

# MINO 60 direct / indirect mid lumen ceiling /

suspended system  
046-5013617Z



Project / Type \_\_\_\_\_

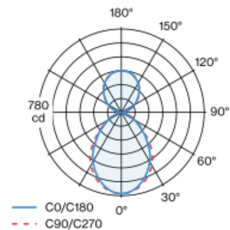
Notes \_\_\_\_\_

Count / Date \_\_\_\_\_



Luminaire housing made of extruded aluminium profile; angular design; for continuous lighting systems; light tight final end caps made of aluminium (available as an accessory); no visible screws; surface white powder coated; for suspended mounting (1500 mm cable suspension as an accessory); with integrated toolless suspension height adjustment on the luminaire; spring clip attachment to the luminaire; freely positionable; LED light inset consisting of highly reflective lacquered aluminium for improved thermal management; light colour 4000 K; binning initial MacAdam  $\leq 3$  SDCM; CRI  $\geq 80$ ; 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  $\leq 19$ ; direct/indirect illumination characteristic; indirect light component with integrated PC boards for maximum, homogeneous ceiling illumination; degree of protection IP20; PC1 220-240V; photobiological safety according to IEC 62471 risk group RG 0 - no Risk; internal wiring in light halogen free; incl. converter, non dimmable; accessories are listed separately; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

## Light distribution



## Product drawing



## General

Ceiling , Suspended \_\_\_\_\_

white , RAL9010 <sup>1</sup> \_\_\_\_\_

2810 lm/m \_\_\_\_\_

IP20 \_\_\_\_\_

indirect 987 lm \_\_\_\_\_

direct 1470 lm \_\_\_\_\_

total 2460 lm \_\_\_\_\_

## LED

4000 K \_\_\_\_\_

CRI  $\geq 80$  \_\_\_\_\_

L90 / 50000 h \_\_\_\_\_

photobio. safety RG 0 - no Risk \_\_\_\_\_

initial MacAdam  $\leq 3$  SDCM \_\_\_\_\_

MR 0.72 \_\_\_\_\_

MDER 0.65 \_\_\_\_\_

## Optical

Microprismatic \_\_\_\_\_

microprismatic \_\_\_\_\_

UGR  $< 19$  \_\_\_\_\_

PstLM  $\leq 1.0$  <sup>2</sup> \_\_\_\_\_

SVM  $\leq 0.4$  <sup>2</sup> \_\_\_\_\_

## Electrical

non DIM \_\_\_\_\_

system 17.9 W \_\_\_\_\_

PC1 220-240V \_\_\_\_\_

system 137 lm/W<sup>3</sup> \_\_\_\_\_

20 W/m \_\_\_\_\_

## Physical

length 872 mm \_\_\_\_\_

width 60 mm \_\_\_\_\_

height 80 mm \_\_\_\_\_

2.4 kg \_\_\_\_\_

<sup>1</sup> RAL code <sup>2</sup> Value of containing product at full load (undimmed)  
<sup>3</sup> incl. optical losses and the efficiency of the operating device (converter)

## 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		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 Faktor	

<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

## Mounting accessories

### END CAPS

TYPE	COLOUR	L-W-H (MM)	ARTICLE NUMBER(S)
1 pair	traffic white	60-40-4	046-5010017
1 pair	jet black	60-40-4	046-5010018
1 pair	white aluminium	60-40-4	046-501001G
1 pair	special colours	60-40-4	046-501001X



## Mounting accessories

### LINEAR CONNECTOR

TYPE	ARTICLE NUMBER(S)
1 piece	005-40046
10 pieces	005-40046.10



### OPAL COVER LINEAR CONNECTOR

ARTICLE NUMBER(S)  
006-14000



## Mounting accessories

### CABLE SUSPENSION

ARTICLE NUMBER(S)  
005-2122110



### CABLE RAIL

Ø (MM)	ARTICLE NUMBER(S)
1200	005-2491110



[046-5013617Z] The technical data represent rated values for an ambient temperature of 25°C. The data values for the luminous flux are initially subject to a tolerance of +/- 10%, those for the electrical connected load are initially subject to a tolerance of +/- 10%, and those for the colour temperature are initially subject to a tolerance of +/- 150 K. No liability is assumed for typographical or printing errors. The general terms and conditions of XAL GmbH apply.  
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## Electrical accessories

### THROUGH WIRE

TYPE	ARTICLE NUMBER(S)
3 x 1,5 mm <sup>2</sup>   10 pieces	004-90003
5 x 1,5 mm <sup>2</sup>   10 pieces	004-90005



## Electrical accessories

### CANOPY / FEEDER CABLE

TYPE	COLOUR	L-W-H (MM)	ARTICLE NUMBER(S)
3 x 1,5 mm <sup>2</sup>	traffic white	90-90-22	005-2212317
3 x 1,5 mm <sup>2</sup>	jet black	90-90-22	005-2212318
5 x 1,5 mm <sup>2</sup>	pure white	90-90-22	005-2212417
5 x 1,5 mm <sup>2</sup>	jet black	90-90-22	005-2212418

