

# MINO 60 high lumen

surface

046-41M413GG



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 white aluminium 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; degree of protection IP20; PC1; 220-240 V; internal wiring in light halogen free; incl. DALI-2 converter; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;



### General

Ceiling | Surface

white aluminium | RAL 9006

IP20

2240 lm

1910 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

PstLM  $\leq 1.0$  <sup>1</sup> | SVM  $\leq 0.4$  <sup>1</sup>

### Electrical

DALI-2 | 1 DALI Addr.

PC1 | 220-240 V

system 23.3 W

system 96 lm/W <sup>2</sup>

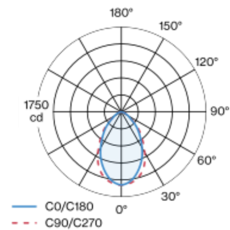
20 W/m

### Physical

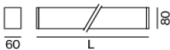
length 1180 mm | width 60 mm | height 80 mm

3.3 kg

### Light distribution



### Product drawing



<sup>1</sup> Value of containing product at full load (undimmed)  
<sup>2</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	18
B13	23
B16	28
B20	35
C10	30
C13	38
C16	46
C20	58

## Colour rendering



## CRI/R<sub>a</sub> ≥ 93 R<sub>e</sub> ≥ 90 (4000 K)



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## TM30 colour vector graphic



The black line represents the black body reference. The red line indicates the results of the test light source. The deviation from the test light source to the reference is shown and is marked by arrows. The shorter the arrows, the higher the color rendering.