

COMBO 450

trim

064-1041517K



Project / Type

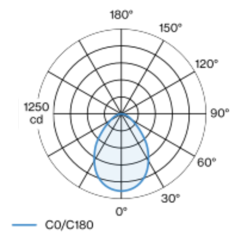
Notes

Count / Date

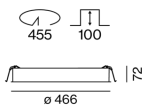


Round light fitting in aluminium; recessed light with wrap around edge; suitable for ceiling thickness of 10-25 mm; surface white powder coated; installation without tools using snap spring closure; external converter for ceiling insertion, through-wiring suitable; electrical connection by means of reverse 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 Factor

^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

