

# MINO 60 mid lumen

ceiling / suspended system

007-93L4117 006-16122G 046-400401X



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

Notes \_\_\_\_\_

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



## General

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

special colours \_\_\_\_\_

IP20 \_\_\_\_\_

1330 lm \_\_\_\_\_

1140 lm/m \_\_\_\_\_

## LED

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

CRI  $\geq$  90 \_\_\_\_\_

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

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

R<sub>g</sub>: 99 , R<sub>r</sub>: 92 , R<sub>t(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>1</sup> \_\_\_\_\_

SVM  $\leq$  0.4 <sup>1</sup> \_\_\_\_\_

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 special colours powder coated; for ceiling surface mounting or 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; luminaire profile for mounting available in advance; 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  $65^\circ \leq 3000$  cd/m<sup>2</sup>; degree of protection IP20; PC1; 220-240 V; internal wiring in light halogen free; incl. converter, non dimmable; accessories are listed separately; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

## Electrical

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

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

system 13.3 W \_\_\_\_\_

system 100 lm/W<sup>2</sup> \_\_\_\_\_

PC1 \_\_\_\_\_

11 W/m \_\_\_\_\_

## Physical

trim \_\_\_\_\_

length 1172 mm \_\_\_\_\_

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

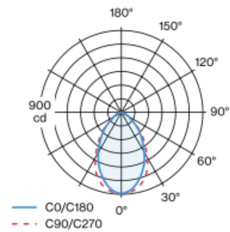
height 80 mm \_\_\_\_\_

3.1 kg \_\_\_\_\_

<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

## Light distribution



## Product drawing



## 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                 |

## Components

### LIGHT OPTIC COVER

| TYPE                     | ARTICLE NUMBER(S) |
|--------------------------|-------------------|
| microprismatic (UGR<19)* | 006-16122G        |

### INSTALLATION CHANNEL

| COLOUR          | L-W-H (MM) | ARTICLE NUMBER(S) |
|-----------------|------------|-------------------|
| special colours | 1172-60-80 | 046-400401X       |

## 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         |



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## Mounting accessories

### CEILING CLIP

| COLOUR      | ARTICLE NUMBER(S) |
|-------------|-------------------|
| transparent | 034-11636         |



## Mounting accessories

### CABLE SUSPENSION

| ARTICLE NUMBER(S) |
|-------------------|
| 005-2122110       |



### CABLE RAIL

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



## 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       |

