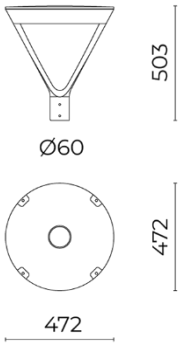
Line Sheet
Rev 06.05.2024

POLI
Colour temperature: 4000K / 3000K / 2700K / 2200K
Type of optics: cycle path LT-C1
asymmetrical street ST-02, ME-05, LA-03
asymmetrical LT-64
rotosymmetric RS-02

01PL_____
Colour: Sablé 100 Noir



General features
Description: LED device for the lighting of pathways and urban areas
Insulation class: class II (class I on request)
Nominal voltage: 220-240 V / 50-60 Hz
Protection level: IP66
Protection against impact: IK08
Surge protection device: integrated 10kV-10kA, Class III, equipped with LED signalling and thermal fuse for disconnection at product end of life; impulse resistance CL II 10kV CM/DM
Power factor: > 0.9
Ambient temperature Ta: -30°C +50°C
Weight: 8 kg
Maximum exposed surface: 0,18 m²
Exposed lateral surface: 0,06 m²
Common mode surge protection: 10 kV
Differential mode surge protection: 10 kV
Driver: included
Driver life expectancy: >100.000 h @ Ta 25°C (0,2% / 1000 h)
Marks and Certifications: ENEC / CE
Classification: CUT OFF

Materials
Body and fastening system: die-cast aluminium alloy UNI EN AB 47100 (copper content <1%)
Screen: tempered flat glass 5 mm
Optical unit: High-transparency PMMA lenses
Seal: anti-age expanded silicone
External screws and metal components: AISI 304 stainless steel

Cariboni group

Internal screws: chrome-plated steel

Wiring plate: galvanised steel

Finish: phosphochromatisation-treated and polyester powder-coated in 16 phases for optimal weather resistance

Colours

Sablé 100 Noir

Installation and maintenance

Installation: post top

Poles diameter: Ø 60 mm (on request accessory for poles Ø 76 mm)

Pole-top fitting for poles Ø 60 mm (h.90 mm): die-cast aluminium alloy UNI EN AB 47100 (copper content <1%), polyester powder-coated Sablé 100 Noir

Wiring: pre-wired product with an outgoing cable (L = 200 mm) and a 2-pin plug and socket connector for a quick and easy installation

Ø power cable: 10 ÷ 14 mm

1 x 0.75 mm^2 double-insulated silicone rubber rigid cables

Cable gland: PG16

Optical unit substitutability: removable by unlocking grubscrews

Wiring plate substitutability: removable plate

Power supply compartment: independent from the optical system

Optical system

Provided with 4000K, 3000K, 2700K and 2200K white emitters fitted via a “pick and place” system to a heat sinking metal core printed circuit board (MCPCB). Optical system composed of high-transparency poly-methyl-methacrylate lenses developed in order that each light source provides full photometry. This solution guarantees that the malfunctioning of an individual LED will not lead to less-illuminated areas, but at most will cause an overall decrease in the percentage of light over the entire area covered.

Colour rendering index (CRI): ≥ 70

Chromatic consistency (SDCM): ≤ 3

Optical unit life expectancy: >100.000 h @ Ta 25°C L90B10

Photobiological safety class: EXEMPT GROUP

ULOR: 0%

DLOR: 100%

Light intensity category: G*3 cycle path LT-C1 and asymmetrical street ST-02, ME-05; G*4 asymmetrical street LA-03; G*6 asymmetrical LT-64 and rotosymmetrical RS-02

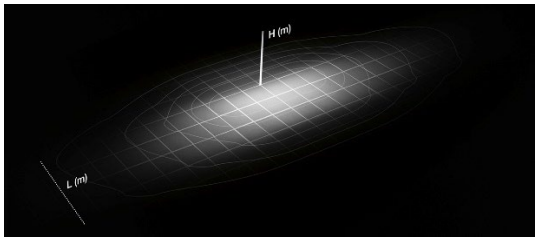
Normative framework

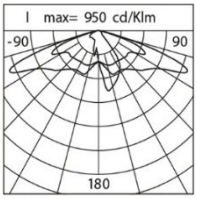
EN60598-1 / EN60598-2-3 / EN62471 / EN61547

Cyple path optics and asymmetrical street optics

LT-C1 Cycle Path

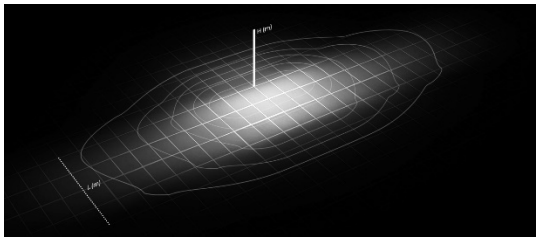
L/H = 0.5 (L = Street width, H = Pole height)

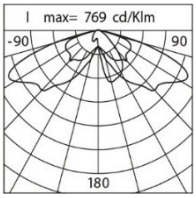




ST-02 Narrow street

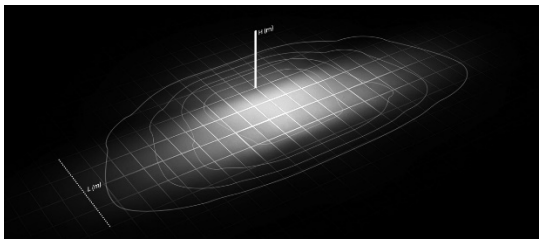
L/H = 0.75 (L = Street width, H = Pole height)

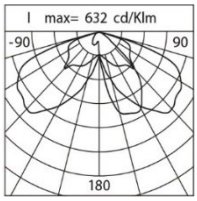




ME-05 Medium street

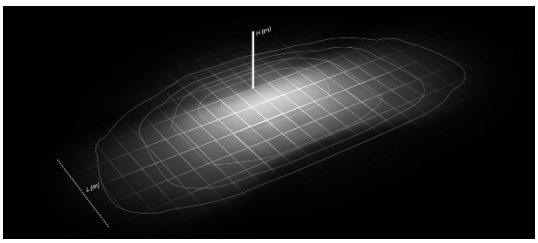
L/H = 1 (L = Street width, H = Pole height)

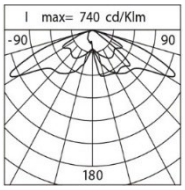




LA-03 Wide street

L/H = 1.25 (L = Street width, H = Pole height)

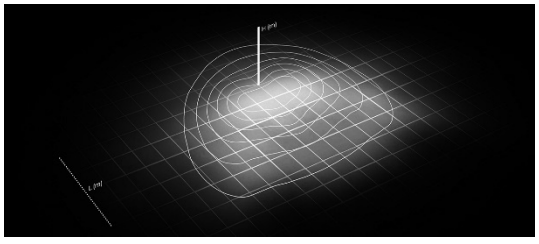




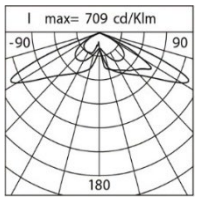
Asymmetrical optics

LT-64 Asymmetric beam with backligh

L/H = 2 (L = Street width, H = Pole height)

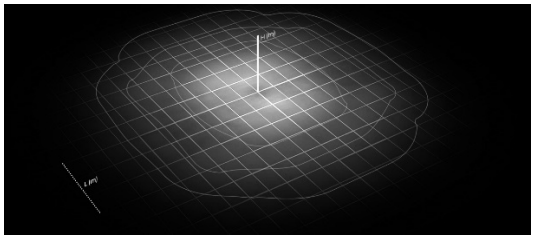


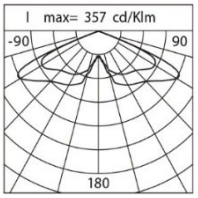
Cariboni group



Rotosymmetric optics

RS-02 Rotosymmetric Beam





Performance data

LT-C1 ST-02, ME-05, LA-03 LT-64 RS-02							
Sources	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
LED R1	4000	2040	9	227	1630	12	136
LED R1	4000	2330	10,5	222	1860	13	143
LED R1	4000	2885	13	222	2305	16	144
LED R1	4000	3425	16	214	2735	19	144
LED R1	4000	3960	19	208	3165	22	144
LED R1	4000	4480	21,5	208	3575	25	143
LED R1	4000	4975	24,5	203	3970	28	142
LED R1	4000	5465	27,5	199	4365	31	141
LED R1	4000	5935	30,5	195	4740	34	139
LED R1	4000	6440	33,5	192	5145	37	139
LED R2	4000	6805	32	213	5440	36	151
LED R2	4000	7855	37,5	209	6275	42	149
LED R2	4000	8880	43	207	7090	47	151
LED R2	4000	9840	49	201	7860	53	148

LED R2	4000	10785	55	196	8615	60	144
LED R2	4000	11870	61	195	9360	65	144
LED R2	4000	12780	67	191	10080	72	140

LT-C1 ST-02, ME-05, LA-03 LT-64 RS-02							
Sources	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
LED R1	3000	1940	9	216	1550	12	129
LED R1	3000	2210	10,5	210	1765	13	136
LED R1	3000	2740	13	211	2190	16	137
LED R1	3000	3255	16	203	2600	19	137
LED R1	3000	3760	19	198	3005	22	137
LED R1	3000	4255	21,5	198	3400	25	136
LED R1	3000	4725	24,5	193	3775	28	135
LED R1	3000	5190	27,5	189	4150	31	134
LED R1	3000	5640	30,5	185	4505	34	133
LED R1	3000	6095	33,5	182	4890	37	132
LED R2	3000	6465	32	202	5170	36	144
LED R2	3000	7465	37,5	199	5960	42	142
LED R2	3000	8435	43	196	6740	47	143
LED R2	3000	9345	49	191	7465	53	141
LED R2	3000	10245	55	186	8185	60	136
LED R2	3000	11270	61	185	8895	65	137
LED R2	3000	12140	67	181	9580	72	133

LT-C1 ST-02, ME-05, LA-03 LT-64 RS-02							
Sources	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
LED R1	2700	1765	9	196	1405	12	117
LED R1	2700	2015	10,5	192	1600	13	123
LED R1	2700	2495	13	192	1985	16	124
LED R1	2700	2960	16	185	2355	19	124
LED R1	2700	3420	19	180	2720	22	124
LED R1	2700	3870	21,5	180	3075	25	123
LED R1	2700	4300	24,5	176	3415	28	122
LED R1	2700	4720	27,5	172	3755	31	121
LED R1	2700	5130	30,5	168	4080	34	120
LED R1	2700	5565	33,5	166	4425	37	120

LED R2	2700	5880	32	184	4680	36	130
LED R2	2700	6785	37,5	181	5395	42	128
LED R2	2700	7670	43	178	6100	47	130
LED R2	2700	8500	49	173	6760	53	128
LED R2	2700	9315	55	169	7410	60	124
LED R2	2700	10210	61	167	8050	65	124
LED R2	2700	10990	67	164	8670	72	120

LT-C1 ST-02, ME-05, LA-03 LT-64 RS-02							
Sources	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
LED R1	2200	1595	9	177	1260	12	105
LED R1	2200	1810	10,5	172	1430	13	110
LED R1	2200	2245	13	173	1775	16	111
LED R1	2200	2670	16	167	2110	19	111
LED R1	2200	3080	19	162	2435	22	111
LED R1	2200	3490	21,5	162	2755	25	110
LED R1	2200	3875	24,5	158	3060	28	109
LED R1	2200	4260	27,5	155	3365	31	109
LED R1	2200	4620	30,5	151	3650	34	107
LED R1	2200	5020	33,5	150	3965	37	107
LED R2	2200	5305	32	166	4190	36	116
LED R2	2200	6120	37,5	163	4835	42	115
LED R2	2200	6910	43	161	5460	47	116
LED R2	2200	7660	49	156	6050	53	114
LED R2	2200	8400	55	153	6635	60	111
LED R2	2200	9130	61	150	7210	65	111
LED R2	2200	9840	67	147	7765	72	108

Data of the lighting source flux and efficiency refer to the LED module, without lenses. In case you need data of the LED module complete with lenses, please multiply the mentioned data by 0.9 factor.
Values indicated in this technical sheet are to be considered nominal values with a tolerance of +/-7%.

Legend

K = Colour temperature

φ mod [lm] = Source flux — φ app [lm] = Unit flux

P mod [W] = Source power — P app [W] = Unit power

η mod [lm/W] = Source efficiency — η app [lm/W] = Unit efficiency

Flux regulation	On request
Self-learning virtual midnight	X
Zhaga - Book 18	X
DALI Regulation	X
Constant Light Output (CLO)	X
1-10V Regulation	X
Mains voltage variation	X
Wireless telemanagement	X
Motion / brightness detectors	X

Flux regulation

Custom programmable virtual midnight self-learning (code ending in _HM4)

Custom programmable versions available on request; via the virtual midnight algorithm it is possible to obtain a precise percentage reduction of the luminous flux and therefore of the power consumption of the unit.

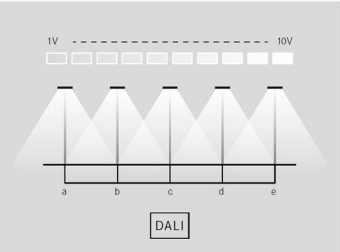
Constant Lumen Output CLO (on request)

The aim of the CLO is to compensate the natural deterioration of the luminous flux of the LEDs. Through a gradual pre-programmed increase in current, the luminous flux is maintained over time and in any case never drops below pre-set limits.

Group Management: flux adjustment of 1-10V (on request) and DALI (on request)

1-10V - This is an analogical control system based on the distribution of a voltage signal of between 1 and 10 Volts, where 1V corresponds to the minimum light intensity value and 10V corresponds to the maximum value.

DALI - This is a digital control system where every device is assigned a unique address that allows individual light points to be controlled and control groups to be created.

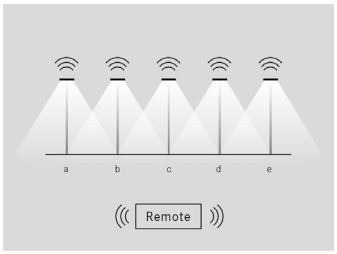


Remote Management (on request)

Wireless remote control systems allow remote luminous flux dimming managing, system monitoring and the display of consumption statistics and faults. In addition to reducing consumption and running costs, remote management systems provide

an infrastructure that can be used to host other local systems or services that are compatible with the latest smart lighting projects.

Wireless - The wireless remote management system allows simple remote management of units, without any constraint due to the pre-existing system.



IoT – ready (on request)

The product is set up for the integration of sensors and communication devices that enable the Internet of Things on an urban scale. Sensors and antennas can be added to the product during the installation or subsequently for updating the system (the connector is in accordance with Zhaga Book 18).

Motion and presence sensors (on request)

The use of motion sensors allows for the detection of passing pedestrians or vehicles and the regulation of the flux, thus guaranteeing an appropriate level of safety. If no moving pedestrians or vehicles are detected, flux is reduced, thus allowing significant reductions in consumption and cost. The type of sensor and the method of installation must be defined according to the application context and the size and shape of the space in question. The system control can be centralised through communication with the 1-10V, DALI or Wireless systems. Sensors must be mounted on the exterior of the product.

Light sensor (on request)

Cariboni products with DALI, 1-10V or Wireless adjustment are compatible with light sensors that adjust light emission based on the level of environmental light. This solution avoids unnecessary waste and guarantees rapid return on investment.