# CITEA | MAYA | SCALA LED

Schréder

# CMS LED

## CHARACTERISTICS – LUMINAIRES

| | | |
|---|---|---|
| Optical compartment tightness level: | | IP 65 (*) |
| Control gear tightness level: | | IP 65 (*) |
| Impact resistance (glass): | | IK 08 (**) |
| Aerodynamic resistance (CxS): | - Mini | 0.062 m² |
| | - Midi | 0.080 m² |
| | - Maxi | 0.095 m² |
| Nominal voltage: | | 230 V – 50 Hz |
| Electrical class: | | I or II (*) |
| Weight (complete): | - Mini | 10 kg |
| | - Midi | 12.5 kg |
| | - Maxi | 19 kg |

(*) according to IEC - EN 60598

(**) according to IEC - EN 62262

## KEY ADVANTAGES

- A timeless design with the advantages of LED technology
- Low energy consumption
- LensoFlex® 2 photometric engine with photometry adapted to various applications
- Maximum versatility: 3 models with 3 sizes each
- Large choice of mounting systems and brackets
- Surge protection 10kV
- Designed to incorporate Owlet range of control solutions

## ELEGANT AND SUCCESSFUL DESIGN WITH STATE-OF-THE-ART LED TECHNOLOGY

The CMS LED range of luminaires combines its three models – Citea LED, Maya LED and Scala LED – with the most accurate LED technology, offering complete lighting solutions which are more efficient and sustainable while ensuring well-being and security for users.

The CMS LED range comes in three sizes: Mini, Midi and Maxi.
The Mini and Midi sizes for up to 48 LEDs are ideally suited to lighting residential streets, urban roads, bike paths and car parks, while the Maxi with 64 LEDs is perfect for large urban roads, avenues, squares, etc.
The CMS LED range is equipped with the second generation LensoFlex®2 photometric engine which offers a high-performance photometry optimised for each specific application with minimum energy consumption.

Colour: AKZO 900 grey sanded

## OPTIONS

- Self-cleaning glass
- Dimming
- Owlet remote management system
- Compact photoelectric cell
- Any colour RAL or AKZO

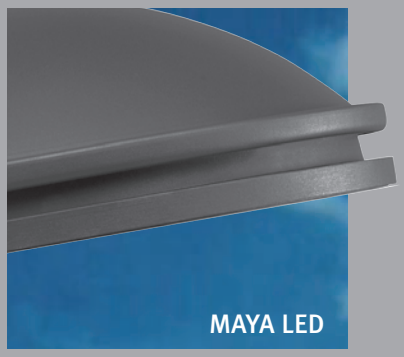
# CMS LED LED LIGHTING

## 3 MODELS, 3 SIZES, TOTAL FLEXIBILITY

The CMS LED luminaires – Citea LED, Maya LED and Scala LED – are distinguished by the design of their crown. The 3 models are available in 3 sizes offering a wide variety of possibilities in lumen package. Depending on the model, the CMS LED range can be equipped with 16, 24, 32, 48 or 64 high-power LEDs. This flexibility, combined with the different lenses developed by Schréder, enable these luminaires to light narrow pedestrian paths, large urban squares or streets, avenues and residential areas with the same comfort and safety.

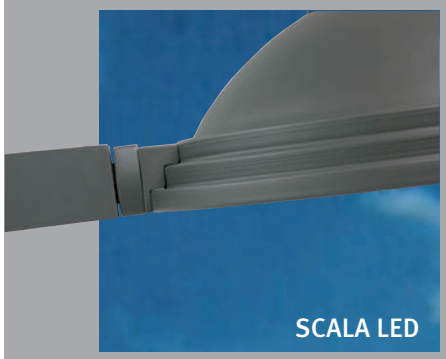
## LENSOFLEX®2

CMS LED luminaires are equipped with second generation LensoFlex®2 photometric engines that have been specifically developed for lighting spaces where the well-being and safety of people using the environments are essential.
This system is based upon the addition principle of photometric distribution.
Each LED is associated with a specific lens that generates the complete photometric distribution of the luminaire. It is the number of LEDs in combination with the driving current that determines the intensity level of the light distribution.




## ENERGY SAVINGS OF UP TO 75%

The CMS LED luminaires integrate the latest cutting edge solutions. The combination of LED technology, a driver working with a constant flux system and a dimming system makes it possible to achieve energy savings that can reach up to 75% compared with luminaires equipped with traditional light sources.
With this very favourable energy balance, the CMS LED luminaires contribute to the effective management of finances and to the responsible use of energy.



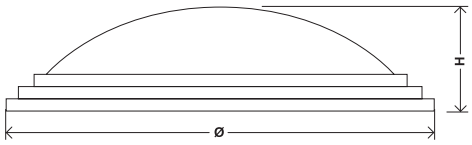

## DURABLE AND RECYCLABLE MATERIALS

The CMS LED luminaires are composed of durable and recyclable materials: a painted aluminium body and crown with a flat tempered glass protector.

## FUTUREPROOF

CMS LED luminaires are designed to meet the requirements of the FutureProof concept. The photometric engine is IP 65 sealed to protect the LEDs and lenses from the outside environment, maintaining photometric performance over time. The optical unit can be easily removed, allowing real on-site replacement at the end of its service life in order to take advantage of future technological developments.

## DIMENSIONS




| | Mini | Midi | Maxi |
|---|---|---|---|
| Ø | 490 mm | 590 mm | 675 mm |
| H | 167 mm | 190 mm | 230 mm |

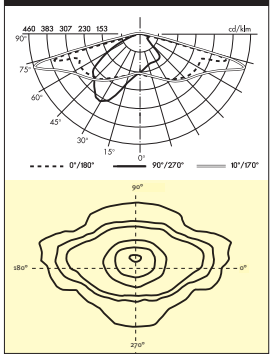
## PHOTOMETRY

| CMS LED LENSOFLEX®2 | | | | | | | Lifetime residual flux @ $t_q$ 25°C (**) |
|---|---|---|---|---|---|---|---|
| | | MINI | | MINI and MIDI | | MAXI | @100.000h |
| Number of LEDs | Neutral white (4250K) | 16 LEDs | 24 LEDs | 32 LEDs | 48 LEDs | 64 LEDs | |
| Current: 350mA | Nominal flux (lm)* | 2200 | 3400 | 4500 | 6800 | 9100 | 90% |
| | Power consumption (W) | 18 | 27 | 36 | 53 | 70 | |
| Current: 500mA | Nominal flux (lm)* | 3000 | 4500 | 6000 | 9000 | 12000 | |
| | Power consumption (W) | 26 | 38 | 51 | 75 | 99 | |

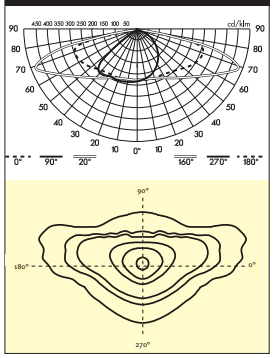
(*) The nominal flux is an indicative LED flux @ $t_j$ 25°C based on LED manufacturer's data. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution) and the optical efficiency of luminaire.
Nominal flux depends on the type of LED in use and likely to change in accordance with the continuous and rapid developments in LED technology.
To follow the progress of the luminous efficiency of the LEDs used, please visit our website.
(**) In accordance with IES LM-80 - TM-21.

## LIGHT DISTRIBUTIONS

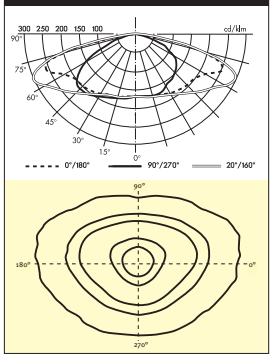
LED optic 5098 – Narrow Road



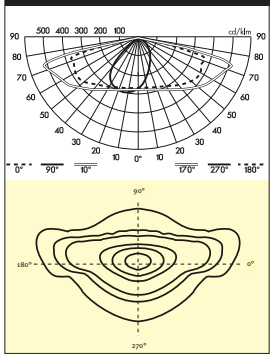
LED optic 5103 – Residential Street



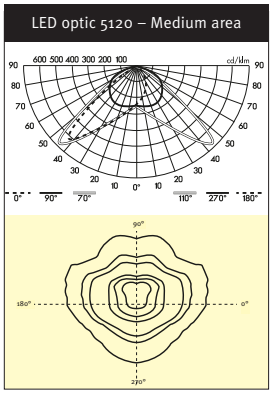
LED optic 5068 – Urban Road



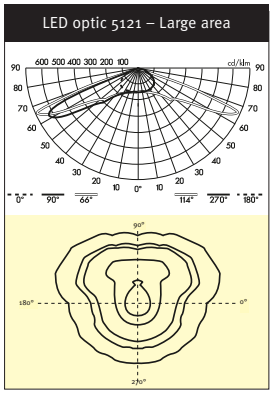
LED optic 5102 – Motorway



LED optic 5120 – Medium area

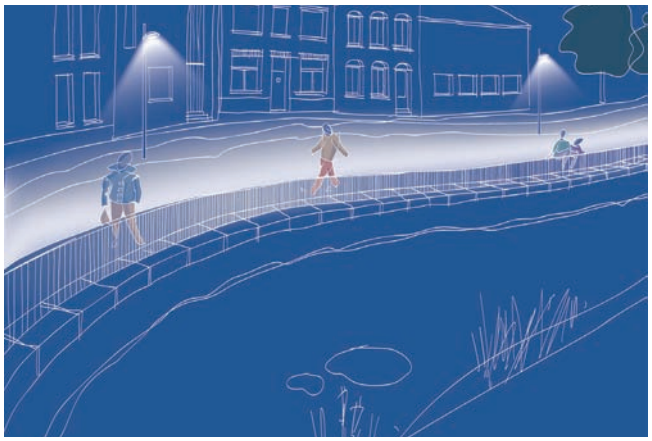


LED optic 5121 – Large area



# APPLICATIONS

CMS LED luminaires demonstrate remarkable photometric performance.
The flexibility of the LensoFlex®2 photometric engine allows for multiple light distributions to completely satisfy the requirements of urban lighting.
Furthermore, the options for varying the number of LEDs allow for a precise adaptation of the nominal power of the luminaire according to the area that is to be lit.

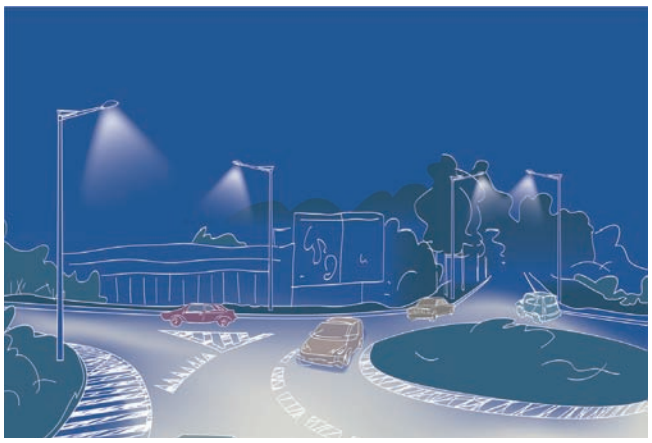


- Optic LensoFlex®2 “Narrow road” 5098
- For S classification according to CIE 115

- Optic LensoFlex®2 “Residential street” 5103
- For M4 classification according to CIE 115

- Optic LensoFlex®2 “Urban road” 5068
- For M3 classification according to CIE 115

- Optic LensoFlex®2 “Motorway” 5102
- For M3 classification according to CIE 115

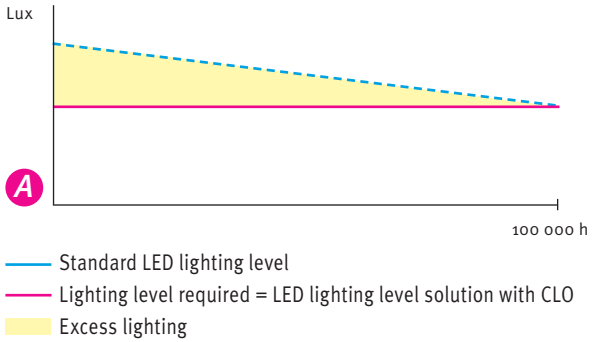


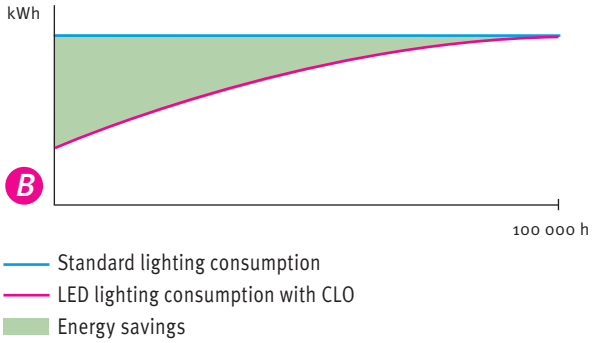
- Optic LensoFlex®2 “Medium area” 5120

- Optic LensoFlex®2 “Large area” 5121

## MAINTAINING THE LUMINOUS FLUX OVER TIME

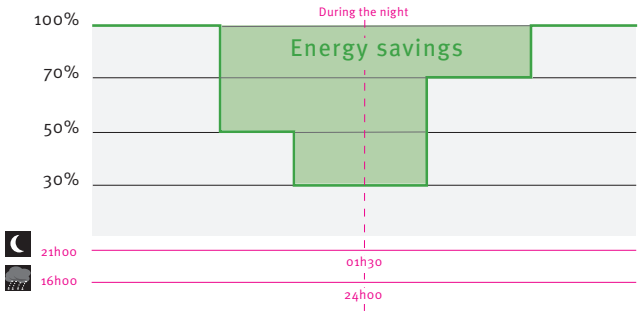
With a conventional solution, the depreciation of the luminous flux over time leads to excess lighting - and thus too much energy consumption - when the luminaires are installed so that the efficiency declines slowly to reach the minimum required level at the end of the installation's service life (graph A).
The CMS LED luminaires can work differently by operating with a constant luminous flux (Constant Light Output - CLO). They control precisely and autonomously their energy needs during the luminaires' life cycle to provide the required level constantly - no more and no less – throughout the service life (graph B).
This can generate additional energy savings of up to 10% over the luminaire's lifetime.



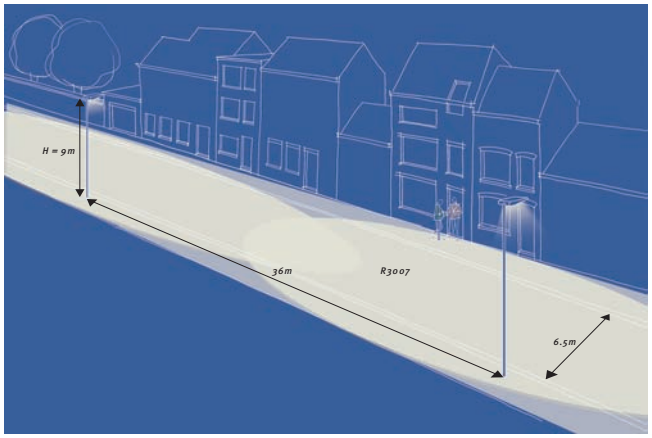




## VARIABLE INTENSITY (DIMMING) FOR EFFICIENT AND COMFORTABLE LIGHTING

The right lighting is adapting precisely the quantity of light according to the real needs at a specific time (depending on daylight and more importantly activity in the area).
Dimming systems can generate substantial energy savings.
The CMS LED range can be equipped with different dimming and remote management systems.




## CASE STUDY




CMS Midi LED
LensoFlex®2 48 LEDs @350mA
4250K neutral white
54W
MF = 0.8
M5 - classified roadway according to CIE 115
$L_{ave}$ = 0.5cd/m²

By replacing the old luminaires equipped with 70W high-pressure sodium lamps the ***power consumption has been reduced by 30%*** to 0.23W/m² while maintaining the 0.5cd/m² required.
SLEEC-L = 0.46W / (m².cd/m²) following Rev. EN 13201 draft.
For 4,000 hours of use per year, for 1km of roadway, this corresponds to a consumption of less than 17kWh/day and emissions lower than 7.9kg eq $CO_2$ according to the average European equivalent of 0.46kg eq $CO_2$/kWh.

# MULTIPLE MOUNTINGS

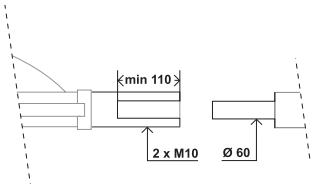
The CMS LED luminaires are designed for lateral or suspended mounting. Various types of lateral mounting can be used.

An axial suspension with catenary mounting is also available. Please contact us for more information concerning this option.

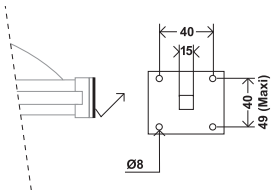
## SIDE-ENTRY MOUNTINGS

### Direct side-entry mounting

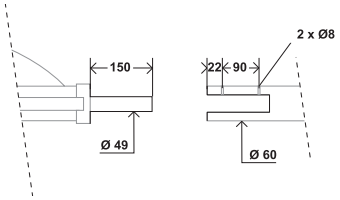
- female, on a plain spigot [D60F]




- square [C40x40: Mini - Midi]
  [C40x49: Maxi]

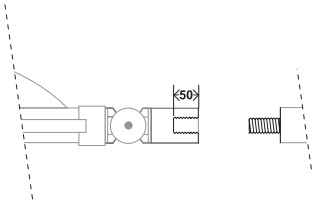



- male, on a female spigot [D60M]

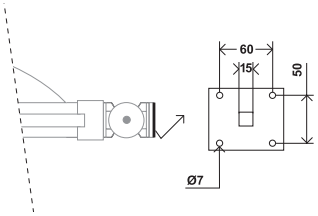



### Side-entry mounting with knuckle-joint

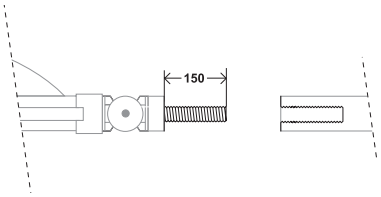
- female, on a 1” BSP threaded tube [R/G34F]



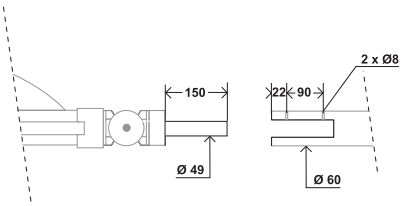

- square [R/C 60x50]



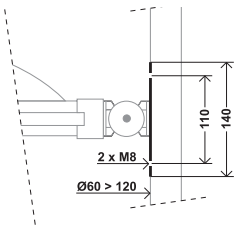

- male, on a 1” female threaded tube [R/G34M]




- male, on a female spigot [R/D60M]




direct wall or pole mounting

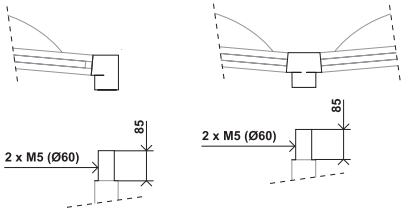



Note: for mounting on a wooden pole, a mounting plate is required

## POST-TOP MOUNTING

### (Mini - Midi)

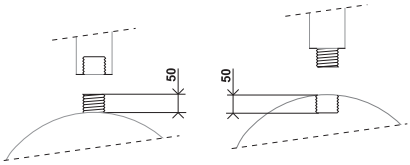
- single [S-D60F]
- double [D-D60F]




## SUSPENDED MOUNTING

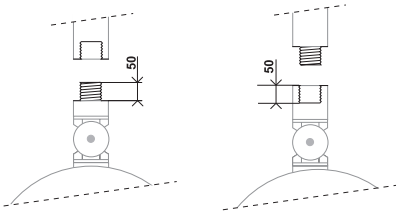
### Direct suspended mounting

- male, on a female threaded tube [G34F]
- female, on a male threaded tube [G34M]

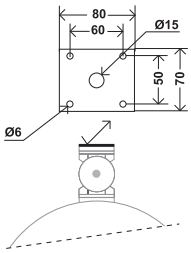



### Suspended mounting with knuckle-joint

- male, on a female threaded tube [G34F]
- female, on a male threaded tube [G34M]

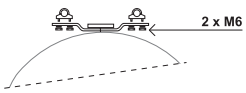



- square

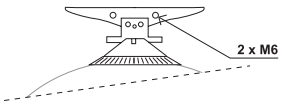



## CATENARY MOUNTING

- traditional




- tau



SCALA LED+LUTECIA

# LUTECIA COLUMNS AND BRACKETS

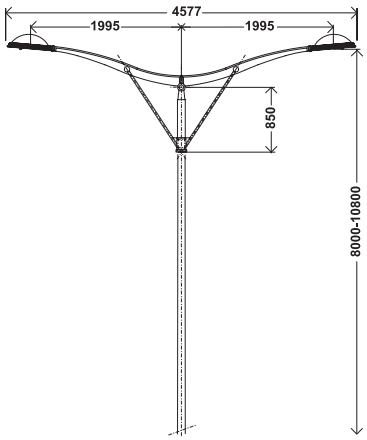
## CONTEMPORARY COLUMN FOR THE CITY

Created by Jean-Michel Wilmotte, the Lutecia range was specifically developed for the Scala LED luminaire.
The cylindrical-conical fluted or smooth lighting column, made of galvanised steel and thermo-coated, is topped by a bracket, single or double, made of cast aluminium with an aluminium tie rod.

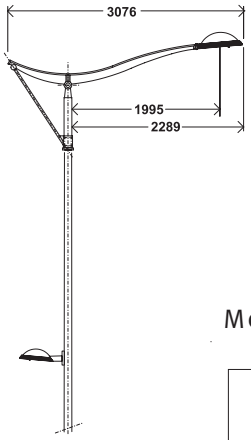
Designed for the Scala LED Maxi or Midi luminaire, the Lutecia ensemble – large model – is made up of a lighting column of a height of between 8 and 10.8 metres for lighting avenues, boulevards, public squares, etc.
The Lutecia ensemble – small model, between 4 and 6 metres in height – is also available for the Scala LED Mini luminaire, for example for lighting pedestrian zones.
A rear bracket and a wall bracket are also available.

Colour: AKZO grey 900 sanded. Other colours on request.

### LARGE MODEL
POLE WITH DOUBLE BRACKET (SCALA MAXI)




### LARGE MODEL
POLE WITH SINGLE BRACKET AND REAR BRACKET (SCALA MAXI AND SCALA MINI)

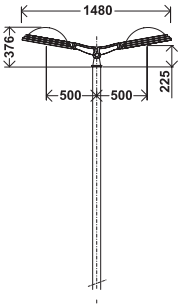



### MOUNTING BASE

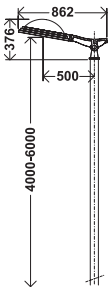



Other mounting configurations on request

### SMALL MODEL
POLE WITH DOUBLE BRACKET (SCALA MINI)




### SMALL MODEL
POLE WITH SINGLE BRACKET (SCALA MINI)



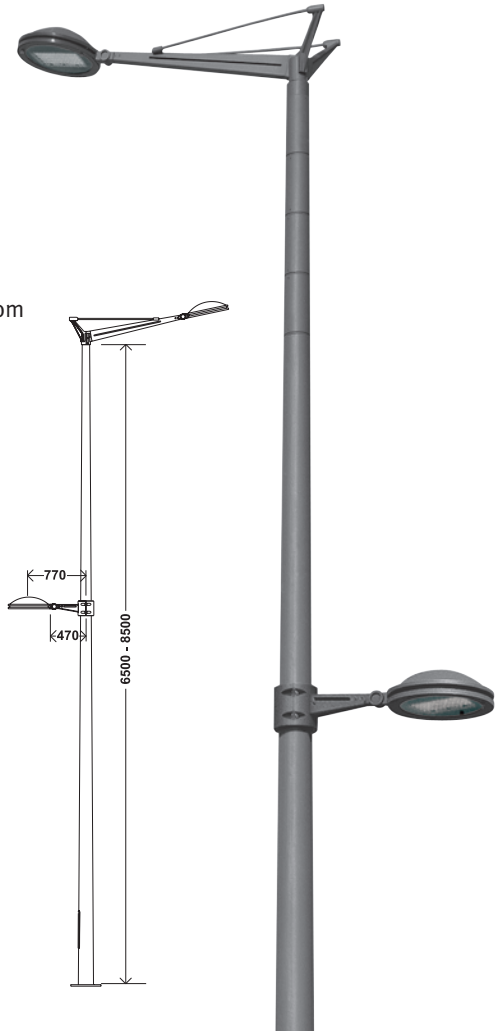

### SMALL MODEL
WALL BRACKET

# EQUINOX COLUMNS AND BRACKETS

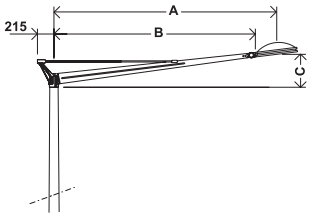
## A VERSATILE SOLUTION FOR TOWNS

Created by Jean-Michel Wilmotte, the Equinoxe ensemble, fitted with the Maya LED luminaire, is particularly suited to lighting avenues, boulevards or public squares.
The Equinoxe ensemble is comprised of a cylindrical-conical lighting column made from galvanised, thermolacquered steel and an aluminium bracket.

Colour: AKZO grey 900 sanded. Any other RAL or AKZO colour on request

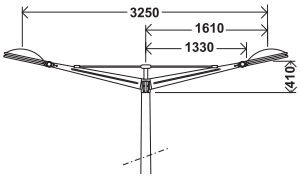



### Single bracket

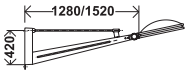


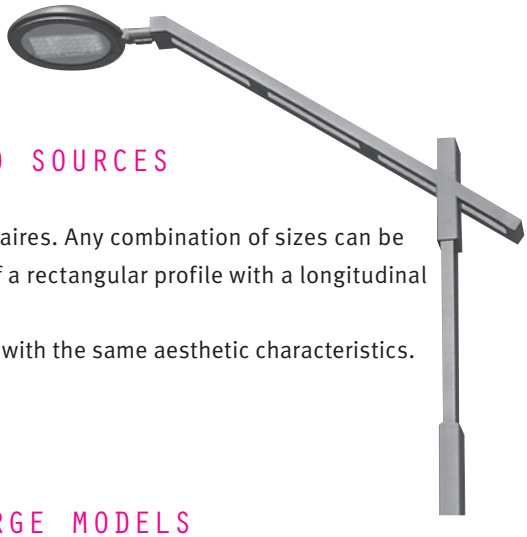

| Single bracket | A | B | C |
|---|---|---|---|
| Small size | 1610 | 1330 | 410 |
| Medium size | 2115 | 1835 | 500 |
| Large size | 2935 | 2650 | 430 |

### Double bracket




### Wall bracket





# NUN'ALVARES COLUMNS AND BRACKETS

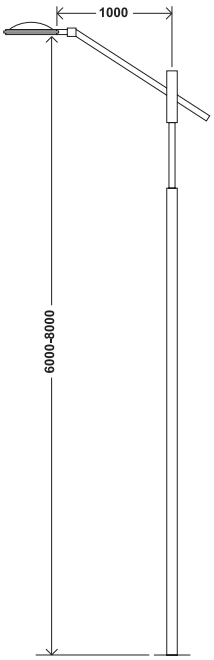
## BROAD RANGE OF CONFIGURATIONS, SIZES AND SOURCES

The Nun'Alvares ensemble was specifically developed for the Citea LED luminaires. Any combination of sizes can be envisaged depending on the flux desired. The lighting column is composed of a rectangular profile with a longitudinal opening at the top of the pole.
Depending on the configuration, the lighting column is provided with a bracket with the same aesthetic characteristics.

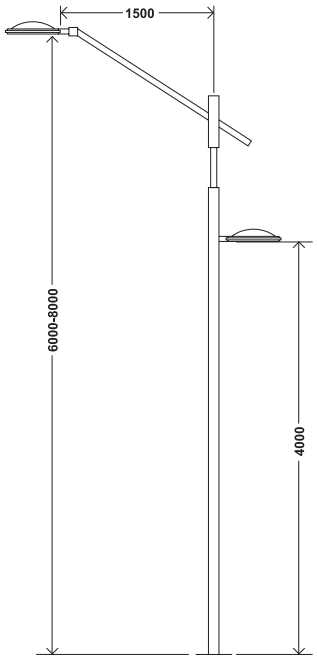
Colour: AKZO grey 900 sanded. Any other RAL or AKZO colour on request

## LARGE MODELS

Pole with 1000 bracket

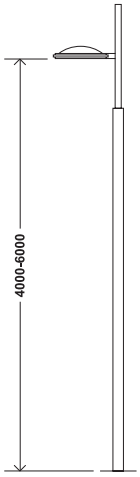



Pole with 1500 bracket + rear bracket

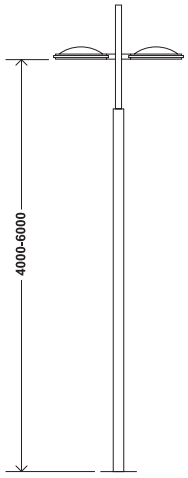



## SMALL MODELS

Pole with single mounting




Pole with double mounting




CITEA LED+NUN'ALVARES

CMS LED-GRP0044-EN-GRP-2013-06

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Solutions

Well-being

Safety

Sustainability

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