

# VARO 110 S

track

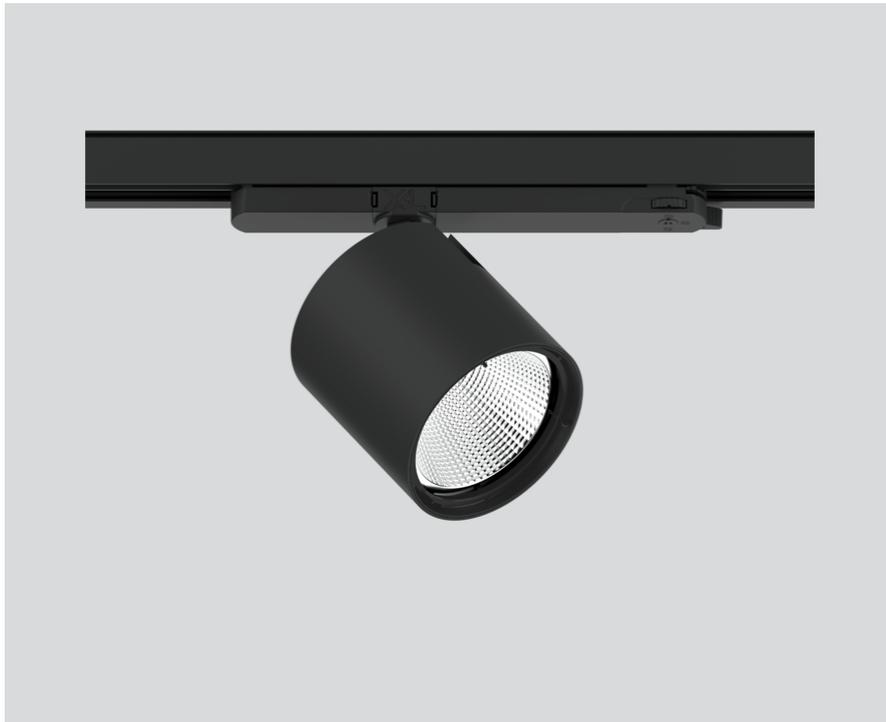
180-6531138S



Project / Type

Notes

Count / Date



## General

Ceiling | Track

tilt max 90°

rotation 355°

black | RAL 9005 <sup>1</sup>

IP20

4500 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(1-15)</sub>: 92

MR 0.78 | MDER 0.71

## Optical

spot | beam angle 14°

## Electrical

DALI-2

PC2 | 220-240 V

system 36 W

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

## Physical

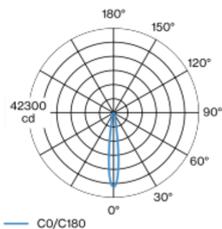
diameter 110 mm | height 110 mm

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 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 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. 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;

<sup>1</sup> RAL code

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

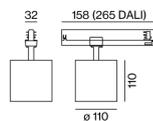
## Light distribution



spot 14°

h (m)	E0° (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 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 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

