

# TULA micro suspended

canopy surface

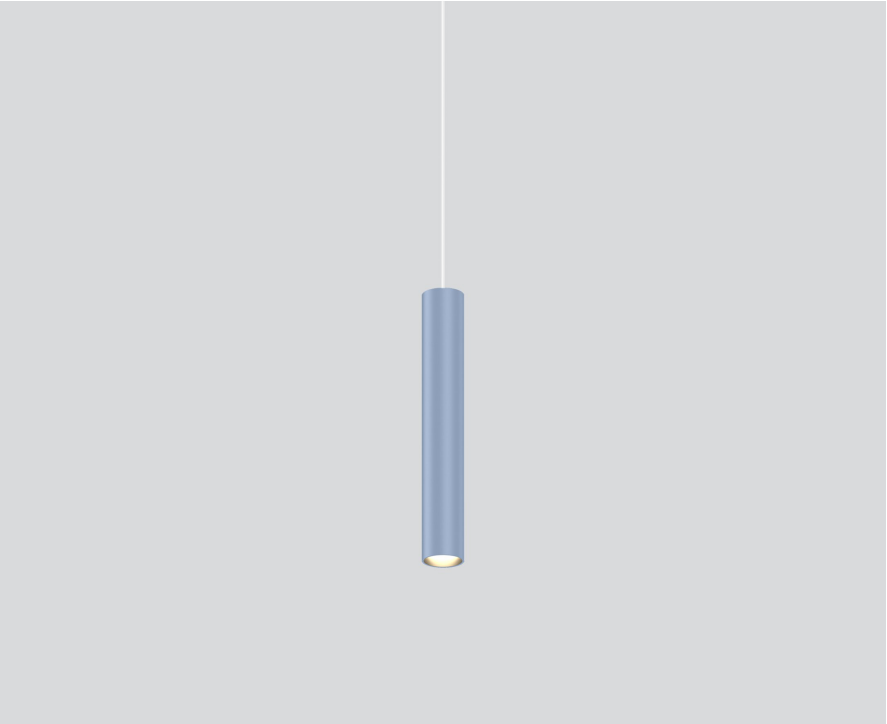
049-551541XM 005-2602117



Project / Type

Notes

Count / Date



Decorative suspended luminaire in aluminium; surface special colours powder coated; pendant fitting with 1500mm suspension; incl. feed (white), can be individually shortened; 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 2700 K; binning initial MacAdam  $\leq 3$  SDCM; CRI  $\geq 90$ ; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; good glare control through recessed light point level; incl. high quality lens system; precise radiation characteristic with 25° beam; degree of protection IP20; PC2; 220-240 V; light source not replaceable; control gear replaceable by an authorized professional;



## General

Ceiling | Suspended

special colours

Canopy traffic white

IP20

648 lm

## LED

2700 K

CRI  $\geq 90$

L90 / 50000 h

initial MacAdam  $\leq 3$  SDCM

R<sub>g</sub>: 99 | R<sub>f</sub>: 91 | R<sub>f(-15)</sub>: 89

MR 0.54 | MDER 0.49

## Optical

medium | beam angle 25°

## Electrical

non DIM

PC2 | 220-240 V

system 11.3 W | fixture 8.4 W

fixture 77 lm/W <sup>1</sup>

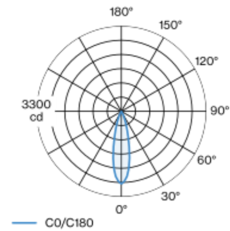
18 Vf | 500 mA

## Physical

diameter 47 mm | height 300 mm

0.54 kg

## Light distribution



medium 25°

| h (m) | E0° (lx) | ø (m) |
|-------|----------|-------|
| 1     | 2800     | 0.44  |
| 2     | 700      | 0.89  |
| 3     | 310      | 1.33  |
| 4     | 180      | 1.78  |
| 5     | 110      | 2.22  |

## Product drawing



<sup>1</sup> incl. consideration of optical losses & internal control unit losses

## Installation instructions



## Lighting calculator



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## Maintenance Factors

| Operating Time [h] | 10 000 | 20 000 | 30 000 | 40 000 | 50 000 |
|--------------------|--------|--------|--------|--------|--------|
| LLMF               | 0.97   | 0.96   | 0.94   | 0.93   | 0.92   |
| 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.

## Components

### CANOPY for cable suspension

|               |        |                   |
|---------------|--------|-------------------|
| COLOUR        | Ø (MM) | ARTICLE NUMBER(S) |
| traffic white | 115    | 005-2602117       |



## Mounting accessories

### SPECIAL MOUNTING TOOL

|   |        |                   |
|---|--------|-------------------|
| TYPE  | Ø (MM) | ARTICLE NUMBER(S) |
| for ARY   MOVE IN 45   NOBA trimless   TULA | 100    | 063-8912110       |



### RING ceiling mounted

|               |        |                   |
|---------------|--------|-------------------|
| COLOUR        | Ø (MM) | ARTICLE NUMBER(S) |
| traffic white | 50     | 050-0510217       |
| jet black     | 50     | 050-0510218       |



### HOOK ceiling mounted

|               |        |                   |
|---------------|--------|-------------------|
| COLOUR        | Ø (MM) | ARTICLE NUMBER(S) |
| traffic white | 18     | 050-0510317       |
| jet black     | 18     | 050-0510318       |



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## Optional electrical accessories

### DIN RAIL POWER SUPPLY

|            |                   |
|------------|-------------------|
| L-W-H (MM) | ARTICLE NUMBER(S) |
| 72-90-63   | 005-6520210       |



### DIN RAIL LED DRIVER

|            |                   |
|------------|-------------------|
| L-W-H (MM) | ARTICLE NUMBER(S) |
| 36-88-59   | 005-6121030       |



## Optical accessories

### OVAL LENS

|                                     |        |                   |
|-------------------------------------|--------|-------------------|
| TYPE                                | Ø (MM) | ARTICLE NUMBER(S) |
| for BO 45   MOVE IN 45   TULA micro | 42     | 007-1965880       |



### SOFT LENS

|   |        |                   |
|---|--------|-------------------|
| TYPE                                      | Ø (MM) | ARTICLE NUMBER(S) |
| for ARY   BO 45   MOVE IN 45   TULA micro | 42     | 007-1965980       |



### WALLWASHER LENS

|   |        |                   |
|---|--------|-------------------|
| TYPE                                      | Ø (MM) | ARTICLE NUMBER(S) |
| for ARY   BO 45   MOVE IN 45   TULA micro | 42     | 007-1965780       |



### HONEYCOMB LOUVER

|   |           |        |                   |
|---|-----------|--------|-------------------|
| TYPE  | COLOUR    | Ø (MM) | ARTICLE NUMBER(S) |
| for BO 45   JUST 45   MOVE IN 45   TARO 45   TULA micro | jet black | 42     | 007-1965188       |



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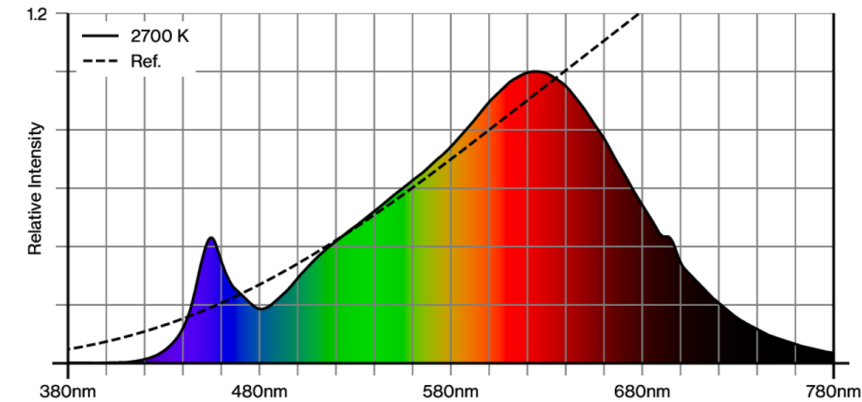


Project / Type

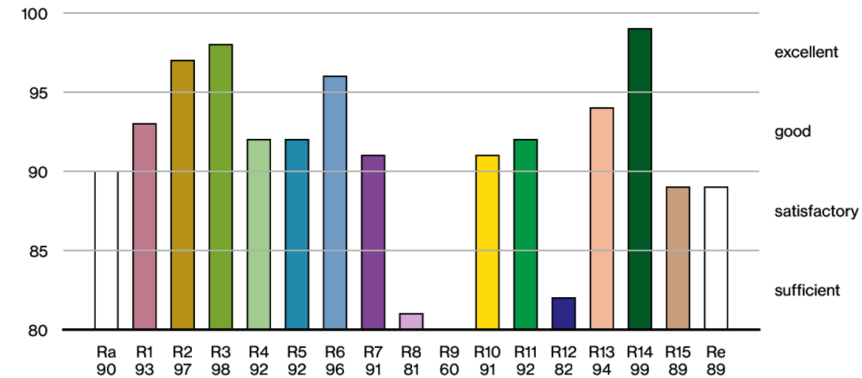
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## Colour rendering



CRI/R<sub>a</sub> ≥ 92 R<sub>e</sub> ≥ 89 (2700 K)



## TM30 colour vector graphic



The black line represents the black body reference. The red line indicates the results of the test light source. The deviation from the test light source to the reference is shown and is marked by arrows. The shorter the arrows, the higher the color rendering.