

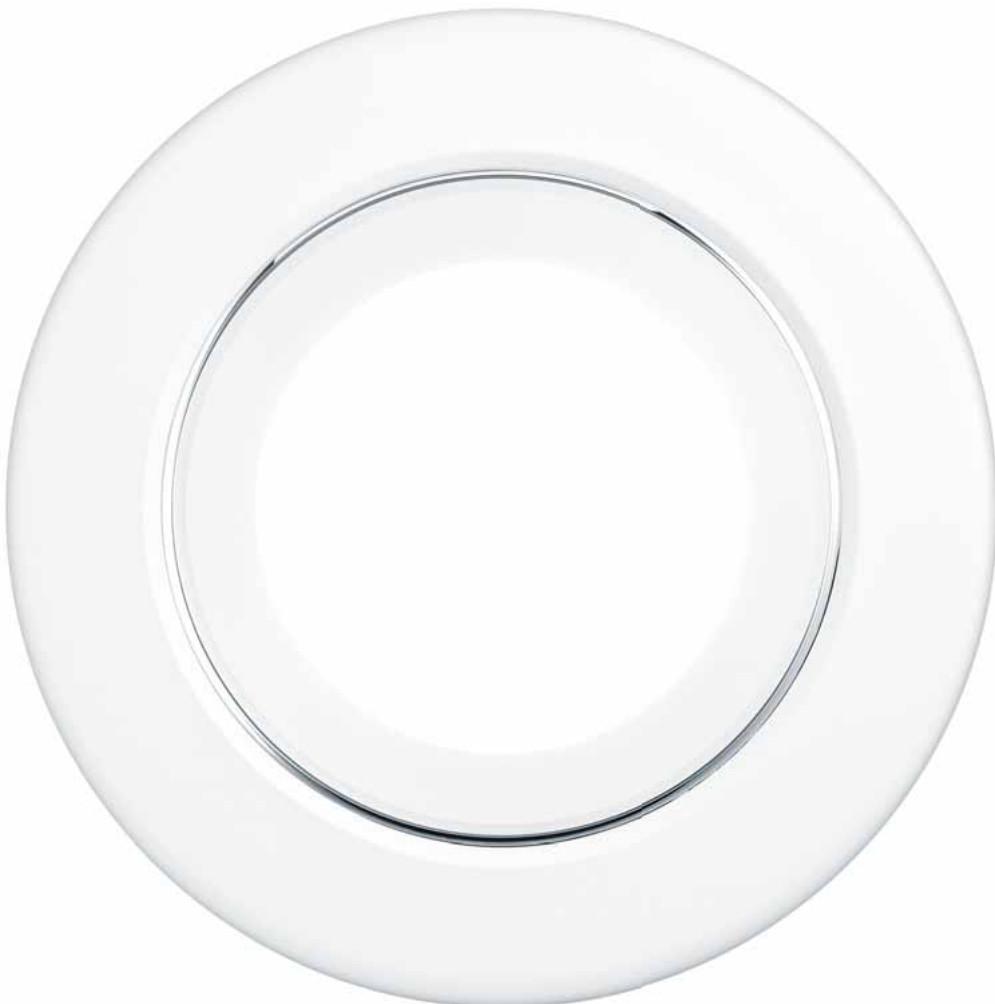


ZUMTOBEL

CREDOS

LED downlight

Compact, simple,
economically efficient.



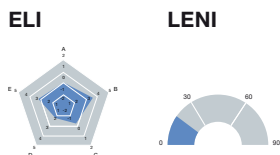
CREDOS

Simply efficient

The compact LED downlight combines efficiency and functionality with an attractive look. By using latest-generation LEDs, CREDOS achieves the same levels of performance as downlights fitted with compact fluorescent lamps up to 2/26 W – but consumes minimal energy.

With dimmable lumen packages of 650, 1000 and 2000 lumens, CREDOS provides pleasant and uniform general lighting in public buildings, offices, hotels and wellness areas, as well as in shops and department stores. In closed ceilings, the downlight offers IP44 protection and can therefore also be used in areas with extra protection requirements.

Another plus point: CREDOS has a service life of 50,000 hours with a decline in luminous flux of no more than 30 % and is therefore also specially recommended for areas where there are very extended operating hours.



ELI: At the Swiss Ornithological Institute (Sempach), the CREDOS LED downlight gives a particularly impressive demonstration of how it is capable of meeting the functional requirements placed on lighting in general and circulation areas, despite consuming so little energy. With its uncluttered looks, the downlight blends unobtrusively into the architecture. As a dimmable luminaire, CREDOS also makes it possible to adjust the lighting intensity individually and flexibly to suit a particular time of day or function.

LENI: energy consumption: 18.12 kWh/m²a

Swiss Ornithological Institute, Sempach / CH
Architecture: W.+R. Leuenberger Architekten, Sursee / CH
Lighting solution: CREDOS LED downlight





CREDOS

Advanced LED technology



CREDOS E 150
Layout of LEDs

1 CREDOS E150 LED 650 lm

Power consumption

9.5 W LED

Luminous flux/luminaire efficiency

650 lm | 68 lm/W

Output level

1/18 W compact fluorescent lamps
1/50 W halogen incandescent lamps

2 CREDOS E150 LED 1000 lm

Power consumption

14 W LED

Luminous flux/luminaire efficiency

1000 lm | 71 lm/W

Output level

1/26 W compact fluorescent lamps
1/75 W halogen incandescent lamps

3 CREDOS E150 LED 2000 lm

Power consumption

26 W LED

Luminous flux/luminaire efficiency

2000 lm | 76 lm/W

Output level

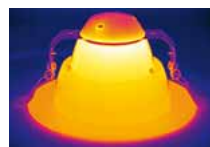
2/26 W compact fluorescent lamps

Premium This downlight features CREE TrueWhite technology and impressive performance with excellent lighting quality and extremely good colour rendering (Ra 90). A diffuser panel ensures uniform colour mixing and light distribution. CREDOS is available in colour temperatures of 3000 K and 4000 K, depending on the desired room ambience.

Efficient With a luminaire efficiency of up to 76 lumens per watt, CREDOS is significantly more efficient than conventional downlights fitted with fluorescent lamps or tungsten-halogen lamps.

Dimmable The brightness of every CREDOS downlight can be adjusted by using standard phase or reverse-phase dimmers.

Durable With its service life of 50,000 hours at 70 % luminous flux, the CREDOS downlight can be considered maintenance free – it is also covered by Zumtobel's 5 year guarantee. This durability is based on an innovative aluminium housing with a design that combines passive thermal management with compact dimensions.



CREDOS | Thermal infrared image



CREDOS E 150
Aluminium coloured reflector insert, matt finish



CREDOS E 150 with surface-mounted housing
Highly specular aluminium-sputtered reflector insert

Ceiling mounting CREDOS is supplied as a fully assembled, pre-cabled luminaire with a recessed gear box for direct connection to the mains supply. A spring catch mechanism on the housing fixes the downlight in the ceiling – simply and securely. Thanks to the compact luminaire housing, the diameter of the ceiling cut-out can vary from 150 to 175 mm, making the LED downlight very flexible in the case of refurbishment projects, too.

Surface-mounting The surface-mounted luminaire is the perfect solution in all areas where recess into the ceiling is either impossible or undesired. All CREDOS standard luminaires can easily be fitted into the housing available as an accessory for mounting on the ceiling.

Reflector inserts With two different reflector inserts, CREDOS also satisfies exacting glare-control requirements. The reflectors are installed quickly without the use of any tools by clicking them into the luminaire.



CREDOS

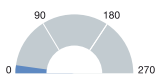
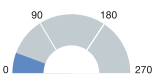
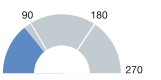
High economic efficiency



Simply efficient The payback period for investing in CREDOS luminaires is very short: these LED downlights consume little energy and relieve operators of the expensive task of performing maintenance, so the system pays for itself within no more than 3 years.

Design example | Entrance area and corridor

Room size: 15 x 2 m
 Room height: 3.0 m
 Maintenance factor: 0.67
 Task level: 0.2 m

	CREDOS E150 1/14 W LED 230 V	Downlight 1/26 W TC-DEL EVG	Downlight 1/75 W QT12 ETR
Number of luminaires	8	8	8
Mean illuminance	111 lx	110 lx	116 lx
Uniformity	0.58	0.69	0.38
Installed load individual luminaire	14.0 W	28.5 W	75.0 W
Total installed load	112.0 W	228.0 W	600.0 W
Annual energy costs*	89.64 €	182.58 €	480.60 €
	 LENI LED = 14.94 kWh/m ² a	 LENI TC = 30.43 kWh/m ² a	 LENI QT = 80.10 kWh/m ² a

* Calculations are based on an electricity price of 0.20 €/kWh and uninterrupted operation 24 hours a day, 365 days a year
There is considerable scope for potential savings in this area too, because no maintenance costs are incurred.

Human Aspects + Energy Efficiency = Humanergy Balance

CREDOS combines lighting quality and energy efficiency with appealing looks – compact, simple and economically efficient.

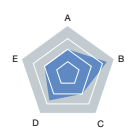
CREDOS | human aspects

- Uniform, wide-area lighting
- Compact, attractive appearance
- Very good colour rendering (Ra 90)

CREDOS | energy efficiency

- High luminaire efficiency up to 71 lm per W
- Dimmable
- Long service life: 50,000 hours at 70 % luminous flux

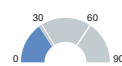
ELI Ergonomic Lighting Indicator



The lighting quality indicator assesses the ergonomic aspect of lighting based upon five criteria:

- A: visual performance
- B: vista
- C: visual comfort
- D: vitality
- E: empowerment

LENI Lighting Energy Numeric Indicator



The energy efficiency indicator specifies energy consumption in kWh per annum and square metre, based upon the EN 15193 standard.



- Compact LED ceiling-recessed luminaire providing a symmetric, wide-beam light distribution
- Aluminium and sheet-steel luminaire housing
- White trim
- Passive thermal management achieved by optimum design of luminaire housing
- With white reflector (glare control: UGR < 26)
- Polycarbonate reflector inserts for improved glare control in matt aluminium-look finish, or highly reflective aluminium-sputtered coating available as an optional accessory; please order separately
- Reflector insert can be fitted easily and without tools using click-fit mechanism
- Service life: 50,000 h at 70 % luminous flux
- Colour temperature: 3000 K (LED930: warm white) or 4000 K (LED940: neutral white)

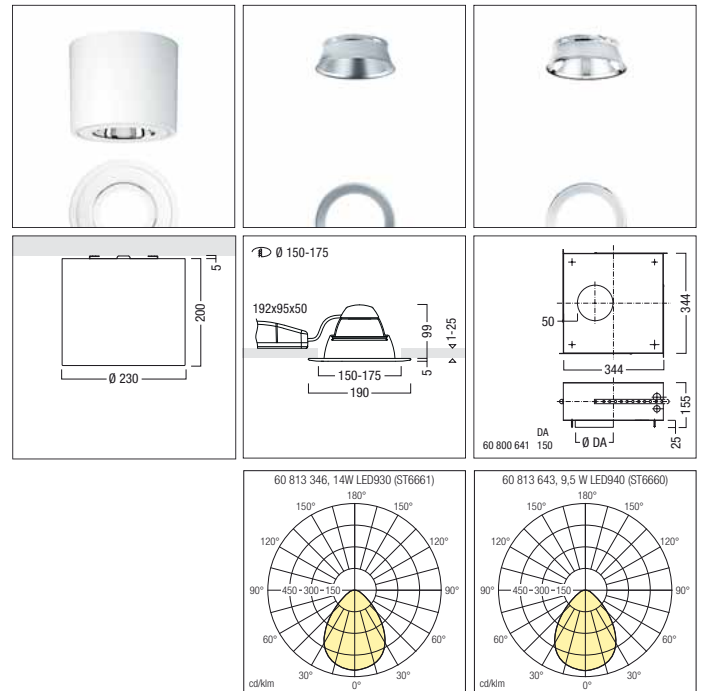
- Luminaire efficiency: up to 76 lm/W (depends on luminaire type)
- Luminaire luminous flux: 650 lm (9,5 W), 1000 lm (14 W), 2000 lm (26 W)
- Colour rendering index: RA 90
- Can be dimmed using standard commercial leading edge and trailing edge dimmers (please refer to installation instructions for specified types)
- Includes control gear
- Includes strain relief and 3-pole plug-in terminal
- Protection class II
- Mains voltage: 220–240 V/ 50–60 Hz
- Through-wiring is possible
- Ceiling cutouts: Ø 150–175 mm
- Two fixing clips provided for tool-free installation in ceilings of thickness 1–25 mm
- IP44 when installed in closed ceilings
- Please note: if using luminaire unit with motion detector, the motion detector must have a relay-switched output
- Please go to the main product name in the ONLINE catalog to find the latest power consumption figures based on continuous improvements in efficiency

Ceiling-recessed LED luminaire

	RD/R0	kg	Order no.
9.5 W LED930	100/150	0.6	60 813 640
9.5 W LED940	100/150	0.6	60 813 643
14 W LED930	100/150	0.6	60 813 646
14 W LED940	100/150	0.6	60 813 649
26 W LED930	100/150	0.6	60 813 714
26 W LED940	100/150	0.6	60 813 715

Zubehör

Reflector insert E150 with highly reflective aluminium-sputtered coating	60 800 732
Reflector insert E150, matt aluminium-look finish	60 800 733
Surface-mount housing, D= 230 mm, white	60 800 752
Concrete casting surround; Ceiling cutout = 150 mm, H = 155 mm	60 800 641



Line circuit-breaker ratings (maximum recommended number of downlights per circuit-breaker)

LED Downlight	C10	C13	C16	B10	B13	B16
CREDOS 9.5 W/ 14 W	50	66	84	30	39	48
CREDOS 26 W	71	92	113	71	92	113

Minus 20 percent



The new product label indicating a top rating in terms of criteria relevant to energy consumption. **eco+** is a holistic product label evaluating all system components involved and the lighting quality of a luminaire. **eco+** falls below the levels specified by existing energy directives by as much as 20 %.

For more information on **eco+**, please visit www.zumtobel.com/eco



Top quality – with a five-year guarantee.
As a globally leading luminaire manufacturer, Zumtobel provides a five-year guarantee for its complete product range.

zumtobel.com/guarantee



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