

MINO 60 high lumen

ceiling offset

046-47M4538H



Project / Type

Notes

Count / Date



General

Ceiling , Surface

black , RAL 9005 ¹

IP20

Ball impact resistant DIN 18032-3

2020 lm

1720 lm/m

LED

3000 K

CRI ≥ 80

L90 / 50000 h

initial MacAdam ≤ 3 SDCM

MR 0.56

MDER 0.51

Optical

High Performance Opal

opal (lambertsch)

PstLM ≤ 1.0 ²

SVM ≤ 0.4 ²

Electrical

DALI-2

220-240 V

system 23.3 W

system 87 lm/W³

PC1

1 DALI Addr.

20 W/m

Physical

length 1175 mm

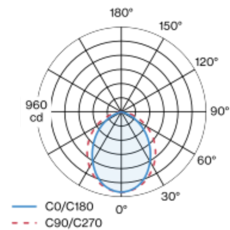
width 60 mm

height 90 mm

3.1 kg

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; 220-240 V; incl. DALI-2 converter; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

Light distribution



Product drawing



¹ RAL code ² Value of containing product at full load (undimmed)
³ FIXTURE: incl. consideration of optical losses & internal control unit losses SYSTEM: 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

MF

Maintenance Factor

LMF^a

Luminaire Maintenance Factor

RSMF^a

Room Surface Maintenance Factor

LLMF

Lamp Lumens Maintenance Factor

LSF

Lamp Survival Faktor

^a 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

