

**Reference Type G**

**Application** General Lighting – Roof Terrace

**Description** Surface mounted IP65 rated LED wall mounted spotlight. Die-cast aluminium body in aluminium grey finish.

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**



**Manufacturer** Feilo Sylvania Fixtures UK Ltd, Avis Way, Newhaven, East Sussex BN9 0ED

**Telephone** + 44 (0) 870 606 2030

**Facsimile** + 44 (0) 1273 512688

**Reference Luminaire** Concord Lighting Angler Square 2

**Lamp** LED

**Reference Type H**

**Application** General & Emergency Lighting – Plant Areas, Risers, Cleaners Cupboards

**Description** Surface mounted weatherproof luminaire, sealed to IP66, with GRP body and polycarbonate light controller. Emergency versions complete with integral battery and inverter for 3 hour operation, where applicable.

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**



**Manufacturer** Cooper Lighting and Safety, Wheatley Hall Road, Doncaster DN2 4NB

**Telephone** + 44 (0) 1302 303316

**Facsimile** + 44 (0) 1302 303235

**Reference Luminaire** Cooper Lighting Tufflite LED+ range

**Lamp** LED

**Reference Type J**

Application General & Emergency Lighting – Roof Terrace

Description Surface wall mounted shallow profile square IP55 bulkhead. With die-cast aluminium body finished in black and opal diffuser. Emergency versions complete with integral battery and inverter for 3 hour operation, where applicable.



Manufacturer Feilo Sylvania Fixtures UK Ltd, Avis Way, Newhaven, East Sussex BN9 0ED

Telephone + 44 (0) 870 606 2030

Facsimile + 44 (0) 1273 512688

Reference  
Luminaire Concord Monitor LED range

Lamp LED

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

**Reference Type X1**

Application General External Lighting – Courtyard Area

Description IP66 rated column mounted LED luminaire of aluminium construction. With 4000K LED light source. To be column mounted using cradle mounting bracket.

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**



Manufacturer Holophane Europe Ltd, Bond Avenue, Bletchley, Milton Keynes MK1 1JG

Telephone + 44 (0) 1908 649292

Facsimile + 44 (0) 1908 272029

Reference Luminaire Holophane Lighting CityMax range with VB Cradle Mount.

Lamp LED

**Reference Type X2**

Application General External Lighting – Courtyard Area

Description IP65 rated column mounted LED reflector luminaire of aluminium construction. With 4000K LED light source.

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**



Manufacturer Abacus Lighting Limited, Oddicroft Lane, Sutton-in-Ashfield NG17 5FT

Telephone + 44 (0) 1623 511111

Facsimile + 44 (0) 1623 552133

Reference Luminaire Abacus Lighting Pescara AL21700 range.

Lamp LED

**Reference Type X3**

Application General External Lighting – Car Park Area

Description IP66 rated column mounted LED luminaire of aluminium construction. With 4000K LED light source.



Manufacturer Abacus Lighting Limited, Oddicroft Lane, Sutton-in-Ashfield NG17 5FT

Telephone + 44 (0) 1623 511111

Facsimile + 44 (0) 1623 552133

Reference Luminaire Abacus Lighting Indus City LED AL21000 range.

Lamp LED

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

**Reference Type X4**

Application General and Emergency External Lighting – Footpaths

Description IP65 rated LED bollard luminaire of aluminium construction. Emergency versions complete with integral battery and inverter for 3-hour operation. With 4000K LED light source.



**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

Manufacturer Abacus Lighting Limited, Oddcroft Lane, Sutton-in-Ashfield NG17 5FT

Telephone + 44 (0) 1623 511111

Facsimile + 44 (0) 1623 552133

Reference Luminaire Abacus Lighting Rada AL22300 range.

Lamp LED

**Reference Type X5**

Application Feature External Lighting

Description IP68 rated ground recessed LED luminaire of aluminium construction. With 4000K LED light source.



**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

Manufacturer Holophane Europe Ltd, Bond Avenue, Bletchley, Milton Keynes MK1 1JG

Telephone + 44 (0) 1908 649292

Facsimile + 44 (0) 1908 272029

Reference Luminaire Holophane Lighting 900 Micro range.

Lamp LED

## Angler Square

Type G

ANGLER/SQUARE2 821LM MED LED 4K AL

4070156



### Product features

- Exterior square spotlight, graduated ring on both axes for precision angling, rotatable on 2 axes, corrosion resistant die-cast aluminium body, 821lm, 13,5W, 61lm/W, 4000K, CRI80+, medium, non dimmable, IP65, IK07, 132(HxWxD) 132x132x60mm, 2.3kg, Class I, 220-240V, A++ A+ A



## PRODUCT OVERVIEW

Product code	4070156
Product name	ANGLER/SQUARE2 821LM MED LED 4K AL
Technology	LED
Type	Integrated LED
Housing material	Corrosion resistant die-cast aluminium
Mount	pole mounted, track version, spot lights, wall mounted, ground mounted
Environment	External
General application	Office, Hospitality, Logistics & Industry, Retail, Education, Residential & Consumer, Museums & Galleries,
Certifications	EUNEW005
ETIM Class	EC001744
Fixture luminous flux (lm)	821
Efficacy (lm/w)	60.81
LOR (%)	100
Colour temperature (K)	4000
Light colour	4000 Neutral White
CRI (Ra)	80
Colour Consistency (SDCM)	3
Total power consumption (W)	13.5
Electrical protection	Class I
Dimmable	No
Average life (Nominal) (h)	50000
Housing colour	aluminium grey
IP rating	IP65
IK rating	IK07
Product EAN number	5026524701563
Lamps	Yes
Included lamp	INTEGRATED LED

## Angler Square

ANGLER/SQUARE2 821LM MED LED 4K AL

**4070156**

### DATA TABLE

#### General data

<b>Product code</b>	4070156
<b>Product name</b>	ANGLER/SQUARE2 821LM MED LED 4K AL
<b>Technology</b>	LED
<b>Type</b>	Integrated LED
<b>Housing material</b>	Corrosion resistant die-cast aluminium
<b>Mount</b>	pole mounted, track version, spot lights, wall mounted, ground mounted
<b>Environment</b>	External
<b>General application</b>	Office, Hospitality, Logistics & Industry, Retail, Education, Residential & Consumer, Museums & Galleries,
<b>Certifications</b>	EUNEW005
<b>ETIM Class</b>	EC001744

#### Optical data

<b>Fixture luminous flux (lm)</b>	821
<b>Efficacy (lm/w)</b>	60.81
<b>LOR (%)</b>	100
<b>Colour temperature (K)</b>	4000
<b>Light colour</b>	4000 Neutral White
<b>CRI (Ra)</b>	80
<b>Colour Consistency (SDCM)</b>	3

#### Electrical data

<b>Total power consumption (W)</b>	13.5
<b>Mains voltage (V)</b>	220-240V~
<b>Electrical protection</b>	Class I
<b>Dimmable</b>	No
<b>Nominal Frequency (Hz)</b>	50/60Hz

#### Lifetime data

<b>Average Rated Lifetime - L80 B10</b>	50000
<b>Average life (Nominal) (h)</b>	50000

#### Physical data

<b>Housing colour</b>	aluminium grey
<b>IP rating</b>	IP65
<b>IK rating</b>	IK07
<b>Diffuser material</b>	Safety tempered glass
<b>Nominal Product Length (mm)</b>	132

## Angler Square

ANGLER/SQUARE2 821LM MED LED 4K AL

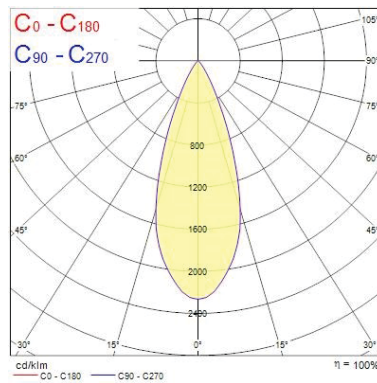
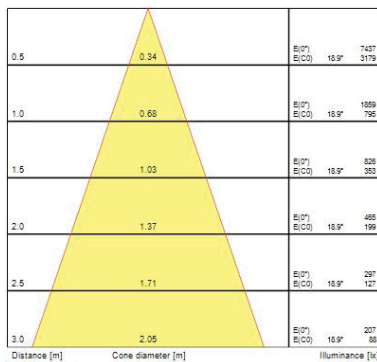
**4070156**

Nominal Product Width (mm)	132
Weight (kg)	2.1

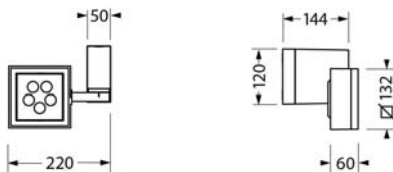
### Packaging

Single packaging type	Carton
Product EAN number	5026524701563
Packaging single length (cm)	14.6
Packaging single width (cm)	32.0
Packaging single height (cm)	18.5
DUN14 (outer)	05026524701563
Units per outer package	1
Packaging outer length (cm)	18.5
Packaging outer width (cm)	32.0
Packaging outer height (cm)	14.6

## PHOTOMETRY



## TECHNICAL DRAWINGS







## Angler Square

ANGLER/SQUARE2 821LM MED LED 4K AL


**4070156**


**Concord** 4070156


 This luminaire contains built in LED lamps.

 } **LED**


The lamps cannot be changed in the luminaire.

874/2012 

 This luminaire contains built in LED lamps.

 } **LED**

The lamps cannot be changed in the luminaire.

**Concord** 4070156  874/2012

Type H

## Tufflite LED+

Up to 155Llm/cW



6



The Tufflite LED+ is a premium, highly efficient version of the standard Tufflite LED, designed to provide the same lumen values whilst using less power - delivering even greater energy savings with a leading efficiency performance of up to 155 luminaire lumens per circuit watt (Llm/ cW).

Tufflite LED+ is a versatile general purpose, IP66 rated, luminaire constructed from a tough GRP (glass reinforced polymer) base and polycarbonate diffuser with a high impact resistance rating of IK08.

Options include; 3 hour combined non-maintained emergency functionality, dimmable control gear and integrated lighting controls options to maximise energy savings, user comfort and control.

With a comprehensive range of lumen outputs across 2 luminaire lengths, Tufflite LED+ delivers choice and flexibility to suit a wide range of applications such as warehousing, plant rooms, carparks, loading/storage spaces and assembly areas where high ingress protection and robust construction are required.

- Latest LED light engine technology delivers leading power savings - up to 155Llm/cW
- 3200 to 12000 nominal lumen options
- Nominal 4' and 6' formats, in wide housings, ideal for both new and retro fit applications
- Impact and heat resistant opal polycarbonate diffuser and GRP base housing construction, IK08 rated, and secured with anti-tamper diffuser clips
- Deep poured continuous polyurethane gasket to maintain IP66 rating
- Integrated lighting control options to maximise energy saving, user comfort and control
- Integral 3 hour maintained functionality option
- Fast fix stainless steel mounting clips for rapid installation. (No need to drill the housing avoiding a potential ingress path)
- Enhanced Capital Allowance (ECA) Compliance across the complete range
- 5 year Eaton warranty as standard

**Light Engine and Control Gear**

- High efficacy linear LED light engines
- >80CRI, 4000°K
- Energy efficient high frequency control gear as standard
- DALI dimmable control gear option

**Materials**

- Body – polyester GRP in RAL7035 grey with integrated gear tray supports and deep poured polyurethane gasket
- Diffuser – UV stabilised fire retardant polycarbonate
- Diffuser clips – polyamide - offering strength and integral locking screw function
- Gear tray – sheet steel, white finish
- Mounting brackets – stainless steel (grade 501)

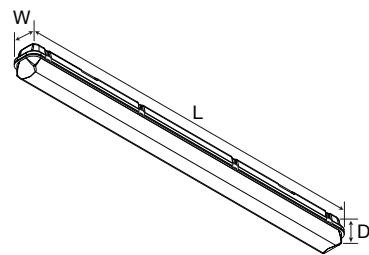
**Installation Notes**

- Surface/suspension mount rear brackets supplied, removing the need to drill the housing base
- 20mm cable entry holes at each end, supplied complete with sealing plugs
- Terminal block with 2 x 2.5mm<sup>2</sup> cable capacity per termination
- Geartray hangs on the body for ease of install, locates in final position with tool free clips
- Simple to use diffuser clips, 4 of which have security screws to lock them in the closed position as an anti-tamper feature and ensures access only through tooled entry to the luminaire
- This luminaire is IP66 rated, this rating only applies when the luminaire is installed observing the correct orientation and must not be positioned in direct sunlight

In exterior applications it is recommended the luminaires are protected under a canopy or cover, the housing is not suitable for mounting with the base directly on a vertical surface in the horizontal orientation. Please refer to the installation leaflet for further details.

**NOTE** - Must be installed observing the correct orientation and must not be positioned in direct sunlight

**Dimensions**



Type	L (mm)	W (mm)	D (mm)	Fixing Centres (mm)	Weight (kg)			
					HF	HF Em	DALI	DALI Em
4' twin	1282	145	101	800	4.27	4.62	4.35	4.70
6' twin	1840	145	101	515/1545	6.45	6.80	6.70	7.10

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

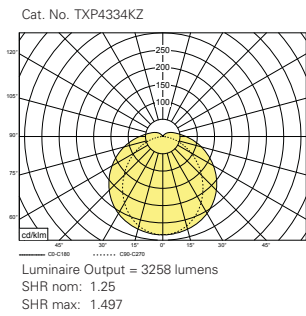
**Options**

- DALI dimming option
- Intelligent light and energy management options:
  - End mounted IP65 rated sensor with switching or dimming function, with/without photocell
- 'Corridor Function' control available to special order with the 'CO' suffix
- Fully integral maintained emergency, 3 hour duration. Suitable for use on defined escape routes
- We offer a range of product support contracts to aid commissioning, reduce your maintenance costs, comply with legislative test requirements and increase the lifespan of your lighting equipment

**Specification**

To specify state: General purpose IP66 rated luminaire with GRP base and reeded opal polycarbonate light controller, secured by tamper resistant hinged latches and removable geartray retained by tool free clips, as Eaton's Tufflite LED+ range, part no.

**Photometric Data**



Reflectances		Room index									
C	W	F	0.75	1	1.25	1.5	2	2.5	3	4	5
70	50	20	51	61	68	73	80	85	89	94	97
70	30	20	43	53	60	65	73	79	83	89	93
70	10	20	37	47	54	59	68	74	78	85	89
50	50	20	49	58	64	69	76	80	84	88	91
50	30	20	41	51	57	63	70	75	79	84	88
50	10	20	36	45	52	57	65	71	75	81	84
30	50	20	46	55	61	65	71	76	79	83	86
30	30	20	40	49	55	60	67	71	75	80	83
30	10	20	35	44	50	55	63	68	71	77	80
0	0	0	32	40	46	51	58	62	66	70	74
BZ-class			6	5	5	5	5	5	5	5	5

**Chemical Resistance**

Chemical Agent	Body (Polyester)	Diffuser (Poly-carbonate)
Acetic acid 10%	●	●
Acetone	○	×
Alcoholic beverages	●	●
Aluminium sulphate	●	●
Ammonia 5%	○	×
Aniline	○	×
Arsenic acid 20%	○	●
Benzene	×	×
Bencylic alcohol	×	×
Bromine	×	×
Calcium chloride	●	●
Calcium nitrate	●	●
Carbon tetrachloride	×	×
Carbonic acid	●	×
Caustic potash 5%	×	×
Cement	●	●
Hydrochloric acid 1-5%	○	●
Chlorine liquids (vapours)	×	×
Chloroform	×	×
Chromic acid	×	○
Citric acid 20%	●	●
Copper sulphate	●	●
Diesel-naphta oil	●	○
Ethyl alcohol 30%	●	●
Ethyl chloride	×	×
Ethyl ether	●	×
Food oils and fats	●	×
Formic acid 10%	○	●
Glycerine	●	●

Chemical Agent	Body (Polyester)	Diffuser (Poly-carbonate)
Hexane	○	●
Iodine	●	×
Iron chloride	●	●
Isopropyl alcohol	●	○
Lubricating oil	●	●
Magnesium sulphate	●	●
Methanol	●	×
Mineral oils	●	●
Nitric acid 20%	×	○
Oxygen	●	●
Ozone	●	●
Perchloric acid 10%	×	●
Petrol	●	×
Phenol	○	×
Potassium bromide	●	●
Potassium nitrate	●	●
Potassium permanganate	●	●
Sea climate	●	●
Silicon oils	●	●
Soda bleach 15%	●	×
Sodium chloride	●	●
Sodium hydroxide 5%	●	×
Sodium sulphate	●	●
Sugar	●	●
Sulphur	●	●
Sulphuric acid 30%	×	●
Toluene	×	×
Trichloroethylene	×	×
Zinc sulphate	●	●

● Resistant ○ Relatively Resistant × Non-Resistant

Monitor Accessories  
 Monitor Hood Black  
**4046028**

Type J



NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.



## PRODUCT OVERVIEW

<b>Product code</b>	4046028
<b>Product name</b>	Monitor Hood Black
<b>General application</b>	Hospitality
<b>ETIM Class</b>	EC002558
<b>E-number Finland</b>	4579226
<b>Electrical protection</b>	Class I
<b>Housing colour</b>	Black
<b>Product EAN number</b>	5026524460286

## DATA TABLE

### General data

<b>Product code</b>	4046028
<b>Product name</b>	Monitor Hood Black
<b>General application</b>	Hospitality
<b>ETIM Class</b>	EC002558
<b>E-number Finland</b>	4579226

### Optical data

<b>Adjustable chromaticity</b>	N
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### Electrical data

<b>Electrical protection</b>	Class I
<b>Transformer required</b>	Yes

### Physical data

<b>Housing colour</b>	Black
<b>Weight (kg)</b>	0.7

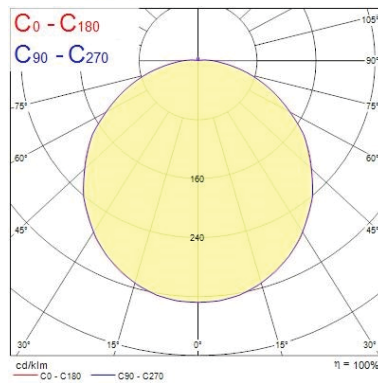
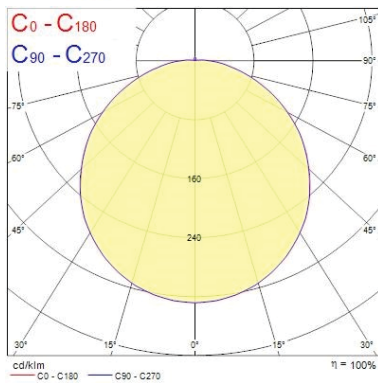
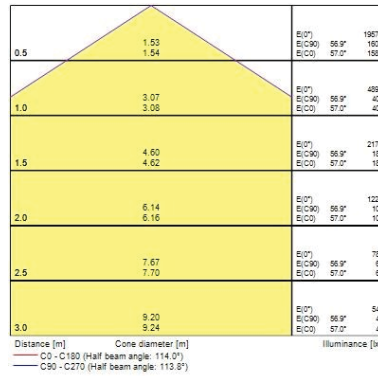
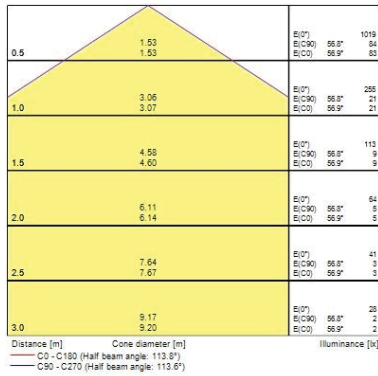
## Monitor LED

### MONITOR LED 4K BLK G2

### 4063821

<b>Product EAN number</b>	5026524638210
<b>Packaging single length (cm)</b>	13.5
<b>Packaging single width (cm)</b>	36.0
<b>Packaging single height (cm)</b>	36.0
<b>DUN14 (outer)</b>	05026524638210
<b>Units per outer package</b>	1
<b>Packaging outer length (cm)</b>	36.0
<b>Packaging outer width (cm)</b>	36.0
<b>Packaging outer height (cm)</b>	13.5

## PHOTOMETRY



## TECHNICAL DRAWINGS



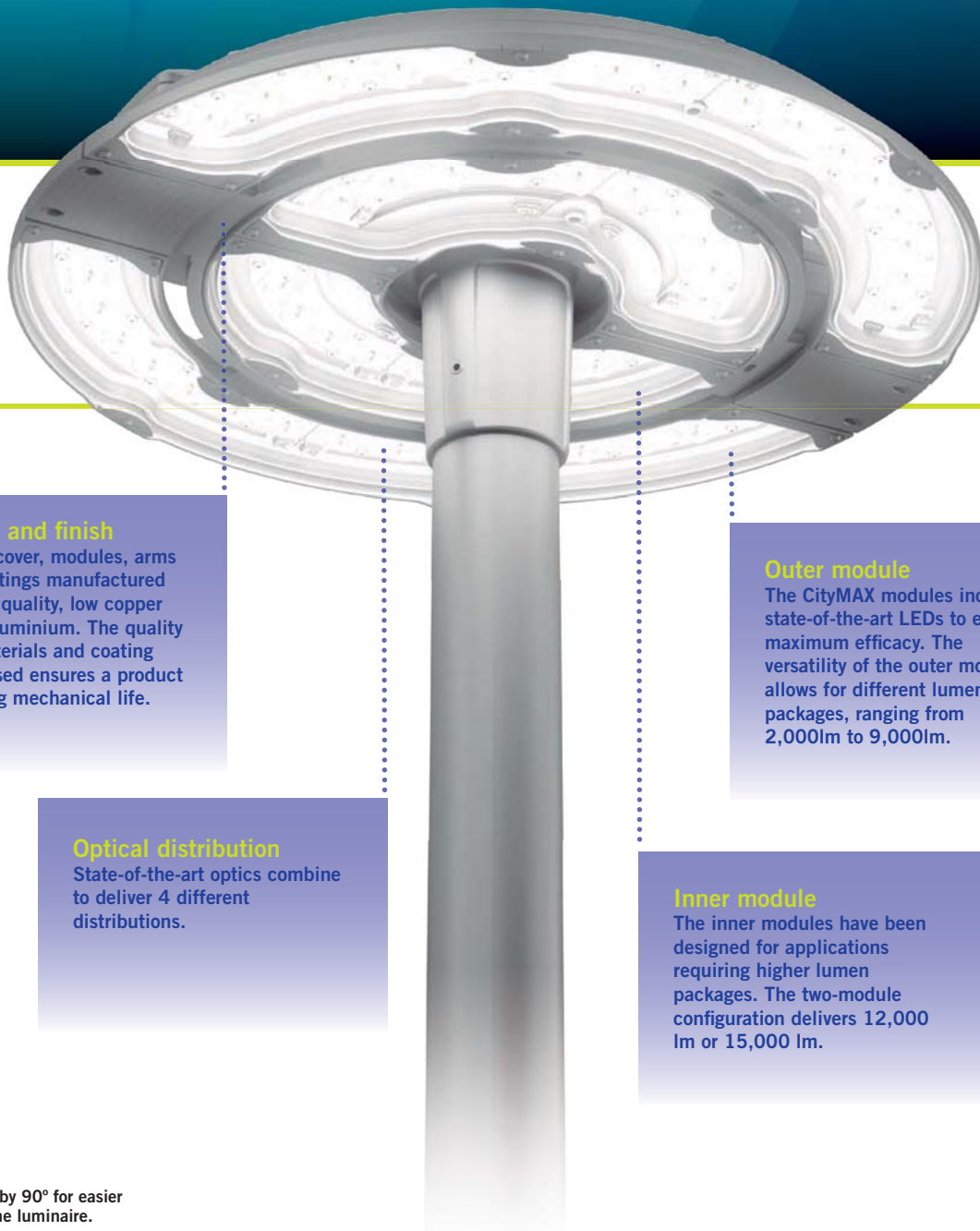


Type X1

CityMAX<sup>®</sup>



INTELLIGENT & DIGITAL STREETLIGHTING LUMINAIRE



### Material and finish

Housing, cover, modules, arms and mountings manufactured from high quality, low copper content aluminium. The quality of the materials and coating process used ensures a product with a long mechanical life.

### Optical distribution

State-of-the-art optics combine to deliver 4 different distributions.

### Outer module

The CityMAX modules include state-of-the-art LEDs to ensure maximum efficacy. The versatility of the outer module allows for different lumen packages, ranging from 2,000lm to 9,000lm.

### Inner module

The inner modules have been designed for applications requiring higher lumen packages. The two-module configuration delivers 12,000 lm or 15,000 lm.

Cover hinges by 90° for easier access into the luminaire.



### Maintenance

Convenient luminaire access from the top, without the need for tools. The modules are separate from the driver, which encourages heat dissipation by way of convection and conduction.

### Tilt Options

The design of CityMAX allows on site -10° to 10° tilting on side entry and post top variants.



FUTURE  
PROOF

### Future-proof design

The CityMax design means that its modules can be upgraded in line with future technology for maximum energy efficiency.



# Measurements

## Windage m<sup>2</sup>

VB2	0.1027
VB1	0.1139
SE2	0.0545
SE1	0.0519
PT2	0.0545
PT1	0.0598
CP2	0.0524
CP1	0.0540
CB1	0.1203
CB2	0.1082

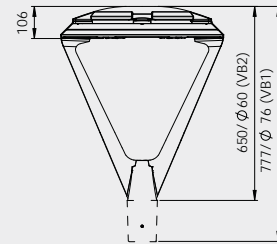
## Weight kg

VB1 up to L094	13.50
VB1 L124 & L154	16.00
VB2 up to L094	12.50
VB2 L124 & L154	15.00
SE2/PT2 up to L094	10.00
SE2/PT2 L124 & L154	12.60
CP2 up to L094	10.16
CP2 L124 & L154	12.70
CB1 up to L094	13.90
CB1 L124 & L154	16.40
CB2 up to L094	12.90
CB2 L124 & L154	15.40

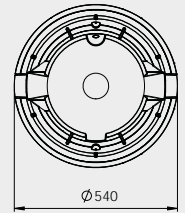
NOTE: Given the constant upgrading of technology and LEDs, the values, data or measurements may change without prior notice.



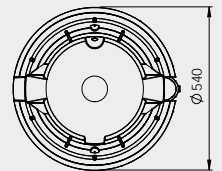
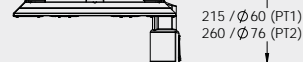
VB mounting



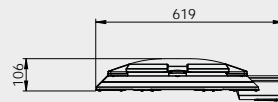
Dimensions in mm



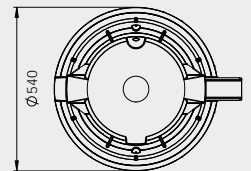
PT mounting



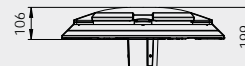
SE mounting



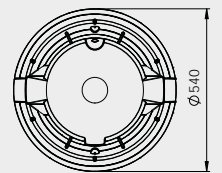
Same total length for versions SE1 (Ø 34/42) and SE2 (Ø 49/60)



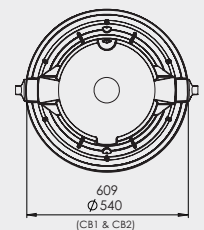
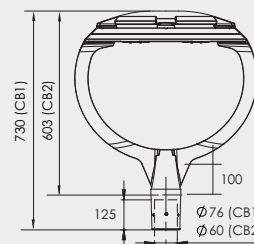
CP mounting



Same total height for versions CP1 (Ø 76) and CP2 (Ø 60)



CB mounting

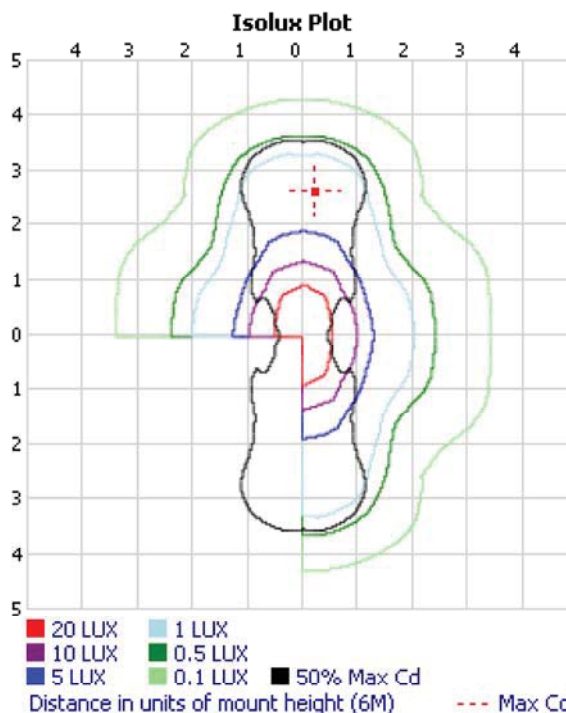
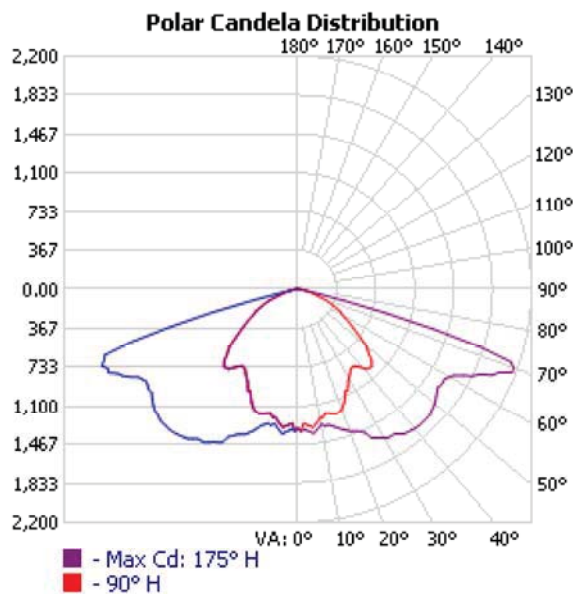




**OUTDOOR PHOTOMETRIC REPORT**

CATALOG: SCL.L054.ST2.VB


TEST #: B16074 + S16605(S) (T)  
 TEST LAB: HOLOPHANE EUROPE PHOTOMETRIC LAB  
 TEST DATE: 3/29/2017  
 CATALOG: SCL.L054.ST2.VB  
 DESCRIPTION: CITY MAX EXTERNAL LIGHTING LUMINAIRE  
 SERIES: SCL  
 LAMP CATALOG: L054  
 LAMP: LED C.5000LM - 4000K  
 LAMP OUTPUT: TOTAL LUMINAIRE LUMENS: 4982.4, **ABSOLUTE PHOTOMETRY \***  
 INPUT WATTAGE: 42.2  
 LUMINOUS OPENING: CIRCULAR (DIA: 0.54M)  
 MAX CD: 2,162.0 AT HORIZONTAL: 175°, VERTICAL: 70°  
 ROADWAY CLASS: UNCLASSIFIED



**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

\*TEST BASED ON ABSOLUTE PHOTOMETRY WHERE LAMP LUMENS=LUMENS TOTAL.  
 \*CUTOFF CLASSIFICATION AND EFFICIENCY CANNOT BE PROPERLY CALCULATED FOR ABSOLUTE PHOTOMETRY.

VISUAL PHOTOMETRIC TOOL 1.2.46 COPYRIGHT 2017, ACUITY BRANDS LIGHTING.  
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 B16074 + S16605(S) (T)  
 VISUAL PHOTOMETRIC TOOL

PUBLISH  
 PAGE 1 OF 4

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: SCL.L054.ST2.VB



**ZONAL LUMEN SUMMARY**

ZONE	LUMENS	% LUMINAIRE
0-30	1,068.7	21.4%
0-40	1,853.3	37.2%
0-60	3,764.3	75.6%
60-90	1,216.4	24.4%
70-100	402.3	8.1%
90-120	1.7	0%
0-90	4,980.7	100%
90-180	1.7	0%
0-180	4,982.4	100%

**LUMENS PER ZONE**

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	123.8	2.5%	90-100	1.7	0%
10-20	357.4	7.2%	100-110	0.000	0%
20-30	587.4	11.8%	110-120	0.000	0%
30-40	784.6	15.7%	120-130	0.000	0%
40-50	963.9	19.3%	130-140	0.000	0%
50-60	947.1	19.0%	140-150	0.000	0%
60-70	815.8	16.4%	150-160	0.000	0%
70-80	369.9	7.4%	160-170	0.000	0%
80-90	30.7	0.6%	170-180	0.000	0%

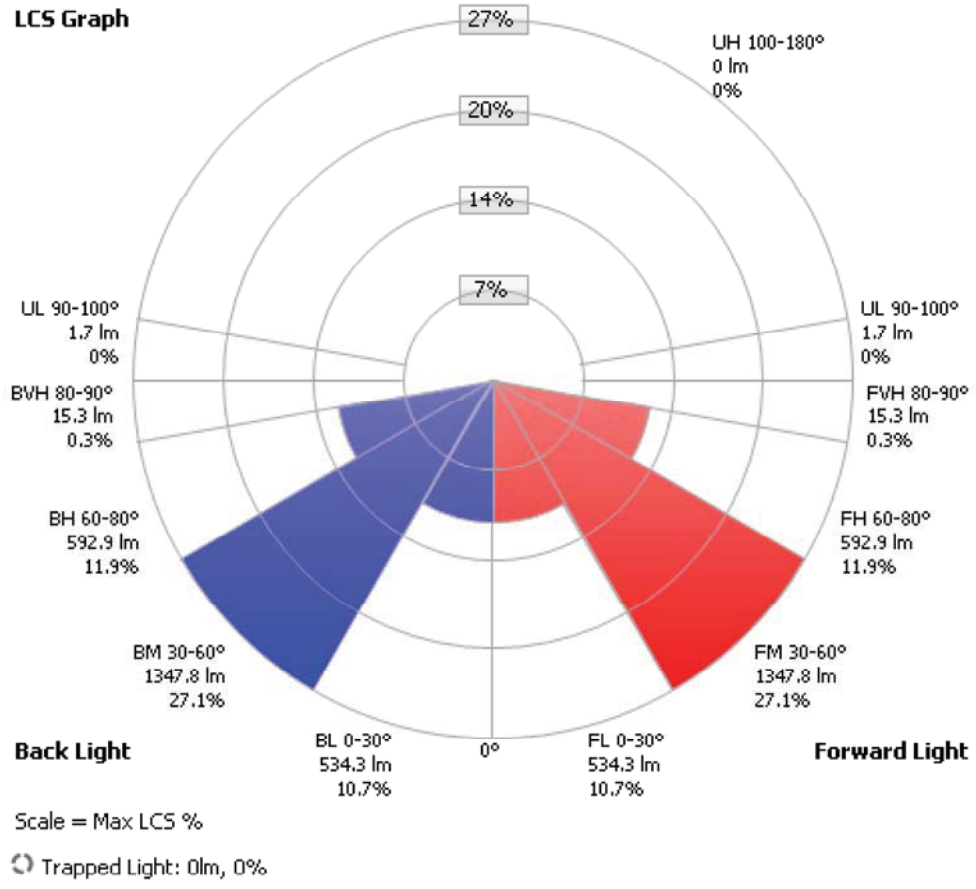
**ROADWAY SUMMARY**

<b>DISTRIBUTION:</b>	UNCLASSIFIED,	
MAX CD, 90 DEG VERT:	6.8	
MAX CD, 80 TO <90 DEG:	83.2	
	LUMENS	% LAMP
DOWNWARD STREET SIDE:	2,490.3	50%
DOWNWARD HOUSE SIDE:	2,490.3	50%
DOWNWARD TOTAL:	4,980.7	100%
UPWARD STREET SIDE:	0.9	0%
UPWARD HOUSE SIDE:	0.9	0%
UPWARD TOTAL:	1.7	0%
<b>TOTAL LUMENS:</b>	4,982.4	100%

**LCS TABLE**

BUG RATING	B2 - U1 - G2	
FORWARD LIGHT	LUMENS	LUMENS %
LOW(0-30):	534.3	10.7%
MEDIUM(30-60):	1,347.8	27.1%
HIGH(60-80):	592.9	11.9%
VERY HIGH(80-90):	15.3	0.3%
<b>BACK LIGHT</b>		
LOW(0-30):	534.3	10.7%
MEDIUM(30-60):	1,347.8	27.1%
HIGH(60-80):	592.9	11.9%
VERY HIGH(80-90):	15.3	0.3%
<b>UPLIGHT</b>		
LOW(90-100):	1.7	0%
HIGH(100-180):	0.000	0%
<b>TRAPPED LIGHT:</b>	0.0	0%

**OUTDOOR PHOTOMETRIC REPORT**  
CATALOG: SCL.L054.ST2.VB





# PESCARA AL21700

IP65

Type X2



## Technical Features

- Power: LED 50.5W (59W total power)
- Weight: 23.8kg
- Available in 2700K, 3000K, 4000K and 5000K colour temperatures
- Luminous flux (light source flux): 5808lm, 6060lm, 6648lm, 6754lm
- Available in two distribution options: Asymmetric and Batwing
- IP65 rated
- Protection Class I (IEC - EN60593)
- CE, ENEC, RoHS certified
- ADC3 die-cast aluminium alloy light output ring and light source frame
- Marine grade fiberglass top canopy with internal steel frame reinforcement
- Water vapour resistant silicone gasket
- Anti-corrosion pre-treatment then finished in an AKZO-NOBEL UV resistant polyester powder coat
- PMMA internal LED optical lens behind 4mm tempered glass 1090 anodized 1.2mm 99.85% purity aluminium reflector
- Input Voltage: AC220-240V
- Ambient temperature tested -40°C ~ +50°C
- Withstand wind speed 45m/s
- Service life ≥35000 hours
- For best results, use on columns up to 6m

## Applications

- Amenity
- Architectural

## Colours

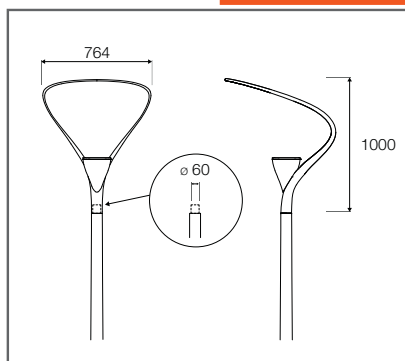
- Anthracite
- Light grey
- Black

	Wattage (W)	Colour Temp. (K) *	Lumen Output (lm)	Distribution	Weight (kg)
<b>AL21701</b>	59	2700	5808	Asymmetric	23.8
	59	3000	6060	Asymmetric	23.8
	59	4000	6648	Asymmetric	23.8
	59	5600	6754	Asymmetric	23.8
<b>AL21702</b>	59	2700	5808	Batwing	23.8
	59	3000	6060	Batwing	23.8
	59	4000	6648	Batwing	23.8
	59	5600	6754	Batwing	23.8

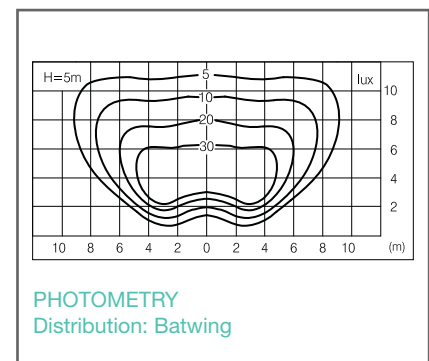
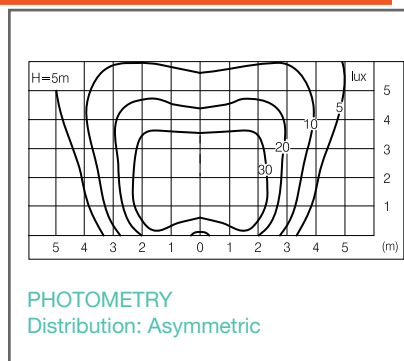
**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

\* Please confirm colour temperature when quoting / ordering

## Key features



Dimensions



All dimensions are in mm.

# INDUS CITY LED AL21000

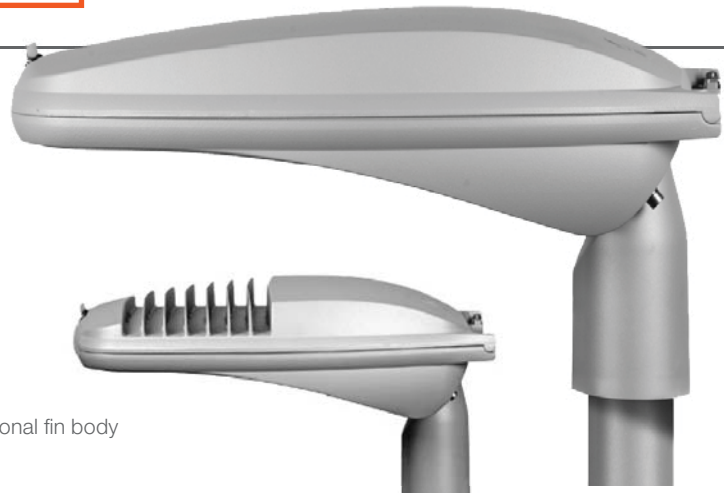
IP66

IK09

Type X3

## Technical Features

- IP66 and IK09 rated
- XLP or XHP-70 LEDs
- Colour temperature 5000K
- CRI >70
- Power correction factor >0.9
- Constructed to EN 60598-1, EN 60598-2-3
- Programmable and high efficiency electronic power source and duration, knife switch included
- Power supply cable access through PG16 cable gland (IP68)
- Power supply 220 - 240V / 50 - 60Hz as standard
- Power supply available in 120 - 277V / 50 - 60 Hz VAC
- Insulation class I and II
- Programmable drive available
- Cable plate is complete with easily replaceable electronic unit
- L80 >70000
- L70 >80000



\*Optional fin body

- Die-cast aluminium body finished in silver polyester powder (RAL 9006)
- Top cover available as a smooth case as standard, with option to have cross-sectional cooling fin case
- LED module replaceable as one unit including the upper cover
- Extra clear 4mm thick tempered flat glass
- Stainless steel closing clips and anti-ageing rubber gaskets
- Teflon pressure compensation filter
- Automatic anti-closing mechanism to prevent accidental closure during assembly and maintenance
- Post top or side entry with adjustable spigot
- Spigot entry  $\varnothing 46 - \varnothing 76$ mm

## Applications

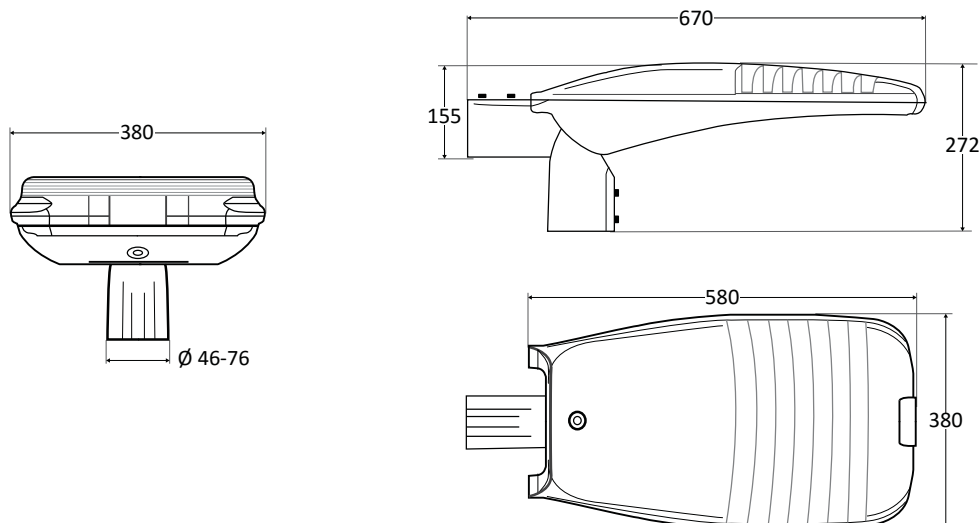
- Commercial
- Rail
- Road
- Amenity

## Colour

- Silver

## Dimensions

Dimensions in mm



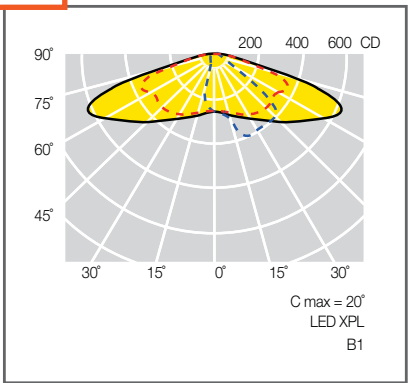
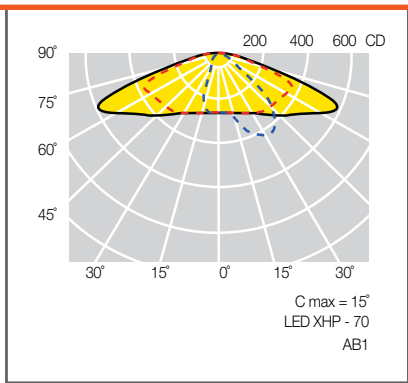
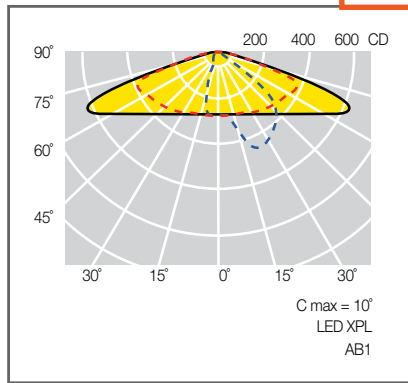


# Technical Specifications

	LED Type	Wattage (W)	No. of LEDs	Lumen Output (lm)	Driver Current (mA)	Prog. Driver	Distribution	Optics	Standard body		Fin Body (f)	
									Weight (kg)	Wind Area (m <sup>2</sup> )	Weight (kg)	Wind Area (m <sup>2</sup> )
<b>AL21020</b>	XPL	30	12	4430	800	Y	(A) Road width greater than 0.85 x the column height	AB1	10.65	0.091	9.3	0.091
		44	18	6330	800	Y		/ AB1	10.75	0.091	9.9	0.091
		60	24	8400	800	Y		Optic	10.85	0.091	10.0	0.091
<b>AL21022</b>	XPL	38	12	5170	1000	Y		AB1	10.65	0.091	9.3	0.091
		57	18	7670	1000	Y		/ AB1	10.75	0.091	9.9	0.091
		76	24	10060	1000	Y		Optic	10.85	0.091	10.0	0.091
<b>AL21024</b>	XHP-70	103	12	16120	700	Y		AB1	10.65	0.091	9.3	0.091
		127	15	19500	700	Y		/ AB1	N/A	N/A	9.9	0.091
		135	26	20530	700	Y		Optic	10.85	0.091	N/A	N/A
<b>AL21026</b>	XHP-70	60	6	9340	800	Y			10.45	0.091	9.6	0.091
		88	9	13800	800	Y		AB1	10.55	0.091	9.7	0.091
		156	16	22620	800	Y		/ AB1	10.75	0.091	N/A	N/A
		165	15	23560	900	Y	Optic	N/A	N/A	9.9	0.091	
<b>AL21028</b>	XHP-70	76	6	11150	1000	Y	AB1	10.45	0.091	9.3	0.091	
		113	9	16360	1000	Y	/ AB1	10.55	0.091	9.7	0.091	
		150	12	21000	1000	Y	Optic	10.65	0.091	9.8	0.091	
<b>AL21021</b>	XPL	30	12	4430	800	Y		10.65	0.091	9.8	0.091	
		44	18	6330	800	Y	B1 / B1	10.75	0.091	9.9	0.091	
		60	24	8400	800	Y	Optic	10.85	0.091	10.0	0.091	
<b>AL21023</b>	XPL	38	12	5170	1000	Y		10.65	0.091	9.8	0.091	
		57	18	7670	1000	Y	B1 / B1	10.75	0.091	9.9	0.091	
		76	24	10060	1000	Y	Optic	10.85	0.091	10.0	0.091	
<b>AL21025</b>	XHP-70	103	12	16120	700	Y		10.65	0.091	9.8	0.091	
		137	15	19500	700	Y	B1 / B1	N/A	N/A	9.9	0.091	
		135	16	20530	700	Y	Optic	10.75	0.091	N/A	N/A	
<b>AL21027</b>	XHP-70	60	6	9340	800	Y		10.45	0.091	9.6	0.091	
		88	9	13800	800	Y	B1 / B1	10.55	0.091	9.7	0.091	
		156	16	22620	800	Y	Optic	10.75	0.091	N/A	N/A	
		165	15	23560	900	Y		N/A	N/A	9.9	0.091	
<b>AL21029</b>	XHP-70	76	6	11150	1000	Y		10.45	0.091	9.6	0.091	
		113	9	16360	1000	Y	B1 / B1	10.55	0.091	9.7	0.091	
		150	12	21000	1000	Y	Optic	10.65	0.091	9.8	0.091	

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

## Photometry



All the optics have CUT-OFF emissions with zero-impact when the floodlight is installed with the glass parallel to the ground.

AB1: for carriageway with a width greater than 0.85 times the height of installation; suitable for large & high speed road ways.

(B) Road width equal or less than 0.85 x the column height (pathways)



ARCHITECTURAL LIGHTING

# RADA AL22300

IP65

Type X4

### Benefits

- Ease of maintenance and upgrade via internal driver tray
- Internal drivers and electrics protected from the elements by the durable rated IP65 body

### Features

- Power: 26W
- Colour temperature 4100K as standard
- CRI: 80+
- Delivered lumens: 2282lm
- IP65 rated
- Rated life: 50000 hours
- 5 year warranty

- Electronic driver 120-277V, 50/60Hz dimmable driver
- Internal driver tray
- Reflective white polycarbonate cone reflector
- Clear polycarbonate lens
- LED: 4 Chip-on-board
- Extruded aluminium housing, finished in a black powdercoat over a chromate conversion coating
- Flush mounting base and flat top
- Vandal-resistant screws
- Mounting kit with 200mm anchor bolts

### Colour

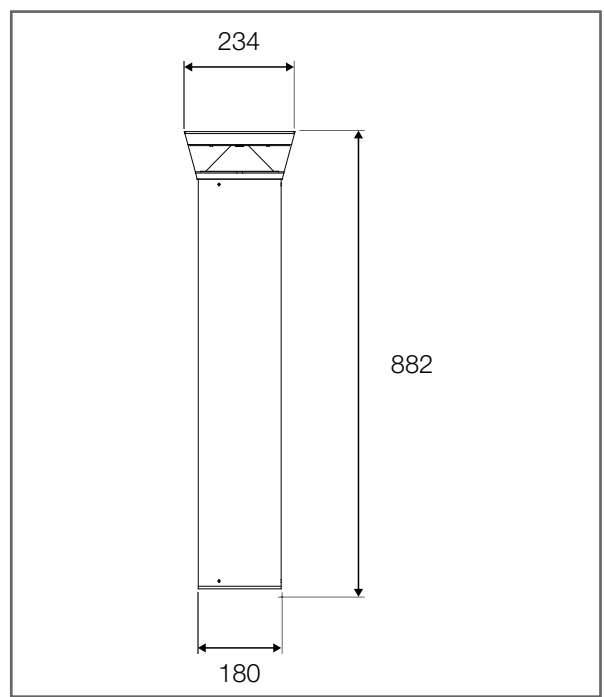
- Black



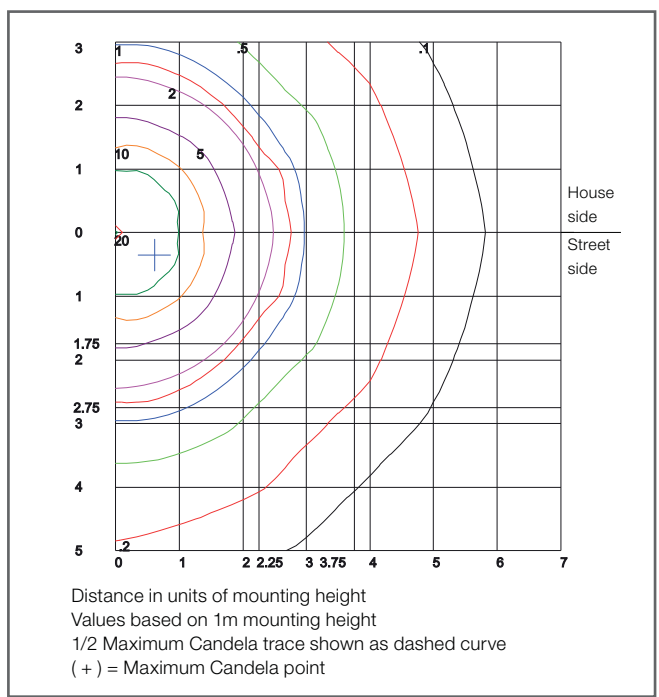
	Wattage (W)	Delivered Lumens (lm)	No. of LED (Chip-on-board)	CRI	Colour Temp. (K)	Colour
<b>AL22300</b>	26	2282	4 COB	80+	4100	Black

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

### Key features



Dimensions



Polar diagram

All dimensions are in mm.



# 900 MICRO

230V  
TRIAC dimmable  
IP68 Full Dry  
IK 08  
2000Kg

Type X5

UPDATE 2015

  
**HOLOPHANE**  
LEADER IN LIGHTING SOLUTIONS  
An **AcuityBrands** Company

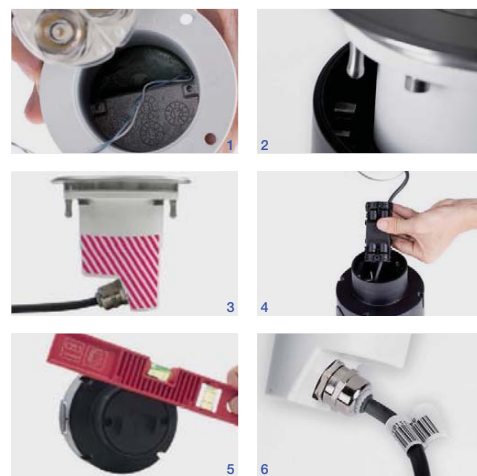


Body made of corrosion resistant, die-cast, painted EN 44100 aluminium alloy. Protection with anodizing treatment, epoxy powder base coating and polyester painting. AISI 316 stainless steel closing flange. 8mm thick extra-clear flat tempered glass. Product with no visible screws with snap-in system for connection to the recessed box. IP68 protection rating with FULL DRY system preventing condensation inside the product. Product supplied with 0.5m cable. Nylon recessed box to be ordered separately. Installation in recessed box set in concrete, with a 20-30 cm gravel drain bed.

Corps en aluminium moulé sous pression EN 44100 résistant à la corrosion. Protection de l'ensemble par traitement d'anodisation, avec primaire époxy et peinture polyester. Anneau de fermeture en acier inoxydable AISI 316L. Diffuseur en verre trempé plat extra-clair de 8mm d'épaisseur. Sans vis apparente, fixation au pot d'encastrement par clipsage. Degré de protection IP68, procédé FULL DRY évitant la formation de condensation à l'intérieur du produit. Appareil livré avec 0,5m de câble. Pot d'encastrement en nylon à commander séparément. Installation dans le pot d'encastrement coulé dans le béton avec lit de drainage de 20-30 cm.



AGRITURISMO UNICORNO  
BRESCIA, ITALIA

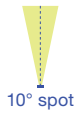


- 1 IP68 Full Dry
  - 2 Product with no visible screws
  - 3 High visual comfort asymmetrical optic
  - 4 Recessed box for installation in concrete or in ground
  - 5 Support for spirit level integrated in the recessed box
  - 6 Product supplied with 0,5 m cable
- 1 IP68 Full Dry
  - 2 Sans vis apparentes
  - 3 Alimentation gradable "TRIAC" intégrée
  - 4 Deux pot d'encastrement pour fixation directement dans le béton ou sur surface naturelle
  - 5 Support pour niveau incorporé pour installation murale
  - 6 Appareil livré avec 0,5 m de câble



3 LED  
230V

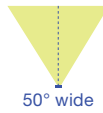
TRIAC DIMMABLE POWER SUPPLY INCLUDED



10° spot



30° medium

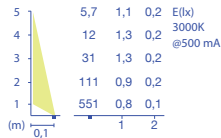
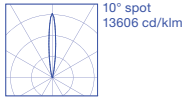


50° wide



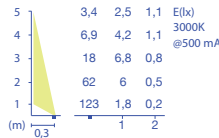
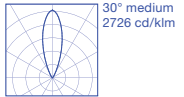
**84 01 9X0**  
5W LED  
220-240V 50/60Hz  
**TRIAC dimmable**  
power supply included  
Class II  
Category C4

A A+ A++



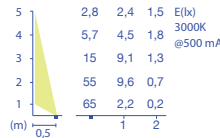
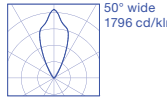
**84 01 9X3**  
5W LED  
220-240V 50/60Hz  
**TRIAC dimmable**  
power supply included  
Class II  
Category C4

A A+ A++



**84 01 9X4**  
5W LED  
220-240V 50/60Hz  
**TRIAC dimmable**  
power supply included  
Class II  
Category C4

A A+ A++



How to create the product code?

WHITE versions available:  
1 = 3000K (495 lm)  
6 = 4000K (570 lm)

Other versions available  
ON REQUEST:  
9 = 2700K (495 lm)  
7 = 5000K (570 lm)  
4 = Amber  
2 = Red  
3 = Green  
5 = Blue

3 LED DYNAMIC  
max. 500mA

POWER SUPPLY TO BE ORDERED SEPARATELY



**84 01 1X0**  
5W LED  
max. 500mA  
3 channels + 1 channel NTC  
power supply excluded  
Class III  
Category C4

A A+ A++

**84 01 1X3**  
5W LED  
max. 500mA  
3 channels + 1 channel NTC  
power supply excluded  
Class III  
Category C4

A A+ A++

**84 01 1X4**  
5W LED  
max. 500mA  
3 channels + 1 channel NTC  
power supply excluded  
Class III  
Category C4

A A+ A++

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

How to create the product code?

Dynamic versions available:  
0 = RGB

other versions available  
ON REQUEST  
8 = Dynamic White

Control systems for dynamic light p. 374

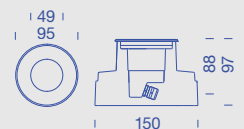
Systèmes de contrôle pour lumière dynamique p. 374

Technical data

Recessed box 89 45 035



Recessed box 89 45 036



ACCESSORIES

**89 45 035**  
88 mm Ø "Slim" recessed box H 100 mm  
Pot d'encastrement rond Ø 88 mm H. 100 mm

**89 17 004**  
IP68 Gel Connector max. 3 x 4 mm<sup>2</sup> Ø 9,5 - 12 mm  
Connecteur gel IP68  
Ø 9,5 - 12 mm max 3 x 4 mm<sup>2</sup>

**89 45 036**  
88 mm Ø round recessed box, H 100 mm,  
with a 150 mm Ø base  
Pot d'encastrement Ø 88 mm H. 100 mm  
avec Ø de base de 150 mm

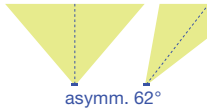
**89 17 007**  
IP68 Gel Connector  
max. 3 x 1,5 mm<sup>2</sup> Ø 7 - 12 mm  
Connecteur rapide IP68  
Ø 7 - 12 mm max. 3 x 1,5mm<sup>2</sup>

**89 18 015**  
Sandblasted filter  
Diffuseur en verre sablé



CASA DI CACCIA  
PIACENZA, ITALIA





1 LED  
max. 700mA

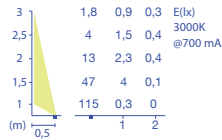
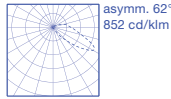
POWER SUPPLY TO BE ORDERED SEPARATELY

Asymmetric  
Asymétrique



**84 01 0X9**  
2,5W LED  
220-240V 50/60Hz  
max. 700mA  
power supply excluded  
Class III  
Category C4

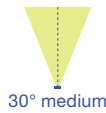
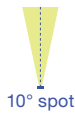
**A A+ A++**



**How to create the product code?**

WHITE versions available:  
1 = 3000K (220 lm @ 700mA)  
6 = 4000K (250 lm @ 700mA)

Other versions available  
ON REQUEST:  
9 = 2700K (220 lm @ 700mA)  
7 = 5000K (250 lm @ 700mA)  
4 = Amber  
2 = Red  
3 = Green  
5 = Blue



1 LED RGB  
FULL COLOR  
max. 350mA

POWER SUPPLY TO BE ORDERED SEPARATELY



**84 01 001**  
3W LED Full Color  
max. 350mA  
3 channels  
power supply excluded  
Class III  
Category C4

**A A+ A++**

**84 01 003**  
3W LED Full Color  
max. 350mA  
3 channels  
power supply excluded  
Class III  
Category C4

**A A+ A++**

**NOTE: The final lumen package and distribution pattern is to be determined by the successful contractor.**

Control systems for dynamic light p. 374

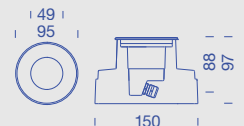
Systèmes de contrôle pour lumière dynamique p. 374

**Technical data**

Recessed box 89 45 035



Recessed box 89 45 036



**ACCESSORIES**

**89 45 035**  
88 mm Ø "Slim" recessed box H 100 mm  
Pot d'encastrement rond Ø 88 mm H. 100 mm

**89 45 036**  
88 mm Ø round recessed box, H 100 mm, with a 150 mm Ø base  
Pot d'encastrement Ø 88 mm H. 100 mm avec Ø de base de 150 mm

**89 18 015**  
Sandblasted filter  
Diffuseur en verre sablé

**89 17 004**  
IP68 Gel Connector max. 3 x 4 mm<sup>2</sup> Ø 9,5 - 12 mm  
Connecteur gel IP68  
Ø 9,5 - 12 mm max 3 x 4 mm<sup>2</sup>

**89 17 007**  
IP68 Gel Connector max. 3 x 1,5 mm<sup>2</sup> Ø 7 - 12 mm  
Connecteur rapide IP68  
Ø 7 - 12 mm max. 3 x 1,5mm<sup>2</sup>

**89 56 090**  
IP67 power supply unit 700mA 10VA (max. 3 LED)  
Alimentation IP67 700mA (pour max. 3 LED)

**89 56 117**  
IP67 power supply unit 700mA (max. 12 LED)  
Alimentation IP 67 700mA (pour max. 12 LED)

**89 56 069**  
IP67 power supply unit 350mA (max. 3 LED)  
Alimentation IP 67 350mA (pour max. 3 LED)

**89 56 117**  
IP67 power supply unit 700mA 30VA (max. 12 LED)  
Alimentation IP 67 700mA 30VA (pour max. 12 LED)