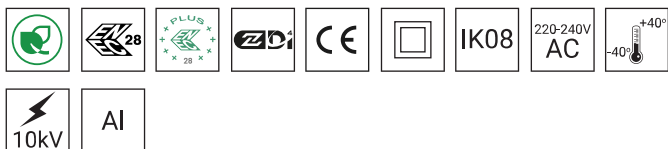


CUDDLE II LED D4I



TECHNICAL DATA

Application	motorways and expressway, urban roads, residential roads (internal), pedestrians, parkings
Assembly	on extension arms with ø 60 x 100 mm ending
Colour	inox / black
Ingress protection	IP 66 for the optical part and the driver
Optical system	PMMA optics, interchangeable LED module, PC-UV diffuser
Material	anodised aluminium alloy
Operating temperature range	from -40°C to +40°C
Expected useful lifetime	L90B10 - 100 000 h
CRI	>70
Input voltage frequency	50/60Hz
Power factor	≥0.95
Number of LED	24 - (48 W, 60 W, 72 W); 64 - (96 W, 120 W, 144 W, 192 W)
Control system	Luminaire can be connected to an external control system and / or sensors via socket compatible with Zhaga Book 18

TABLE OF VARIANTS

Code	Symbol	LED power	Luminaire power consumption	LED forward current	Colour temperature (CCT)	LEDs luminous flux¹	Luminaire luminous flux¹	Luminous efficacy¹	Unit volume	Inrush current	D4i socket	Net weight
2225033/1/...²	CUDDLE II LED D4i 48	48 W	55 W	700 mA	2700 K	8150 lm	6950 lm	126 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225033/3/...²	CUDDLE II LED D4i 48	48 W	55 W	700 mA	3500 K	8650 lm	7350 lm	134 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225033/4/...²	CUDDLE II LED D4i 48	48 W	55 W	700 mA	4000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225033/6/...²	CUDDLE II LED D4i 48	48 W	55 W	700 mA	5000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225034/1/...²	CUDDLE II LED D4i 60	60 W	67 W	830 mA	2700 K	9300 lm	7950 lm	119 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225034/3/...²	CUDDLE II LED D4i 60	60 W	67 W	830 mA	3500 K	9850 lm	8400 lm	125 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225034/4/...²	CUDDLE II LED D4i 60	60 W	67 W	830 mA	4000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225034/6/...²	CUDDLE II LED D4i 60	60 W	67 W	830 mA	5000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225035/1/...²	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	2700 K	10700 lm	9100 lm	115 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225035/3/...²	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	3500 K	11350 lm	9700 lm	123 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225035/4/...²	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	4000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225035/6/...²	CUDDLE II LED D4i 72	72 W	79 W	1000 mA	5000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	49A / 290µs	1 ↑	5.6 kg
2225037/1/...²	CUDDLE II LED D4i 96	96 W	105 W	500 mA	2700 K	16000 lm	13650 lm	130 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225037/3/...²	CUDDLE II LED D4i 96	96 W	105 W	500 mA	3500 K	16950 lm	14450 lm	138 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225037/4/...²	CUDDLE II LED D4i 96	96 W	105 W	500 mA	4000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225037/6/...²	CUDDLE II LED D4i 96	96 W	105 W	500 mA	5000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225039/1/...²	CUDDLE II LED D4i 120	120 W	129 W	625 mA	2700 K	19250 lm	16400 lm	127 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225039/3/...²	CUDDLE II LED D4i 120	120 W	129 W	625 mA	3500 K	20500 lm	17450 lm	135 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225039/4/...²	CUDDLE II LED D4i 120	120 W	129 W	625 mA	4000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225039/6/...²	CUDDLE II LED D4i 120	120 W	129 W	625 mA	5000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225041/1/...²	CUDDLE II LED D4i 144	144 W	154 W	750 mA	2700 K	22350 lm	19050 lm	124 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225041/3/...²	CUDDLE II LED D4i 144	144 W	154 W	750 mA	3500 K	23750 lm	20250 lm	131 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225041/4/...²	CUDDLE II LED D4i 144	144 W	154 W	750 mA	4000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg

CUDDLE II LED D4I



2225041/6/... ²	CUDDLE II LED D4i 144	144 W	154 W	750 mA	5000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	24A / 60µs	1 ↑	7.8 kg
2225046/1/... ²	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	2700 K	27850 lm	23750 lm	116 lm/W	0.033 m³	85A / 215µs	1 ↑	7.8 kg
2225046/3/... ²	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	3500 K	29600 lm	25250 lm	123 lm/W	0.033 m³	85A / 215µs	1 ↑	7.8 kg
2225046/4/... ²	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	4000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	85A / 215µs	1 ↑	7.8 kg
2225046/6/... ²	CUDDLE II LED D4i 192	192 W	205 W	1000 mA	5000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	85A / 215µs	1 ↑	7.8 kg
2225233/1/... ²	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	2700 K	8150 lm	6950 lm	126 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225233/3/... ²	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	3500 K	8650 lm	7350 lm	134 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225233/4/... ²	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	4000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225233/6/... ²	CUDDLE II LED D4i D 48	48 W	55 W	700 mA	5000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225234/1/... ²	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	2700 K	9300 lm	7950 lm	119 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225234/3/... ²	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	3500 K	9850 lm	8400 lm	125 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225234/4/... ²	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	4000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225234/6/... ²	CUDDLE II LED D4i D 60	60 W	67 W	830 mA	5000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225235/1/... ²	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	2700 K	10700 lm	9100 lm	115 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225235/3/... ²	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	3500 K	11350 lm	9700 lm	123 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225235/4/... ²	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	4000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225235/6/... ²	CUDDLE II LED D4i D 72	72 W	79 W	1000 mA	5000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	49A / 290µs	1 ↓	5.6 kg
2225237/1/... ²	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	2700 K	16000 lm	13650 lm	130 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225237/3/... ²	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	3500 K	16950 lm	14450 lm	138 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225237/4/... ²	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	4000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225237/6/... ²	CUDDLE II LED D4i D 96	96 W	105 W	500 mA	5000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225239/1/... ²	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	2700 K	19250 lm	16400 lm	127 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225239/3/... ²	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	3500 K	20500 lm	17450 lm	135 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225239/4/... ²	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	4000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225239/6/... ²	CUDDLE II LED D4i D 120	120 W	129 W	625 mA	5000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225241/1/... ²	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	2700 K	22350 lm	19050 lm	124 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225241/3/... ²	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	3500 K	23750 lm	20250 lm	131 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225241/4/... ²	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	4000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225241/6/... ²	CUDDLE II LED D4i D 144	144 W	154 W	750 mA	5000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	24A / 60µs	1 ↓	7.8 kg
2225246/1/... ²	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	2700 K	27850 lm	23750 lm	116 lm/W	0.033 m³	85A / 215µs	1 ↓	7.8 kg
2225246/3/... ²	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	3500 K	29600 lm	25250 lm	123 lm/W	0.033 m³	85A / 215µs	1 ↓	7.8 kg
2225246/4/... ²	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	4000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	85A / 215µs	1 ↓	7.8 kg
2225246/6/... ²	CUDDLE II LED D4i D 192	192 W	205 W	1000 mA	5000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	85A / 215µs	1 ↓	7.8 kg
2225433/1/... ²	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	2700 K	8150 lm	6950 lm	126 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225433/3/... ²	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	3500 K	8650 lm	7350 lm	134 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225433/4/... ²	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	4000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225433/6/... ²	CUDDLE II LED D4i x2 48	48 W	55 W	700 mA	5000 K	9150 lm	7800 lm	142 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225434/1/... ²	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	2700 K	9300 lm	7950 lm	119 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225434/3/... ²	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	3500 K	9850 lm	8400 lm	125 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225434/4/... ²	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	4000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg

49A /

2225434/6/... ²	CUDDLE II LED D4i x2 60	60 W	67 W	830 mA	5000 K	10450 lm	8900 lm	133 lm/W	0.024 m³	72A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225435/1/... ²	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	2700 K	10700 lm	9100 lm	115 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225435/3/... ²	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	3500 K	11350 lm	9700 lm	123 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225435/4/... ²	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	4000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225435/6/... ²	CUDDLE II LED D4i x2 72	72 W	79 W	1000 mA	5000 K	12100 lm	10300 lm	130 lm/W	0.024 m³	49A / 290µs	1 ↑ / 1 ↓	5.6 kg
2225437/1/... ²	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	2700 K	16000 lm	13650 lm	130 lm/W	0.033 m³	24A / 100µs	1 ↑ / 1 ↓	7.8 kg
2225437/3/... ²	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	3500 K	16950 lm	14450 lm	138 lm/W	0.033 m³	24A / 100µs	1 ↑ / 1 ↓	7.8 kg
2225437/4/... ²	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	4000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	24A / 100µs	1 ↑ / 1 ↓	7.8 kg
2225437/6/... ²	CUDDLE II LED D4i x2 96	96 W	105 W	500 mA	5000 K	18000 lm	15350 lm	146 lm/W	0.033 m³	24A / 100µs	1 ↑ / 1 ↓	7.8 kg
2225439/1/... ²	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	2700 K	19250 lm	16400 lm	127 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225439/3/... ²	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	3500 K	20500 lm	17450 lm	135 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225439/4/... ²	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	4000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225439/6/... ²	CUDDLE II LED D4i x2 120	120 W	129 W	625 mA	5000 K	21700 lm	18500 lm	143 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225441/1/... ²	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	2700 K	22350 lm	19050 lm	124 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225441/3/... ²	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	3500 K	23750 lm	20250 lm	131 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225441/4/... ²	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	4000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225441/6/... ²	CUDDLE II LED D4i x2 144	144 W	154 W	750 mA	5000 K	25150 lm	21450 lm	139 lm/W	0.033 m³	24A / 60µs	1 ↑ / 1 ↓	7.8 kg
2225446/1/... ²	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	2700 K	27850 lm	23750 lm	116 lm/W	0.033 m³	85A / 215µs	1 ↑ / 1 ↓	7.8 kg
2225446/3/... ²	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	3500 K	29600 lm	25250 lm	123 lm/W	0.033 m³	85A / 215µs	1 ↑ / 1 ↓	7.8 kg
2225446/4/... ²	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	4000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	85A / 215µs	1 ↑ / 1 ↓	7.8 kg
2225446/6/... ²	CUDDLE II LED D4i x2 192	192 W	205 W	1000 mA	5000 K	31350 lm	26700 lm	130 lm/W	0.033 m³	85A / 215µs	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

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

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

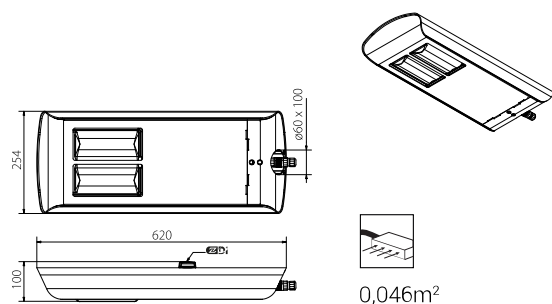
- LED luminaire with an additional protection device

CUDDLE II LED D4i

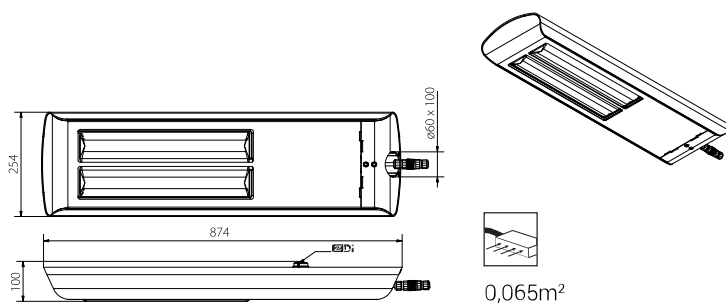


TECHNICAL DRAWING

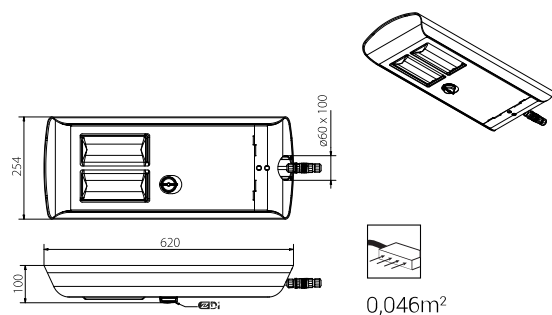
CUDDLE II LED D4i 48-72 W



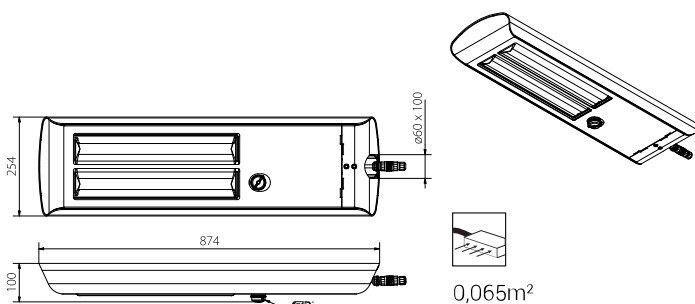
CUDDLE II LED D4i 96-192 W



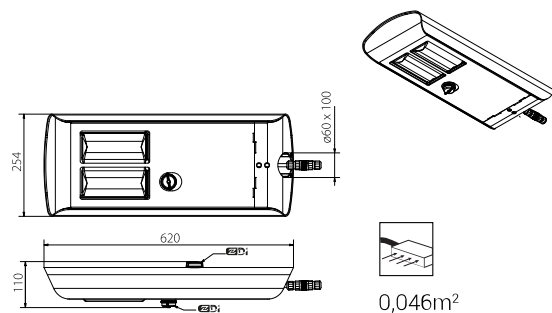
CUDDLE II LED D4i D 48-72 W



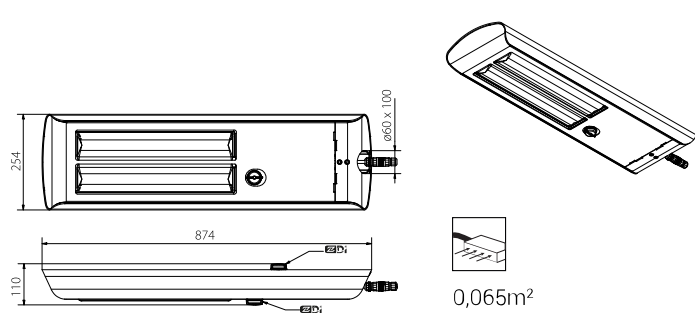
CUDDLE II LED D4i D 96-192 W



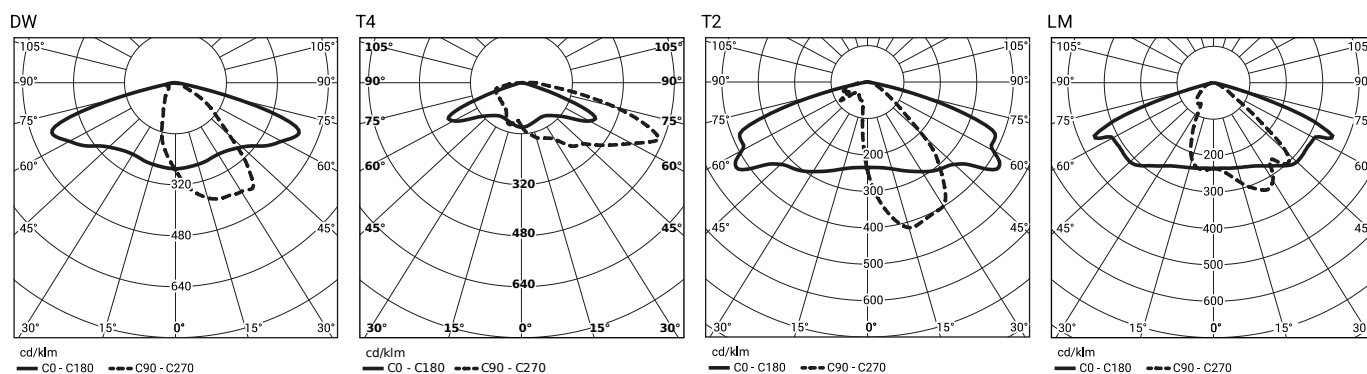
CUDDLE II LED D4i x2 48-72 W

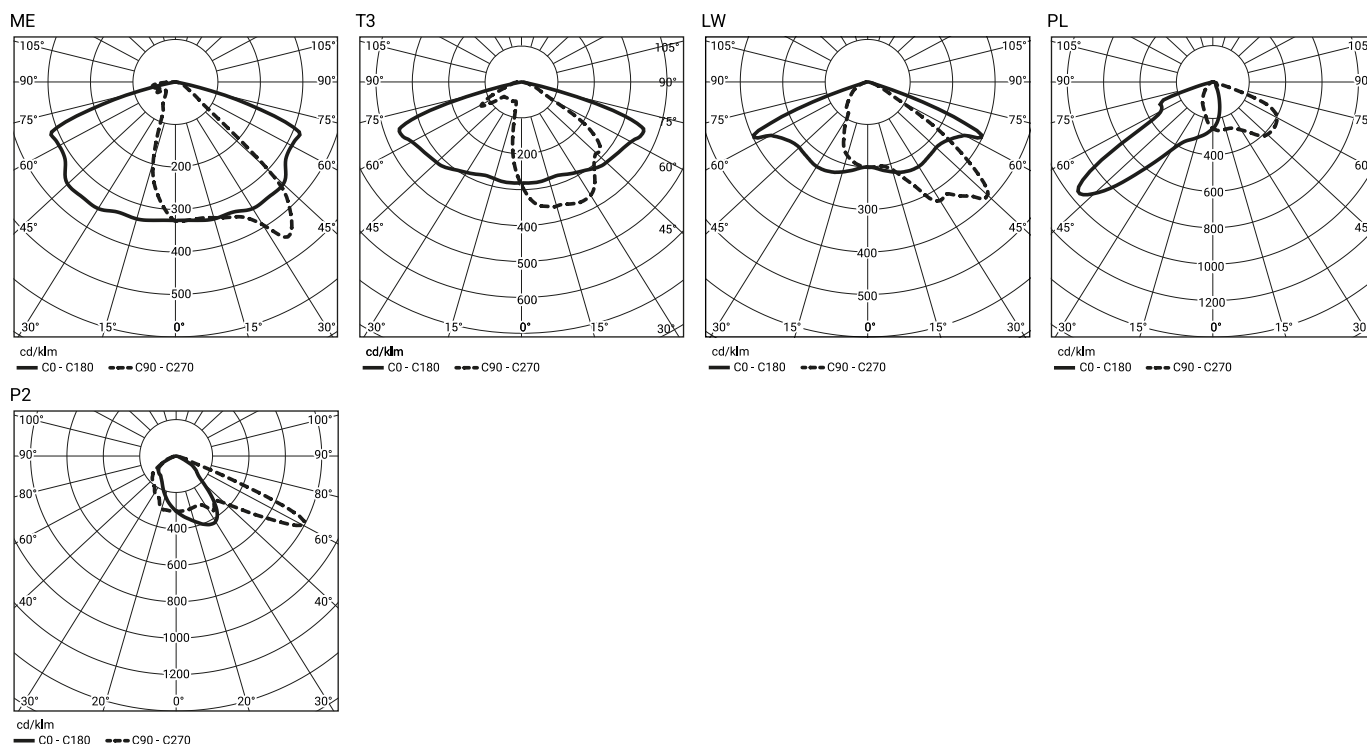


CUDDLE II LED D4i x2 96-192 W



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,
- 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,

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	4	9	13	23	37	46	58
	C	4	9	13	23	37	46	58
CUDDLE II LED D4i 96, 120, 144W	B	1	3	5	8	14	17	21
	C	1	4	7	11	19	23	29
CUDDLE II LED D4i 192W	B	0	1	2	3	5	6	7
	C	0	2	3	5	8	10	13

CHROMATICITY

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

Fuse – type gG and GL

Luminaire	2A	4A	6A	10A	16A	20A	25A
CUDDLE II LED D4i 48W	4	9	13	23	37	46	58
CUDDLE II LED D4i 60W	4	9	13	23	37	46	58
CUDDLE II LED D4i 72W	4	9	13	23	37	46	58
CUDDLE II LED D4i 96W	2	4	7	11	19	23	29
CUDDLE II LED D4i 120W	2	4	7	11	19	23	29
CUDDLE II LED D4i 144W	2	4	7	11	19	23	29
CUDDLE II LED D4i 192W	0	2	4	6	12	17	22

PHOTOMETRIC CODE

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