

FLIGHT

Roadway lighting systems
from 2700 lm to 30000 lm

LIGHTING



Palazzoli
LUCE D'AUTORE

FLIGHT



The series

New fixtures for street lighting are made through die-casting in EN44300 aluminum alloy with very low copper content, featuring anti-corrosion treatment to ensure maximum resistance even in harsh environments. The electronic assembly is equipped with proprietary LED modules, protected against short circuits, overvoltages, and overtemperatures. The FLIGHT range is available with reflectors in 99.9% pure aluminum or with PMMA lenses with over 95% transparency. This flexibility allows the range to have a wide variety of optics available for installation in any situation. The diffuser is made of 4mm thick extra-clear flat tempered glass, resistant to impacts and UV rays. The fixing system is universal and adjustable, suitable for pole head and overhang, and can be used on poles with a diameter ranging from 42mm to 76mm. FLIGHT uses white light LEDs with adjustable color temperature from 2200K to 5700K and achieves an efficiency of 165 lm/W. Upon request, FLIGHT can be equipped or prepared for the installation of NEMA or ZHAGA SOCKETS, allowing centralized monitoring and management of public lighting through wireless control, enabling integration with the IoT world.



FLIGHT S



FLIGHT M



The range

FLIGHT SIZE S roadway lighting systems



FLIGHT SIZE M roadway lighting systems

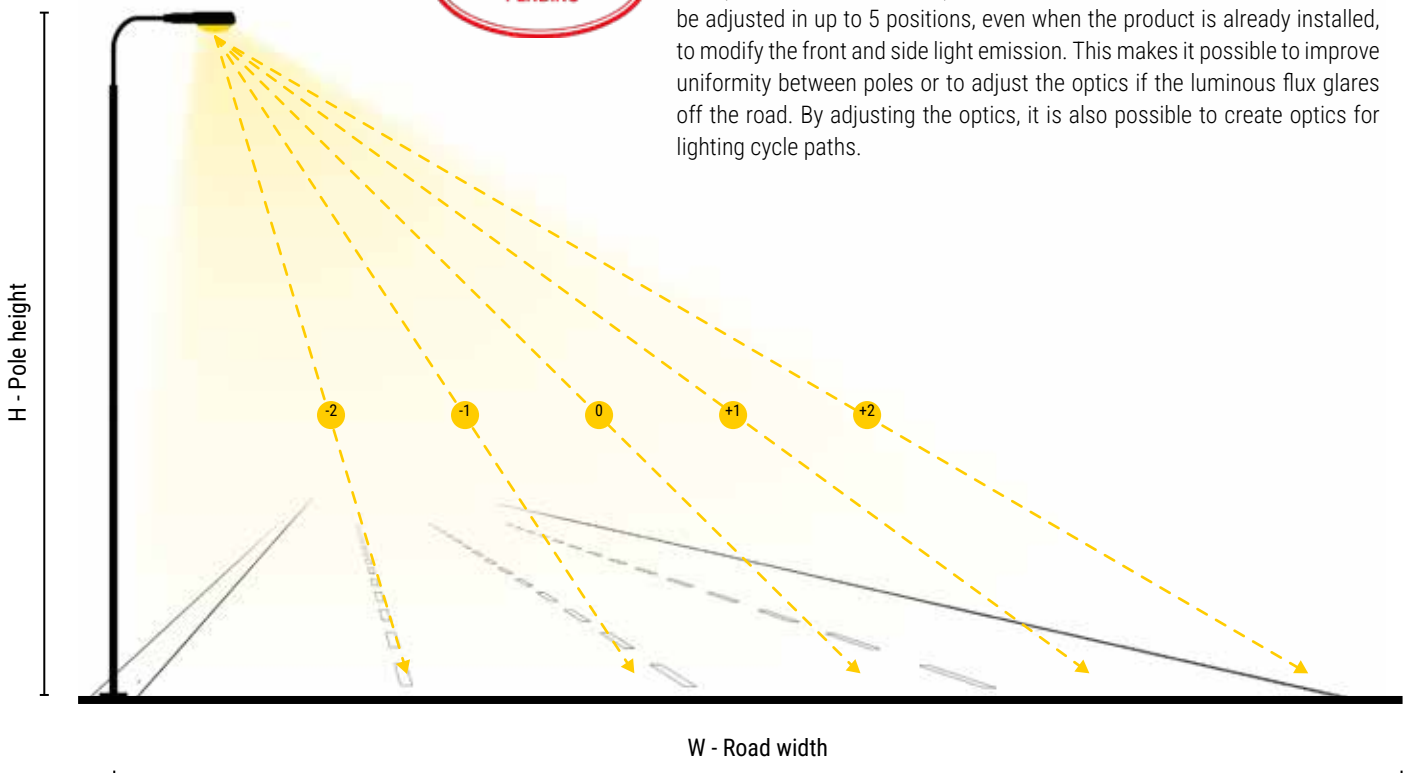


Nominal flux	2726 lm to 12044 lm	14742 lm to 361362 lm
Output flux	2272 lm to 10037 lm	12285 lm to 30110 lm
Power	up to 66 W	up to 197 W
Efficacy	up to 165 lm/W	up to 160 lm/W
Control systems	On - off (dimnable upon request through various standards)	On - off (dimnable upon request through various standards)
Versions	Standard	Standard
Optics	STR-ST roadway narrow beam STR-AM roadway wide beam STR-ST cycle lane SX Crosswalks DX Crosswalks 45° roadway wide beam 60° roadway wide beam Large areas 60° extra wide beam	STR-ST roadway narrow beam STR-AM roadway wide beam SX Crosswalks DX Crosswalks 45° roadway wide beam 60° roadway wide beam Large areas 60° extra wide beam



FOS - FLIGHT Optical System

FOS (FLIGHT Optical System) is Palazzoli's system that allows the optics to be adjusted in up to 5 positions, even when the product is already installed, to modify the front and side light emission. This makes it possible to improve uniformity between poles or to adjust the optics if the luminous flux glares off the road. By adjusting the optics, it is also possible to create optics for lighting cycle paths.



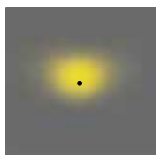
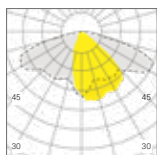
The FLIGHT range with reflectors in pure 99.9% aluminum and PVD coating in silver



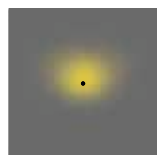
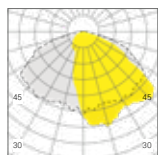
The FLIGHT range with PMMA lenses, anti-aging, UV-resistant, with efficiency >90% and transparency >95%



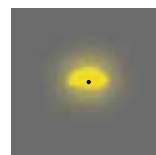
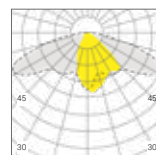
Optics



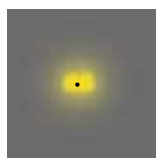
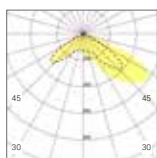
STR-ST roadway narrow beam



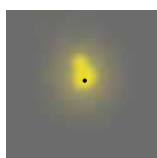
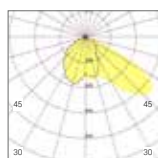
STR-AM roadway wide beam



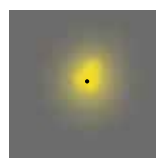
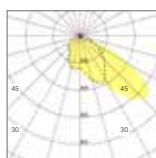
STR-ST cycle lane



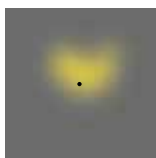
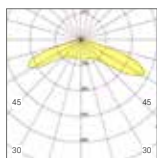
Large areas 60° extra wide beam



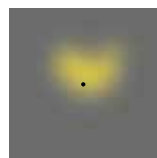
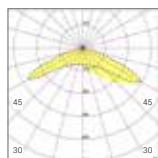
SX Crosswalks



DX Crosswalks



45° roadway wide beam



60° roadway wide beam



Fastening systems



WALL BRACKET

DOUBLE PROJECTING
BRACKET

SINGLE PROJECTING
BRACKET

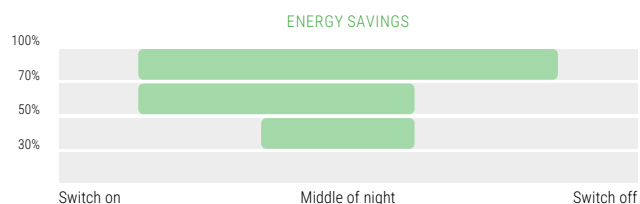
System architecture

Electronic group with proprietary LED modules, power supply integrated into the body with direct connection to the connector to streamline wiring.



Ready for smart cities

FLIGHT can be equipped with control systems based on adjustments with an internal timer and wireless systems for integration into the IoT world in order to monitor and manage public lighting in real time, reduce operating costs, and dynamically program light levels. On the luminaire body, two different connection solutions to light management devices can be accommodated: with ZHAGA socket and with NEMA socket.



ZHAGA Socket (ZHAGA Book 18): is a new standardized watertight socket powered at low voltage through the internal DALI driver of the luminaire, suitable for managing modern wireless remote control systems; materials resistant to UV rays and strong impact resistance complete the characteristics of this robust connector.



NEMA Socket (ANSI C136.41): is a watertight socket, positioned on the luminaire cover to simplify maintenance by avoiding the need to access internal electrical components. It is the ideal interface for installing traditional brightness sensors and is equipped with 5 or 7 poles: 3 for electrical connection, the remaining 2 or 4 pins for carrying the signal with 1/10V or DALI protocol.



Roadway

Roundabouts

Roads

Motorways



FLIGHT



WARRANTY
2 YEARS OPTIONALLY EXTENDABLE TO 7



DIRECTIVES

2014/30/UE (EMC)
2014/35/UE (LVD)
2011/65/UE (RoHS)
2012/19/UE (RAEE)
2009/125/CE (ERP)
Reg. UE 2019/2020 (EcoDesign)

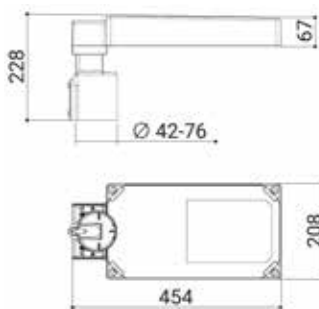
PRODUCT STANDARDS

EN 55015
EN 60598-1
EN 60598-2-1
EN 60598-2-3
EN 60598-2-5
EN 61000-3-2
EN 61000-3-3
EN 61547
EN 62311
EN 62493
EN 62471
IEC TR 62778
EN 63000

Body material	Low-copper aluminium alloy EN 44300
Surface treatment	Fluorozirconate passivation
Surface finish	Non-toxic polyester, anti UV, kilnpolymerised coating
Colour	Grey RAL 7011
Diffuser material	Extra clear tempered glass
Protection rating	IP66 as per IEC 60598-1
Impact resistance	IK08 according to IEC/EN 62262
Corrosion class	C5-M / C4-H (ISO 9223)
Mounting system	Pole attachment 42÷76 mm Pole-top - 5°÷ +20° -20°÷+5° projecting bracket
Ambient operating temperature	-30°C - +40°C
Ambient storage temperature	-40°C - +70°C
Wind load surface	Size S side 0.03 m ² - front 0.13 m ² Size M side 0.04 m ² - front 0.18 m ²
Actual efficacy of the device	Up to 165 lm/W
Colour temperature	4000K - 3000K
Optics features	High efficiency 99.9% aluminium reflector PMMA lenses with anti-aging properties, UV-resistant, with efficiency >90%, and transparency >95%
Colour rendering index values	CRI≥70 according to EN 62717
Colour consistency	MacAdam 4-step
Photobiological risk	RG0-Exempt Group (EN 62471)
Residual flicker	<1%
Luminous flux maintenance	L80 B10 150.000 h Tq=+25°C
Insulation class	II
Supply voltage	200-240V 50-60Hz
Surge protection	10 kV common mode and differential mode according to EN61000-4-5
Power factor	>0,95
Type of power supply	Connector with cable length 70 cm
Max. conductor cross-section	1÷2,5 mm ²
Entry cable diameter	7÷13 mm

On request, special versions are available with virtual midnight, NEMA and ZHAGA sockets, operating temperatures up to +60°C, and colour temperatures from 2200K to 5700K.

FLIGHT | size S

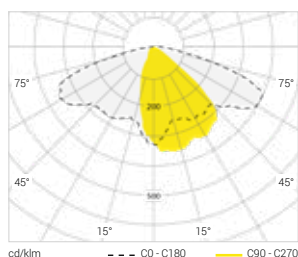


Flicker
<1%

Class
II

IP66

IK08



STR-ST roadway narrow beam optics

Included: adjustable pole mount -5° to +20° for pole-top application; -20° to +5° for wall mounting with projecting arm.
Suitable for pole diameters from 42 mm to 76 mm.
Aluminum reflector. FOS see page 4.
The stated flux and power values may be subject to a +/- 7% tolerance.

4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
14	14	2726	2272	Glass	163	On-off	5,00	804131
14	38	6790	5658	Glass	150	On-off	5,00	804191
28	28	5520	4600	Glass	165	On-off	5,00	804231
28	53	9786	8155	Glass	153	On-off	5,00	804271
28	66	12044	10037	Glass	153	On-off	5,00	804281

3000 K
Class II

14	38	6427	5356	Glass	142	On-off	5,00	803191
28	53	9781	8151	Glass	142	On-off	5,00	803271
28	66	11178	9315	Glass	142	On-off	5,00	803281

FLIGHT | size S

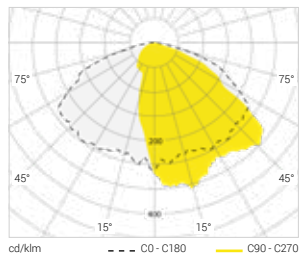
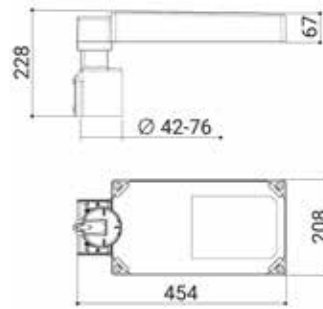


Flicker
<1%

Class
II

IP66

IK08

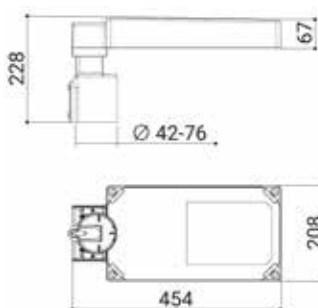


STR-AM roadway wide beam optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm.
Suitable for pole diameters from 42 mm to 76 mm.
Aluminum reflector. FOS see page 4.
The stated flux and power values may be subject to a +/- 7% tolerance.

	No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
4000 K Class II	14	14	2726	2272	Glass	163	On-off	5,00	804130
	14	38	6790	5658	Glass	150	On-off	5,00	804190
	28	28	5520	4600	Glass	165	On-off	5,00	804230
	28	53	9786	8155	Glass	153	On-off	5,00	804270
	28	66	12044	10037	Glass	153	On-off	5,00	804280
3000 K Class II	14	38	6427	5356	Glass	142	On-off	5,00	803190
	28	53	9781	8151	Glass	142	On-off	5,00	803270
	28	66	11178	9315	Glass	142	On-off	5,00	803280

FLIGHT | size S

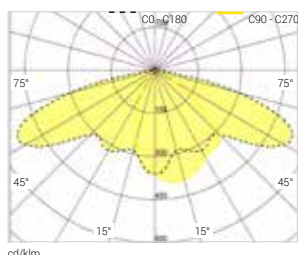


Flicker
<1%

Class
II

IP66

IK08



STR-ST cycle lane optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm.
Suitable for pole diameters from 42 mm to 76 mm.
Aluminum reflector. FOS see page 4.
The stated flux and power values may be subject to a +/- 7% tolerance.

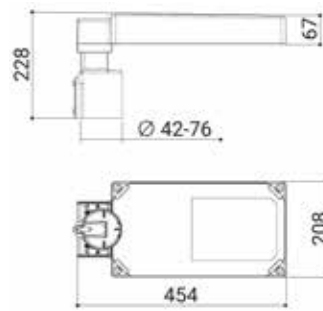
4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm) _{Tj=25 °C}	Output flux (lm) _{Tq=25 °C}	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
14	16	2854	2378	Glass	145	On-off	5,00	804142
28	28	6022	5018	Glass	153	On-off	5,00	804242

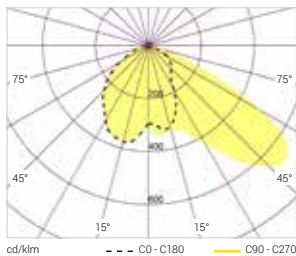
3000 K
Class II

14	16	2795	2329	Glass	142	On-off	5,00	803142
28	28	5904	4920	Glass	150	On-off	5,00	803242

FLIGHT | size S



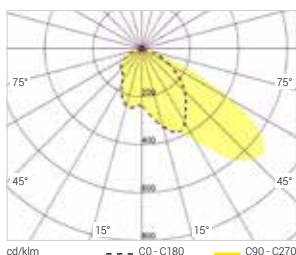
Flicker <1%	Class II
IP66	IK08



SX crosswalks optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

	No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
4000 K Class II	20	29	5150	4292	Glass	148	On-off	5,00	804113
	20	58	9744	8120	Glass	140	On-off	5,00	804123
3000 K Class II	20	58	8700	7250	Glass	125	On-off	5,00	803123



DX crosswalks optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

	No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
4000 K Class II	20	29	5150	4292	Glass	148	On-off	5,00	804114
	20	58	9744	8120	Glass	140	On-off	5,00	804124
3000 K Class II	20	58	8700	7250	Glass	125	On-off	5,00	803124

FLIGHT | size S

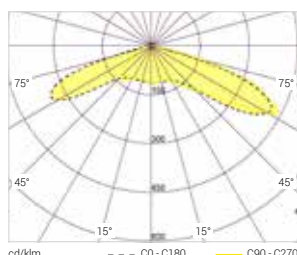
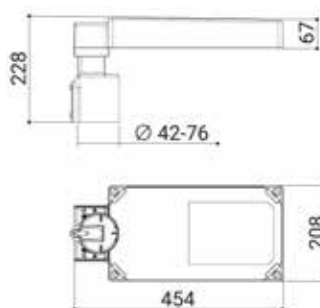


Flicker
<1%

Class
II

IP66

IK08



45° roadway wide beam optics

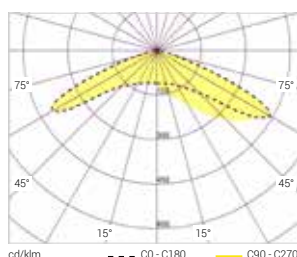
Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
20	29	5150	4292	Glass	148	On-off	5,00	804115
20	58	9744	8120	Glass	140	On-off	5,00	804125

3000 K
Class II

20	58	8700	7250	Glass	125	On-off	5,00	803125
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60° roadway wide beam optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

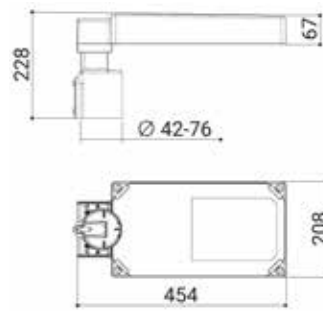
4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
20	29	5150	4292	Glass	148	On-off	5,00	804116
20	58	9744	8120	Glass	140	On-off	5,00	804126

3000 K
Class II

20	58	8700	7250	Glass	125	On-off	5,00	803126
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FLIGHT | size S

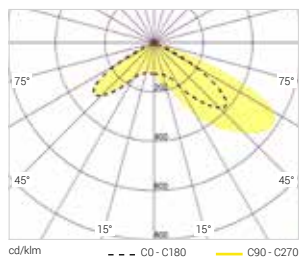


Flicker
<1%

Class
II

IP66

IK08



Large areas 60° extra wide beam optics

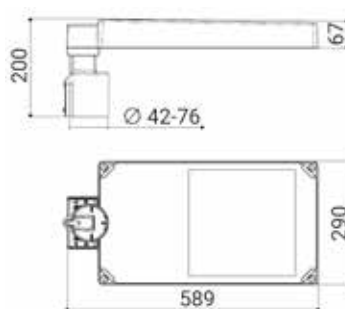
Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm.

PMMA lenses.

The stated flux and power values may be subject to a +/- 7% tolerance.

	No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
4000 K Class II	20	29	5150	4292	Glass	148	On-off	5,00	804117
	20	58	9744	8120	Glass	140	On-off	5,00	804127
3000 K Class II	20	58	8700	7250	Glass	125	On-off	5,00	803127

FLIGHT | size M

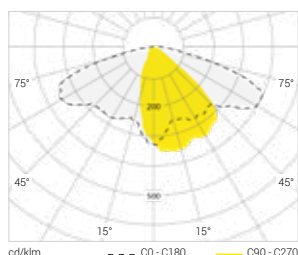


Flicker
<1%

Class
II

IP66

IK08



STR-ST roadway narrow beam optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm.
Suitable for pole diameters from 42 mm to 76 mm.
Aluminum reflector. FOS see page 4.
The stated flux and power values may be subject to a +/- 7% tolerance.

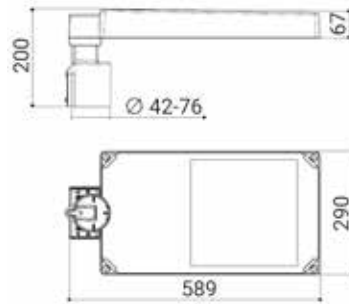
4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
42	86	16118	13432	Glass	156	On-off	7,50	804371
42	113	20776	17313	Glass	153	On-off	7,50	804391
56	151	27702	23085	Glass	153	On-off	7,50	804491
70	164	30110	25092	Glass	153	On-off	7,50	804581
84	197	36132	30110	Glass	153	On-off	7,50	804681

3000 K
Class II

42	86	15292	12743	Glass	148	On-off	7,50	803371
42	113	19283	16069	Glass	142	On-off	7,50	803391
56	151	25710	21425	Glass	142	On-off	7,50	803491
70	164	27946	23288	Glass	142	On-off	7,50	803581
84	197	33535	27946	Glass	142	On-off	7,50	803681

FLIGHT | size M

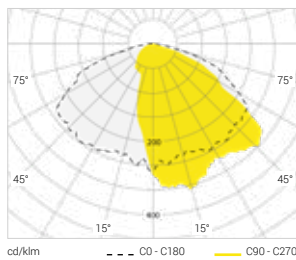


Flicker
<1%

Class
II

IP66

IK08



STR-AM roadway wide beam optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm.
Suitable for pole diameters from 42 mm to 76 mm.
Aluminum reflector. FOS see page 4.
The stated flux and power values may be subject to a +/- 7% tolerance.

4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm) Tj=25 °C	Output flux (lm) Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
42	86	16118	13432	Glass	156	On-off	7,50	804370
42	113	20776	17313	Glass	153	On-off	7,50	804390
56	151	27702	23085	Glass	153	On-off	7,50	804490
70	164	30110	25092	Glass	153	On-off	7,50	804580
42	197	36132	30110	Glass	153	On-off	7,50	804680

3000 K
Class II

42	86	15292	12743	Glass	148	On-off	7,50	803370
42	113	19283	16069	Glass	142	On-off	7,50	803390
56	151	25710	21425	Glass	142	On-off	7,50	803490
70	164	27946	23288	Glass	142	On-off	7,50	803580
84	197	33535	27946	Glass	142	On-off	7,50	803680

FLIGHT | size M

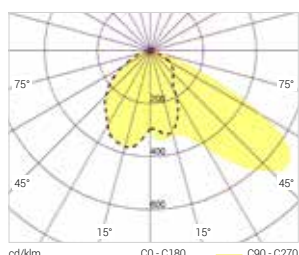
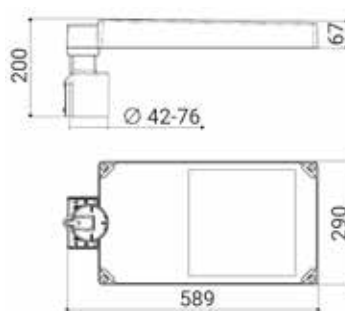


Flicker
<1%

Class
II

IP66

IK08



SX crosswalks optics

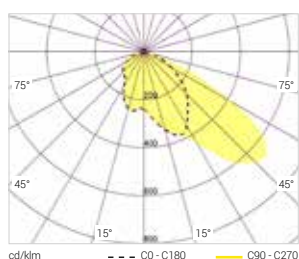
Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
40	82	14742	12285	Glass	150	On-off	7,50	804173
80	117	21341	17784	Glass	152	On-off	7,50	804253
80	164	29484	24570	Glass	150	On-off	7,50	804273

3000 K
Class II

40	82	14054	11712	Glass	143	On-off	7,50	803173
80	117	20358	16965	Glass	145	On-off	7,50	803253
80	164	28108	23423	Glass	143	On-off	7,50	803273



DX crosswalks optics

Included: adjustable pole mount -5° to + 20° for pole-top application; -20° to + 5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

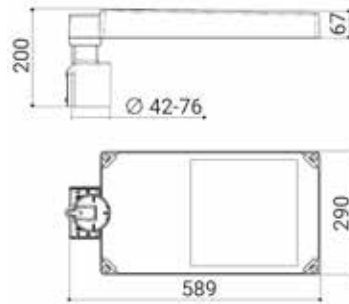
4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
40	82	14742	12285	Glass	150	On-off	7,50	804174
80	117	21341	17784	Glass	152	On-off	7,50	804254
80	164	29484	24570	Glass	150	On-off	7,50	804274

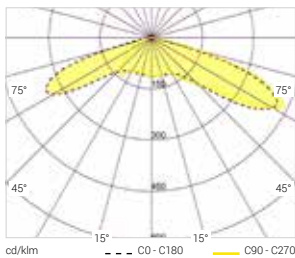
3000 K
Class II

40	82	14054	11712	Glass	143	On-off	7,50	803174
80	117	20358	16965	Glass	145	On-off	7,50	803254
80	164	28108	23423	Glass	143	On-off	7,50	803274

FLIGHT | size M



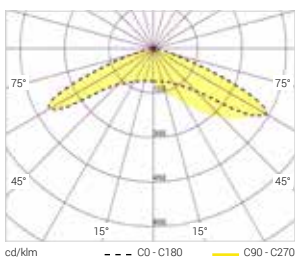
Flicker <1%	Class II
IP66	IK08



45° roadway wide beam optics

Included: adjustable pole mount -5° to +20° for pole-top application; -20° to +5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

	No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
4000 K Class II	40	82	14742	12285	Glass	150	On-off	7,50	804175
	80	117	21341	17784	Glass	152	On-off	7,50	804255
	80	164	29484	24570	Glass	150	On-off	7,50	804275
3000 K Class II	40	82	14054	11712	Glass	143	On-off	7,50	803175
	80	117	20358	16965	Glass	145	On-off	7,50	803255
	80	164	28108	23423	Glass	143	On-off	7,50	803275

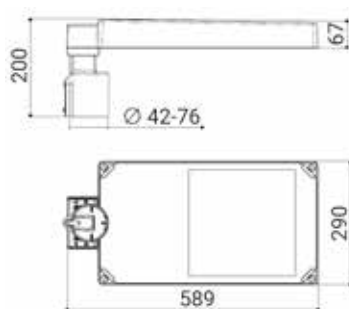


60° roadway wide beam optics

Included: adjustable pole mount -5° to +20° for pole-top application; -20° to +5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm. PMMA lenses. The stated flux and power values may be subject to a +/- 7% tolerance.

	No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
4000 K Class II	40	82	14742	12285	Glass	150	On-off	7,50	804176
	80	117	21341	17784	Glass	152	On-off	7,50	804256
	80	164	29484	24570	Glass	150	On-off	7,50	804276
3000 K Class II	40	82	14054	11712	Glass	143	On-off	7,50	803176
	80	117	20358	16965	Glass	145	On-off	7,50	803256
	80	164	28108	23423	Glass	143	On-off	7,50	803276

FLIGHT | size M

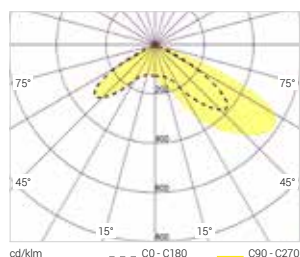


Flicker
<1%

Class
II

IP66

IK08



Large areas 60° extra wide beam optics

Included: adjustable pole mount -5° to +20° for pole-top application; -20° to +5° for wall mounting with projecting arm. Suitable for pole diameters from 42 mm to 76 mm.

PMMA lenses.

The stated flux and power values may be subject to a +/- 7% tolerance.

4000 K
Class II

No. of LEDs	Power (W)	Nominal flux (lm)Tj=25 °C	Output flux (lm)Tq=25 °C	Diffuser	Efficacy (lm/W)	Version	Weight (kg)	Code
40	82	14742	12285	Glass	150	On-off	7,50	804177
80	117	22464	18720	Glass	160	On-off	7,50	804257
80	164	31056	25880	Glass	158	On-off	7,50	804277

3000 K
Class II

40	82	14054	11712	Glass	143	On-off	7,50	803177
80	117	21341	17784	Glass	152	On-off	7,50	803257
80	164	29484	24570	Glass	150	On-off	7,50	803277

Accessories FLIGHT




FLIGHT equipped with double projecting bracket

Single projecting bracket

	<p>Material: Painted galvanised steel</p>
<p>Code: 834901</p>	

Double projecting bracket

	<p>Material: Painted galvanised steel</p>
<p>Code: 834902</p>	

Wall installation bracket

	<p>Material: Painted galvanised steel</p>
<p>Code: 834903</p>	



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