GMR ENLIGHTS

laFOGLIA600

For product specifications, materials and colours, please refer to the details inside

laFoglia 600

Technical data

GMR ENLIGHTS

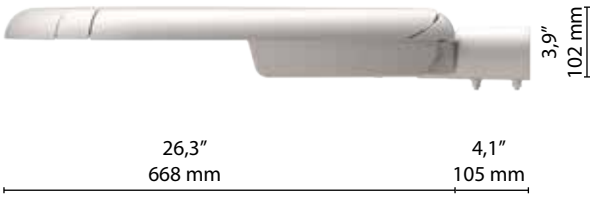
rev. 2025.03

Accessibility

Timeless
Tool-free openable fixture. Replaceable internal components without the need of tools.

Optical technology

Glassed
Refracting optical system consist of singlechip LED, PMMA lenses with 30 years of warranty against UV and yellowing by aging, aluminium reflector having a purity of 99,7% and extra clear tempered glass.

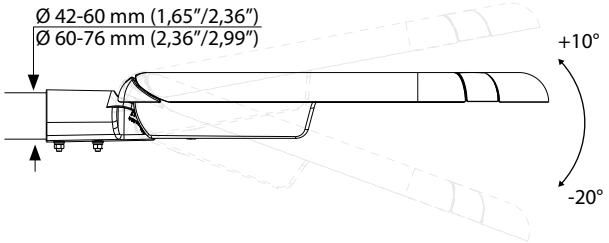


Scale: 1:10

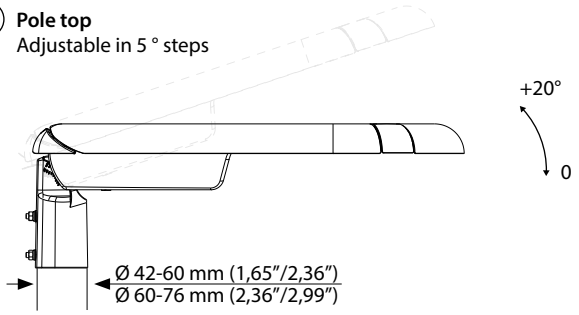
Max. weight	EPA (CXS)
19,8 lb (9,0 Kg)	Plan: 2,6ft² (0,25 m²)

Fixing type

Side
Adjustable in 5 ° steps



Pole top
Adjustable in 5 ° steps



Standard

Compliance: UL Standard 1598-CSA C22,2no.250.0.

Conformity | protection

Conformity
c ETL us Intertek
CE

Salt spray test
ISO 9227
8000 hr

Vibration test passed
IEC 60068-2-6

Safety class
Class I

Protection classes
WET LOCATION · IK 09 · 4 NEMA

Photobiological safety
Classe 0 Exempt group IEC/TR62471

Plus

Dark Sky Friendly · optical flexibility · low glare · CAM 2017 Compliant

Lighting fixture features

General features

Power source:	120-277V | 50/60Hz | tolerance +/-10%
Current supply:	350 mA | 525 mA |700 mA | Others (P_{max} = 154W)
Power Factor | THD:	≥0.95 | <10 % (At full load)
Expected life (Ta=77°F|25°C):	> 100.000 h | L90B10 | @ LED 350mA
Operational temperature (Ta):	T_{min} = -40°F (-40°C) T_{max} = 131°F (55°C) |700 mA 122°F (50°C) |850mA
Storage temperature:	-40°F/+176°F (-40°C/+80°C)
Overcharge protection:	Main surge immunity up to 10kV
Disconnector:	Optional
Standard functions:	Current fixed |Virtual midnight |CLO

Materials

Lighting fixture:	Die cast aluminium | EN1706
Optical system:	Optics in PMMA Aluminium reflector, 99.7% oxidised and polished purity
Screen:	Screen-printed ultraclear tempered glass | Th. 0,15in (4mm)
Gaskets:	Removable silicon
Cable gland:	Polyamide PA66 | PG16 | Ø 0,55in (14mm) MAX
Screws and bolts:	AISI 304 stainless steel
Fixture color:	GMR light Others on request
Silkscreen color:	RAL 9005

LED features

LED data 4.000 K - 640mA:	700 lm/LED | 181 lm/W | 77°F (25°C) [Tj] | ≤ 3 step MacAdam
Color temperature:	2.200K | 2.700K | 3.000 K | 4.000 K | CRI ≥ 70

Optional

Additional surge protector device:	SPD | Max peak current 10kV/5kA 8/20µs
Additional surge protector device SPD 400:	SPD | Max peak current 10kV 8/20µs + permanent overvoltage protection higher than 270Vac
Electrical equipment:	1,64ft (0,5m) power cable with 2-3 or 4-5 core connector Disconnector and cable clamp | cross section AWG14 ÷ AWG6
Optional functions:	DALI2 | D4i
Connectors and sockets:	NM (Nema Socket) | ZS (Zhaga Socket)

GMR ENLIGHTS s.r.l. • Quality system certificate ISO 9001:2015-ISO 14001:2015 • phone:+39 0543 462611 • fax:+39 0543 449111 • sales@gmrenlights.com • www.gmrenlights.com
The information in the data sheet may be subject to variations and implementations; please check the latest news on www.gmrenlights.com • The pictures used are purely for information.
Tolerance: size +/- 1% ; weight +/- 3%.

laFoglia 600

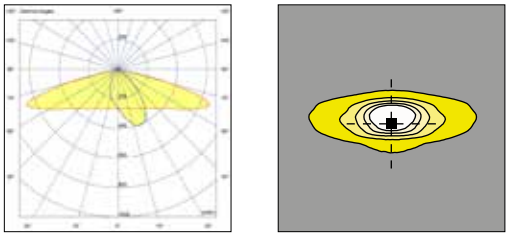
Available optical system

GMR ENLIGHTS

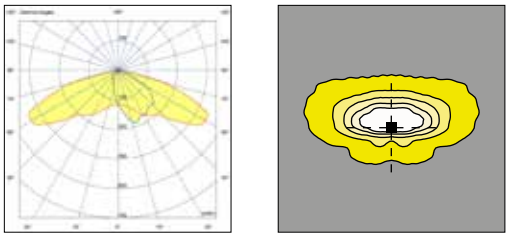
rev. 2025.03

ASYMMETRICAL DISTRIBUTION\\

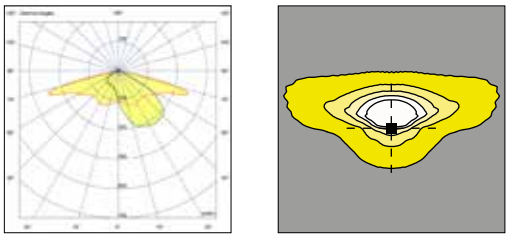
2A



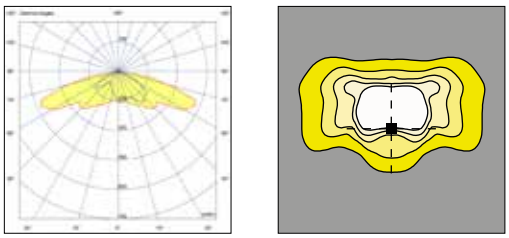
2B



2C

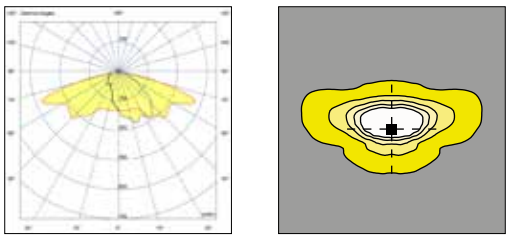


2D

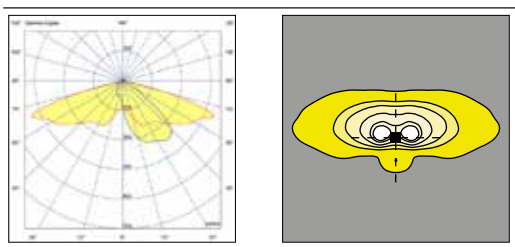


ASYMMETRICAL DISTRIBUTION\\

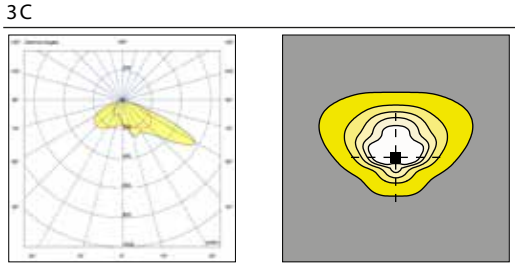
3A



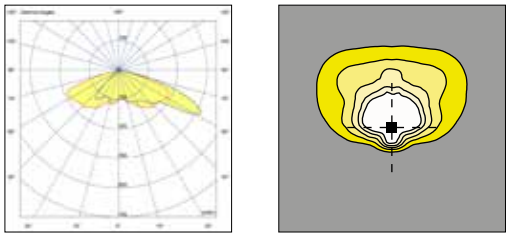
3B



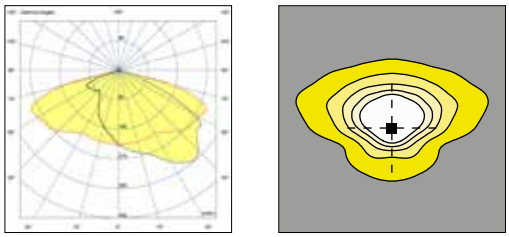
3C



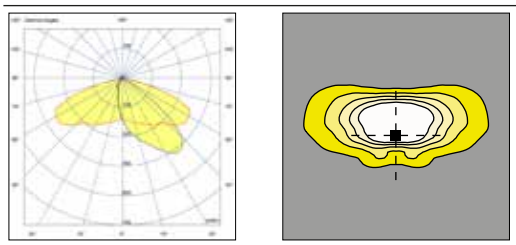
3D



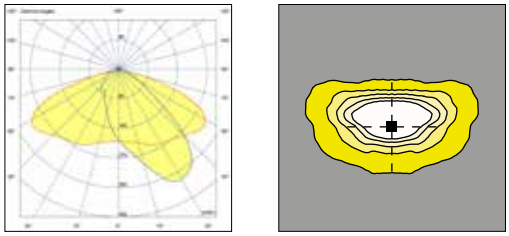
3E



3F

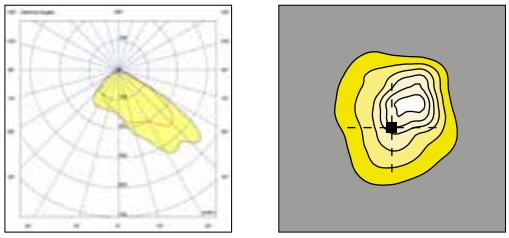


3G

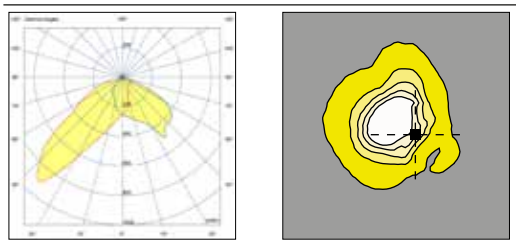


PEDESTRIAN PATHS\\

4A



4B



laFoglia 600

Photometric data | LED modules nominal data

rev. 2025.03

The LED modules nominal data refers only to the LED light sources in a standard version, with 4000 K color temperature, color rendering index CRI 70 min. and a junction temperature tj of 77°F (25°C). The LED nominal data are extrapolated from the manufacturer documentations.

LED code	I LED [mA]	I [mA]	Luminous flux [lm]	Power LED [W]	Efficiency [lm/W]
GL12	175	350	9131	45,7	200
	265	525	12835	69,7	184
	350	700	16592	94,5	176
	475	950	19568	130,2	150
GL14	175	350	10360	53,2	195
	265	525	14635	81,2	180
	350	700	17662	109,7	161
	450	900	19984	142,8	140
GL16	175	350	11590	60,7	191
	265	525	16078	92,6	174
	350	700	18953	125,0	152
	400	800	20073	143,7	140

laFoglia 600

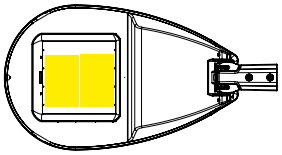
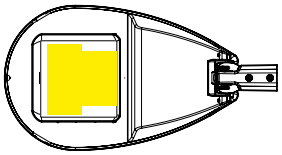
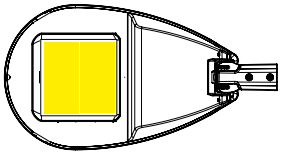
Photometric data | Lighting fixture measured data

rev. 2025.03

The lighting fixture measured data refers to GMR ENLIGHTS products in a standard version, with 4000 K color temperature, optica type 3G and an ambient temperature ta of 77°F(25 °C).

GMR ENLIGHTS offers the possibility of driving the device with custom currents (•).

Feature availability is subject to configurations. To obtain luminous fluxes and efficiencies of the lighting fixture in case of optic type and/or color temperature and/or color rendering index different from the standard use the conversion factors shown in the tables.

Order code: LF6_GLxx		I LED [mA]	I [mA]	Luminous flux [lm]	Power LED [W]	Efficiency [lm/W]
GL12		175	350	8985	50,5	178
		265	525	12630	76,0	166
		350	700	16326	101,5	161
		475	950	19254	139,5	138
GL14		175	350	10195	58,0	176
		265	525	14401	88,5	163
		350	700	17380	118,0	147
		450	900	19665	153,5	128
GL16		175	350	11404	66,5	171
		265	525	15821	99,5	159
		350	700	18650	134,5	139
		400	800	19752	154,5	128

OPTIC CONVERSION FACTOR LUMINOUS FLUX

Optic type	Flux multiplier
1A | 2B | 3G	1,00
2C | 4B	0,99
1B | 2A | 3C | 3D | 4A | 5A	0,98
2D | 3E | 3F | 3H	0,97
3A |3B	0,96

Tk CONVERSION FACTOR LUMINOUS FLUX

Tk [K]	Flux multiplier
2.200	0,86
2.700	0,94
3.000	0,95

CRI CONVERSION FACTOR LUMINOUS FLUX

CRI (color render index)	Flux multiplier
70	1,00
80	0,91

(*) See pag: Available optical system, to check the optic type availability.
(**) See pag: Technical data, to check the colour temperatureb availability.

Functions

Standard functionality

Fixed current
During production, the light fixture is pre-set with a fixed current amongst the standard settings that appear in the tables on page 3. Upon customer's request, it is also possible to set a specific current (custom setting).

Virtual Midnight | Automatic dimming
The driver is programmed to automatically dim the light output according to the time. As required by regulations, the maximum output is set during initial hours and towards the end of the light fixture's operating time interval. During these hours there is statistically more traffic. The light output is then dimmed during the central hours of the operating time interval. This management is achievable through a self-learning process of the device, that establishes the centre point of the time interval. This moment is called "virtual midnight" and it is the point that the dimming profile refers to in order to know when to reduce the light output. We can manage up to 8hrs of programming that evolve around the virtual midnight and up to 5 steps of dimming. This way the light output will adjust automatically, adapting throughout the year to the duration of the nighttime, by referring to the pre-set parameters based on the centre point of the operating time interval.

CLO Constant Lumen Output
LEDs over time are inevitably subject to performance depreciation. This light reduction may be compensated by gradually increasing the LED's current during its lifespan, this corresponds to a gradual increase of lumen output proportional to the amount that is naturally depreciated.

On request functionality

DALI2 Control and monitoring system
On request, the fixture can be fitted with a DALI2 communication interface. This protocol allows it to be monitored and controlled remotely through use of Dali control buses.

D4i
On request, the fixture can be equipped with a D4i certified power supply. This is the ideal solution for wireless sensors and/or controls. This system was developed to integrate various systems to address smart city requirements. Included is DALI2 protocol + auxiliary power (AUX) to supply power to devices and sensors. This system is usually required when using a Zhaga socket.

LINESWITCH
This functionality by using an extra wire within the streetlight's power line, allows to dimmer to a pre-set level. For example, a centralised timer can change this value from 100% to 50%, and vice versa.

AMPDIM
This feature allows dimming using the power line controlled by an upstream flow regulator. For this feature, the flow controller must use amplitude modulation (AM).

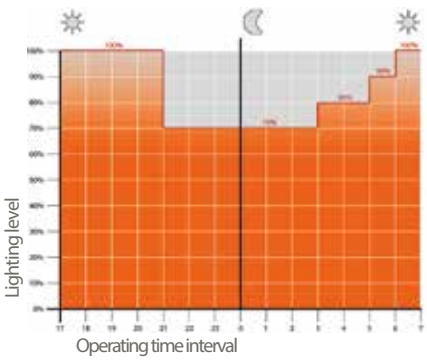
NEMA | Nema Socket (7 PIN)
The Nema Socket is a 7 PIN connector/socket with IP66 rating, that is fitted on the fixture to make it interfaceable with various ANSI C136 compliant devices and remote-control gear.
These devices can be installed during or after installation of the light fixtures. The NEMA socket can provide power interruption and is interfaceable with DALI buses and/or 1-10V dimming. It is compatible with point-to-point node connection, and twilight sensors ect.

ZHAGA Zhaga Socket (4 PIN)
The Zhaga socket is a small and compact 4 Pin connector/socket, that is fits ideally with the design of GMR ENLIGHTS fixtures. With ZHAGA sockets it is possible install the devices, sensors, ZHAGA remote controls during or after installation of the light fixtures. This socket is usually required in conjunction with the DALI Sensor feature, which involves a DALI2/D4i communication protocol in addition to 12/24V auxiliary port to supply power to the sensors. It is compatible with point-to-point wireless control solutions and SMART CITY applications to control and monitor the public lighting infrastructure.

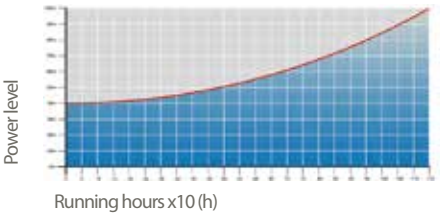
PRESENCE SENSOR
The product can be equipped with a presence sensor type zhaga book 18 in the lower part of the luminaire. In this case the lighting body is provided with Zhaga socket and Driver D4I. It is very important to carefully evaluate the installation context (height and underlying area) according to the sensing diagram of the device.

Third-party remote control
GMR ENLIGHTS fixtures are compatible with most third-party remote controls, powerline communication systems, wired systems (buses) and wireless systems.

Example of 4-step adjustment with virtual midnight



CLO Light Flow Compensation



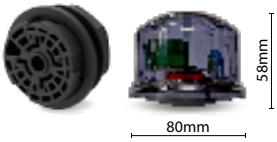
7 Pin Nema Socket 7 (A) and IP66 shorting cap (B)

A

B

4 Pin Zhaga Socket (C) and IP66 cap (D)

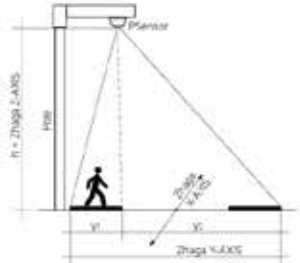
C



D

Installation example of Zhaga

Installation example of presence sensor



For these versions, the TIMELESS plus, only on the wiring plate, is not available

The information in the data sheet may be subject to variations and implementations; please check the latest news on www.gmrenlights.com • The pictures used are purely for information.

Protection cycles

rev. 2025.03

GMR ENLIGHTS works with cast iron, steel and aluminum. The materials are selected and processed to maximize performance and quality.

GALVANIZED STEEL

Protection of galvanized steel surfaces for poles

The protection of galvanized steel elements is achieved by following steps:

- Micro sandblasting;
- First epoxy layer application followed by:
Wilting > Drying > Cooling;
- Acrylic glaze layer application followed by:
Wilting > Drying > Cooling;
- Packing at least after 24-hour-drying at room temperature.

Protection of galvanized steel surfaces for brackets and pastorals

The protection of the galvanized steel elements is achieved thanks to:

- Micro sandblasting;
- Phosphoric pickling bath at a ph level ranging from 1.5 to 3;
- Rinsing with demineralised water;
- First powder layer application;
- Kiln firing;
- Application of a final powder layer;
- Kiln roasting of the final powder layer at 356°F (180°C);
- Cooling.

CAST IRON

Protection of cast iron surfaces for bases

The protection of cast iron elements is achieved by the following treatments:

- Surface micro shotblasting;
- Mono-component dip galvanizing followed by:
Wilting > Drying > Cooling;
- Epoxy micaceous primer application followed by:
Wilting > Drying > Cooling;
- Acrylic enamel application followed by:
Wilting > Drying > Cooling;
- Packing at least after 24-hour-drying at room temperature.

DIE-CAST ALUMINIUM

Protection of die-cast aluminium surfaces for lighting fixtures, tops, collars, brackets and pastorals

Lighting fixtures, brackets, pastoral, and die-cast accessories undergo a cycle of powder painting which creates a barrier against the corrosion of metal parts. Moreover this barrier makes the finished product comply with design specifications in terms of surface roughness, color and reflectance.
The cycle consists of the following steps:

- Micro sandblasting;
- Hot pickling bath in a zinc-based phosphodegreasing solution;
- Specific process for the preparation of surfaces before painting;
- Washing with water;
- Rinsing with demineralised water and subsequent drying;
- First bowder layer application followed by kiln baking at 356°F (180°C);
- Final powder layer application using a High Durability product and final kiln roasting at 356°F (180°C).

Salt spray test

The top quality of such treatments is confirmed by salt spray tests performed in accordance with standard ISO 9227:2017 Neutral Salt Spray test (NSS).
The test was carried out for 8.000 hours at 95°F (35°C) and demostrated through the report test released.

GMR ENLIGHTS s.r.l

Legal headquarters:
Strada Provinciale Specchia - Alessano, 68 • 73040 (LE)

Administrative and operational headquarters:
Via Grande n°226 • 47032 Bertinoro (FC)

T +39 0543 462611
F +39 0543 449111

sales@gmrenlights.com
www.gmrenlights.com

The information in the data sheet may be subject to variations and implementations; please check the latest news on www.gmrenlights.com • The pictures used are purely for information.
Tolerance: size +/- 1% ; weight +/- 3%.