

# Spin M



## KEY ADVANTAGES

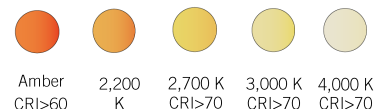
- Integrates into any urban space
- Tool-free access from the top
- Sturdiness: IP66 + IK09
- Die-cast aluminium (Cu<0.1%)
- Energy Efficient: 152 lm/W
- Up to 11 photometric distributions
- Smart Ready: Designed to house both indoor and outdoor communications nodes
- Future Proof: Zhaga-compliant
- Life span L90B10 100,000h (Ta) 25°C
- Night Friendly: ULR Arrêté du 27 décembre 2018



## DESCRIPTION

The Spin Series is a family of luminaires with LED technology designed by Carandini for different urban lighting uses.

Thanks to its aesthetic design and different optical distributions, it integrates perfectly into lighting for pedestrian areas, urban streets, squares and gardens, offering the light needed in each location to create pleasant and safe atmospheres.



2,452lm - 13,963lm



9.0 Kg



152 lm/W  
Luminaire



-40°C - +50°C



Tool-free  
access to  
control gear



0.00% - 0.08%  
FHS/ULR

## 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 (1,000 h)

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

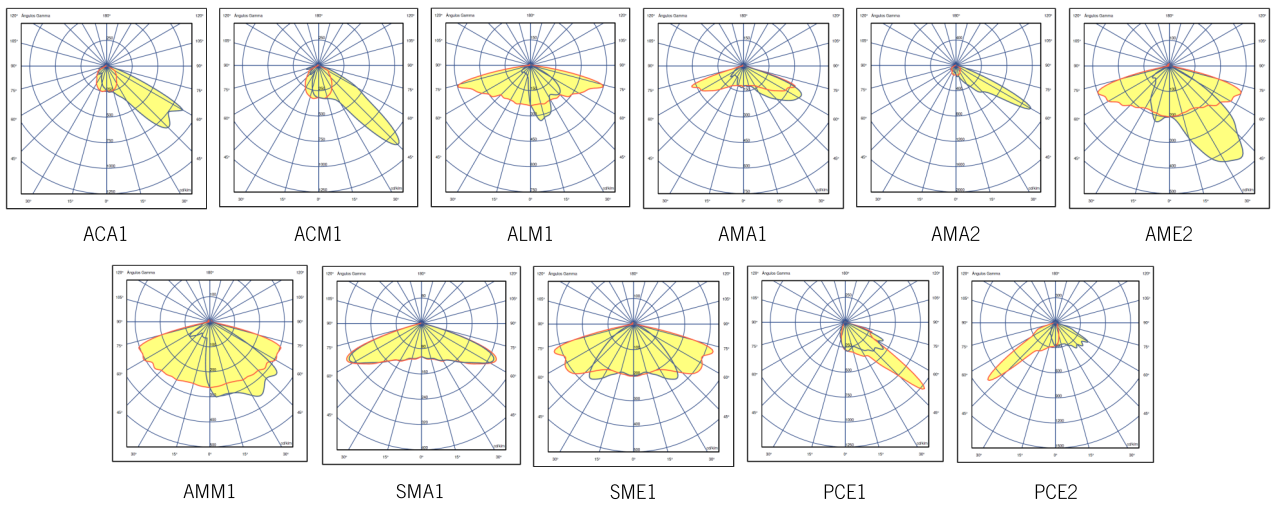
\*Test reports from independent ENAC accredited laboratories or equivalent. Measurements taken at ISO 17025 approved laboratory.  
Meets the minimum CEI - IDAE requirements.

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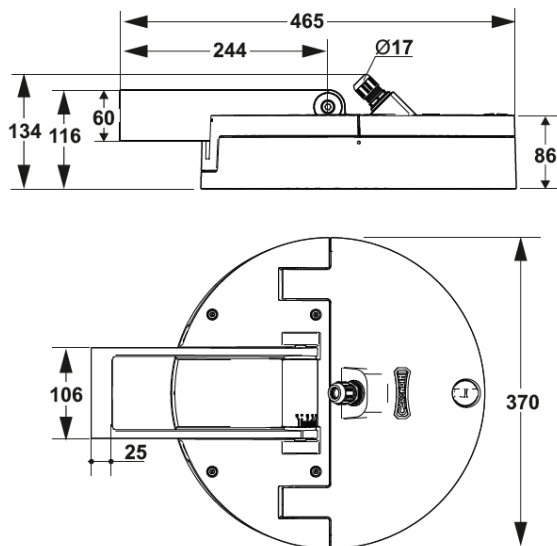
# SPIN

## PHOTOMETRIC CONFIGURATIONS

11 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 situations:

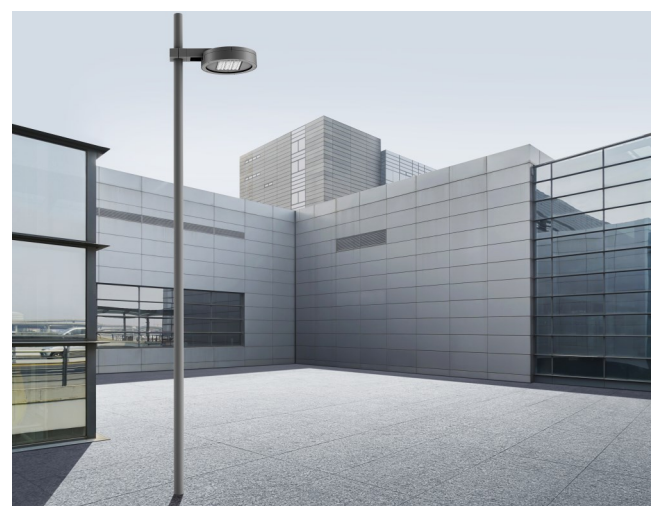


## DIMENSIONS



## APPLICATIONS

Parks, urban streets, gardens, squares and pedestrian areas.



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SPIN

## SPIN M CHARACTERISTICS

## GENERAL INFORMATION

Sustainability	Recyclability: 98,78% Carbon footprint per use: 0.024823 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

Body, Cover and Fork	Pressure die-cast aluminium EN AC-44100 (LM6) with low copper content <0.1%. Includes a moulded silicone gasket in the perimeter channel.
Finish	Grey polyester powder coat paint RAL 7015 Textured (715T). Other finishes, upon request.
Entry	M20 nickel plated brass cable gland
Light enclosure	5mm toughened flat glass.
Exterior nuts and bolts	Stainless steel (AISI304).
General ingress protec-	IP66 (EN 60598-1 and EN 60529)
Level of protection against impacts	IK09 (EN 62262)
Operating temperature	Ta -40°C to +50°C According to luminaire configuration.
Estimated life	L90B10 100,000 h at Ta 25°C. Light maintenance values at 25°C. Calculated by TM-21 based on LM-80 data.

## ELECTRICAL CHARACTERISTICS

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

## LIGHTING CHARACTERISTICS

Real light package	2,452lm to 13,963lm (21W - 103W)
LED colour temperature	4,000 K (Neutral White, nw). 3,000 K (Warm White, ww). 2,700 K (Warm White, ww). 2,200 K (Warm White, ww). Amber colour temperature, upon request.
Colour rendering index (CRI)	CRI>70. CRI80 upon request
LEDs	Includes 32 and 48 LEDs.
ULR	Between 0.00% and 0.08%
Optics	Acrylic PMMA lenses especially designed for LEDs.
Photometric configurations	ACA1 Throw angle 10° spread angle 40°/60° (Type III) ACM1 Throw angle 15° spread angle 45° (Type III) ALM1 Throw angle 75° spread angle 10°/45° (Type III) AMA1 Throw angle 70° spread angle 50°/65° (Type IV) AMA2 Throw angle 15° spread angle 60° (Type III) AME2 Throw angle 70° spread angle 15°/40° (Type II) AMM1 Throw angle 70° spread angle 20°/40° (Type II) PCE1 Throw angle 50° spread angle 45°/55° (Type IV) PCE2 Throw angle 50° spread angle 50°/60° (Type II) SMA1 Throw angle 60° spread angle 60° (Type VS) SME1 Throw angle 70° spread angle 40° (Type II)
LED thermal management	Heat dissipation via conduction, radiation and convection based on a design for LED technology.

## SPIN S CHARACTERISTICS

MAINTENANCE AND ASSEMBLY	
Installation and maintenance	Tool-free luminaire access system designed by Carandini. Access to the driver from the top.
Installation	BF1 bracket=> Cast fork for installation on wall or column. Ø 17 mm drill for M16 x 50 mm screw
Equipped weight	6.7 Kg
Pressure equalisation valve	The luminaire has a pressure equalisation valve to balance internal / external system pressure. Integrating the valve extends the projected lifetime of the gaskets and internal components by reducing the pressure exerted on them, and also prevents the entry of moisture that can cause condensation.

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)
Autonomous regulation	Factory-programmable regulation: 56: 50% from 00:00 to 06:00 66: 60% from 00:00 to 06:00 76: 70% from 00:00 to 06:00 SC: As requested by the client.
CLO regulation	Percentage flow during product lifetime: 7: 70% luminous flux during luminaire lifetime. 8: 80% luminous flux during luminaire lifetime. 9: 90% luminous flux during luminaire lifetime.
Sockets	4-X: Zhaga socket with/without IP66 cover
Photocells	2: Photocell for larger Zhaga socket (20 lux)
Node	BS: Controlux Basic

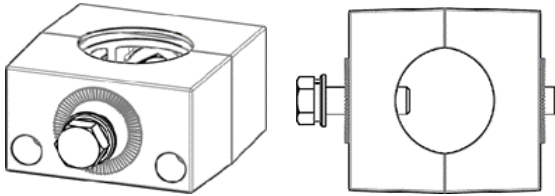
## ACCESSORIES

All installation accessories are assembled with the standard fork included in the luminaire. Standard accessory colour: textured grey RAL 7015.

### Accessories for columns of Ø 60 mm:

#### NF60—1

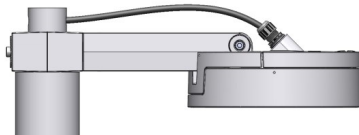
Cast mounting to attach 1 luminaire to a Ø 60 mm column Code: 318492



The mounting includes:

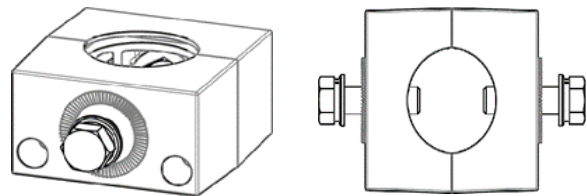
M8 x 40 mm Allen screws, washers and M16 x 20 mm Allen stud

To attach 1 luminaire to the mounting: M16 x 50 mm hexagonal screw and washers.



#### NF60—2

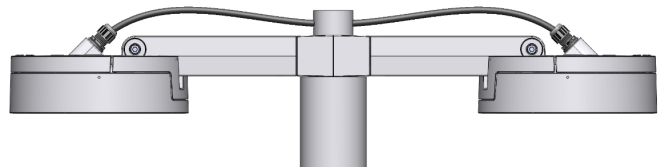
Cast mounting to attach 2 luminaires to a Ø 60 mm column Code: 318493



The mounting includes:

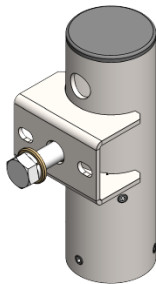
M8 x 40 mm Allen screw and washers.

To attach 2 luminaires to the mounting: M16 x 50 mm hexagonal screws and washers.



#### PT2—1

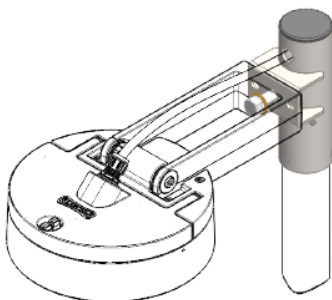
Cast mounting to attach 1 luminaire to a Ø 60 mm column Code: 320118



The mounting includes:

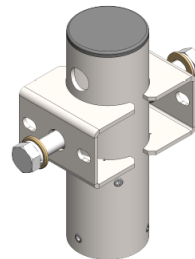
To attach to the column: M8 x 10 mm Allen studs

To attach the luminaire to the mounting M16 x 50 mm hexagonal screw and washers.



#### PT2—2

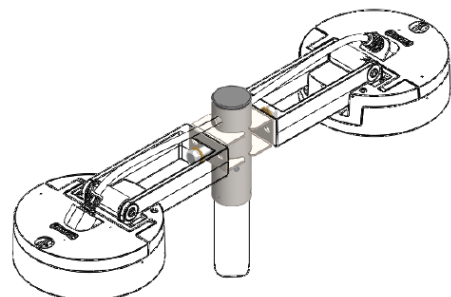
Cast mounting to attach 2 luminaires to a Ø 60 mm column Code: 320141



The mounting includes:

To attach to the column: M8 x 10 mm Allen studs

To attach the luminaire to the mounting M16 x 50 mm hexagonal screw and washers.



## ACCESSORIES

All installation accessories are assembled with the standard fork included in the luminaire. Standard accessory colour: textured grey RAL 7015.

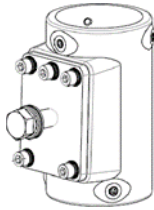
### Accessories for columns of Ø 76, 101 and 114 mm:

#### Dara cast knot to attach 1 luminaire

NF76-1: Knot for column of Ø 76 mm. Code: 318531

NF101-1: Knot for column of Ø 101 mm. Code: 318504

NF114-1: Knot for column of Ø 114 mm. Code: 318534



The knot includes:

To attach the knot to the column: M8 x 10 mm Allen studs

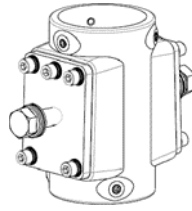
To attach the luminaire to the knot M16 x 50 mm screw and washers

#### Cast knot to attach 2 luminaires

NF76-2: Knot for column of Ø 76 mm. Code: 318532

NF101-2: Knot for column of Ø 101 mm. Code: 318533

NF114-2: Knot for column of Ø 114 mm. Code: 318535



The knot includes:

To attach the knot to the column: M8 x 10 mm Allen studs

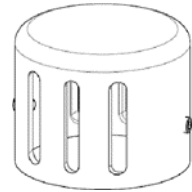
To attach the luminaire to the knot M16 x 50 mm screw and washers

#### Top cover finish cap for column

TS76: Top cover finish cap for column of Ø 76 mm. Code: 318541

TS101: Top cover finish cap for column of Ø 101 mm. Code: 318542

TS114: Top cover finish cap for column of Ø 114 mm. Code: 318543



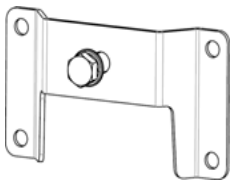
The cover finish cap includes

M8 x 10 mm Allen stud to attach to the column

### Accessories for installation on wall or surface:

FM16-1

Mounting for wall or surface Code: 318540



The mounting includes:

- To attach 1 luminaire to the mounting M 16 x 50 mm hexagonal screw and washers.

### SPIN M PHOTOGRAPHS



### LOGISTICAL INFORMATION

#### SPIN M

Box size: 474 x 379 x 195 mm

Box weight: 9.0 kg.

Number of boxes: 32 units

American base: 1200 x 800 x 1710 mm

Stack height: 8 levels

Area occupied: 75%

Volume used: 69%

Total gross weight: 308 kg.

## LUMINAIRE DIMMING

### By programming the driver

#### Programming profile

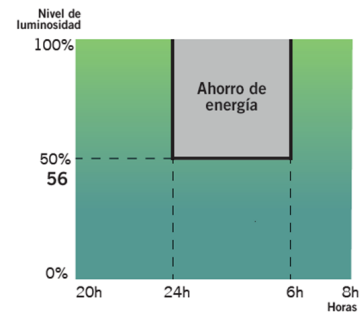
The driver can be programmed so that luminous flux is reduced from the luminaire during the least busy hours at night while always meeting the required lighting and uniformity levels.

#### Programming profile 56

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

Hasta un

**26%**  
de ahorro



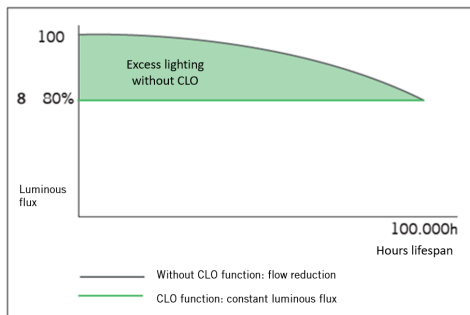
### Using the CLO function

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 lifetime of the luminaire. This saves energy and increases the lifetime of the system. Furthermore, the light level in the area where the luminaire is installed remains constant over time.

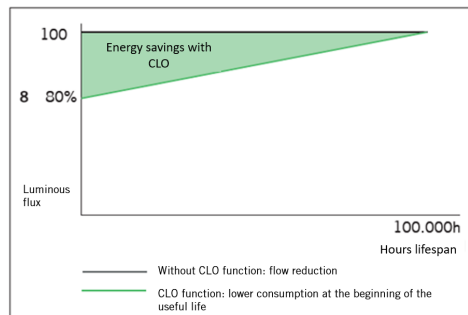
#### Constant luminous flux 8

Luminous flux from the luminaire at 80% to maintain light levels throughout its lifetime.

#### Luminous flux chart



#### Consumption graph



Hasta un

**10%**  
de ahorro

y se incrementa la vida de la luminaria

### By incorporating an additional device

#### Presence sensor

By using a presence sensor, lighting can be adjusted according to the level of activity in the area where the luminaire is installed.



The light level is raised when a pedestrian or vehicle is detected in the area.



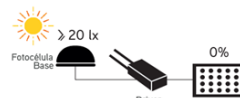
#### Photocell

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

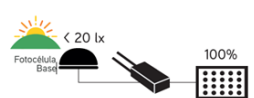
This is extremely useful so the luminaires are not switched on during the day when there is still sufficient natural light.

#### 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.



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SPIN



## INNOVATIVE AND UPDATABLE OVER TIME (Zhaga/ ZD4i)

### Zhaga

#### 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.

Z H A G A 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	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

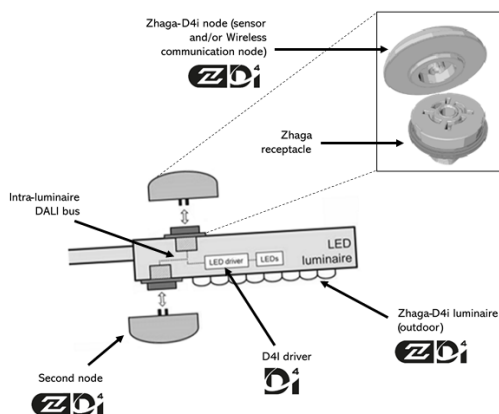
Zhaga-D4i certification covers all the essential characteristics, including automatic adjustment, digital communication, data reporting and power requirements in any single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals, such as connectivity nodes.

### STANDARDISATION AS A MEANS TO ACHIEVE SUSTAINABILITY

The Spin S 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 2 W and 1 W.

### 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 sockets compliant with the Zhaga “Book 18” & Zhaga-D4i standard on sensor and communication node interoperability.