

# FL800R

LED Floodlight System with AeroFlow® Cooling



This luminaire complies with ETL guidelines for White Light Emitting Diode Lighting Units and is eligible for the Enhanced Capital Allowance (ECA) scheme.

**FL800R LED FLOODLIGHTING SYSTEM** provides an innovative new approach to floodlighting.

To build a system, FL800R modules can be grouped as a luminaire in single, double, triple or quad configuration and arranged on a mast with full azimuth rotation and tilt function. WB830 gear box provides remote mounting for LED drivers and control whilst the WB855 is used for side entry mounting.

Each module has a range of optical distribution options and a range of elevation angles to build a combined luminaire photometric output that meets even the most challenging of schemes.

FL800R module uses AeroFlow® Cooling System to provide exceptional thermal management. Maximised heat dissipation enables a compact luminaire design, which can be retrofitted onto existing masts.

Lumileds LUXEON® MX LEDs and AeroFlow® together deliver high lumen output with very low lumen depreciation over life, this minimises energy and operating cost by reducing overlighting.

FL800R offers an extremely competitive solution to replace traditional HID sources with performance, versatility and reliability.

Max. Luminous Flux	82600 lm
Max. Luminaire Efficacy	135 lm/W
Max. Luminaire Efficacy ( Full Power)	119 lm/W

L90 > 100,000 hrs, Ta = 25°C

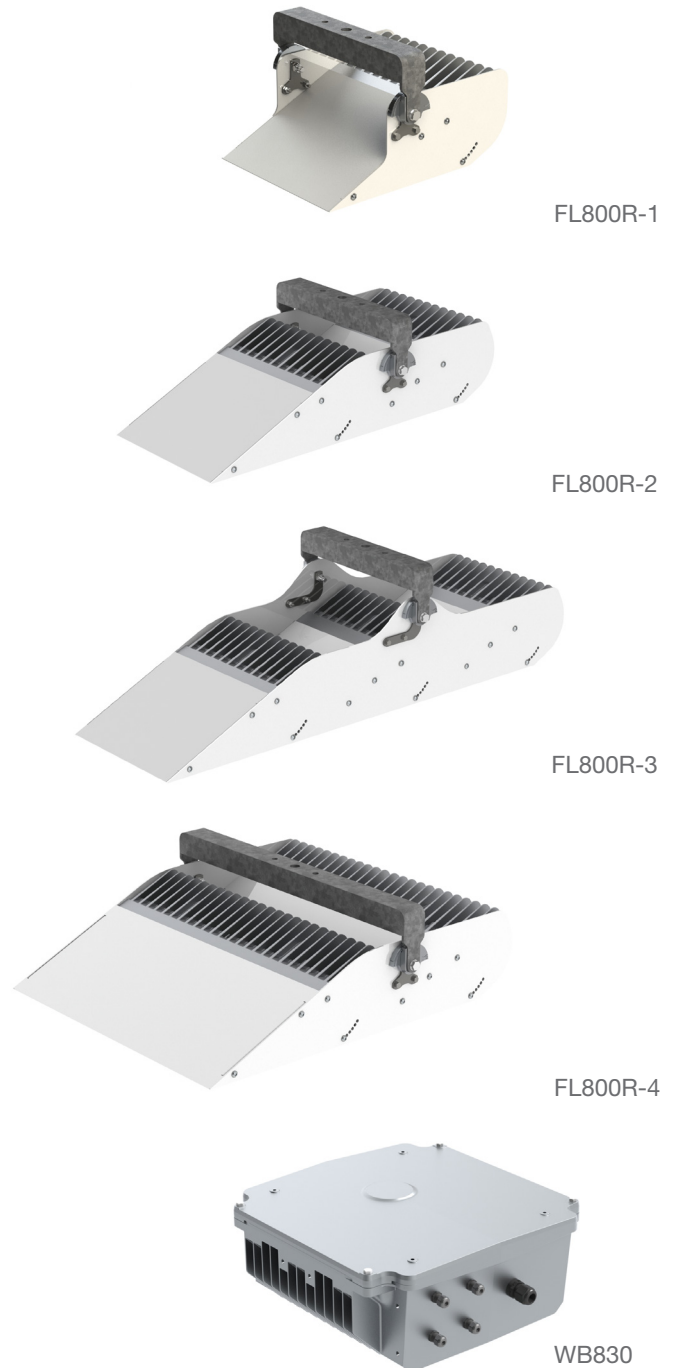
L80 > 100,000 hrs, Ta = 45°C

## APPLICATIONS

- Airports
- Ports
- Sport facilities
- Logistics
- Car parks
- Roads and roundabouts
- Shopping areas

## FEATURES

- Lumileds LUXEON® MX LED
- Superior luminaire efficacy - 135lm / W
- High Colour Rendering Index (CRI > 70)
- Constant Light Output (CLO)
- Instant hot restrike
- AeroFlow® Cooling System
- Demountable driver compartment
- Low wind profile area
- Low maintenance costs
- Full Cowl, distribution cut off 5° below horizontal
- Flexible and programmable lighting control options (CMS)
- IP66 ingress protection
- 100% recyclable



## BENEFITS

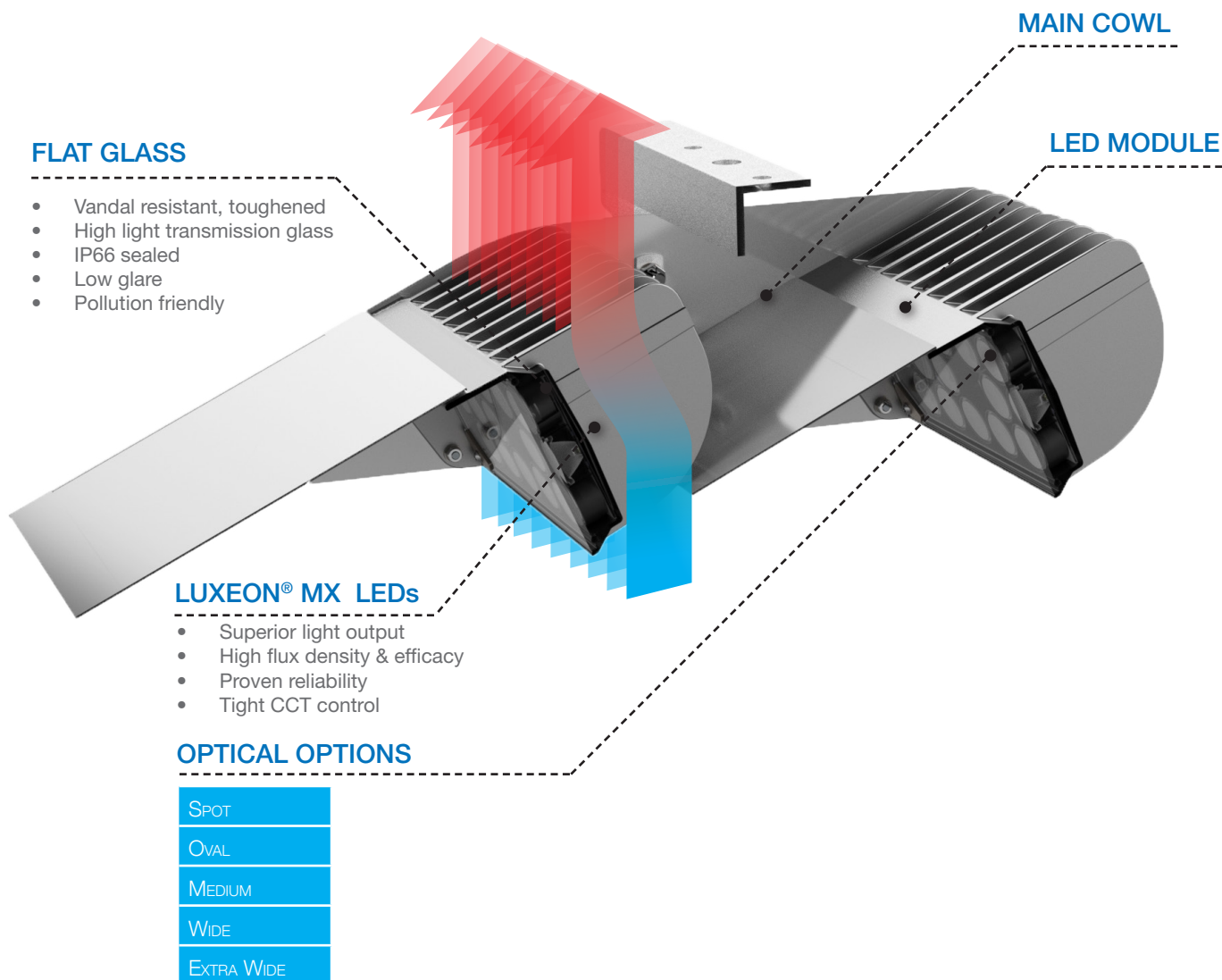
- High flux density and efficacy LED
- Reduces energy costs and carbon emissions
- Improved safety and visual performance
- Minimises overlighting, saving energy
- Suitable for high security and safety critical lighting tasks
- L80 @ 100,000 hrs, Ta = 45°C \*
- Flexible mounting allowing cost savings
- Allows mounting on existing columns / masts
- Minimises Total Cost of Ownership
- Dark sky friendly, minimal glare
- Full control and monitoring of each luminaire
- Consistent high performance in aggressive environments
- Fully compliant with WEEE and RoHS regulations

\* Lumen depreciation calculated up to 100,000 hours using IES TM-21 method.

## AeroFlow® COOLING SYSTEM

Unique aerodynamic vents created by the vertical fins are designed to accelerate natural convection through the heatsink. Each airway is heated and the rising hot air draws cold air in from the bottom, immediately cooling the LEDs. The hot air accelerates away from the fins, quickly removing heat from the floodlight module.

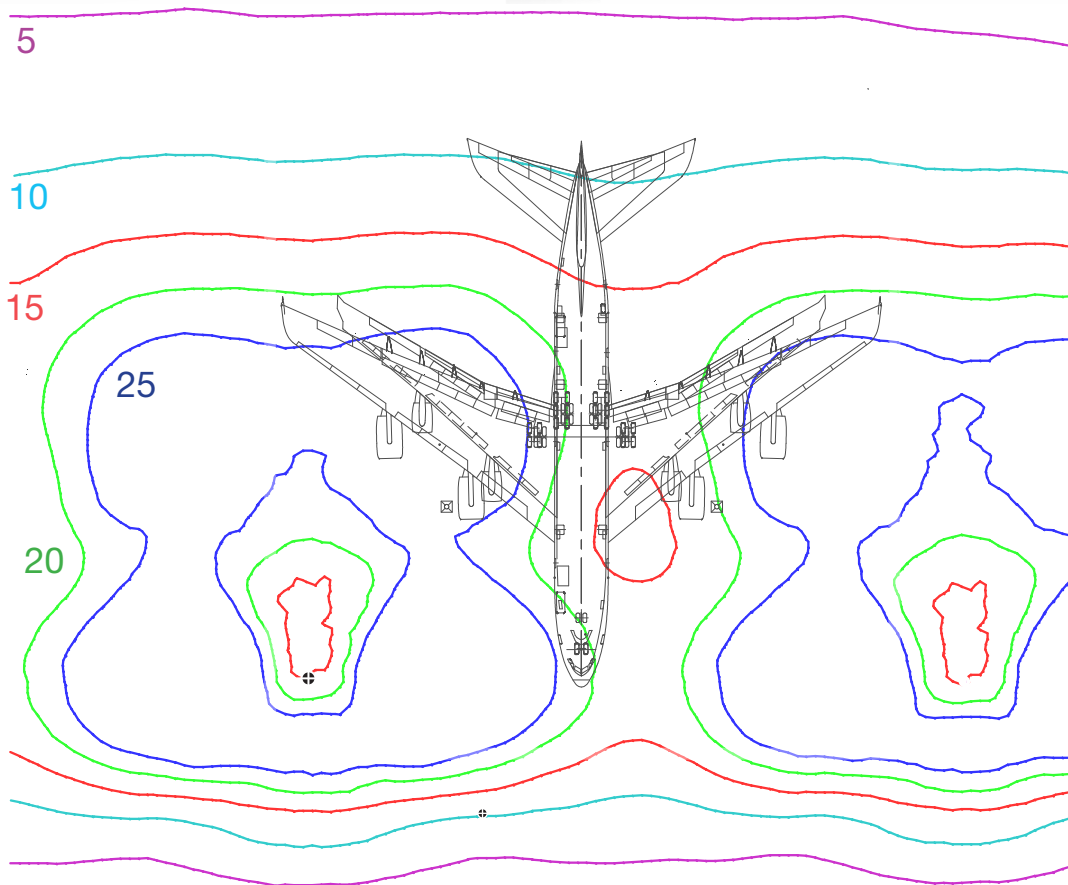
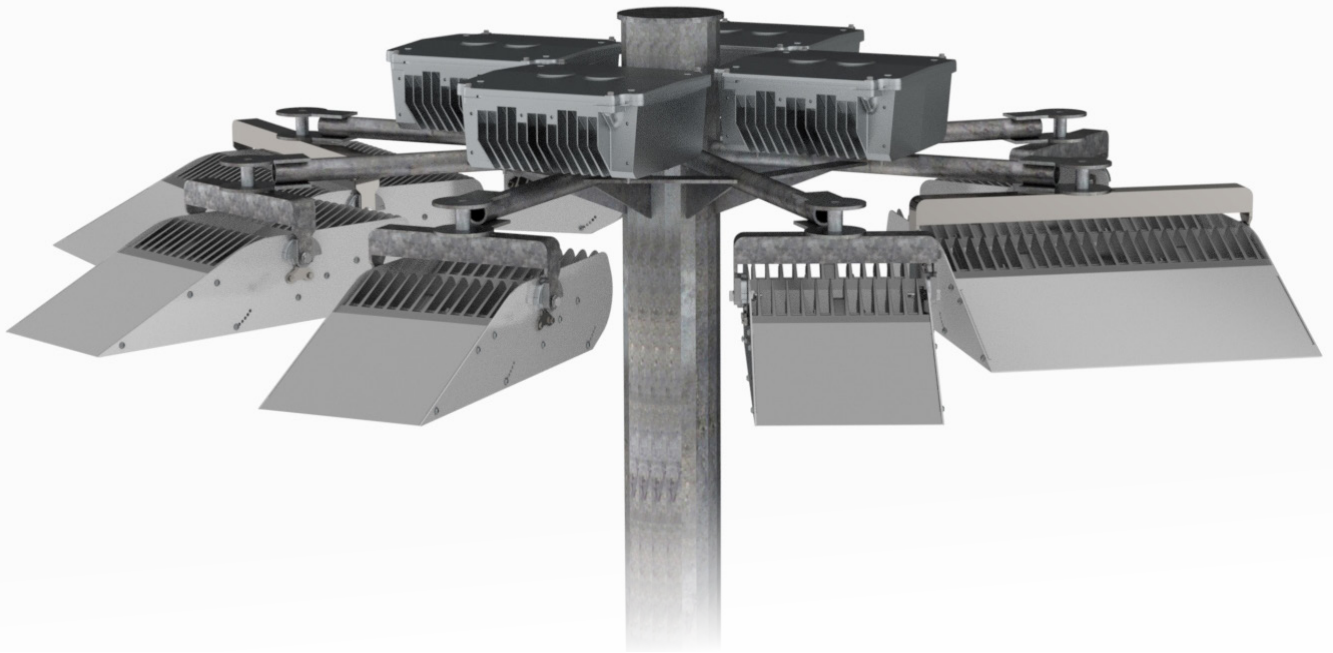
FL800R can be used in an environment of up to 50°C whilst still having low lumen depreciation and long life.



## LIGHT CONTROL

FL800R meets the most demanding requirements for area lighting applications such as sports lighting, airports, ports and traffic junctions. Combined, the cowl and precision optics provide exceptional control minimising obtrusive light, glare and upward light without compromising the lighting performance.

## ENERGY EFFICIENCY



A380 Aircraft Stand 87 x 82m lit to CAP168  
Overall MF = 0.80  
Mounting height = 20m

The table below shows the energy saving for a typical Airbus A380 aircraft stand.

Light Source	Nominal Power	System Power	Number of Units	Total System Power	Energy Savings
SON-T	400W	449W*	8	3592W	-
FL800R	150W	143W**	16	2288W	37%

\* With electromagnetic control gear

\*\* Average power consumption over life with CLO for lumen depreciation MF = 0.90

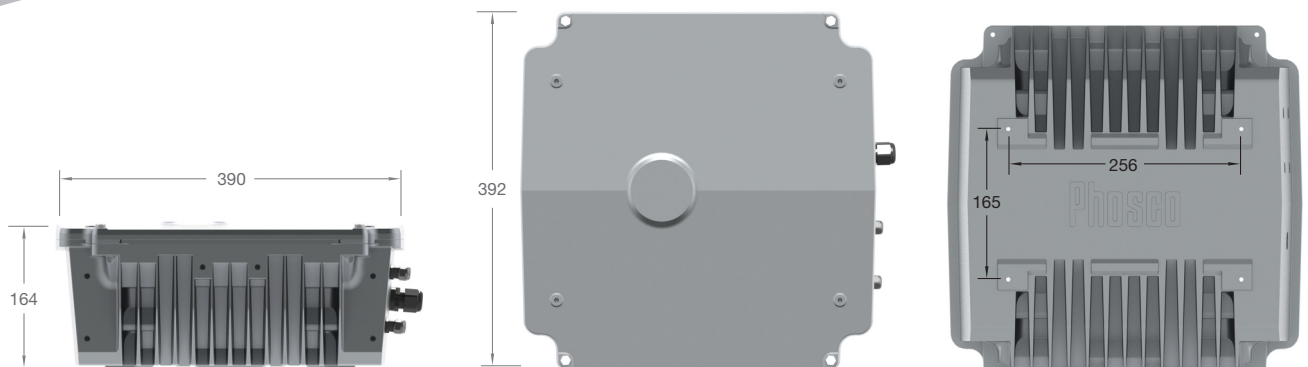
# WB830 SPECIFICATION

## WB830 GEAR BOX

Designed as an integral part of the FL800R floodlight system, the WB830 gear box accommodates a variety of LED driver makes and models, as well as a range of photocell and CMS control options. The WB830 is designed to minimise driver operating temperatures through effective thermal management even in the hottest of climates, and so WB830 maximises the operating life of the FL800R floodlighting system.



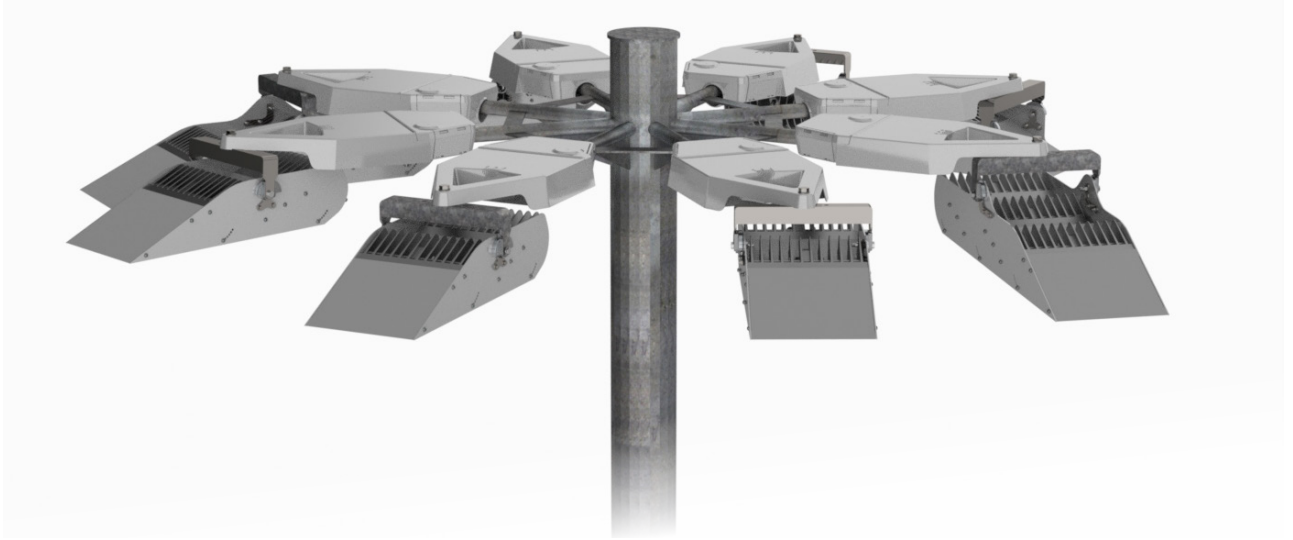
Driver	Up to four 165W drivers ( Philips /Osram )
Compatibility	Up to four FL800R modules per gear box
Input Voltage Range	120-277V 50/60Hz ( Philips programmable ) (UL 150W only) 347-480V 50/60Hz ( Philips non-programmable ) (UL 150W only) 195-264V 50/60Hz ( Philips / Osram - Not UL tested )
Electrical Class	I
Lighting Regulation	Photocell • Time switch • Central Management System
Dimming Control	1-10V • DALI • Switch Dim • Multi Step Dimming
Driver Current	300mA ~ 800mA ( in 50mA steps, dependent of driver type ) (UL 700mA Max)
Operating Temperature	-40°C to +50°C
Storage Temperature	-40°C to +80°C
Surge Protection	10 kV Common Mode, 6 kV Differential Mode to IEC 61000-4-5
Installation	Stirrup or bottom mount ( 4 x M8 stud )
Mounting orientation	Top-opening preferred ( for optimal thermal management )
Remote mounting	With MTP ( Module Thermal Protection ) up to 3m from FL800R Module
Finish	Polyester powder coat
Colours	Light grey ( RAL 7035 ), other RAL colour upon request
Ingress Protection	IP66
Wind Area (EPA)	0.060m <sup>2</sup>
Weight	13kg ( WB830 with four drivers )



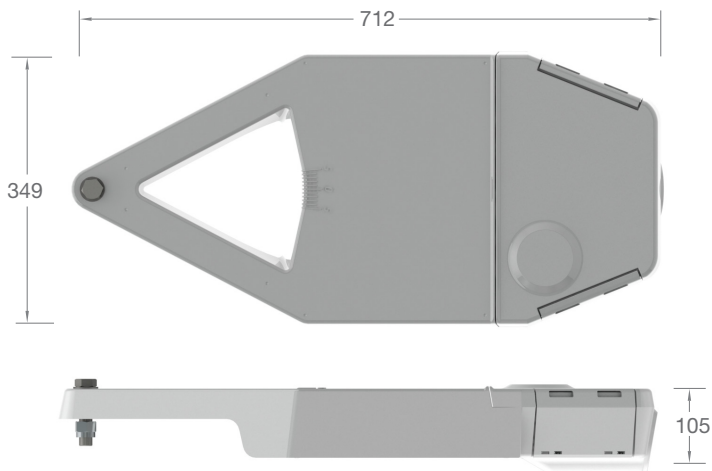
# WB855 SPECIFICATION

## WB855 GEAR BOX

WB855 gear box can be used where FL800R are to be mounted from side entry spigot tubes rather than floodlight brackets. They avoid use of adapters and the need to add gear box mounting plates. (This option is not UL Listed)



Driver	Up to three 150W drivers ( Philips / Osram )
Compatibility	Up to three FL800R modules per gear box
Input Voltage Range	120-277V 50/60Hz ( Philips programmable ) 347-480V 50/60Hz ( Philips non-programmable ) 195-264V 50/60Hz ( Philips )
Electrical Class	I
Lighting Regulation	Photocell • Time switch • Central Management System
Dimming Control	1-10V • DALI • Switch dim • Dynadimmer
Driver Current	300mA ~ 700mA ( in 50mA steps )
Operating Temperature	-40°C to +50°C
Storage Temperature	-40°C to +80°C
Surge Protection	10 kV Common Mode, 6 kV Differential Mode to IEC 61000-4-5
Installation	Ø 42 - 60mm x 100mm Side Entry
Finish	Polyester powder coat
Colours	White ( RAL 9010 ), other RAL colour upon request
Ingress Protection	IP66
Wind Area (EPA)	0.051m <sup>2</sup>
Weight	7.4kg ( plus 1.2kg per driver )

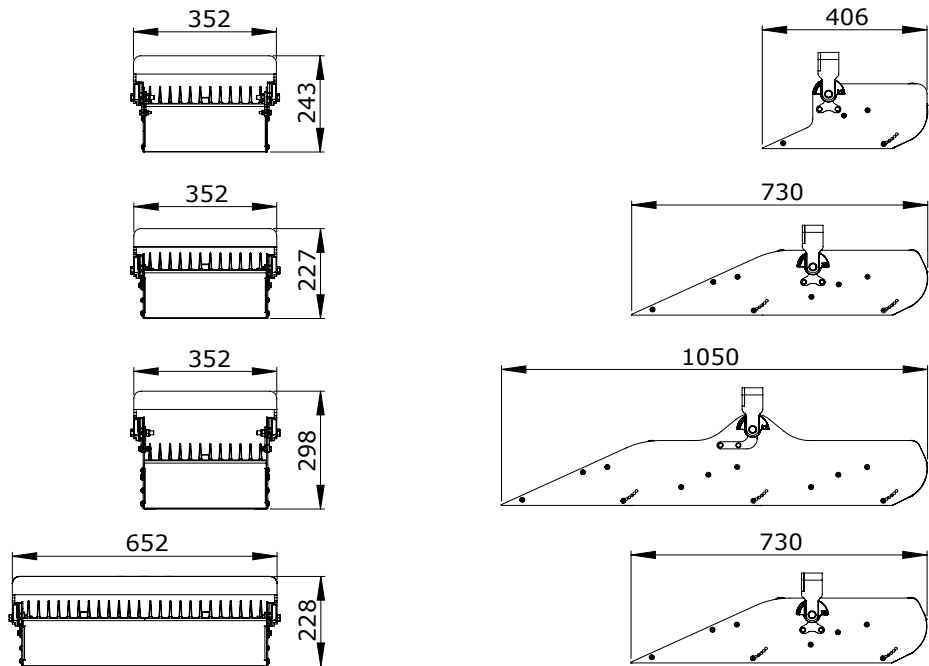


# FL800R SPECIFICATION

Light Source	Lumileds LUXEON® MX LED			
Number of LEDs	18 ( per module )			
Correlated Colour Temperature	Warm - 3000K, Neutral - 4000K, Cool - 5700K			
Colour Rendering Index	> 70			
Optical Cover	Flat glass			
Max. Luminaire Efficacy at full power	119lm/W			
Max. Luminaire Efficacy	135lm/W			
Electrical Class	I			
Lumen Maintenance output *	L80 @ 100,000 hours, Ta = 45°C • L90 @ 100,000 hours, Ta = 25°C			
Driver Current	300mA ~ 800mA ( in 50mA steps, 700mA Max for UL )			
Operating Temperature	-40°C to +50°C			
Storage Temperature	-40°C to +80°C			
Installation Height	10 ~ 50m			
Installation	Stirrup mount			
Material	Marine Grade Aluminium LM6 ( module ) • Aluminium side plates • Galvanised steel stirrup			
Finish	Natural aluminium ( module ) • Polyester powder coated RAL 9010 ( side plates)			
Ingress Protection	IP66			
Module Elevation Options	40°, 45°, 50°, 55°, 60°, 65° ( select at time of order )			
Luminaire Tilt ( on site )	-15° to +15° in 2.5° steps			
Product Configuration	FL800R-1	FL800R-2	FL800R-3	FL800R-4
Max. Luminaire luminous flux	20,800 lm	41,370 lm	61,940 lm	82,640 lm
Power Consumption **	68 ~ 175W	136 ~ 349W	204 ~ 524W	272 ~ 699W
Wind Area ( EPA )	0.054m <sup>2</sup>	0.094m <sup>2</sup>	0.097m <sup>2</sup>	0.094m <sup>2</sup>
Weight ( FL800R excluding WB830 )	6kg	10kg	14.5kg	17.5kg

\* Lumen depreciation calculated up to 100,000 hours using IES TM-21 method.

\*\* Values for 300 - 800 mA Operation



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