

# TUBO 60

surface

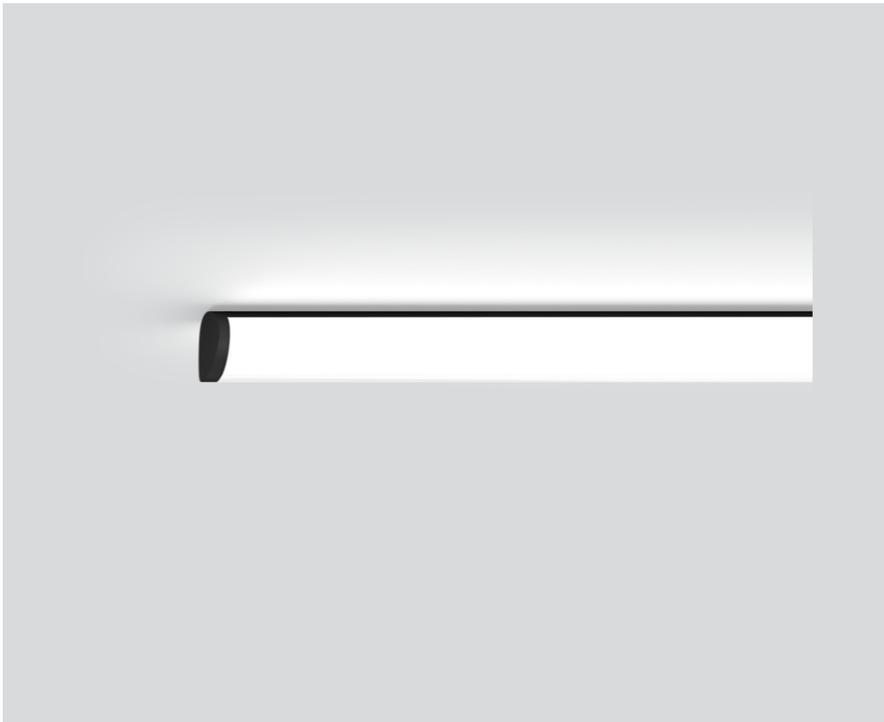
058-31145380



Project / Type

Notes

Count / Date



## General

Ceiling / Wall , Surface

black , RAL9005 <sup>1</sup>

3020 lm/m

IP20

3570 lm

## LED

3000 K

CRI  $\geq$  80

L90 / 50000 h

photobio. safety RG 0 - no Risk

initial MacAdam  $\leq$  3 SDCM

MR 0.56

MDER 0.51

## Optical

High Performance Opal

PstLM  $\leq$  1.0 <sup>2</sup>

SVM  $\leq$  0.4 <sup>2</sup>

## Electrical

DALI-2

32 W

PC1 220-240V

112 lm/W

1 DALI Addr.

27 W/m

## Physical

length 1210 mm

width 60 mm

height 60 mm

3.4 kg

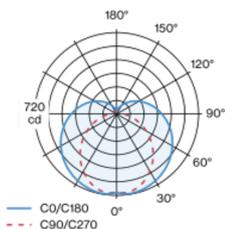
<sup>1</sup> RAL code <sup>2</sup> Value of containing product at full load (undimmed)

## Installation instructions



Carrier profile made of extruded aluminium profile; light-tight end caps in aluminium; converter integrated into luminaire housing; surface black powder coated; suitable for wall or ceiling mounting; easy installation using ceiling clips; light control via high quality lens system for maximum, homogeneous illumination; light colour 3000 K; binning initial MacAdam  $\leq$  3 SDCM; CRI  $\geq$  80; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; cylindrical cover made of satin PMMA for uniform illumination; with gentle ceiling illumination; degree of protection IP20; PC1 220-240V; photobiological safety according to IEC 62471 risk group RG 0 - no Risk; incl. DALI-2 converter; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

## Light distribution



## Product drawing



# TUBO 60

surface

058-31145380



Project / Type

Notes

Count / Date

## 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	18
B13	24
B16	30
B20	37
C10	31
C13	40
C16	51
C20	62