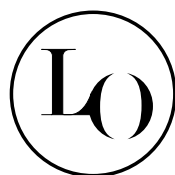


CATULLO

design FEDERICA FULICI



LORELUX

LORELUX - CATULLO DATASHEET



Concept	Linear and geometric design for a sustainable and resistant urban lighting with an easy maintenance.
Description	Catullo is a LED urban luminaire suitable for illuminating parks, squares and city roads. Its lighting body is made from innovative polymeric materials that respect urban ecology and resist corrosion, extreme temperatures (from - 60°C to + 80°C) and UV discolouration thanks to the innovative Rotoskin® patented system, the self-cleaning covering providing a protective shield on all exposed surfaces of the luminaire. Catullo includes both suspended and on catenary mounting and offers a wide range of finishes and photometries, as well as remote-control devices located inside the luminaire that do not alter its design while guaranteeing further savings and road safety.
Materials	Mono-material (Vxxx finishes): 100% recyclable and PSV (Plastic Second Life) certified polyethylene (from 50 to 98% of post-consumer plastic content), anti-discolouration, UV stabilised and batch-dyed. Floral (Rxxx finishes): 100% recyclable and PSV (Plastic Second Life) certified compound (with post-consumer plastic content equal to 75%), obtained from the combination of flakes and PE powders with anti-UV additives.
Product's preview	



Pluses

- Lighting body's useful service life of over 50 years
- Immunity to corrosion by atmospheric agents and pollutants
- Resistance to impacts and vandalism
- No flaking or significant discolouration over time
- Interchangeable LED engine for upgrades and/or repairs
- Wide range of finishes from recycled polyethylene (PSV -Plastic Second Life- certified)
- Wide range of photometries in order to meet all lighting needs
- Devices for Smart cities that can be integrated without any external antenna

Product's certifications



Material's certifications



Application areas



Mountings

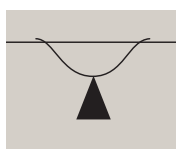
Mast arm
Code **KM-CATULLO-S**



Wall suspended on arm
Code **KM-CATULLO-S**



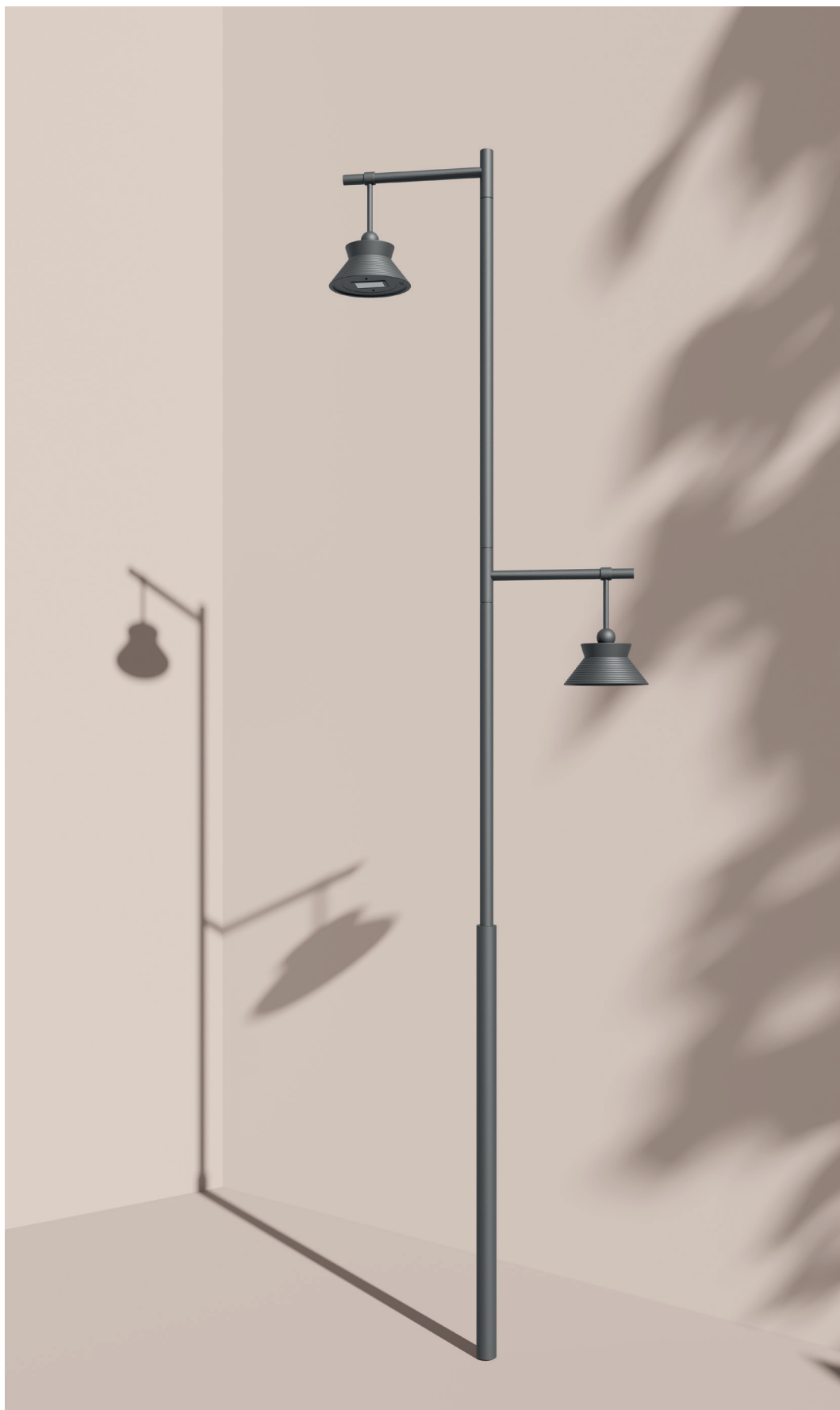
Suspended on catenary
Code **KM-CATULLO-T**



Ceiling suspension
Code **KM-CATULLO-S**



LORELUX - CATULLO DATASHEET



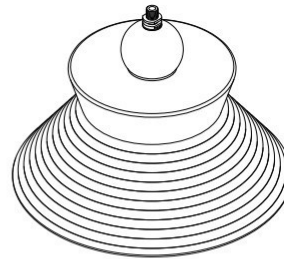
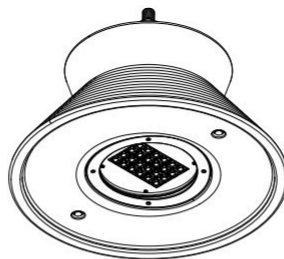
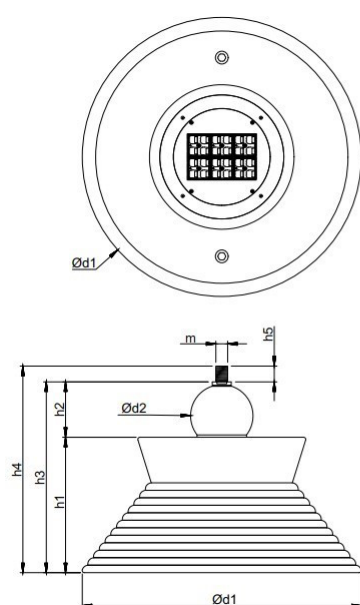
Installation examples



LORELUX - CATULLO DATASHEET

Technical drawing standard model

Suspended mounting: Catullo luminaire + KM-CATULLO-S mounting kit



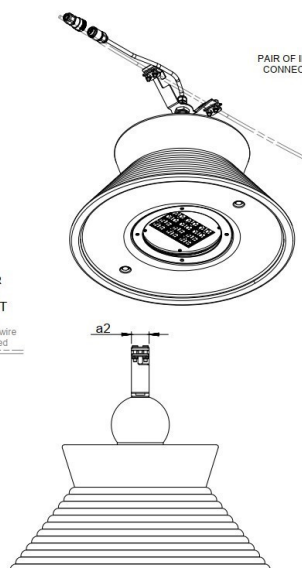
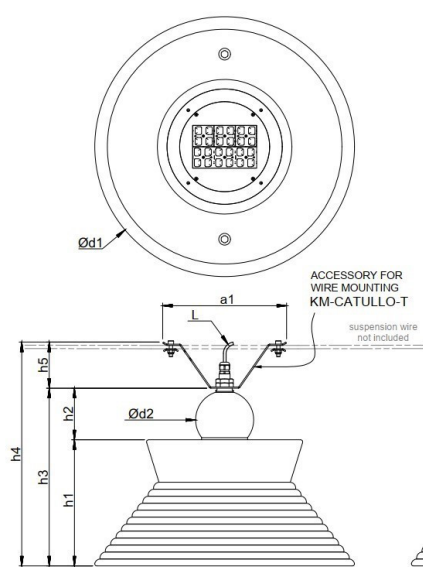
DIMENSION TABLE

$d1 = \varnothing 618$ mm
 $d2 = \varnothing 138$ mm
 $h1 = 300$ mm
 $h2 = 123$ mm
 $h3 = 423$ mm
 $h4 = 458$ mm
 $h5 = 35$ mm
 $m = \text{Male Thread Standard}$
 $3/4'' \text{ GAS DIN ISO 228}$

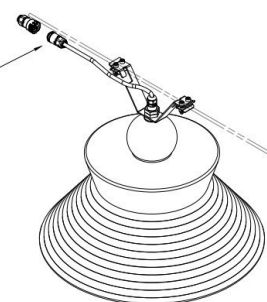
Weight = 10,2 kg
 Wind exposure: $Scx = 0,30 \text{ m}^2$ base
 $= 0,14 \text{ m}^2$ lateral

Technical drawing optional model

Suspended on catenary: Catullo luminaire + KM-CATULLO-T mounting kit



PAIR OF IP 66 PROTECTED CONNECTORS INCLUDED



DIMENSION TABLE

$d1 = \varnothing 618$ mm
 $d2 = \varnothing 138$ mm
 $h1 = 300$ mm
 $h2 = 123$ mm
 $h3 = 423$ mm
 $h4 = 533$ mm
 $h5 = 110$ mm
 $a1 = 295$ mm
 $a2 = 40$ mm
 Outgoing cable length: $L = 500$ mm

Weight = 10,8 kg
 Wind exposure: $Scx = 0,30 \text{ m}^2$ base
 $= 0,14 \text{ m}^2$ lateral

LORELUX - CATULLO DATASHEET

MAIN FEATURES

Manufacturer	NITEKO S.R.L.
Brand	LORELUX®
Series	Catullo
Device type	LED urban luminaire
Application areas	Street, urban and residential lighting Historic centres, squares, car parks and green areas Pedestrian areas and cycle lanes
Mounting	Mast arm, wall suspended on arm, suspended on catenary, ceiling suspension
Mounting accessories	Standard Suspended: KM-CATULLO-S (¾" GAS connection) Optional Suspended: · KM-CATULLO-1/2-INCH (½" GAS connection) · KM-CATULLO-1-INCH (1" GAS connection) · KM-S-60MM-3/4-INCH (60mm adapter - ¾" GAS) Optional on catenary: KM-CATULLO-T (Mounting kit for suspension on catenary)
Product's protection rating	External agents: IP66 Mechanical impacts: IK10 Chemical: VOC Free Electrical: EOS Free SPD: MC ≤ 12 kV ; MD ≤ 12kV ; I ≤ 10kA Photobiological: RG1 (D > 1,97m)
Material's protection rating	UV: 15 (15.000 h) Flame: HB Discolouration: max CMC 3 colour deviation for 3.000 h according to ISO 4892-2 B1 cycle
Temperature	Operating: -40°C ÷ +45°C (Control via N.T.C.) Storage: -40°C ÷ +80°C
Energy rating	>A++
Warranty	Body: 20 years Light source: 10 years
Certifications	Product: CE; ENEC; RoHS; EOS free; VOC free; EPD Italy (Pending); IEC/EN 62262 Material: UL94; ISO 4892-2; PSV (Plastic Second Life)
Optical compartment / Electric compartment	Separated Opening of the compartments after removal of the anti-fall fixing screws Optional Tool Less Opening

LORELUX - CATULLO DATASHEET

OPTICAL FEATURES

Light source	HI Power LED
LED modules	PCB, independent and replaceable
Optics	Independent and replaceable
Nominal luminous flux	2.173 ÷ 13.648 lm
Light source efficiency	· $\eta_{LED} > 180 \text{ lm/W}$ (CCT > 4.000 K / CRI > 70) · $\eta_{LED} > 170 \text{ lm/W}$ (CCT > 3.000 K / CRI > 70) · $\eta_{LED} > 160 \text{ lm/W}$ (CCT > 2.700 K / CRI > 70) · $\eta_{LED} > 150 \text{ lm/W}$ (CCT > 2.200 K / CRI > 70)



LORE LUX - CATULLO DATASHEET

Colour temperature	Standard CCT: 3.000K Optional CCT: 2.200K; 2.700K; 4.000K; 5.000K; 5.700K Colour stability: 3 Step MacAdam
Colour rendering index	Standard CRI: 70 Optional CRI: 80; 90
Photometries	Asymmetric; elliptic; rotosymmetric; symmetric; pedestrian
Optical accessories	B.L.S. (Back Light Stop) Code: KM - CATULLO - BLS
Optical performance	Standard: η_{OPT} : 79 ÷ 90 % Optional with KM - CATULLO - BLS accessory: η_{OPT} : 69 ÷ 81%
Lighting fixture efficiency	$\eta_{FIX} > 130 \text{ lm/W}$ (CCT > 4.000 K / CRI > 70) $\eta_{FIX} > 125 \text{ lm/W}$ (CCT > 3.000 K / CRI > 70) $\eta_{FIX} > 115 \text{ lm/W}$ (CCT > 2.700 K / CRI > 70) $\eta_{FIX} > 105 \text{ lm/W}$ (CCT > 2.200 K / CRI > 70)
Light intensity class	$\geq G^*2$
Glare index	$\geq D.4$
ULR / ULOR	0,00%
Service life	L98 B10: > 100.000 h (TJ = 85 ° C IF $\leq$ 500mA) L90 B10: > 120.000 h (TJ = 85 ° C IF $\leq$ 500mA) L80 B10: > 270.000 h (TJ = 85 ° C IF $\leq$ 500mA) L70 B10: > 450.000 h (TJ = 85 ° C IF $\leq$ 500mA)

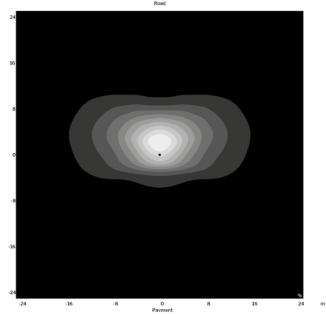
LORELUX - CATULLO DATASHEET

CONFIGURATIONS

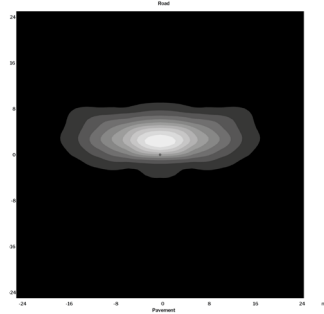
Model	Power [W]	Nominal luminous flux [lm]			
		4.000 K CRI 70 5.000 K CRI 70 5.700 K CRI 70	3.000 K CRI 70	2.700 K CRI 70 4.000 K CRI 80	2.200 K CRI 70 2.700 K CRI 80 3.000 K CRI 80 5.700 K CRI 90
CATULLO 15 W	15,7	2.823	2.694	2.440	2.173
CATULLO 20 W	20,8	3.860	3.672	3.333	2.961
CATULLO 30 W	24,6	4.533	4.314	3.913	3.470
	30,9	5.582	5.298	4.816	4.260
CATULLO 40 W	34,6	6.172	5.852	5.323	4.692
	39,2	6.882	6.519	5.930	5.209
CATULLO 50 W	36,4	6.896	6.564	5.957	5.299
	40,7	7.721	7.343	6.667	5.923
	46,5	8.798	8.370	7.595	6.739
	51,3	9.591	9.120	8.279	7.341
CATULLO 60 W	54,6	10.115	9.611	8.730	7.738
	62,0	11.426	10.842	9.858	8.713
CATULLO 70 W	64,0	11.819	11.211	10.196	9.002
	71,4	12.998	12.319	11.209	9.857
CATULLO 75 W	75,0	13.648	12.935	11.770	10.350

PHOTOMETRIES

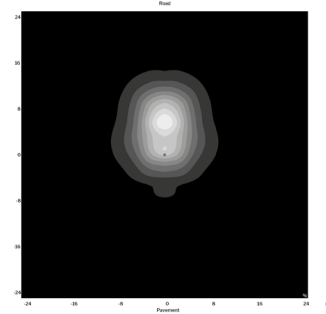
Asymmetric



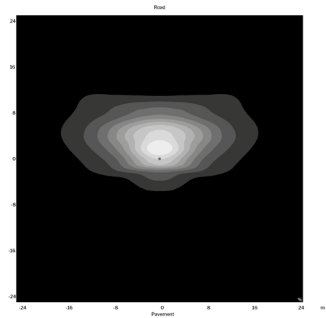
Code A1 ($\eta = 84\% \mid G^*6$)



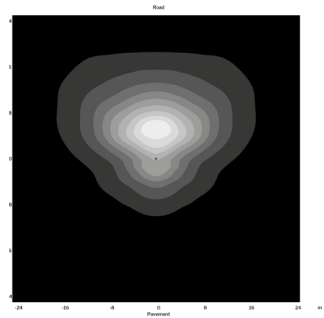
Code A2 ($\eta = 84\% \mid G^*4$)



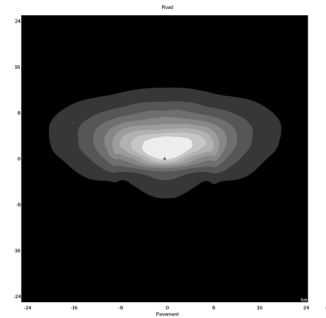
Code A3 ($\eta = 87\% \mid G^*6$)



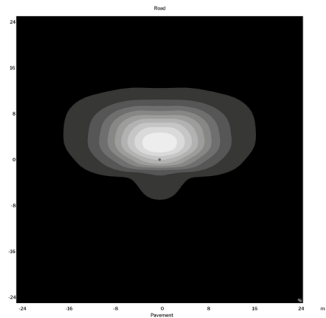
Code A4 ($\eta = 83\% \mid G^*6$)



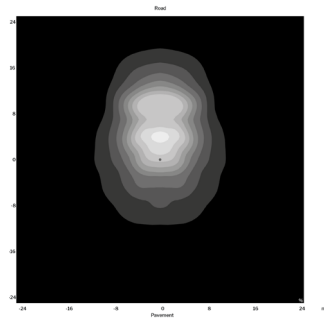
Code A7 ($\eta = 79\% \mid G^*2$)



Code A8 ($\eta = 82\% \mid G^*1$)



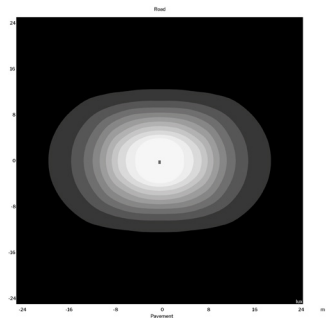
Code A9 ($\eta = 85\% \mid G^*4$)



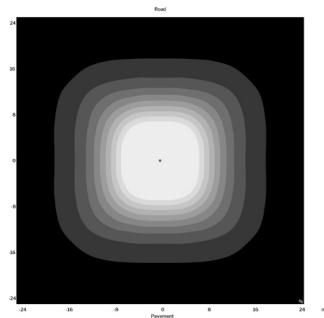
Code A13 ($\eta = 81\% \mid G^*6$)

Elliptic

Rotosymmetric

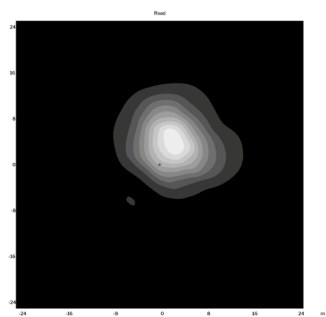


Code E3 ($\eta = 87\% \mid G^*6$)

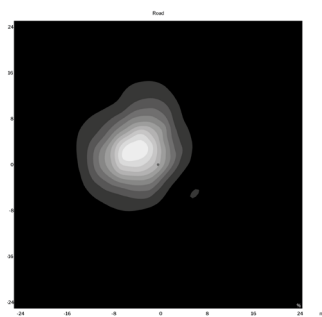


Code R1 ($\eta = 82\% \mid G^*6$)

Pedonali

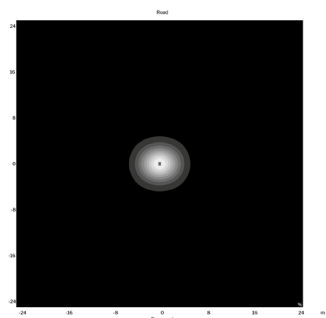


Codice **PCDX** ($\eta = 85\% \mid G^*6$)

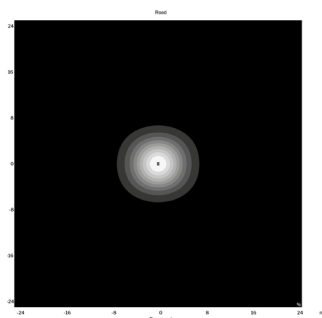


Codice **PCSX** ($\eta = 85\% \mid G^*6$)

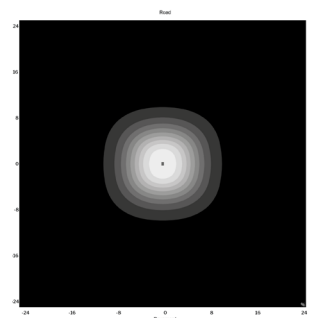
Symmetric



Code **25** ($\eta = 90\% \mid G^*6$)



Code **50** ($\eta = 90\% \mid G^*6$)



Code **100** ($\eta = 86\% \mid G^*6$)

Optional

Other photometries available on request.

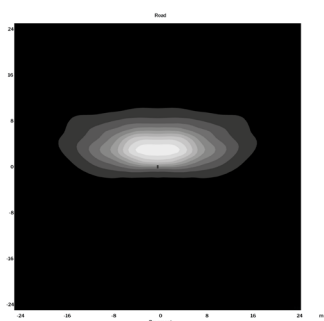
OPTICAL ACCESSORIES

Code **KM-CATULLO-BLS**

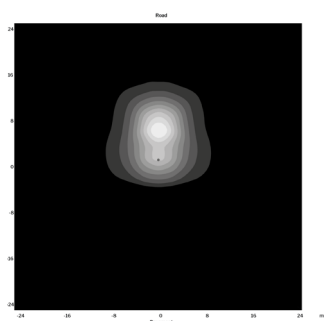


PHOTOMETRIES WITH **KM-CATULLO-BLS** OPTICAL ACCESSORY

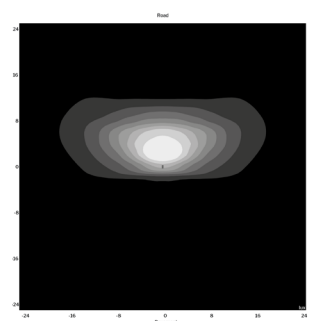
Asymmetric



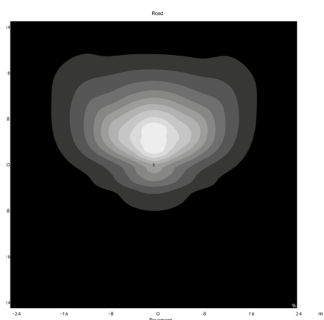
Code **BA2** ($\eta = 79\%$ | G^*6)



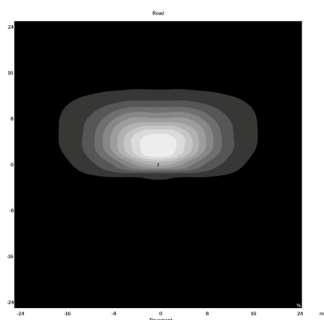
Code **BA3** ($\eta = 81\%$ | G^*4)



Code **BA4** ($\eta = 77\%$ | G^*6)



Code **BA7** ($\eta = 69\%$ | G^*6)



Code **BA9** ($\eta = 81\%$ | G^*2)

ELECTRICAL FEATURES

Power supply	Standard 240V AC : 175 ÷ 264 V AC; 50 / 60 Hz Optional 240V AC: 120 ÷ 277 V AC; 50 / 60 Hz Optional 12V DC: 9 ÷ 18 V DC Optional 24V DC: 18 ÷ 32 V DC
LED power current	$I_f \leq 500 \text{ mA}$
Insulation class	Standard: class II Optional: class I
Power	15 ÷ 75W
Power factor	PF > 0,97 (Active PFC)
Electrical efficiency	$\eta_{EL} : 83 \div 92 \%$
Electrical connection	External power cable (IP66 protected electrical connector). Standard length: 1,0 m Standard Cable (Class II): H07RN-F 2x1,5mmq; Optional Cable (Class I):H07RN-F 3x1,5mmq; Optional Cable (DALI): H07RN-F 5x1,5mmq;
Electrical protection	Built-in SPD: C.M. $\leq 12 \text{ kV}$; D.M. $\leq 12 \text{ kV}$; I $\leq 10 \text{ kA}$

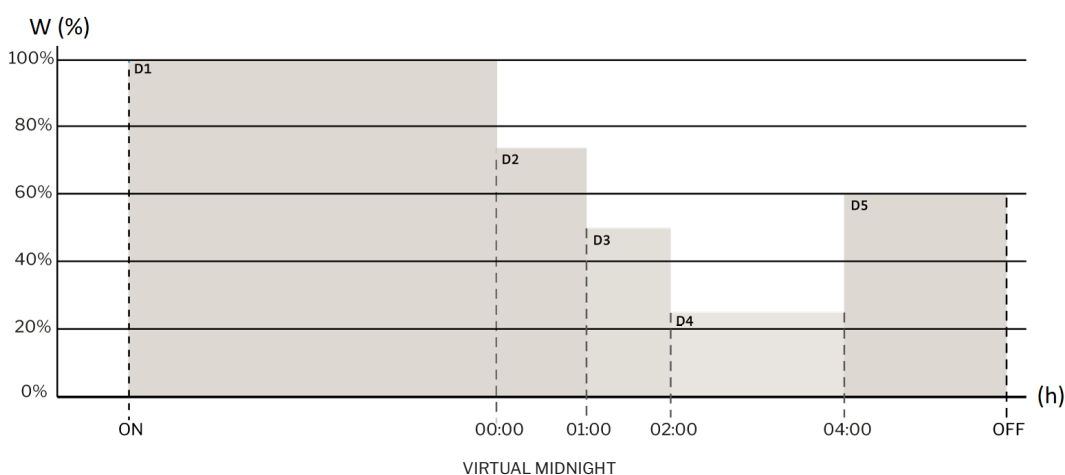


CONTROL FEATURES

Autonomous dimming	K-CATULLO-PRG5: automatic control up to 5 daily profiles
	K-CATULLO-CLO.LITE: constant lighting control during the lifetime with a single profile
	K-CATULLO-CLO.FULL: constant lighting control during the lifetime up to 20 profiles
Control cable dimming	K-CATULLO-DIM: 1-10V analogue control
	K-CATULLO-DALI: DALI digital control
	K-CATULLO-D4i: DALI 2.0 / AUX 24 V DC digital control
Power Line control dimming	K-CATULLO-PLV: Power Line Voltage control
Radio wave control	K-CATULLO-NEMASCK: control with NEMA device
	K-CATULLO-ZAGHASCK: control with ZHAGA

CONTROL FUNCTIONS

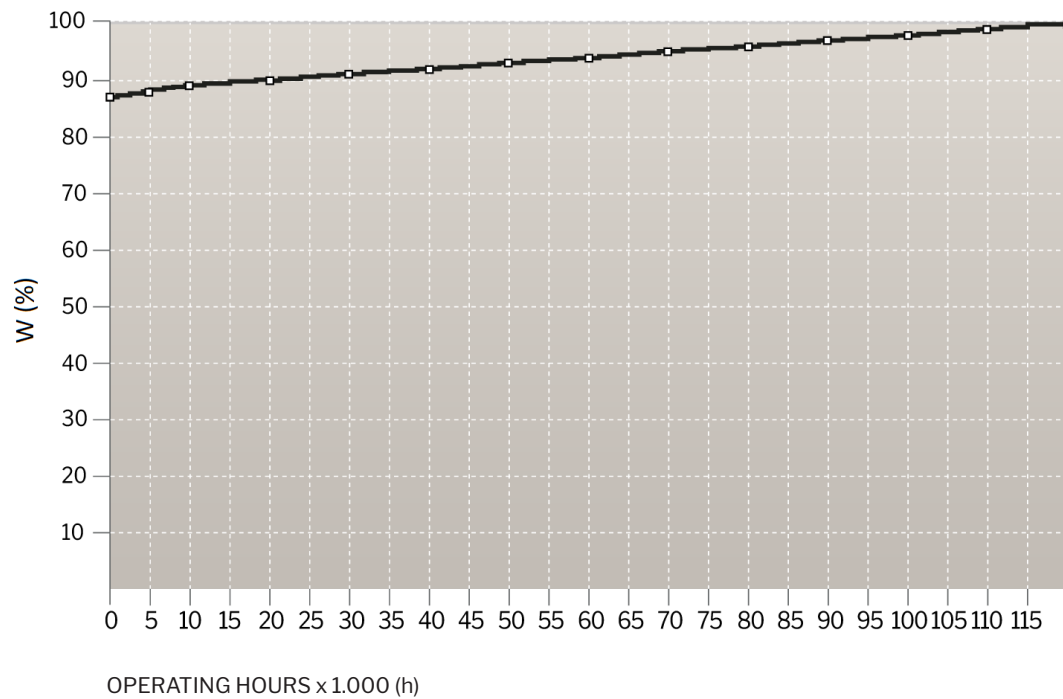
PRG5 module



The PRG module allows to control and reduce the luminous flux of the lighting fixture from 10% to 100% of the maximum value, without the use of dedicated cables

- D1: time slot ON - 23:59 → power 100%
- D2: time slot 00:00 - 00:59 → power 75%
- D3: time slot 01:00 - 01:59 → power 50%
- D4: time slot 02:00 - 03:59 → power 25%
- D5: time slot 04:00 - OFF → power 60%

CLO module

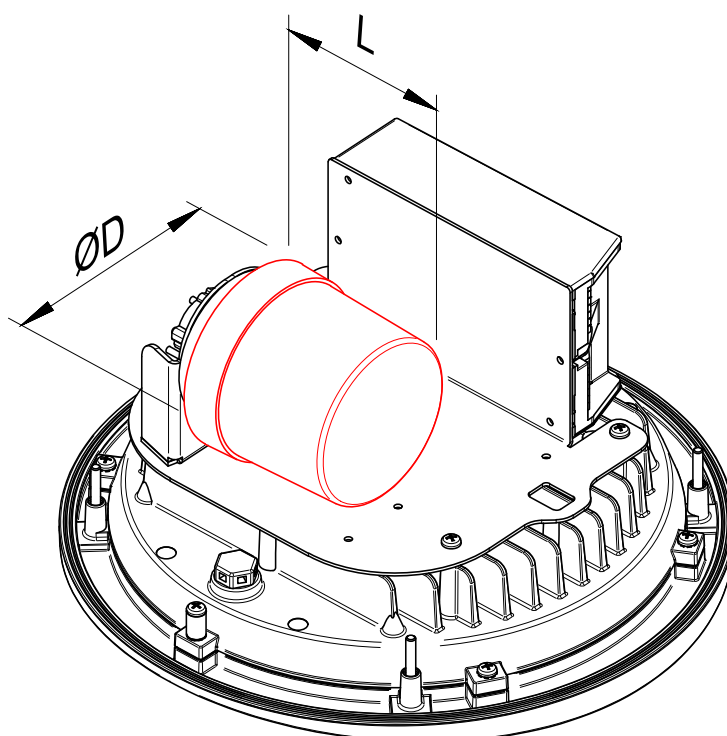
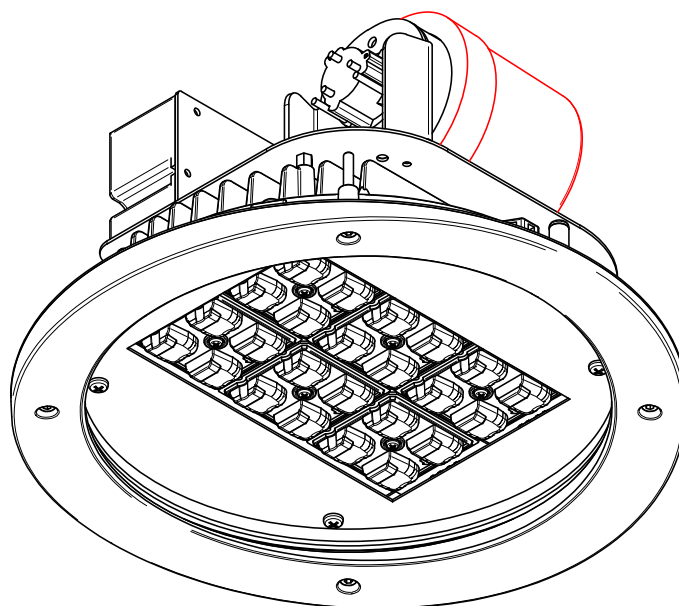


The CLO function allows to gradually increase the level of light output over time from a lower initial luminous flux up to 100%, thus compensating the luminous flux degradation of the LED module during the lighting fixture entire lifetime. It can also serve as a means to reduce energy consumption.

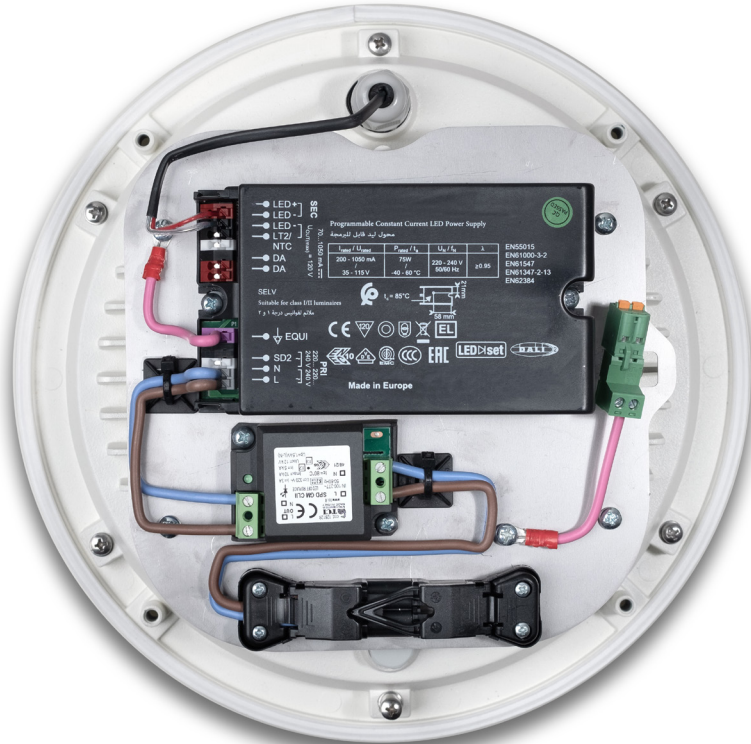
ELECTRIC COMPARTMENT

Maximum possible
dimensions [mm] for
remote-control devices:

$\varnothing D \times L = 84 \times 74$



LORELUX - CATULLO DATASHEET

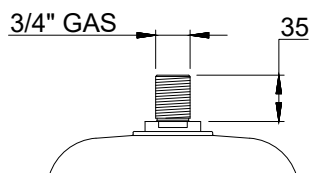


LORELUX - CATULLO DATASHEET

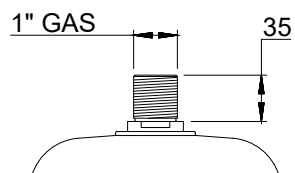
MECHANICAL FEATURES

Materials	Body: UV stabilised, self-cleaning, anti-discolouration and PSV (Plastic Second Life) certified polyethylene, 5 mm minimum thickness Heat sink: die-cast aluminium LED modules: aluminium Optics: PMMA, PC Screen: tempered flat glass, 5 mm thickness Gaskets: silicone Anti-condensation valves: PA (polyamide) Accessories: stainless steel Screws: stainless steel Packaging: FSC cardboard
Recycled plastic content	Black: 98% Coloured: 50% Floral: 75%
Service life	Body: >50 years Components: >10 years
Dimensions and weight	Suspended model: Ø 618 x h458 mm 10,20 kg On catenary model: Ø 618 x h533 mm 10,80 kg
Wind exposure	Base: 0,300 mq Lateral: 0,140 mq
Packaging free from both polystyrene and internal cardboard inserts	Primary (standard suspended): W640 x L640 x H520 mm 12,6 kg 1 pcs / box (eco-friendly packaging) Tertiary (standard suspended): W1.300 x L1.300 x H1.710 mm 180,0 kg 12 pcs / pallet (eco-friendly packaging) Primary (on catenary): W640 x L640 x H520 mm 13,2 kg 1 pcs / box (eco-friendly packaging) Tertiary (on catenary): W1.300 x L1.300 x H1.710 mm 187,0 kg 12 pcs / pallet (eco-friendly packaging)
Tolerance: luminous flux +/-5%; power consumption +/- 5%; dimensions +/-1%; weight +/-3%	

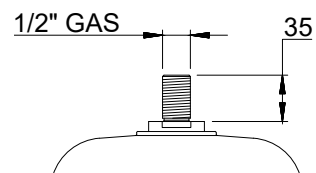
MOUNTING ACCESSORIES



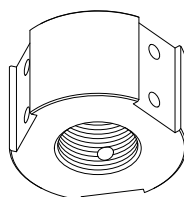
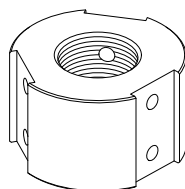
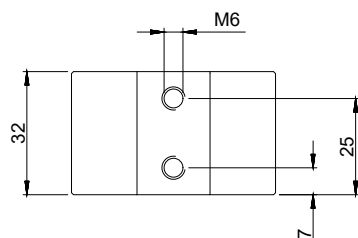
Standard:
Code KM-CATULLO-S



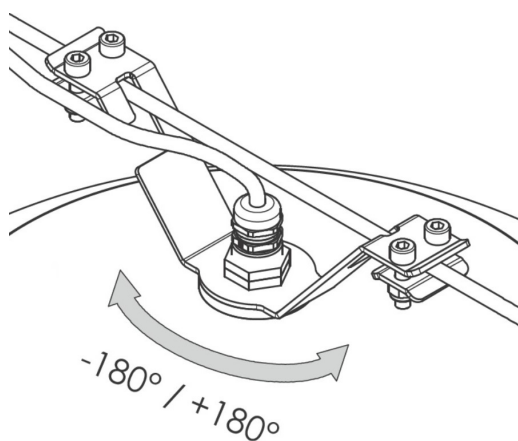
Optional:
Code KM-CATULLO-1-INCH



Optional:
Code KM-CATULLO-1/2-INCH



Optional:
3/4" GAS adapter for Ø60mm poles.
Code KM-S-60MM-3/4-INCH



Optional:
Code KM-CATULLO-T

FINISHES

Batch-dyed colours



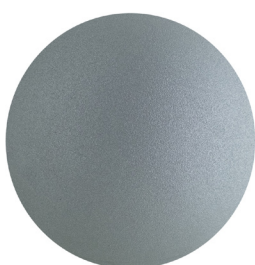
VBLK (graphite black)



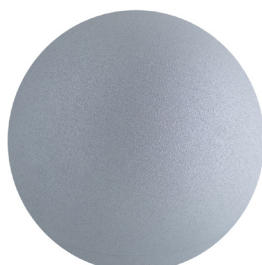
VNTH (anthracite)



VBZM (metallic bronze)



VGRM (metallic grey)



VGY1 (grey)



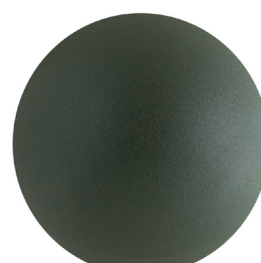
VWH1 (white)



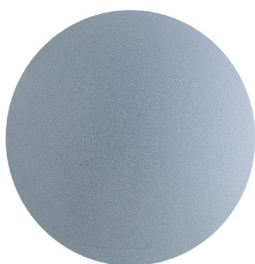
VCRT (marte)



VCR1 (venere)



VGRN (green)



VTQ1 (urano)

Floral



RTTN (antares)



RBLK (callisto)

Projects

