

# VARO 110 S

180-6530018W



Project / Type

Notes

Count / Date



**General**

Ceiling , Track

tilt max 90°

rotation 355°

black , RAL9005 <sup>1</sup>

IP20

3140 lm

**LED**

3000 K

CRI ≥ 90

initial MacAdam ≤ 3 SDCM

R<sub>g</sub>: 99 , R<sub>f</sub>: 92 , R<sub>(1-15)</sub>: 93

MR 0.61

MDER 0.55

**Optical**

wide flood

beam angle 66°

PstLM ≤ 1.0 <sup>2</sup>

SVM ≤ 0.4 <sup>2</sup>

**Electrical**

non DIM

23.4 W

PC2 220-240V

134 lm/W

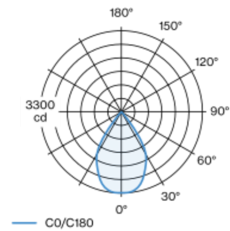
**Physical**

diameter 110 mm

height 110 mm

Track light made of die-cast aluminium; surface black 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 3000 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 220-240V; 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;

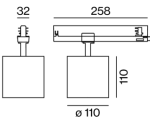
## Light distribution



wide flood 66°

h (m)	E0° (lx)	ø (m)
1	3290	1.30
2	820	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)

## 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

