

# MINO 60 high lumen

ceiling / suspended system

007-93M5017 006-16152H 046-4005017



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 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 3000 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; HPO (High Performance Opal) cover for uniform illumination; 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;

## Light distribution



## Product drawing



### General

Ceiling , Suspended

white , RAL9010 <sup>1</sup>

IP20

2980 lm

2020 lm/m

### LED

3000 K

CRI  $\geq 90$

L90 / 50000 h

initial MacAdam  $\leq 3$  SDCM

R<sub>g</sub>: 99 , R<sub>r</sub>: 91 , R<sub>f(1-15)</sub>: 89

MR 0.61

MDER 0.55

### Optical

High Performance Opal

opal (lambertsch)

### Electrical

non DIM

220-240 V

system 29.1 W

PC1

system 102 lm/W<sup>2</sup>

20 W/m

### Physical

trim

length 1472 mm

width 60 mm

height 80 mm

3.5 kg

<sup>1</sup> RAL code

<sup>2</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                            | 15                 |
| B13                            | 19                 |
| B16                            | 24                 |
| B20                            | 30                 |
| C10                            | 25                 |
| C13                            | 32                 |
| C16                            | 40                 |
| C20                            | 49                 |

## Components

### LIGHT OPTIC COVER

| TYPE                  | ARTICLE NUMBER(S) |
|-----------------------|-------------------|
| opal high performance | 006-16152H        |

### INSTALLATION CHANNEL

| TYPE    | COLOUR     | L-W-H (MM) | ARTICLE NUMBER(S) |
|---------|------------|------------|-------------------|
| 1472 mm | pure white | 1472-60-80 | 046-4005017       |



## 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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### 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       |

