

# TUBIN 60

surface

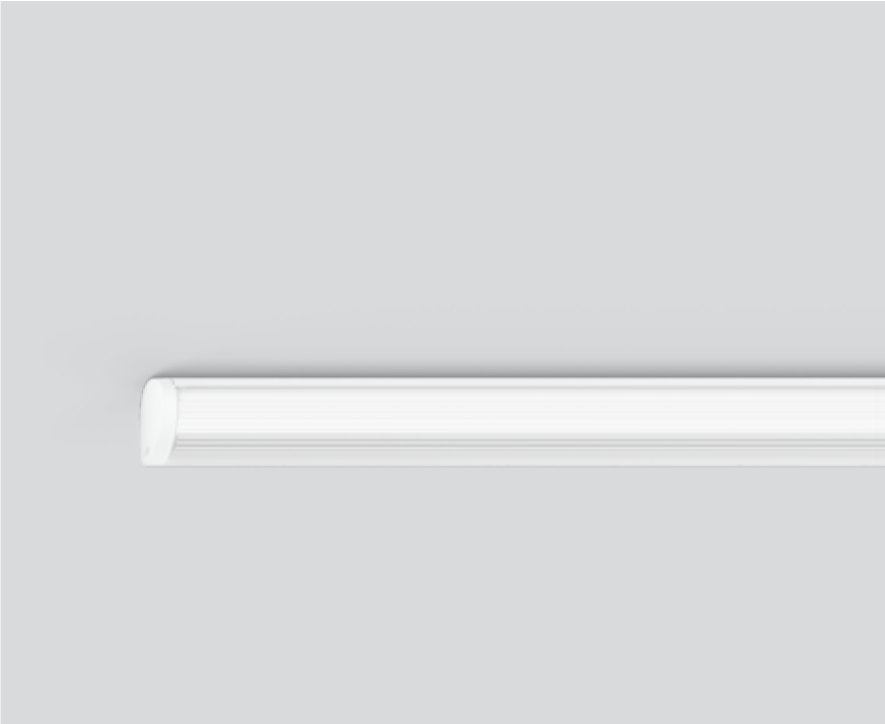
058-5114137C



Project / Type \_\_\_\_\_

Notes \_\_\_\_\_

Count / Date \_\_\_\_\_



## General

Ceiling / Wall , Surface \_\_\_\_\_

white , RAL 9010 <sup>1</sup> \_\_\_\_\_

IP20 \_\_\_\_\_

3170 lm \_\_\_\_\_

2680 lm/m \_\_\_\_\_

## LED

4000 K \_\_\_\_\_

CRI ≥ 90 \_\_\_\_\_

L90 / 50000 h \_\_\_\_\_

initial MacAdam ≤ 3 SDCM \_\_\_\_\_

R<sub>g</sub>: 99 , R<sub>r</sub>: 92 , R<sub>t(1-15)</sub>: 90 \_\_\_\_\_

MR 0.81 \_\_\_\_\_

MDER 0.74 \_\_\_\_\_

## Optical

Clear Cover \_\_\_\_\_

opal (lambertsch) \_\_\_\_\_

PstLM ≤ 1.0 <sup>2</sup> \_\_\_\_\_

SVM ≤ 0.4 <sup>2</sup> \_\_\_\_\_

## Electrical

DALI-2 \_\_\_\_\_

220-240 V \_\_\_\_\_

system 27.9 W \_\_\_\_\_

system 114 lm/W<sup>3</sup> \_\_\_\_\_

PC1 \_\_\_\_\_

24 W/m \_\_\_\_\_

## Physical

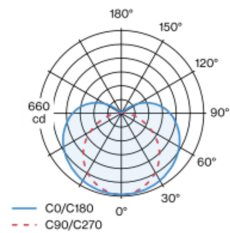
length 1210 mm \_\_\_\_\_

width 60 mm \_\_\_\_\_

height 60 mm \_\_\_\_\_

Carrier profile made of extruded aluminium profile; light-tight end caps in aluminium; converter integrated into luminaire housing; surface white 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 4000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 90; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; clear, cylindrical cover with linear prismatic optic; with gentle ceiling 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> 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



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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	24
C13	32
C16	40
C20	49

