

# MINO 60 mid lumen

surface

046-41L311GG



Project / Type

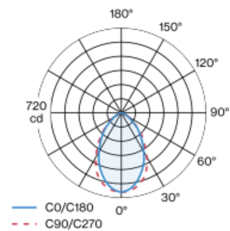
Notes

Count / Date



Luminaire housing made of extruded aluminium profile; light tight final end caps made of aluminium; no visible screws; angular design; surface grey powder coated; suitable for wall or ceiling mounting; lighting profile (end cover pre-assembled) available in advance for installation; remaining lamp components mounted without tools; LED light inset consisting of highly reflective lacquered aluminium for improved thermal management; light colour 4000 K; binning initial MacAdam  $\leq 3$  SDCM; CRI  $\geq 90$ ; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; micro prismatic PMMA diffuser incl. diffuser film for homogeneous illumination and reduced luminance; UGR  $\leq 19$ ; VDU compatible workplace luminaire according to DIN EN 12464-1; luminance above 65°  $\leq 3000$  cd/m<sup>2</sup>; degree of protection IP20; 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 | Surface

grey | RAL 9006 <sup>1</sup>

IP20

999 lm

1150 lm/m

### LED

4000 K

CRI  $\geq 90$

L90 / 50000 h

initial MacAdam  $\leq 3$  SDCM

R<sub>g</sub>: 99 | R<sub>f</sub>: 92 | R<sub>i(1-15)</sub>: 90

MR 0.81 | MDER 0.74

### Optical

Microprismatic | microprismatic

UGR  $\leq 19$  |  $\geq 65^\circ$   $< 3000$  cd/m<sup>2</sup>

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

### Electrical

non DIM

PC1 | 220-240 V

system 10.3 W

system 97 lm/W <sup>3</sup>

12 W/m

### Physical

length 880 mm | width 60 mm | height 80 mm

2.59 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



## 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	0.92	0.9
LSF	1	1	1	1	1

MF

LMF × RSMF × LLMF × LSF

MF

Maintenance Factor

LMF<sup>a</sup>

Luminaire Maintenance Factor

RSMF<sup>a</sup>

Room Surface Maintenance Factor

LLMF

Lamp Lumens 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	9
B13	13
B16	15
B20	18
C10	18
C13	26
C16	30
C20	36

