

VARO 110 S

track

180-6530118S



Project / Type

Notes

Count / Date



General

Ceiling , Track

tilt max 90°

rotation 355°

black , RAL 9005 ¹

IP20

3220 lm

LED

4000 K

CRI ≥ 90

L85 / 50000 h

initial MacAdam ≤ 3 SDCM

R_g: 100 , R_f: 92 , R_{f(-15)}: 91

MR 0.78

MDER 0.71

Optical

spot

beam angle 14°

Electrical

non DIM

220-240 V

system 23.4 W

system 138 lm/W²

PC2

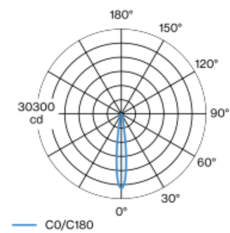
Physical

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 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. 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;

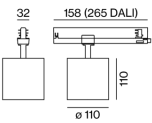
Light distribution



spot 14°

| h (m) | EO° (lx) | ø (m) |
|-------|----------|-------|
| 1 | 26500 | 0.25 |
| 2 | 6600 | 0.50 |
| 3 | 2900 | 0.75 |
| 4 | 1700 | 1.00 |
| 5 | 1100 | 1.25 |

Product drawing



¹ RAL code

² 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 | 0.975 | 0.944 | 0.913 | 0.883 | 0.854 |
| LSF | 1 | 1 | 1 | 1 | 1 |

| | | | |
|------------------|------------------------------|-------------------|---------------------------------|
| MF | LMF × RSMF × LLMF × LSF | RSMF ^a | Room Surface Maintenance Factor |
| MF | Maintenance Factor | LLMF | Lamp Lumens Maintenance Factor |
| LMF ^a | Luminaire Maintenance Factor | LSF | Lamp Survival Faktor |

^a 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 |

