

# MINO 60 high lumen

ceiling offset

046-47M3638H



Project / Type	
Notes	
Count / Date	



## General

Ceiling , Surface	
black , RAL 9005 <sup>1</sup>	
IP20	
Ball impact resistant DIN 18032-3	
1730 lm	
1980 lm/m	

## LED

4000 K	
CRI ≥ 80	
L90 / 50000 h	
initial MacAdam ≤ 3 SDCM	
MR 0.72	
MDER 0.65	

## Optical

High Performance Opal	
opal (lambertsch)	
PstLM ≤ 1.0 <sup>2</sup>	
SVM ≤ 0.4 <sup>2</sup>	

## Electrical

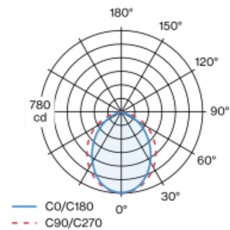
DALI-2	
220-240 V	
system 17.5 W	
system 99 lm/W <sup>3</sup>	
PC1	
1 DALI Addr.	
20 W/m	

## Physical

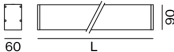
length 875 mm	
width 60 mm	
height 90 mm	

Luminaire housing made of extruded aluminium profile; light-tight end caps in aluminium; angular design; surface black powder coated; luminaire, ball proof version to DIN 18032-3 and DIN 57710 part 13 / VDE 0710 part 13; not suitable for indoor tennis centers (or halls with comparable ball sizes); LED light inset consisting of highly reflective lacquered aluminium for improved thermal management; light colour 4000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 80; 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; incl. DALI-2 converter; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

## Light distribution



## Product drawing



<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		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 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

