we-ef

WE-EF LIGHTING USA

Floodlights

FLC200 LED Series

2017

THE INTELLIGENCE OF LIGHT®

Design and Engineering

The most important element in the design process is the development of luminaires that encompass timeless design; in other words, design that best reflects their enduring qualities.

In addition, state-of-the-art engineering brings with it the highest standards with regard to environmentally-friendly materials and processes, i.e., high IP ratings, excellent thermal management and innovative optical systems. The development of high-end, efficient reflectors and lenses is one of the core competencies of WE-EF. This means compliance with international lighting and safety norms, while meeting the criteria of such organizations as the Dark Sky Society. Continual investment in research and development is the basic condition for meeting these requirements. WE-EF innovations, such as IOS® Innovative Optical Systems, CTA® Cool Touch Adaptor, ASC Anti Slip Coating and OLC® One LED Concept, are just some examples of the company's continuing investment in technology.

Production

'Made by WE-EF' is more than just an expression; the high quality level of in-house production processes includes:

- Tooling for HPDC and injection moulding
- Aluminum high-pressure die-casting
- CNC machining
- Powder Coating
- Pole manufacturing
- Assembly

Through continual investment in tooling, production processes and the ongoing education of our employees, we are able to achieve the highest standards of quality. In exterior lighting, the corrosion resistance qualities of a product are important for their reliability and longevity. A durable and reliable corrosion protection can only be achieved when Product Development and the Production Processes are considered together. Years of research, development and practical testing and experience in some of the harshest climates on earth has resulted in WE-EF's unique 5CE corrosion protection system. It encompasses five critical elements; Material, Conversion Coating, Powder Coating, PCS Polymer Coated Stainless Hardware and Process Control. Only complete systems such as 5CE can provide reliability and longevity in exterior environments.

Application

Real and sustainable cost and energy savings can only be achieved through professional project planning, including the application of the latest optical systems and light sources. In streetlighting applications, for example, this means minimizing the number of luminaires required by optimizing the efficiency of the optical system, while at the same time limiting glare in line with international standards. In short, reduced installation and maintenance costs, less CO_2 and improved quality of light.

Recycling

More than 90 percent of a WE-EF luminaire can be recycled. The main component, a marine-grade aluminum substrate, is refined from recycled aluminum. This recycled aluminum is also an 'energy storer'. Only 5 percent of the original energy needed to process bauxite into aluminum is required for recycling. In other words, 95 percent of the original energy input is also recycled.

FLC200 LED

Symmetrical Floodlight, wide, medium, narrow, very narrow or very narrow beam distribution 'sharp cut-off', symmetric.

IP66, Class I. IK07. Marine-grade, die-cast aluminum alloy. 5CE superior corrosion protection including PCS hardware. Powdercoat finish in RAL 7016, RAL 9004, RAL 9006, RAL 9007 or RAL 9016. CCG® (Controlled Compression Gasket) technology. Safety glass lens. One cable gland. Second gland for through wiring on request.

Factory installed LED circuit board. LED boards and LED lenses can be removed for upgrading. PMMA LED lenses.

EC electronic converter, thermally separated.

Optional 1-10V or DALI interface on request.

Light source
LED 24-155 W, 3000 K,
for 4000 K refer to www.we-ef.com

Light distributions
[W] [M] [N] [VN] [VNS]

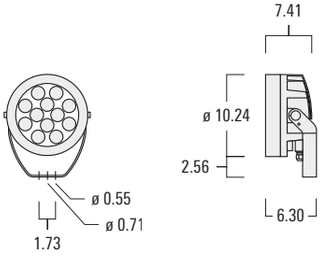
The Goods Line. Ultimo, Sydney (AUS). Lighting Design: Lighting Art + Science. Landscape Architects: Aspect Studios / CHROFI

[W]

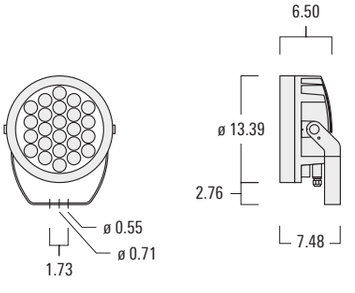
[W] Wide beam distribution, symmetric

[W]	Part ID	Light source	K	lm*	cd/klm	C_0C_{180}	lbs
FLC230	667-3420	12 LED 24W / 700 mA	3000	3257	981	29.7°/29.7°	16.8
	667-3423	12 LED 36W / 1050 mA	3000	4680	981	29.7°/29.7°	16.8
	667-3432	12 LED 52W / 1400 mA	3000	5986	948	29.7°/29.7°	16.8
FLC240	667-4420	24 LED 48W / 700 mA	3000	6515	981	29.7°/29.7°	27.8
	667-4421	24 LED 72W / 1050 mA	3000	9360	981	29.7°/29.7°	27.8
	667-4422	24 LED 104W / 1400 mA	3000	11971	948	29.7°/29.7°	27.8
FLC260	667-6420	36 LED 72W / 700 mA	3000	9772	981	29.7°/29.7°	35.6
	667-6421	36 LED 108W / 1050 mA	3000	14040	981	29.7°/29.7°	35.6
	667-6422	36 LED 155W / 1400 mA	3000	17957	948	29.7°/29.7°	35.6

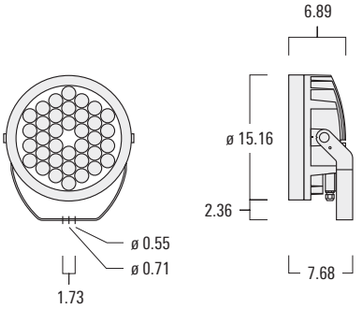
FLC230



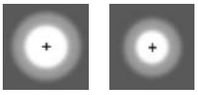
FLC240



FLC260



* Nominal lumen output based on LED manufacturers data at 85°C T_J. For rated lumens at 25°C T_s and latest data refer to www.we-ef.com.



[M] [N]

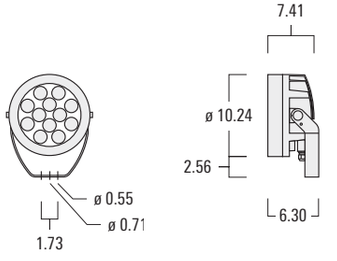
[M] Medium beam distribution, symmetric

[N] Narrow beam distribution, symmetric

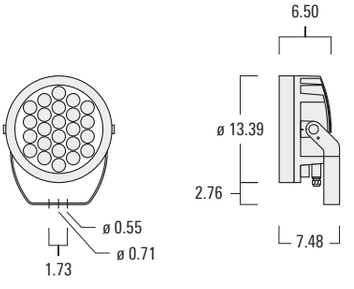
[M]	Part ID	Light source	K	lm*	cd/klm	C_0C_{180}	lbs
FLC230	667-3320	12 LED 24W / 700 mA	3000	3257	3039	15.3°/15.3°	16.8
	667-3321	12 LED 36W / 1050 mA	3000	4680	3039	15.3°/15.3°	16.8
	667-3322	12 LED 52W / 1400 mA	3000	5986	2922	15.3°/15.3°	16.8
FLC240	667-4320	24 LED 48W / 700 mA	3000	6515	3039	15.3°/15.3°	27.8
	667-4321	24 LED 72W / 1050 mA	3000	9360	3039	15.3°/15.3°	27.8
	667-4322	24 LED 104W / 1400 mA	3000	11971	2922	15.3°/15.3°	27.8
FLC260	667-6320	36 LED 72W / 700 mA	3000	9772	3039	15.3°/15.3°	35.6
	667-6321	36 LED 108W / 1050 mA	3000	14040	3039	15.3°/15.3°	35.6
	667-6322	36 LED 155W / 1400 mA	3000	17957	2922	15.3°/15.3°	35.6

[N]	Part ID	Light source	K	lm*	cd/klm	C_0C_{180}	lbs
FLC230	667-3120	12 LED 24W / 700 mA	3000	3257	8202	7.3°/7.3°	16.8
	667-3121	12 LED 36W / 1050 mA	3000	4680	8202	7.3°/7.3°	16.8
	667-3122	12 LED 52W / 1400 mA	3000	5986	7892	7.3°/7.3°	16.8
FLC240	667-4120	24 LED 48W / 700 mA	3000	6515	8202	7.3°/7.3°	27.8
	667-4121	24 LED 72W / 1050 mA	3000	9360	8202	7.3°/7.3°	27.8
	667-4122	24 LED 104W / 1400 mA	3000	11971	7892	7.3°/7.3°	27.8
FLC260	667-6120	36 LED 72W / 700 mA	3000	9772	8202	7.3°/7.3°	35.6
	667-6121	36 LED 108W / 1050 mA	3000	14040	8202	7.3°/7.3°	35.6
	667-6122	36 LED 155W / 1400 mA	3000	17957	7892	7.3°/7.3°	35.6

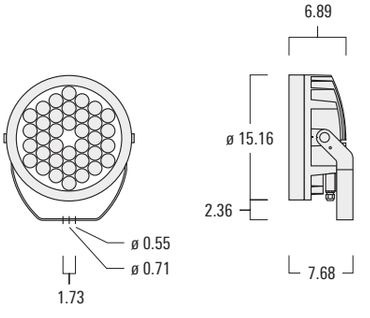
FLC230



FLC240



FLC260



* Nominal lumen output based on LED manufacturers data at 85°C T_J. For rated lumens at 25°C T_s and latest data refer to www.we-ef.com.

[VN]

[VNS]

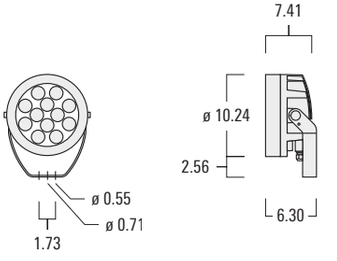
[VN] Very narrow beam distribution, symmetric

[EES] Very narrow beam distribution, symmetric 'sharp cut-off'

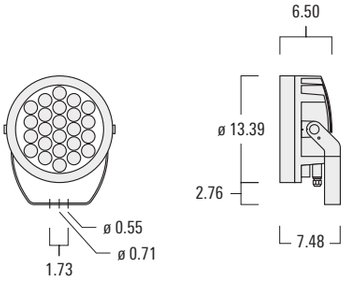
[NV]	Part ID	Light source	K	lm*	cd/klm	C_0C_{180}	lbs
FLC230	667-3220	12 LED 24W / 700 mA	3000	3257	34566	4.1°/4.1°	16.8
	667-3221	12 LED 36W / 1050 mA	3000	4680	34566	4.1°/4.1°	16.8
	667-3222	12 LED 52W / 1400 mA	3000	5986	33874	4.1°/4.1°	16.8
FLC240	667-1816	24 LED 48W / 700 mA	3000	6515	34566	4.1°/4.1°	27.8
	667-4221	24 LED 72W / 1050 mA	3000	9360	34566	4.1°/4.1°	27.8
	667-4222	24 LED 104W / 1400 mA	3000	11971	33874	4.1°/4.1°	27.8
FLC260	667-6220	36 LED 72W / 700 mA	3000	9772	34566	4.1°/4.1°	35.6
	667-6221	36 LED 108W / 1050 mA	3000	14040	34566	4.1°/4.1°	35.6
	667-6222	36 LED 155W / 1400 mA	3000	17957	33874	4.1°/4.1°	35.6

[VNS]	Part ID	Light source	K	lm*	cd/klm	C_0C_{180}	lbs
FLC230	667-3226	12 LED 24W / 700 mA	3000	2756	61491	2.9°/2.9°	16.8
	667-3227	12 LED 36W / 1050 mA	3000	3960	61491	2.9°/2.9°	16.8
	667-3228	12 LED 52W / 1400 mA	3000	5065	59646	2.9°/2.9°	16.8
FLC240	667-4226	24 LED 48W / 700 mA	3000	5512	61491	2.9°/2.9°	27.8
	667-4227	24 LED 72W / 1050 mA	3000	7920	61491	2.9°/2.9°	27.8
	667-4228	24 LED 104W / 1400 mA	3000	10130	59646	2.9°/2.9°	27.8
FLC260	667-6226	36 LED 72W / 700 mA	3000	8268	61491	2.9°/2.9°	35.6
	667-6227	36 LED 108W / 1050 mA	3000	11880	61491	2.9°/2.9°	35.6
	667-6228	36 LED 155W / 1400 mA	3000	15195	59646	2.9°/2.9°	35.6

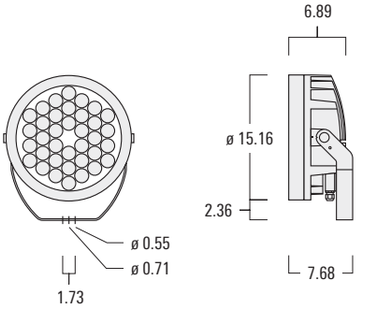
FLC230



FLC240



FLC260



* Nominal lumen output based on LED manufacturers data at 85°C T_J. For rated lumens at 25°C T_s and latest data refer to www.we-ef.com.

FEATURES FLC200 LED

IP classification:	IP66
Electrical protection:	Class I
Impact protection:	IK07
Housing:	Marine-grade, die-cast aluminum alloy
	5CE Superior Corrosion Protection
Hardware:	PCS Hardware (Polymer Coated Stainless Steel)
Main lens:	Safety glass lens
Gasket:	CCG® (Controlled Compression Gasket) technology
Ballast:	EC electronic converter, thermally separated
	Integrated surge protection 6/6kV, SP10 (10/10kV) optional
	Optional 1-10V or DALI interface on request
LED:	12, 24 or 36 LEDs, 3000 K or 4000 K
Optic:	PMMA LED lens
	[W] [M] [N] [VN] [VNS] beam distributions

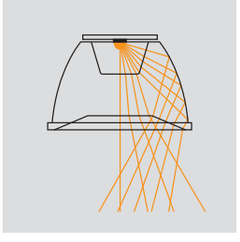
CAD-optimized symmetric lens system for 'Projected Light' applications. WE-EF's high-precision lenses for symmetric light distribution are designed to take utmost advantage of high power LEDs by leading manufacturers. While these LEDs feature a host of state-of-the-art performance data, it is the combination of these criteria that poses great challenges for the design of a 'perfect optical lens'.

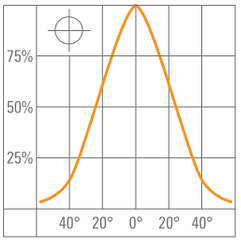
Main features of WE-EF's symmetric lens system

- CAD-engineered and precision manufactured lenses and lens arrays deliver tightly controlled light distribution while limiting light spillage to an absolute minimum.
- High efficiency within the 50% 'half beam' angle, combined with minimum light spillage beyond the 10% 'field' angle.
- Optimized light colour mixing within the entire beam, for highest aesthetic performance when illuminating critical architectural features and surfaces.
- In the unlikely event of failure of one or several LEDs within a luminaire, light levels drop, while uniformity is retained.

[W] Lens – Main Features *

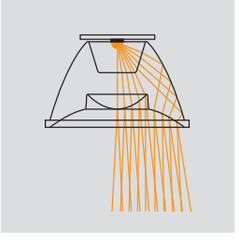
- Symmetric distribution, wide beam
- 50% 'Half beam' angle typically within 20.5°/20.5° to 30°/30°
- 10% 'Field' angle typically within 45°/45°

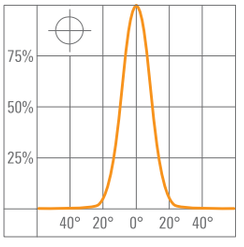




[N] Lens – Main Features *

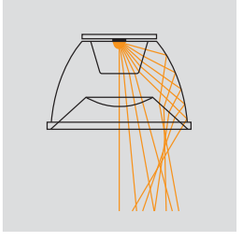
- Symmetric distribution, narrow beam
- 50% 'Half beam' angle typically within 7.5°/7.5° to 10°/10°
- 10% 'Field' angle typically within 20°/20°

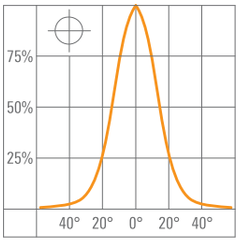




[M] Lens – Main Features *

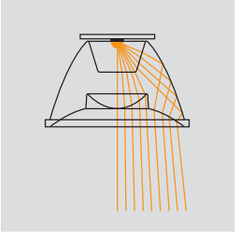
- Symmetric distribution, medium beam
- 50% 'Half beam' angle typically within 10.5°/10.5° to 20°/20°
- 10% 'Field' angle typically within 30°/30°

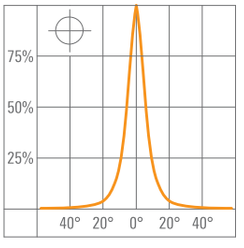




[VN] Lens – Main Features *

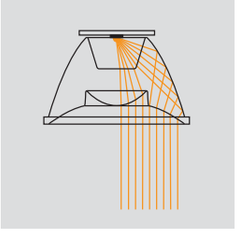
- Symmetric distribution, very narrow beam
- 50% 'Half beam' angle typically within 5.5°/5.5° to 7°/7°
- 10% 'Field' angle typically within 15°/15°

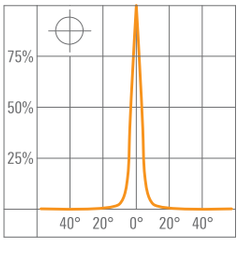




[VNS] Lens – Main Features *

- Symmetric distribution, very narrow beam, 'sharp cut-off'
- 50% 'Half beam' angle typically within 5°/5°
- 10% 'Field' angle typically within 10°/10°





*** The illustrations and diagrams shown here represent WE-EF proprietary optics; details may vary depending on luminaire model.**

MOUNTING ACCESSORIES – FLC200 SERIES

Marine-grade aluminum construction. 5CE superior corrosion protection including PCS hardware. Powdercoat finish in RAL 7016, RAL 9004, RAL 9006, RAL 9007 or RAL 9016.

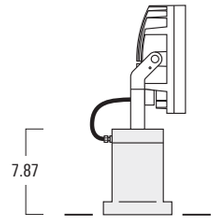
Short post					lbs
for FLC230 / FLC240 / FLC260	667-9301	EM1-M16	Short post		4.85

Matching planted root to be ordered separately:

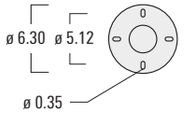
Planted root for short post					lbs
for FLC230 / FLC240 / FLC260	665-9302	ESV4	Planted root		9.70

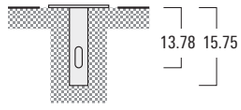
Galvanised steel

Pole clamps TS Series				D	lbs
for FLC230 / FLC240 / FLC260	667-9320	TS1-2/M12	Pole clamp	Ø 3"-3.5"	3.31
	667-9321	TS1-2/M12	Pole clamp	Ø 4.0"-4.5"	3.31
	667-9322	TS1-2/M12	Pole clamp	Ø 4.5"-5.25"	3.75
	667-9323	TS2-2/M16	Pole clamp	Ø 4.5"-5.25"	3.53
	667-9348	TS2-2/M16	Pole clamp	Ø 3"-3.5"	3.09
	667-9349	TS2-2/M16	Pole clamp	Ø 4.0"-4.5"	3.31

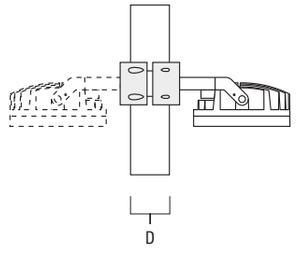


Short post EM1





Planted root ESV4



Pole clamps TS1/TS2

OPTICAL ACCESSORIES – FLC200 SERIES

Internal Accessories

A maximum of one internal optical accessory.	for FLC230	for FLC240	for FLC260
Flood lens IO-360	667-8120	667-8123	667-8126
Linear spread lens IO-180	667-8119	667-8122	667-8125
Wallwash lens IO-20*	667-8118	667-8121	667-8124
Honeycomb louvre IW	667-8210	667-8211	667-8212

* ideal for uniform wall washing applications

External Accessories**

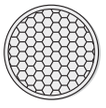
A maximum of one external optical accessory.	for FLC230	for FLC240	for FLC260
Glare shield ES	667-9221	667-9244	667-9264
Snoot ET	667-9222	667-9245	667-9265

** External accessory must be specified during order placement.

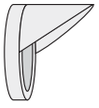
IO-360 Flood lens

IO-180 Linear spread lens

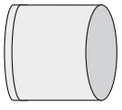
IO-20 Wallwash lens



IW Honeycomb louvre



ES Glare schield



ET Snoot

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