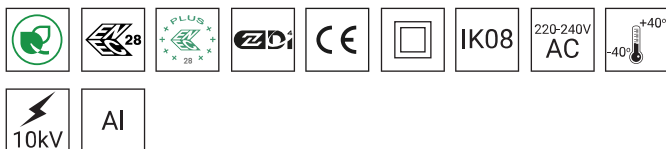




## TECHNICAL DATA

<b>Application</b>	motorways and expressway, urban roads, residential roads (internal), pedestrians, parkings
<b>Assembly</b>	on extension arms with ø 60 x 100 mm ending
<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, PC-UV diffuser
<b>Material</b>	anodised aluminium alloy
<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>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 can be connected to an external control system and / or sensors via socket compatible with Zhaga Book 18



## TABLE OF TYPES

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>	Unit volume	D4i socket	Net weight
2225033/1/... <sup>2</sup>	CUDDLE II LED D4i 48	48 W	55 W	700 mA	2700 K	8150 lm	6950 lm	126 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225033/3/... <sup>2</sup>	CUDDLE II LED D4i 48	48 W	55 W	700 mA	3500 K	8650 lm	7350 lm	134 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225033/4/... <sup>2</sup>	CUDDLE II LED D4i 48	48 W	55 W	700 mA	4000 K	9150 lm	7800 lm	142 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225033/6/... <sup>2</sup>	CUDDLE II LED D4i 48	48 W	55 W	700 mA	5000 K	9150 lm	7800 lm	142 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225034/1/... <sup>2</sup>	CUDDLE II LED D4i 60	60 W	67 W	830 mA	2700 K	9300 lm	7950 lm	119 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225034/3/... <sup>2</sup>	CUDDLE II LED D4i 60	60 W	67 W	830 mA	3500 K	9850 lm	8400 lm	125 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225034/4/... <sup>2</sup>	CUDDLE II LED D4i 60	60 W	67 W	830 mA	4000 K	10450 lm	8900 lm	133 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225034/6/... <sup>2</sup>	CUDDLE II LED D4i 60	60 W	67 W	830 mA	5000 K	10450 lm	8900 lm	133 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225035/1/... <sup>2</sup>	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	2700 K	10700 lm	9100 lm	115 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225035/3/... <sup>2</sup>	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	3500 K	11350 lm	9700 lm	123 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225035/4/... <sup>2</sup>	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	4000 K	12100 lm	10300 lm	130 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225035/6/... <sup>2</sup>	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	5000 K	12100 lm	10300 lm	130 lm/W	0.024 m <sup>3</sup>	1 ↑	5.6 kg
2225037/1/... <sup>2</sup>	CUDDLE II LED D4i 96	96 W	105 W	500 mA	2700 K	16000 lm	13650 lm	130 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225037/3/... <sup>2</sup>	CUDDLE II LED D4i 96	96 W	105 W	500 mA	3500 K	16950 lm	14450 lm	138 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225037/4/... <sup>2</sup>	CUDDLE II LED D4i 96	96 W	105 W	500 mA	4000 K	18000 lm	15350 lm	146 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225037/6/... <sup>2</sup>	CUDDLE II LED D4i 96	96 W	105 W	500 mA	5000 K	18000 lm	15350 lm	146 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225039/1/... <sup>2</sup>	CUDDLE II LED D4i 120	120 W	129 W	625 mA	2700 K	19250 lm	16400 lm	127 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225039/3/... <sup>2</sup>	CUDDLE II LED D4i 120	120 W	129 W	625 mA	3500 K	20500 lm	17450 lm	135 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225039/4/... <sup>2</sup>	CUDDLE II LED D4i 120	120 W	129 W	625 mA	4000 K	21700 lm	18500 lm	143 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225039/6/... <sup>2</sup>	CUDDLE II LED D4i 120	120 W	129 W	625 mA	5000 K	21700 lm	18500 lm	143 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225041/1/... <sup>2</sup>	CUDDLE II LED D4i 144	144 W	154 W	750 mA	2700 K	22350 lm	19050 lm	124 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225041/3/... <sup>2</sup>	CUDDLE II LED D4i 144	144 W	154 W	750 mA	3500 K	23750 lm	20250 lm	131 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225041/4/... <sup>2</sup>	CUDDLE II LED D4i 144	144 W	154 W	750 mA	4000 K	25150 lm	21450 lm	139 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225041/6/... <sup>2</sup>	CUDDLE II LED D4i 144	144 W	154 W	750 mA	5000 K	25150 lm	21450 lm	139 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225046/1/... <sup>2</sup>	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	2700 K	27850 lm	23750 lm	116 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225046/3/... <sup>2</sup>	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	3500 K	29600 lm	25250 lm	123 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225046/4/... <sup>2</sup>	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	4000 K	31350 lm	26700 lm	130 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225046/6/... <sup>2</sup>	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	5000 K	31350 lm	26700 lm	130 lm/W	0.033 m <sup>3</sup>	1 ↑	7.8 kg
2225233/1/... <sup>2</sup>	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	2700 K	8150 lm	6950 lm	126 lm/W	0.024 m <sup>3</sup>	1 ↓	5.6 kg
2225233/3/... <sup>2</sup>	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	3500 K	8650 lm	7350 lm	134 lm/W	0.024 m <sup>3</sup>	1 ↓	5.6 kg

# CUDDLE II LED D4I



2225233/4/... <sup>2</sup>	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	4000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	1 ↓	5.6 kg
2225233/6/... <sup>2</sup>	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	5000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	1 ↓	5.6 kg
2225234/1/... <sup>2</sup>	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	2700 K	9300 lm	7950 lm	119 lm/W	0.024 m³	1 ↓	5.6 kg
2225234/3/... <sup>2</sup>	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	3500 K	9850 lm	8400 lm	125 lm/W	0.024 m³	1 ↓	5.6 kg
2225234/4/... <sup>2</sup>	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	4000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	1 ↓	5.6 kg
2225234/6/... <sup>2</sup>	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	5000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	1 ↓	5.6 kg
2225235/1/... <sup>2</sup>	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	2700 K	10700 lm	9100 lm	115 lm/W	0.024 m³	1 ↓	5.6 kg
2225235/3/... <sup>2</sup>	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	3500 K	11350 lm	9700 lm	123 lm/W	0.024 m³	1 ↓	5.6 kg
2225235/4/... <sup>2</sup>	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	4000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	1 ↓	5.6 kg
2225235/6/... <sup>2</sup>	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	5000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	1 ↓	5.6 kg
2225237/1/... <sup>2</sup>	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	2700 K	16000 lm	13650 lm	130 lm/W	0.033 m³	1 ↓	7.8 kg
2225237/3/... <sup>2</sup>	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	3500 K	16950 lm	14450 lm	138 lm/W	0.033 m³	1 ↓	7.8 kg
2225237/4/... <sup>2</sup>	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	4000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	1 ↓	7.8 kg
2225237/6/... <sup>2</sup>	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	5000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	1 ↓	7.8 kg
2225239/1/... <sup>2</sup>	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	2700 K	19250 lm	16400 lm	127 lm/W	0.033 m³	1 ↓	7.8 kg
2225239/3/... <sup>2</sup>	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	3500 K	20500 lm	17450 lm	135 lm/W	0.033 m³	1 ↓	7.8 kg
2225239/4/... <sup>2</sup>	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	4000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	1 ↓	7.8 kg
2225239/6/... <sup>2</sup>	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	5000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	1 ↓	7.8 kg
2225241/1/... <sup>2</sup>	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	2700 K	22350 lm	19050 lm	124 lm/W	0.033 m³	1 ↓	7.8 kg
2225241/3/... <sup>2</sup>	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	3500 K	23750 lm	20250 lm	131 lm/W	0.033 m³	1 ↓	7.8 kg
2225241/4/... <sup>2</sup>	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	4000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	1 ↓	7.8 kg
2225241/6/... <sup>2</sup>	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	5000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	1 ↓	7.8 kg
2225246/1/... <sup>2</sup>	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	2700 K	27850 lm	23750 lm	116 lm/W	0.033 m³	1 ↓	7.8 kg
2225246/3/... <sup>2</sup>	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	3500 K	29600 lm	25250 lm	123 lm/W	0.033 m³	1 ↓	7.8 kg
2225246/4/... <sup>2</sup>	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	4000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	1 ↓	7.8 kg
2225246/6/... <sup>2</sup>	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	5000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	1 ↓	7.8 kg
2225433/1/... <sup>2</sup>	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	2700 K	8150 lm	6950 lm	126 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225433/3/... <sup>2</sup>	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	3500 K	8650 lm	7350 lm	134 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225433/4/... <sup>2</sup>	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	4000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225433/6/... <sup>2</sup>	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	5000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225434/1/... <sup>2</sup>	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	2700 K	9300 lm	7950 lm	119 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225434/3/... <sup>2</sup>	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	3500 K	9850 lm	8400 lm	125 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225434/4/... <sup>2</sup>	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	4000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225434/6/... <sup>2</sup>	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	5000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225435/1/... <sup>2</sup>	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	2700 K	10700 lm	9100 lm	115 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225435/3/... <sup>2</sup>	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	3500 K	11350 lm	9700 lm	123 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225435/4/... <sup>2</sup>	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	4000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225435/6/... <sup>2</sup>	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	5000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	1 ↑ / 1 ↓	5.6 kg
2225437/1/... <sup>2</sup>	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	2700 K	16000 lm	13650 lm	130 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225437/3/... <sup>2</sup>	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	3500 K	16950 lm	14450 lm	138 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225437/4/... <sup>2</sup>	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	4000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225437/6/... <sup>2</sup>	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	5000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225439/1/... <sup>2</sup>	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	2700 K	19250 lm	16400 lm	127 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225439/3/... <sup>2</sup>	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	3500 K	20500 lm	17450 lm	135 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225439/4/... <sup>2</sup>	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	4000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225439/6/... <sup>2</sup>	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	5000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225441/1/... <sup>2</sup>	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	2700 K	22350 lm	19050 lm	124 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225441/3/... <sup>2</sup>	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	3500 K	23750 lm	20250 lm	131 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225441/4/... <sup>2</sup>	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	4000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225441/6/... <sup>2</sup>	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	5000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225446/1/... <sup>2</sup>	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	2700 K	27850 lm	23750 lm	116 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225446/3/... <sup>2</sup>	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	3500 K	29600 lm	25250 lm	123 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225446/4/... <sup>2</sup>	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	4000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg
2225446/6/... <sup>2</sup>	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	5000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	1 ↑ / 1 ↓	7.8 kg

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

2) symbol of chosen optical system eg. 2225033/6/T2 is CUDDLE II LED D4i 48 5000K with T2 optical system

↑ - D4i socket from top, ↓ - D4i socket from bottom, ↑↓ - D4i socket from top and bottom

3) SHD diaphragm reducing light distribution by 18.5% and reducing the luminaire's backlight

## DIRECTIVES AND STANDARDS

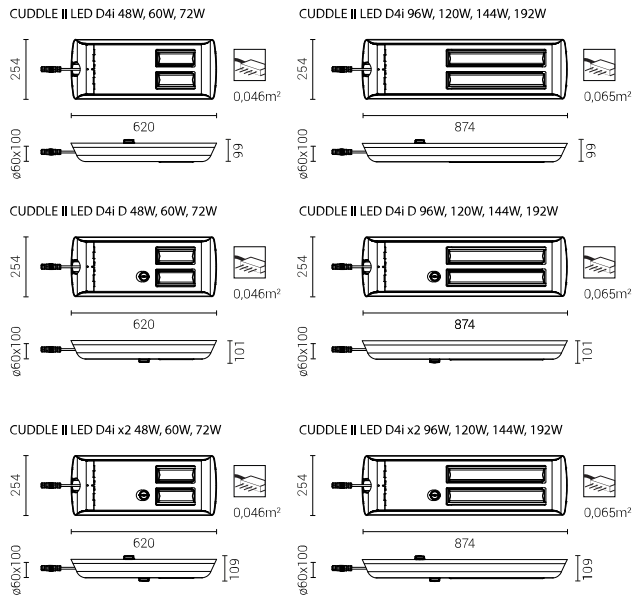
**DIRECTIVES:** 2014/35/UE (Official Journal of the UE L 96/357 29.03.2014), 2014/30/UE (Official Journal of the UE L 96/79 29.03.2014), 2011/65/UE, 2009/125/EC  
**STANDARDS:** PN-EN IEC 60598-1: 2021-7, PN-EN 60598-2-3: 2006, PN-EN 60529: 2003, PN-EN 62262: 2003, PN-EN 62471:2010, PN-EN 55015: 2013, PN-EN 61547: 2009, PN-EN 61000-3-2: 2014, PN-EN 61000-3-3: 2013

## CHARGING DISCHARGE FROM THE LED LUMINAIRE HOUSING

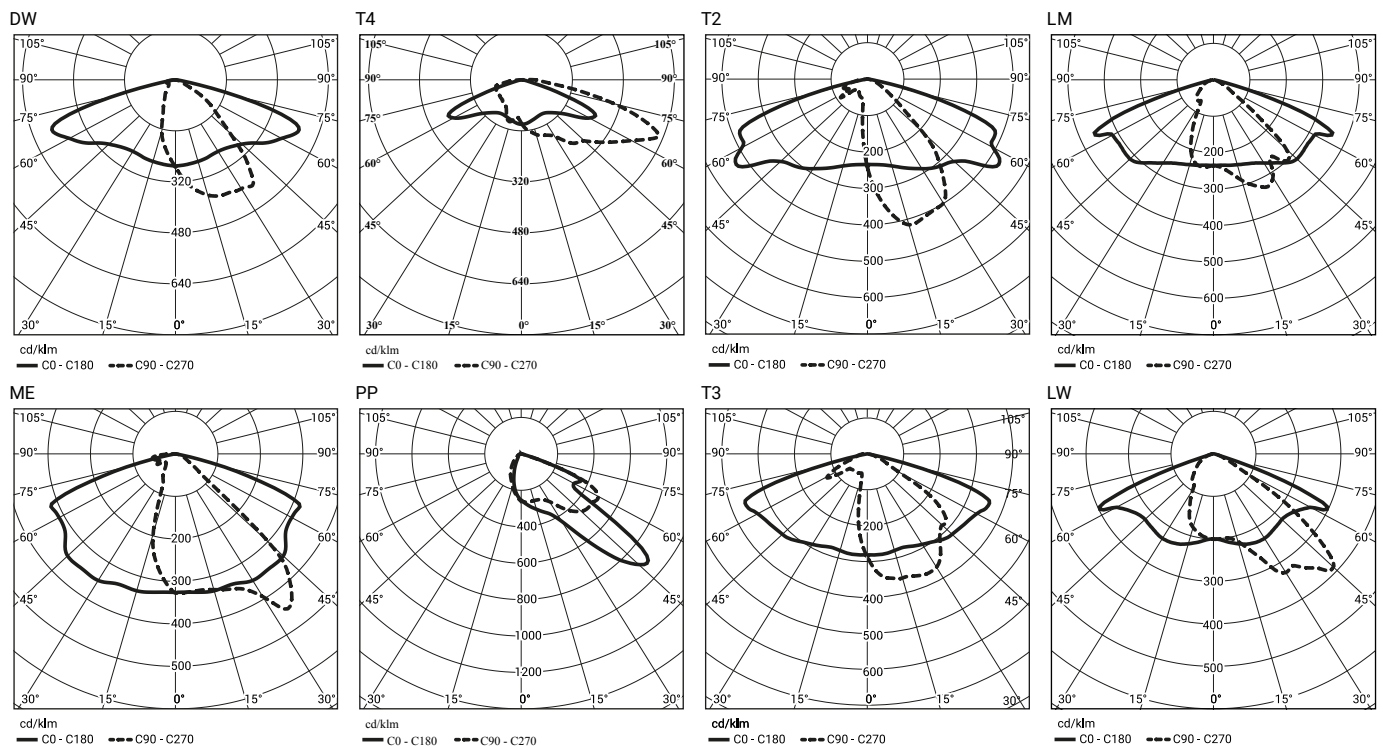
In order to efficient discharge the electrostatic charge from the housing of LED fitting installed on the pole from dielectric material (non-conductive) one of the following solutions is required:

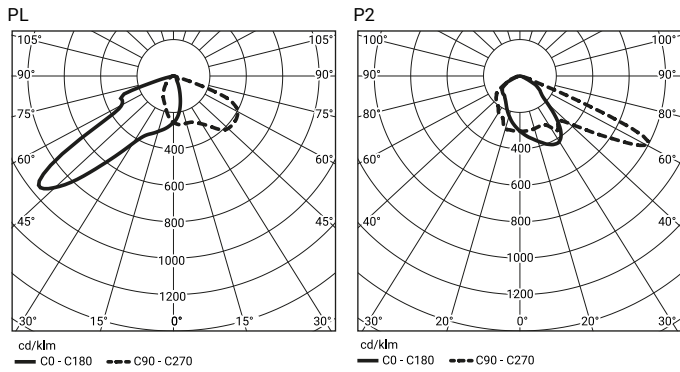
- functional grounding
- LED luminaire with an additional protection device

## TECHNICAL DRAWING



## PHOTOMETRIC CURVES





## POWER SYSTEM FUNCTIONS

### Luminaire in standard has following functions of intelligent power supply:

- Possibility of programming multistage dimming of luminaire, up to 5 intervals in the range of from 10 to 100% of nominal power,
- Temperature protection of LED module (from overheating) in case of unintentional luminaire operation during the,
- Regulation of power / luminous flux – the option of setting another value than the catalogue in the range of 30-100% of nominal one,

## ACCETABLE 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 D4i 48, 60, 72W	B	3	7	11	18	30	36	46
	C	3	7	11	18	30	36	46
CUDDLE II LED D4i 96, 120, 144W	B	1	3	5	8	14	17	22
	C	1	3	5	8	14	17	22
CUDDLE II LED D4i 192W	B	0	1	2	3	5	6	7
	C	0	2	3	5	8	10	13

Fuse – type gG and GL

Luminaire	2A	4A	6A	10A	16A	20A	25A
CUDDLE II LED D4i 48W	6	13	20	33	53	66	83
CUDDLE II LED D4i 60W	5	10	16	27	43	54	68
CUDDLE II LED D4i 72W	4	9	13	23	37	46	58
CUDDLE II LED D4i 96W	3	7	10	17	28	35	43
CUDDLE II LED D4i 120W	2	5	8	14	22	28	35
CUDDLE II LED D4i 144W	2	4	7	11	19	23	29
CUDDLE II LED D4i 192W	0	2	4	6	12	17	22