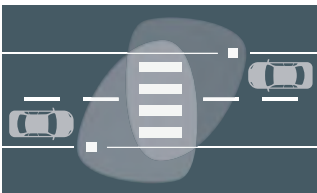


[P65] Pedestrian/bicycle lane

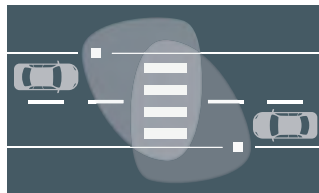
[S65] Streetlighting

[A60] Asymmetric 'forward throw'

[R65] Rectangular 'side throw'



[P45R]



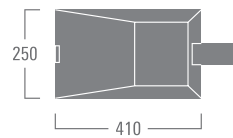
[P45L]



PFL230

[P65] [S65] [A60] [R65]

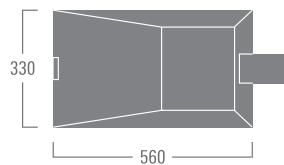
12-36 W
1160-3540 lm



PFL240

[P45R] [P45L]
[S65] [A60] [R65]

36-72 W
3230-7500 lm

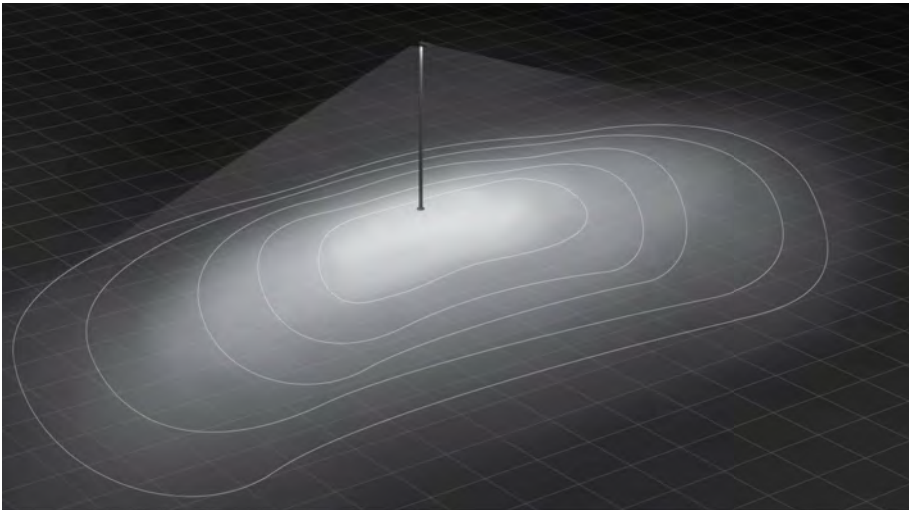


- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 317

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature

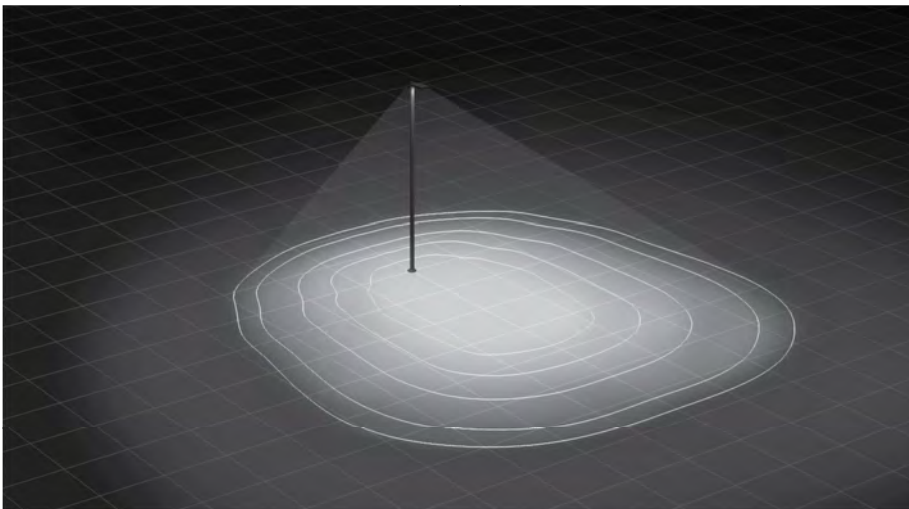
IOS® Innovative Optical System

IOS® optics for street and area lighting applications currently comprise 11 distinctly different versions – for distinctly different applications – and counting. Shown here is a selection of the most frequently used light distributions. For further details, refer to the Technology section on page 356



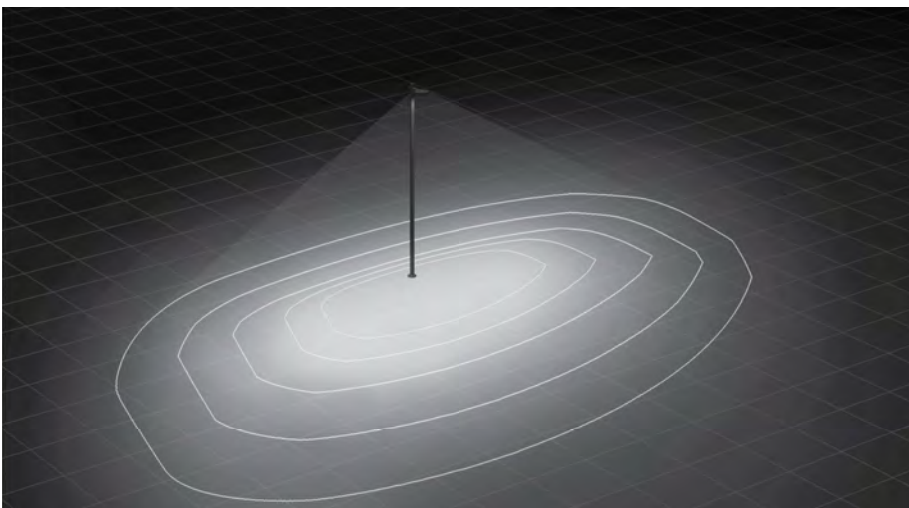
[S70] Streetlighting

Optimised for illuminance-based streetlighting applications (maximum spacing between luminaires).



[A60] Asymmetric 'forward throw'

Particularly suitable for area lighting such as car parks etc.



[R65] Rectangular 'side throw'

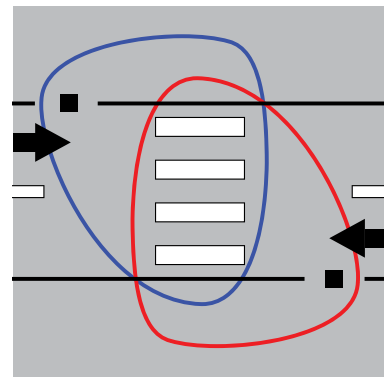
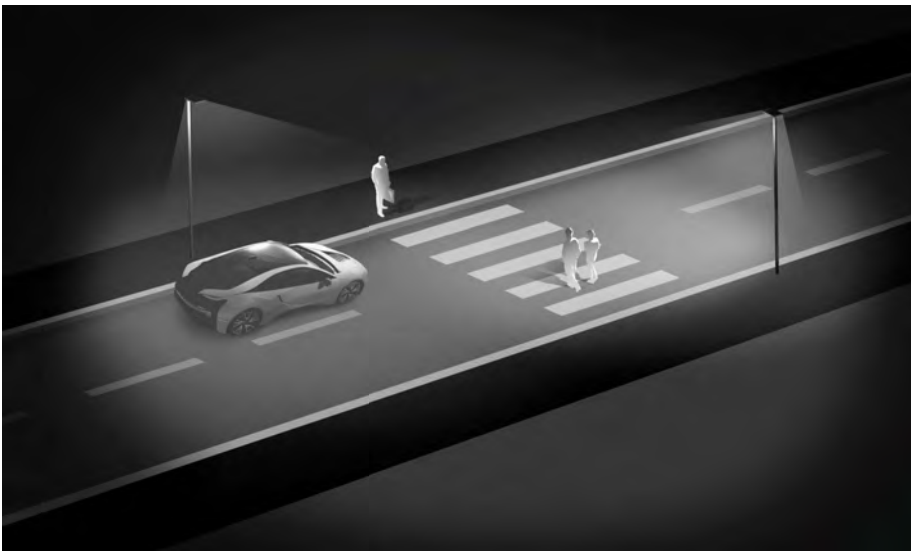
Developed for area lighting applications where a combination of side and forward throw of light is required.

[P45R]

Pedestrian crossing, for right-hand traffic

[P45L]

Pedestrian crossing, for left-hand traffic (shown here)



**[P65]**

Ideal for the lighting of pedestrian and bicycle lanes to EN DIN 13201, Class S2-S4.
Typical spacing between luminaires, 5 to 7 times the mounting height.



6 m

Mounting accessories

RE, RF, RI pole brackets

RE, RI wall brackets

5 m

Poles

AMW (wood)

AMF (steel)

AML (aluminium)

AM (steel) *

4 m

3 m

2 m

1 m

Shown in this example are two RFL540-SE
with RE pole bracket and AMF-S pole

▪ Recommended mounting height 4.0 - 10.0 m

* Not currently available in AU/NZ

Mounting accessories

RV pole bracket
RV wall bracket

Poles

AMW (wood)
AMF (steel)
AML (aluminium)
AM (steel) *

Shown in this example is VFL540
with AML-A pole

**Mounting accessories**

RE, RF, RI pole brackets
RE, RI wall bracket

Poles

AMW (wood)
AMF (steel)
AML (aluminium)
AM (steel) *

Shown in this example are two VFL540-SE
with RE pole bracket and AMF-S pole



▪ Recommended mounting height 4.0 - 10.0 m

* Not currently available in AU/NZ



▪ Recommended mounting height 6.0 - 10.0 m

* Not currently available in AU/NZ

▪ Recommended mounting height 4.0 - 6.0 m

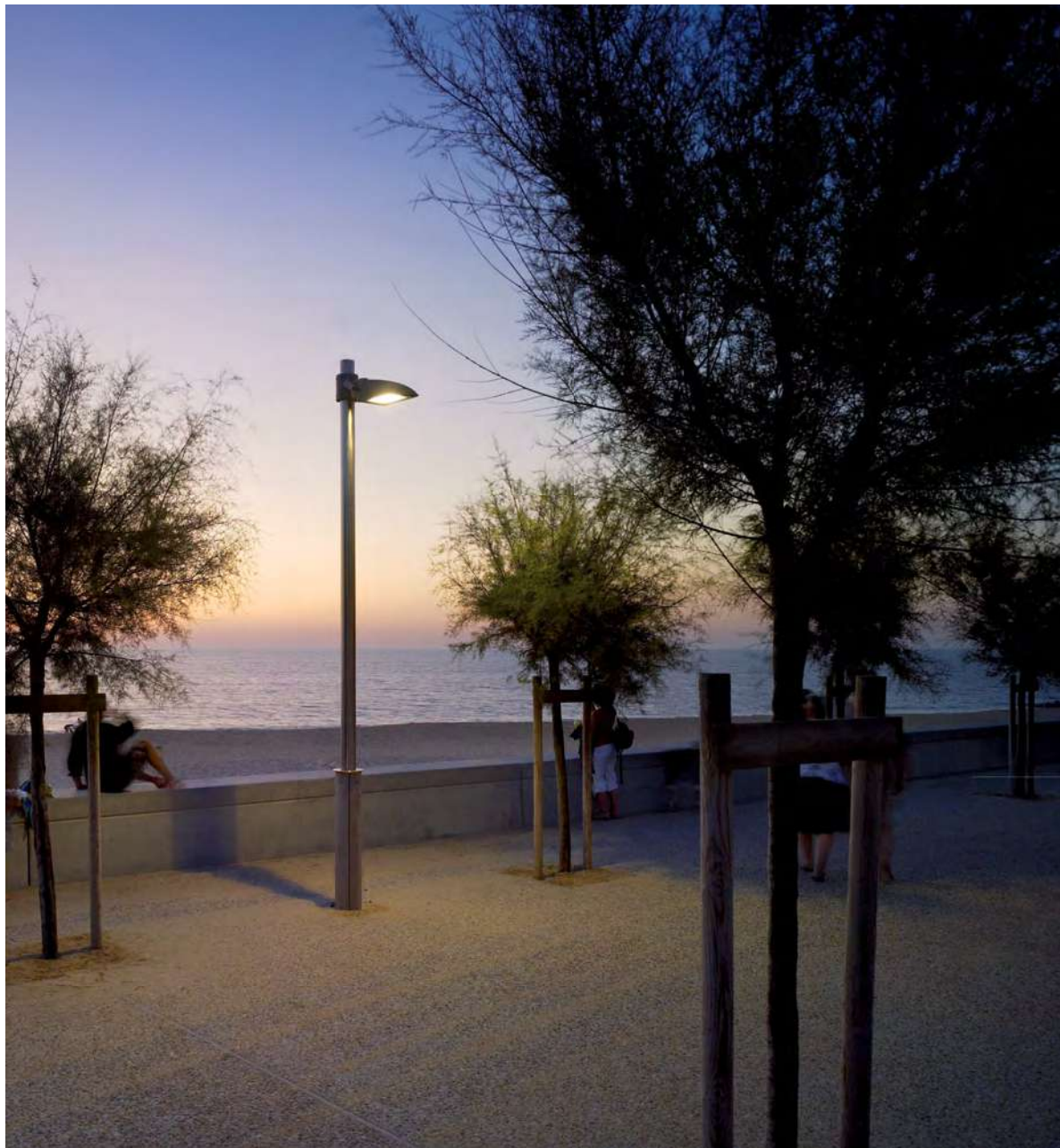
* Not currently available in AU/NZ

FLA400 / FLA700

Prepared for Oceanic Tasks

Seaside locations are coveted assets. Public spaces that link towns and cities with rivers, lakes and oceans are invaluable. In recent years, many piers and promenades have experienced successful redesigns and revitalisations. The requirements for the materials used and their surface treatment are enormous. With the 5CE Superior Corrosion Protection WE-EF has an answer to these challenges.







- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: One cable gland
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346

IP66

IK08



Available distributions:
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





- [P65] Pedestrian/bicycle lane
- [S60] [S65] [S70] Streetlighting
- [A60] Asymmetric 'forward throw'
- [R65] Rectangular 'side throw'

Suitable for downlighting, façade and uplighting applications

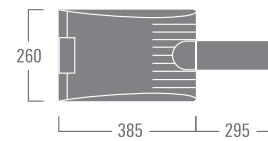
For matching wall mounted luminaires, refer to page 114



FLA441*

[P65] [S60] [S65] [S70] [A60] [R65]

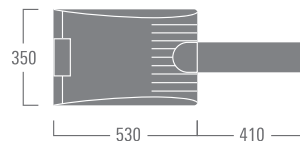
36-54 W
3230-5630 lm



FLA461*

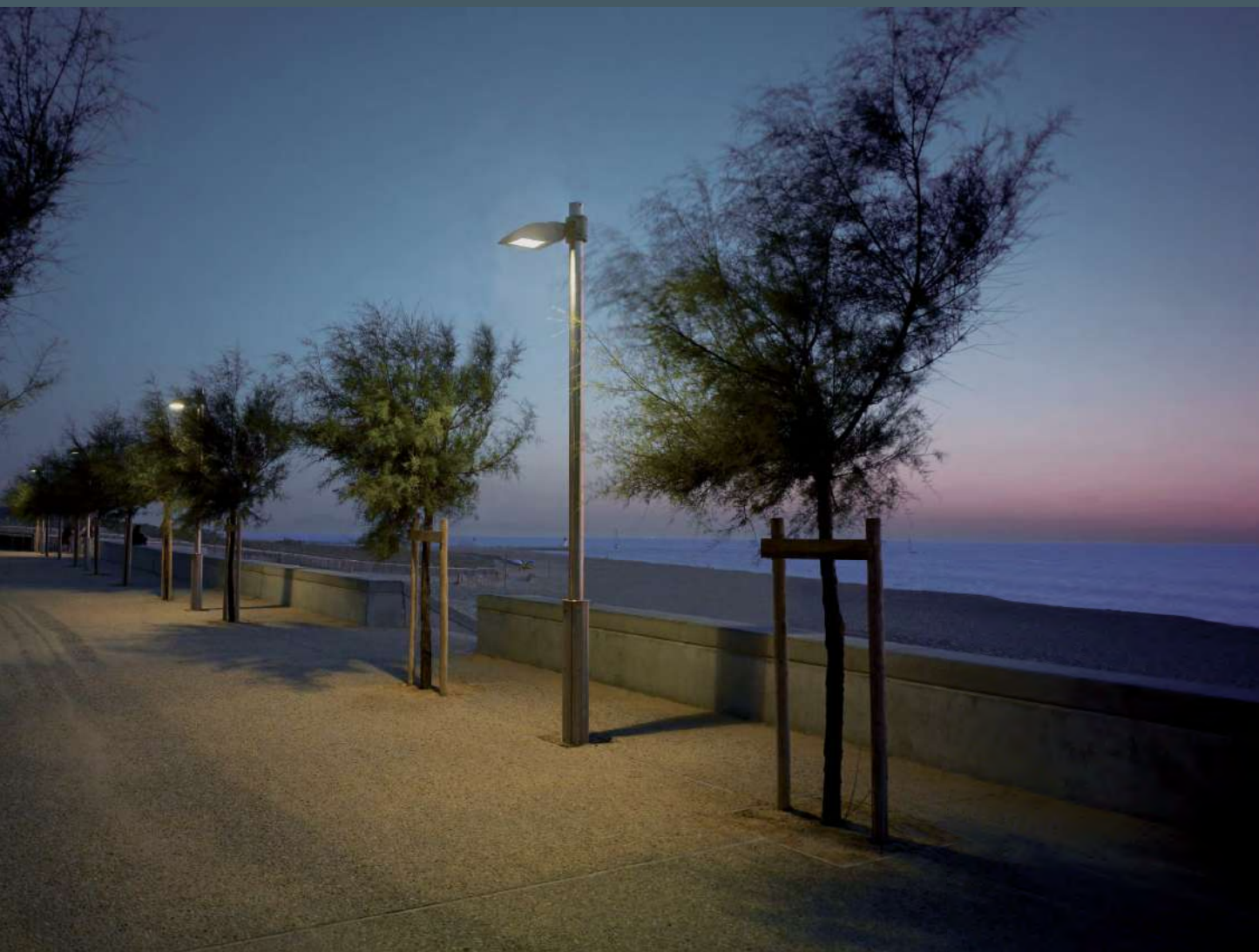
[P65] [S60] [S65] [S70] [A60] [R65]

72-108 W
6610-11250 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 326

* Not currently available in AU/NZ



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-separated compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: One cable gland
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346

IP66

IK08



Available distributions:
[P65] [S60] [S65] [S70] [A60] [R65]

Standard colours – AU/NZ



Standard colours – AP





- [P65] Pedestrian/bicycle lane
- [S60] [S65] [S70] Streetlighting
- [A60] Asymmetric 'forward throw'
- [R65] Rectangular 'side throw'

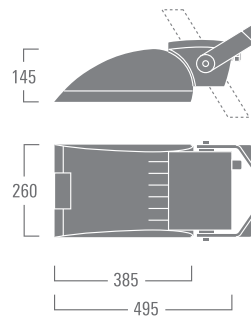
Suitable for downlighting, façade and uplighting applications



FLA440

[P65] [S60] [S65] [S70] [A60] [R65]

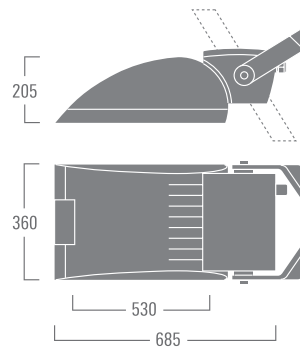
36-54 W
3230-5630 lm



FLA460

[P65] [S60] [S65] [S70] [A60] [R65]

72-108 W
6460-11250 lm



2700 K 3000 K 4000 K

- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 327

- In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



- Luminaire housing: Marine-grade, die-cast aluminium alloy
- Corrosion protection: 5CE, including PCS hardware
- Driver: Integral EC electronic converter in thermally-shielded compartment
- Main lens: Safety glass, hinged
- Gasketing: Silicone CCG® Controlled Compression Gasket
- Optics: IOS® Innovative Optical System
CAD-optimised for superior illumination and glare control
OLC® One LED Concept
- Mains connection: One cable gland
- Control options: ON/OFF
WE-EF Eco Step Dim®; refer to page 346



IP66

IK08

Exploratorium
San Francisco (US)
Architect: EHDD
Lighting design: David Nelsen & Associates

Available distributions:
[S65] [A60] [R65]

Standard colours – AU/NZ

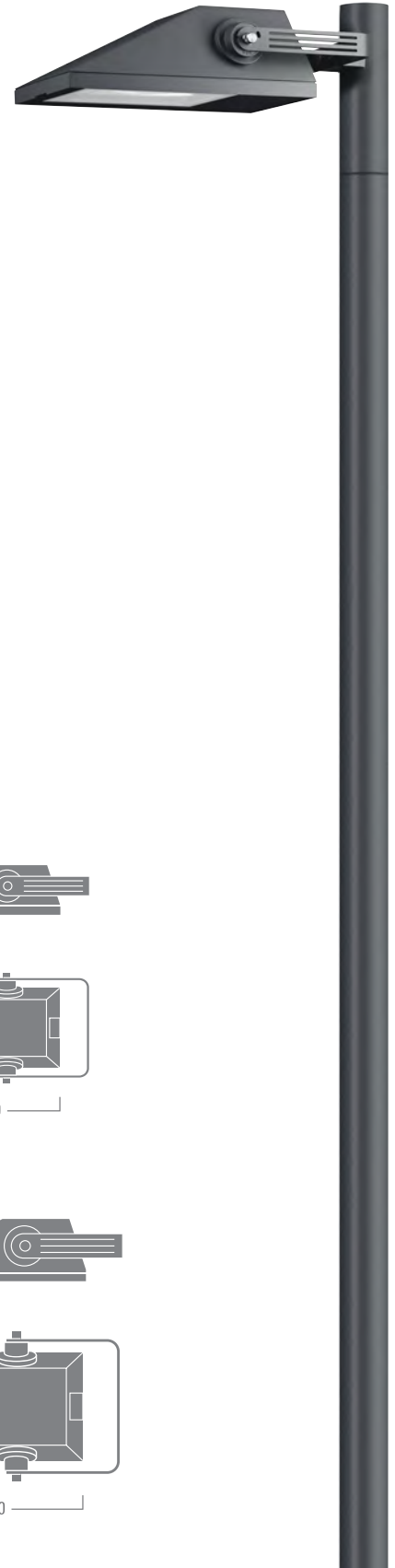


Standard colours – AP





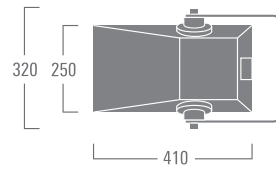
[S65] Streetlighting
 [A60] Asymmetric 'forward throw'
 [R65] Rectangular 'side throw'



FLA730

[S65] [A60] [R65]

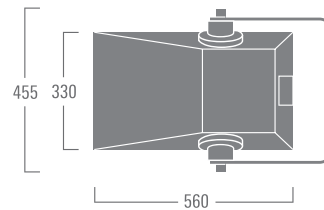
24-54 W
 2060-5610 lm



FLA740

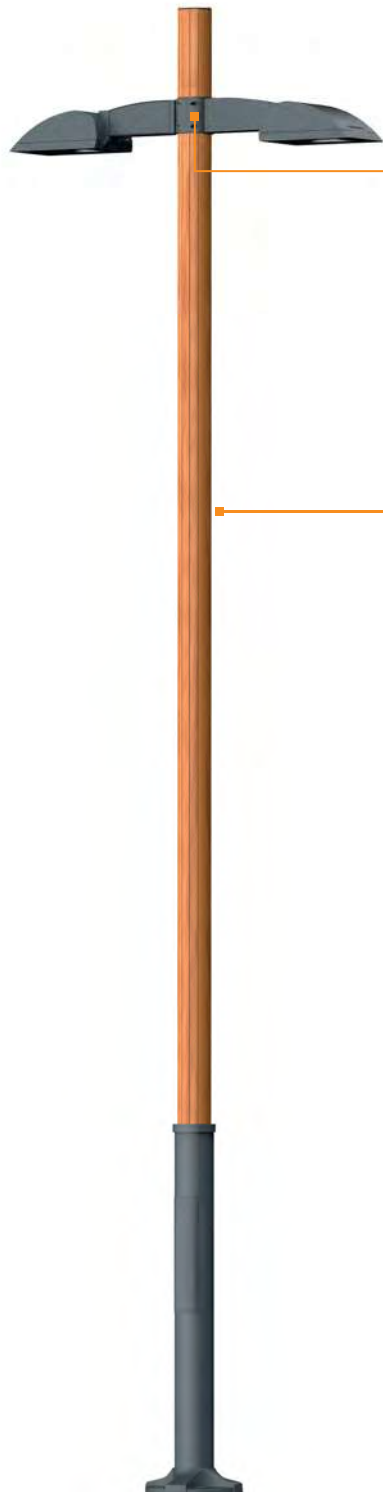
[S65] [A60] [R65]

36-72 W
 3230-7500 lm



- For detailed specifications, product codes and latest performance data, refer to www.we-ef.com
- Shown above are rated lumens for 3000 K at $T_q = 25^\circ\text{C}$
- For accessories, refer to page 327

▪ In AU/NZ SP10 (10/10 kV) surge protection is a standard feature



Mounting accessories

EB column fitter

Poles

AMW (wood)

AMF (steel)

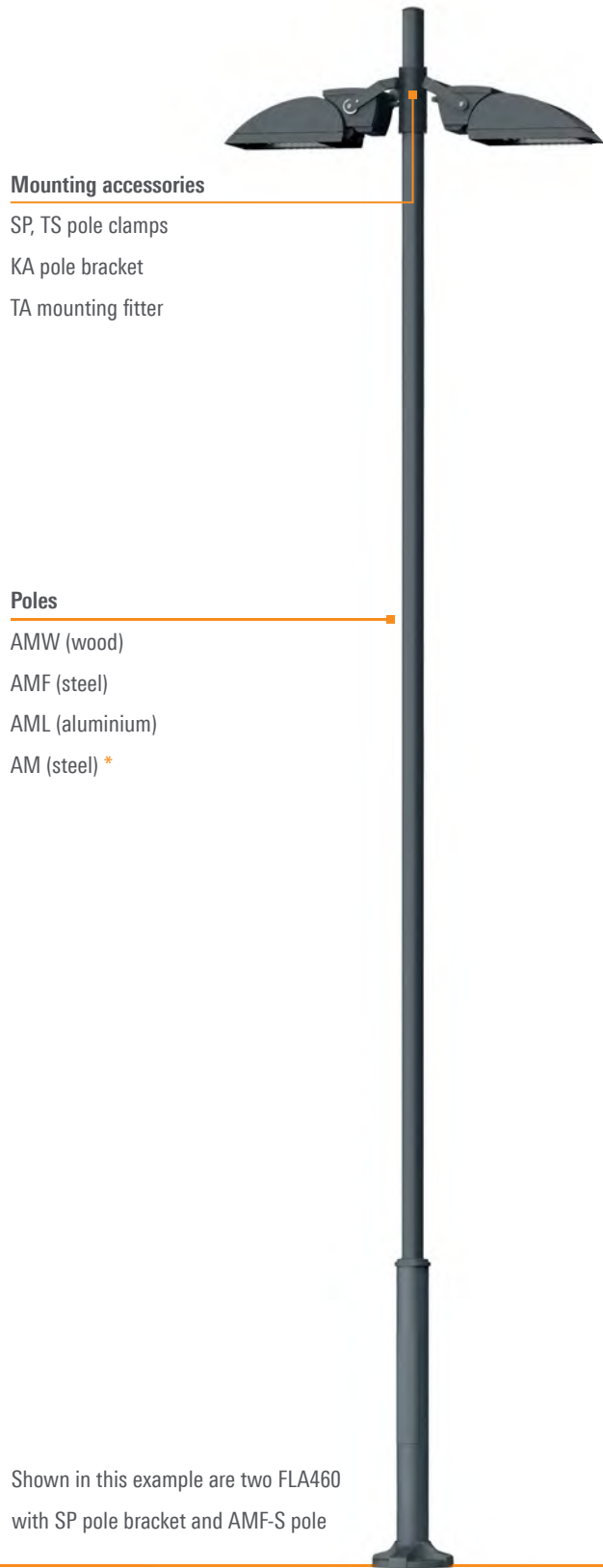
AML (aluminium)

AM (steel) *

Shown in this example are two FLA441
with EB pole bracket and AMW-S pole

▪ Recommended mounting height 4.0 - 6.0 m

* Not currently available in AU/NZ



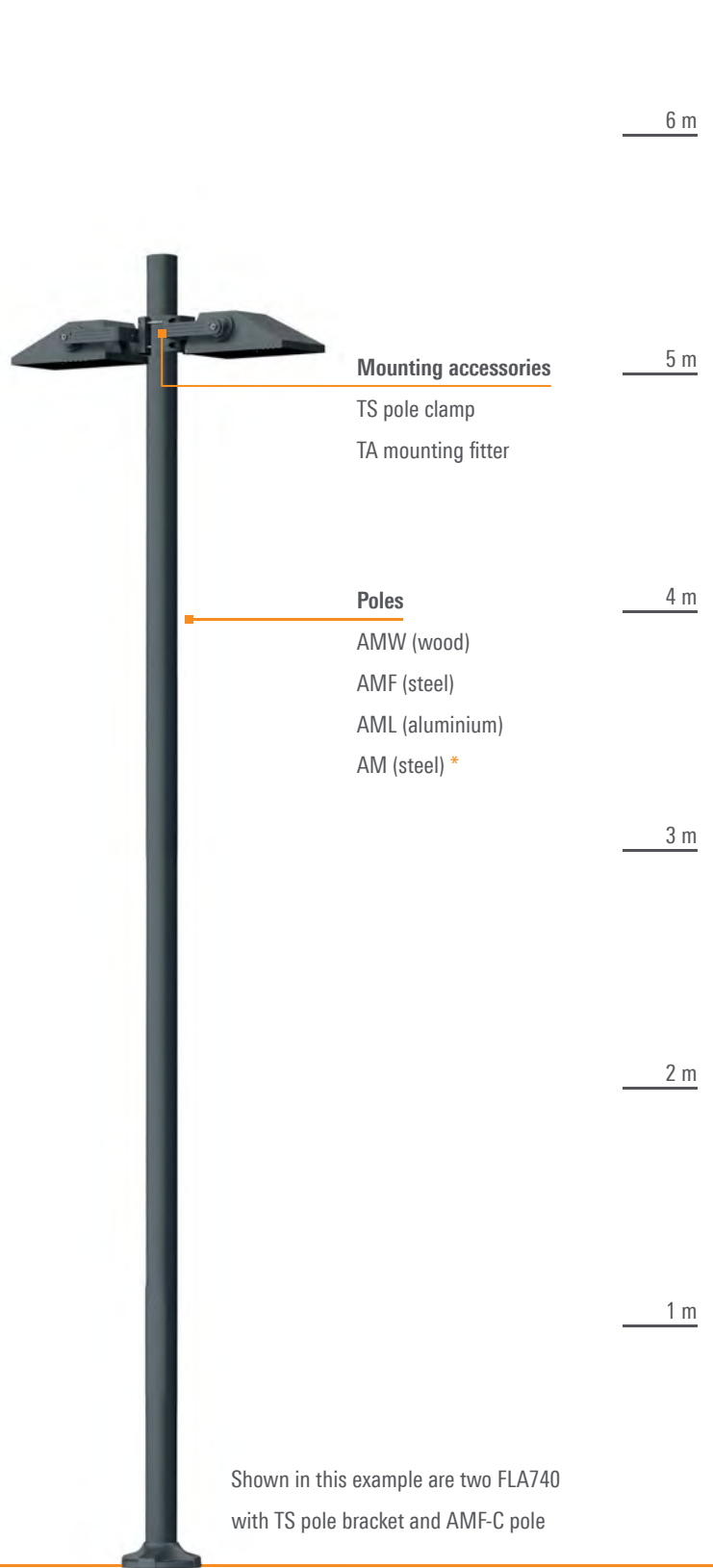
Mounting accessories

- SP, TS pole clamps
- KA pole bracket
- TA mounting fitter

Poles

- AMW (wood)
- AMF (steel)
- AML (aluminium)
- AM (steel) *

Shown in this example are two FLA460 with SP pole bracket and AMF-S pole



Mounting accessories

- TS pole clamp
- TA mounting fitter

Poles

- AMW (wood)
- AMF (steel)
- AML (aluminium)
- AM (steel) *

Shown in this example are two FLA740 with TS pole bracket and AMF-C pole

6 m

5 m

4 m

3 m

2 m

1 m

▪ Recommended mounting height 6.0 - 10.0 m

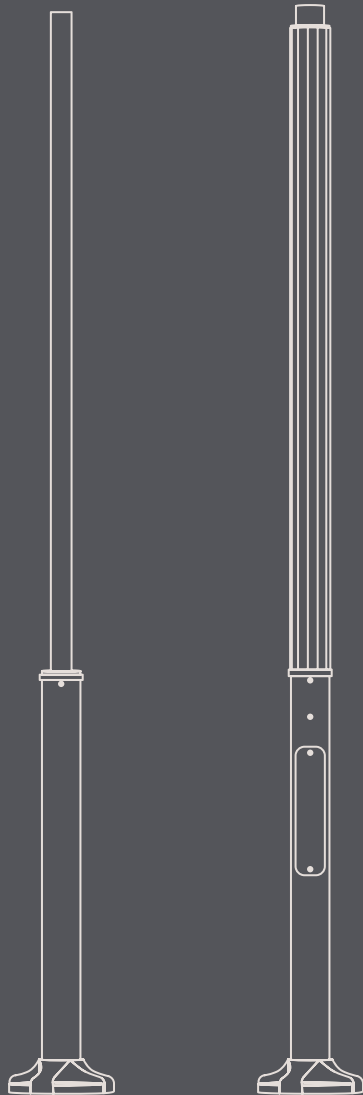
▪ Recommended mounting height 4.0 - 6.0 m

* Not currently available in AU/NZ

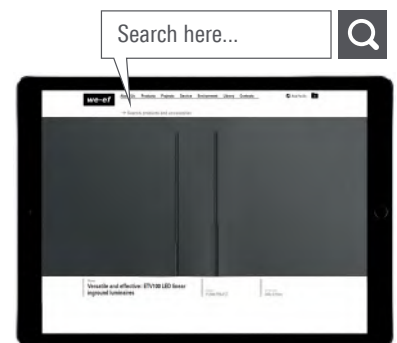
Poles

No range of high-quality luminaires would be complete without a selection of matching poles, from the same source.

When combined with the matching luminaires, the various versions of WE-EF poles – made of steel, aluminium or with wooden finishes, constant or stepped – open up a wide range of combinatory options for implementing individual and concise design concepts for illumination in urban spaces.



AMW-C / AMW-S	330
AMF-C / AMF-S	331
AML-C / AML-S / AML-A	332
AM-C / AM-S	333



Poles

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

AMW-C / AMW-S

Pole construction:	Impregnated hardwood* top section with anodised aluminium core structure Galvanised steel base section Modular two-piece construction
Corrosion protection:	5CE+Primer, including PCS hardware
Finish:	Polyester powdercoat, architectural grade
Spigot:	Dimensions vary, dependent on type of luminaire used; to be specified at time of ordering
Service door:	PCS locking screws; mounting tray for mains connection equipment
Installation:	Surface mounting flange plate, including covers to conceal mounting hardware
Accessory:	Planted root; to be ordered separately depending on site-specific requirements. For details refer to www.we-ef.com



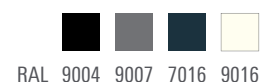
* Refer to website for maintenance and protection instructions

▪ The featured poles have been designed for safe installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

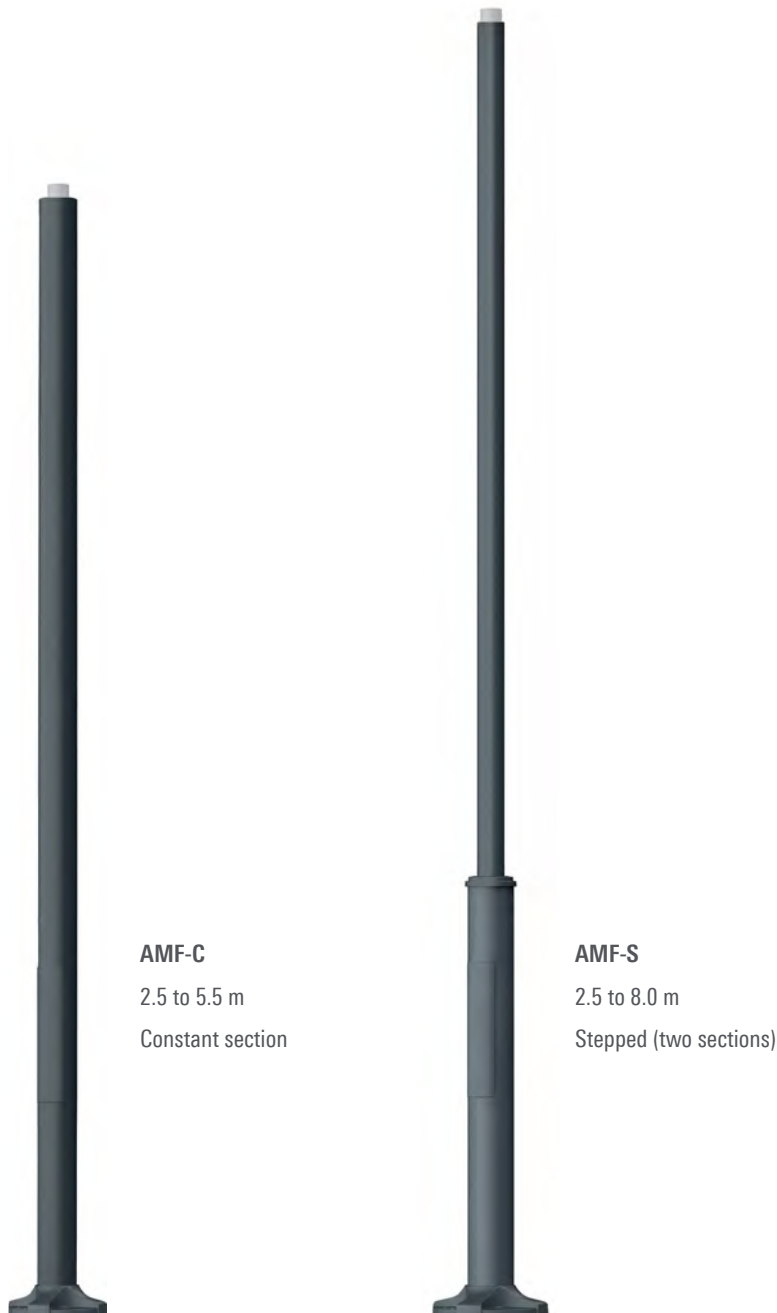
Standard colours – AU/NZ



Standard colours – AP



- Pole construction: Tubular steel, hot-dipped galvanised
 AMF-C: Modular two-piece construction for $h \geq 4.0$ m
 AMF-S: Modular two-piece construction
- Corrosion protection: 5CE+Primer, including PCS hardware
- Finish: Polyester powdercoat, architectural grade
- Spigot: Dimensions vary, dependent on type of luminaire used; to be specified at time of ordering
- Service door: PCS locking screws; mounting tray for mains connection equipment
- Installation: Surface mounting flange plate, including covers to conceal mounting hardware
- Accessory: Planted root; to be ordered separately depending on site-specific requirements. For details refer to www.we-ef.com



AMF-C
 2.5 to 5.5 m
 Constant section

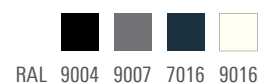
AMF-S
 2.5 to 8.0 m
 Stepped (two sections)

▪ The featured poles have been designed for safe installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

Standard colours – AU/NZ



Standard colours – AP



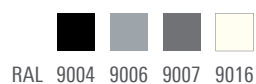
AML-C / AML-S / AML-A

Pole construction:	Tubular aluminium AML-C and AML-A: One-piece construction AML-S: Modular two-piece construction
Corrosion protection:	5CE+Primer, including PCS hardware
Finish:	Polyester powdercoat, architectural grade
Spigot:	Dimensions vary, dependent on type of luminaire used; to be specified at time of ordering
Service door:	PCS locking screws; mounting tray for mains connection equipment
Installation:	Surface mounting flange plate, including covers to conceal mounting hardware
Accessory:	Planted root; to be ordered separately depending on site-specific requirements. For details refer to www.we-ef.com

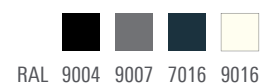


▪ The featured poles have been designed for safe installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

Standard colours – AU/NZ



Standard colours – AP

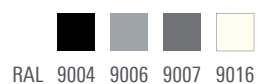


Pole construction:	Tubular steel, hot-dipped galvanised
	One-piece construction
Finish:	Polyester powdercoat, architectural grade
Spigot:	Dimensions vary, dependent on type of luminaire used; to be specified at time of ordering
Service door:	PCS locking screws; mounting tray for mains connection equipment
Installation:	Surface mounting flange plate

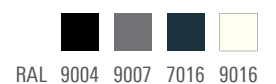


▪ The featured poles have been designed for safe installation and operation (in combination with WE-EF luminaires) in most common wind-load regions. For application in high wind-load regions, contact WE-EF or a certified engineer for structural calculations.

Standard colours – AU/NZ



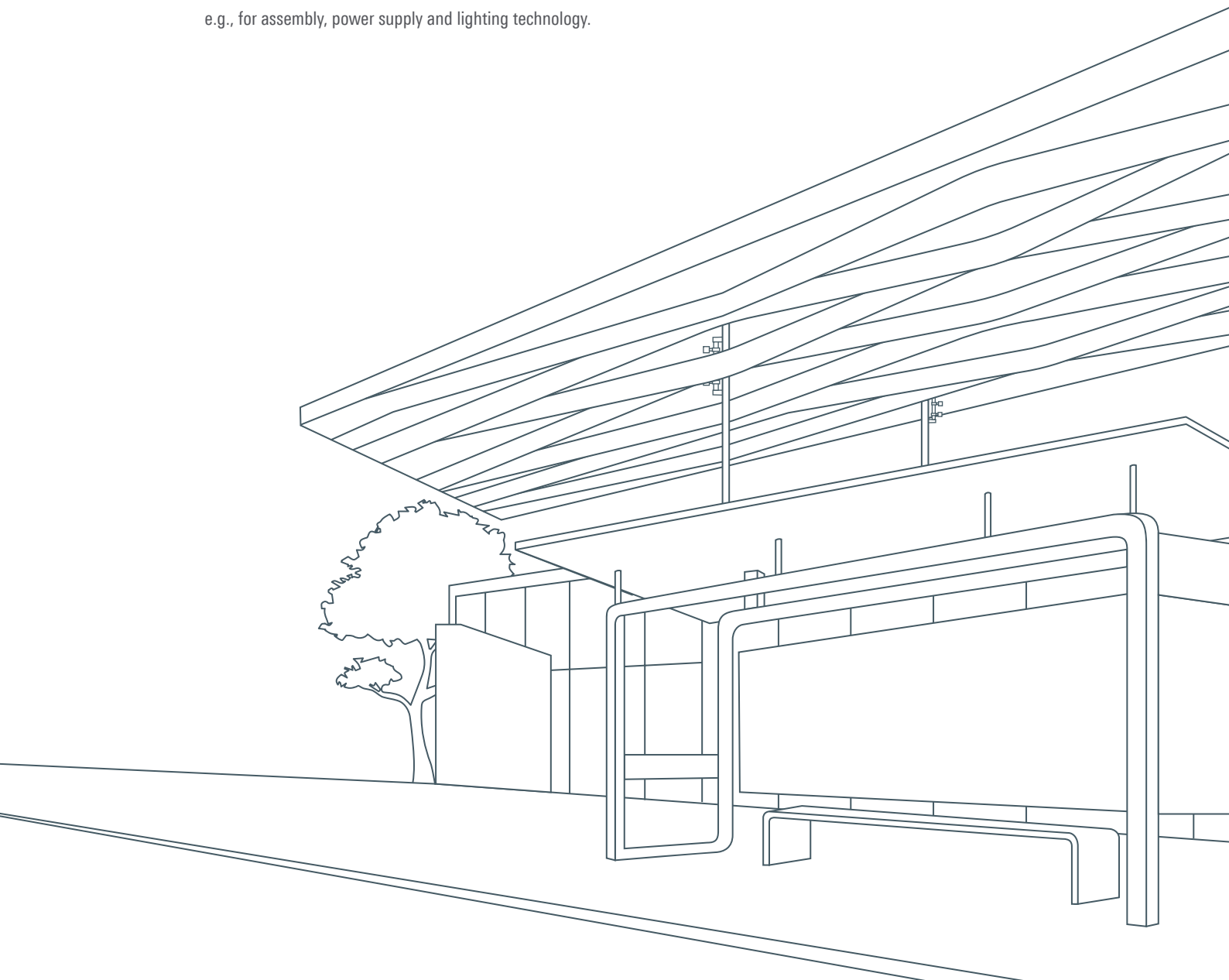
Standard colours – AP



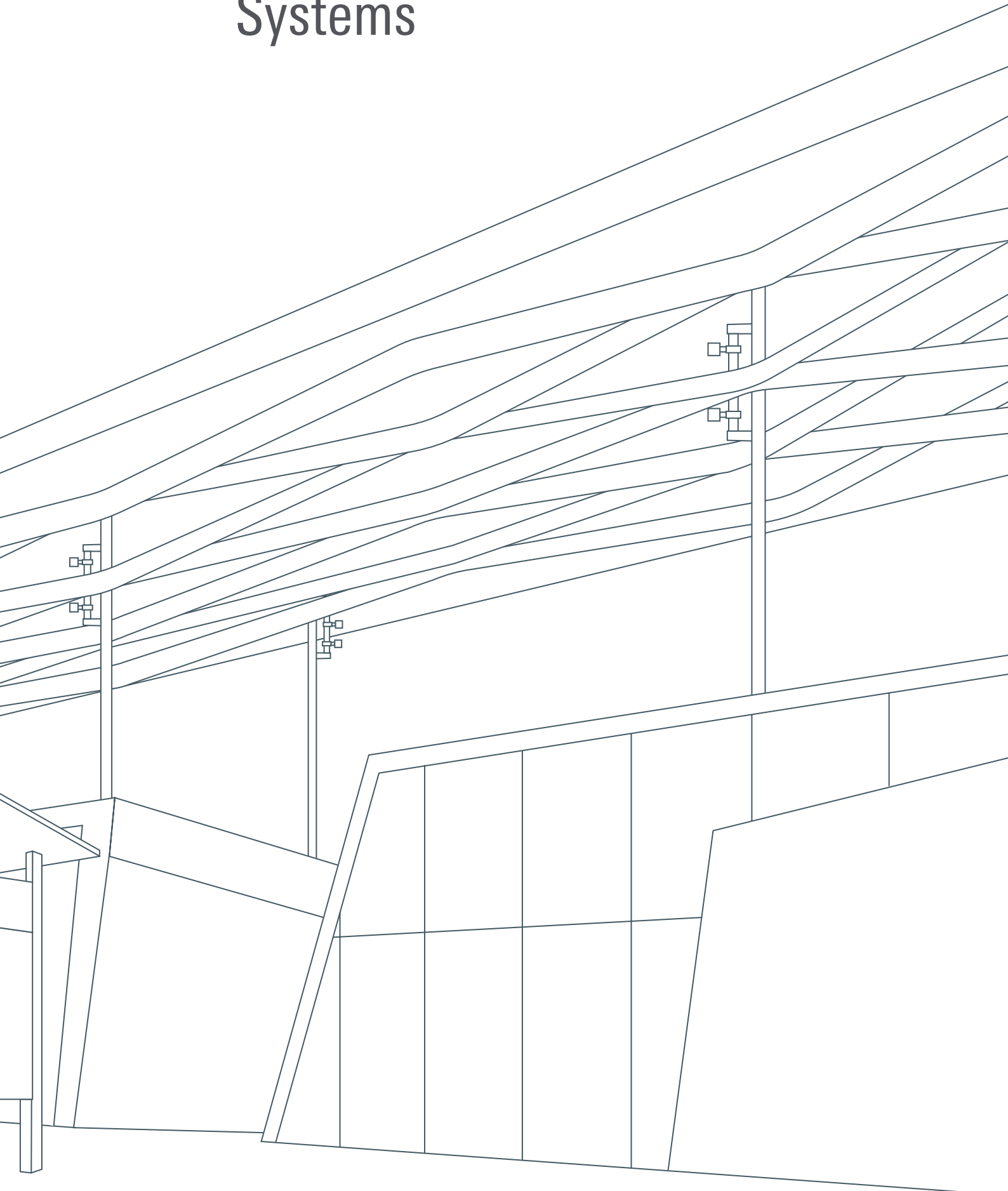
Every city is different. Every lighting task in public space has its own individual character.

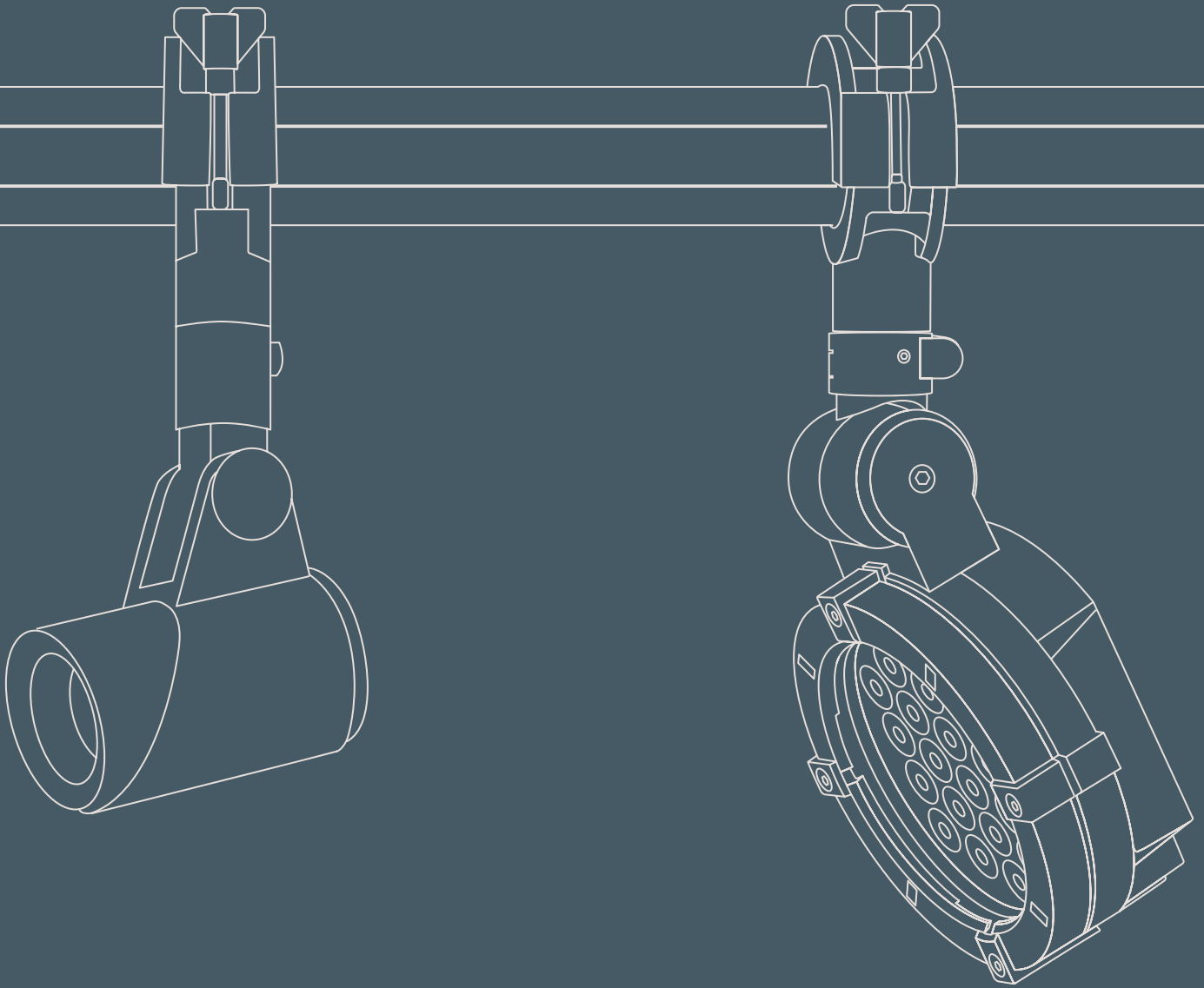
This is a situation that calls for tailored lighting solutions. With WE-EF's systems for outdoor lighting, putting together the perfect ensemble for any given lighting challenge is easy.

These systems consist of carefully curated sets of combinable elements, e.g., for assembly, power supply and lighting technology.



Systems



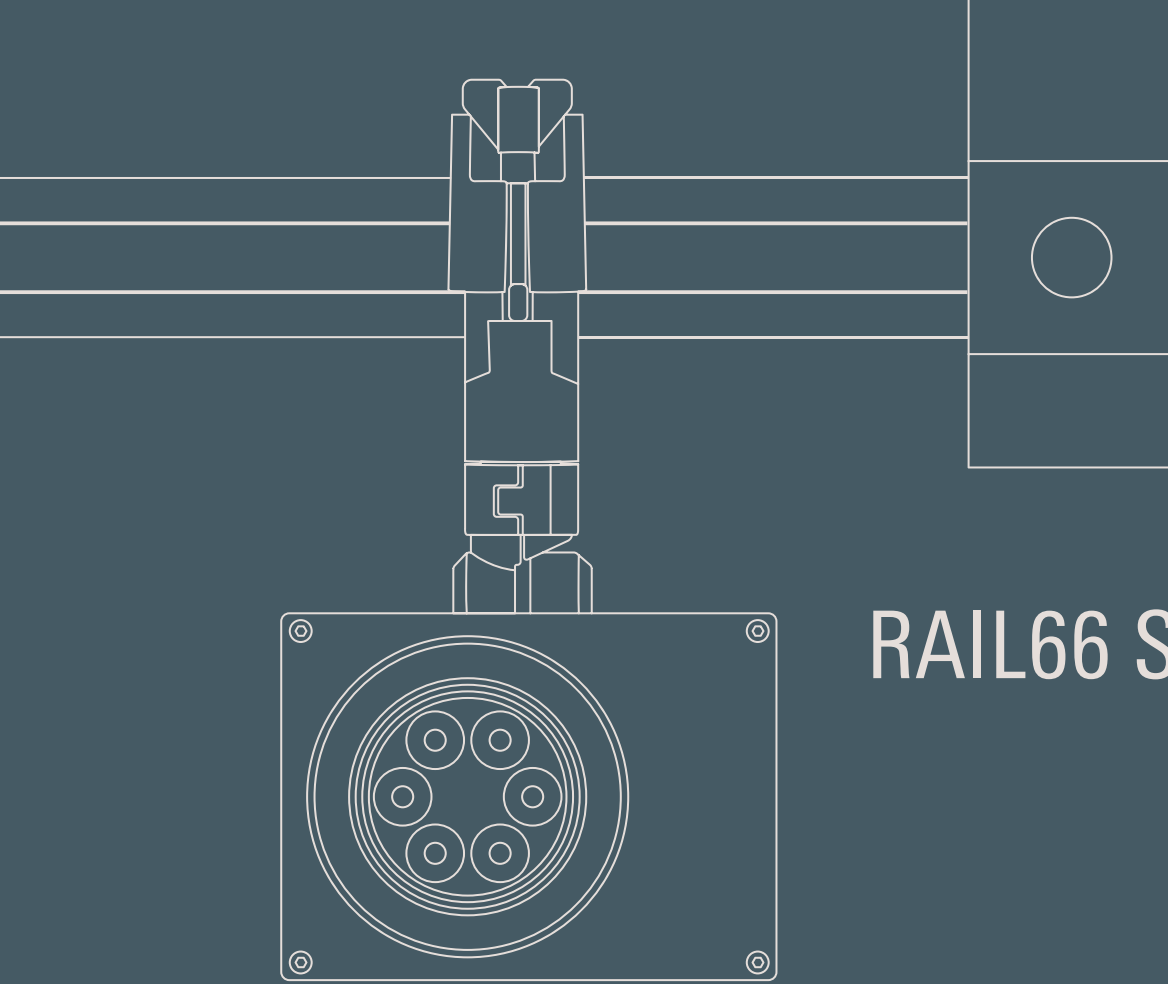


Whenever directional lighting needs to be repeatedly adapted to changing conditions – reconfigured, aligned, readjusted – the flexibility of RAIL66 comes into full play.

WE-EF offers with RAIL66, a flexible, weatherproof rail system for outdoor use. Its robust extruded profiles in different lengths carry up to six matching projectors and supply them with power.

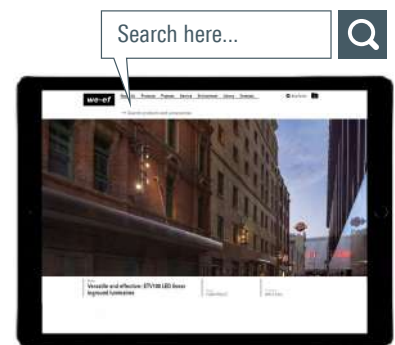
All RAIL66 projectors can be freely positioned and aligned; they do not need to be opened during installation.

There are various installation variants for façades, steel structures and poles as well as a mobile variant as a special version.



RAIL66 System

RAIL66 UNIVERSAL	340-341
RAIL66 CANTILEVER	342-345



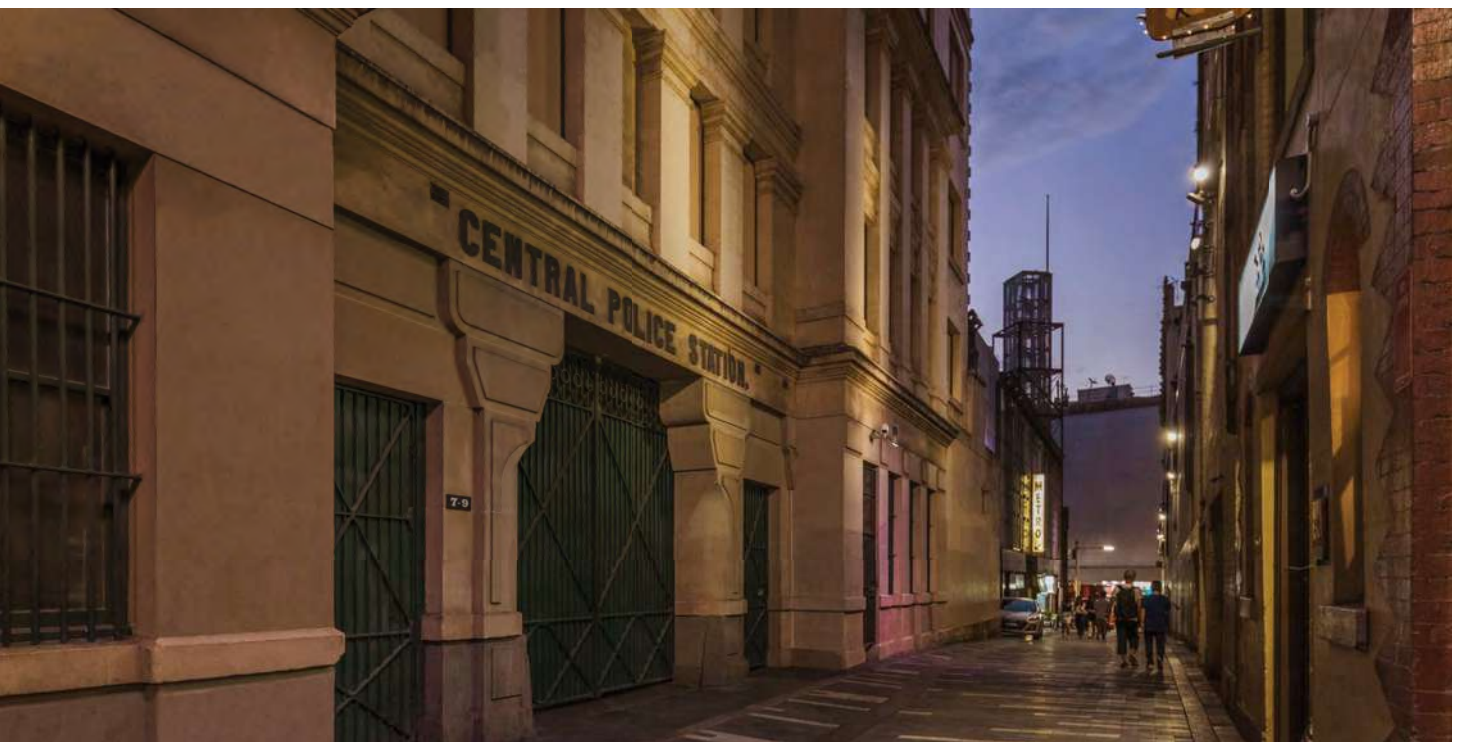
RAIL66 System

For detailed specifications, product codes and latest performance data, refer to www.we-ef.com

Wilmot and Central street

Street and Area Lighting Re-invented

A series of connected measures was initiated to upgrade and revitalise two streets in downtown Sydney. The roads and sidewalks now form one level – a 'shared zone' for all users and passers-by, with vehicles moving at walking speed. The innovative concept also required planners to break new ground with regard to lighting by using WE-EF's RAIL66 mounting system and individually aligned projectors. The new luminaires illuminate the road surface and accentuate details of the adjacent historic façades.







RAIL:	Marine-grade, all-aluminium construction Anodised rail extrusion
Corrosion protection:	5CE, including PCS hardware
Gasketing:	Silicone rubber gasket
Installation:	In any desired orientation, on walls and columns, under roof and ceiling structures etc.
Mains connection:	Concealed termination chamber Rail extrusion features internal wiring and up to six countersunk, IP rated, compact mains outlets
Control circuits:	ON/OFF, 1-10 V, DALI; to be specified in time of ordering

IP66

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

Standard colours – AP

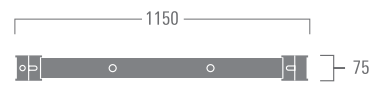
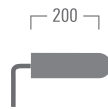


RAL 9004 9007 7016 9016



RAIL66 UNIVERSAL

2-3 projectors



3-4 projectors



4-6 projectors





RAIL:	Marine-grade, all-aluminium construction Anodised rail extrusion
Corrosion protection:	5CE, including PCS hardware
Gasketing:	Silicone rubber gasket
Installation:	Horizontal wall mounting
Mains connection:	Concealed termination chamber Rail extrusion features internal wiring and up to six countersunk, IP rated, compact mains outlets
Control circuits:	ON/OFF, 1-10 V, DALI; to be specified in time of ordering

IP66

Standard colours – AU/NZ



RAL 9004 9006 9007 9016

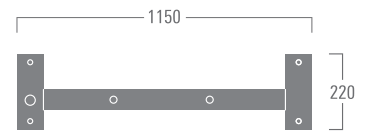
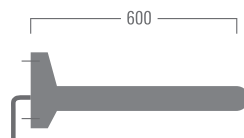
Standard colours – AP



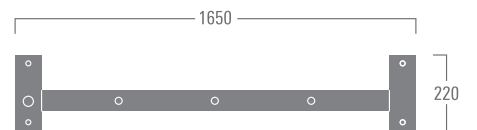
RAL 9004 9007 7016 9016

**RAIL66 CANTILEVER**

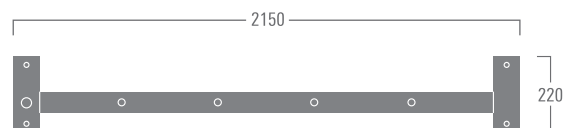
2-3 projectors



3-4 projectors



4-6 projectors



RAIL66

Adjustable directional lighting system. IP66 rated for operation in demanding outdoor environments.

For matching FLD100 and FLB100 RAIL66 projectors, refer to pages 152 and 160, respectively.

**RAIL66 UNIVERSAL**

For installation in any desired orientation, on walls, columns, structures, etc.

- [1] One single cable entry provides mains voltage connection for up to six projectors.
Concealed termination chamber.
- [2] Rail extrusion features internal wiring and up to six countersunk, IP rated, compact mains outlets.
- [3] The projector's die-cast aluminium clamp attaches to the rail. Matching clamp/rail details facilitate either perfect alignment of several projectors in one row, or precise offset in increments of 90 degrees.
- [4] Extensive horizontal and vertical aiming range for practically infinite directional adjustment.

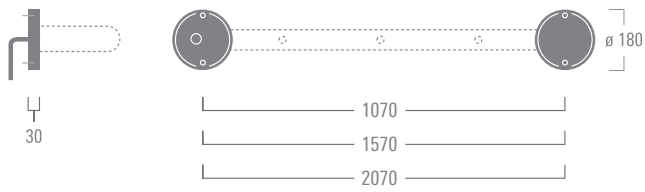
RAIL66 CANTILEVER

CANTILEVER outreach of 600 mm particularly suitable for wallwash and signboard lighting applications.

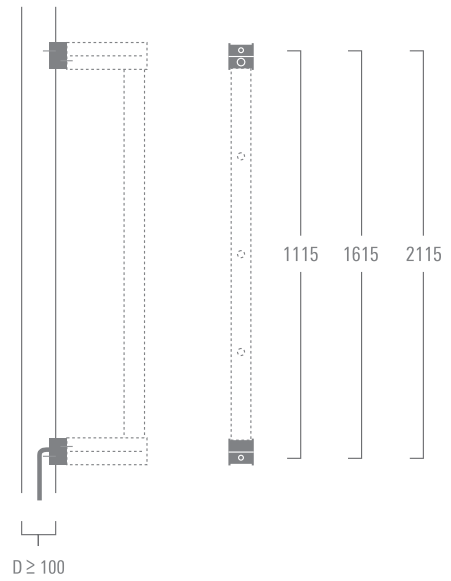


Mounting accessories

for RAIL66 UNIVERSAL



Flat surface fitters (pair) – provide enhanced mounting surface coverage and facilitate concealing of a recessed junction box.



Column fitters (pair) – allow installation to pipe structures and columns of (minimum) 100 mm diameter.

ECO STEP DIM® BASIC

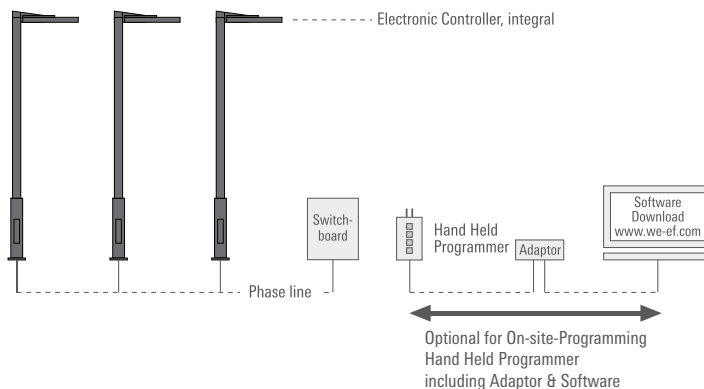


An electronic controller is fitted in the luminaire to reduce luminous flux and power to a preset value, ex-factory.

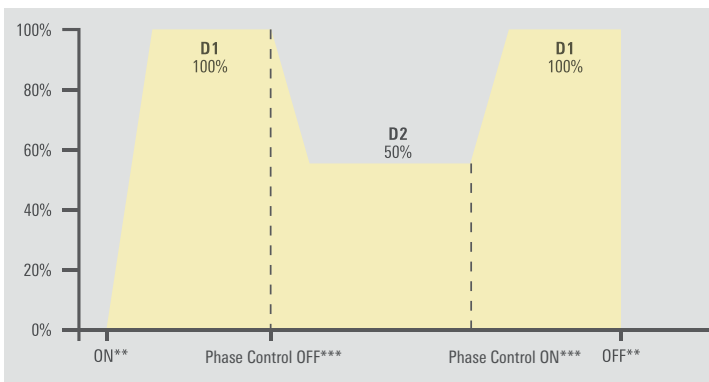
Features

- Control phases (L') such as those that are, for example, used in networks using luminaires with two conventional lamps is required to activate the switch.
- One dimming level can be programmed. This is done ex-factory. Luminous flux is reduced from 100 per cent to 55 per cent, and input is reduced to 50 per cent (standard programming). Other dimming levels can also be programmed on request.
- Other customer-specific requirements, such as adapting the dimming behaviour for the twilight period or gradual dimming can be programmed.
- The system can be activated (on/off) via a photocell or timer.
- Standard: Positive logic supply phase and control phase = 100% light.
- Optional: negative logic supply phase without control phase = 100% light.

Eco Step Dim Basic – Schematic



Eco Step Dim Basic – Standard Programming*



* For customised programming at the factory, please contact WE-EF directly

** ON/OFF defined by user, using a dimmer switch (photocell) / timer

*** Cycle times for the phase are defined by the user

ECO STEP DIM® ADVANCED

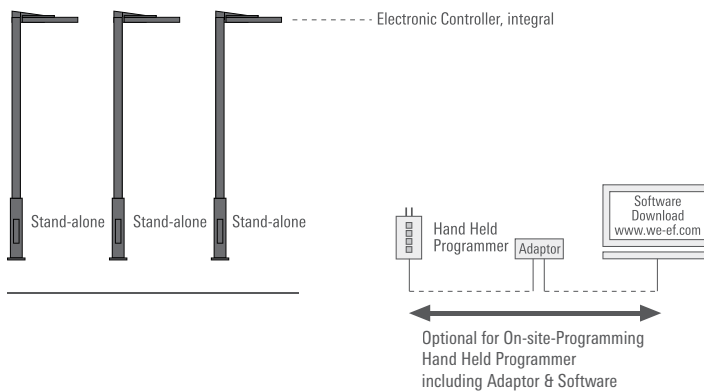


A factory-programmed, multi-step electronic controller is fitted in the luminaire for reducing the luminous flux and input.

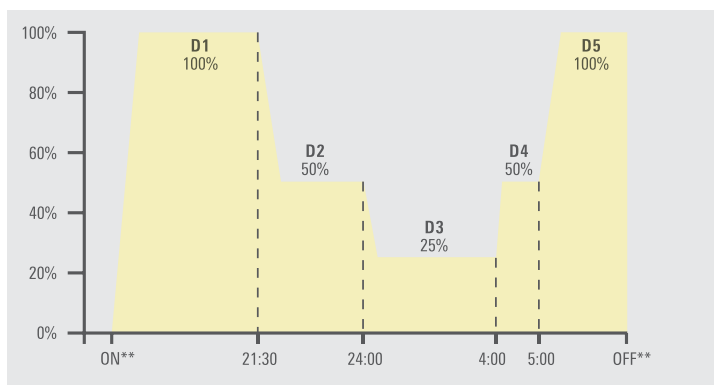
Features

- No separate power source (control phase) required for dimming control. The luminaire is operated in stand-alone mode.
- Five dimming levels can be programmed. This is done ex-factory. The programming is either according to the specification or on the basis of WE-EF experience (=standard programming). Subsequent reprogramming is possible on site.
- The luminaires are switched on and off via a photocell or timer.

Eco Step Dim® Advanced – Schematic



Eco Step Dim® Advanced – Standard Programming*



* For customised programming at the factory, please contact WE-EF directly

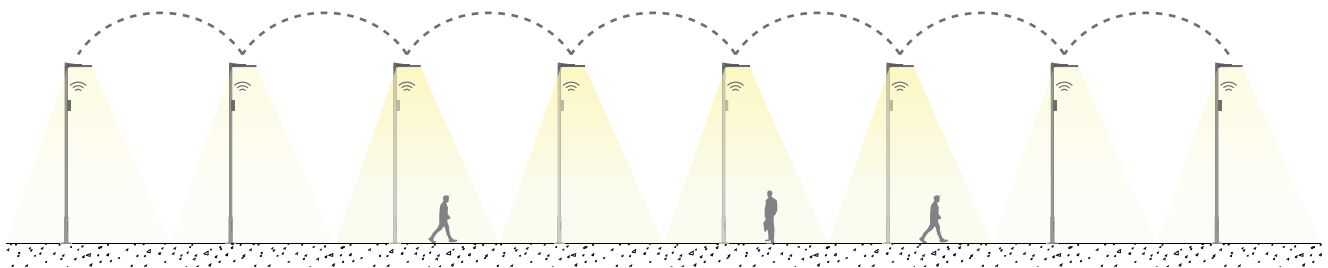
** ON/OFF defined by user, using a dimmer switch (photocell) / timer

ECO STEP DIM® MOTION



The right light at the right place. Eco Step Dim® Motion is a system based on motion data captured by PIR sensors (passive infrared). If no movements are detected, Eco Step Dim® Motion dims the luminaires or groups of luminaires according to a programmed setting, to a lower lighting level, for example 20 per cent.

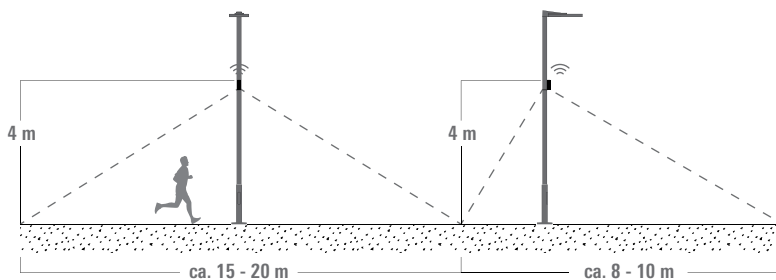
Eco Step Dim® Motion is a wireless system for controlling street and area lighting luminaires. The motion sensors are usually attached directly to the pole. The luminaires are connected to each other via wireless protocol and are controlled via DALI.



Eco Step Dim® Motion reacts to movement/presence. It allows communication by the luminaires with each other. Ideal for footpaths, bicycle paths or residential streets.

If no presence is detected at a location, the luminaires are automatically dimmed. When a presence is detected, the light level for a given number of luminaires is increased to a predefined level, e.g., 100 per cent. They remain at this level behind the person or persons moving through the area for a predefined period.

The system is easy to configure with an Android app and a Bluetooth dongle on site. The system is bi-directional. All luminaires serve as both master and slave, and control and communicate with each other. After initial configuration, connect only with one luminaire to reach all the luminaires.

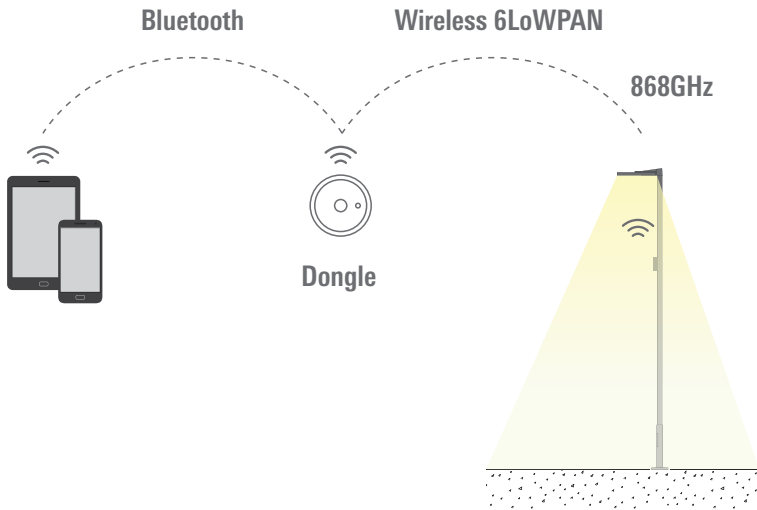


Analog sensor PIR 110°/116 °, recommended installation height 4 m

Commissioning

Luminaires that are delivered to a project are programmed during commissioning with both project specific information, e.g. project name, site, as well as default settings for lighting control.

The default settings for lighting control enable each luminaire to function correctly from initial installation until the system has been correctly configured.



Default settings	Value
Enable presence sensor	0n
Dim light level	20 %
Max. light level	100 %
Delay time	60 sec

Communication method for commissioning and installation

ECO STEP DIM® MOTION

Eco Step Dim® Motion is configured on the system side with a 15-digit password, the Eco Step Dim® Motion App and a Bluetooth dongle.



Android app for commissioning and installation



Dongle for secure communication.

Acts as an interface between Android devices and the 6Low PAN

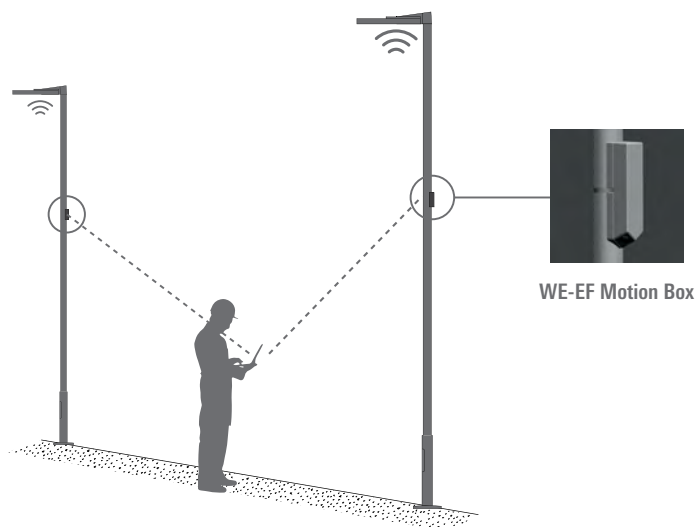
ECO STEP DIM® MOTION



With the Eco Step Dim® Motion light management system, WE-EF provides a 2 stage system to realize a variety of control options.

Features and benefits of linking

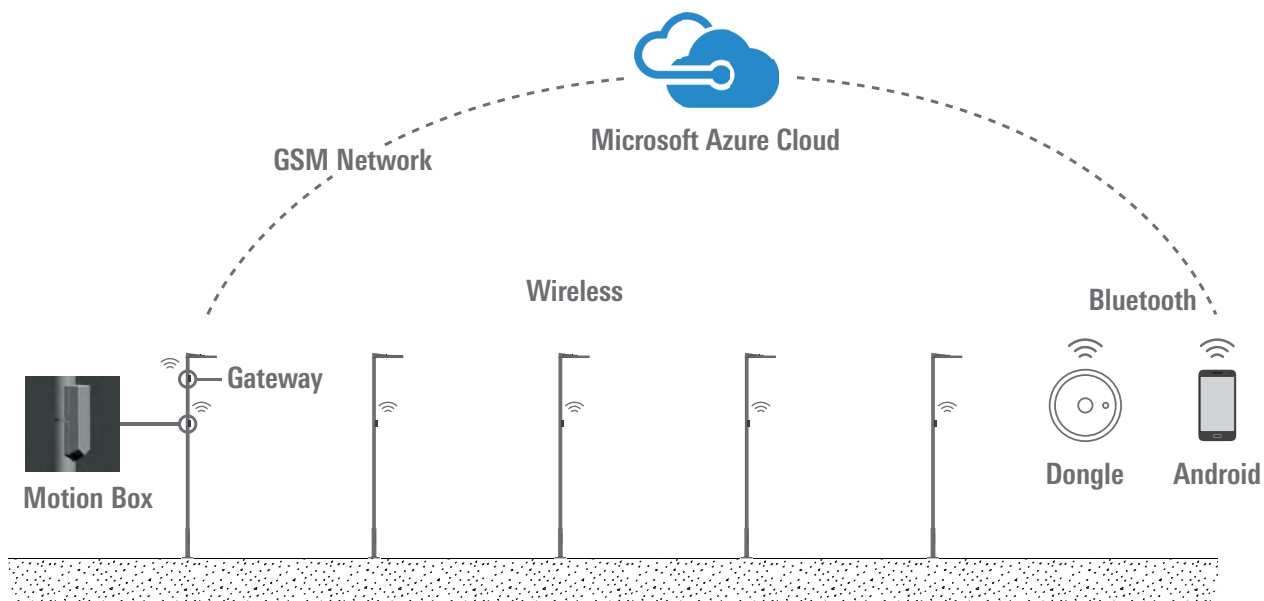
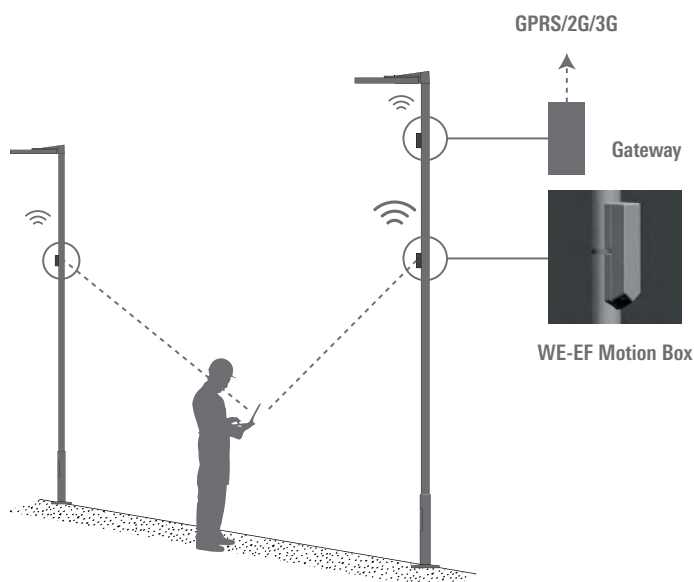
- Several luminaires connected via wireless protocol.
 - Data exchange/transmission between the luminaires
- Android device and dongle
- Wireless communication 128-bit encryption
- Luminaire information (firmware, programs, date etc.)
- Records (voltage, burning hours, power factor, temperature etc.)
- Luminaire groups can be formed
- Adjustable amount of light (high and low), depending on presence/time
- Adjustable ramps between the light levels
- Settings can be inherited
- In-Motion Box Integrated GPS, temperature and impact sensor
- Recommended maximum distance between luminaires is 100 metres
- Access to all luminaires from one luminaire for commissioning and installation
- Firmware update via wireless protocol



Features and benefits of connection

- Luminaires connected to a light management system via gateway
- All settings possible via GPRS/2G/3G
- Data held in Microsoft Azure Cloud
- Access with the online Dashboard software from any point
- Reports on energy consumption, switching cycles, traffic density, error messages etc. can be called up on the Dashboard
- Error messages etc. can be emailed
- 500 controllers can be managed via one gateway
- The light management Eco Step Dim® Motion can, following technical clarification, be integrated into other light management systems

Connected



Ready to Connect

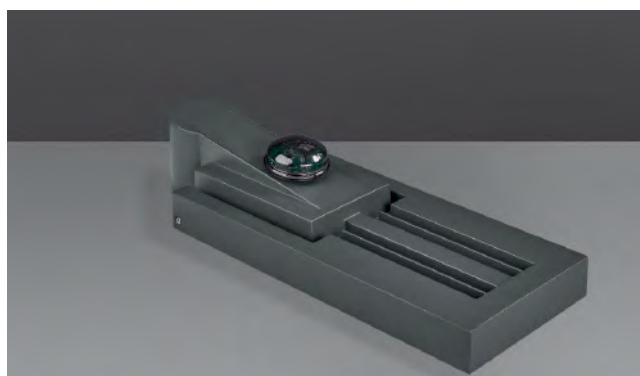
R2C

- R2C products are equipped with interfaces, ready for integration into a light management system.
- A Zhaga Book 18 interface is installed ex-works. The interface is covered with a robust protective cap, and protection class IPX6 is maintained.
- The luminaires are completely pre-wired and equipped with a DALI LED driver.

Depending on the choice of light management system, a corresponding controller must be available for commissioning and attachment to the standardized Zhaga Book 18 interface ("plug'n play" system).



Connect the controller



Luminaire is now ready for use

Suitable luminaires for P2C Prepare to Connect and R2C Ready To Connect



ZFS400



RFS500



CFS500



RMT320



RMM320



RMC320



CFT500



RFL500-SE



VFL500



VFL500-SE



PFL500

Surge protection

WE-EF pole mounted and catenary luminaires are fitted with electronic converters featuring 6/6 kV surge protection in accordance with EN61000-4-5. For comprehensive protection of the luminaire against lightning and electrical surges (high-risk areas), primary (type 1) and secondary (type 2) surge arrestors, such as the WE-EF SP10, must be installed into the power supply. For luminaires rated at less than 10 kV or installations in such high-risk areas, the optional SP10 (10/10 kV) surge protection accessory is recommended. If the surge protector has been triggered, the luminaire is automatically disconnected from the mains

The technical planner/installer is responsible for the proper selection, sizing and installation of the surge protection modules that must be provided on site.

Note: In AU/NZ SP10 (10/10 kV) surge protection is a standard feature for WE-EF pole mounted luminaires.





Place Gabrielle Andéol
Gigondas (FR)

IOS® Innovative Optical System

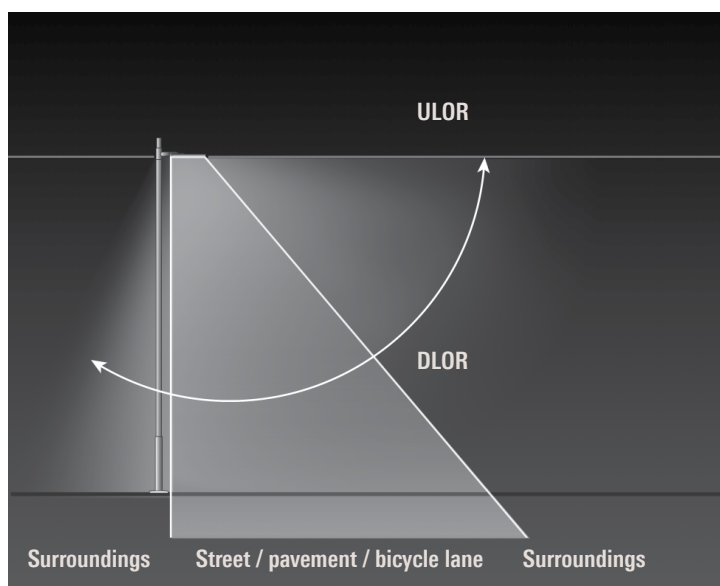


The IOS® system is a fundamental part of the WE-EF development philosophy. The main features of the IOS® system are:

- In-house CAD design
- Tooling exclusive to WE-EF
- Precisely manufactured optical system exclusive to WE-EF
- High photometric performance, beam efficiency and control
- Superior glare control and visual comfort through appropriate shielding angles
- Optional optical accessory toolkit

In street and area lighting applications, IOS® features full cut-off light distribution in compliance with European standard EN 13201 (Class G3/G4/G5/G6):

- Zero light emission above the 90° horizontal
- Tightly controlled 'candela' intensities in the critical high-angle glare zone at 80°-90° (from nadir)
- Solutions to light trespass and dark skies concerns

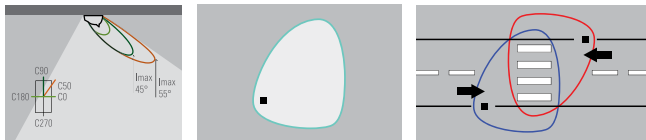


ULOR: The main purpose of an optical system is to direct light onto a specified target surface. Particularly in streetlighting applications, any amount of light that is emitted above the horizontal, must be considered not merely as being wasteful, but equally so as polluting the night sky. The Upward Light Output Ratio (ULOR) is a measure of how much light escapes from a luminaire into the sky. Obviously, a ULOR of zero per cent is desirable. The better the optical system, the lower the burden on our environment.

[P45R] and [P45L] Lenses – Pedestrian crossing distribution.

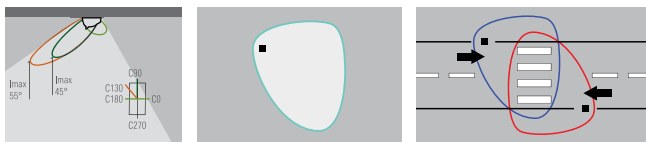
- Optimised for illuminance-based design work (maximum spacing), the '45' references the nominal angle of peak intensity from nadir (downward vertical).
- No light above the 90° horizontal (ILE Class E1/E0).

Ideal for the illumination of pedestrian crossing to EN DIN 13201, Class S2-S4.



[P45R]

right-hand traffic



[P45L]

left-hand traffic

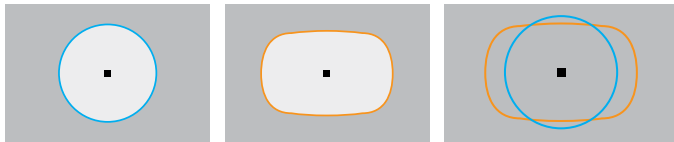


Shown in this example are two VFL540 with [P45L] pedestrian crossing, for left-hand traffic

[C45] [C50] [C55] [C60] [C70] and [R] Lenses – Symmetric and Rectangular distribution.

- Optimised for illuminance-based design work (maximum spacing) with good visual comfort.
- For [C50] [C60] and [C70], maximum angle of peak intensity through C0 50° C0 60° and C0 70° respectively.
- For [R], maximum angle peak intensity through C0 65°, C90 45°.
The [R] distribution has a forward to side ratio of 1:2.
- No light above the 90° horizontal (ILE Class E1/E0).

Ideal for lighting public spaces where both uniformity and visual comfort are critical factors.



[C50] [C60] [C70]

[R]

[C50] [R]

Light distribution in comparison



Shown in this example are CFT540 with [R] Rectangular distribution

[P65] Lens – Pedestrian/bicycle lane distribution.

- Optimised for illuminance-based design work (maximum spacing).
The 65–70 references the nominal angle of peak intensity from nadir (downward vertical).
- No light above the 90° horizontal (ILE Class E1/E0).

Ideal for pedestrian and bicycle lanes according to the criteria for illuminance EN DIN 13201, Class S2-S4.



[P65]

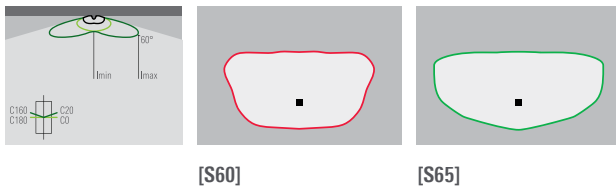


Shown in this example are PFL540 with [P65] Pedestrian/bicycle lane distribution.

[S60] and [S65] Lenses – Streetlighting distribution.

- Optimised for luminance-based design work (high visual comfort).
The '60' references the nominal angle of peak intensity from nadir (downward vertical).
- No light above the 90° horizontal (ILE CLASS E1/E0).

Ideal for streetlighting according to the criteria for luminance EN DIN 13201, Class ME3-ME6. For a one-sided arrangement, guaranteed spacing = $5-5.5 \times \text{MH UI} \geq 0.4$, $T_i < 15$ per cent.



Shown in this example are RMC320 [S60] Streetlighting distribution

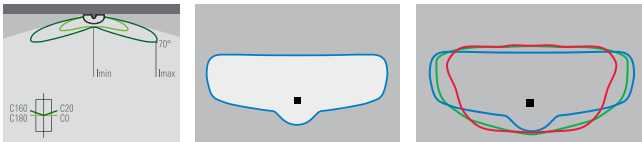
[S70] Lens – Streetlighting distribution.

- Optimised for illuminance-based design work (maximum spacing).

The '70' references the nominal angle of peak intensity from nadir (downward vertical).

- No light above the 90° horizontal (ILE CLASS E1/E0).

Ideal for streetlighting according to the criteria for illuminance EN DIN 13201, Class S1-S6. For a one-sided arrangement, guaranteed spacing = 7-9 MH Uniformity $U_0 \geq 0.2-0.4$, with good visual comfort (the norm does not provide specific values for glare limitation).



[S70]

[S60] [S65] [S70]

Light distribution in comparison

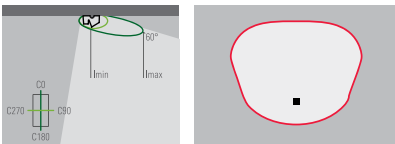


Shown in this example are RMT320 [S60] Two-sided Streetlighting distribution

[A60] Lens – Asymmetric 'forward throw' distribution.

- Nominal angle of peak intensity through C0 60-65°.
- Rearward spill limited to an angle of 10°.
- No light above the 90° horizontal (ILE CLASS E1/E0).

Ideal for lighting public spaces where visual comfort (glare limitation) is a critical factor.



[A60]



Shown in this example are PLS420 [A60] Asymmetric 'forward throw' distribution

[R45] and [R65] Lenses – Rectangular 'side throw' distribution.

- Optimised for illuminance-based design work (maximum spacing).

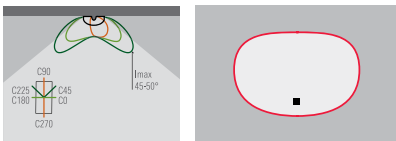
The '45' or '65' references the nominal angle of peak intensity from nadir (downward vertical).

- Rearward spill limited to an angle of 10°.
- No light above the 90° horizontal (ILE CLASS E1/E0).

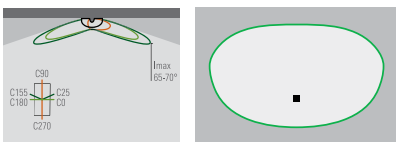
Ideal for streetlighting according to the criteria for illuminance EN DIN 13201,

Class S1-S6. For a one-sided arrangement, guaranteed spacing = 4-5 MH Uniformity for [R45] and 7-9 MH Uniformity for [R65]

$U_0 \geq 0.2-0.4$, with good visual comfort (the norm does not provide specific values for glare limitation).



[R45]



[R65]



Shown in this example are QLS410 [R45] Rectangular 'side throw' distribution

WE-EF LED lens systems follow the approach of the 'multi-layer' principle. Each individual LED illuminates the same area, thus creating so-called lighting layers. The sum of all these layers results in a uniform and efficient illumination.

The multi-layer principle has five advantages:

- Light is strictly controlled, and any light pollution is kept to an absolute minimum through the exact aiming of the LEDs.
- The system ensures through modular engineering that groups of LEDs can be simply and quickly exchanged.
- If one LED fails and the light level drops, uniformity is retained.
- OLC® technology has been developed with the future in mind; when more efficient LEDs become available, they can simply be retrofitted.

The OLC® technology (multi-layer principle) is the ideal method for achieving a uniform and energy saving lighting solution, particularly for street and area lighting, providing the highest level of safety in ensuring that the failure of individual LEDs does not lead to an adverse effect in the lighting. It balances the needs for safety with visual comfort and energy savings.



WE-EF's multi-layer technique – 100% light



WE-EF's multi-layer technique – 70% light

To further improve the efficiency of street and area lighting luminaires, WE-EF has developed the RFC™ technology. The conventional flat-glass panel or cover is replaced by a UV-stabilised panel that has a surface that is contoured in a way that imitates the shape of the OLC® lens; the goal is to minimise the loss of light that normally occurs due to internal reflection.

The RFC™ technology is available for the WE-EF lens system

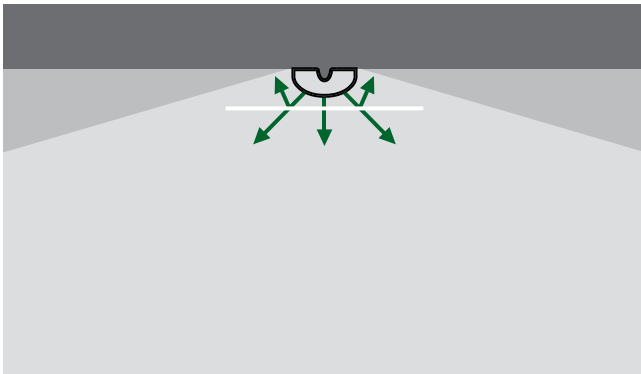
[P45R] [P45L] Pedestrian crossing distribution

[P65] Pedestrian/bicycle lane distribution

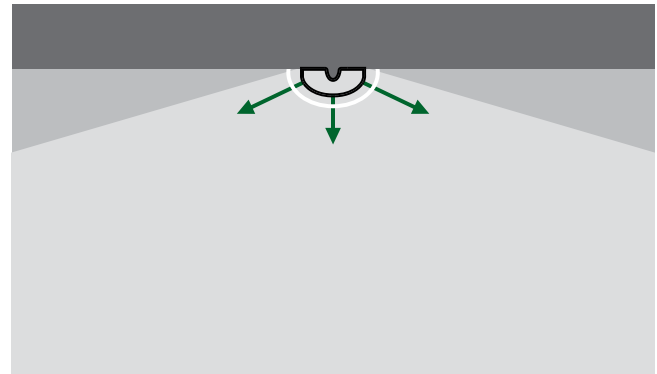
[S60] [S65] [S70] Streetlighting distribution

[A60] Asymmetric 'forward throw' distribution

[R65] [R45] Rectangular 'side throw' distribution



Internal reflection from conventional, flat main lens



RFC™ technology delivers high light transmission



The contour of the main lens follows the shape of the individual LED lens, thereby minimising internal reflections within the luminaire.

- In the case of the [S60] lens, at the critical 60° (downwards vertical), 20% of the light with a conventional flat glass cover is reflected internally. With the [S70] lens, at the critical 70°, it is 30%. These losses are virtually eliminated by the RFC™ technology.
- With the [S60] lens, this means a slight increase in the spacing (0.25 x mounting height) in the case of the [S70] lens, spacing has increased significantly (0.5 to 1.0 x mounting height).



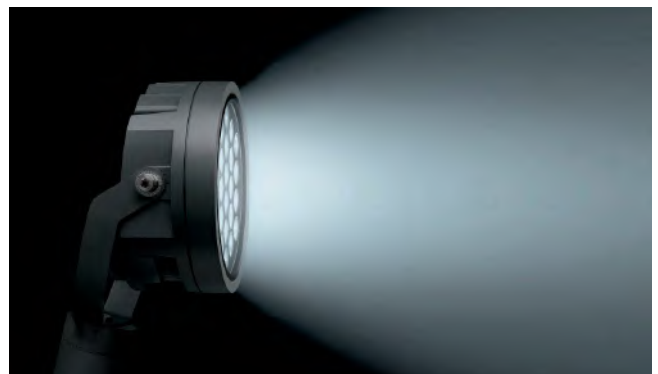
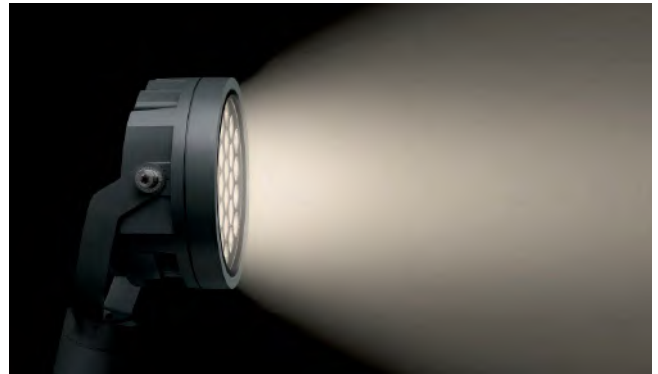
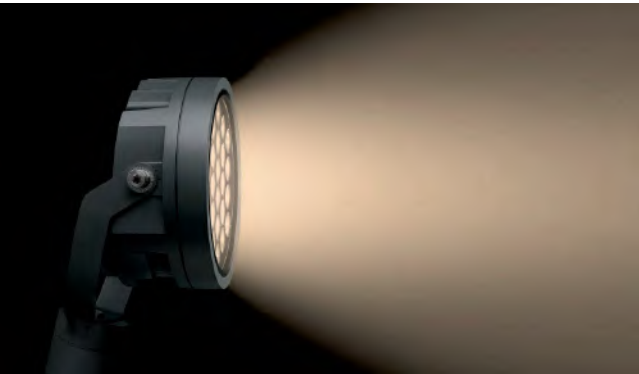
For optimum photometric performance, multiple arrays of white LEDs of different colour temperatures are joined into one optical system. Tuning these different types of LEDs through separate control channels allows infinite variation from warm to neutral to cool white light as well as smooth dimming at any chosen colour temperature.

As a consequence of higher luminous efficacy (i.e., lumens per watt) of cool white LEDs over their warm white counterparts, conventional systems typically display a noticeable drop or increase in brightness when the

colour temperature is being adjusted. WE-EF Tunable White Technology masters this problem through smart control circuitry that stabilises the luminous flux throughout the entire 2700 K - 6000 K tuning range.

Illuminated with different colour temperatures, the colours and textures of surfaces, vegetation and other media are perceived differently.

Tunable white luminaires can be used to showcase private and public spaces, architecture and landscapes, in ever-changing ways – be it for special events, during the course of a night or with the change of seasons.



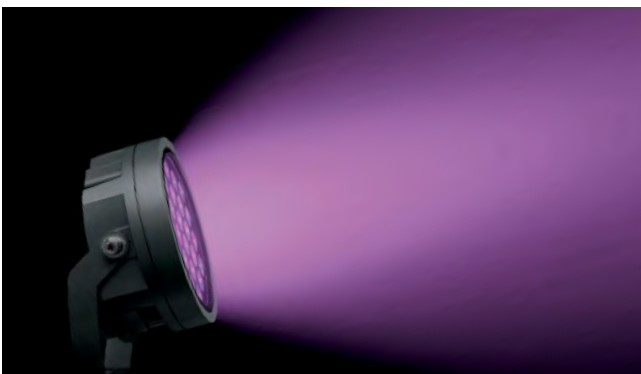
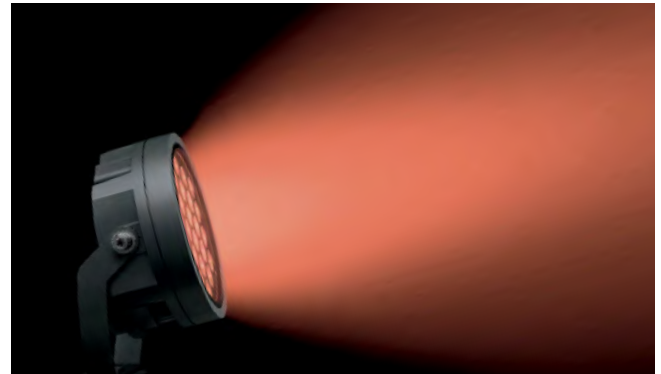
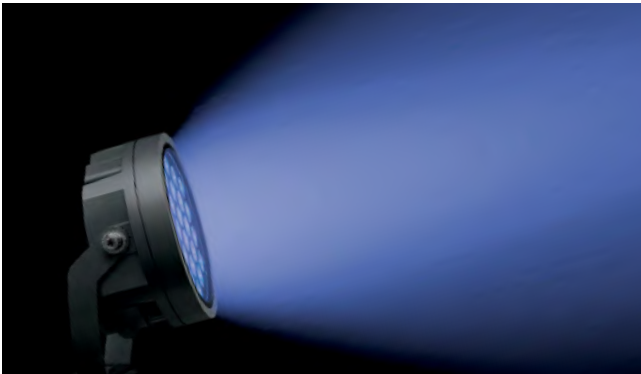


WE-EF Colour Boost Technology enables four-channel colour mixing, With 30% to 40% higher overall luminous flux than the usual standard. The lens optics developed by WE-EF, and matched to the coloured LEDs, enable homogeneous colour mixing, smooth colour transitions, high efficiency and maximum control of the light.

With four-channel colour mixing, the available electrical power of the projector is normally distributed evenly across all four channels. This means that a maximum of 25% of the electrical power is available to each channel. As a rule, however, a maximum of three channels are used for colour mixing. This means that only a maximum of 75% of the electrical power is available to them.

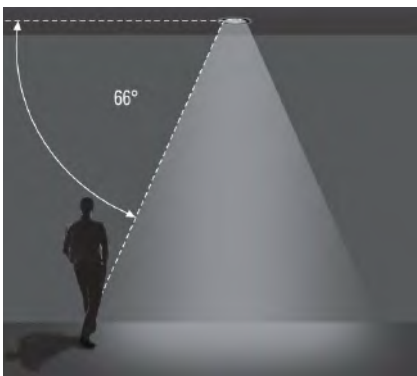
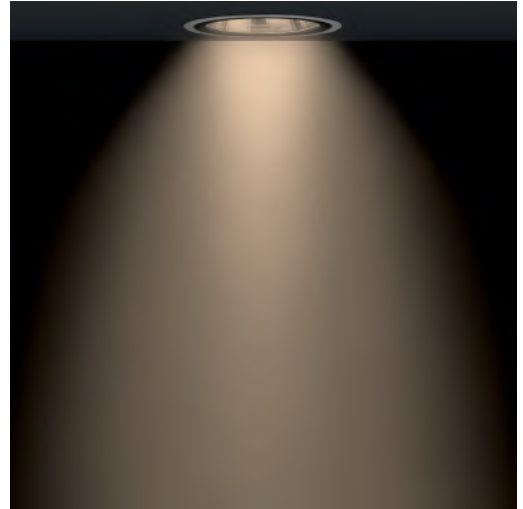
This is where WE-EF Colour Boost Technology comes in. When only three channels are used, it distributes 100% of the electrical power to the three active channels, so that 33% instead of 25% of the total electrical power is available to each channel.

Depending on the colours used, this increases the overall luminous flux by up to 40%. In order to ensure optimum operating parameters for the LEDs at all times, and to avoid overloading, the built-in driver reliably limits the respective rated current per channel. If the maximum rated current per colour in a four-channel operation is set at 100%, dynamic power management can increase this to a maximum of 140%.

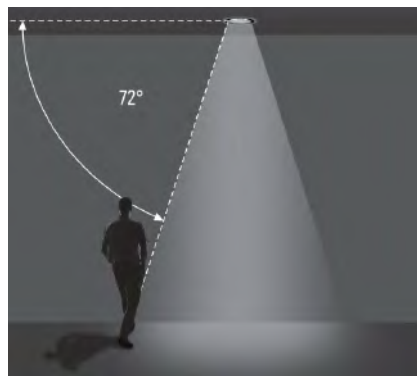




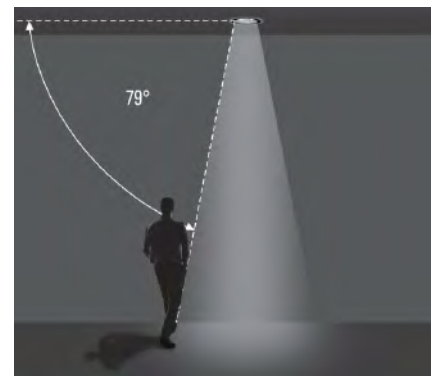
For all applications where visual tasks place particularly high demands on lighting quality, WE-EF has developed the DOC100 Darklight downlights. A two-part reflector combination ensures that no direct light is emitted within the cut-off angle, and prevents people from looking directly into the light source. The result is consistent and effective limitation of both direct glare and reflected glare on smooth surfaces such as displays and monitors. Seen from below, part of the luminaire's reflector appears as a luminous ring with moderate luminance.



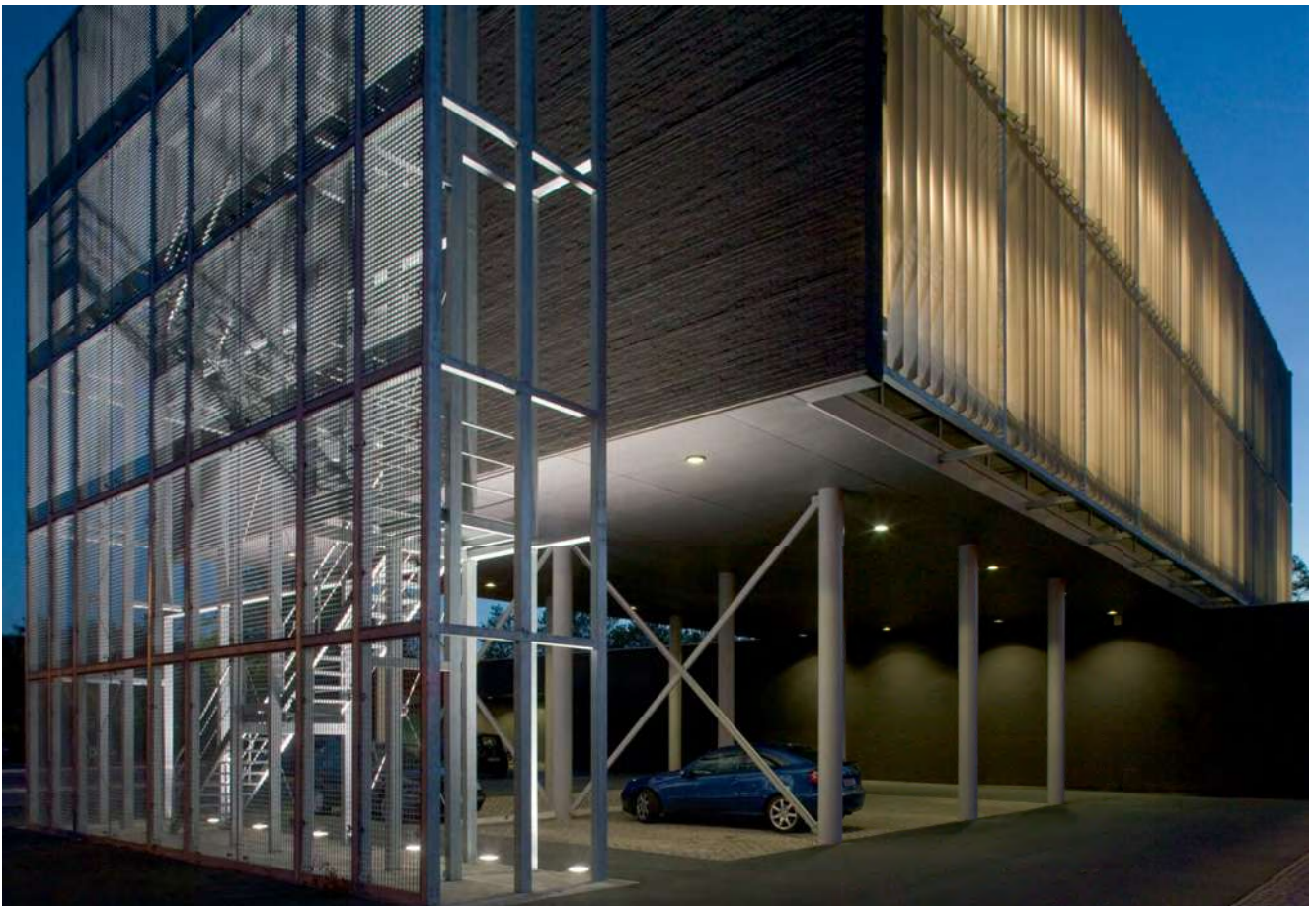
[B] Wide beam
66° shielding angle



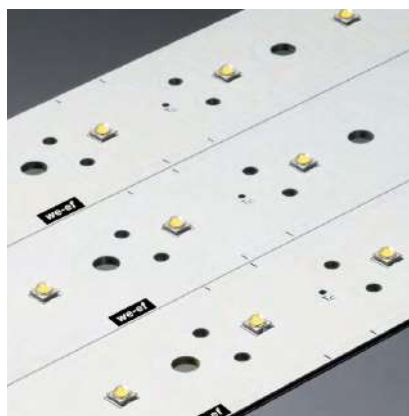
[M] Medium beam
72° shielding angle



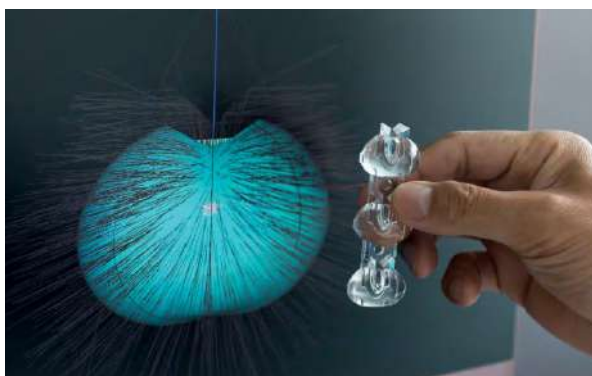
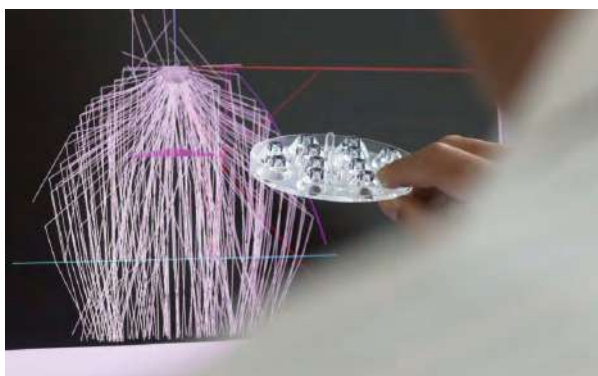
[E] Narrow beam
79° shielding angle



The development of high-quality and efficient LED lenses is one of WE-EF's core competencies. WE-EF possesses the expertise for design, engineering and production. WE-EF is able to apply its expertise gained from long experience in the development and operation of LEDs. For example, at the SONY Center in Berlin, in 2004, WE-EF was involved in one of the first major LED projects. It was an invaluable advantage, both in understanding today's possible LED technology and in converting this knowledge into innovative lighting solutions.



CAD design, optical simulations, prototypes, verification and injection moulding tooling are all used in WE-EF's development and production facilities. A prototype is prepared in WE-EF's tooling shop for every LED lens type, which is then measured and optimised. WE-EF LED boards fitted with high-quality LEDs, which have narrowly-defined binning tolerances, guarantee high visual comfort.



Thermal management

Long service life and maximum efficiency can only be achieved with perfectly co-ordinated thermal management. WE-EF products discharge the heat generated by the LEDs through the enclosure that contains a built-in heat sink. As part of a first development step, thermal conditions are simulated with the relevant computer programs and optimised at a theoretical level. Once this optimisation process is complete, prototypes are produced for each luminaire, which are then subjected to intensive testing until they provide results that meet the requirements for optimised heat discharge with maximum service life and minimal reduction in luminous flux.



LED – Light Emitting Diodes

As a luminaire manufacturer, WE-EF aims to shape the thermal conditions in the luminaires to ensure that the LEDs are operated at the optimum working point and that overloads can be avoided. The product data sheets of the LED manufacturers, which are based on the results of tests and mathematical calculations, form the foundation for ensuring that these tasks can be performed successfully. An assessment of whether an LED in a luminaire is being operated in an optimum manner, and the effects on service life and reduction in luminous flux, is much more complex than for conventional lamps. Such an assessment therefore requires more attention. WE-EF started its first tests in 2008. New luminaires with new LEDs are constantly being added. That is why WE-EF can fall back on empirical values of more than 60,000 hours of operation. The findings from the test series are the basis for further innovations.



Definitions

The terms and definitions used in this section are based on the document entitled 'Guidelines for project design safety in LED lighting' (Leitfaden Planungssicherheit in der LED-Beleuchtung), published by the German Electrical and Electronic Manufacturers' Association (ZVEI) in March 2020

Rated input power P (W): The effective input of a luminaire, comprising the power consumption of all components integrated in the luminaire.

Rated luminous flux ϕ_v (lm): The total radiant flux of a luminaire in its visible range, also known as the initial luminous flux.

Luminaire efficacy η_v (lm/W): The quotient of the rated luminous flux and the rated input power.

Rated ambient operating temperature T_a (°C): The ambient temperature at which a luminaire can be operated whilst still maintaining all safety-relevant parameters. In this catalogue, $T_a = 25^\circ\text{C}$. However, please note that the majority of the luminaires listed have a significantly higher rated temperature (T_a). Contact WE-EF to request data for a particular luminaire.

Rated ambient performance temperature T_q (°C): The ambient temperature at which a luminaire reaches the specified values for luminous flux and service life, for example. All of the data in this catalogue are based on a rated ambient temperature T_q of 25°C .

Rated service life L_xB_y (h): The number of hours after which:

(a) A group of LED luminaires have dropped to a luminous flux of x (%);

and

(b) A number y (%) of LED luminaires have dropped below the specified luminous flux.

Example:

Requirement $L_{70}B_{10} - 60,000$ h means that after 60,000 hours the group of LED luminaires in question must still provide 70% of the initial luminous flux, whereby 10% of the LED luminaires in question are permitted to provide less than 70% of the initial luminous flux.

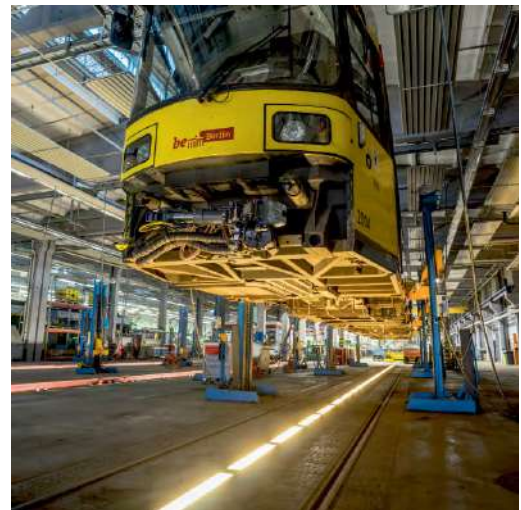
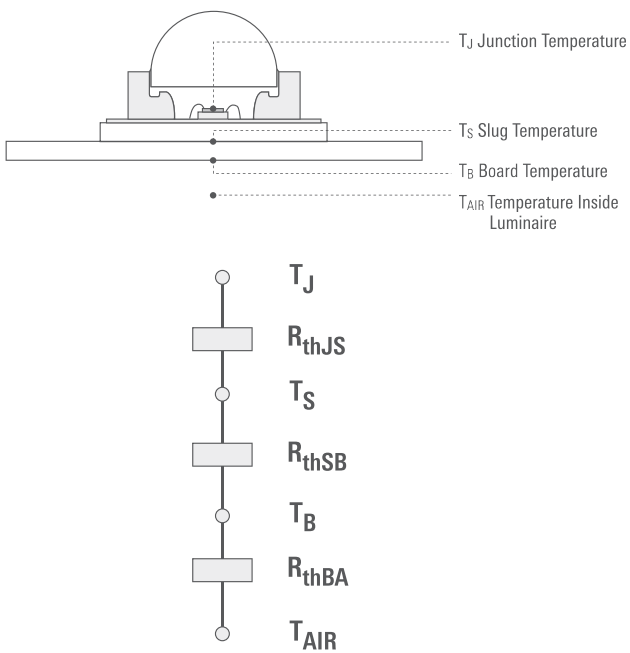
Luminous flux

The luminous flux values listed in this catalogue refer to so-called rated luminous flux levels. The junction temperature increases differently once the LEDs are in operation inside a luminaire. Depending on the LED used the LED manufacturers state maximum junction temperature T_J of approx. 125°C to 150°C . This temperature is set at a maximum 95°C at a rated ambient performance T_q of 25°C for the WE-EF luminaires shown in this catalogue.

This heating up of the LEDs leads to a change in luminous flux, hence a decrease in the luminous flux which must be recorded when the luminaire is measured in the lighting laboratory. All of the technical lighting data published by WE-EF take this context into account. It means that technical lighting computer calculations using original WE-EF technical lighting data, such as data that are available worldwide via DIALUX, also render these correlations correctly. Current information regarding the luminous flux that can be achieved during the operation of the luminaire can be obtained from www.we-ef.com.

Thermal resistance (R_{th})

One of the main focus areas of LED developments in recent years has been, and still is the reduction in thermal resistance $R_{th} = R_{thJS} + R_{thSB} + R_{thBA}$ (resistance between an LED's junction temperature and the ambient temperature). The lower the resistance, the smaller the LED's thermal load. This leads to higher luminous flux and reduced ageing, and hence to a longer service life. A luminaire manufacturer can influence thermal resistance by: (a) developing optimised cooling elements for specific applications, guaranteeing clean and level contact surfaces between the LED circuit board and the heat sink; and (b) selecting materials with very high thermal conductivity for the LED circuit boards (for example, aluminium.) Circuit boards made of plastics are not suitable in this context.



5CE Superior Corrosion Protection



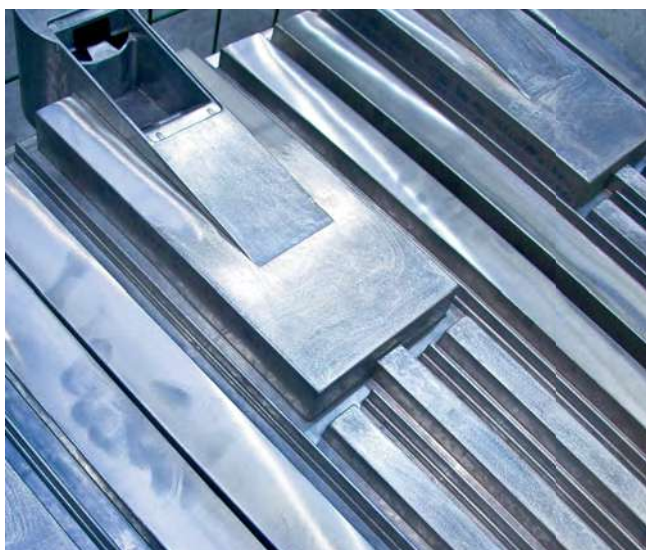
A decisive quality feature for exterior luminaires is their resistance to corrosion. Outstanding and long-lasting anti-corrosion properties can only be achieved by a comprehensive, integrated approach. The result of many years of research and development, hands-on testing and experience, WE-EF's unique 5CE system encompasses five critical elements:

1. Substrate
2. Conversion coating
3. Powder
4. PCS hardware
5. Process control

1. Substrate

A marine grade, low copper content aluminium alloy is used for all WE-EF above-ground luminaires. Typical alloy composition is:

Cu ≤ 0.1 %	Zn ≤ 0.1 %
Mg ≤ 0.1 %	Pb ≤ 0.1 %
Si = 10.0-13.5 %	Sn ≤ 0.05 %
Fe ≤ 1.0 %	Ti ≤ 0.2 %
Mn ≤ 0.5 %	Al = Balance
Ni ≤ 0.1 %	



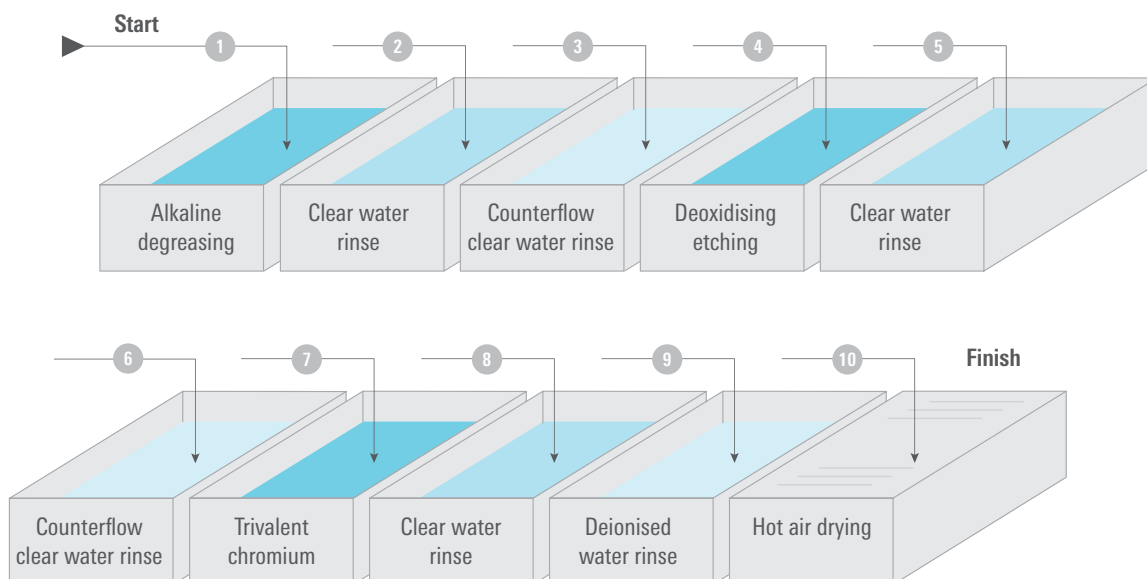
2. Conversion Coating

The multi-step pre-treatment and conversion coating process for WE-EF housings includes degreasing, deoxidizing, etching and, zirconium/chromium conversion coating. It is considered the most effective conversion coat available for aluminium substrates.

The zirconium conversion coating process comprises:

- Acid degreasing/etching.
- Clear water rinse.
- Counterflow clear water rinse.
- Deionised water rinse.
- Zirconium (+chromium) conversion coating (3-10 mg/m²).
- Hot air drying.

Strict controls are constantly maintained over the parameters of every step in each process, such as purity, pH, chemical concentrations, temperature etc. This ensures the best achievable substrate penetration and uniformity of the conversion coat, thereby ensuring optimum corrosion resistance and powdercoat adhesion.



3. Powder

WE-EF uses special UV-stabilised, architectural grade polyester powder, which is electrostatically bonded (60-100 μm) and oven cured at $\sim 200^\circ\text{C}$. The grade of polyester powder applied is based on saturated polyester resins. Combined with UV-resistant cross-linking agents and selected pigments, it features outstanding resistance to atmospheric ageing and UV light exposure. Properly applied to a suitable metal substrate, the resulting powdercoat finish exhibits excellent outdoor durability, and complies with German GSB and European QUALICOAT standards.

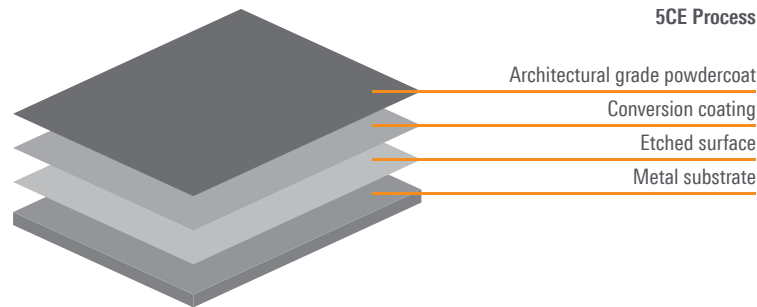


4. PCS Hardware



In the context of 5CE, WE-EF only uses hardware made from austenitic stainless steel, and additionally sealed with a tough, impregnated polymer coat that fulfills two functions:

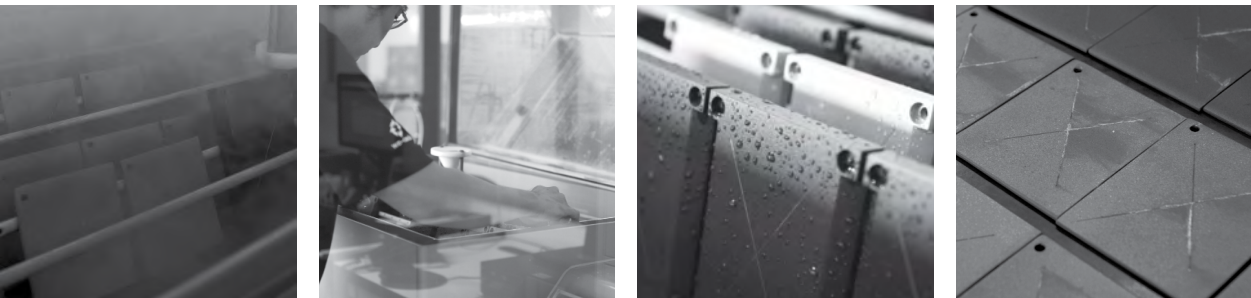
- Reduced friction between male and female thread causes tighter fit between connected parts.
- Non-metallic barrier between the two metals, aluminium and steel, prevents galvanic corrosion that otherwise occurs when metals of dissimilar electro-negativities are in contact.



5. Process Control

All materials and production steps at WE-EF are part of a tightly controlled process under ISO 9001 quality assurance. It includes ongoing spectrometer analysis of aluminium alloy used, daily checks of chemical concentration in the pre-treatment phase, quality control checks on finished parts, up to 3,000 hours salt spray exposure tests etc.

Salt spray testing



The Final Product

Customers and users of WE-EF products can count on the final result being a quality commodity of excellent corrosion resistance that can be serviced after years of operation, and features a powdercoat finish of outstanding adhesion and colour stability.

5CE + Primer



+Primer

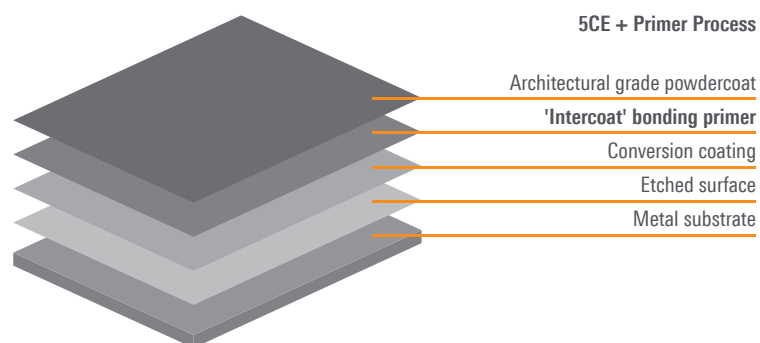
For installations where corrosion protection over and above the 5CE system is required, 5CE + Primer introduces an additional element to the process:

1. Substrate
2. Conversion coating + Primer
3. Powder top coat
4. PCS hardware
5. Process control

Primer

Immediately after conversion coating, a specially formulated 'intercoat' bonding, epoxy primer is electrostatically bonded (80-100 μm), and initially semi-cured in a 180°C oven. Following the subsequent application of the polyester powder top coat, full curing and essential 'intercoat' bond is achieved at 200°C. Top coat and primer are perfectly merged.

The 5CE + Primer anti-corrosion technology is available on request for most luminaires from the WE-EF range.



ASC® Anti-Slip Coating for Inground Uplights



A translucent, tough and highly abrasion resistant ceramic material is fused into the surface of the luminaire's safety glass lens. Slip resistance, as required in pedestrian traffic and wet environments, conforms with DIN 51130 (class R10) and AS/NZS4586:1999 (class V). Corresponding tests were performed at the German BIA and the Australian CSIRO institutes.



ETC100/300-GB series
(gimbal) with ASC®



ETC100/300-FS series
(fixed optics) with ASC®



EVC100/300-FS series
(fixed optics) with ASC®

Arranged in a stochastic (irregular) pattern, the ASC® Anti-Slip Coating has only a moderate effect on the luminaire's light distribution and LOR (light output ratio).

Lenses and Diffusers

Toughened safety glass, borosilicate glass, ceramic glass, acrylic (PMMA), UV-stabilised polycarbonate (PC) and polyethylene (HDPE) are used throughout the WE-EF product range.

Gasketing

Weatherproof and non-ageing silicone rubber is used extensively, thereby providing excellent sealing qualities in corrosive and high temperature environments.

A number of luminaires are also designed with CCG® (Controlled Compression Gasket) technology for a maintained protection rating.

Voltage

WE-EF luminaires and electrical accessories are supplied ready for connection to a 230 V 50 Hz supply. Control gear for other voltages and frequencies is available on request.

Electrical Protection

German and European industrial standards DIN EN 60598, specify electrical protection and IP classification of luminaires. WE-EF products comply with these standards as well as with equivalent international standards. WE-EF luminaires conform to electrical protection class I. The compulsory earthing terminal is marked with the symbol \oplus . In the event of a fault, a correctly installed luminaire will cause the circuit protection device to trip. Special luminaire versions with protection according to Class II are available on request.

Ambient Temperatures

WE-EF is range of products is generally designed for operation at 25°C. For installations where excessive ambient temperatures exist, special luminaires and equipment can be supplied on request.

Standards

WE-EF luminaires, floodlights and lighting columns are designed to conform with present IEC/DIN/EN and VDE standards. Furthermore, all luminaires manufactured for the European market bear the CE standards conformity mark. WE-EF is constantly developing and improving its products. The technical information given, including data and designs, can be subject to change without prior notice. The dimensions and weights stated are approximate values, subject to manufacturing tolerances. Special finishing, execution and construction are available on request.



As with all components, electronic converters (drivers) are engineered for reliability and longevity.

IP Classification

The international Protection Code (IP) classifies luminaires according to their protection against the ingress of dust, solid foreign bodies and water.

IP1X Protection against solid objects of diameter greater than 50 mm.

IP2X Protection against finger touch and solid objects of diameter greater than 12 mm.

IP3X Protection against solid objects of diameter greater than 2.5 mm.

IP4X Protection against solid objects of diameter greater than 1.0 mm.

IP5X Complete protection against solid objects and harmful dust deposits (dust-proof).

IP6X Total protection against dust (dust-tight).

IPX1 Protection against vertically dripping water (drip-proof).

IPX2 Protection against dripping water up to 15° from the vertical.

IPX3 Protection against spraying water or falling rain up to 60° from the vertical (rain-proof).

IPX4 Protection against splashing water from any direction (splash-proof).

IPX5 Protection against water jets from any direction (jet-proof).

IPX6* Protection against heavy seas or powerful water jets.

IPX7* Protection against the effects of immersion (watertight-immersible).

IPX8* Protection against submersion (pressure watertight-submersible).

The combination of both numerals describes the IP classification of a luminaire.

All WE-EF luminaires are marked accordingly, e.g., IP66 (dust-and water jet-tight).

* WE-EF luminaires that comply with IPX7 and/or IPX8 are always additionally tested to meet IPX6 requirements under DIN EN 60598. This is because the test conditions and procedures for IPX7 and IPX8 differ significantly from those for IPX6, and compliance for all is not automatically assured.



IK-Classification

DIN EN 50102 classifies the degrees of protection that luminaires provide against external mechanical impacts.

IK01 Protection against 0.14 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer).

IK02 Protection against 0.20 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer).

IK03 Protection against 0.35 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer).

IK04 Protection against 0.50 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer).

IK05 Protection against 0.70 J (joules) impact energy (equivalent to specified impact from 0.2 kg polyamide hammer).

IK06 Protection against 1 J (joules) impact energy (equivalent to specified impact from 0.5 kg polyamide hammer).

IK07 Protection against 2 J (joules) impact energy (equivalent to impact of 0.5 kg steel weight dropped from 400 mm height).

IK08 Protection against 5 J (joules) impact energy (equivalent to impact of 1.7 kg steel weight dropped from 300 mm height).

IK09 Protection against 10 J (joules) impact energy (equivalent to impact of 5.0 kg steel weight dropped from 200 mm height).

IK10 Protection against 20 J (joules) impact energy (equivalent to impact of 5.0 kg steel weight dropped from 400 mm height).

Factory-sealed



Faster, safer, easier: If you are looking for a way to save money and nerves during installation, WE-EF's factory-sealed luminaires are a boon – for customers, planners and installers alike. Genuine ease of installation and maintenance always starts with design – an area profoundly affected by the paradigm shift in exterior lighting brought about by LED technology.

Today, accessibility for lamp replacement is no longer required. High-quality LED technology ensures maintenance-free operation over many years, as long as the housings are up to their job – keeping optical and electronic components safe in all conditions. With WE-EF, they are safe. Part of WE-EF's luminaires are delivered factory-sealed and do not need to be opened for installation.

Their seal is permanently maintained, ensuring optimum compliance with the specified protection class (IP).

Installation

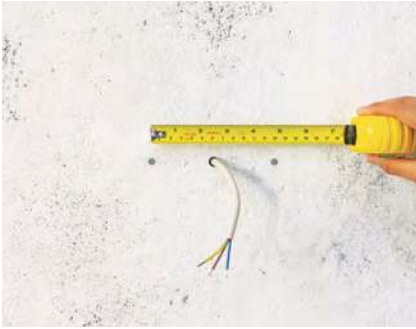
Installation instructions are provided with all WE-EF products.

Suitably qualified personnel must be engaged for the installation and maintenance in compliance with the latest applicable regulations and relevant legislation.

When it comes to electrical connection, flexibility is the rule with WE-EF's ready-to-connect luminaires. Pre-installed connecting cables with a free end are just as possible as plug connectors or discrete connection boxes. The bottom line: No matter what your application is, WE-EF luminaires are optimised for quick, easy and safe installation, allowing technicians to work much more efficiently – and easing the minds of planners and operators alike.

Luminaires to rely on provided by WE-EF – full performance, trouble-free. Permanently. Should there ever be the need for maintenance, sophisticated parts such as PCS-coated, stainless-steel fasteners ensure easy loosening of mounting connections – even after many years and in the harshest weather, e.g., in coastal conditions. – even after many years and in the harshest weather, e.g., in coastal conditions.





Shown in this example is a step-by-step installation of a factory-sealed product – QLS410.



Shown in this example is a step-by-step installation of a factory-sealed product – RMT320.

The longevity of our products is a major asset for our customers – and, at the same time, a significant contribution to the protection of our environment: Durable products need to be replaced and recycled far less often, saving energy and resources.

Design and engineering

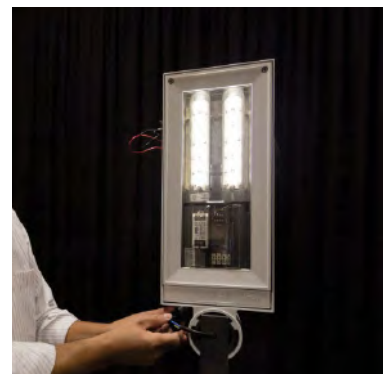
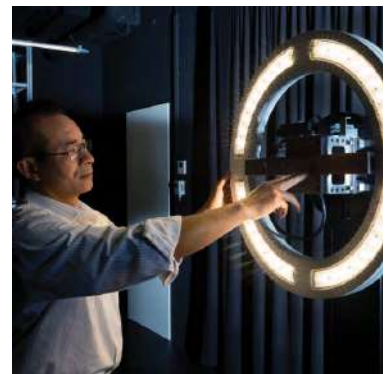
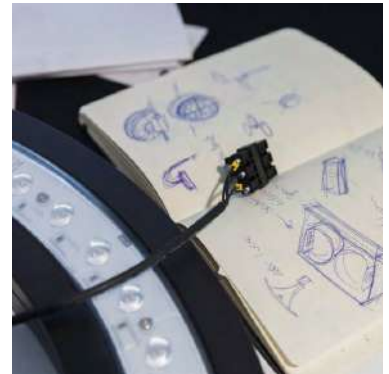
The timeless design of WE-EF luminaires is a reflection of their longevity. The way we see it, environmentally-friendly engineering that accepts and masters the challenges of our times involves selecting materials and processes according to ecological criteria, high IP protection classes, efficient thermal management and IOS® Innovative Optical Systems. The development of high-quality, efficient reflector and lens technologies meeting these standards – IOS® – is one of WE-EF's core competences.

Meeting international lighting and safety standards comes as naturally to our luminaires as matching the requirements of the Dark Sky organisations. It is one of the reasons why we constantly invest in research and development.

Production

"Made by WE-EF" is more than just a phrase – it is the summation of the philosophy behind our high production depth. Our means of manufacturing range from tool-making for die-casting and injection moulding equipment to aluminium die-casting, CNC production, CNC sheet metal working, powder coating and pole production to pre- and end-assembly.

To meet our high-quality standards, we continuously invest in tools, production facilities and the training of our staff.



Application

By using innovative light sources in combination with appropriately adapted optics, we achieve the optimum product characteristics for any given application.

In street and area lighting, for example, high light output ratios and wide beam angles minimise the number of light points required – while at the same time ensuring the compliance with relevant glare limitation requirements.

The result is significantly reduced costs for installation and maintenance, less CO₂ due to reduced energy and resource consumption, and greater lighting comfort.

Recycling

More than 90% of the materials used for WE-EF luminaires can be recycled.

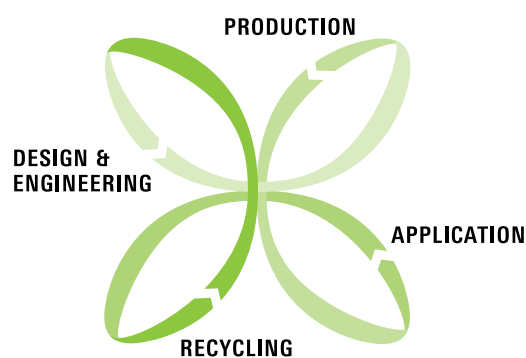
Our luminaire housings are made of high-grade, recycled aluminium alloy that can be recycled repeatedly without loss of quality.

Life cycle assessment

WE-EF was one of the first organisations in the lighting industry to provide EPDs (Environmental Product Declarations) in accordance with ISO 14025 and EN 15804 standards. These EPDs entail detailed documentation on the environmental footprint of our outdoor luminaires over all phases of their life cycle. To compile the required information, we collaborate closely with external specialists in life-cycle analysis.

EPDs are product-specific data sheets that contain verifiable and easily comparable information on the environmental impact of any given product. They document this impact not only for the time in which the product is actively used, but across its entire life cycle, from raw material extraction to recycling. For investors, operators and designers who care for the sustainability of their projects, this information is vital for sourcing decisions.

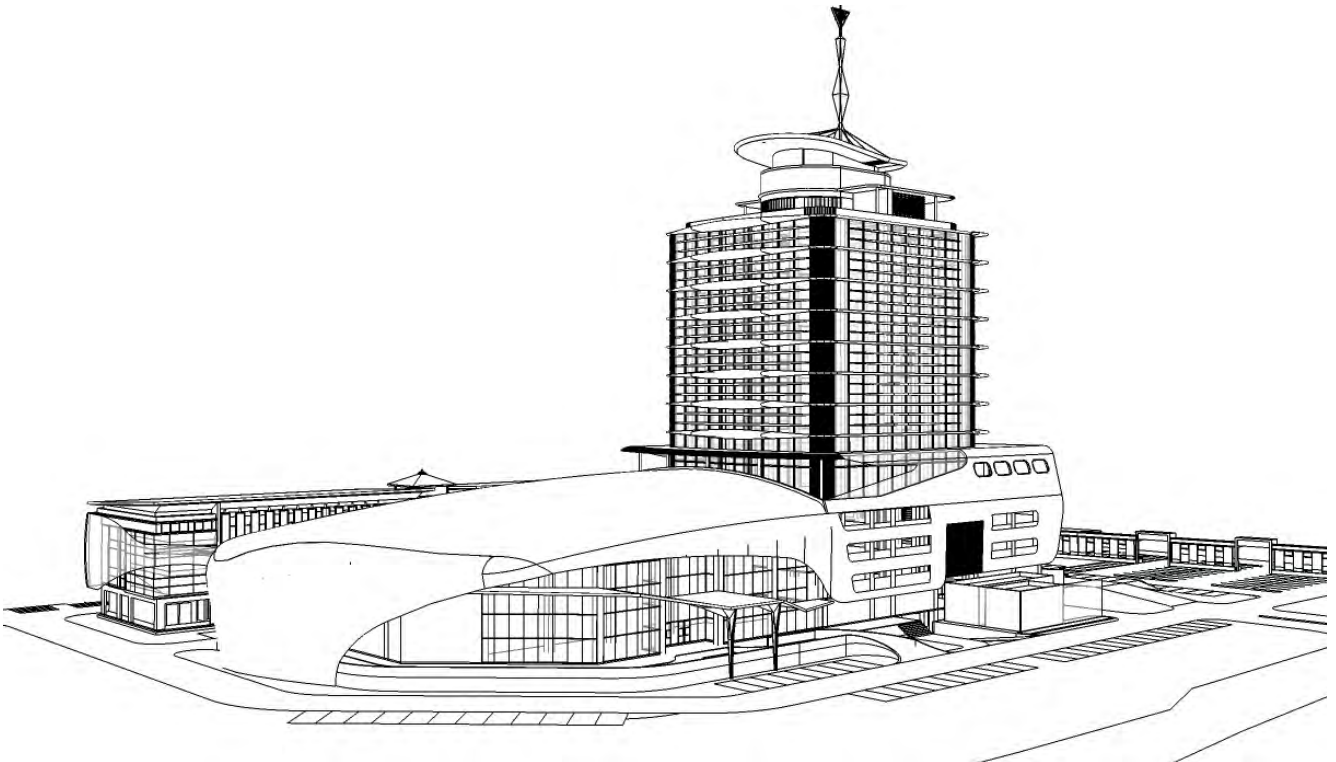
Prime concern of this life-cycle assessment are luminaires for street and area lighting. The EPDs for these luminaires as well as detailed additional information and environmental performance statements are available online at our website.



Planning Support and Specials

Comprehensive service for all who plan and use exterior lighting is an integral part of WE-EF's portfolio – face-to-face as well as online. Are you involved in the design, planning and construction of lighting systems – as a project engineer, lighting designer or member of other professions.

Do you wish to implement lighting projects smoothly and by WE-EF products? We are glad to help! Do not hesitate to get in touch and discuss your project with WE-EF's experts. For an up-to-date list of our worldwide sales partners as well as extensive technical and lighting information and tools (such as product specifications or photometric data), WE-EF's DIALux Plug-In, AGi32 or Revit Files as BIM data, please visit our website at www.we-ef.com



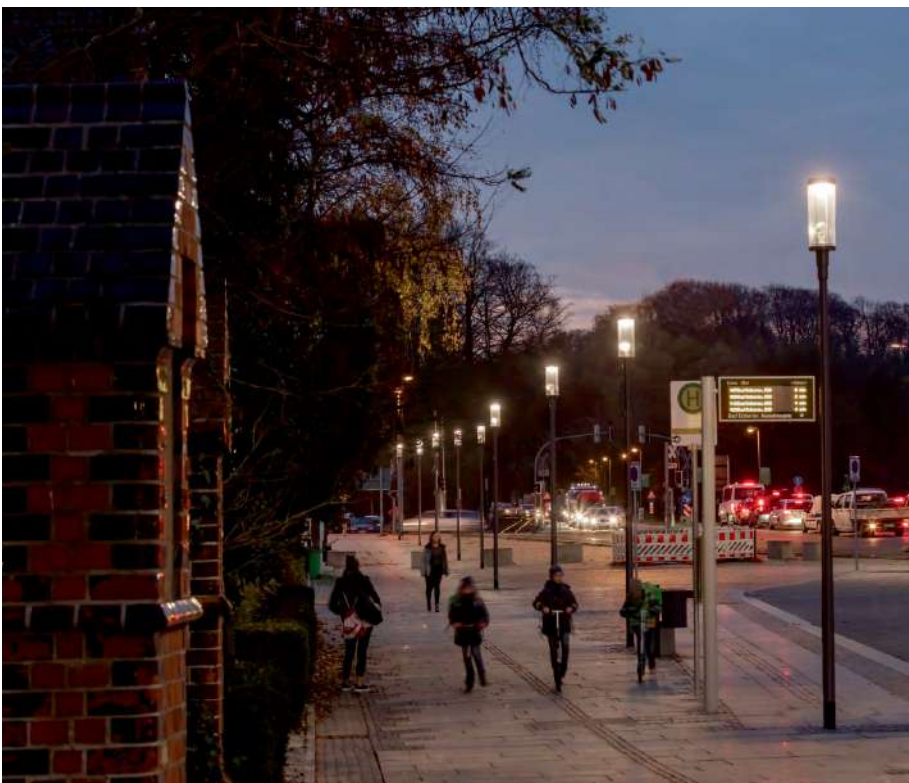
Specials / Custom Solutions

Exterior lighting concepts tailored to specific cities or situations often require technical solutions that are as specific as the projects they illuminate. To perfectly fit special mounting situations or to meet individual design requirements, WE-EF luminaires can be modified on request, right on the factory floor.

What's even more interesting for lighting designers and users alike are the possibilities for custom designs with bespoke lighting properties that are opened up by WE-EF's lighting know-how and diverse selection of high-precision optical components. One example is the use of sophisticated multi-lens combinations in a single luminaire to create truly unique light distributions.



Do not hesitate to contact WE-EF's experts for further information – we always appreciate a fresh challenge!



ZFT470-FT / VFL530-SE / FLC121

Alexandrinenplatz, Bad Doberan (DE)

Builder/Architect: Amt für Stadtentwicklung Bad Doberan

Planning: Merkel Ingenieur Consult, Bad Doberan

Standards, regulations, sizes and units

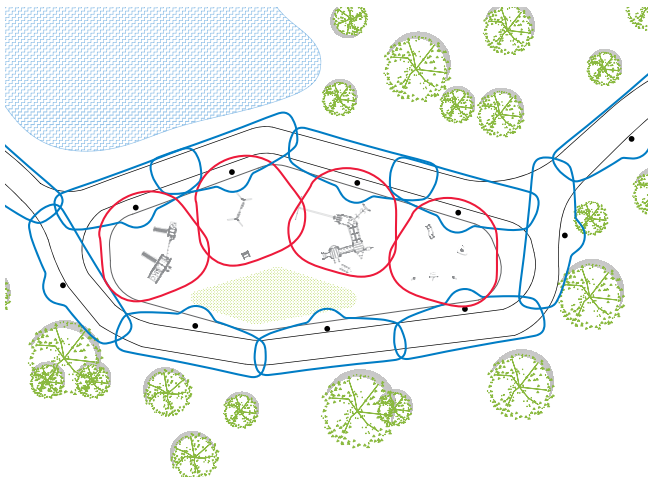
Any responsible planning starts with standards and regulations. However, when it comes to planning light, there is always a crucial component that is just as important as economy and ecology, and just as fundamental as the technical requirements listed in specs and standards sheets. It's called emotion. As an essential part of architecture, light affects our emotions in a way few other factors can. That's why it has to be applied with meticulous care and measure – accentuated or uniform, glare-free, with the perfect hue and in the right quantity.

Depending on the task, the following standards should be observed:

DIN EN 12464 Workplace lighting

DIN EN 12193 Sports facility lighting

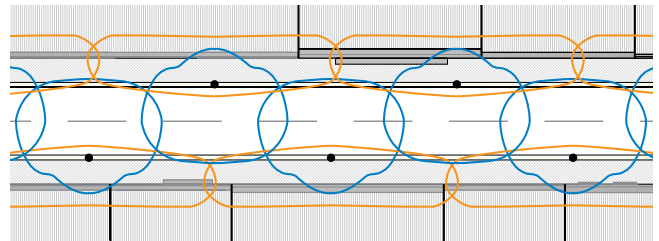
DIN EN 13201 Streetlighting



Example 1 – RMT320 Pole Mounted Luminaire

This luminaire is generally used for street lighting in residential areas and pathway/landscape lighting in public parks. A typical modular lens application comprises:

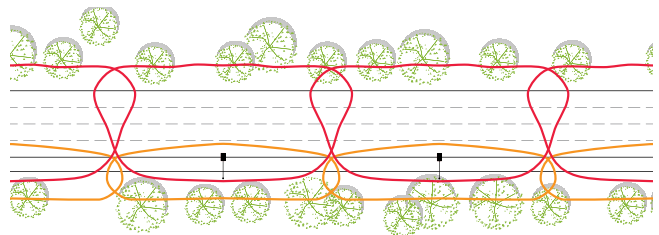
- [S70] distribution for pathways
3000 K colour temperature
700 mA operating current for 'standard' lumens package
(12 LEDs/nominal 2,951 lm)
- [A60] distribution for adjacent playground
4000 K colour temperature
1050 mA operating current for 'high' lumens package
(12 LEDs/nominal 5,400 lm)
- A two-circuit arrangement for separate switching, e.g., pathways throughout the night, playground until midnight only.



Example 2 – RFS540 Catenary Mounted Luminaire

Typically used in inner cities and old town centres that often have narrow streets, this luminaire is particularly suited for modular lens applications. In this 'shopping street' example:

- [R65] distribution for slow-moving traffic lanes
3000 K colour temperature
700 mA operating current (36 LEDs/nominal 8,554 lm)
- [P65] distribution for pedestrian lanes
3000 K colour temperature
700 mA operating current (12 LEDs/nominal 2,951 lm)
- WE-EF Control system for dimming on a time-controlled basis.














































Example 3 – VFL540-SE Pole Mounted Luminaire

This multi-purpose luminaire is used in numerous applications, from car parks and residential streets to railway shunting yards and highways – as described in this example:

- [P65] distribution for the 'inner' shoulder and lane 1
4000 K colour temperature
1050 mA operating current for 'high' lumens package
(12 LEDs/nominal 5,400 lm)
- [S60] distribution for lanes 2, 3, 4 and 5 and the 'outer' shoulder
4000 K colour temperature
1050 mA operating current for 'high' lumens package
36 LEDs/nominal 16,200 lm)
- WE-EF Control system for dimming on a time-controlled basis.

AM-C	333	EVC300-FS TW	42-45	PLS400	96-99
AMF-C	331	FLA400 Bracket version	320-321	PSY400	220-221
AMF-S	331	FLA400 Stirrup version	322-323	PTY400	222-225
AML-A	332	FLA400 Wall bracket	114-115	QLO200	120-121
AML-C	332	FLA700	324-327	QLS400	100-103
AML-S	332	FLB100 RAIL66	160-163	QRI300	86-87
AM-S	333	FLB100 Space frame	160-163	QRO300	84-85
AMW-C	330	FLB100 Spigot mounted	158-159	QSI200	240-241
AMW-S	330	FLB100 Surface mounted	158-159	RAIL66 Cantilever	342-345
CFS500	260-261	FLB100 Wall bracket	158-159	RAIL66 Universal	340-341
CFT500	292-295	FLC100 RAIL66	170-173	RFL500-SE	298-299
CFY200	234-237	FLC100 Space frame	170-173	RFS500	258-259
DAC100	128-129	FLC100 Surface mounted	166-167	RLS400	104-105
DAC200	138-141	FLC100 Wall bracket	168-169	RMC300	286-289
DAC200-GB	136-137	FLC102	112-113	RMM300	284-285
DAS100	262-263	FLC200	174-177	RMT300	280-283
DLB200	118-119	FLC200 PP	192-193	SLS400	106-107
DLG200	118-119	FLC200-CC	184-191	STI100	80-83
DLO200	118-119	FLC200-CC PP	196-205	STL100	74-75
DLS200	118-119	FLC200-TW	178-183	STO100	78-79
DOC100	128-129	FLC200-TW PP	194-195	SVL100	76-77
DOC100-FT	130-133	FLC300 RAIL66	210-213	VFL500	302-303
DOC100-FT TW	134-135	FLC300 Space frame	210-213	VFL500-SE	306-307
DOC200	138-141	FLC300 Spigot mounted	206-209	VLR100	92-95
DOC200-FT	130-133	FLC300 Surface mounted	206-209	VLS400	106-107
DOC200-GB	136-137	FLC300 Wall bracket	206-209	XLO200	118-119
DOR100	126-127	FLD100 RAIL66	152-155	ZA600-FT	272-275
ETC300-FS	40-41	FLD100 Space frame	152-155	ZAT400	276-277
ETC300-FS CC	46-53	FLD100 Spigot mounted	146-147	ZFS400	256-257
ETC300-FS MARKER	38-39	FLD100 Surface mounted	148-149	ZFT400	270-271
ETC300-FS TW	42-45	FLD100 Wall bracket	150-151	ZFT400-FT	268-269
ETC300-GB	30-31	KTX200	228-229	ZFY200	230-233
ETC300-GB CC	34-35	KTY200	228-229		
ETC300-GB TW	32-33	LTM400	248-249		
ETV100	58-61	LTP400	246-247		
ETV100 MARKER	56-57	MRY200	226-227		
ETV100-CC	64-67	NTY100	238-239		
ETV100-TW	62-63	OLV300	110-111		
EVC300-FS	40-41	PFL200	310-317		
EVC300-FS CC	46-53	PFL500	308-309		
EVC300-FS MARKER	38-39	PIA200	116-117		

 WE-EF Standard RAL 9004 Signal black	 RAL 7011 Iron grey
 WE-EF Standard RAL 9006 White aluminium	 RAL 7012 Basalt grey
 WE-EF Standard RAL 9007 Grey aluminium	 RAL 7015 Slate grey
 WE-EF Standard RAL 7016* Anthracite grey	 RAL 7022 Umbra grey
 WE-EF Standard RAL 9016 Traffic white	 RAL 7024 Graphite grey
 WE-EF Standard Classic Silver	 RAL 7030 Stone grey
 RAL 1015 Light ivory	 RAL 7032 Pebble grey
 RAL 3002 Carmine red	 RAL 7035 Light grey
 RAL 3004 Purple red	 RAL 7037 Dusty grey
 RAL 3005 Wine red	 RAL 7043 Traffic grey
 RAL 3011 Brown red	 RAL 7045 Telegrey 1
 RAL 3020 Traffic red	 RAL 8004 Copper brown
 RAL 5003 Sapphire blue	 RAL 8017 Chocolate brown
 RAL 5004 Black blue	 RAL 8019 Grey brown
 RAL 5014 Pigeon blue	 RAL 9005 Jet black
 RAL 5023 Distant blue	 RAL 9010 Pure white
 RAL 6005 Moss green	 RAL 9018 Papyrus white
 RAL 6009 Fir green	 DB 501
 RAL 6011 Reseda green	 DB 502
 RAL 6012 Black green	 DB 701
 RAL 6021 Pale green	 DB 702
 RAL 7006 Beige grey	 DB 703

WE-EF colours: Fine textured RAL 9004 signal black, RAL 9006 white aluminium, RAL 9007 grey aluminium, RAL 7016 anthracite grey, RAL 9016 traffic white are standard colours, plus Classic Silver where stated in product specifications. WE-EF luminaires may be ordered in any of the wide variety of available RAL and DB colours.



Outstanding and long-lasting anti-corrosion properties can only be achieved through a comprehensive, integrated approach – the result of many years of research and development, hands-on testing and experience. The WE-EF 5CE system encompasses five critical elements:

- Substrate
- Conversion coating
- Powder
- PCS hardware
- Process control

All materials and production steps are part of a tightly-controlled process under ISO 9001 quality assurance. The 5CE technology includes PCS (polymer coated stainless steel) hardware. Unique to WE-EF, PCS hardware is used for all critical connections to prevent harmful galvanic corrosion.

The end result is a quality product of excellent corrosion resistance that can be serviced after years of operation, and which features a powdercoat finish of outstanding adhesion and colour stability.

* Not standard for AU/NZ

The colour shades and gloss levels are for guidance only. For accurate colour matching, use the official 840-HR 841-GL reference charts.

