

# VARO 110 S

180-6530138M



Project / Type

Notes

Count / Date



## General

Ceiling , Track

tilt max 90°

rotation 355°

black , RAL9005 <sup>1</sup>

IP20

3200 lm

## LED

4000 K

CRI ≥ 90

initial MacAdam ≤ 3 SDCM

R<sub>g</sub>: 100 , R<sub>r</sub>: 92 , R<sub>(1-15)</sub>: 91

MR 0.78

MDER 0.71

## Optical

medium

beam angle 25°

## Electrical

DALI-2

23.4 W

PC2 220-240V

137 lm/W

## Physical

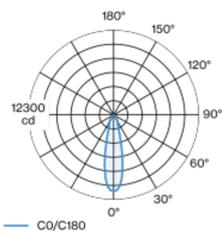
diameter 110 mm

height 110 mm

<sup>1</sup> RAL code

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 25° 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. 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;

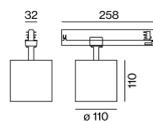
## Light distribution



medium 25°

h (m)	E0° (lx)	ø (m)
1	11100	0.45
2	2800	0.90
3	1200	1.35
4	700	1.81
5	400	2.26

## 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	0.975	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.

## 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

