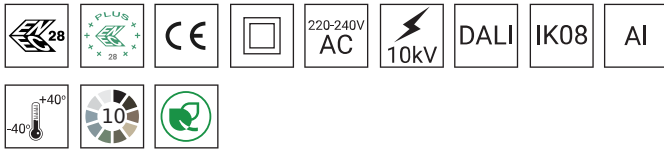




## TECHNICAL DATA

|                                    |  |
|------------------------------------|--|
| <b>Assembly</b>                    | -  |
| <b>Application</b>                 | motorways and expressway, urban roads, residential roads (internal), pedestrians, parkings                                       |
| <b>Colour</b>                      | inox / black   |
| <b>Ingress protection</b>          | IP 66 for the optical part and the driver  |
| <b>Optical system</b>              | PMMA optics, interchangeable LED module  |
| <b>Material</b>                    | anodised aluminium alloy, PC-UV diffuser   |
| <b>Unit volume</b>                 | 0,024 m <sup>3</sup> (CUDDLE II LED 48 - 72 W)<br>0,033 m <sup>3</sup> (CUDDLE II LED 96 - 192 W)                                |
| <b>Operating temperature range</b> | from -40°C to +40°C  |
| <b>Expected useful lifetime</b>    | L90B10 - 100 000 h   |
| <b>CRI</b>                         | >70  |
| <b>Inrush current</b>              | 43 A / 260 μs (CUDDLE II LED 48 - 72)<br>77 A / 150 μs (CUDDLE II LED 96 - 144)<br>11,5 A / 1320 μs (CUDDLE II LED 192)          |
| <b>Input voltage frequency</b>     | 50/60Hz  |
| <b>Power factor</b>                | ≥0.95  |
| <b>Number of LED</b>               | 24 (48 W, 60 W, 72 W), 64 (96 W, 120 W, 144 W, 192 W)  |
| <b>Control system</b>              | Luminaire has the possibility to connect to an external control system via DALI interface (optionally via analog signal 1- 10V). |



## TABLE OF VARIANTS

| Code                       | Symbol                | LED power | Luminaire power consumption | LED forward current | Colour temperature (CCT) | LEDs luminous flux <sup>1</sup> | Luminaire luminous flux <sup>1</sup> | Luminous efficacy <sup>1</sup> | Net weight |
|----------------------------|-----------------------|-----------|-----------------------------|---------------------|--------------------------|---------------------------------|--------------------------------------|--------------------------------|------------|
| 2223133/1/... <sup>2</sup> | CUDDLE II LED REG 48  | 48 W      | 55 W                        | 700 mA              | 2700 K                   | 8150 lm                         | 6950 lm                              | 126 lm/W                       | 5.6 kg     |
| 2223133/3/... <sup>2</sup> | CUDDLE II LED REG 48  | 48 W      | 55 W                        | 700 mA              | 3500 K                   | 8650 lm                         | 7350 lm                              | 134 lm/W                       | 5.6 kg     |
| 2223133/4/... <sup>2</sup> | CUDDLE II LED REG 48  | 48 W      | 55 W                        | 700 mA              | 4000 K                   | 9150 lm                         | 7800 lm                              | 142 lm/W                       | 5.6 kg     |
| 2223133/6/... <sup>2</sup> | CUDDLE II LED REG 48  | 48 W      | 55 W                        | 700 mA              | 5000 K                   | 9150 lm                         | 7800 lm                              | 142 lm/W                       | 5.6 kg     |
| 2223134/1/... <sup>2</sup> | CUDDLE II LED REG 60  | 60 W      | 67 W                        | 830 mA              | 2700 K                   | 9300 lm                         | 7950 lm                              | 119 lm/W                       | 5.6 kg     |
| 2223134/3/... <sup>2</sup> | CUDDLE II LED REG 60  | 60 W      | 67 W                        | 830 mA              | 3500 K                   | 9850 lm                         | 8400 lm                              | 125 lm/W                       | 5.6 kg     |
| 2223134/4/... <sup>2</sup> | CUDDLE II LED REG 60  | 60 W      | 67 W                        | 830 mA              | 4000 K                   | 10450 lm                        | 8900 lm                              | 133 lm/W                       | 5.6 kg     |
| 2223134/6/... <sup>2</sup> | CUDDLE II LED REG 60  | 60 W      | 67 W                        | 830 mA              | 5000 K                   | 10450 lm                        | 8900 lm                              | 133 lm/W                       | 5.6 kg     |
| 2223135/1/... <sup>2</sup> | CUDDLE II LED REG 72  | 72 W      | 79 W                        | 1000 mA             | 2700 K                   | 10700 lm                        | 9100 lm                              | 115 lm/W                       | 5.6 kg     |
| 2223135/3/... <sup>2</sup> | CUDDLE II LED REG 72  | 72 W      | 79 W                        | 1000 mA             | 3500 K                   | 11350 lm                        | 9700 lm                              | 123 lm/W                       | 5.6 kg     |
| 2223135/4/... <sup>2</sup> | CUDDLE II LED REG 72  | 72 W      | 79 W                        | 1000 mA             | 4000 K                   | 12100 lm                        | 10300 lm                             | 130 lm/W                       | 5.6 kg     |
| 2223135/6/... <sup>2</sup> | CUDDLE II LED REG 72  | 72 W      | 79 W                        | 1000 mA             | 5000 K                   | 12100 lm                        | 10300 lm                             | 130 lm/W                       | 5.6 kg     |
| 2223137/1/... <sup>2</sup> | CUDDLE II LED REG 96  | 96 W      | 105 W                       | 500 mA              | 2700 K                   | 16000 lm                        | 13650 lm                             | 130 lm/W                       | 8.6 kg     |
| 2223137/3/... <sup>2</sup> | CUDDLE II LED REG 96  | 96 W      | 105 W                       | 500 mA              | 3500 K                   | 16950 lm                        | 14450 lm                             | 138 lm/W                       | 8.6 kg     |
| 2223137/4/... <sup>2</sup> | CUDDLE II LED REG 96  | 96 W      | 105 W                       | 500 mA              | 4000 K                   | 18000 lm                        | 15350 lm                             | 146 lm/W                       | 8.6 kg     |
| 2223137/6/... <sup>2</sup> | CUDDLE II LED REG 96  | 96 W      | 105 W                       | 500 mA              | 5000 K                   | 18000 lm                        | 15350 lm                             | 146 lm/W                       | 8.6 kg     |
| 2223139/1/... <sup>2</sup> | CUDDLE II LED REG 120 | 120 W     | 129 W                       | 625 mA              | 2700 K                   | 19250 lm                        | 16400 lm                             | 127 lm/W                       | 8.6 kg     |
| 2223139/3/... <sup>2</sup> | CUDDLE II LED REG 120 | 120 W     | 129 W                       | 625 mA              | 3500 K                   | 20500 lm                        | 17450 lm                             | 135 lm/W                       | 8.6 kg     |
| 2223139/4/... <sup>2</sup> | CUDDLE II LED REG 120 | 120 W     | 129 W                       | 625 mA              | 4000 K                   | 21700 lm                        | 18500 lm                             | 143 lm/W                       | 8.6 kg     |
| 2223139/6/... <sup>2</sup> | CUDDLE II LED REG 120 | 120 W     | 129 W                       | 625 mA              | 5000 K                   | 21700 lm                        | 18500 lm                             | 143 lm/W                       | 8.6 kg     |
| 2223141/1/... <sup>2</sup> | CUDDLE II LED REG 144 | 144 W     | 154 W                       | 750 mA              | 2700 K                   | 22350 lm                        | 19050 lm                             | 124 lm/W                       | 8.6 kg     |
| 2223141/3/... <sup>2</sup> | CUDDLE II LED REG 144 | 144 W     | 154 W                       | 750 mA              | 3500 K                   | 23750 lm                        | 20250 lm                             | 131 lm/W                       | 8.6 kg     |
| 2223141/4/... <sup>2</sup> | CUDDLE II LED REG 144 | 144 W     | 154 W                       | 750 mA              | 4000 K                   | 25150 lm                        | 21450 lm                             | 139 lm/W                       | 8.6 kg     |
| 2223141/6/... <sup>2</sup> | CUDDLE II LED REG 144 | 144 W     | 154 W                       | 750 mA              | 5000 K                   | 25150 lm                        | 21450 lm                             | 139 lm/W                       | 8.6 kg     |
| 2223146/1/... <sup>2</sup> | CUDDLE II LED REG 192 | 192 W     | 205 W                       | 1000 mA             | 2700 K                   | 27850 lm                        | 23750 lm                             | 116 lm/W                       | 8.8 kg     |
| 2223146/3/... <sup>2</sup> | CUDDLE II LED REG 192 | 192 W     | 205 W                       | 1000 mA             | 3500 K                   | 29600 lm                        | 25250 lm                             | 123 lm/W                       | 8.8 kg     |
| 2223146/4/... <sup>2</sup> | CUDDLE II LED REG 192 | 192 W     | 205 W                       | 1000 mA             | 4000 K                   | 31350 lm                        | 26700 lm                             | 130 lm/W                       | 8.8 kg     |
| 2223146/6/... <sup>2</sup> | CUDDLE II LED REG 192 | 192 W     | 205 W                       | 1000 mA             | 5000 K                   | 31350 lm                        | 26700 lm                             | 130 lm/W                       | 8.8 kg     |

1) tolerance +/- 5% due to LEDs accuracy

2) symbol of chosen optical system eg. 2223133/6/T2 is CUDDLE II LED REG 48 5000K with T2 optical system

\*For the CUDDLE II LED REG luminaire with P2 and PL optics it is possible to choose an additional light colour temperature: 5700K. The product code is then supplemented with the designation '/7'. Example: 2223133/7/P2 -CUDDLE II LED REG 48W 5700K luminaire with P2 optics

## DIRECTIVES AND STANDARDS

**DIRECTIVES:** 2014/35/UE (Official Journal of the UE L 96/357 29.03.2014), 2014/30/UE (Official Journal of the UE L 96/79 29.03.2014), 2011/65/UE RoHS (Official Journal of the UE L 174/88 01.07.2011), 2009/125/EC(Official Journal of the UE L 285/10 31.10.2009)

**STANDARDS:** PN-EN IEC 60598-1: 2021-7, PN-EN 60598-2-3: 2006, PN-EN 60529: 2003, PN-EN 62262: 2003, PN-EN 62471:2010, PN-EN 55015: 2019, PN-EN 61547: 2009, PN-EN 61000-3-2: 2019 , PN-EN 61000-3-3: 2014, PN-EN 62722-2-1 (tq=40°C)

Lighting parameters presented based on laboratory tests according to IESNA LM-79-19

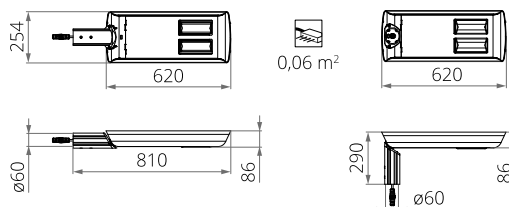
## REMOVING ELECTROSTATIC CHARGE FROM LED LUMINAIRE BODY

In order to efficient discharge the electrostatic charge from the housing of LED fitting installed on the pole from dielectric material (non-conductive) one of the following solutions is required:

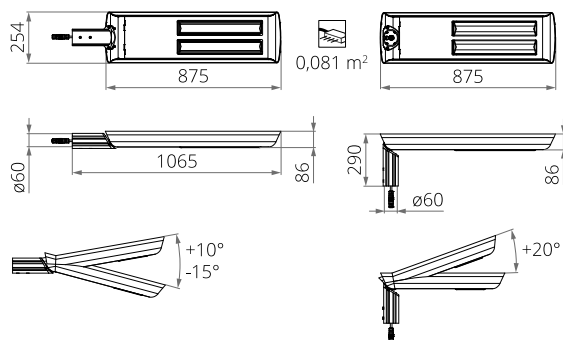
- functional grounding
- LED luminaire with an additional protection device

## TECHNICAL DRAWING

CUDDLE II LED REG 48W, 60W, 72W

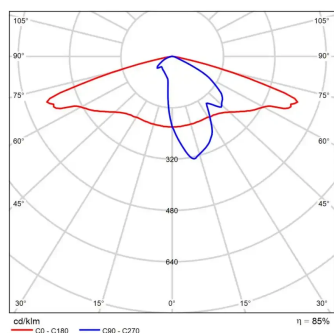


CUDDLE II LED REG 96W, 120W, 144W, 192W

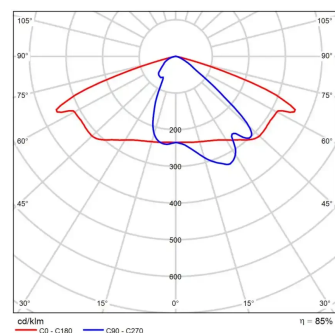


## PHOTOMETRIC CURVES

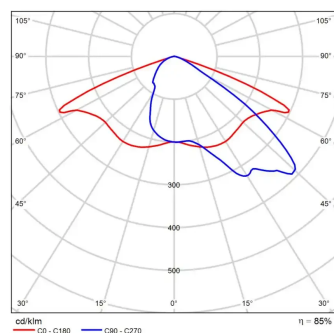
DW



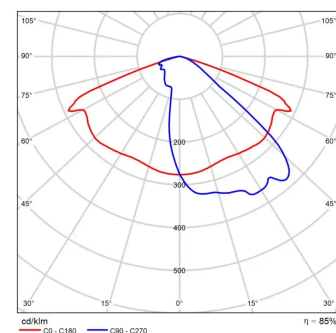
LM



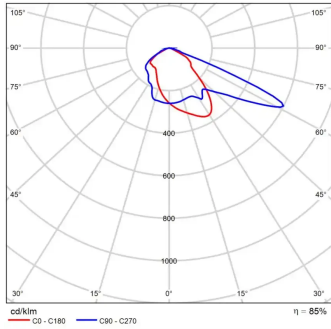
LW



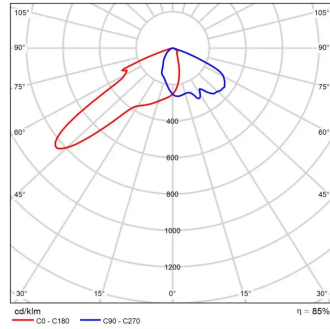
ME



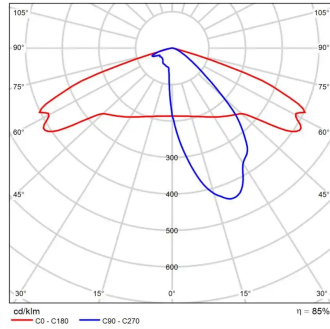
P2



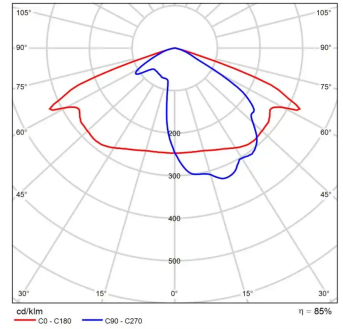
PL



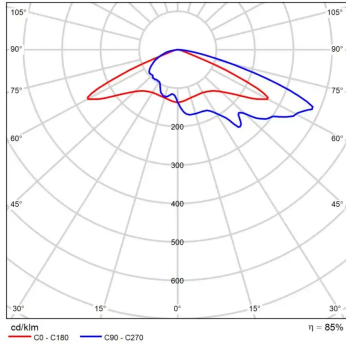
T2



T3



T4



## POWER SYSTEM FUNCTIONS

Luminaire in standard has following functions of intelligent power supply:

- Connection to outside control system by DALI interface (operation of analog signal 1-10V as an option),
- Possibility of programming multistage dimming of luminaire, up to 5 intervals in the range of from 10 to 100% of nominal power,
- LED module equipped with thermal protection implemented via an NTC thermistor,
- Regulation of power / luminous flux – the option of setting another value than the catalogue in the range of 30-100% of nominal one,

## ACCEPTABLE QUANTITY OF LUMINAIRES ON ONE CIRCUIT

Overcurrent switches MCB type B or C

| Luminaire                      | Typ | 2A | 4A | 6A | 10A | 16A | 20A | 25A |
|--------------------------------|-----|----|----|----|-----|-----|-----|-----|
| CUDDLE II LED<br>48, 60, 72W   | B   | 1  | 2  | 4  | 6   | 10  | 12  | 15  |
|                                | C   | 1  | 4  | 6  | 10  | 17  | 20  | 26  |
| CUDDLE II LED<br>96, 120, 144W | B   | 1  | 2  | 3  | 5   | 9   | 11  | 14  |
|                                | C   | 1  | 3  | 5  | 9   | 15  | 18  | 23  |
| CUDDLE II LED<br>192W          | B   | 1  | 2  | 4  | 6   | 10  | 12  | 15  |
|                                | C   | 1  | 4  | 6  | 10  | 17  | 20  | 26  |

Fuse – type gG and GL

| Luminaire                      | 2A | 4A | 6A | 10A | 16A | 20A | 25A |
|--------------------------------|----|----|----|-----|-----|-----|-----|
| CUDDLE II LED<br>48, 60, 72W   | 0  | 4  | 8  | 11  | 22  | 31  | 44  |
| CUDDLE II LED<br>96, 120, 144W | 0  | 3  | 6  | 8   | 16  | 22  | 29  |
| CUDDLE II LED<br>192W          | 1  | 3  | 5  | 8   | 14  | 17  | 22  |

## CHROMATICITY

| Chromaticity | x      | y      |
|--------------|--------|--------|
| 2700K        | 0,4582 | 0,4099 |
| 3500K        | 0,4080 | 0,3916 |
| 4000K        | 0,3825 | 0,3798 |
| 5000K        | 0,3451 | 0,3554 |

## PHOTOMETRIC CODE

|       |         |
|-------|---------|
| 2700K | 727/559 |
| 3500K | 735/559 |
| 4000K | 740/559 |
| 5000K | 750/559 |