

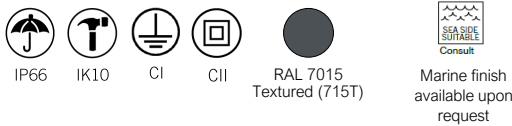
# C-LINE

## GEN4



### KEY ADVANTAGES

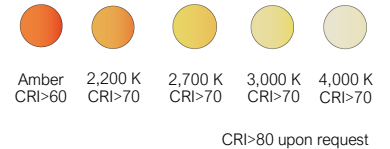
- Tool-free access from the top.
- Sturdiness: IP66 + IK10.
- Die-cast aluminium (Cu<0.1%)
- Up to 4 optical distributions.
- Energy Efficient: 131lm/ W.
- Smart Ready: Designed to house both indoor and outdoor communications nodes.
- Future Proof: Zhaga-compliant
- Lifespan L90B10 100,000 h at 25 °C.



### DESCRIPTION

The C-Line series is a luminaire designed and manufactured by Carandini for urban settings such as squares, parks, walkways or residential areas.

It uses latest generation high-performance, efficient LEDs to offer a solution that meets the important requirements of optical performance and energy efficiency.



### STANDARDS / CERTIFICATES

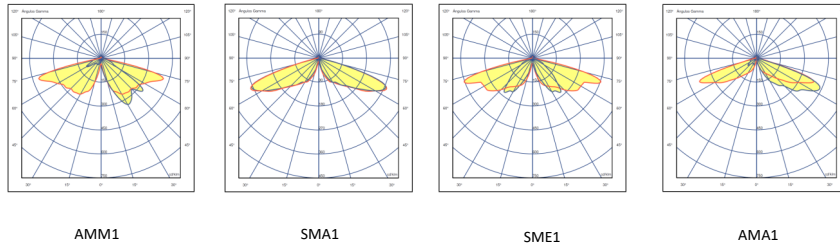
- CE
- RoHS
- UNE-EN 60598-1
- UNE-EN 60598-2-3 or 60598-2-5
- UNE-EN 62471:2009
- UNE-EN 60598
- UNE-EN 61000-3-2
- UNE-EN 61000-3-3
- UNE-EN 55015
- UNE-EN 61547
- UNE-EN 62031
- UNE-EN 61347-2-13
- UNE-EN 62384
- UNE-EN 13032-4
- UNE-EN ISO 9227 NSS: 2017 (1000h)

904 lm - 9043 lm	7.9 Kg
131 lm/W Luminaire	0.19 m²
Tool-free access to control gear	-40 °C - +50 °C
Connection system without opening the luminaire	1%

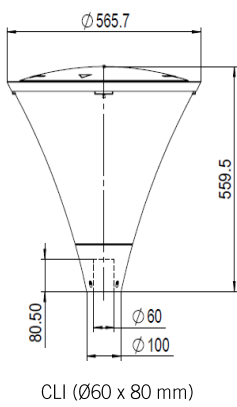
220 - 240 V / 100V - 277 V  
50-60 Hz  
L90B10 100,000 h  
Ta 25 °C

## PHOTOMETRIC CONFIGURATIONS

4 photometric configurations are available for use in the various environments where this type of luminaire might be installed, meaning it can be adapted to suit all situa-



## DIMENSIONS (mm)



## APPLICATIONS

Residential areas, parks and gardens, squares and pedestrian areas.



## C-LINE CHARACTERISTICS

GENERAL INFORMATION	
Sustainability	Recyclability: 97,97% Maximum carbon footprint per use: 0.017593 kg kW/h de CO2
CE mark	Yes
ENEC Certificate	Yes
RoHS-compliant	Yes
Testing standards	LM 79-80 (all measurements at ISO17025 certified laboratory)

GENERAL CHARACTERISTICS	
Cover	Reinforced polyamide (UNE-EN ISO 4892-3:2014)
Diffuser	Stabilized UV polycarbonate. (UNE-EN ISO 4892-3:2014)
Mounting	Die-cast aluminium EN AC-44100 (LM6) with low copper content <0.1%.
Finish	Grey polyester powder coating RAL 7015 Textured (715T).
Exterior nuts and bolts	Stainless steel (AISI304).
General ingress protection	IP66 (EN 60598-1 and EN 60529).
Degree of	IK10 (EN 62262).
Operating temperature	Ta -40 °C a +50 °C According to luminaire configuration.
Estimated life	L90B10 100,000 h at 25 °C. Light maintenance values at 25 °C are

ELECTRICAL CHARACTERISTICS	
Electrical class	Class I or Class II
Input voltage	220 V - 240 V / 50 Hz - 60 HzOptional 100-277 V
Power factor	> 0.9
Harmonic distortion	< 10% Other voltages, upon request.Other voltages upon
Overvoltage protection	Overvoltage protection (1.2/50) 10 kV. Maximum current (8/20) 10 kA. Maximum voltage (L-N) 320 V. Maximum voltage (L/N-GND) 400 V. Optional overvoltage protection: 20 kA, 20 kV.

MAINTENANCE AND ASSEMBLY	
Installation and maintenance	Toolless assembly.
Installation	Installation to column of Ø60 mm.
Accessories	C.SENS=> column mounted presence sensor.
Equipped weight	7.9 Kg

LIGHTING CHARACTERISTICS	
Real light package	1,000 lm to 8,000 lm (9 - 68 W)
LED colour temperature	4,000 K (Neutral White, nw). 3,000 K (Warm White, nw). 2,700 K (Warm White, nw). 2,200 K (Warm White, nw). Amber colour temperature, upon request.
Colour rendering index (CRI)	CRI>70. CRI80 upon request.
LEDs	12, 16 and 32 LEDs.
ULR	1%
Optics	Acrylic PMMA lenses especially designed for LEDs.
Photometric configurations	<b>AMM1:</b> Throw 70° Spread 30°/50° (Type III) <b>SMA1:</b> Throw 70° Spread 70° (Type IV) <b>SME1:</b> Throw 70° Spread 40° (Type II) <b>AMA1:</b> Throw 70° Spread 60° (Type IV)
LED thermal management	Heat dissipation via conduction, radiation and convection based on a design for LED technology.

MANAGEMENT AND CONTROL	
Devices	1N: LED 1N RC: Adjustable LED in head RD: Adjustable LED Protocol DALI AF: Adjustable LED Protocol 1 - 10 V RL: Pulse adjustable LED 2N: Dual level SR: Smart Ready (D4i) Other devices, upon request.
Autonomous regulation	Factory-programmable regulation: 56: 50% from 24:00 to 06:00 66: 60% from 24:00 to 06:00 76: 70% from 24:00 to 06:00
CLO regulation	Percentage flow during product lifespan: 7: 70% luminous flux during luminaire lifespan. 8: 80% luminous flux during luminaire lifespan. 9: 90% luminous flux during luminaire lifespan.
Sockets	3-U: NEMA 3 pin socket with/without IP66 cover 5-V: NEMA 5 pin socket with/without IP66 cover 7-V: NEMA 7 pin socket with/without IP66 cover 4-X: Zhaga socket with/without IP66 cover
Photocells	1: Photocell for NEMA 3, 5 and 7 pin socket (20 lux) 2: Photocell for larger Zhaga socket (20 lux)
Node	ON: Controlux One BS: Controlux Basic

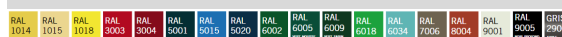
## COLOURS

### PREDEFINED COLOUR OF THE LUMINAIRE

<b>RAL 7015</b>	- Polyester Powder 7015 Slate Grey Textured Matt
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### PREDEFINED \*

Otros colores disponibles



### FINISHES

\* Standard range of colours

<b>RAL 9005</b>	Polyester Powder 9005 Intense Black Textured Matt.
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<b>RAL 9006</b>	Polyester Powder 9006 Aluminium White Smooth White Glossy.
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<b>RAL 9007</b>	Polyester Powder 9007 Aluminium Grey Smooth Glossy.
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\*These colours may be painted as long as the parts allow it.

## LOGISTICAL INFORMATION\*

- Box size: 600 x 600 x 600 mm
- Individual weight: 8.4 kg.
- Number of boxes: 6 units
- American base: 1200 x 800 x 1950 mm
- Stack height: 3 levels
- Area occupied: 75%
- Volume used: 67.5%
- Total weight: 70 kg.
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\*If the luminaire includes cable, consult box dimensions.

## LUMINAIRE ADJUSTMENT

### By programming the driver

Programming profile

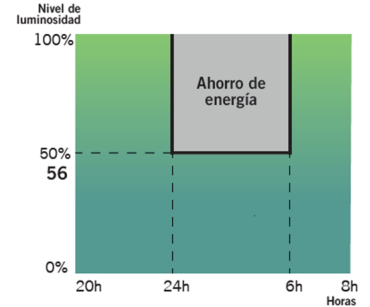
The driver can be programmed so that luminous flux is reduced from the luminaire during the least busy hours at night while always meeting the required lighting and uniformity levels.

Programming profile 56

From 00:00 to 06:00 the luminaire reduces its initial intensity by 50%.

Hasta un

**26%**  
de ahorro



### Using the CLO function

While taking lumen depreciation over the years into account, the driver is programmed so that it starts at a reduced level and gradually increases power over the lifespan of the luminaire. This saves energy and increases the lifespan of the system. Furthermore, the light level in the area where the luminaire is installed remains constant over time.

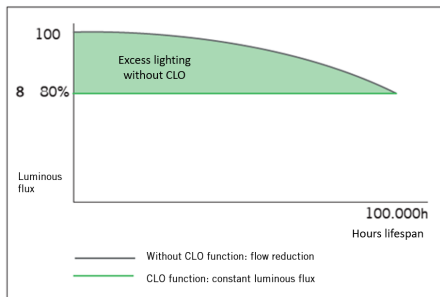
### Constant luminous flux 8

luminous flux from the luminaire at 80% to maintain light levels throughout its lifespan.

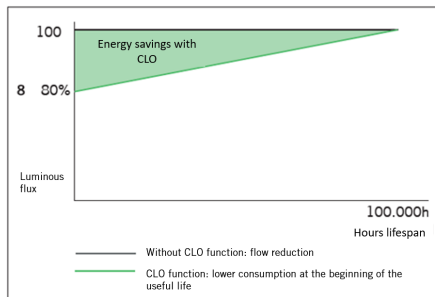
Hasta un

**10%**  
de ahorro

Luminous flux chart



Consumption graph



y se incrementa la vida de la luminaria

### By incorporating an additional device

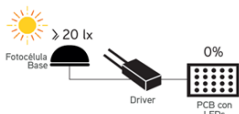
#### Photocell

A photocell enables the luminaire to be switched on or off based on the solar light intensity detected.

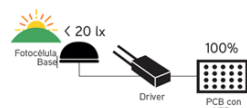
This is extremely useful so the luminaires are not switched on during the day when there is still sufficient natural light.

#### Ejemplo con fotocélula de 20 lx:

Si la fotocélula detecta más de 20 lx no activará el encendido de la luminaria.



Es cuando los niveles luminicos empiezan a bajar que la fotocélula detecta 20 lx y activa el encendido de la luminaria.



INNOVATIVE AND UPDATABLE OVER TIME (Zhaga/ ZD4i)



Zhaga — “Future Proof”

Zhaga is an industrial consortium that seeks to standardise the specifications used for interfaces between LED luminaires and light sources. The goal is to achieve interchangeability between products made by different manufacturers. Zhaga defines the testing procedures for light sources from luminaires and LEDs so that the luminaires accept the LED source.



Zhaga D4i — “Sensor Ready”

The Zhaga consortium merged with DiiA to create one single Zhaga-D4i certificate that combines the specifications for outdoor connectivity from Version 2 of Zhaga Book 18 with the D4i specifications of Dii4 for intra-luminaire DALI.

“BOOKS” PER APPLICATION. A PROFITABLE SOLUTION.

ZHAGA Consortium		Book 1-25 Overview by application		
	Office & Industry	Retail & Hospitality	Outdoor	
Integrated LED light engines	14, 2,8	17, 16		
LED modules (non-integrated)	7, 21, 14	12, 9, 5, 3,10	4	15, 19
Drivers	13	LED set 22,23	24,25	
Sensor and communication modules		20	18	

The specifications indicating that a component is Zhaga can be found in a series of books that are only available to consortium members and enable designs to be produced according to the marked standard. The advantages for society are clear given that, besides reducing the consumption of resources, luminaire re-use is increased with a focus on achieving a circular economy.

CERTIFICATION PROGRAMME

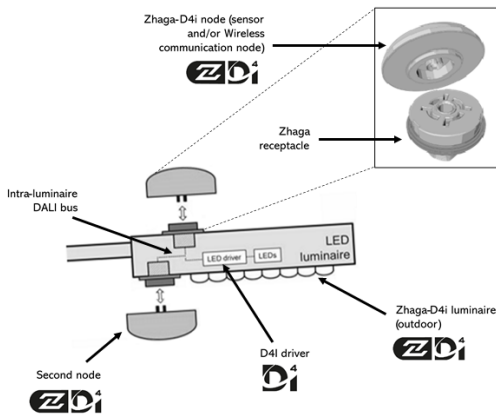
Zhaga-D4i certification covers all the essential characteristics, including automatic adjustment, digital communication, data reporting and power requirements in any single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals, such as connectivity nodes.

STANDARDISATION AS A MEANS TO ACHIEVE SUSTAINABILITY

The Conus GEN4 luminaire has been designed to function with the latest available market-proven technology based on standards. This also enables it to meet the CARANDINI sustainability requirements and become a product ready for maintenance in the future under better guarantees while respecting the environment and society.

The luminaires marked as Zhaga are a “Future Proof” design, meaning it is based on and designed around standard Zhaga components. These components are mainly the LED modules and the drivers. The electric compartment and dissipation area for LED modules has space and additional mountings to include any driver compliant with Zhaga “Book 13” based on market driver dimensions, or any LED module compliant with Zhaga “Book 15” based on LED controller interface specifications.

This makes it possible to have a sustainable product that can be updated over time.



CONNECTIVITY

D4i specifications take the best of the standard DALI2 protocol and adapt it to an interconnected lighting environment, but with certain limitations. Only the control devices installed in the luminaires can be combined with a Zhaga-D4i luminaire. According to the specifications, the control devices are respectively limited to an average power consumption of 2W and 1W.

SMART CITY

Luminaires marked ZD4i are a "Smart Ready" design, which means they are designed to house both indoor and outdoor communication nodes through connection bases compliant with the Zhaga “Book 18” & Zhaga-D4i standard on sensor and communication node interoperability.