

COMBO 450

trim

064-1041517K



Project / Type

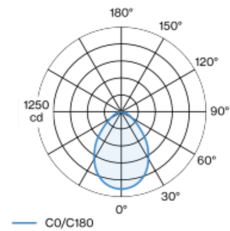
Notes

Count / Date

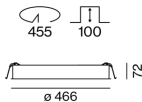


Round light fitting in aluminium; recessed light with wrap around edge; suitable for ceiling thickness of 10-25 mm; surface white powder coated; installation without tools using snap spring closure; external converter for ceiling insertion, through-wiring suitable; electrical connection by means of reverse polarity protected plug system; LED board highly reflective lacquered for higher efficiency; light colour 3000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 80 ; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; flush ceiling light level; micro prismatic PMMA cover; absolutely homogeneous illumination by using a diffuser film on polycarbonate base; improved ratio of scattering effect to light transmission; same luminance for all size versions; UGR ≤ 19 ; VDU compatible workplace luminaire according to DIN EN 12464-1; luminance above $65^\circ \leq 3000 \text{ cd/m}^2$; degree of protection IP40; PC1; 220-240 V; internal wiring in light halogen free; incl. converter, non dimmable; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

Light distribution



Product drawing



General

Ceiling , Recessed

white , RAL 9010 ¹

IP40

2060 lm

LED

3000 K

CRI ≥ 80

L90 / 50000 h

initial MacAdam ≤ 3 SDCM

MR 0.54

MDER 0.49

Optical

Microprismatic

microprismatic

UGR ≤ 19 , $\geq 65^\circ < 3000 \text{ cd/m}^2$

PstLM ≤ 1.0 ²

SVM ≤ 0.4 ²

Electrical

non DIM

220-240 V

system 16.7 W

system 123 lm/W³

PC1

Physical

trim

diameter 466 mm

height 72 mm

3.1 kg

Cutout

diameter 455 mm

min. ceiling thickness 10 mm

max. ceiling thickness 25 mm

recessed depth 100 mm

¹ RAL code ² Value of containing product at full load (undimmed)
³ incl. consideration of optical losses, internal control unit losses & operating device efficiency

Installation instructions



Lighting calculator



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Maintenance Factors

| Operating Time [h] | 10 000 | 20 000 | 30 000 | 40 000 | 50 000 |
|--------------------|------------------------------|--------|-------------------|---------------------------------|--------|
| LLMF | 0.98 | 0.96 | 0.94 | 0.91 | 0.9 |
| LSF | 1 | 1 | 1 | 1 | 1 |
| MF | LMF × RSMF × LLMF × LSF | | RSMF ^a | Room Surface Maintenance Factor | |
| MF | Maintenance Factor | | LLMF | Lamp Lumens Maintenance Factor | |
| LMF ^a | Luminaire Maintenance Factor | | LSF | Lamp Survival Faktor | |

^a According to "CIE 97, Maintenance of indoor electric lighting systems", 2005, ISBN 3-900-734-34-8. The values must be determined by the planner.

Circuit Breaker Types

| Automatic Circuit Breaker Type | Number of Fixtures |
|--------------------------------|--------------------|
| B10 | 31 |
| B13 | 40 |
| B16 | 50 |
| B20 | 62 |
| B25 | 78 |
| C10 | 52 |
| C13 | 67 |
| C16 | 85 |
| C20 | 104 |
| C25 | 130 |

Mounting accessories

MOUNTING RING

| TYPE | ARTICLE NUMBER(S) |
|----------------------|-------------------|
| for acoustic ceiling | 064-1906400 |

