

# MINO 60 mid lumen

ceiling offset  
046-47L4518H



Project / Type

Notes

Count / Date



RG0  
IEC 62471

220-240V

X-PERT

X-PERT

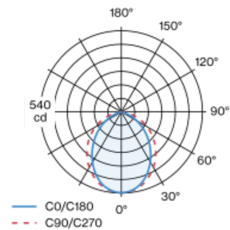
General	
Ceiling , Surface	
black , RAL9005 <sup>1</sup>	
1030 lm/m	
IP20	
Ball impact resistant DIN 18032-3	
1200 lm	

LED	
3000 K	
CRI ≥ 80	
L90 / 50000 h	
photobio. safety RG 0 - no Risk	
initial MacAdam ≤ 3 SDCM	
MR 0.56	
MDER 0.51	

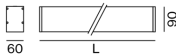
Optical	
High Performance Opal	
opal (lambertsch)	
PstLM ≤ 1.0 <sup>2</sup>	
SVM ≤ 0.4 <sup>2</sup>	

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 3000 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 220-240V; photobiological safety according to IEC 62471 risk group RG 0 - no Risk; incl. converter, non dimmable; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

## Light distribution



## Product drawing



Electrical	
non DIM	
13.3 W	
PC1 220-240V	
90 lm/W	
11 W/m	

Physical	
length 1175 mm	
width 60 mm	
height 90 mm	
3.1 kg	

<sup>1</sup> RAL code <sup>2</sup> Value of containing product at full load (undimmed)

## 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	29
B13	38
B16	48
B20	60
C10	49
C13	64
C16	80
C20	100

