

# SONO 450 direct / indirect

surface  
071-91486370



Project / Type

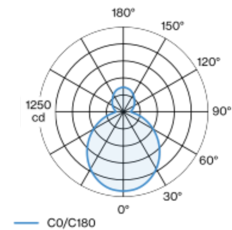
Notes

Count / Date

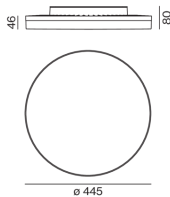


Round luminaire housing in die-cast aluminium; surface white powder coated; suitable for wall or ceiling mounting; time saving installation through snap-in mounting system; LED board highly reflective lacquered for higher efficiency; same luminance for all size versions; light colour 4000 K; binning initial MacAdam  $\leq 3$  SDCM; CRI  $\geq 80$ ; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; completely homogeneously illuminated, satin PMMA cover; direct / indirect radiation characteristic for additional accentuation of the ceiling; luminaire with 2 cable openings and plug-in terminal for through wiring; degree of protection IP40; PC1; 220-240 V; shock resistance IK07; internal wiring in light halogen free; incl. DALI-2 converter; light source not replaceable; control gear replaceable by an authorized professional;

## Light distribution



## Product drawing



### General

Ceiling / Wall | Surface

white | RAL 9010 <sup>1</sup>

IP40

IK07

indirect 1200 lm | direct 3480 lm

total 4680 lm

### LED

4000 K

CRI  $\geq 80$

L90 / 50000 h

initial MacAdam  $\leq 3$  SDCM

MR 0.72 | MDER 0.66

### Optical

Opal | opal (lambertsch)

PstLM  $\leq 1.0$  <sup>2</sup> | SVM  $\leq 0.4$  <sup>2</sup>

### Electrical

DALI-2 | 1 DALI Addr.

PC1 | 220-240 V

system 34 W

system 138 lm/W <sup>3</sup>

### Physical

diameter 445 mm | height 80 mm

3.8 kg

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

## Installation instructions



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## Maintenance Factors

Operating Time [h]	10 000	20 000	30 000	40 000	50 000
LLMF	0.98	0.95	0.93	0.91	0.9
LSF	1	1	1	1	1
MF	LMF × RSMF × LLMF × LSF		RSMF <sup>a</sup>	Room Surface Maintenance Factor	
MF	Maintenance Factor		LLMF	Lamp Lumens Maintenance Factor	
LMF <sup>a</sup>	Luminaire Maintenance Factor		LSF	Lamp Survival Factor	

<sup>a</sup> 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	13
B13	20
B16	24
B20	30
C10	26
C13	40
C16	48
C20	60

## Mounting accessories

### DISMOUNTING TOOL

TYPE	ARTICLE NUMBER(S)
vacuum cup	086-30000

