

KIO LED



FEATURES

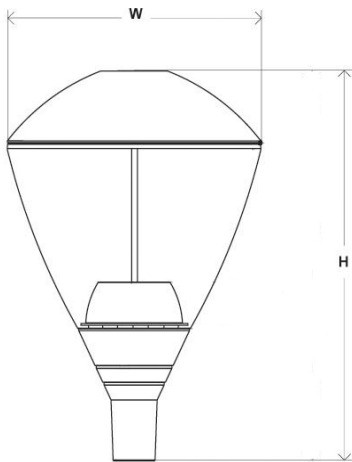
Elegance, comfort, creation of ambiance and performance

- Creation of ambiance
- Low energy consumption
- Visual comfort
- Elegant design for low height installation
- LensoFlex®2 offering high performance photometry, comfort and safety
- Designed to incorporate Owllet control and sensor solutions
- Future Proof : smart upgradability
- Surge protection 10kV

TYPES OF APPLICATION

- Urban roads and streets
- Residential streets
- Squares and pedestrian areas
- Parks
- Car parks
- Bike paths
- Bridges

DIMENSION DRAWING



DIMENSIONS AND CHARACTERISTICS

Designer : Grandesign	KIOL00 (Kio LED)
Length (mm)	460
Width (mm)	460
Height (mm)	703
Weight (kg)**	8
Tightness level*	IP 66
Impact resistance*	IK 09
Electrical class*	Class I EU, Class II EU
Aerodynamic resistance (CxS)	0.080m ²

* According to IEC-EN60598 and IEC-EN62262

** Average weight. The max weight is +/- 10% more but for the exact weight according to the configuration, please contact us.

SUMMARY

CONCEPT

Park & residential area luminaire with choice of direct or diffused photometric distribution

Applications: [TYPEOFAPPLICATION]

Recommended installation height: between 4 and 5m

HOUSING & FINISH

Body and cover in corrosion free, high-pressure, die-cast aluminium, polyester powder coated

Protector in UV resistant polycarbonate

Colour: AKZO black 200 sanded

INSTALLATION

Post-top mounting on vertical mast with 76mm diameter with 60mm spigot

Fixation with 2 stainless steel grub screws.

Delivered with pre-fitted 5m cable

OPTICAL UNIT

Optical unit may be fitted with a methacrylate diffuser providing warm light and avoiding glare (comfort version)

Flatbed PCB, with acrylic lens overlay principle

CRI > 70

ULOR: 3.9%

LED lumen depreciation

Lifetime residual flux @ Tq=25°C @ 100,000h: 350mA & 500mA: 90%; 700mA: 80%.

ELECTRICAL

Input voltage: 120-277VAC, 220-240VAC - 50/60Hz

Power factor > 90% at full load

10kV surge protection

STANDARDS & CERTIFICATIONS

CE

LM79-80

ROHS

All measurements in ISO17025 accredited laboratory

OPTIONS

Other RAL or AKZO colours

OWLET remote management

Custom dimming profile, Constant Light Output (CLO), Bi-Power

Presence detection

CONCEPT

1. FutureProof: Smart Upgradability

Since LED technology is constantly evolving, both the photometric engine and the gears can be replaced at the end of the LEDs' lifespan to take advantage of future technological developments

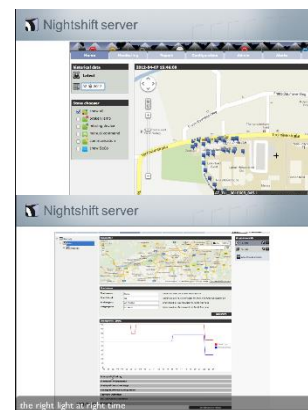
OPTIONS



1. OWLET wireless remote management dimming & control system

The luminaires are pre-programmable, wireless programmable or remotely programmable and controllable. Each individual light point can be switched off/on or dimmed at any time. Operating state, energy consumption and failures are reported and stored in a database with the exact timestamp and geographical location. Owlet helps lighting managers to assure the right lighting level while reducing operating costs and maintaining a sustainable outdoor lighting scheme. The wireless Luminaire Controllers (LuCo) exist in different types, all of them are compatible with each other.

1. Shows status of all light points per zone, per street...
2. Defines dimming profiles automatically/manually
3. Produces reports automatically/manually (operating & consumption)
4. Alarm schemes (failures, faults, consumption via SMS, phone, email)
5. Connects to 3rd party systems
6. Data exchange with other servers
7. Data management



Available Luminaire Controllers:

LuCo-PD: Wireless Individual Luminaire Controller with integrated photocell that is mounted on top of the luminaire. Connected to the driver via a cable.

LuCo-NXP: Wireless Individual Luminaire Controller integrated inside the luminaire with shark fin antenna on top.

Both types of luminaire controllers can control of individual luminaires or clusters of luminaires. They build a bi-directional mesh network amongst each other to the Segment Controller (one SeCo per 100/150 light points).

The above mentioned LuCo's, are commissioned either manually introduction in the web GUI (Graphical User Interface) or via the use of a wireless handheld device that allows automatic geo-positioning on the Owlet NightShift GUI.

*Segment controller & Antenna + cable order number:

Equipment	Order no.	Description
Segment Controller	00-05-921	Segment Control
Segment Controller Cable + Antenna GSM/UMTS + Zigbee 2,4GHz	00-05-922	Cable 1m
	00-05-924	Cable 2m
	00-05-927	Cable 3m

	00-05-925	Cable 5m
	00-05-923	Cable 7m
	00-05-926	Cable 10m
Commissioning tool	C777260	TMGT Wireless Handheld Tool Kit



2. Motion and/or presence detection

Motion detection is compatible with any type of control or dimming system. It will enhance the efficacy of the installation by only increasing the light level when a vehicle or a pedestrian is detected.

2.1 Stand-alone luminaire

This solution needs to be integrated in each luminaire if the installation is equipped with regular dimming without remote wireless connection.

2.2 Stand-alone network of luminaires

To monitor stand-alone networks or luminaire clusters with motion and/or presence detectors. The location of the detection device can be multiple (for example, either attached or integrated in the luminaire or in a remote location). To detect the arrival of a person that requires light, the sensor can either be on one, on a selection of luminaires, on all luminaires or in a remote location for the most optimum detection. In that case, in addition to the sensor selection, the LuCo-ADP will serve as communication node in all of the luminaires in the network. Each sensor can be attributed to one or multiple luminaires and vice versa!

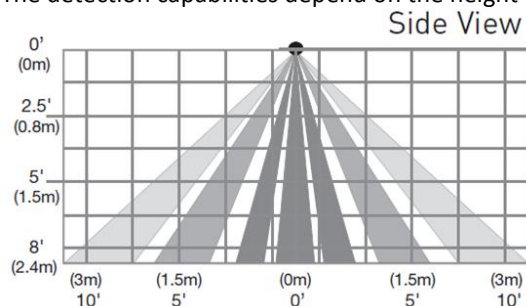
LuCo-ADP: Wireless Individual Luminaire Controller to manage a cluster of luminaires. The LuCo is integrated inside the luminaire with an antenna on the top. The luminaires communicate between each other via a bi-directional mesh network. A Master or Segment Controller is only temporarily required during the set-up of the system.

2.3 Remote wireless solutions (interoperable)

For installations with remote wireless solutions, the motion and presence detectors can also be located on one, on a selection of luminaires, on all luminaires or in a remote location to detect the arrival of people in the most optimum way. The LuCo-NXP and LuCo-PD will in that case play the role of the communication node. This option combines the functionality of the stand-alone network with remote wireless control.

2.4 Presence detection capabilities

The detection capabilities depend on the height of the installation and the type of sensor.



The settings of the luminaire will determine:

- The temporisation: the length of time a luminaire is switched on when a presence is detected
- When the sensor is idle or in detection mode

- The inclination of the luminaire influences the scope of the detection zone

The integration of sensors into round luminaires, needs to be synchronised and oriented according to the photometry and the motion path. Our staff is happy to help you with this analysis.

A stand-alone unit to integrate into a wireless Owlet control network; either autonomous or interoperable and equipped w/o PIR sensor:

Equipment	Order no.	Description
Moov-Box	P6010000001beu	P6010 MOOVBOX NO SENSOR LuCo-ADP
Moov-Box	P6010000002beu	P6010 MOOVBOX WITH SENSOR LuCo-ADP
Moov-Box	P6010000003beu	P6010 MOOVBOX WITH SENSOR LuCo-NXP
Moov-Box	P6010000004beu	P6010 MOOVBOX NO SENSOR LuCo-NXP



3. Dimming without wireless remote management

Custom dimming profile; Constant Light Output (CLO); Bi-Power dimming and Dali are available.

3.1 Custom Dimming

This option enables dimming profiles with up to 5 levels to adapt the light according to the real needs during the night. The dimming profile can be set up in two ways. The standard way determines the dimming profiles based on the middle of the night and is fully operational after 3 full nights. The second way (on request) determines that the night starts from the moment that the lights are switched on. The dimming profiles are immediately operational.

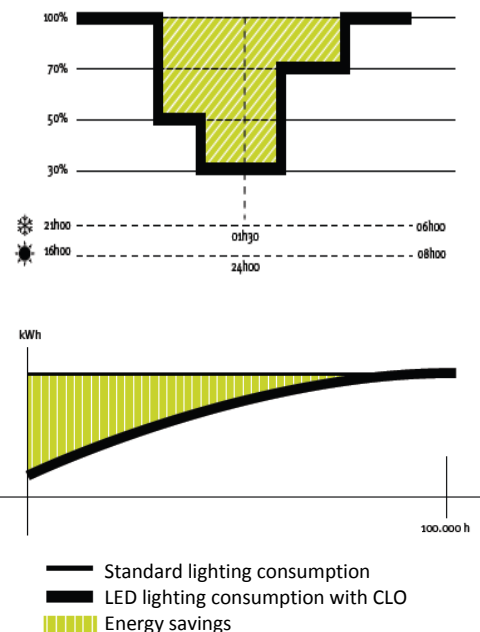
3.2 Constant Light Output

This system compensates for the depreciation of luminous flux and to avoid excess lighting at the beginning of the installation's service life, providing substantial energy savings.

3.3 Bi-Power functionality

In several countries an extra wire, a so-called control wire or switched line, is distributed throughout the street lighting network.

In most cases, when the street lighting is switched on, both the line and the switched line are energized to the 230V level. At a certain point during the night this switched line is switched off from the grid. The bi-power driver detects this signal as a command to reduce the output current to a lower preset value. In most cases this value equals 50%.





4. Photocell

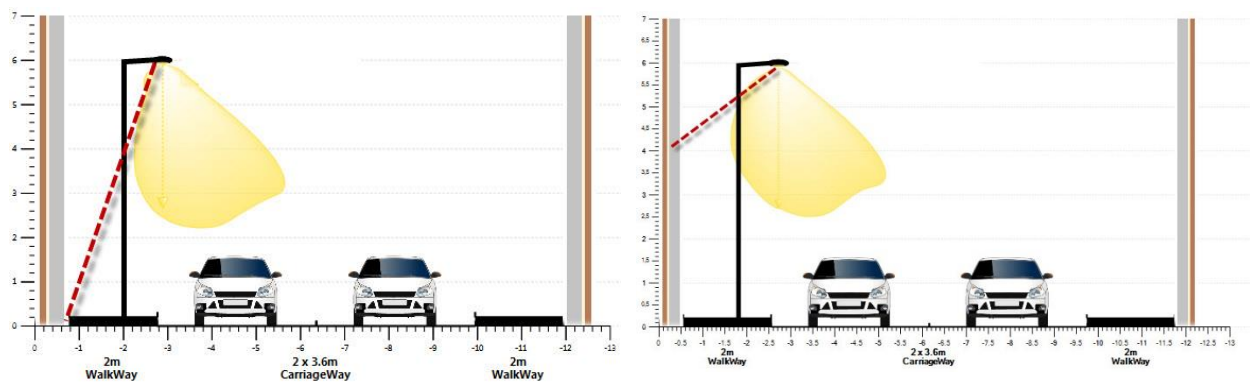
The photocell will switch on the luminaire as soon as daylight has reached a certain level. The photocell is compatible with regular or programmable drivers. Our photocell catalogue is at your disposal should you require a particular photocell according to your regional requirements and regulations.



5. Advanced Photometry

5.1 Back Light control

Back Light control will prevent light spill from the back of the luminaire.



6. Other colours available

Other RAL or AKZO colours are available on request.

LUMEN AND POWER DETAILS

Typical data for Neutral White (NW) LEDs (4000 K, CRI min. 70) at Tq 25° C.

Model	Acronym	Colour temp.	Flux code	Typical luminaire output (lm)	Luminaire power (W)	Luminaire efficacy (lm/W)	Current (mA)	Typical LED flux (lm)	LED Count
Kio LED	KIOL00	NW	001A0	1800	18	100	350	2400	16
Kio LED	KIOL00	NW	002A1	2400	26	92	500	3200	16
Kio LED	KIOL00	NW	002A2	2900	27	107	350	3600	24
Kio LED	KIOL00	NW	003A3	3000	36	83	700	4100	16
Kio LED	KIOL00	NW	003A4	3600	36	100	350	4800	32
Kio LED	KIOL00	NW	003A5	3900	38	103	500	4800	24
Kio LED	KIOL00	NW	004A6	4800	52	92	500	6400	32
Kio LED	KIOL00	NW	004A7	4900	55	89	700	6100	24
Kio LED	KIOL00	NW	006A8	6100	73	84	700	8200	32

Note: The flux is an indicative average and may vary with the different optics and types of protector. Tolerance on LED flux is $\pm 7\%$ and on total luminaire power $\pm 5\%$.

The precise flux and corresponding matrix for each configuration are available on www.schreder.com

Typical data for Warm White (WW) LEDs (3000 K, CRI min. 80) at Tq 25° C.

Model	Acronym	Colour temp.	Flux code	Typical luminaire output (lm)	Luminaire power (W)	Luminaire efficacy (lm/W)	Current (mA)	Typical LED flux (lm)	LED Count
Kio LED	KIOL00	WW	001A0	1700	18	94	350	2200	16
Kio LED	KIOL00	WW	002A1	2200	26	85	500	3000	16
Kio LED	KIOL00	WW	002A2	2700	27	100	350	3400	24
Kio LED	KIOL00	WW	002A3	2800	36	78	700	3800	16
Kio LED	KIOL00	WW	003A4	3300	36	92	350	4500	32
Kio LED	KIOL00	WW	003A5	3600	38	95	500	4500	24
Kio LED	KIOL00	WW	004A6	4500	52	87	500	6000	32
Kio LED	KIOL00	WW	004A7	4600	55	84	700	5700	24
Kio LED	KIOL00	WW	005A8	5700	73	78	700	7600	32

Note: The flux is an indicative average and may vary with the different optics and types of protector. Tolerance on LED flux is $\pm 7\%$ and on total luminaire power $\pm 5\%$.

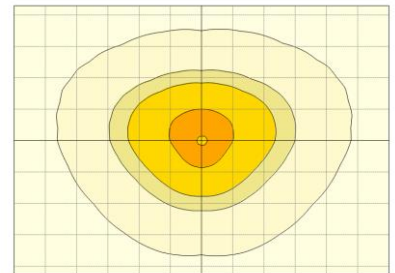
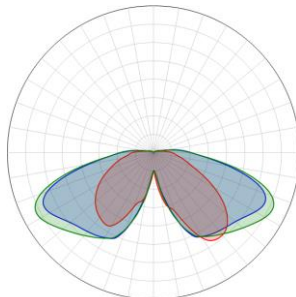
The precise flux and corresponding matrix for each configuration are available on www.schreder.com

PHOTOMETRY

5068AS

Asymmetrical

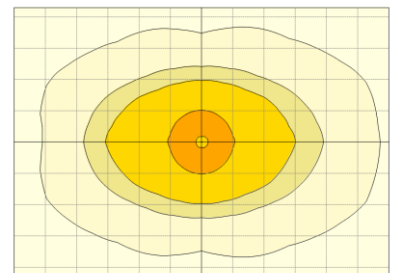
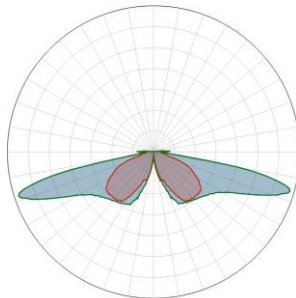
Wide



5068SY

Symmetrical

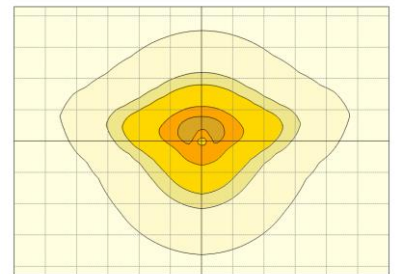
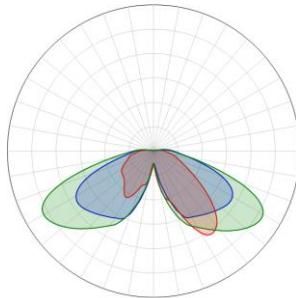
Wide



5096AS

Asymmetrical

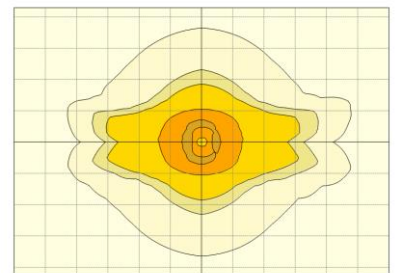
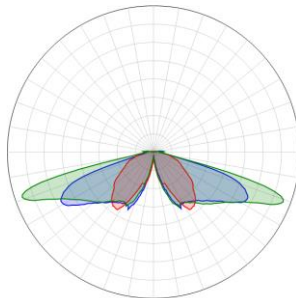
Medium



5096SY

Symmetrical

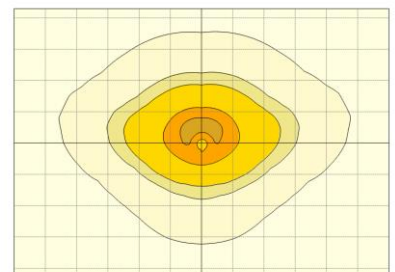
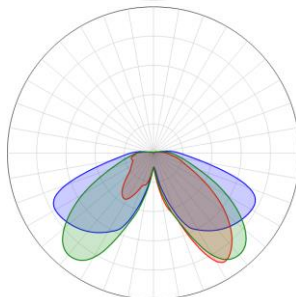
Medium



5098AS

Asymmetrical

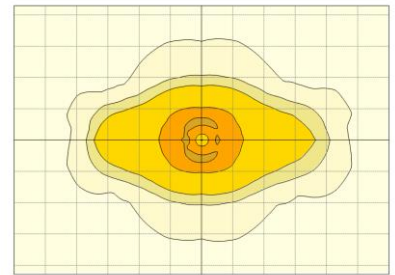
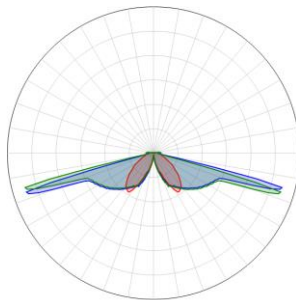
Medium



5098SY

Symmetrical

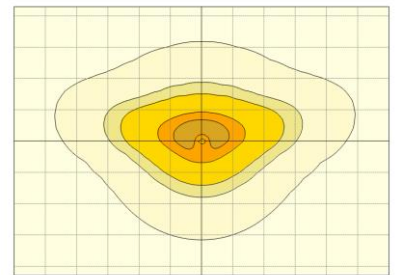
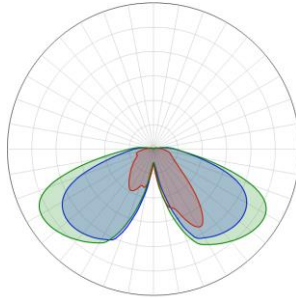
Medium



5102AS

Asymmetrical

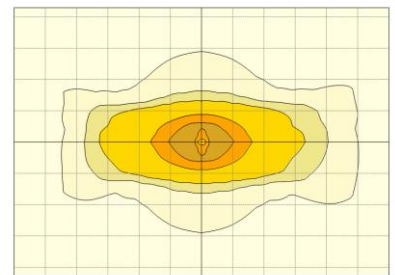
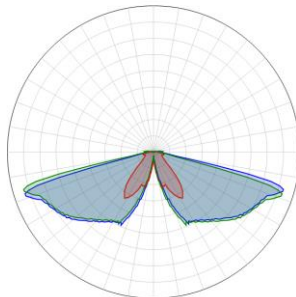
Medium



5102SY

Symmetrical

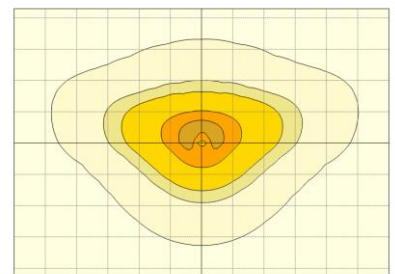
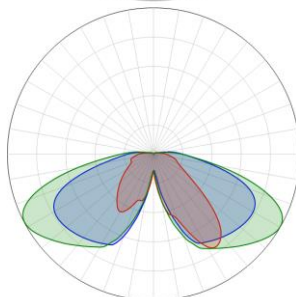
Medium



5103AS

Asymmetrical

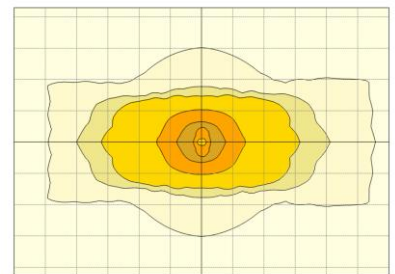
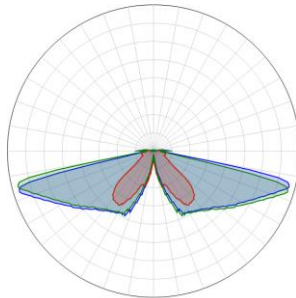
Wide



5103SY

Symmetrical

Wide



HOW TO CREATE A VALID ORDERING CODE ?

1 Go to the Ordering Data page(s) and compose your solution by choosing one code per column in order to specify the **PRODUCT ID**, **COUNTRY** (of installation), **OPTICAL BLOCK**, **GEARS**, **CONTROLS**, **FIXATIONS** and **COLOUR**. You may choose several **OPTIONS**.

ORDERING DATA																	Schneider
ID	COUNTRY	OPTICAL BLOCK			GEARS			CONTROLS [H]					OPTIONS		COLOUR		
PRODUCT ID	COUNTRY OF INSTALLATION [1]	COLOUR TEMP	FLUX CODE [2]	PHOTOMETRY TYPE [3]	PROTECTOR TYPE [3]	VOLTAGE & EL. CLASS	DIMMING	ELECTR. PROTECTION	POWER CABLE	CABLE TYPE	CONTROLLER	PHOTO CELL	SENSOR	FIXATIONS	OPTIONS [5]	COLOUR	
PRODXX PRODXX	AO Angola	NW Neutral White		5068AS 5096AS	GL01 Flat Glass	V01 120V CL1	D00 No Dimming	53 100V - no Fuse	C0 No Cable	00 No Cable	C0 No Controller	0 No Photocell	0 No Sensor	U2 Universal 32mm	N0 No Options	06 AKZO 150 GS	
AR Argentina	WW Warm White			5098AS 5102AS	GL04 Flat Glass + self-cleaning	V02 230V CL1	D01 0 - 10V	59 100V + Fuse 5x20mm Time Lag 3A	CH Cable length 4m	2C 2x1.5"	C1 LuCo-NXP	8 Nema Socket	1 PIR Presence	U3 Universal 42-48mm	A0 Toolless	08 RAL 3004 T	

2 Configure your solution easily: most of the proposed options do not require any additional information and are briefly explained below the code (refer to the footnotes to check compatibility between the selected options).

COUNTRY	OPTICAL BLOCK	GEARS	CONTROLS [4]	FIXATIONS	OPTIONS
COUNTRY OF INSTALLATION [1]	COLOUR TEMP	VOLTAGE & EL. CLASS	CONTROLLER	FIXATIONS	OPTIONS [5]
AO Angola	NW Neutral White	V01 120V CL1	D00 No Dimming	U2 Universal 32mm	N0 No Options
AR Argentina	WW Warm White	V02 230V CL1	D01 0 - 10V	U3 Universal 42-48mm	A0 Toolless

3 Choose your **Flux**, **Photometry** and **Control** codes by referring to more detailed information included in the Product Sheet.

Flux CODE *	Flux temp.	Flux code	Typical luminaire output (lm)	Power (W)
PRODUCTX	NW	001A0	1000	10
PRODUCTX	NW	001A1	1400	14
PRODUCTX	NW	001A2	1800	19
PRODUCTX	NW	002A3	2000	18
PRODUCTX	NW	002A4	2700	26
PRODUCTX	NW	003A5	3000	

Depending on your choice of colour temperature, please refer to the corresponding table to find the **flux code** for the typical lumen package you require^(*). Please check the **Product ID** to make sure that the lumen package you need is available with the size you have chosen.

PHOTO METRY TYPE **	PHOTO METRY
5068AS	
5096AS	
5098AS	
5102AS	
5103AS	
5112AS	

To choose the **photometry**, refer to the 4 digit codes beside the curves and diagrams^(*). AS = asymmetrical, SY = symmetrical and BL = Back Light control.

^(*) The precise flux and corresponding matrix for each configuration are available on www.schneider.com

CONTROLLER	CONTROLLER
C0	No Controller
C1	LuCo-NXP
C2	LuCo-ADP

Available Luminaire Controllers:

LuCo-PD: Wireless Individual Luminaire Control or control of luminaire clusters. Acts as per 100/150 light points.

LuCo-NX: Wireless Individual Luminaire Control of luminaire clusters. Requires a Segma

To commission the above mentioned LUCC map in the Owllet user interface NightShift

To configure the ideal solution between the features you need and the available **controllers**, refer to the description in the Product sheet.

EXAMPLES OF VALID ORDERING CODES

ONLY WITH STANDARD FEATURES

PRODXX - 00 - NW008AH - 5118BL - GL01 - V02D03S3 - C000 - C201 - U4 - A1 - A6 - 0L

Product ID (6 digits)	Universal (2 digits)	Colour temperature + Flux code (7 digits)	Photometry type (6 digits)	Protector type (2 digits)	Voltage & elec. class + Dimming + Elec. protection (8 digits)	Power cable type (4 digits)	Controller + Photocell + Sensor (4 digits)	Fixation (2 digits)	Options (2 digits each)	Colour (2 digits)
	ISO 3166 country code (2 digits)		Custom photometry		Voltage & elec. class + Custom dimming + Elec. protection (8 digits)	Custom power cable (4 digits)	Custom contr., Photocell & Sensor (4 digits)		Customised options (Photometry, Dimming, Cables, Control & Photocell) for which you will receive a specific code (4 digits each)	Specific RAL colour (8 digits)

WITH CUSTOMISED REQUESTS

PRODXX - AT - NW008AH - CUSTOM - GL04 - V02D0453 - CJZZ - ZZZZ - U4 - PXXX - DXXX - CXXX - SXXX - TXXX - RAL3005M

ID	COUNTRY	OPTICAL BLOCK				GEARS					CONTROLS [4]			FIXATIONS	OPTIONS	COLOUR
PRODUCT ID	COUNTRY OF INSTALLATION [1]	COLOUR TEMP	FLUX CODE [2]	PHOTOM ETRY TYPE [3]	PROTECTOR	VOLTAGE & EL. CLASS	DIMMING	ELECTR. PROTECTION	POWER CABLE	CABLE TYPE	CONTROLLER	PHOTO CELL	SENSOR	FIXATIONS	OPTIONS [5]	COLOUR
KIOLOO	00 Universal Standard	NW Neutral White		5068AS	PC07 Deep shaped PC	V02 230V CLI	D00 No Dimming	S3 10kV - no Fuse	C0 No Cable	00 No Cable	C0 No Controller	0 No Photocell	0 No Sensor	P6 Post top 60mm 6 screws	N0 No Others	0M AKZO 200 BS
				5096AS												
	AO Angola	WW Warm White		5098AS	PC11 Deep shaped PC + diffusor	V03 230V CLII	D01 0 - 10V	S9 10kV + Fuse 5x20mm Time Lag 3A	CH Cable length 4m	2C 2X1.5²	C1 LuCo-NXP	G Ø20 hole	1 PIR Occupacy	B2 Post top 60mm 2 screws	A6 Seaside	0B RAL 3004 T
				5102AS												
	AR Argentina			5103AS			D02 DALI	SA 10kV + Fuse 5x20mm Time Lag 4A	CI Cable length 5m	2D 2X2.5²	C2 LuCo-ADP	I 20 lux 1:1 IP67	Z CUSTOM SENSOR		AA Special labeling	0C RAL 6005 T
				5068SY												
	AU Australia			5096SY			D03 Bi-Power 50% (if switched line OFF)	SB 10kV + Fuse 5x20mm Time Lag 5A	CJ Cable length 6m	3B 3X1.5²	ZZ CUSTOM CONTROLLER	J 35 lux 1:0.5			PXXX Photometry custom	0D RAL 6009 B
				5098SY												
	---			5102SY			D04 Custom Dimming Profile	SC 10kV + Fuse 5x20mm Time Lag 6.3A	CL Cable length 8m	3C 3G1.5²		K 35 lux 1:0.5 IP67			DXXX Dimming profile custom	0E RAL 7016 B
				5103SY												
				5102BL			D05 No Dimming + CLO	SE 10 kV + Fuse Cartridge 10x38mm 4A Type GG500V		3D 3X2.5²		L 55 lux 1:0.5			CXXX Cables custom	0F RAL 7035 B
				5103BL												
				CUSTOM*			D06 0 - 10V + CLO	SF 10 kV + Fuse Cartridge 10x38mm 6A Type GG500V		3E 3G2.5²		M 55 lux 1:0.5 IP67			SXXX Control/Sensor position, type, ...	0G RAL 7040 B
							D07 DALI + CLO	SH 10kV + 2 Fuses 8x30mm 4A		4C 4X1.5²		N 70 lux 1:0.5			LXXX Label custom	0H RAL 7040 T
							D08 Bi-Power 50% (if switched line OFF) + CLO	SI 10kV + 2 Fuses 8x30mm 6A		4D 4G1.5²		O 70 lux 1:0.5 IP67			FXXX Finishing Colour , vernish, ...	0I RAL 9005 B
							D09 Custom Dimming Profile + CLO			5A 5G1.5²					OXXX Others	0J RAL 9006 B
							D10 AMPDIM			ZZ CUSTOM CABLE						0K RAL 9011 T
							D11 AMPDIM + CLO									0L AKZO 150 GS
							D14 Bi-Power 50% (if switched line ON)									0M AKZO 200 BS
							D15 Telemanagement									0N AKZO 900 GS

ID	COUNTRY	OPTICAL BLOCK				GEARS					CONTROLS [4]			FIXATIONS	OPTIONS	COLOUR	
PRODUCT ID	COUNTRY OF INSTALLATION [1]	COLOUR TEMP	FLUX CODE [2]	PHOTOMETRY TYPE [3]	PROTECTOR	VOLTAGE & EL. CLASS	DIMMING	ELECTR. PROTECTION	POWER CABLE	CABLE TYPE	CONTROLLER	PHOTO CELL	SENSOR		OPTIONS [5]	COLOUR	
							<div>D16 Bi-Power 30% (if switched line OFF)</div> <div>D17 Bi-Power 30% (if switched line OFF) + CLO</div> <div>D18 Bi-Power 30% (if switched line ON)</div>										<div>00 RAL 7038 B</div> <div>0P RAL 9003 M</div> <div>0R RAL 9022 T</div> <div>0S RAL 7001 T</div> <div>0T RAL 9006 M</div> <div>0U RAL 9005 M</div> <div>0V RAL7040 M</div> <div>0W RAL 9006 T</div> <div>01 RAL 7037 T</div> <div>RALxxxx M Other RAL colour Matte</div> <div>RALxxxx B Other RAL colour Brilliant</div> <div>RALxxxx T Other RAL colour Textured</div> <div>ZZ Other specific paint*</div>
Your Order																	
KIOL00						V	D	S	C		C						

Example: KIO L00-BE-NW003A4-5098SY-PC11-V02D05S3-CH3C-C000-P3-A6-0M

Notes: +++ LuCo-NXP and LuCo-ADP available only with D15 Telemanagement +++ CL II with 10kV surge protection available in differential mode only.

[1] Please provide country of installation to ensure country specific settings are taken into account. Schröder will provide you the code to use (00 (universal standard) or the country's ISO code).

[2] See further Lumen and Power details table. [3] See further Photometrics table.

[4] Schröder fixtures are compatible with most controls equipment available on the market. Please contact Schröder for more information.

[5] Multiple SELECTIONS and VARIANTS concatenation possible eg. -A2-AA-P0Z0-D0W0-C0Y0-S0M0-L0H0.

*Please contact Schröder to specify your requirement. A custom requirement must be validated by Schröder and may impact the delivery leadtime.