

# SPIO 20 downlight

trim

048-1610517F 002-90783



Project / Type

Notes

Count / Date



### General

Ceiling , Recessed

rotation 360°

white , RAL 9016 <sup>1</sup>

IP20

296 lm

fixture 45 lm/W<sup>2</sup>

### LED

3000 K

CRI ≥ 90

L85 / 50000 h

initial MacAdam ≤ 3 SDCM

R<sub>g</sub>: 104 , R<sub>f</sub>: 91 , R<sub>f(1-5)</sub>: 92

MR 0.59

MDER 0.54

### Optical

flood

beam angle 34°

UGR ≤ 10

P<sub>stLM</sub> ≤ 1.0 <sup>3</sup>

SVM ≤ 0.4 <sup>3</sup>

### Electrical

non DIM

220-240 V

system 8.7 W

fixture 6.5 W

12 Vf

600 mA

PC2

### Physical

trim

diameter 35 mm

height 66 mm

### Cutout

diameter 26 mm

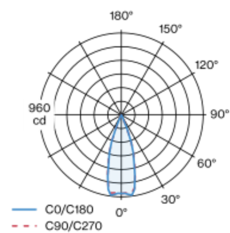
min. ceiling thickness 2 mm

max. ceiling thickness 25 mm

recessed depth 80 mm

Round recessed spotlight in aluminium; surface 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 3000 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



<sup>1</sup> RAL code  
<sup>2</sup> incl. consideration of optical losses & internal control unit losses  
<sup>3</sup> Value of containing product at full load (undimmed)

### 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 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	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

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



#### DIN RAIL LED DRIVER

TYPE	L-W-H (MM)	ARTICLE NUMBER(S)
DALI-2   200-1050 mA   2 x 42W	36-88-59	005-6121030

