

# UNICO L4 basic high efficient

ceiling

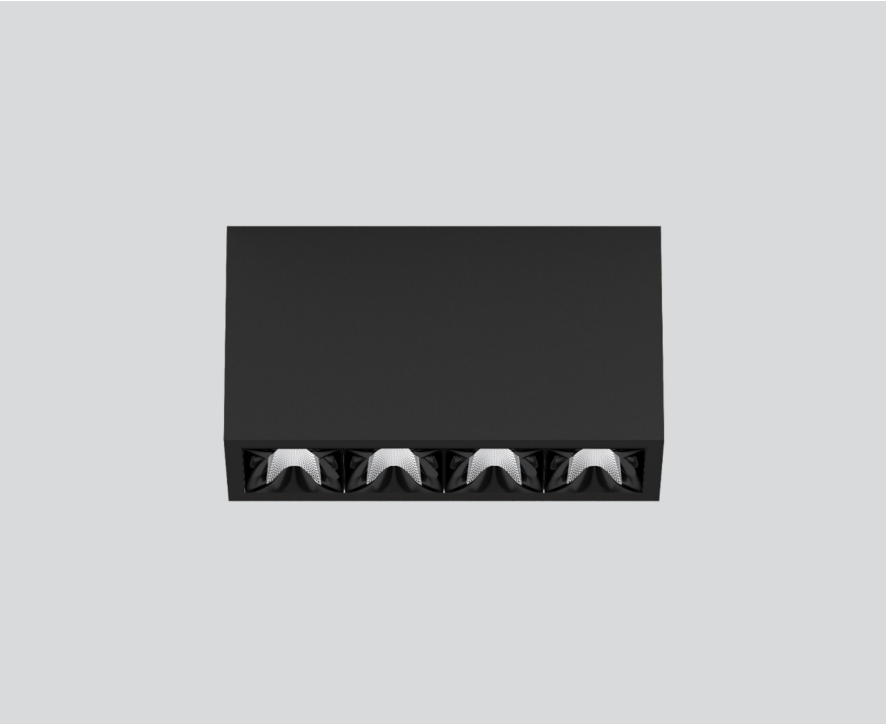
090-1L413CBB11



Project / Type

Notes

Count / Date



Rectangular surface mounted multi-downlight made of aluminium; luminaire housing can be attached to mounting plate without tools by interlock; converter integrated into luminaire housing; surface jet black powder coated; equipped with four flood round light elements; symmetrical light distribution with precise radiation characteristic, beam angle 46°; high quality reflector with micro-faceted, aluminum-vaporised surface; Reflector black; UGR ≤ 19; passive cooling of the LEDs through improved heat sink geometry; light colour 4000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 90; min. 85% of luminous flux after 50000 operating hours; energy-efficient high power LEDs with very good colour rendering; degree of protection IP20; PC1; 220-240 V; incl. DALI-2 converter; light source not replaceable; control gear replaceable by an authorized professional; clank-free;



### General

Ceiling | Surface

jet black | RAL 9005

Reflector black

IP20

1900 lm

### LED

4000 K

CRI ≥ 90

L85 / 50000 h

initial MacAdam ≤ 3 SDCM

R<sub>g</sub>: 99 | R<sub>f</sub>: 92 | R<sub>t(1-15)</sub>: 90

MR 0.81 | MDER 0.74

### Optical

flood round | beam angle 46°

UGR ≤ 19

PstLM ≤ 1.0 <sup>1</sup> | SVM ≤ 0.4 <sup>1</sup>

### Electrical

DALI-2 | 1 DALI Addr.

PC1 | 220-240 V

system 15.3 W

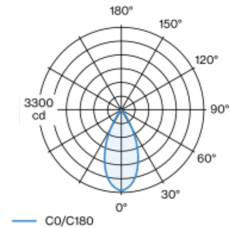
system 124 lm/W <sup>2</sup>

### Physical

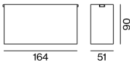
length 164 mm | width 51 mm | height 90 mm

0.55 kg

### Light distribution



### Product drawing



<sup>1</sup> Value of containing product at full load (undimmed)  
<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	0.982	0.954	0.926	0.899	0.873
LSF	1	1	1	1	1

MF

LMF

LMF<sup>a</sup>

LMF × RSMF × LLMF × LSF

Maintenance Factor

Luminaire Maintenance Factor

RSMF<sup>a</sup>

LLMF

LSF

Room Surface Maintenance Factor

Lamp Lumens Maintenance Factor

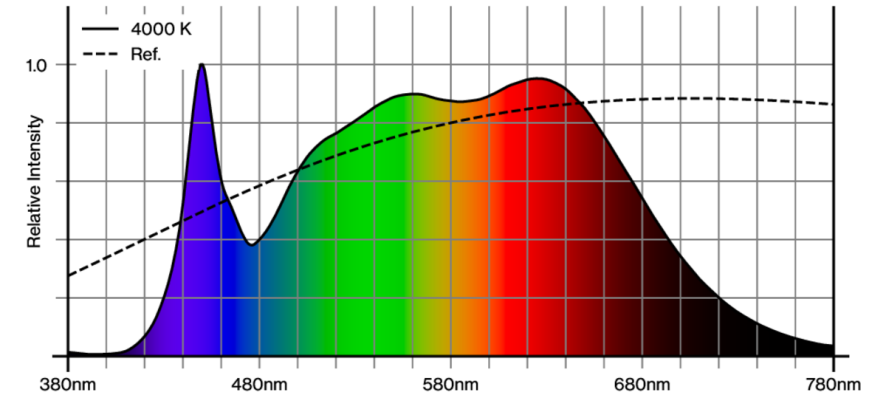
Lamp Survival Factor

<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.

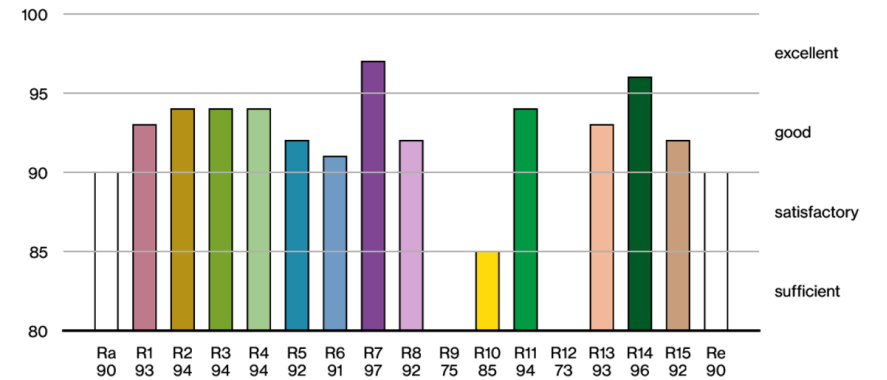
## Circuit Breaker Types

Automatic Circuit Breaker Type	Number of Fixtures
B10	72
B16	115
C10	106
C16	170

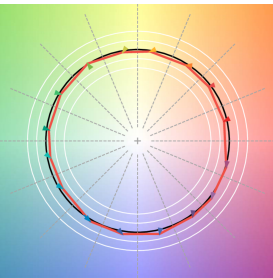
## Colour rendering



CRI/R<sub>a</sub> ≥ 93 R<sub>e</sub> ≥ 90 (4000 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.

