

# SPIO 20 downlight

trim

048-1610417F 002-90783



Project / Type

Notes

Count / Date



### General

Ceiling | Recessed

rotation 360°

traffic white | RAL 9016

IP20

289 lm

fixture 44 lm/W <sup>1</sup>

### LED

2700 K

CRI ≥ 90

L85 / 50000 h

initial MacAdam ≤ 3 SDCM

R<sub>g</sub>: 104 | R<sub>f</sub>: 88 | R<sub>(f-15)</sub>: 89

MR 0.5 | MDER 0.46

### Optical

flood | beam angle 34°

UGR ≤ 10

PstLM ≤ 1.0 <sup>2</sup> | SVM ≤ 0.4 <sup>2</sup>

### Electrical

non DIM

PC2 | 220-240 V

system 8.7 W | fixture 6.5 W

12 Vf | 600 mA

### Physical

trim

diameter 35 mm | height 66 mm

0.18 kg

### Cutout

diameter 26 mm

min. ceiling thickness 2 mm | max. ceiling thickness 25 mm

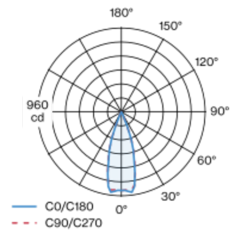
recessed depth 80 mm

<sup>1</sup> incl. consideration of optical losses & internal control unit losses

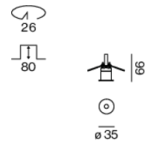
<sup>2</sup> Value of containing product at full load (undimmed)

Round recessed spotlight in aluminium; surface traffic white powder coated; with trim; suitable for ceiling thickness of 2-25 mm; installation without tools using snap spring closure; passive cooling of the LEDs through improved heat sink geometry; light colour 2700 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 90; min. 85% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; incl. high quality lens system; precise radiation characteristic with 34° beam; no multiple shadows; uncluttered ceiling look through recessed lighting level; reduced light-emitting surface (only ø 10 mm); degree of protection IP20; PC2; 220-240 V; incl. converter, non dimmable; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

### Light distribution



### Product drawing



### Installation instructions



### Lighting calculator



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## Maintenance Factors

Operating Time [h]	10 000	20 000	30 000	40 000	50 000
LLMF	1	1	0.99	0.97	0.96
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 Factor	

<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	31
B13	40
B16	50
B20	62
C10	52
C13	67
C16	85
C20	104

## Components

### POWER SUPPLY

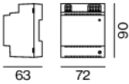
L·W·H (MM)	ARTICLE NUMBER(S)
147-44-22	002-90783



## Optional electrical accessories

### DIN RAIL POWER SUPPLY

L·W·H (MM)	ARTICLE NUMBER(S)
72-90-63	005-6520210



### DIN RAIL LED DRIVER

L·W·H (MM)	ARTICLE NUMBER(S)
36-88-59	005-6121030



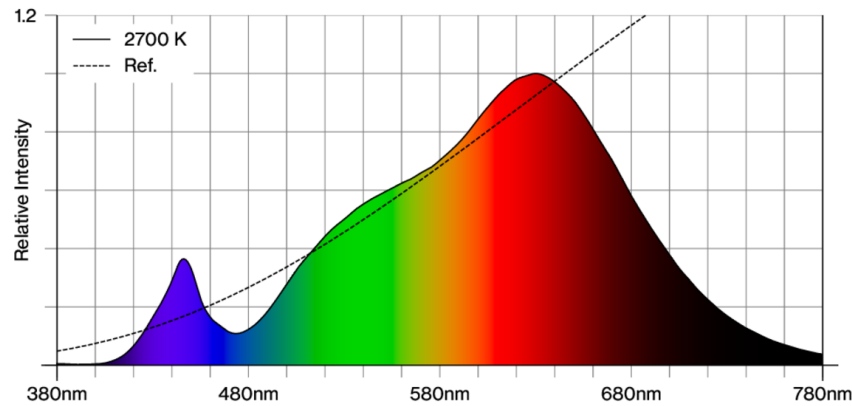


Project / Type

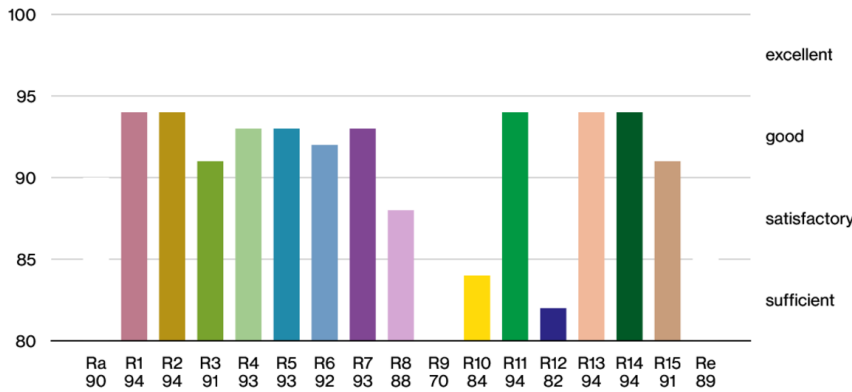
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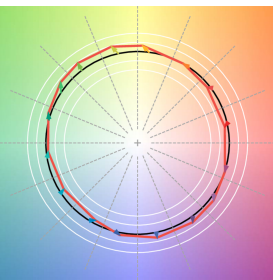
Colour rendering



CRI/R<sub>a</sub> ≥ 92 R<sub>e</sub> ≥ 89 (2700 K)



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.