

# VARO 110 S

track  
180-6530037F



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

Notes \_\_\_\_\_

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



## General

Ceiling , Track \_\_\_\_\_

tilt max 90° \_\_\_\_\_

rotation 355° \_\_\_\_\_

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

IP20 \_\_\_\_\_

3200 lm \_\_\_\_\_

## LED

3000 K \_\_\_\_\_

CRI ≥ 90 \_\_\_\_\_

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

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

flood \_\_\_\_\_

beam angle 40° \_\_\_\_\_

## Electrical

DALI-2 \_\_\_\_\_

220-240 V \_\_\_\_\_

system 23.4 W \_\_\_\_\_

system 137 lm/W<sup>2</sup> \_\_\_\_\_

PC2 \_\_\_\_\_

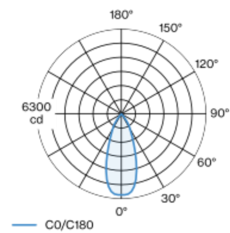
## Physical

diameter 110 mm \_\_\_\_\_

height 110 mm \_\_\_\_\_

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 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 40° 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. DALI-2 converter; 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;

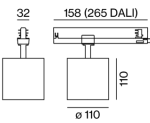
## Light distribution



flood 40°

h (m)	EO <sup>2</sup> (lx)	ø (m)
1	6010	0.73
2	1500	1.46
3	670	2.18
4	380	2.91
5	240	3.64

## Product drawing



<sup>1</sup> RAL code  
<sup>2</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

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 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.

## 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

