

# VARO 110

track  
080-6120618F



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

Notes \_\_\_\_\_

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



## General

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

tilt max 90° \_\_\_\_\_

rotation 355° \_\_\_\_\_

black , RAL 9005 <sup>1</sup> \_\_\_\_\_

IP20 \_\_\_\_\_

4050 lm \_\_\_\_\_

## LED

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

CRI ≥ 90 \_\_\_\_\_

L80 / 50000 h \_\_\_\_\_

initial MacAdam ≤ 3 SDCM \_\_\_\_\_

R<sub>g</sub>: 97 , R<sub>f</sub>: 90 , R<sub>(1-15)</sub>: 89 \_\_\_\_\_

MR 0.81 \_\_\_\_\_

MDER 0.74 \_\_\_\_\_

## Optical

flood \_\_\_\_\_

beam angle 33° \_\_\_\_\_

PstLM ≤ 1.0<sup>2 3</sup> \_\_\_\_\_

SVM ≤ 0.4<sup>2 3</sup> \_\_\_\_\_

Track light made of die-cast aluminium; surface black powder coated; 355° rotatable and 90° tiltable; converter integrated into spotlight head; 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. 80% 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 33° beam; installed and exchanged without tools; optical attachment available as accessory; accessories are listed separately; degree of protection IP20; PC1; 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;

## Electrical

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

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

system 42 W \_\_\_\_\_

system 96 lm/W<sup>4</sup> \_\_\_\_\_

PC1 \_\_\_\_\_

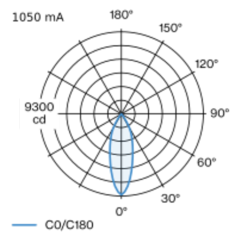
## Physical

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

height 185 mm \_\_\_\_\_

1 kg \_\_\_\_\_

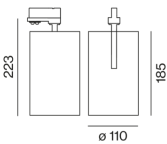
## Light distribution



flood 33° 1050 mA

h (m)	E0° (lx)	ø (m)
1	9170	0.59
2	2290	1.18
3	1020	1.77
4	570	2.37
5	370	2.96

## Product drawing



<sup>1</sup> RAL code <sup>2</sup> 1050 mA

<sup>3</sup> Value of containing product at full load (undimmed)  
<sup>4</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	0.96	0.92	0.88	0.85	0.81
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.

## Circuit Breaker Types

Automatic Circuit Breaker Type	Number of Fixtures
B10	11
B13	15
B16	19
B20	23
C10	19
C13	25
C16	32
C20	39

## Optical accessories

### SNOOT WITH HONEYCOMB LOUVER

Ø (MM)	ARTICLE NUMBER(S)
106	006-93130

