

# VARO 110 S

track  
180-6531117S



Project / Type \_\_\_\_\_

Notes \_\_\_\_\_

Count / Date \_\_\_\_\_



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  $\leq 3$  SDCM; CRI  $\geq 90$ ; 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 14° 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;

**General**

Ceiling | Track \_\_\_\_\_

tilt max 90° \_\_\_\_\_

rotation 355° \_\_\_\_\_

white | RAL 9016 <sup>1</sup> \_\_\_\_\_

IP20 \_\_\_\_\_

4500 lm \_\_\_\_\_

**LED**

4000 K \_\_\_\_\_

CRI  $\geq 90$  \_\_\_\_\_

L85 / 50000 h \_\_\_\_\_

initial MacAdam  $\leq 3$  SDCM \_\_\_\_\_

R<sub>g</sub>: 100 | R<sub>f</sub>: 92 | R<sub>f(1-15)</sub>: 92 \_\_\_\_\_

MR 0.78 | MDER 0.71 \_\_\_\_\_

**Optical**

spot | beam angle 14° \_\_\_\_\_

**Electrical**

non DIM \_\_\_\_\_

PC2 | 220-240 V \_\_\_\_\_

system 36 W \_\_\_\_\_

system 125 lm/W <sup>2</sup> \_\_\_\_\_

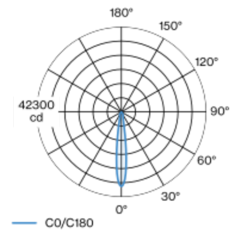
**Physical**

diameter 110 mm | height 110 mm \_\_\_\_\_

0.62 kg \_\_\_\_\_

<sup>1</sup> RAL code  
<sup>2</sup> incl. consideration of optical losses, internal control unit losses & operating device efficiency

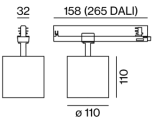
## Light distribution



spot 14°

h (m)	EO° (lx)	ø (m)
1	37100	0.25
2	9300	0.50
3	4100	0.75
4	2300	1.00
5	1500	1.25

## 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	0.977	0.95	0.923	0.897	0.872
LSF	1	1	1	1	1

MF

LMF × RSMF × LLMF × LSF

MF

Maintenance Factor

LMF<sup>a</sup>

Luminaire Maintenance Factor

RSMF<sup>a</sup>

Room Surface Maintenance Factor

LLMF

Lamp Lumens 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.

## Optical accessories

### HONEYCOMB LOUVER

Ø (MM)

106

ARTICLE NUMBER(S)

080-6501118



### WIDE FLOOD LENS

Ø (MM)

106

ARTICLE NUMBER(S)

080-6502110W



### OVAL LENS

Ø (MM)

106

ARTICLE NUMBER(S)

080-6502210



### SNOOT short

Ø (MM)

97

ARTICLE NUMBER(S)

080-6503118



### SNOOT medium

Ø (MM)

97

ARTICLE NUMBER(S)

080-6503218



### SNOOT angle

Ø (MM)

97

ARTICLE NUMBER(S)

080-6503318

