GMR ENLIGHTS

WOLTRON 03

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

Woltron 03 Sport

Technical data

GMR ENLIGHTS

rev. 2021.03

Install

Suitable for the lighting of sport facilities of any level, even for television broadcasts [Flicker <2%]

Accessibility

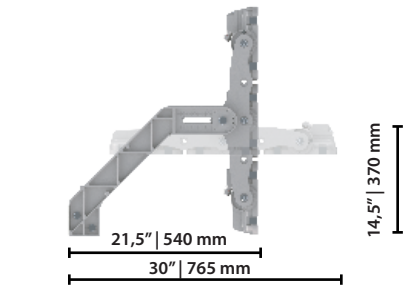
Openable

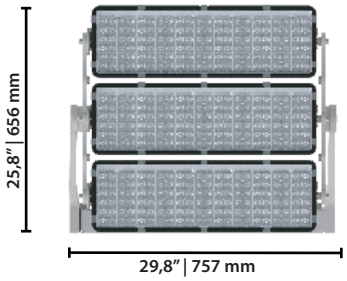
Openable fixture with basic tools
Replaceable internal components using basic tools.

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.

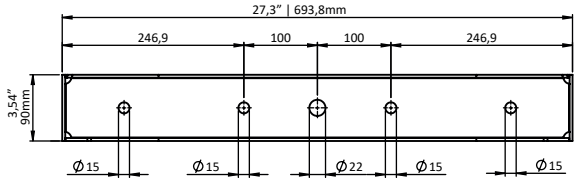




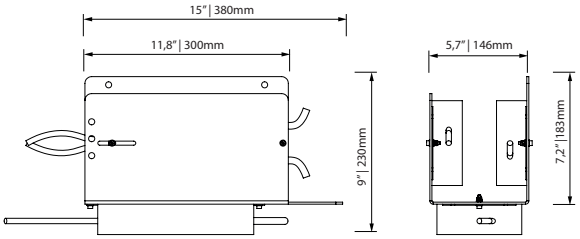
Scale: 1:15

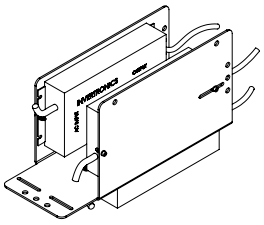
Max. weight	CXS
32 Kg (brachet+ floodlights)	Front: 0,5 m²
Power supply (driver+driver plate): 9 Kg	

Floodlights fiixng



Driver plate





It can be inserted in a door with a minimum size of 150mmx400mm

Standard

EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

Conformity | protection

Conformity

Salt spray test

ISO 9227

8000 hr

Vibration test passed

IEC 60068-2-6

Insulation classes

Protection classes

IP 66 IK 10

Photobiological safety

Classe 0 Exempt group IEC/TR62471

Plus

OPTICAL FLEXIBILITY · LOW GLARE · CAM 2017 COMPLIANT · A++ IPEA MIN

Lighting fixture features

General features

Power source:	90-305V | tolerance +/-10% | 249-528V on request
Current supply:	700 mA | 1050 mA | 1200 mA (P_{max} = 1444W)
Power:	*Pmax CLASS 1 1264W | Pmax CLASS 2 990W
Power Factor | THD:	≥0.95 | <10 % (At full load)
Expected life (Ta=25°):	> 100.000 h | L90B10 | @ LED 1200mA
Operational temperature (Ta):	T_{min} = -40°C T_{max} = +40°C | LED @1444W
Storage temperature:	-40°C/+80°C
Overcharge protection:	Main surge immunity up to 10kV
Standard functions:	1-10 V | Current fixed |Virtual midnight |CLO |DALI
Standard equipment:	Dislocable up to 50 meters, supplied with fixing plate wall mounted in galvanized steel and wire

Materials

Lighting fixture:	Die cast aluminium | EN1706
Bracket:	Made up: 2 die-cast aluminum arms 1 hot galvanized steel base
Optical system:	Optics in PMMA Aluminium reflector, 99.7% oxidised and polished purity
Frame:	Die cast aluminium | EN1706 | 3 adjustments
Screen:	Ultraclear tempered glass | Th. 4mm
Gaskets:	Removable silicon
Cable gland:	Polyamide PA66 | PG16 | Ø 14mm MAX | IP 66
Screws and bolts:	AISI 304 stainless steel
Fixture color:	GMR light

Led features

LED data 4.000 K - 700mA:	340 lm/LED | 180 lm/W | 25°C [Tj] | ≤ 3 step MacAdam
Color temperature:	3.000K | 4.000 K | 5.700 K | CRI ≥ 70

Optional

Surge protection:	SPD with LED | 12kV
Electrical equipment:	- Junction box - 380V driver - additional IP connectors
Mechanical equipment:	- Aiming device for precise pointing - Pole-top adapter Ø60-76 - Protection grille - Light shield
Optional functions:	DALI | DMX

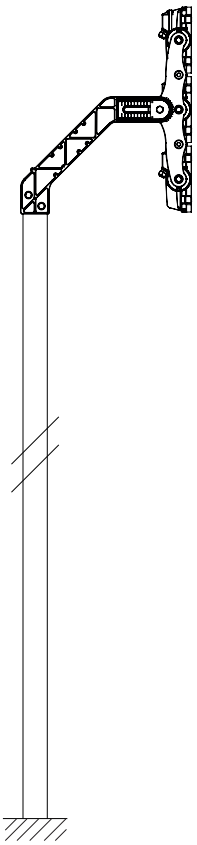
The information in the data sheet may be subject to variations and implementations; please check the latest news on www.gmrenlights.com • The pictures used are purely for information. Tolerance: size +/- 1% ; weight +/- 3%.

Woltron 03 Sport

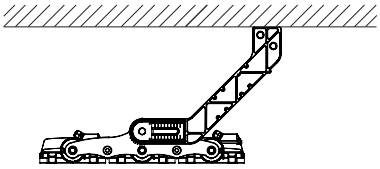
GMR ENLIGHTS
rev. 2020.05

Fixing TYPE

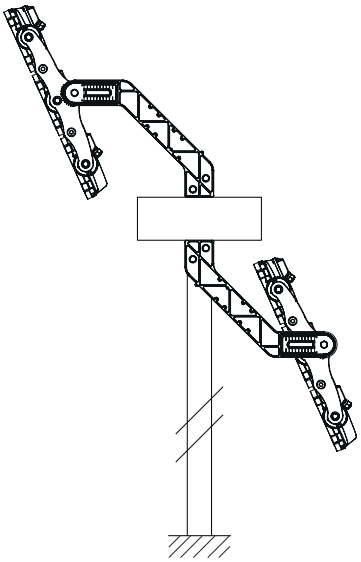
Pole-top fixing



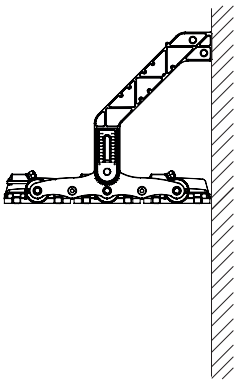
Surface mounting



Multiple installation

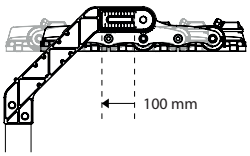


Wall mounting

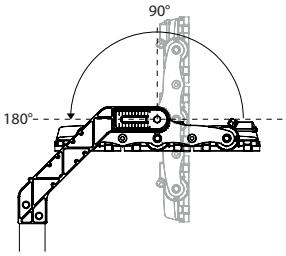


Adjustement diagrams

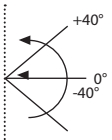
Longitudinal adjustment

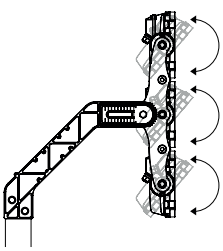


Complete floodlight adjustment



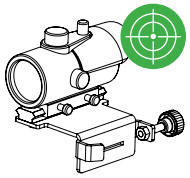
Module adjustment



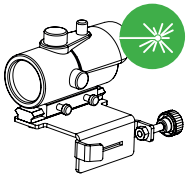


Mechanical optional

Easily installable aiming device
for precise pointing of the light.

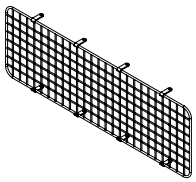


Optic

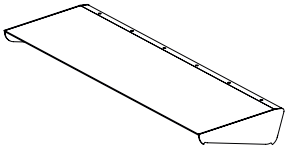


Laser

Protection grille to safeguard the floodlight's screen. It can be easily removed for cleaning.



Light shield: Vizor to minimise upward light.



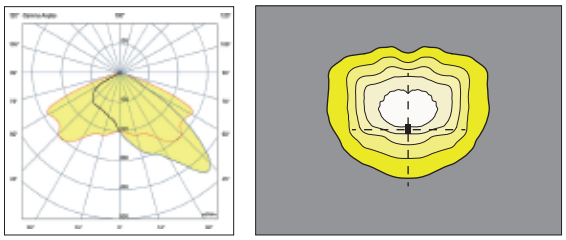
Woltron 03 Sport

Available optical system

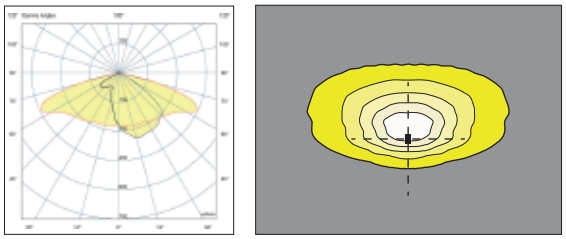
2021.03

ASYMMETRICAL DISTRIBUTION\\ *TYPE 3*

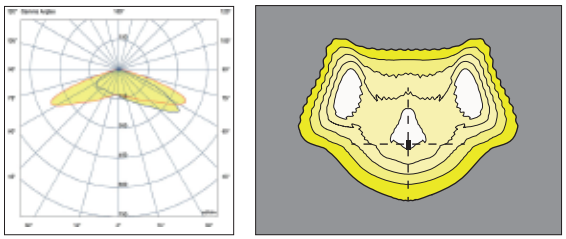
3A



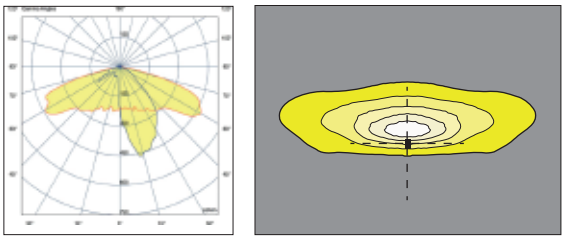
3B



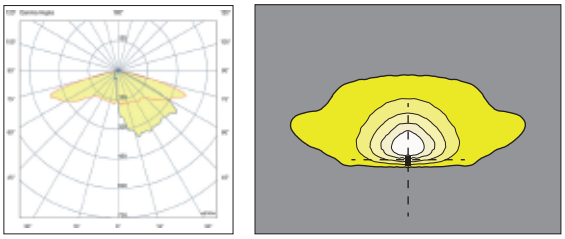
3C



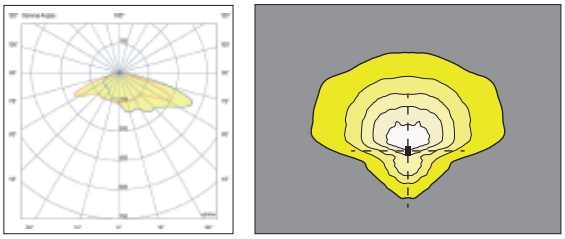
3D

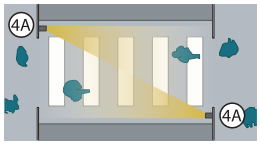


3E

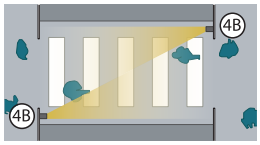


3F

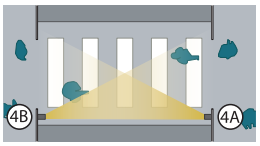




TYPE 4A



TYPE 4B



TYPE 4A + TYPE 4B

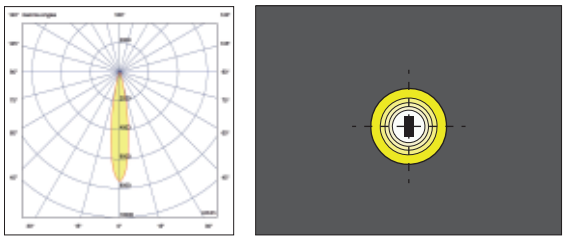
Woltron 03 Sport

Available optical system

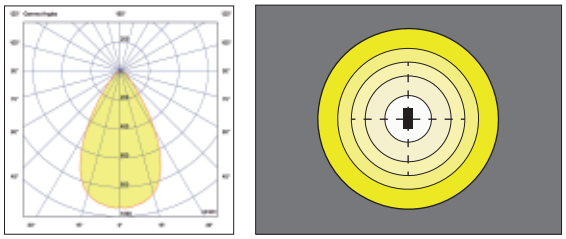
2021.03

ROTO-SYMMETRICAL DISTRIBUTION\\ *TYPE 9*

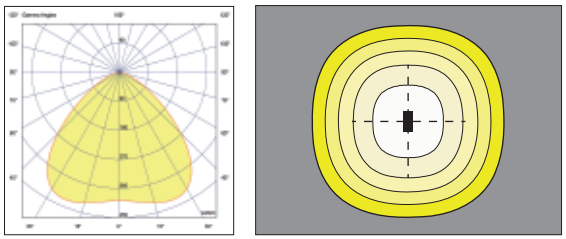
9A



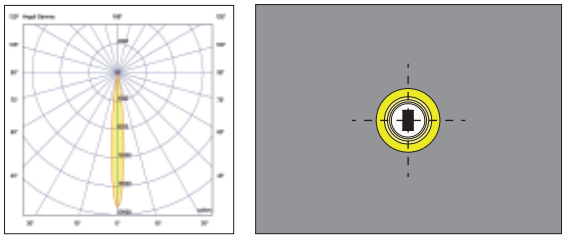
9B



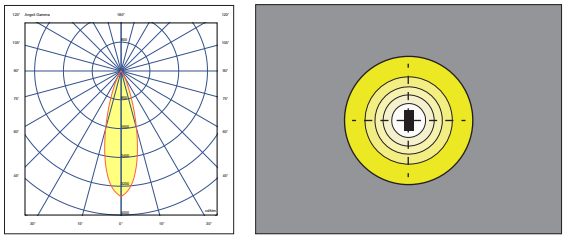
9C



9D

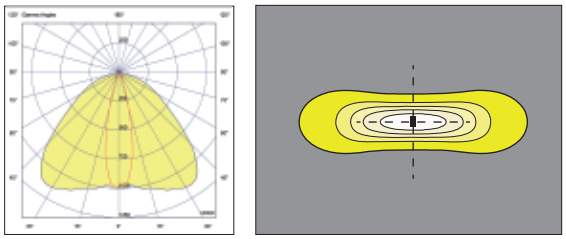


9E



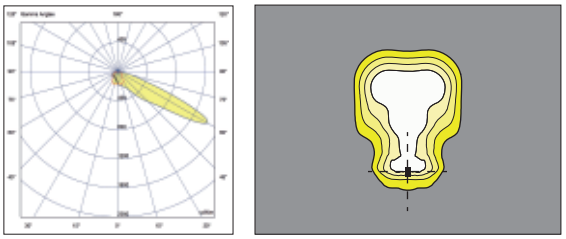
SYMMETRICAL DISTRIBUTION\\ *TYPE 10*

10A

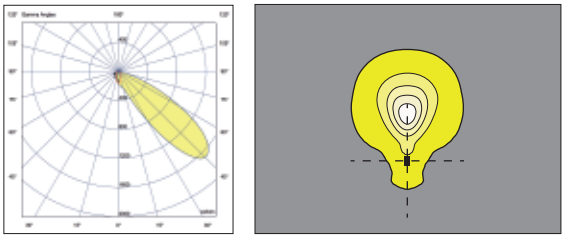


FLOODLIGHT DISTRIBUTION\\ *TYPE 11*

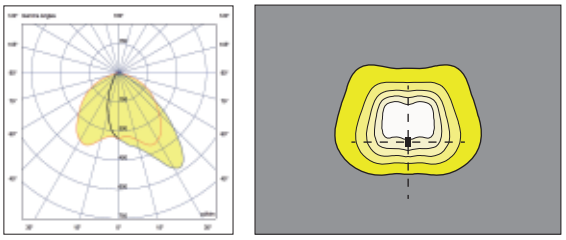
11A



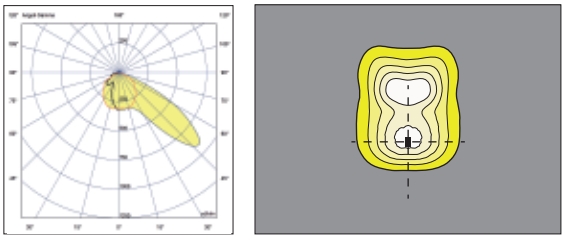
11B



11C



11D



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Woltron 03 Sport

Photometric data | LED modules nominal data

GMR ENLIGHTS

2021.03

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 25°C. The LED nominal data are extrapolated from the manufacturer documentations.

LED code		(•) I [mA]	Luminous flux [lm]	Power [W]	Efficiency [lm/W]
GL81		700	114229	658	174
		1050	163779	1016	161
		1200	158496	1016	156
GL87		700	122562	706	174
		1050	175869	1091	161
		1200	170196	1091	156
GL93		700	131068	755	174
		1050	187959	1166	161
		1200	181896	1166	156
GL99		700	139574	804	174
		1050	200210	1242	161
		1200	193752	1242	156

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Woltron 03 Sport

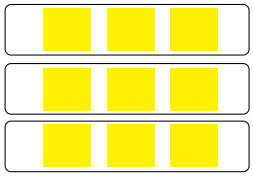
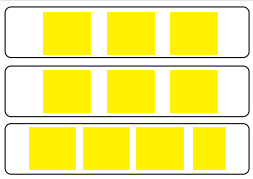
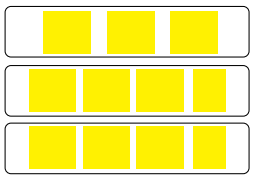
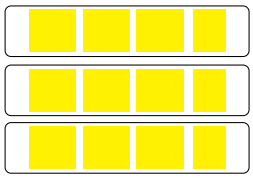
Photometric data | Lighting fixture measured data

2021.03

The lighting fixture measured data refers to GMR ENLIGHTS products in a standard version, with 4000 K color temperature and an ambient temperature ta of 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: WS3_GLxx		(•) I [mA]	Flusso luminoso [lm]	Potenza [W]	Efficienza [lm/W]
9B					
GL81		700	93690	679,0	138
		1050	131002	1036,0	126
		1200	142966	1186,0	121
GL87		700	100364	728,5	138
		1050	140325	1111,0	126
		1200	153133	1272,5	120
GL93		700	107039	777,5	138
		1050	149647	1186,0	126
		1200	163300	1358,5	120
GL99		700	113713	827,0	138
		1050	158969	1264,0	126
		1200	173467	1444,5	120

OPTIC CONVERSION FACTOR LUMINOUS FLUX

Optic type	Flux multiplier
3A | 3C | 3D | 3E | 3F	0,99
09A | 09E	1,01
09B | 09C	1,00
10A	1,00
11A | 11B	0,99
11C	1,00

Tk CONVERSION FACTOR LUMINOUS FLUX

Tk [K]	Flux multiplier
3.000	0,94
5.700	1,01

CRI CONVERSION FACTOR LUMINOUS FLUX

CRI (color render index)	Flux multiplier
70	1,00
80	0,93

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

Woltron 03 Sport

Photometric data | Lighting fixture measured data

GMR ENLIGHTS

2021.03

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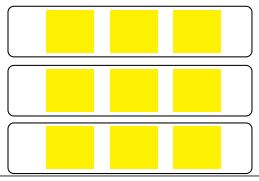
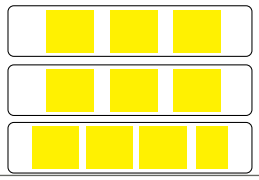
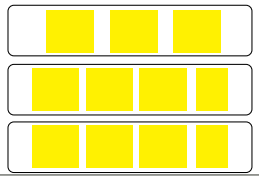
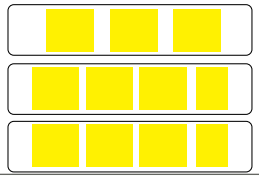
Order code: WS3_GLxx		(•) I [mA]	Flusso luminoso [lm]	Potenza [W]	Efficienza [lm/W]
9D					
GL81		700	85630	709,0	121
		1050	116958	1086,0	108
		1200	127024	1246,0	102
GL87		700	91723	760,0	121
		1050	125272	1165,0	108
		1200	136048	1337,0	102
GL93		700	97815	812,0	120
		1050	133585	1244,0	107
		1200	145071	1427,5	102
GL99		700	103908	863	120,5
		1050	141899	1323	107
		1200	154095	1518	11,5

Tk CONVERSION FACTOR LUMINOUS FLUX

Tk [K]	Flux multiplier
5.700	1,01

CRI CONVERSION FACTOR LUMINOUS FLUX

CRI (color render index)	Flux multiplier
70	1,00
80	0,93
90	0,81

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

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Functions

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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.

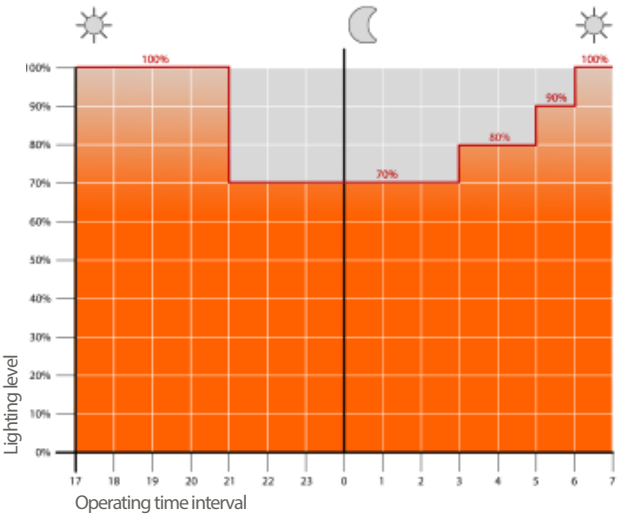
CLO Constant Lumen Output
LEDs over time are inevitably subject to performance depreciation. This light reduction may be compensated by gradually increasing the LED's current during its lifespan, this corresponds to a gradual increase of lumen output proportional to the amount that is naturally depreciated.

1-10V Analog control system
On request, the fixture can be equipped with 1-10V dimming interface. This protocol provides the possibility of dimming a single device or a public lighting line through a 1-10V control bus.

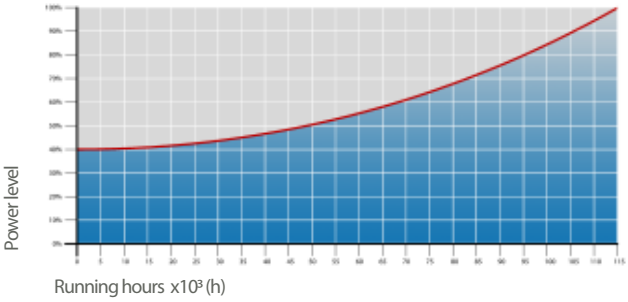
On request functionality

DALI SENSOR (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 Lumawise socket.

DMX
This lighting control protocol allows to manage the dimming using a master device.



Example of 4-step adjustment with virtual midnight



CLO Light Flow Compensation

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Protection cycles

2021.03

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 180°C (356°F);
- 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 180°C (356°F);
- Final powder layer application using a High Durability product and final kiln roasting at 180°C (356°F).

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 35°C (95°F) and demostrated through the report test released.

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