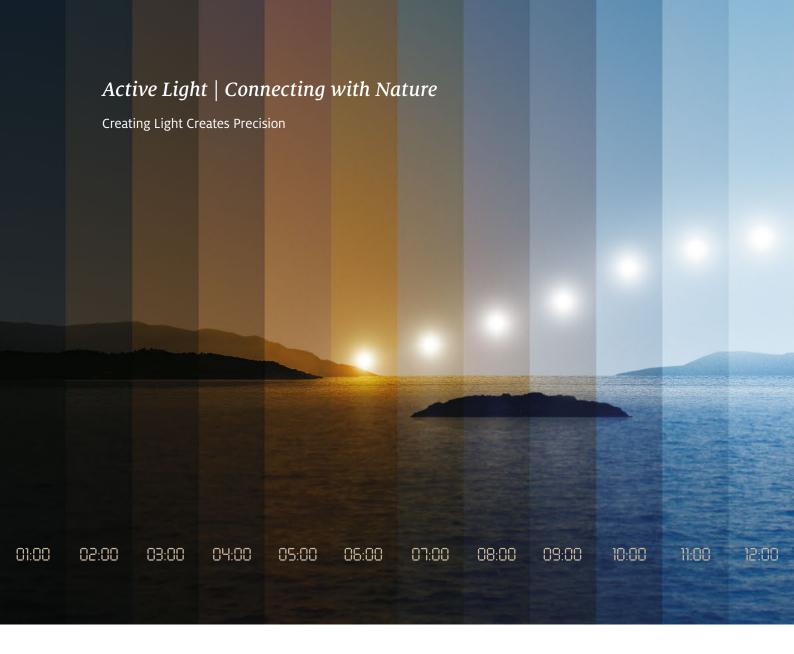


# CRAFT

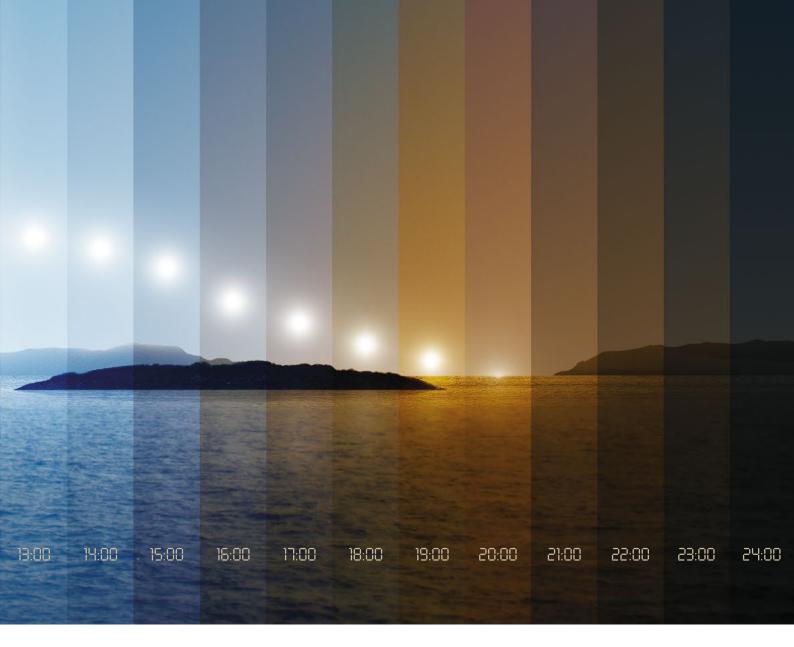
High-bay LED luminaire

A turning point in industrial lighting: never before has a luminaire been so powerful, so compact and so efficient.



Active Light in industry is as unique and dynamic as the employees, the processes and the layout of different production halls. Human Centric Lighting puts the focus of the lighting design firmly on the individual. Visual, emotional and biological needs are fully supported by a blend of Active Light and additional workplace-oriented lighting for work during the day and the night. This approach also facilitates accurate working and improved quality. Pioneering lighting solutions with activity-based lighting use innovative sensor technology to automatically adapt to the specific situation.

Find out how Active Light works: zumtobel.com/activelight





### Intensity

Dynamically adjusted lighting levels help employees with their regular visual tasks. Active Light helps reduce error rates and increase worker safety.



#### Direction

Uniform and shadow-free illumination minimises glare – even with glossy surfaces. Adjusting the direction of the light towards the visual object with Active Light enhances visual quality. Precise work is promoted and fatigue is simultaneously kept to a minimum.



# Colour

Active Light means tailoring light colours to reflect age, user preference and working hours, increasing well-being and boosting employee productivity.



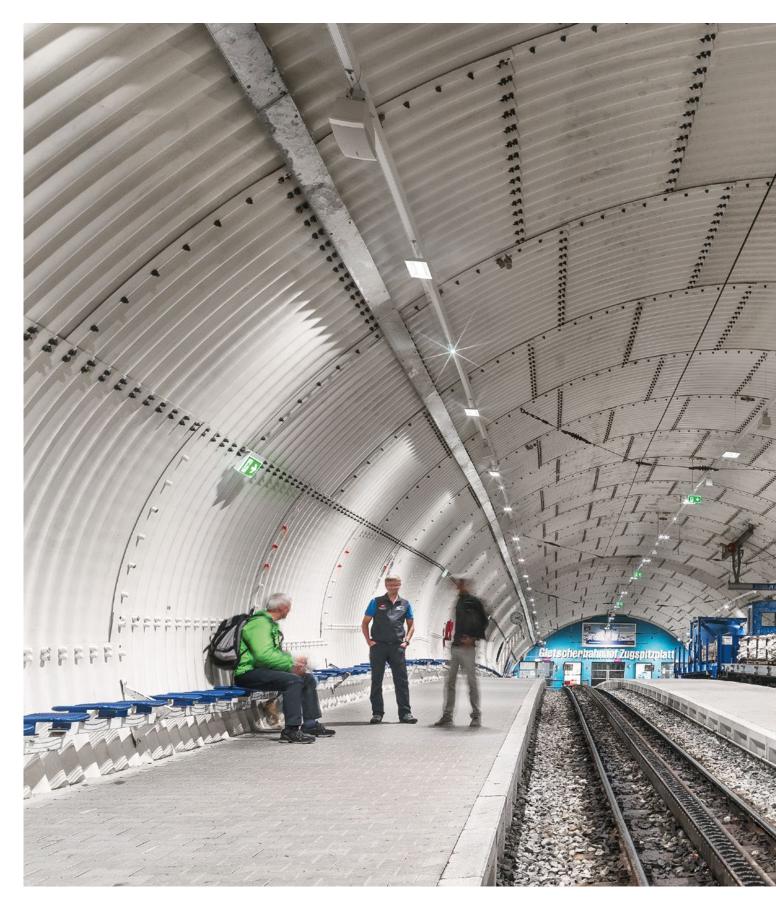
# Time

Artificial light based on the natural course of the day helps support the internal clock. Luminaires controlled by sensors, which only switch on when light is required, reduce costs and minimise energy consumption.



Wilh. Wülfing GmbH & Co. KG, Borken | DE





Bayerische Zugspitzbahn, Garmisch-Partenkirchen | DE Electrical planning: Bayrische Zugspitzbahn Bergbahn AG, Garmisch-Partenkirchen | DE Electrical installation: Elektro Hofmann GmbH, Garmisch-Partenkirchen | DE







# The best from two worlds

CRAFT design

"Arup and Zumtobel share numerous established brand values. Both companies rely on innovation to develop better solutions that provide real benefits for people. When developing CRAFT, our exciting cooperation made it possible to create a luminaire with very high standards in terms of technical features and design. Moreover, the direct feedback and application know-how by our international lighting team helped us meet these requirements in a truly global product concept."

Design | Stephen Philips, Arup









# CRAFT provides security

Continuation of a success story

Its reliability creates multiple benefits: starting from unique thermal management, the high-bay LED luminaire CRAFT is best prepared for industrial challenges. It combines high resilience, zero maintenance and a long service life with low electricity requirements – the luminaire efficiency is up to 143 lm/W. CRAFT meets the wide variety of lighting tasks with various mounting options and illuminance from 7,500 lm up to 36,000 lm. Appropriate, good lighting reduces error rates and provides well-being at the workplace. Stable light colours and optimum lateral glare suppression (UGR > 22) provide additional safety.

CRAFT meets high requirements for colour rendering with values up to Ra>80. Stroboscopic effects for rotating machines are also completely unknown to this luminaire, even in the dimmed state.



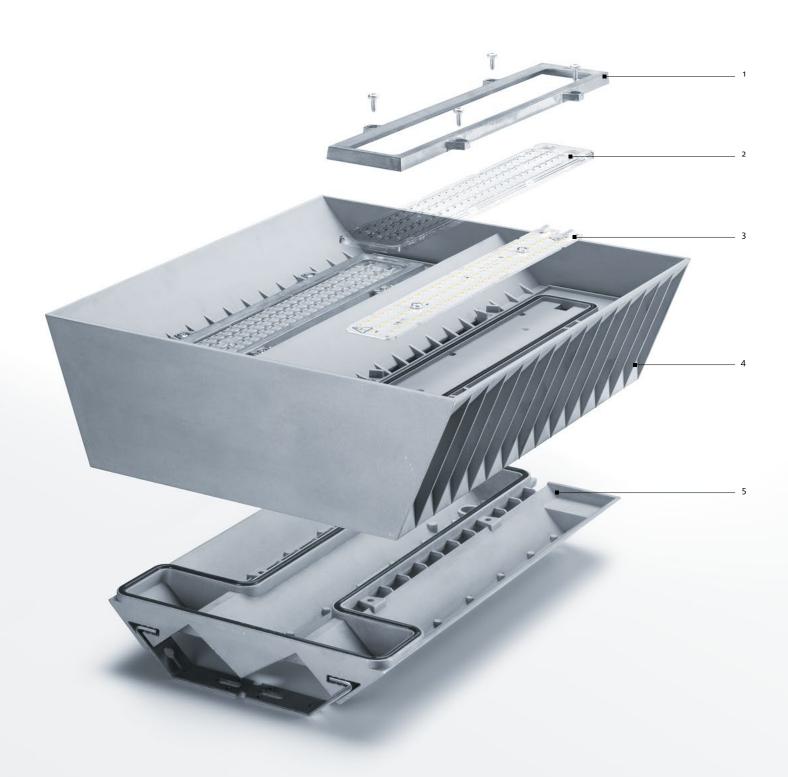
# Less is more

New design delivers added benefits

The high-bay LED luminaire CRAFT raises the bar to impressive heights. The luminaire's inner workings and appearance have been designed from scratch – this was the only way to make CRAFT achieve its outstanding efficiency level. With a power input of 280 W, a luminous flux of 36 000 lumens is produced. To achieve high-precision light direction, each LED has been assigned a separate lens, which means that long shelves can now be illuminated as efficiently as spacious bays.

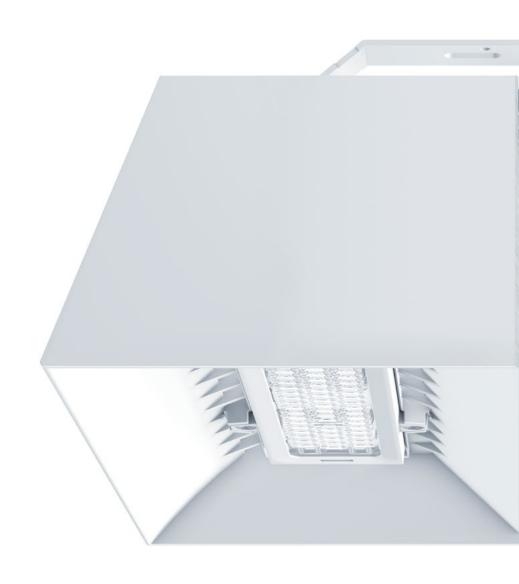
#### **CRAFT** components

- 1 The frame is screwed together which protects the optics and distinguishes CRAFT as a ball-proof luminaire.
- 2 The optics assign each LED its own lens. This allows the light to be directed very precisely and is extremely efficient.
- 3 The LED board has been optimised for a high luminous flux and long life cycle. After 50,000 hours of operation, at least 85 per cent of the initial luminous flux will still be achieved.
- 4 DThe die-cast aluminium housing is light, and at the same time robust. The decrease in the number of individual parts has also reduced the number of sealing layers required. As a result, CRAFT is resistant to the ingression of moisture and dirt.
- 5 The housing cover with integrated sealing rim prevents the ingress of moisture and dirt. Easy access to the converter facilitates maintenance.



# For a long life

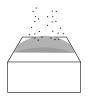
CRAFT accepts industrial challenges

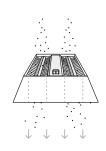


#### Dust deposits on the luminaire

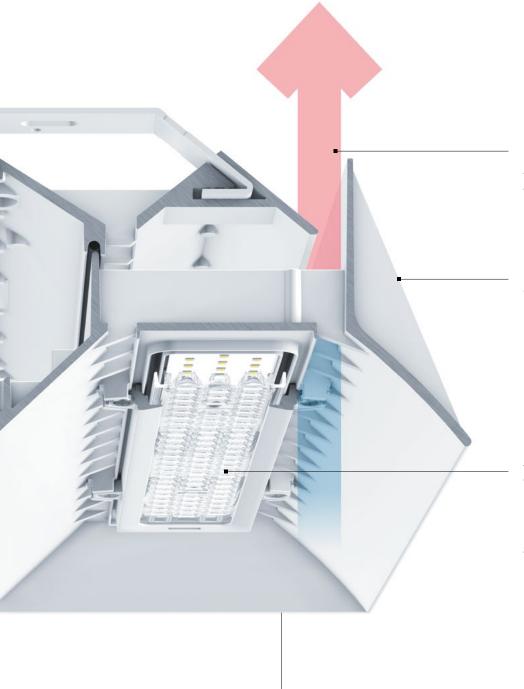
Conventional luminaire







With CRAFT, design and function form an indivisible unit. Based on requirements made by industrial applications, each luminaire component fulfils a specific function. This is reflected by details such as the LED boards arranged at both sides of the converter, which allow perfect thermal management thanks to the separating air gap. The resulting stack effect optimises passive cooling by the extensive rib structure, avoiding the accumulation of dust that would be detrimental as it would interfere with the luminaire's thermal conditions. Ambient temperatures of 55°C or higher are frequently found here, and luminaires installed above high-bay storage or production facilities are difficult to access for maintenance purposes.



In order to ensure perfect cooling and minimum maintenance effort, CRAFT creates air flow through the luminaire. This sustainably protects the technical components from overheating and optimises the luminaire's service life.

Bevelled luminaire surfaces prevent dust from accumulating.

The CRAFT wide-beam and the CRAFT narrow-beam versions, industrial luminaires meet all requirements in terms of uniform illumination of bays and efficient lighting of high-bay storage facilities. Each LED has been assigned a separate lens. This ensures that the light is directed very precisely as well as providing good glare control and outstanding efficiency.

As a generally DALI-dimmable luminaire that can be operated with emergency power, CRAFT excludes strobing and makes perfect use of the possibilities of lighting control. Controlled lighting solutions save energy and adjust to changing requirements: areas requiring 500 lux for production activities today may make do with 200 lux for storage purposes tomorrow.



DIESEL S.p.A, Molvena | IT Architecture: Diesel Creative, Breganze | IT Electrical installation: F&M Ingegneria S.p.A, Mirano | IT



# **CRAFT**

# Versatile in application



### **CRAFT PMMA**

Especially for extreme ambient conditions and exposure to chemical substances in industrial production facilities, a PMMA optic was developed that is highly durable even in atmospheres frequently containing oil. Additional protection is provided by an easy-to-clean cover made of toughened safety glass.



### **CRAFT PC**

The high-bay LED luminaire with PC optic is perfectly suitable for use in industrial areas without exposure to chemical substances. Typical application areas are high-bay warehouses, large exhibition halls, reception halls or also sports halls (BWS certificate).



# CRAFT sens (presence sensor and daylight sensor)

Choosing a lighting solution that is daylight and presence dependent is the best way of saving energy in storage applications. CRAFT sens does not require separate wiring or additional lighting controls. The sensor is ideal for mounting heights up to 16 meters.



### **CRAFT TECTON**

The LED high-bay luminaire with TECTON adapter can be integrated in the trunking system faster than ever. No additional wiring work is required. This mean that CRAFT TECTON can be installed on the trunking immediately after unpacking. With a DALI converter for LED luminaires which can operate on emergency power, CRAFT TECTON is perfectly prepared for various installation purposes.



### CRAFT FI (Food Industry)

A luminaire housing specifically developed for the high requirements of the food industry prevents dust and bacteria from accumulating inside the housing of the CRAFT FI luminaire. Thanks to its smooth surface, the luminaire can easily be cleaned. Its polycarbonate optic not only ensures perfect lighting quality, but also protects the sensitive LED modules from harmful external influences. Even high ambient temperatures do not constitute any problem: CRAFT FI is suitable for use at temperatures of up to 50 °C.



### **CRAFT HT (high-temperature)**

High ambient temperatures of up to +70 °C in industrial bays are a real challenge that can, however, be mastered by CRAFT HT fitted with a PC optic. The luminaire specifically designed for operation at high temperatures is able to withstand the most extreme industrial conditions.





**CRAFT S**Mounting height: 3 m to 6 m



**CRAFT M**Mounting height: 5 m to 12 m



# Customised lighting solution

Lumen packages from 7500 lm to 36000 lm

The CRAFT luminaire range includes three sizes with highly varied lumen packages. Installation height may vary between 3 m and 25 m. Thus, the efficient LED high-bay luminaire is suitable for any application areas ranging from small-scale workshops to huge industrial halls. Warm white light (3000 K) has been added to the existing range of colour temperatures (4000 K and 6500 K), so that CRAFT S can now also be used for shop and retail applications.



**CRAFT L**Mounting height: 8 m to 25 m



	Dimensions (LWH)  339 x 164 x 125 mm	Lumen output	Lumens per watt (LEF)  125 lm/W*	
CRAFT <b>S</b>		7 500 lm		
CRAFT M	390 x 330 x 114 mm	9 500 lm	143 lm/W*	
		12 600 lm	138 lm/W*	
		18 000 lm	129 lm/W*	
CRAFT L	680 x 330 x 114 mm	19 000 lm	143 lm/W*	
		25 200 lm	138 lm/W*	
		36,000 lm	120 lm/W/*	

<sup>\*</sup>Value applicable for the 6500 K type



Actual size shown

# Compact light-weight luminaire

CRAFT makes assembly and installation easy

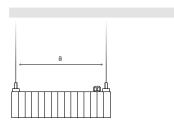
The small, compact industrial luminaire combines maximum output with easy handling. Thanks to its low weight of 5.6 kg (CRAFT M) or 9.5 kg (CRAFT L), it can be installed by just one person. CRAFT features only two suspension points for suspension from a cord or optionally from a chain, and can therefore be fixed and adjusted quickly. Another feature is the five-pole cable, 1.5 m long, allowing for electrical connection of the luminaire without having to open it. This guarantees IP65 protection.



A height-adjustable pendulum mounting simplifies installation. CRAFT LED high-bay luminaires can be positioned



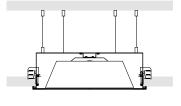




CRAFT **S**: a = 170 mm - 233 mm

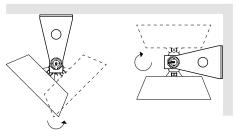
CRAFT **M**: a = 356 mm CRAFT **L**: a = 646 mm

# Recessed



# Mounting frames

# Optional installation



Pivoting ceiling and wall fixture

# One trunking, many benefits

**CRAFT and TECTON** 



The CRAFT model suitable for installation on TECTON trunking, can be assembled quickly and allows for easy electrical installation. One single trunking run is sufficient enough to firmly secure the compact high-bay LED luminaire and connect it to the power supply and the lighting control system. With a simple turn of the wrist, additional products for emergency lighting can also be integrated into the proven TECTON trunking with its 11-pole current conducting section. Another benefit: luminaires already installed can be easily moved; additional luminaires can be clicked into place at the required position. Therefore, the system can be adjusted to new room layouts at any time.



# Utilising savings potential

Individual luminaire or a combination of luminaires

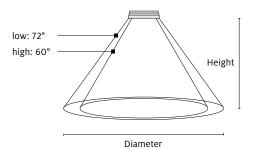


Mounting height of up to 16 m

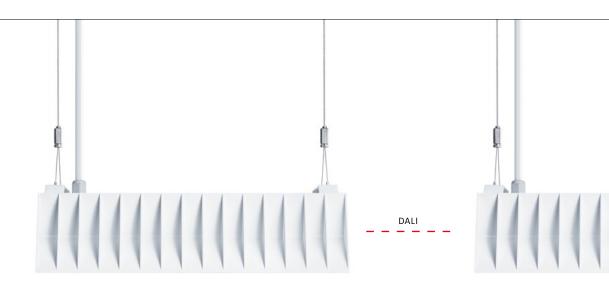
### **CRAFT** sens

With an integrated daylight and presence sensor, CRAFT sens is the ideal solution for warehouses where luminaires are mounted at heights of up to 16 metres. With a detection angle of 60° or 72°, the sensor adjusts precisely to the dimensions of the room and thereby ensures the highest degree of flexibility in project design and application. CRAFT sens does not require addressing or commissioning. When a presence is detected, the illumination level adjusts in line with the amount of available daylight. After the delay period has passed, the luminaire dims to the low light setting and remains at that level as safety lighting. Both the delay period, with a factory setting of 10 minutes, as well as the lower light level setting of 10 percent, can be easily adjusted using the IR remote control.





low					
Height (m)	8,0	9,0	10,0	11,0	12,0
Diameter (m)	12,0	13,5	15,0	16,5	18,0
high					
Height (m)	12,0	13,0	14,0	15,0	16,0
Diameter (m)	14,0	15,2	16,4	17,6	18,8



# **CRAFT and DIMLITE**

Intelligent lighting management achieves maximum energy efficiency. Daylight is used as a natural light source and supplemented with artificial lighting in order to maintain a constant lighting level during work hours. Increasing automation is creating more and more zones and areas where people do not work or which are visited only for occasional inspections. The lighting management system uses these periods of restricted lighting requirements to dim the luminaire down to a minimum level, and to only switch back up to full lighting levels when movement is detected.

zumtobel.com/dimlite



DIMLITE lighting control unit

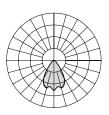


Daylight sensor



CRAFT sens

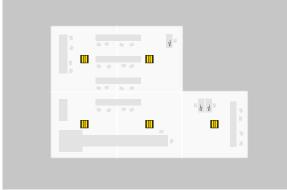
# CRAFT light distribution

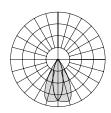


# CRAFT wide beam for production areas

Based on requirements made by industrial applications, CRAFT features a wide beam optic has been optimised for production areas where people are supposed to work with full concentration and reliability. CRAFT provides light with good glare control – with unique efficiency and uniformity. This is made possible by a lighting cone that is shaped like a pyramid with a square base, which makes overlapping cones, as produced by luminaires with circular light emission, a thing of the past. Thus, efficiency is increased in terms of the lighting design.



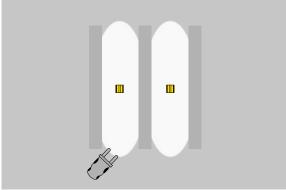




# **CRAFT narrow beam for warehouses**

In warehouses, the challenge is to illuminate long and high rows of shelves as uniformly and efficiently as possible. The narrow-beam optic by Zumtobel has been designed, developed and manufactured especially for this application. CRAFT therefore stands aloof from widespread compromise solutions. As a distinctly narrow- beam solution, it uses the spacing between one LED luminaire and the next to full effect. In order to achieve a luminous intensity level of 100 lx on the floor and to properly illuminate the shelves, spacings of 15 m are possible with an installation height of 15 m.





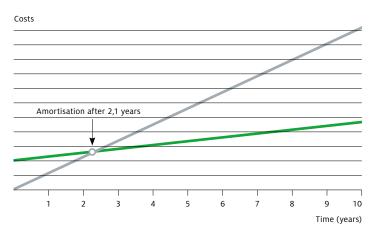
# Your benefit expressed in figures

CRAFT LED compared with T26 continuous row luminaires



High energy efficiency and outstanding lighting quality give advanced LED luminaires a substantial head start in high-bay lighting. Rooms with high ceilings may require huge maintenance effort; however, thanks to the luminaires' long service life, no maintenance is required at all. LED luminaires plus presence-based and daylight-based control provide maximum energy savings. CRAFT has a built-in dimming function as standard; this is a prerequisite for creating perfect visual conditions with minimum artificial light. The efficient luminaires can be perfectly integrated into lighting management systems while solving several problems occurring in conventional light sources: ignition occurs at once, and frequent switching or dimming does not reduce the light source's service life.

#### **Amortisation of costs**



# Underlying conditions

### **Existing luminaires**

**New luminaires** 

273 T26 continuous row luminaires, 2 x 58 W Luminous flux: 10036 lm  $\,$ 

# Luminous efficiency: 94 lm/W

104 high-bay LED luminaires CRAFT 98 W

Luminous flux: 13 000 lm Luminous efficiency: 131 lm/W

#### Lighting management

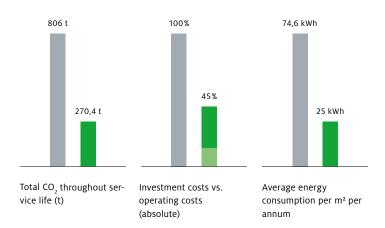
DIMLITE multifunctional unit for dimming and Maintenance function zumtobel.com/dimlite

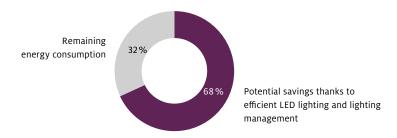
# Calculation period

10 years

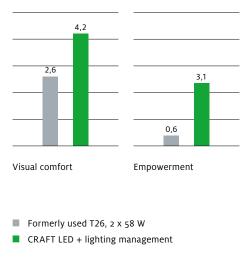
■ Formerly used T26, 2 x 58 W
■ CRAFT LED + lighting management

# Energy consumption and costs:





# Lighting quality:



# ecocalc

A comparative calculation was made using ecoCALC. zumtobel.com/ecocalc

# Flexible installation

Various installation options make CRAFT a high-bay luminaire that is universally applicable. In addition to classic chain and cable suspension, the rotatable ceiling and wall mounts provide a high degree of flexibility – even after installation. As a luminaire module in a pre-wired 11-pole TECTON lighting strip system, CRAFT gains additional design freedom with easy installation. Built-in frames enable the luminaire to be perfectly integrated into the ceiling.

# For a long life

As an IP65-protected luminaire, CRAFT is ideal for rough industrial ambient conditions. This high-bay luminaire has a whole bundle of measures to thank for its durability, including a chimney effect that draws both heat and dust away from the luminaire. The spatial separation of the converter and the LED boards also helps support optimal thermal management.

# Application-oriented lighting technology

With two optics – narrow beam for narrow shelving rows, wide beam for open areas – CRAFT always guarantees the best visual conditions. CRAFT offers the chance to achieve unparalleled uniformity with fewer luminaries. The rectangular light distribution prevents unnecessary overlapping and thereby simplifies project design.

# Versatile thanks to a wide product range

The CRAFT luminaire family has the right model for every requirement. In addition to the three sizes (S, M and L), various lumen packages and light colours, the CRAFT range also includes models that can meet special demands, like high temperatures or food industry requirements.

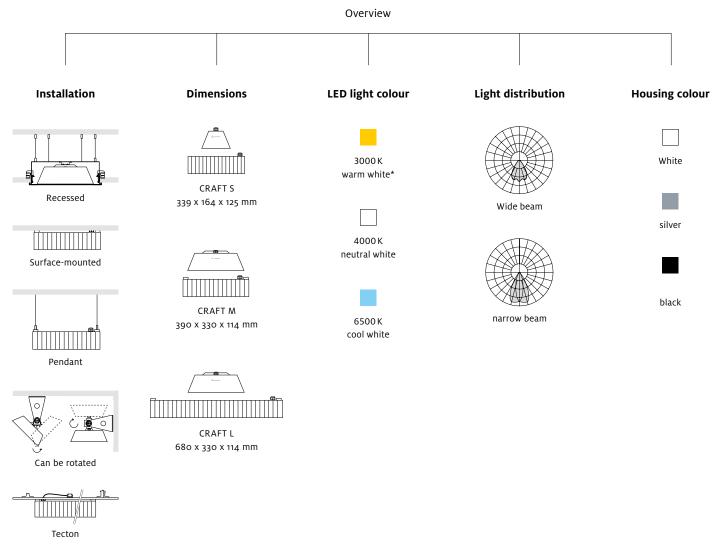
# Low energy consumption

With a light output of up to 143 lumens per watt, the CRAFT high-bay luminaire is one of the most efficient luminaires in its class. Maximum energy efficiency is achieved with a lighting solution controlled by presence and daylight sensors, so all the necessary components have been neatly integrated into the CRAFT sens luminaire.



# CRAFT

# High-bay LED luminaire



Zumtobel, a company of the Zumtobel Group, is an internationally leading supplier of integral lighting solutions for professional indoor and outdoor building lighting applications.



zumtobel.com/office



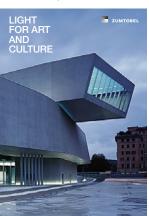
zumtobel.com/hotel



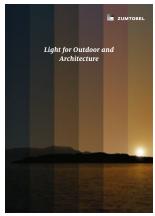
zumtobel.com/industry



zumtobel.com/education



zumtobel.com/culture



zumtobel.com/outdoor



zumtobel.com/shop



zumtobel.com/healthcare

- Offices and Communication
- Education and Science
- Presentation and Retail
- Hotel and Wellness
- Art and Culture
- Health and Care
- Industry and Engineering
- Outdoor and Architecture
- Living

We provide unique customer benefits by integrating technology, design, emotion and energy efficiency. We combine the best possible ergonomic lighting quality for an individual's well-being with the responsible use of energy resources. The company's own sales organisations in twenty countries, as well as commercial agencies in fifty other countries, form an international network of experts and design partners providing professional lighting consulting, design assistance and comprehensive services.

# Lighting and sustainability

In line with our corporate philosophy "We want to use light to create worlds of experience, make work easier and improve communications and safety while remaining fully aware of our responsibility to the environment", Zumtobel offers energy-efficient high-quality products, while at the same time making sure that our production processes based on the considerate use of resources are environmentally compatible.

zumtobel.com/sustainability



As a globally leading luminaire manufacturer, Zumtobel provides a five year manufacturer's guarantee on all Zumtobel branded products in accordance with the terms of guarantee at **zumtobel.com/guarantee**.

Order no.04 946 201-EN 10/17 © Zumtobel Lighting GmbH Technical data was correct at time of going to press. We reserve the right to make technical changes without notice. Please contact your local sales office for further information.





Tracks and spots



Modular lighting systems



Downlights



Recessed luminaires



Surface-mounted and pendant luminaires



Free-standing and wall-mounted luminaires



Continuous-row systems and individual batten luminaires



High-bay luminaires



Luminaires with extra protection



Façade, media and outdoor luminaires



Lighting management systems



Emergency lighting



Zumtobel Group Services



#### info.uk@zumtobelgroup.com zumtobel.co.uk

**USA and Canada** 

**United Kingdom** 

Chiltern Park

ZG Lighting (UK) Limited

Buckinghamshire SL9 9FG

T +44/(0)1388420042

Chiltern Hill, Chalfont St. Peter

Zumtobel Lighting Inc. 3300 Route 9W Highland, NY 12528 T +1/845/691 6262 F +1/845/691 6289 info.us@zumtobelgroup.com zumtobel.us

#### Australia

ZG Lighting Australia Pty. Ltd. 43 Newton Road Wetherill Park NSW 2164 T +61/1300139965 info.au@zumtobelgroup.com zumtobel.com.au

#### New Zealand

ZG Lighting (NZ) Limited 27 Jomac Place, Avondale, Auckland 1026 PO Box 71134, Rosebank, Auckland 1348 T 0800800834 T +64/(9)8287155 F +64/(9) 820 7591 info.nz@zumtobelgroup.com zumtobel.co.nz

### China

Thorn Lighting (Guangzhou) Limited 12A Lian Yun Road Eastern Section, GETDD, Guangzhou 510530, P.R. China T +86(20)2232 6000 Sales Hotline: 400 8080 195 info.cn@zumtobelgroup.com zumtobel.cn

#### Hong Kong

ZG Lighting Hong Kong Ltd. Unit 503 – 508, 5/F, Building 16W, Phase 3, Hong Kong Science Park, New Territories, Hong Kong T+852/(0)25784303 F +852/(0)2887 0247 info.hk@zumtobelgroup.com

#### India

Thorn Lighting India Pvt. Ltd. No. 43, Chamiers Road Raja Annamalaipuram, Chennai 600028, Tamil Nadu, India T +91/(44) 24357588 F +91/(44) 2435 8744 info.in@zumtobelgroup.com

**Singapore** ZG Lighting Singapore Pte. Ltd. 158 Kallang Way # 06-01/02 Singapore 349245 T+65/68445800 F +65/6745 7707 info.sg@zumtobelgroup.com

#### **United Arab Emirates**

Zumtobel Lighting GmbH 4B Street, Al Quoz Industrial Area Dubai, United Arab Emirates T +971/4 3404646 info.ae@zumtobelgroup.com zumtobel.ae

#### Romania

Zumtobel Lighting Romania SRL Radu Greceanu Street, no. 2, Ground Floor, sector 1 012225 Bucharest T +40 31225 38 01 F +40 31225 38 04 info.ro@zumtobelgroup.com zumtobel.com

**Hungary** ZG Lighting Hungary Kft. Váci út 49 1134 Budapest T +36/(1) 450 2490 F +36/(1) 350 0829 info.hu@zumtobelgroup.com zumtobel hu

#### Croatia

ZG Lighting d.o.o. Ulica Petra Hektorovića 2 10000 Zagreb T +385/(1) 64 04 08 0 F +385/(1) 64 04 090 info.hr@zumtobelgroup.com

## Bosnia and Herzegovina

ZG Lighting d.o.o. Predstavništvo u BiH Zmaja od Bosne 7 71000 Sarajevo T +387 33 590 463 info.ba@zumtobelgroup.com

ZG Lighting d.o.o. Beton hala - Karađorđeva 2-4 11000 Belgrade M+381 69 5444802 info.rs@zumtobelgroup.com

#### Czech Republic

ZG Lighting Czech Republic s.r.o. Jankovcova 2 Praha 7 17000 Praha T +420 266 782 200 F +420 266 782 201 info.cz@zumtobelgroup.com zumtobel.cz

#### Slovak Republic

ZG Lighting Slovakia s.r.o. Tomášikova 64 831 04 Bratislava T +421 2 2030 0044 info.sk@zumtobelgroup.com zumtobel.sk

#### Poland

ZG Lighting Polska Sp. z o.o. Wołoska 9a Platinium Business Park III 02-583 Warszawa T +48 22 856 74 31 info.pl@zumtobelgroup.com zumtobel.pl

#### Slovenia

ZG Lighting d.o.o Štukljeva cesta 46 1000 Ljubljana T +386/(1) 5609 820 F +386/(1) 5609 866 info.si@zumtobelgroup.com zumtobel.si

#### Russia

ZG Svet ISC Official office Zumtobel Group Nizhniy Susalniy pereulok, 5/19, office 405 105064 Moscow T +7/(495) 981 35 41 T +7/(812) 604 02 60 info.ru@zumtobelgroup.com zumtobel.ru

#### Norway

ZG Lighting Norway AS Bygdøy allé 4 0257 Oslo T +47 22 54 72 00 info.no@zumtobelgroup.com zumtobel.no

# Sweden

ZG Lighting Nordic AB Hyllie Boulevard 10b 215 32 Malmö T +46 649 2000 info.se@zumtobelgroup.com zumtobel.se

#### Denmark

ZG Lighting Denmark A/S Stamholmen 155, 5. sal 2650 Hvidovre T +45 35 43 70 00 info.dk@zumtobelgroup.com zumtobel.dk

### Headquarters

Zumtobel Lighting GmbH Schweizer Strasse 30 Postfach 72 6851 Dornbirn, AUSTRIA T +43/(o)5572/390-0 info@zumtobel.info

