

# VARO 110 S

track

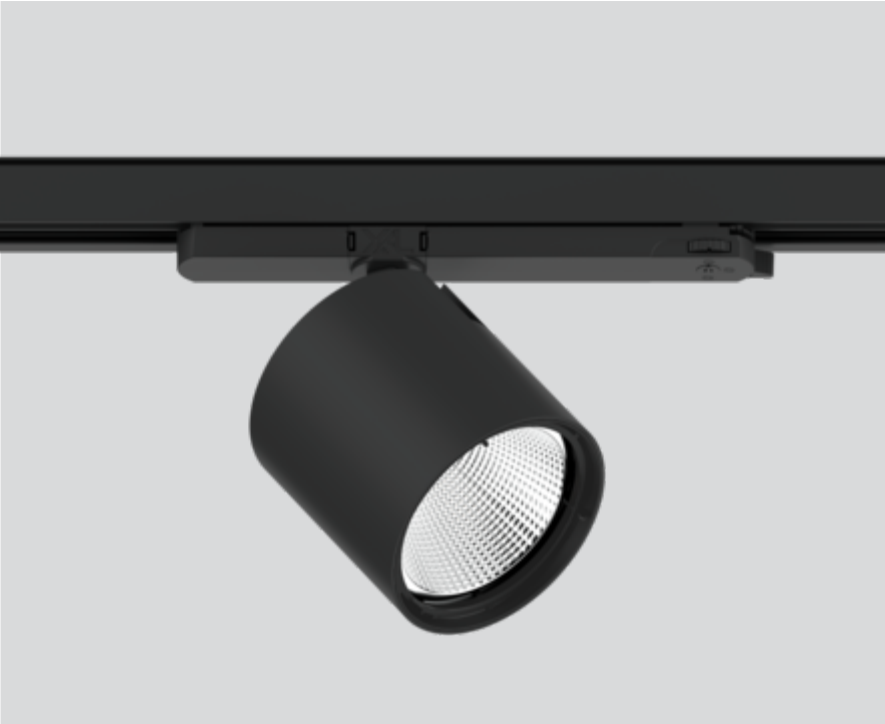
180-6530138W



Project / Type

Notes

Count / Date



## General

Ceiling , Track

tilt max 90°

rotation 355°

black , RAL 9005 <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 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 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. 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;

## Electrical

DALI-2

220-240 V

system 23.4 W

system 136 lm/W<sup>3</sup>

PC2

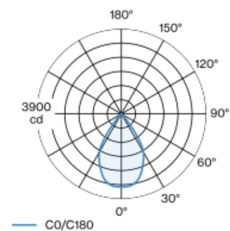
1 DALI Addr.

## Physical

diameter 110 mm

height 110 mm

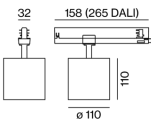
## Light distribution



wide flood 66°

h (m)	E0° (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> 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 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.

### 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

