

# VARO 110 S

track

180-6531218S



|                |
|----------------|
| Project / Type |
| Notes          |
| Count / Date   |



## General

|                               |
|-------------------------------|
| Ceiling , Track               |
| tilt max 90°                  |
| rotation 355°                 |
| black , RAL 9005 <sup>1</sup> |
| IP20                          |
| 4500 lm                       |

## LED

|  |
|--|
| 3500 K   |
| CRI ≥ 90   |
| L85 / 50000 h  |
| initial MacAdam ≤ 3 SDCM   |
| R <sub>g</sub> : 97 , R <sub>f</sub> : 90 , R <sub>(1-15)</sub> : 93 |
| MR 0.73  |
| MDER 0.66  |

## Optical

|                |
|----------------|
| spot           |
| beam angle 14° |

## Electrical

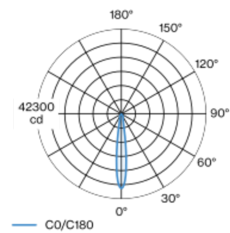
|                              |
|------------------------------|
| non DIM                      |
| 220-240 V                    |
| system 36 W                  |
| system 125 lm/W <sup>2</sup> |
| PC2                          |

## 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 3500 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. 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;

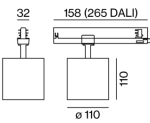
## Light distribution



spot 14°

| h (m) | EO° (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



<sup>1</sup> RAL code  
<sup>2</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               | 0.977  | 0.95   | 0.923  | 0.897  | 0.872  |
| 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 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) | 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       |

