

# VARO 110 S

track  
180-6530117W



Project / Type
Notes
Count / Date



## General

Ceiling , Track
tilt max 90°
rotation 355°
white , RAL 9016 <sup>1</sup>
IP20
3190 lm

## LED

4000 K
CRI ≥ 90
L85 / 50000 h
initial MacAdam ≤ 3 SDCM
R <sub>g</sub> : 100 , R <sub>f</sub> : 92 , R <sub>f(1-5)</sub> : 91
MR 0.78
MDER 0.71

## Optical

wide flood
beam angle 66°
PstLM ≤ 1.0 <sup>2</sup>
SVM ≤ 0.4 <sup>2</sup>

Track light made of die-cast aluminium; surface white powder coated; 355° rotatable and 90° tiltable; integrated converter in the plastic adapter; passive cooling of the LEDs through improved heat sink geometry; with COB (Chip on Board) technology for maximum efficiency; no appearance of multiple shadows; light colour 4000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 90; min. 85% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; including high quality aluminium reflector with spherical reflector; high gloss anodised; neutral colour reflection through absolute freedom from interference colour; for brilliant object staging; precise radiation characteristic with 66° beam; installed and exchanged without tools; optical attachments available as accessories; optical attachments can be combined; accessories are listed separately; degree of protection IP20; PC2; 220-240 V; incl. converter, non dimmable; adapter for toolless insertion or movement on a variety of 3-phase power tracks; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

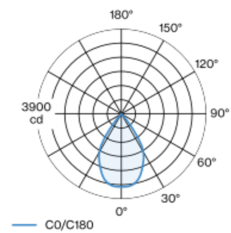
## Electrical

non DIM
220-240 V
system 23.4 W
system 136 lm/W <sup>3</sup>
PC2

## Physical

diameter 110 mm
height 110 mm

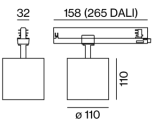
## Light distribution



wide flood 66°

h (m)	EO <sup>3</sup> (lx)	ø (m)
1	3340	1.30
2	840	2.60
3	370	3.89
4	210	5.19
5	130	6.49

## 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



## Lighting calculator



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## Maintenance Factors

Operating Time [h]	10 000	20 000	30 000	40 000	50 000
LLMF	0.975	0.944	0.913	0.883	0.854
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
B13	42
B16	53
B20	66
C13	71
C16	90
C20	110

## Optical accessories

### HONEYCOMB LOUVER

Ø (MM)	ARTICLE NUMBER(S)
106	080-6501118



### WIDE FLOOD LENS

Ø (MM)	ARTICLE NUMBER(S)
106	080-6502110W



### OVAL LENS

Ø (MM)	ARTICLE NUMBER(S)
106	080-6502210



### SNOOT

TYPE	Ø (MM)	ARTICLE NUMBER(S)
short	97	080-6503118
medium	97	080-6503218
angle	97	080-6503318

