

TUBO 60

surface

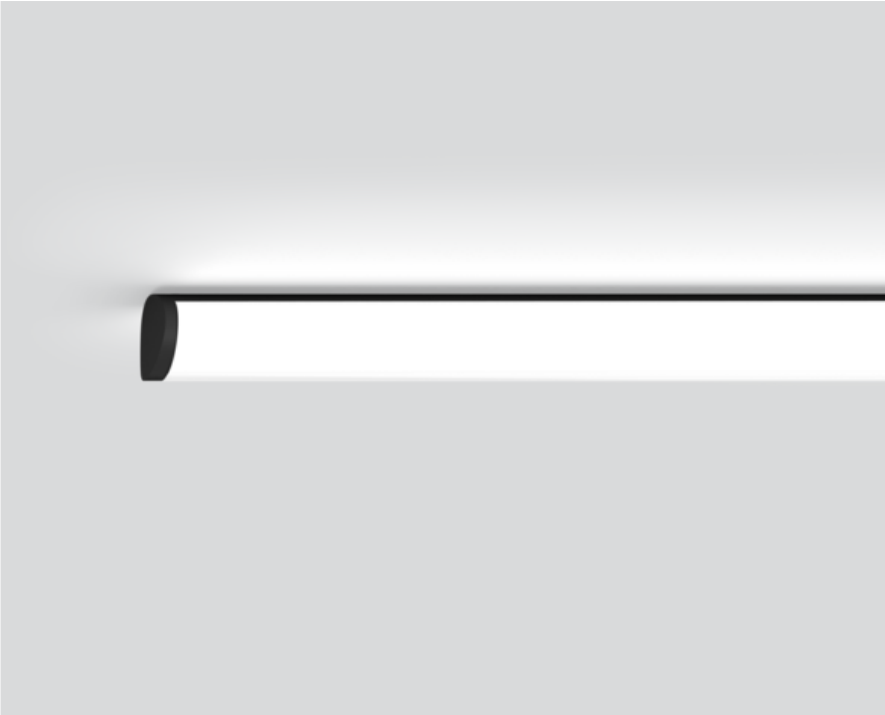
058-31121380



Project / Type

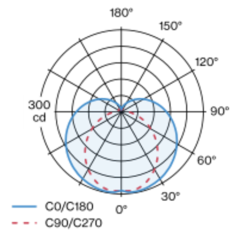
Notes

Count / Date



Carrier profile made of extruded aluminium profile; light-tight end caps in aluminium; converter integrated into luminaire housing; surface jet 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 4000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 90 ; 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; incl. DALI-2 converter; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

Light distribution



Product drawing



General

Ceiling / Wall | Surface

jet black | RAL 9005

IP20

1480 lm

2480 lm/m

LED

4000 K

CRI ≥ 90

L90 / 50000 h

initial MacAdam ≤ 3 SDCM

R_g: 99 | R_f: 92 | R_{i(1-15)}: 90

MR 0.81 | MDER 0.74

Optical

High Performance Opal | opal (lambertsch)

PstLM ≤ 1.0 ¹ | SVM ≤ 0.4 ¹

Electrical

DALI-2 | 1 DALI Addr.

PC1 | 220-240 V

system 13.9 W

system 106 lm/W ²

23 W/m

Physical

length 625 mm | width 60 mm | height 60 mm

0.9 kg

¹ Value of containing product at full load (undimmed)

² 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

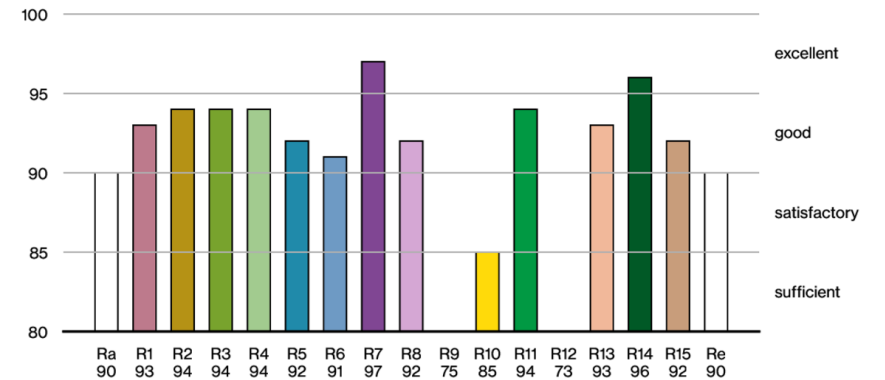
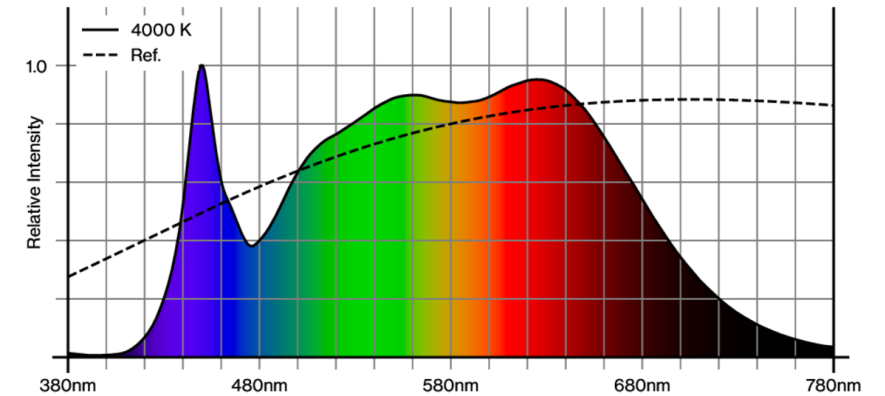
MF	LMF × RSMF × LLMF × LSF	RSMF ^a	Room Surface Maintenance Factor
MF	Maintenance Factor	LLMF	Lamp Lumens Maintenance Factor
LMF ^a	Luminaire Maintenance Factor	LSF	Lamp Survival Factor

^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	24
B16	30
B20	37
C10	31
C13	40
C16	51
C20	62

Colour rendering



TM30 colour vector graphic



The black line represents the black body reference. The red line indicates the results of the test light source. The deviation from the test light source to the reference is shown and is marked by arrows. The shorter the arrows, the higher the color rendering.

