

# TULA micro suspended

canopy trimless

049-5515414M 005-3511017 002-90732



Project / Type

Notes

Count / Date



Decorative suspended luminaire in aluminium; surface polished chrome; pendant fitting with 1500mm suspension; incl. feed (black), 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; canopy for trimless installation in plasterboard ceilings; suitable for ceiling thickness of 9-25 mm; special mounting tool for easy installation of the trimless housing available as an accessory; accessories are listed separately; incl. converter, non dimmable; external converter for ceiling insertion; light source not replaceable; control gear replaceable by an authorized professional;

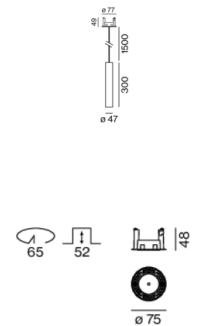
## Light distribution



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



## General

Ceiling | Suspended

chrome

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(1-15)</sub>: 89

MR 0.54 | MDER 0.49

## Optical

medium | beam angle 25°

PstLM  $\leq 1.0$ <sup>1 2 3 4</sup> | SVM  $\leq 0.4$ <sup>1 2 3 4</sup>

## Electrical

non DIM

PC2 | 220-240 V

system 11.3 W | fixture 8.4 W

fixture 77 lm/W<sup>5</sup>

18 Vf | 500 mA

## Physical

diameter 47 mm | height 300 mm

0.83 kg

## Cutout

diameter 65 mm

min. ceiling thickness 9 mm | max. ceiling thickness 25 mm

recessed depth 70 mm

<sup>1</sup> soft lens BO 45 007-1965980 <sup>2</sup> oval lens BO 45 007-1965880  
<sup>3</sup> wallwasher lens BO 45 007-1965780  
<sup>4</sup> Value of containing product at full load (undimmed)  
<sup>5</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.

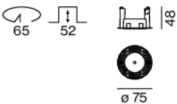
## Circuit Breaker Types

Automatic Circuit Breaker Type	Number of Fixtures
B10	57
B13	75
B16	92
B20	115
C10	57
C13	75
C16	92
C20	115

## Components

### MOUNTING SET trimless

TYPE	COLOUR	Ø (MM)	ARTICLE NUMBER(S)
for installation in plasterboard ceilings	traffic white	75	005-3511017



### POWER SUPPLY

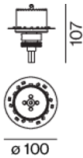
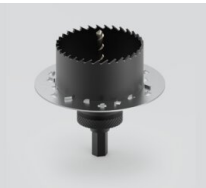
L-W-H (MM)	ARTICLE NUMBER(S)
65-39-20	002-90732



## 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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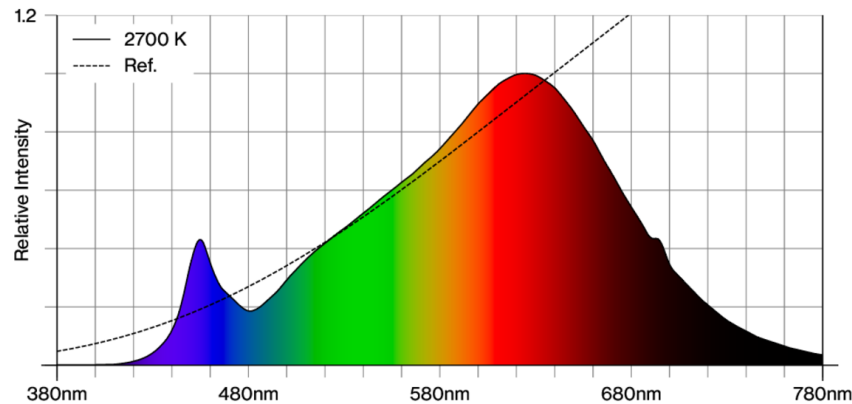


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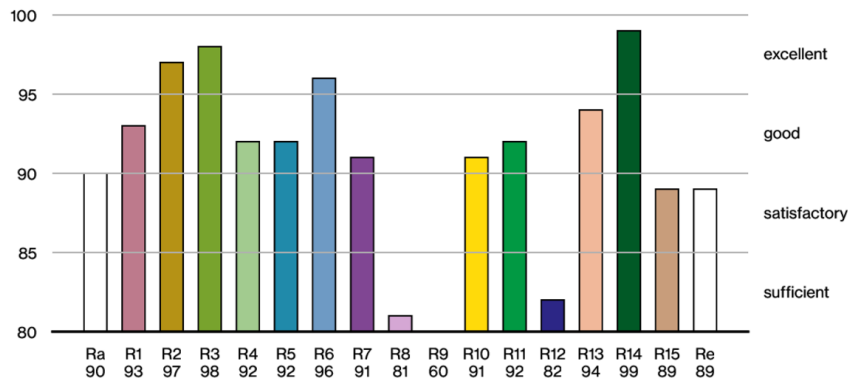
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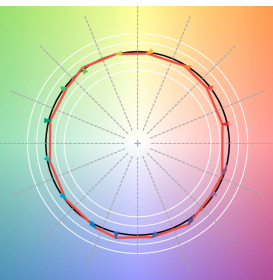
## Colour rendering



## 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.