TRILUX
SIMPLIFY YOUR LIGHT.

INDUSTRY LIGHTING SOLUTIONS

MORE THAN JUST LIGHTING

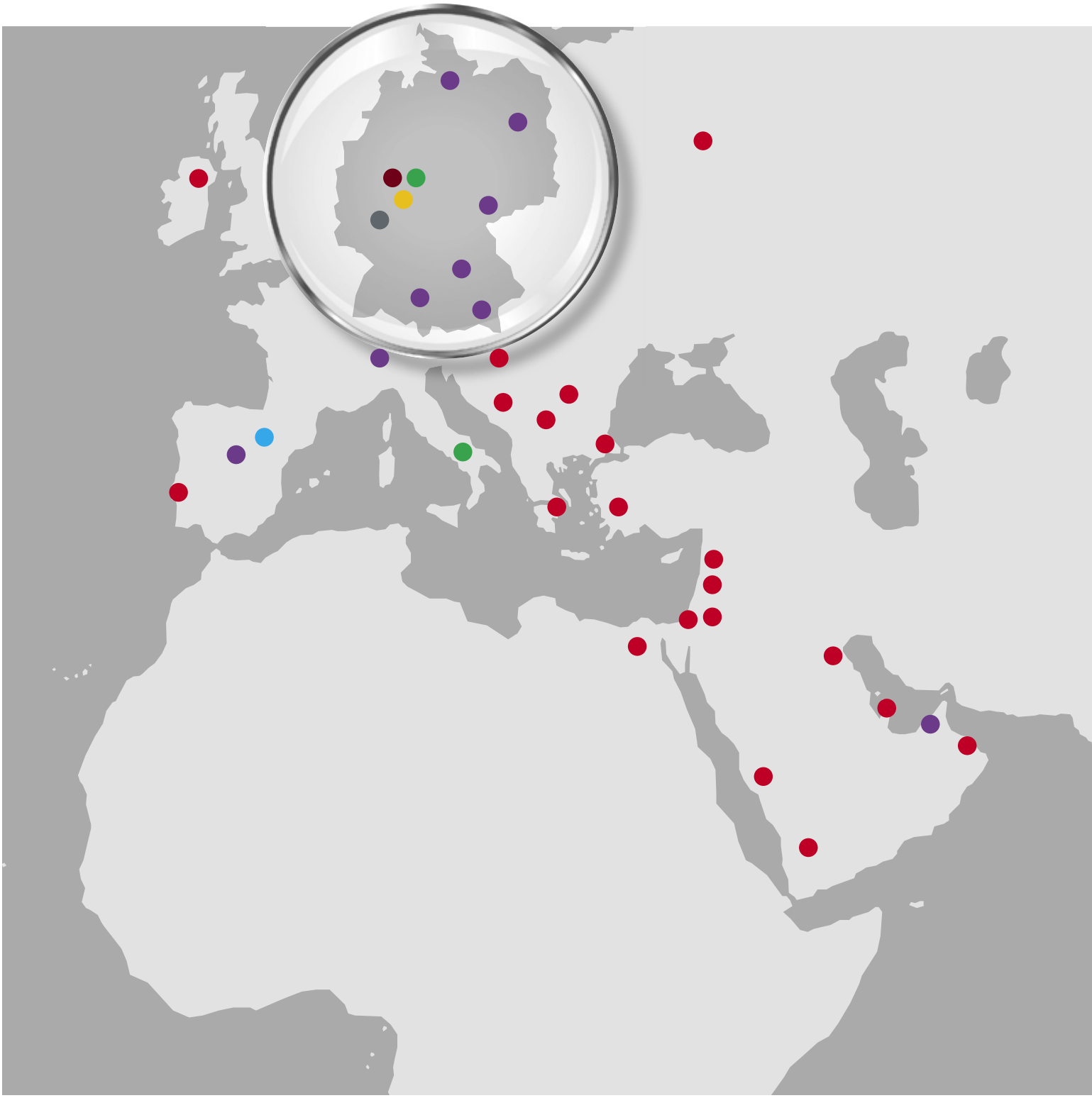
CONTENT

TRILUX

Technology, themes and trends

Application

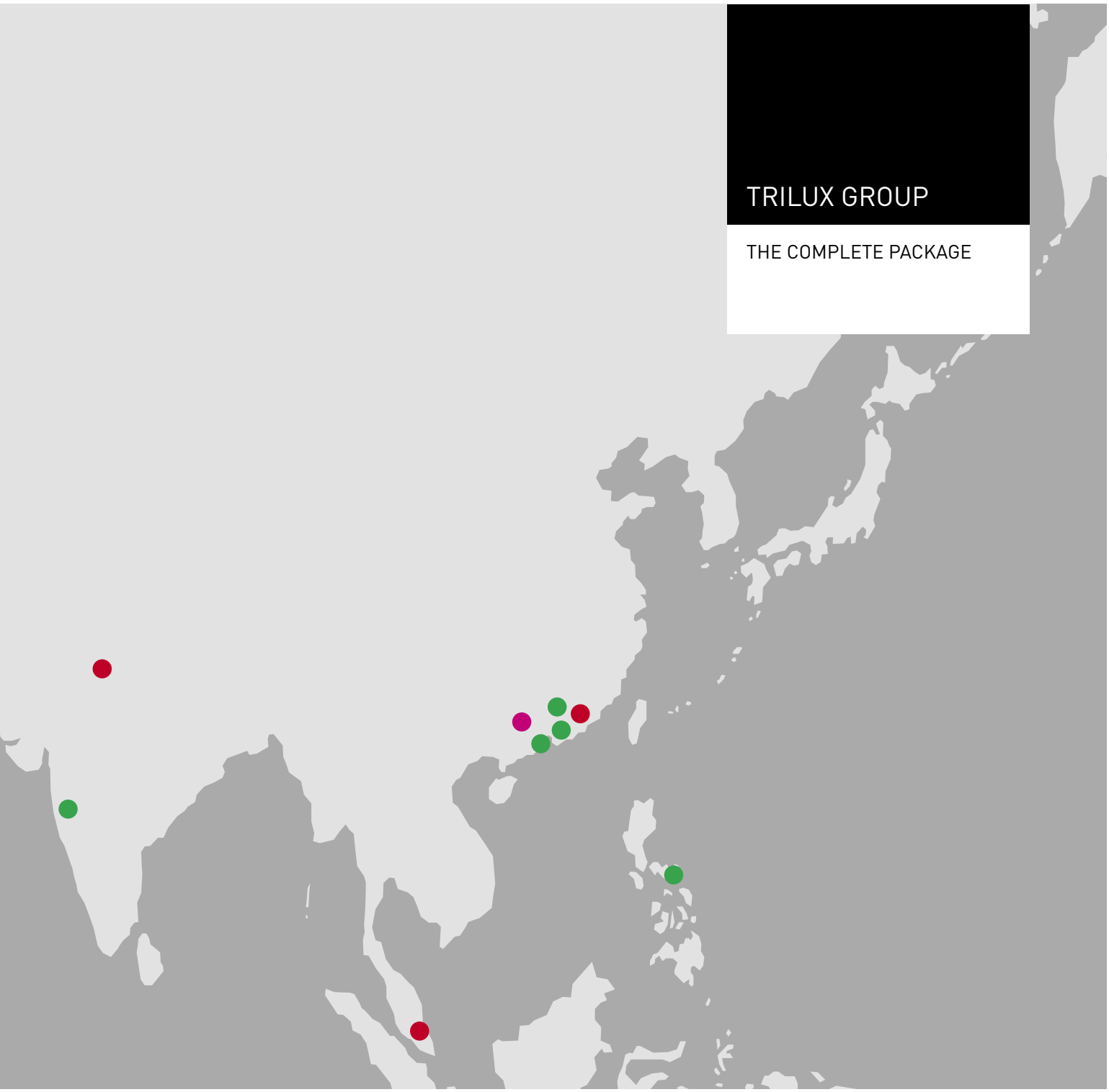
Services



Partners

Sales offices

TRILUX
SIMPLIFY YOUR LIGHT.



TRILUX GROUP

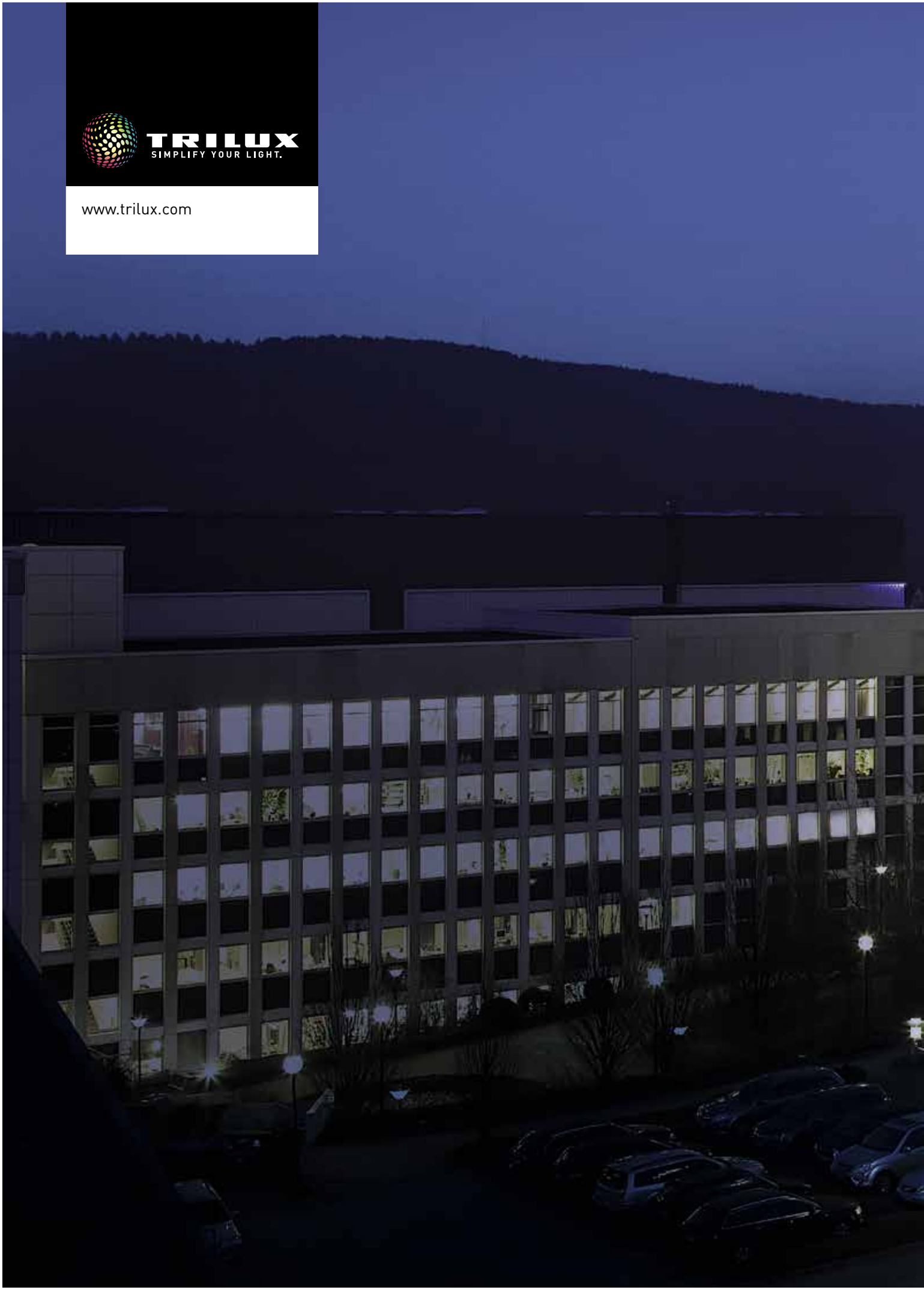
THE COMPLETE PACKAGE

oktalite zalux light evolution b,a,g, ICT watt24

Established know-how, a passionate commitment and international experience: the TRILUX Group develops efficient, simple lighting solutions for all applications. Ranging from state-of-the-art light and control technology to custom luminaires with a high level of technical and design sophistication. Whether TRILUX and Oktalite as experts for the lighting division, ZALUX and BAG for the OEM Systems Group division, or the affiliated companies ICT and watt24 – all work together every day to achieve their aim of making light even more efficient and providing solutions for customers featuring high levels of simplicity. For this purpose the corporate group brings together its research and development expertise under a single roof: the Innovation and Technology Centre, a source for new ideas for saleable products. With these innovation-oriented structures, the TRILUX Group is a pioneering partner with a high level of expertise for customers located all over the world.

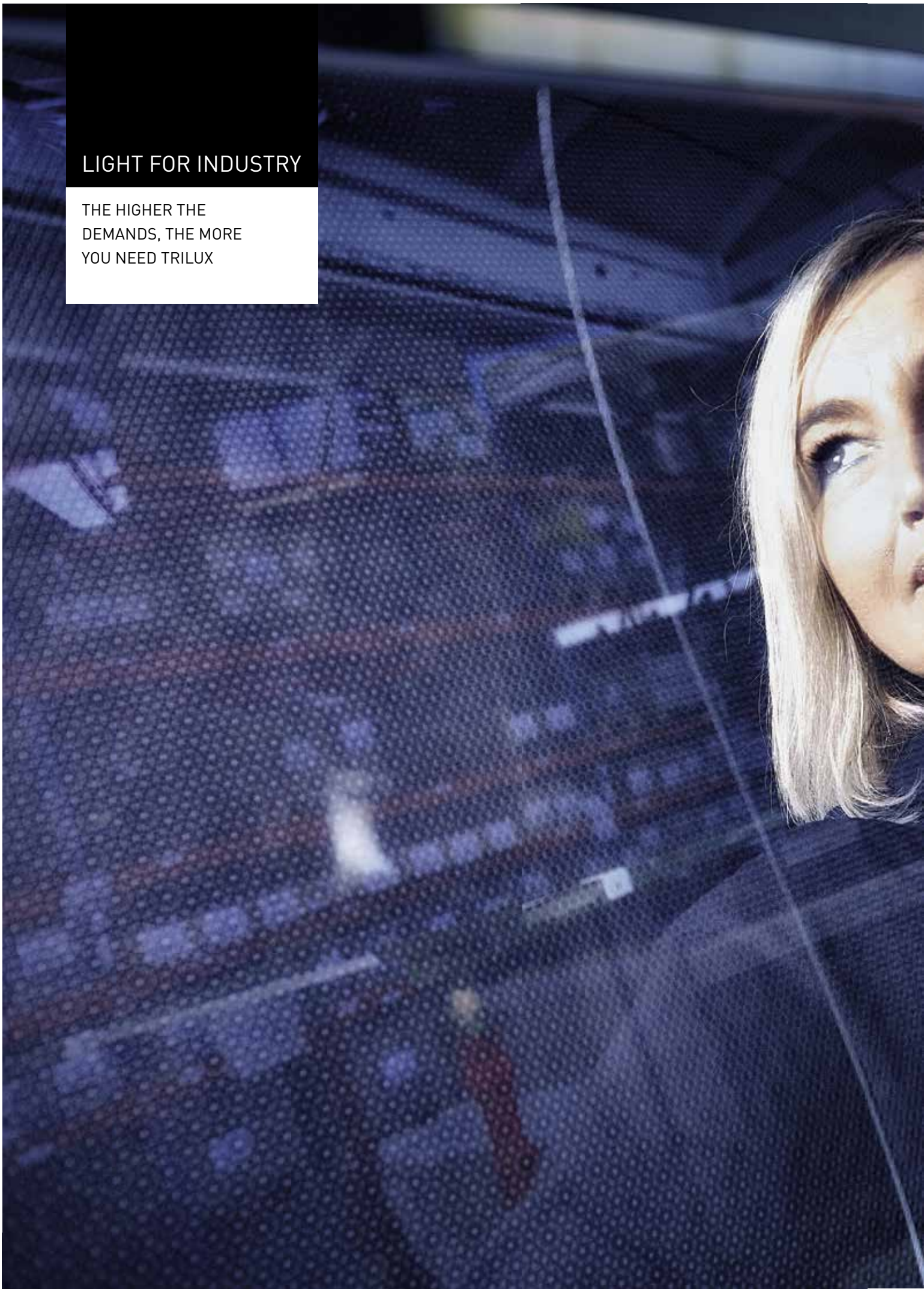
TRILUX
SIMPLIFY YOUR LIGHT.

www.trilux.com



TRILUX has characterised both the history and the future of light for more than 100 years, with the aim of creating artificial light that is just as efficient, diverse and sustainable as the sun itself. TRILUX today offers not only innovative luminaires for indoor and outdoor applications but also perfectly matching lighting solutions for all requirements.

TRILUX SIMPLIFY YOUR LIGHT represents the most simple and reliable path to customised, energy-efficient and sustainable lighting solutions. In the dynamic and ever more complex lighting market, customers are provided with optimal advice, ideal orientation and perfect light. To ensure this, TRILUX offers a wide portfolio of technologies as well as high-performance partners within the TRILUX Group and unites single components to create custom-designed complete solutions – always perfectly matched to customer requirements and specific applications.



LIGHT FOR INDUSTRY

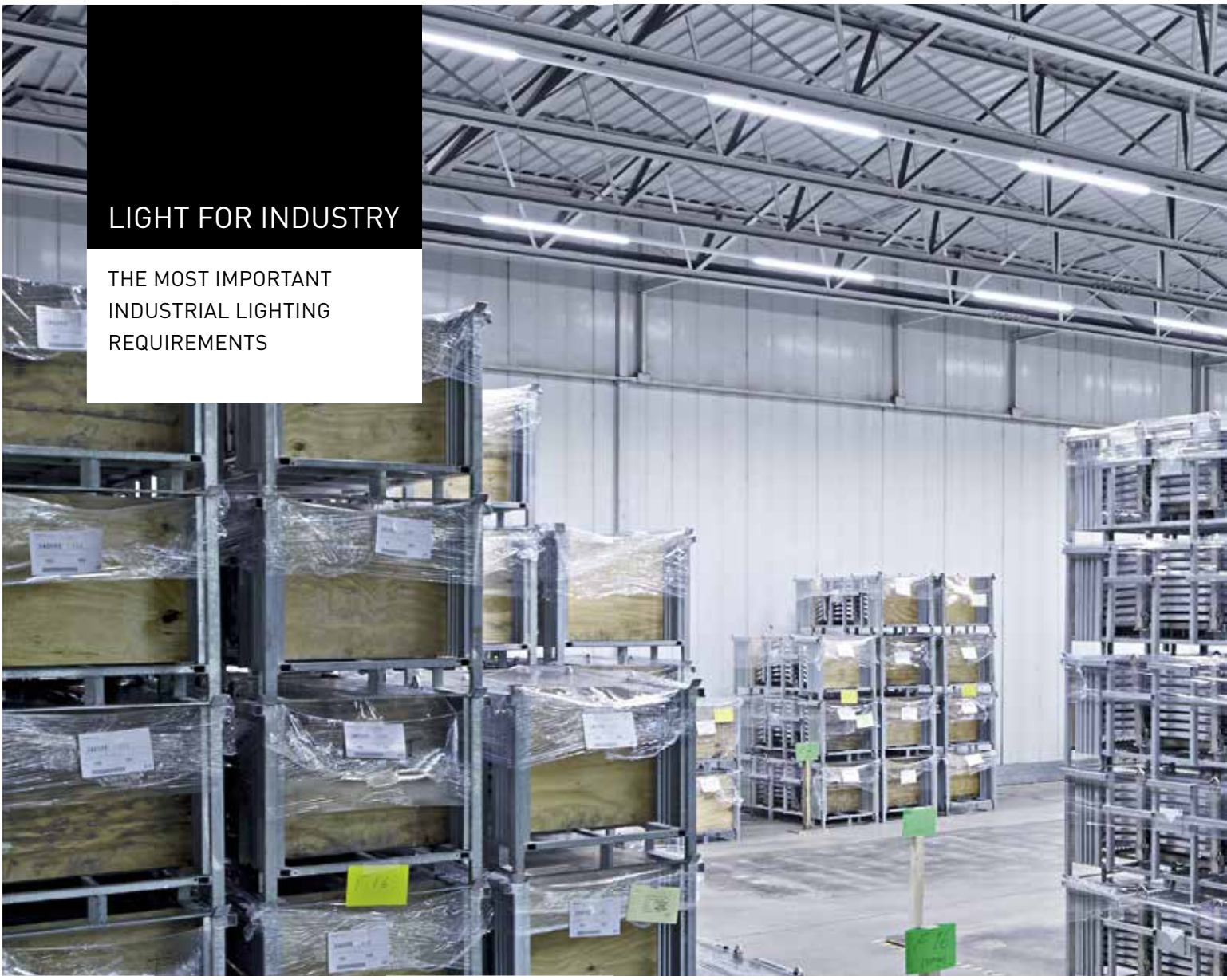
THE HIGHER THE
DEMANDS, THE MORE
YOU NEED TRILUX

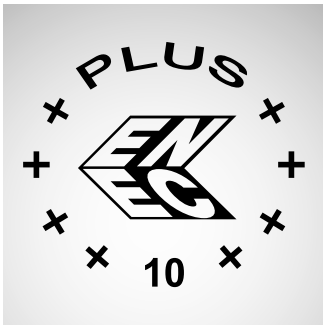
Light is becoming increasingly important in the industrial sector. Lighting solutions planned with modern methods cut operating costs, improve visual conditions, increase levels of productivity and operational safety and help save the environment. Legislative specifications are also becoming ever more stringent and technological possibilities increasingly diverse. Within this tense environment, many companies search for a qualified partner to exploit the potential of modern lighting solutions rapidly, reliably and as simply as possible.

Companies expecting more from their lighting than simply complying with current standards view TRILUX as a specialist for the complete spectrum of requirements – ranging from production bays and warehouses to corridors and administrative offices. For more than 100 years TRILUX has been developing both innovative and highly efficient light systems that set standards in terms of quality, cost efficiency and sustainability.

LIGHT FOR INDUSTRY

THE MOST IMPORTANT INDUSTRIAL LIGHTING REQUIREMENTS





Standards and regulations – legislative requirements
A wide range of standards and regulations must be considered when designing and installing lighting systems. The most important ones: DIN EN 12464 specifies standard-compliant planning and installation. Legislators also specify minimum energy requirements for lighting in buildings as part of DIN EN 15193. Directives for work safety and rules determined by professional associations must also be taken into account. The EC directive for the HQL ban has also been in force since mid-2015, finally banning inefficient mercury vapour lamps from the market.

ENEC+ – the new performance certificate
Until now, the economic performance of LED solutions could only be calculated using the specifications of the manufacturer. IEC performance standards for LED modules and LED-based luminaires were determined to achieve greater transparency and comparability between market participants – leading to the development of a pan-European system of certification. ENEC+ is a performance indicator which objectively confirms the correctness of manufacturer specifications. The designation was initiated by Lighting Europe, the umbrella association of the European lighting industry, together with independent European testing institutes and is awarded by known ENEC test centres. TRILUX already develops its luminaires based on these new technology standards.

Economic efficiency – a must for companies
TRILUX lighting systems feature high levels of energy efficiency and low operating overheads. Upgrading conventional T8 lighting installations to TRILUX LED solutions featuring light management systems enables operating costs to be cut by up to 85 %. This means that such new systems pay back investment costs within very short time periods.

Sustainability – an important factor
LED lighting is a plus both economically and ecologically. Its energy efficiency makes an important contribution in reducing the emission of damaging global warming gases and companies can also credibly provide evidence of their sustainability policy. Image enhancement in the true sense of the word.

Quality of light – higher productivity, improved safety and fewer mistakes
Current surveys show that customised lighting solutions improve productivity by 13 % and reduce the rate of accidents by 11 % compared to conventional, obsolete lighting installations (source: A.T. Kearney).

Light management – exploiting new potential
Light is becoming increasingly intelligent and flexible. High-performance light management systems reduce operating costs by fully exploiting existing daylight and switching on luminaires only when needed via occupancy detection. Lighting solutions can also be simply integrated into networks and flexibly and conveniently controlled via computers or mobile end devices.

LIGHT FOR INDUSTRY

TRILUX EXPERTISE FOR
ALL AREAS

With TRILUX, light becomes a strategic factor

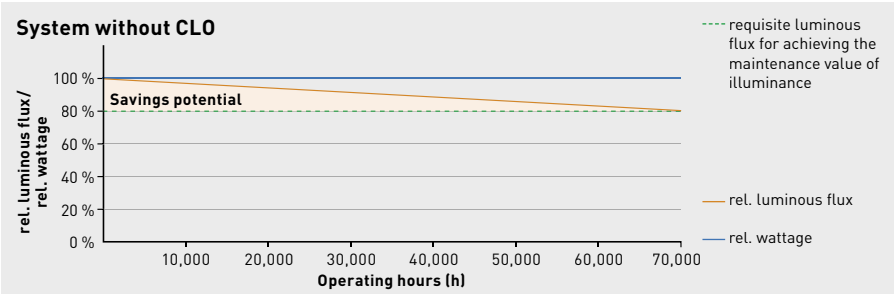
Extensive technical knowledge is needed to design lighting for industrial requirements and to evaluate the presented solution within the company. Not only standards and operating costs need to be considered, but also the fact that new technologies provide options with regard to sustainability, flexibility, networking and the effect of light. TRILUX supports customers with its extensive expertise in all areas – ranging from initial designing and detailed cost efficiency calculations to the integration of an intelligent light management system. Especially practical is the fact that companies can fulfill the requirements of all operational areas from a single source, thanks to the wide TRILUX product portfolio. In short, TRILUX enables light to become a strategic factor that cuts operating costs and significantly improves productivity, visual comfort and the atmosphere in all areas of the company.

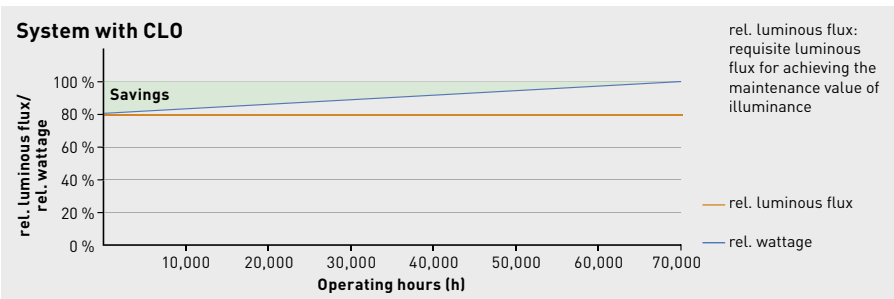
TRILUX expert tips for light quality 50,000 hours ≠ 50,000 hours: careful with the service life!

At first sight, LEDs impress with a long service life. A typical value is 50,000 operating hours for example. Looking at this more closely however shows enormous qualitative differences between manufacturers. Important in this context until now was specifying the L and B values. The L value specifies the degradation of the LED – how strongly luminaire luminous flux decreases across time. A service life of 50,000 hours with L70 means that luminous flux decreases to 70 % of initial output after 50,000 hours. The
B value means for example that only 10 % of intact luminaires generate luminous flux of less than 80 % compared to initial brightness at the end of their 50,000 hour service life. If no B value is specified the B50 classification applies, meaning that specified luminous flux reduces to below 80 % of lumen output with half the luminaires. Until now, TRILUX specified the lifespan of its LED luminaires with the significantly better L80/B10 values. In the future, TRILUX will act in accordance with the directive of the ZVEI (German Association of Electrical Technology and Electronics Industry) which fixes the B value to 50 and will therefore no longer document it. Specifying the L value is defined by the manufacturer according to product quality and is objectively confirmed with the ENEC+ approval mark. A luminaire documented until now as L80/B10 will now be specified with an L value of 85 for example, whereby a lifespan of 50,000 hours continues to apply.

TRILUX implements CLO technology. What's the advantage?

As operating periods progress, luminaire luminous flux also decreases in LED luminaires. If this operationally-dependent degradation is not taken into account during planning, the level of illuminance falls below specified reference values after a certain duration. To ensure lighting that complies to standards over a specific time period, the lighting system is initially set to higher illuminance. TRILUX uses an intelligent alternative – CLO. Constant Light Output technology counteracts degradation-related loss of luminous flux. As part of this, the luminous flux of luminaires is kept constant over the complete service life due to successive increases in current value. This renders higher system configuration due to degradation unnecessary and reduces operating costs. Compared to switchable luminaire types, lifespan also increases because total load on the LEDs is reduced. Defective LED luminaires can also be replaced without abnormalities because no differences in brightness occur between old and new luminaires.





LIGHT SAVES MONEY

ENERGY-EFFICIENT
LIGHT SOLUTIONS FOR
INDUSTRY

Maximising quality of light and minimising operating and investment costs – a highly promising formula that can be implemented in industrial lighting projects. In most companies, enormous potential for optimisation exists in terms of both quality of light and costs. TRILUX lighting solutions combine the best of both: outstanding quality of light with above-average energy efficiency, long lifespans and wide maintenance intervals.

Refurbishments: old systems with potential

Seen economically, obsolete and inefficient lighting is a goldmine that can achieve high savings potential if upgraded. On average, 40 % of total energy is used on lighting in buildings. In 'energy-intensive' production plants, power requirements for lighting accounts for around 15 % of total energy requirements, in office areas 50 % and in warehouses 80 %. The reason for this is that only a few lighting solutions comply with the current state of technology – three out of four lighting installations in non-residential buildings are over 25 years old and 85 % have no intelligent light control.

Rewarding: high efficiency and high utilisation

Refurbishing conventional, obsolete installations enables energy consumption to be cut by up to 80 %. Seen in terms of cost calculations, this means that in many cases savings on operating costs pay back investment costs after a short period of time. From that moment onwards the financial benefits increase until decommissioning. Work effort is also minimal: TRILUX offers a wide spectrum of customised refurbishment solutions for rapid and simple replacements.

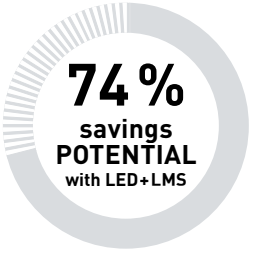
Energy efficiency example Chilled warehouse	**Old installation**	**New system A**	**New system B**
Luminaire	Weatherproof luminaire T8, 1x58 W, CCG	Nextrema G3 B 4000-840 ET (without LM)	Nextrema G3 B 4000-840 ETDD + LV (with LM, energy savings 38 %)
Power consumption per luminaire	71 W	30 W	30 W
Number of luminaires in building	59 pieces	59 pieces	59 pieces
Total power consumption	4,189 W	1,770 W	1,770 W
Kilowatt hours p.a.	29,742 kWh	12,567 kWh	7,792 kWh
Energy costs p.a.	€ 7,339	€ 3,101	€ 1,923
Energy saving potential		**58 %**	**74 %**
Saved kilowatt hours p.a.		17,175 kWh	21,950 kWh
Energy savings Ø p.a.		€ 4,238	€ 5,416
CO_2 savings p.a.		10.31 tonnes	13.17 tonnes

Based on a nominal cost of 0.21 € per kWh in 2015 and an annual inflation rate of 5 % per year over 7 years (each with 7,100 hrs.) of service life.

Service tip: see how much you could save!

Use the TRILUX Efficiency Calculator to simply and quickly estimate the level of savings potential with your refurbishment. Find the calculator at:

www.trilux.com/efficiency-calculator.



LIVELINK

WHEN INTELLIGENCE
COMES TO LIGHT

LiveLink

Intelligent light management provides a variety of advantages, optimising the quality of light, reducing operating costs and enabling users to conveniently control lighting conditions according to individual requirements.

Low operating overheads, high quality of light
The possibilities are enormous – installing a LiveLink light management system with presence and daylight detection cuts operating costs by up to 85 %. The quality of light is simultaneously improved: LiveLink enables the effortless setting up and calling up of light scenes, meaning that employees are able to quickly modify the lighting situation to their specific activities or individual needs, e.g. in production areas, offices and warehouses.

LiveLink: the simple solution for complex tasks
Even though the benefits of light management systems are known, complex designing, installation and commissioning often proved a barrier for project managers in the past. LiveLink is different: all components and processes are ideally matched and installed in next to no time thanks to intuitive use of the software.

LiveLink – TRILUX and STEINEL expertise in a single system
LiveLink brings together TRILUX's lighting and control expertise with market-leading sensor technology from STEINEL. The result sets new standards in terms of quality, performance and user friendliness.

LIVELINK

SIMPLY DESIGNED
RAPIDLY INSTALLED
INTUITIVELY OPERATED

Download on the App Store

GET IT ON Google play

LiveLink was developed to decisively simplify the complex processes of designing, installation, commissioning and operating a light management system. The aim was to gain maximum performance and flexibility along with minimum effort for all participants, ranging from designers to users. LiveLink has achieved these targets at all levels – the high-performance light management system provides simple access to a new world of light and light control.

Designing – simpler than ever
LiveLink offers a wide selection of preset room configurations for typical applications. These so-called 'use cases' have been designed, amongst others, for industrial halls, warehouses, offices and corridors and can be individually modified for more complex requirements.

Installation: simple and quick
LiveLink can be rapidly installed thanks to simple wiring: only the mains connection and DALI control lines are needed to interconnect the luminaires and establish a connection to the control system.

Commissioning: intuitive and mobile using tablets
Commissioning is easy with an iOS or Android tablet and users are guided through the process step-by-step. No extensive prior knowledge is necessary thanks to the intuitive graphic user interface. Especially practical is that correct commissioning can be controlled via visual feedback from the system.

Operation: conveniently via push-button and app
Many processes such as presence detection and recording daylight levels are carried out automatically by LiveLink with the corresponding configuration. LiveLink can also be controlled conveniently using commercially available push-buttons on walls, or with a simple and high-performance app installed on mobile end devices. System parameters can also be quickly and simply modified with the app.

LIGHT MANAGEMENT

SAVE ENERGY
MOTIVATE WORKERS

Light management enables the energy-saving use of light. This means only using light where it is needed and only as much as required. Electronic control components automatically switch or dim a lighting system for this purpose and suitable solutions are available for nearly all applications in the industrial sector, ranging from storage rooms to production bays.

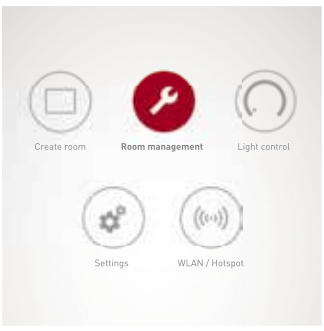
The two essential functions of presence detection and daylight control are specifically implemented in all typical applications. The following product page show how corresponding light management systems can be assigned to the products. Light management components must be ordered separately, or can be directly assembled into products (master luminaires) upon request.

Light management systems

WW Control

WW control
DALI light management system for white-white control and support of the human day-night rhythm.

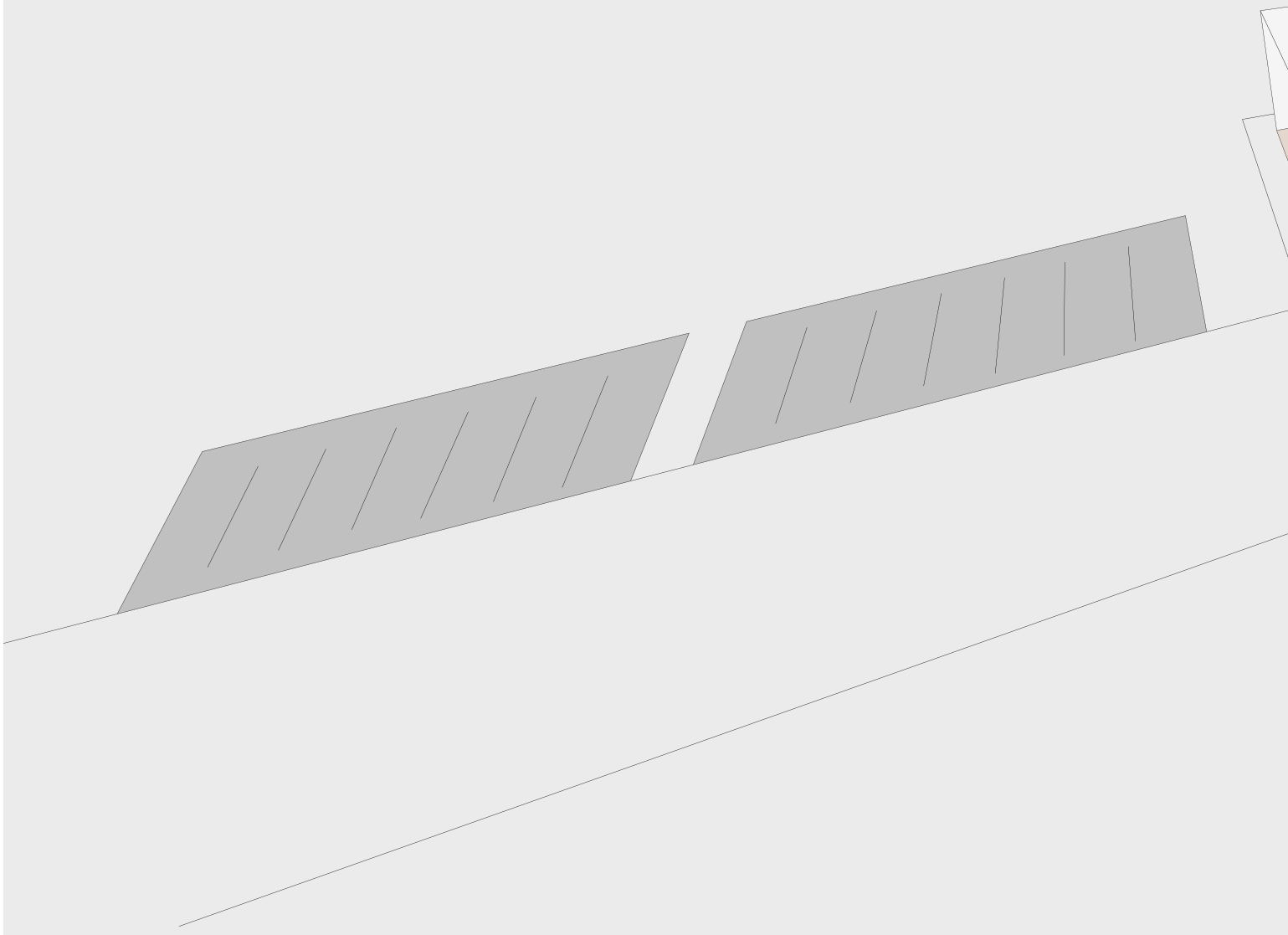
LiveLink



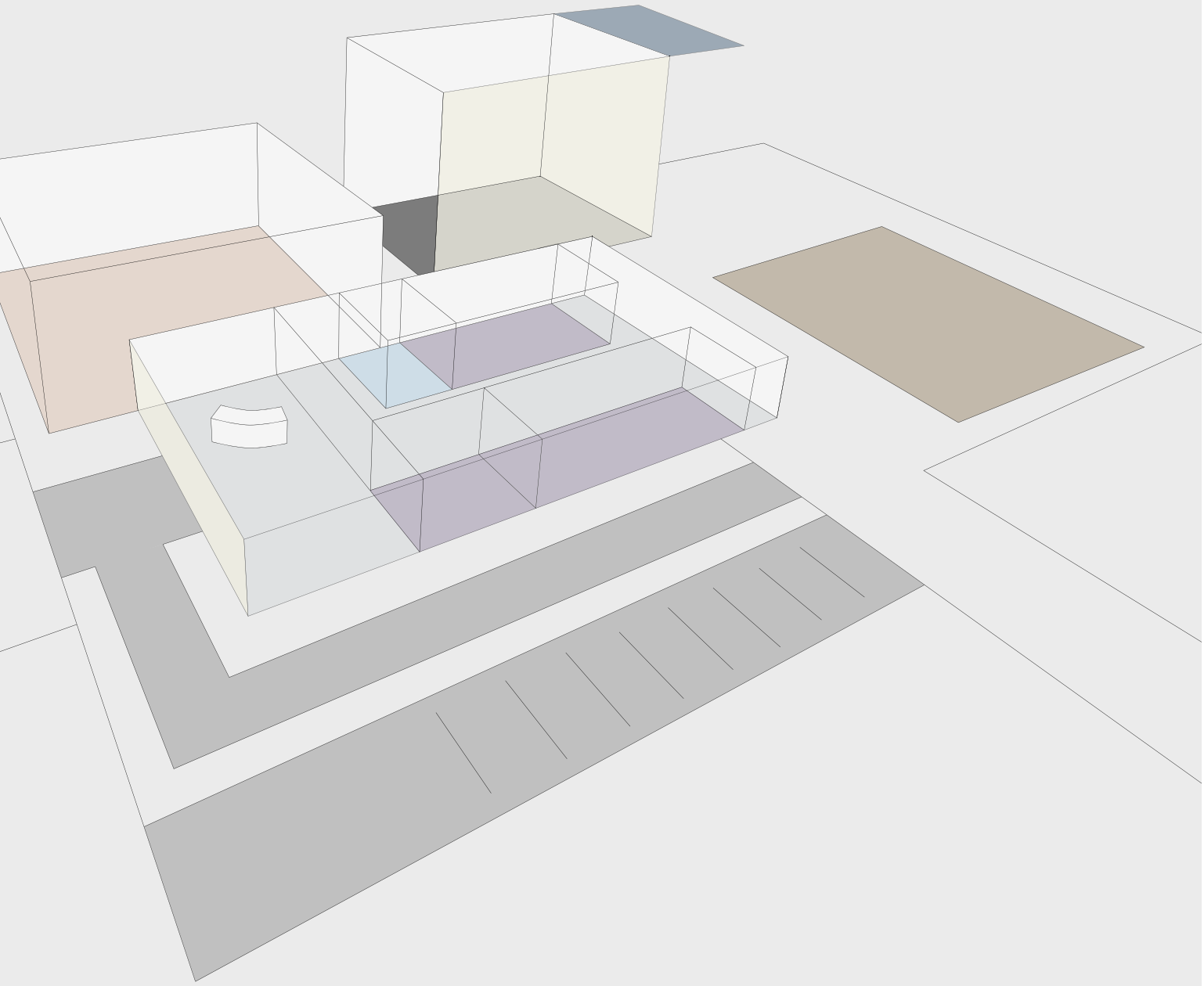
LiveLink
Flexible DALI light management system for energy saving with preset room configurations (use cases) and integrated WLAN module.

INDUSTRY

THE RIGHT SOLUTION FOR
EVERY APPLICATION



22 Entrance areas / corridors / stairways
26 Offices
30 Production halls
34 Warehouses
38 Canopied outdoor areas
42 Outdoor storage
46 Sanitary facilities
48 Car parks and paths
52 Facade illumination



Differing requirements demand the right lighting solutions in each case. Modern lighting technology in production environments provides the precondition for high productivity and occupational safety. Visual acuity and visual comfort are most important within the various office types, whereas in other areas e.g. corridors and stairways safety has maximum priority. The following pages show TRILUX luminaires which can be used variably in the individual industrial environments.

The products shown represent only a small selection of our lighting solutions. See the complete product spectrum at **www.trilux.com**.

ENTRANCE AREAS, CORRIDORS AND STAIRWAYS

THE FIRST IMPRESSION COUNTS

An attractive welcome for business partners, guests and employees

In many cases the entrance area is the first point of personal contact with a company and the prestigious importance of this is correspondingly high. The right light and suitable luminaires are decisive factors in achieving a harmonious overall impression. Entrance areas require a high and simultaneously uniform lighting level that facilitates orientation for visitors and employees without causing glare. Current trends are planar light and light systems enabling individual and decorative designing with colours using RGB colour mixing. TRILUX offers a wide range of lighting solutions with premium lighting effects and designs that offer new levels of flexibility for prestigious industrial architecture.

Functionality and good looks for stairways and corridors

When lighting corridors and stairways, functional aspects are often focused on – the areas must be illuminated perfectly to provide good orientation and enable safe movement. TRILUX luminaires offer even more: with their timelessly modern designs and attractive light, even long corridors and twisty stairways can be effectively displayed. A practical option: in areas with low traffic frequency, energy consumption can be cut without impairing safety by using a light management system with presence detection.

ENTRANCE AREAS

THE FIRST IMPRESSION
COUNTS

WW Control

LiveLink

Polaron IQ LED
The purist design of the Polaron IQ LED blends into interiors with a timelessly simple elegance. The product family with modular design provides maximum design flexibility thanks to various ring sizes, light emissions, RGB variants and accessories for several mounting methods.

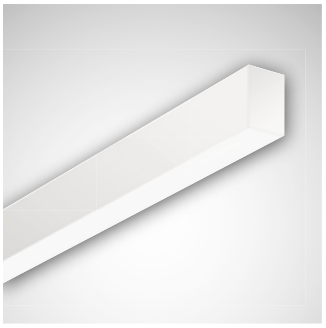
www.trilux.com/polaroniq

Inplana/Onplana LED
Inplana and Onplana provide glare-eliminated planar light for the first time in the downlight sector. The luminaires blend ideally into all surroundings thanks to their modern, purist design. Also suitable for wall mounting due to minimised direct glare and wide light emission to provide new planning and designing options.

www.trilux.com/inplana-onplana

Inperla Ligra Plus LED
Various beam characteristics, luminous flux packages and designs make the Inperla Ligra Plus LED the ideal lighting solution. A wide distribution optic, limited luminance levels and high glare reduction ensure a pleasant sense of light and maximum visual comfort.

www.trilux.com/inperlaligraplus



LC67 LED
The flexible LC67 light channel with a modular design provides high design flexibility for users – the result is light that ideally brings together functionality and appearance, whether in the form of a trimless recessed channel, with a covering edge, as a surface-mounted channel or as a suspended version with an indirect component for ceiling illumination.

www.trilux.com/lc67

CORRIDORS AND STAIRWAYS

INVITING AND ENERGY-SAVING

WW Control

LiveLink

Polaron IQ LED
The basis element of the Polaron IQ LED range is a filigree, round light profile providing maximum design flexibility and enabling countless combinations within the series – this enables lighting and luminaire design to be perfectly adapted to specific applications. RGB versions further expand the design flexibility.

www.trilux.com/polaroniq

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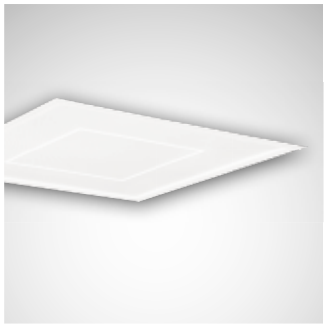
www.trilux.com/inplana-onplana

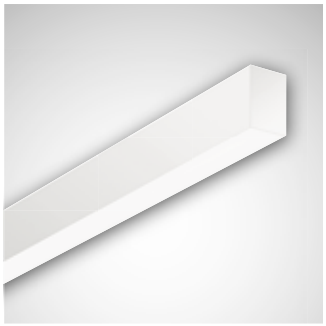
Inperla Ligra Plus LED
Various beam characteristics, luminous flux packages and designs make the Inperla Ligra Plus LED the ideal lighting solution. A wide distribution optic, limited luminance levels and high glare reduction ensure a pleasant sense of light and maximum visual comfort.

www.trilux.com/inperlaligraplus



Arimo Slim CDP and CDP-X LED
The Arimo Slim CDP and CDP-X LED recessed luminaires emit especially pleasant, glare-free light in accordance with standards, achieved with high-efficiency microprisms. The CDP-X optic also creates a unique, harmonious light effect thanks to its inner light edge.

www.trilux.com/arimoscdp



LC67 LED
The LC67 light channel system ideally presents architecture and provides especially homogeneous light without directly visible shadow gaps or differences in luminance. Available as standard in 10 different module lengths, the light channel can be installed horizontally and vertically around corners with T, L and X connectors and is ideal for corridors and stairways.

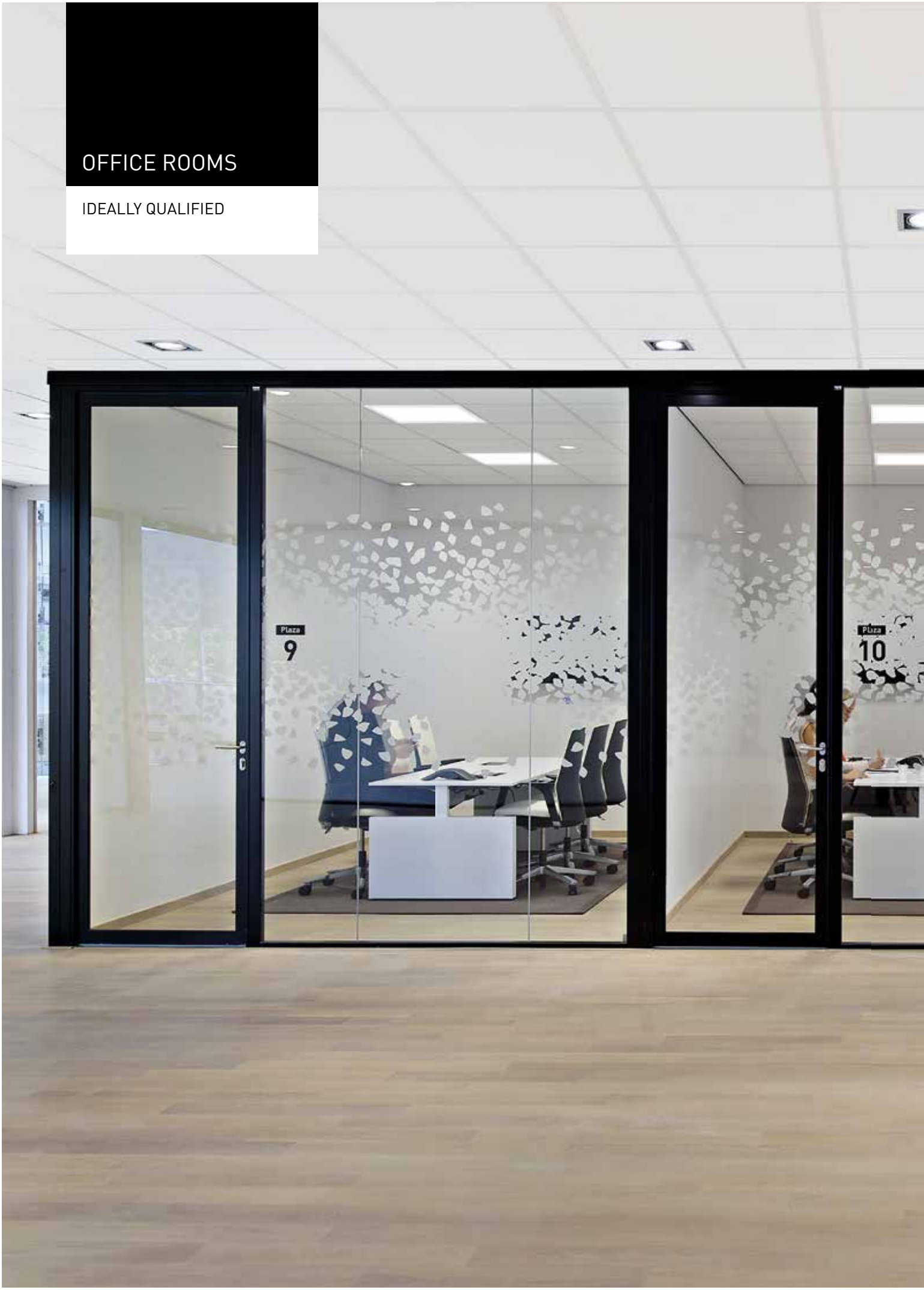
www.trilux.com/lc67

Ridos Slim LED
Tight niches, corridors and rooms where every centimetre counts – the filigree Ridos Slim LED with its slender dimensions is the ideal solution, expanding the application flexibility of the wide-ranging Ridos product family. Seamless continuous line arrangements are also ideal for corridors.

www.trilux.com/ridos-slim

OFFICE ROOMS

IDEALLY QUALIFIED



Quality, flexibility and efficiency are the key features of TRILUX lighting solutions for offices. The standard-compliant and glare-free illumination of rooms and individual workstations supports concentrated and fatigue-free work in the long run. If activities change, then lighting conditions can be rapidly modified to the new requirements – e.g. using an optimised lighting scene for computer screen work or for reading documents. Appearances are important as well – pleasant light and modern luminaire designs generate positive working atmospheres and in terms of energy efficiency, TRILUX luminaires set standards. In summary: TRILUX lighting solutions enable work to be carried out more easily, increase levels of well-being in offices and also cut operating overheads.

OFFICE ROOMS

IDEALLY QUALIFIED

WW Control

LiveLink

Belviso C1 LED
With completely uniform illumination, the Belviso C1 LED recessed luminaire creates high levels of well-being with its shadow-free light and provides lighting for computer screen workstations in accordance with standards. Active variants with white-white control emit relaxing or activating light according to requirements.

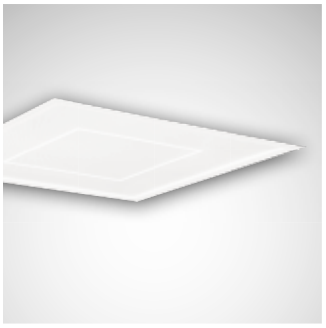
www.trilux.com/belvisoc1

Coriflex MRX LED
With its clear language of design and uniform illuminance across the complete luminaire length, Coriflex LED seamlessly blends into any room concept. Equipped with a louvre with micro-reflector technology, the Coriflex is also ideal for illuminating computer screen workstations (UGR19).

www.trilux.com/coriflex

Arimo Slim MRX LED
With micro-reflector technology (MRX), these recessed luminaires generate pleasant, glare-free light even at high luminous flux levels (UGR19 < 1,500 cd/m²). They also offer above-average energy efficiency.

www.trilux.com/arimosmrx

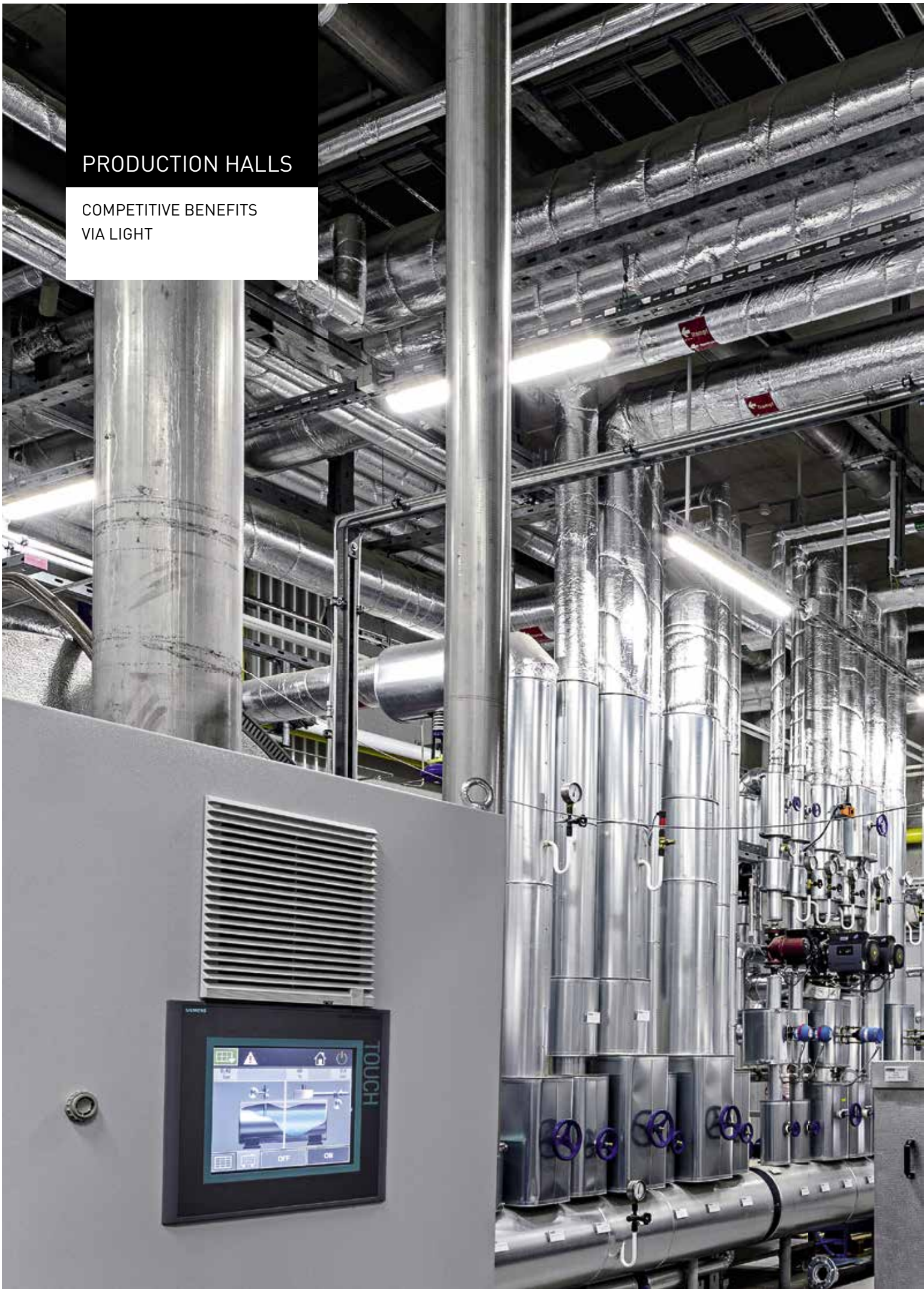


Arimo Slim CDP and CDP-X LED
The Arimo Slim CDP and CDP-X LED recessed luminaires emit especially pleasant, glare-free light in accordance with standards, achieved with high-efficiency microprisms. The CDP-X optic also creates a unique, harmonious light effect thanks to its inner light edge.

www.trilux.com/arimoscdp

PRODUCTION HALLS

COMPETITIVE BENEFITS
VIA LIGHT



Operating conditions prevalent in industrial production halls place high demands on the robustness of luminaires. According to the sector and specific operation, conditions may be especially humid or dusty and luminaires must withstand vibrations, knocks and temperature fluctuations as well as comply with maximum hygienic specifications, e.g. in the food industry. At the same time, optimum visual conditions are needed as these significantly affect productivity and safety in the operational environment. Current surveys show that the bright light is able to improve productivity by 13 % and reduce the rate of accidents by 11 % compared to conventional, obsolete lighting installations (source: A.T. Kearney).

Almost all production halls can be illuminated perfectly with the wide portfolio of TRILUX lighting systems. Thanks to energy-efficient LED technology, operating overheads can be drastically reduced compared to conventional luminaires. Especially important for production areas is that TRILUX luminaires have especially long lifespans due to inherently high quality. This prevents annoying, expensive disruptions to operations caused by maintenance work.

PRODUCTION HALLS

COMPETITIVE BENEFITS
VIA LIGHT

WW Control

LiveLink

E-Line LED
With various luminous flux levels and optics, the E-Line LED is ideal for all industrial lighting tasks. High energy efficiency cuts operating costs significantly, meaning that investments can be rapidly paid back. Just 44 seconds is all it takes to mount the E-Line LED unit without tools into existing E-Line trunking rails (T5/T8) with refurbishment projects.

www.trilux.com/e-line

Nextrema G3 LED
The Nextrema G3 LED featuring a high quality die-cast aluminium body is especially robust, providing highly reliable operation even in extreme conditions. Its long service life and high energy efficiency enable the rapid payback of investment costs and therefore low overall operating costs.

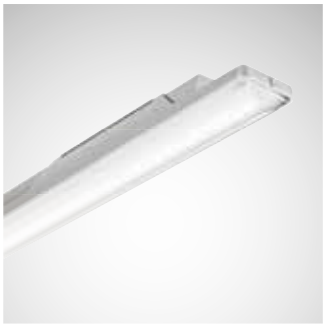
www.trilux.com/nextremag3

Mirona Fit LED
The Mirona Fit LED highbay luminaire is a reliable lighting solution for demanding conditions in industry. Even at high ambient temperatures of 55 °C the tough luminaire provides a long, low-maintenance service life. With up to 150 lm/W, the Mirona Fit LED is especially energy-efficient and reduces operating costs.

www.trilux.com/mironafit

E-Line IP54 LED
With an IP54 protection rating, the E-Line IP54 LED withstands dust and splash water and is ideal for challenging tasks in production halls. With HACCP compliance, the E-Line LED also meets maximum hygienic demands for the food industry. The luminaire is also especially efficient with up to 148 lm/W.

www.trilux.com/e-line



Araxeon LED
With a high quality luminaire body of glass-fibre reinforced polyester, the Araxeon LED is especially resistant to environmental factors. The energy-efficient and durable LED weather-proof luminaire features flexible lighting technology and optional control possibilities via sensors and an intelligent light management system.

www.trilux.com/araxeon

Ondo LED
The rotationally symmetric distribution Ondo LED illuminates especially high rooms perfectly and in compliance with current standards. The highbay is therefore ideal for storage, logistics and production halls and is also extremely attractive economically thanks to low investment costs and high savings potential.

www.trilux.com/ondo

WAREHOUSES

HUGE SPACES WITH
HUGE POTENTIAL

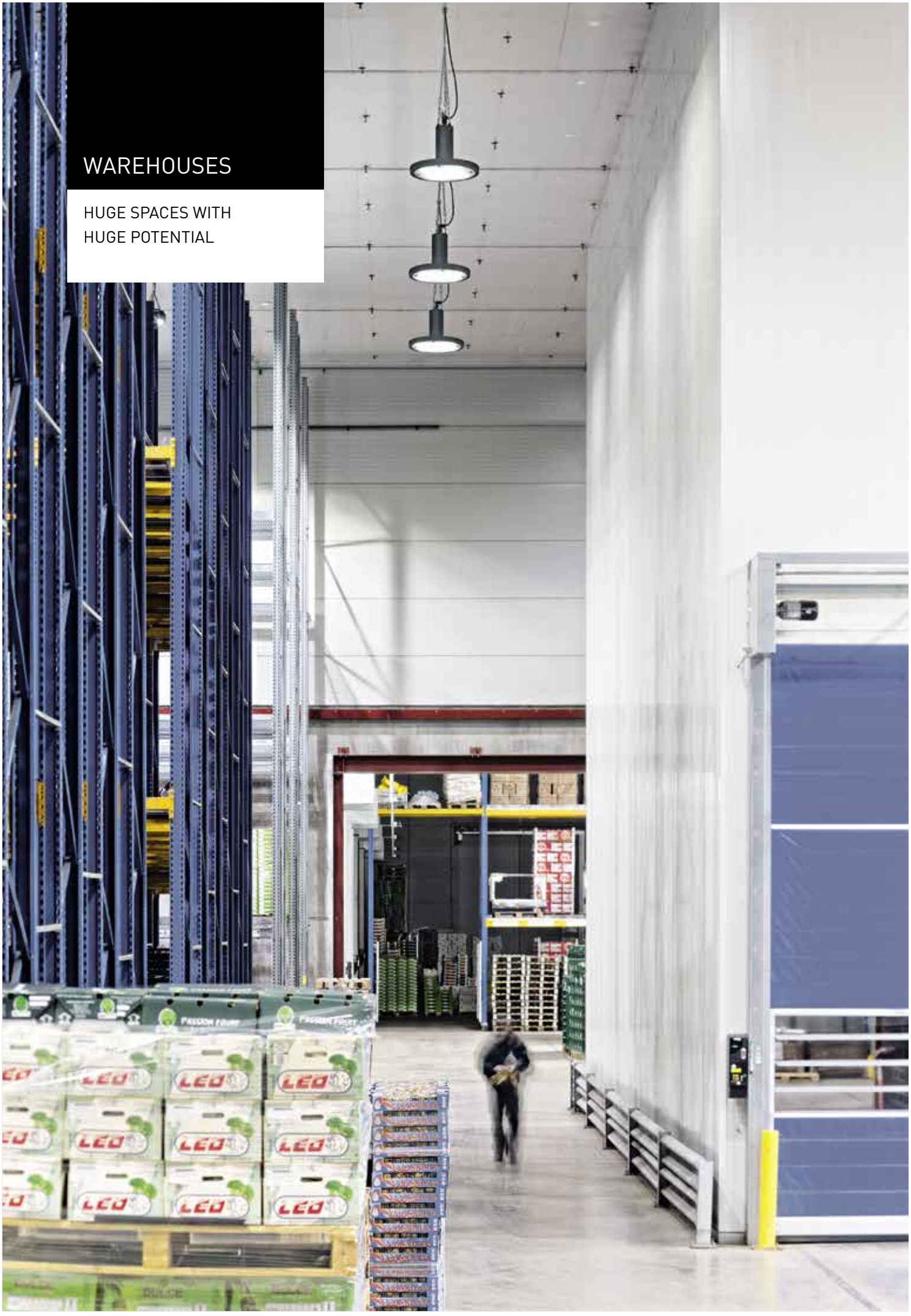
Warehouses are a world of their own – large, windowless halls with high shelving constructions and relatively narrow aisles where workers need to move quickly and safely. Ideal lighting solutions are high-performance and durable luminaires with narrow or narrow-wide distribution reflectors and high levels of glare reduction. Optimum visual conditions must exist when looking up towards the hall ceiling as well, e.g. when sorting goods at high heights with forklift trucks.

Warehouses are also typically large areas only entered for short periods of time and infrequently. To save energy, LED lighting solutions with light management systems featuring presence detection are recommended: luminaires are only switched on if people are in the detection range.

Tip: Specifically developed refurbishment solutions such as the TRILUX E-Line LED luminaire allow conventional lighting installations with T8 lamps to be simply and quickly upgraded.

WAREHOUSES

HUGE SPACES WITH
HUGE POTENTIAL



WW Control

LiveLink

E-Line IP54 LED
The frequently rough conditions existing in warehouses is no problem for the E-Line IP54 LED with its high protection rating. The E-Line LED also has an ideal price/performance ratio: high energy efficiency of 148 lm/W significantly cuts operating costs, meaning the rapid payback of investments.

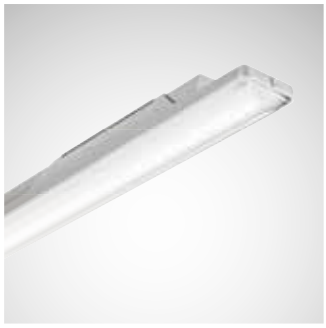
www.trilux.com/e-line

Mirona RL LED
The Mirona RL LED with its concise design is ideal for a range of applications. Its high protection rating and temperature resistance makes it especially reliable in tough industrial environments and uniform light provides optimum visual comfort.

www.trilux.com/mironarl

Ondo LED
The rotationally symmetric distribution Ondo LED illuminates especially high rooms perfectly and in compliance with current standards. The highbay is therefore ideal for storage, logistics and production halls and is also extremely attractive economically thanks to low investment costs and high savings potential.

www.trilux.com/ondo

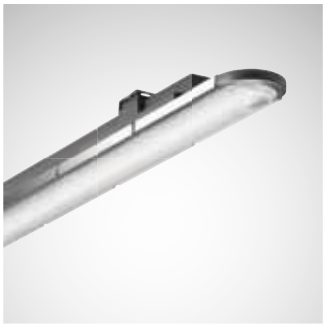


Araxeon LED
With a high quality luminaire body of glass-fibre reinforced polyester, the Araxeon LED is especially resistant to environmental factors. The energy-efficient and durable LED weather-proof luminaire features flexible lighting technology and optional control possibilities via sensors and an intelligent light management system.

www.trilux.com/araxeon

Mirona Fit LED
The Mirona Fit is the highly diverse lighting solution for warehouses and logistics halls thanks to three beam characteristics, three lumen levels and optional sensor and CLO versions. The 52,000 lumen version even makes 2:1 refurbishments possible. With a 50,000 hour service life even at high ambient temperatures of 55 °C, the luminaire is also durable and extremely reliable.

www.trilux.com/mironafit



Nextrema G3 LED
The Nextrema G3 LED featuring a high quality die-cast aluminium body is especially robust, providing highly reliable operation even in extreme conditions. Its long service life and high energy efficiency enable the rapid payback of investment costs and therefore low overall operating costs.

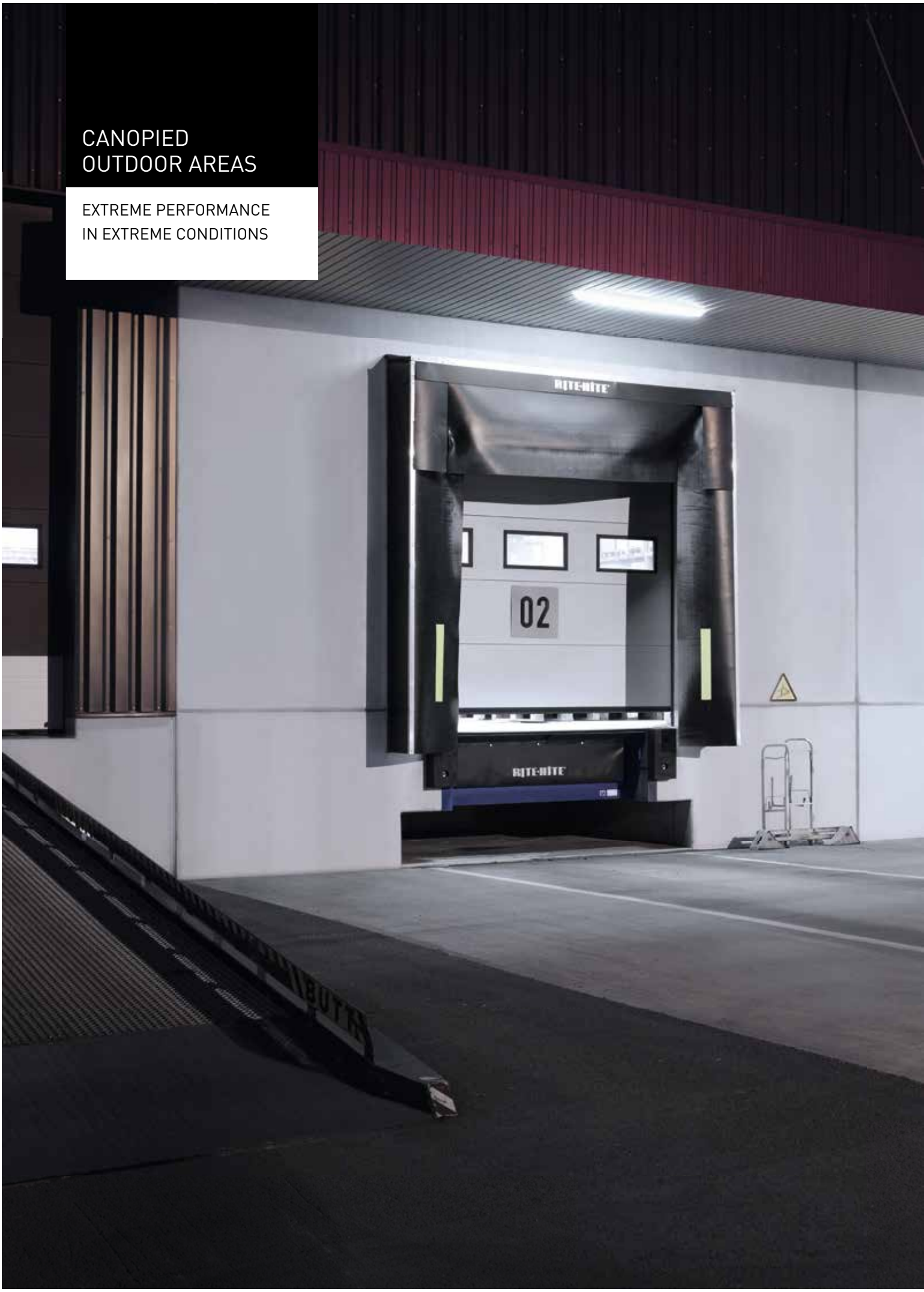
www.trilux.com/nextremag3

E-Line LED
With various luminous flux levels and optics, the E-Line LED is ideal for all industrial lighting tasks. High energy efficiency cuts operating costs significantly, meaning that investments can be rapidly paid back. Just 44 seconds is all it takes to mount the E-Line LED unit without tools into existing E-Line trunking rails (T5/T8) with refurbishment projects.

www.trilux.com/e-line

CANOPIED OUTDOOR AREAS

EXTREME PERFORMANCE
IN EXTREME CONDITIONS



Weather does what it wants – but this makes no difference to TRILUX luminaires for canopied outdoor areas. The luminaires have been designed for continuous operation in extreme application conditions, withstanding harsh weather thanks to a high protection rating and class as well as reliably resisting dust and soiling. Knocks and vibrations also have no effect on light quality or service life thanks to the tough luminaire construction. The TRILUX lighting solutions offer highly economic energy consumption: thanks to energy-efficient LED technology and a light management system with presence detection and constant light control, operating costs can be cut by up to 80 % compared to conventional solutions.

CANOPIED OUTDOOR AREAS

EXTREME PERFORMANCE
IN EXTREME CONDITIONS

WW Control

LiveLink

E-Line IP54 LED
With its high protection rating, the E-Line IP54 LED is also ideal for extreme applications such as canopied outdoor areas. Two lumen levels and three optics predestine the E-Line IP54 LED for a variety of lighting tasks. High energy efficiency of 148 lm/W significantly cuts operating costs, enabling the rapid payback of investments.

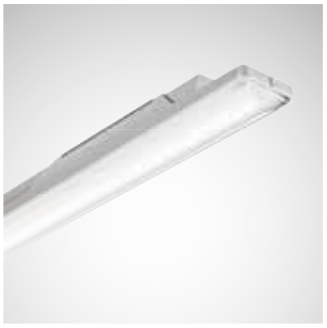
www.trilux.com/e-line

Nextrema G3 HF LED
The Nextrema G3 HF LED is especially robust, providing highly reliable operation even in extreme conditions. Its long service life and high energy efficiency enable the rapid payback of investment costs. Presence and daylight sensors enable configuration according to requirements and provide reliable lighting management.

www.trilux.com/nextremag3

Mirona QXS LED
The compact and therefore extremely space-saving Mirona QXS LED is a flexible all-rounder, ideal for almost all industrial applications. The luminaire is especially energy-efficient and thanks to various optics, provides best visual conditions for safe work in industry, whether indoors or in canopied outdoor areas.

www.trilux.com/mironaqxs



Araxeon LED
With a high quality luminaire body of glass-fibre reinforced polyester, the Araxeon LED is especially resistant to environmental factors. The energy-efficient and durable LED weather-proof luminaire features flexible lighting technology and optional control possibilities via sensors and an intelligent light management system.

www.trilux.com/araxeon

OUTDOOR STORAGE

TOUGH SOLUTIONS FOR
ADVERSE WEATHER

Baking heat, bitter cold, rain and snow – illuminating outdoor storage areas is a challenging task. Optimum visual conditions must exist at all times and in every type of weather for non-canopied areas. People need to quickly find their way about and safely move on foot and in vehicles. Text and references, e.g. labels and delivery notes on stored goods must be identified and read at a glance. Light in outdoor storage areas must therefore be bright without causing glare and keep operating costs under control, because with regard to area size energy consumption is sometimes significant. TRILUX lighting solutions for outdoor storage facilities feature high levels of functionality, mature and especially efficient lighting technology and tough workmanship with high protection ratings and classes, and, because all outdoor storage areas despite their common factors are unique, beam characteristics and lamp configurations can be flexibly modified to specific framework conditions.

OUTDOOR STORAGE

TOUGH SOLUTIONS FOR
ADVERSE WEATHER

Lumena Star 70 LED
The innovative specular optic of the Lumena Star 70 LED wide beam floodlight emits pleasant, glare-free light without disturbing light spill and compared to conventional lighting systems, saves energy by up to 40 %. Further savings potential is provided by optional features such as power reduction and light management systems.

www.trilux.com/lumenastar

Lumena 40 LED
Typical performance features of the Lumena 40 LED floodlight are its lightweight, filigree design and a robust, highly functional construction. The variety of light sources and many different optics provide maximum design flexibility when illuminating and accenting facades and buildings.

www.trilux.com/lumena

Lumega IQ LED
Lumega IQ LED post-top and bracket-mounted luminaires guarantee outstanding light distribution. Newly developed optical systems and a wide range of luminaire luminous flux levels enable individual adaptations to building-specific lighting tasks.

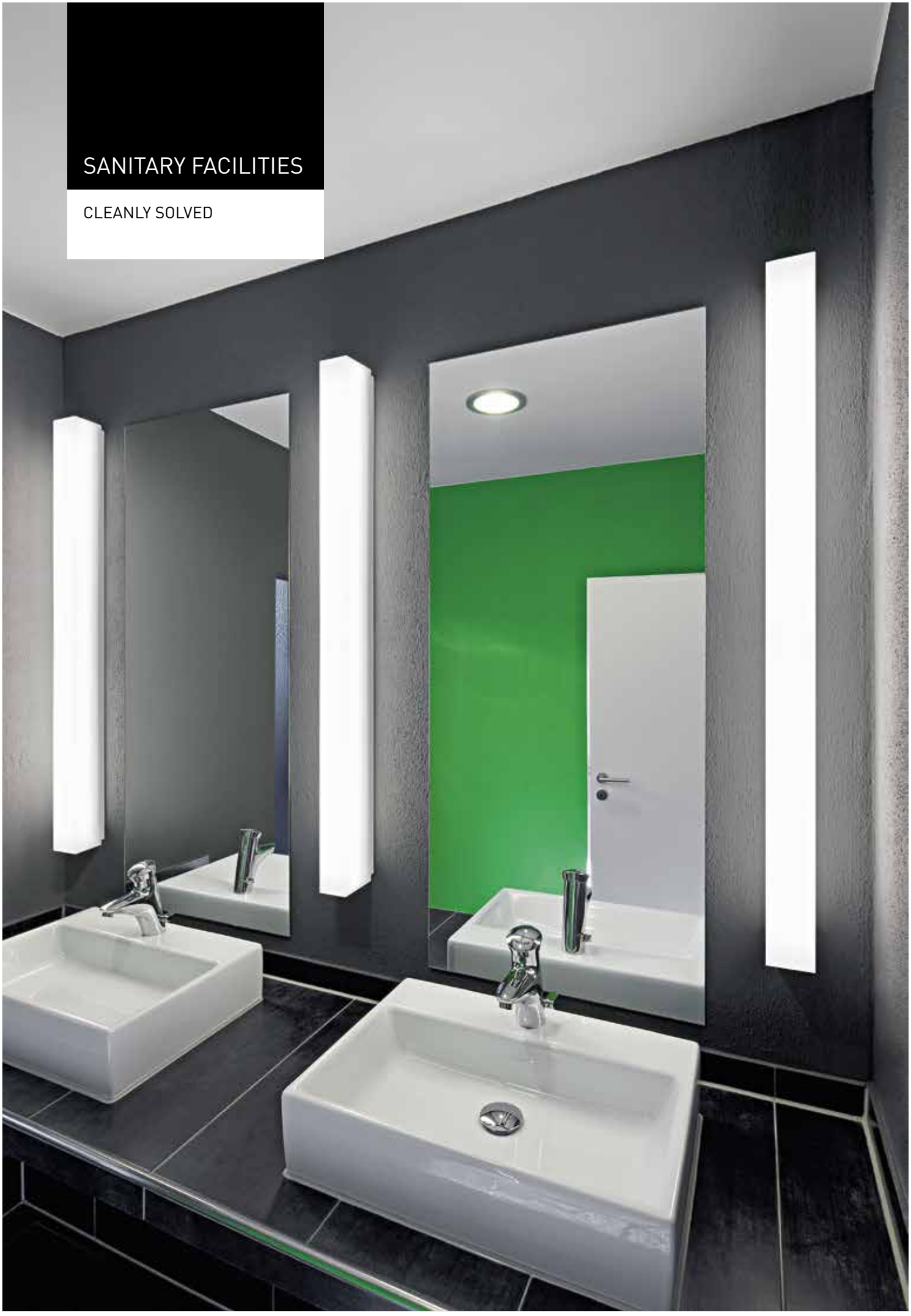
www.trilux.com/lumegaiq70

Viatana LED
The Viatana combines state-of-the-art LED technology and free-form reflector technology to achieve optimum luminous efficiency and maximum energy efficiency. Various luminaire luminous flux levels between 2,000 and 9,000 lumens ensure ideal illumination.

www.trilux.com/viatana

SANITARY FACILITIES

CLEANLY SOLVED



WW Control

LiveLink

Sanitary areas should look clean, bright and friendly. The challenge lies in the fact that tiled walls and floors easily communicate an excessively bright and sterile impression. Avoiding light reflections in mirrors also requires designing expertise – and the right products. Modern LED technology enables sanitary facilities to be illuminated without glare and can also create pleasant atmospheres by individually specifying the light colour for example. An important factor is that sanitary areas are often only used on an ad-hoc basis, meaning energy costs for lighting can be significantly cut by intelligent light management systems with presence sensors. Active luminaire versions with daylight sequences provide ideal solutions for the often window-less sanitary areas.

Inperla Ligra Plus LED
Various beam characteristics, luminous flux packages and designs make the Inperla Ligra Plus LED the ideal lighting solution. Active versions featuring white-white control simulate the course of daylight – an ideal solution for window-less sanitary areas.

www.trilux.com/inperlaligraplus

Acuro LED
The wall-mounted mirror luminaires with IP44 protection emit especially soft light thanks to a finely structured opal diffuser. The Active version is ideal for frequently window-less sanitary areas, supporting the natural day-night rhythm of people thanks to white-white control.

www.trilux.com/acuro

CAR PARKS, PATHS, AND FACADE ILLUMINATION

OUTDOOR AREAS IDEALLY PRESENTED

The right light is the right step

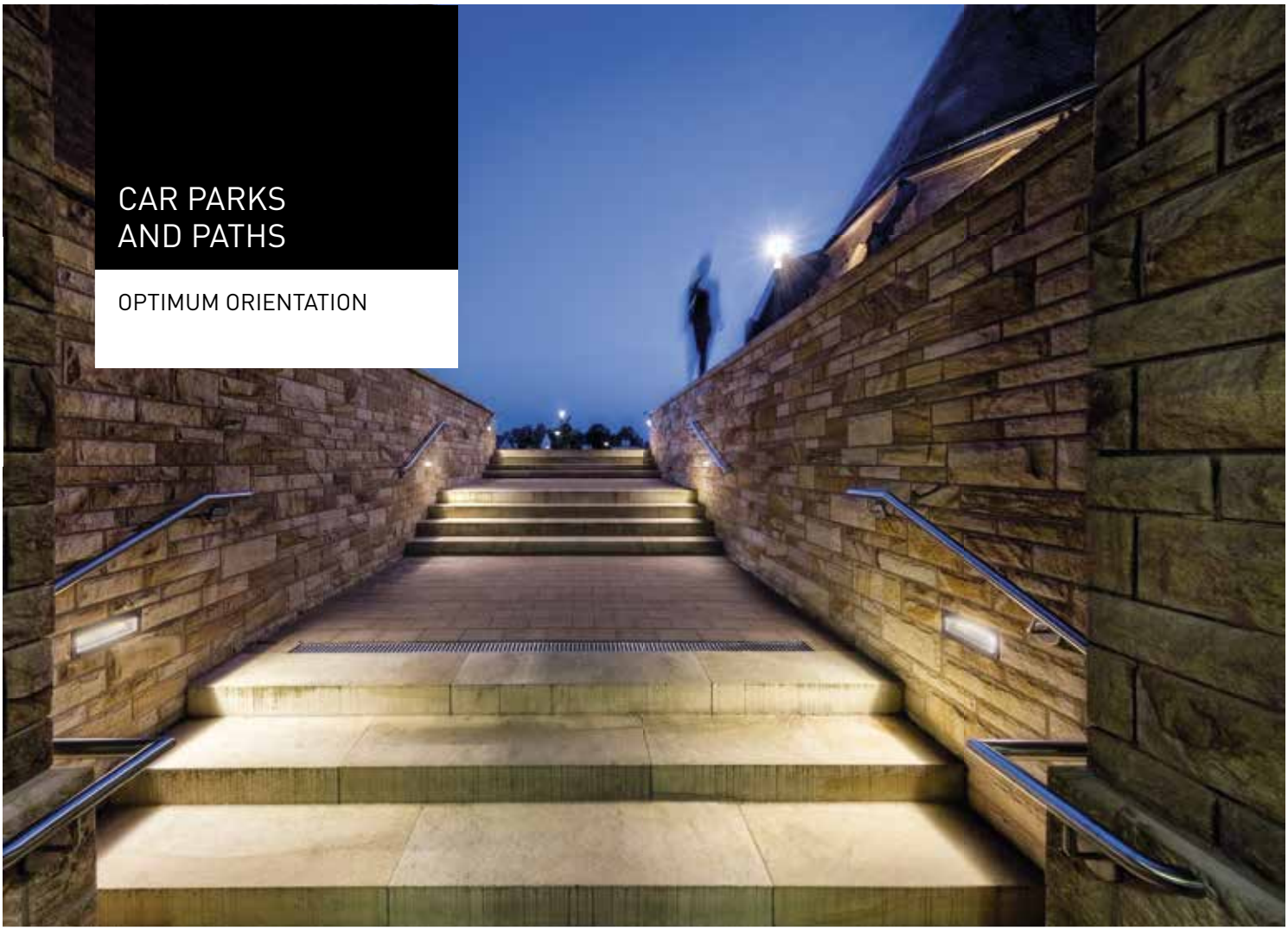
Safety and orientation have top priority when illuminating car parks and paths and outdoor lighting solutions must also be capable of withstanding highly adverse weather conditions and even vandalism. TRILUX luminaires are ideal for such applications thanks to their outstanding optics, highly durable materials and robust construction, ...and that's not all – the luminaires feature modern, purist designs that blend harmoniously into their surroundings and set attractive accents. The solutions also score points in terms of economic operation and the unusually low operating costs can be reduced even further with intelligent light management systems.

The ideal display of architecture and companies

When illuminating buildings and facades, functional, aesthetic and emotional aspects are focused on. Signage and entrance areas must be illuminated to provide quick and reliable orientation for visitors, while the architecture itself can be confidently highlighted using planar and accent lighting to reflect corporate design – e.g. with light colours in the company's own C.I. TRILUX LED solutions offer a wide spectrum of options.

CAR PARKS AND PATHS

OPTIMUM ORIENTATION



Lumega IQ LED
The newly developed optical systems of Lumega IQ LED post-top and bracket-mounted luminaires guarantee outstanding light distribution. Various MLT^{IQ} (multi-lens technology) lenses and a wide range of luminaire luminous flux levels enable individual adaptations to building-specific lighting tasks.

www.trilux.com/lumegaiq

Cuvia 40/60 LED
The modular design of the Cuvia 60 LED provides maximum flexibility with luminous flux levels and optical systems and makes future upgrades highly simple. The post-top and bracket-mounted luminaires feature high efficiency levels and impress across-the-board, from purchase to operating costs and maintenance.

www.trilux.com/cuvia40
www.trilux.com/cuvia60

ConStela LED
Supporting columns with various heights, various luminaire heads and the option of using flexibly settable spots create unique light columns with the ConStela LED. With the TRILUX Configurator, individual modules can quickly be combined to make custom-designed columns.

www.trilux.com/constela

884··· LED series
The decorative LED bollard luminaires 884··· LED feature highly simple installation and maintenance and the modular luminaire design enables upgrading to more efficient LED generations.

www.trilux.com/884

HS LED
The decorative HS bollard and wall luminaires ideally illuminate paths with light accents. Energy-efficient and with extremely low maintenance due to LED technology, the highly durable luminaires are a reliable partner in outdoor applications.

www.trilux.com/hs

Pareda
Pareda decorative recessed wall luminaires have two construction sizes, each with various recessing versions for flexible adaptation to diverse lighting tasks. High-quality workmanship, a high protection rating, durable materials and almost no maintenance make the Pareda ideal for applications in tough environments.

www.trilux.com/pareda

FACADE ILLUMINATION

PRESTIGIOUS EXTERIORS

Lumena Star LED
The innovative specular optic of the Lumena Star wide beam floodlight emits pleasant, glare-free light without disturbing light spill and compared to conventional lighting systems, saves energy by up to 40 %. Further savings potential is provided by optional features such as power reduction and light management systems.

www.trilux.com/lumenastar

Lumena 40 LED
Typical performance features of the Lumena 40 LED floodlight are its lightweight, filigree design and a robust, highly functional construction. The variety of light sources and many different optics provide maximum design flexibility when illuminating and accenting facades and buildings.

www.trilux.com/lumena

Faciella LED
Available in three construction sizes, the high performance, energy-efficient Faciella LED spot illuminates objects and buildings of various types and sizes in a uniform design. Various luminous flux levels and beam angles provide suitability for a variety of lighting tasks, enabling custom-designed light.

www.trilux.com/faciella

Lutera 90/100/200 LED
The low recess depth of the Lutera 90 LED ground-recessed spotlight enables use both indoors and outdoors. Differing beam angles and light colours ideally illuminate both objects and buildings and the intelligent sealing concept guarantees long-term, disturbance-free operation even in extreme conditions.

www.trilux.com/lutera90
www.trilux.com/lutera100
www.trilux.com/lutera200

TRILUX AKADEMIE

THEME DAYS
LED SEMINARS
WEBINARS

The TRILUX Akademie provides qualified training events for everyone professionally concerned with light. In addition to many topics about fundamental lighting expertise and electrotechnical aspects, light in practice, lighting design for indoor and outdoor applications as well as efficiency and economy, theme days, seminars and webinars also provide participants with many other facets of lighting.

Seminars which are highly respected in the lighting industry communicate fundamental, practical expertise. Another path to better knowledge are the theme days by renowned experts. The academy also follows new paths with webinars that offer special themes flexibly and with no need to travel.

Participants gain qualifications with all training formats in accordance with their previous knowledge and training targets. To increase learning and training effectiveness, a focus is placed on discussions, interactivity and direct communication between lecturers and participants.


Die Zukunft
liegt nicht
im Dunkeln.

TRILUX TOOLS

SIMPLE PLANNING WITH THE TRILUX EFFICIENCY CALCULATOR

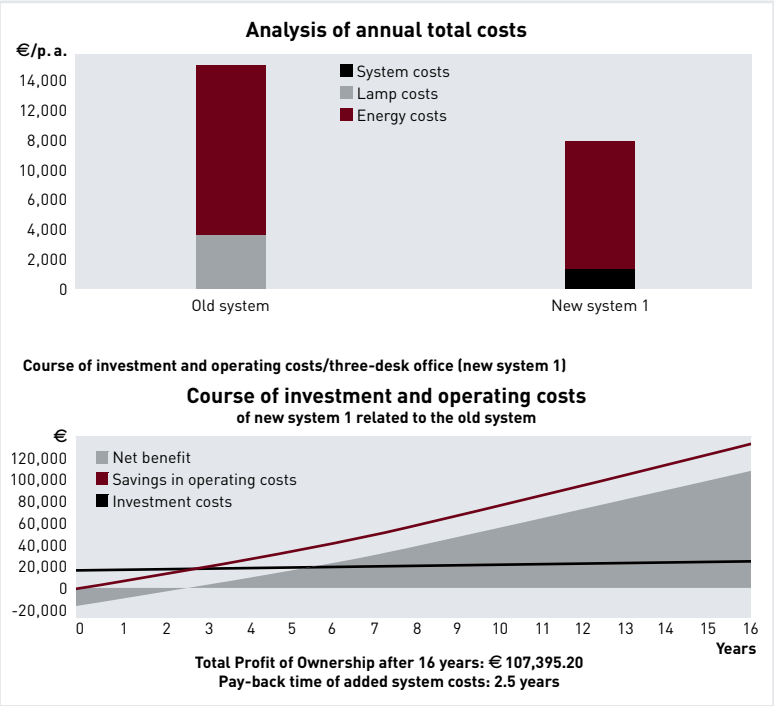
With the Efficiency Calculator, TRILUX provides a tool to compare the economy of up to five lighting systems with each other. The savings potential of new systems can be simply determined and documented. For example, the efficiency calculator calculates the pay-back period of a new system with LED lighting. The profit level achieved by running savings over and above the added investment during the complete system life cycle can also be calculated.

Analysis and graphic processing

For calculation purposes, all economically relevant parameters are entered into a concise input form. Luminaire, system and utilisation data are taken into account as well as system, lamp, maintenance and energy costs. Connection to the TRILUX online catalogue ensures that product data is always up-to-date. Clear graphic displays of the results, e.g. the analysis of annual total costs or the sequence of investment and operating costs make it all clearly understandable at first glance.

Easy use of data

Calculation results are summarised in easily understandable tables to support customer-specific decision processes. These include statements concerning energy efficiency, reduction of carbon dioxide, costs and pay-back periods for relevant planning fundamentals. Individually created projects can of course be saved to a local PC, archived and then processed later. Creating a project report is also useful. This includes all project data, evaluations, diagrams as well as data sheets of the products used.



www.trilux.com/efficiency-calculator

TRILUX ONLINE

SIMPLY WORKING MORE EFFICIENTLY

SIMPLIFY YOUR WORKING PROCESS.

SIMPLIFY YOUR TEAMWORK.

SIMPLIFY YOUR SEARCH.

SIMPLIFY YOUR PROJECT MANAGEMENT.

SIMPLIFY YOUR CONFIGURATION.

SIMPLIFY YOUR WORKSPACE.

Simply working more efficiently – with the new TRILUX website
Concise, practical and with intuitive use – this is TRILUX online from now on. The new TRILUX website is not only now more tidy and modern, but each area, screen and function has been newly designed. Requisite information is found at the right location and daily work is now supported more than ever.

The online presence now unites the classic website, the product catalogue, global references, configurators and the TRILUX portal. This portal contains a project management system in which all articles for a project can be saved. The portal automatically brings together all relevant data, so that product information, tender documents, planning data and prices are all available with one click. Online work was never as simple as this!

Simply everywhere and any time
Each area of the website has been optimised for PCs, tablets and smart phones. This means that all functions are available at all times and in a user-friendly way. Whether you're in the office, out-and-about or at home – TRILUX helps you to master your daily work anywhere.

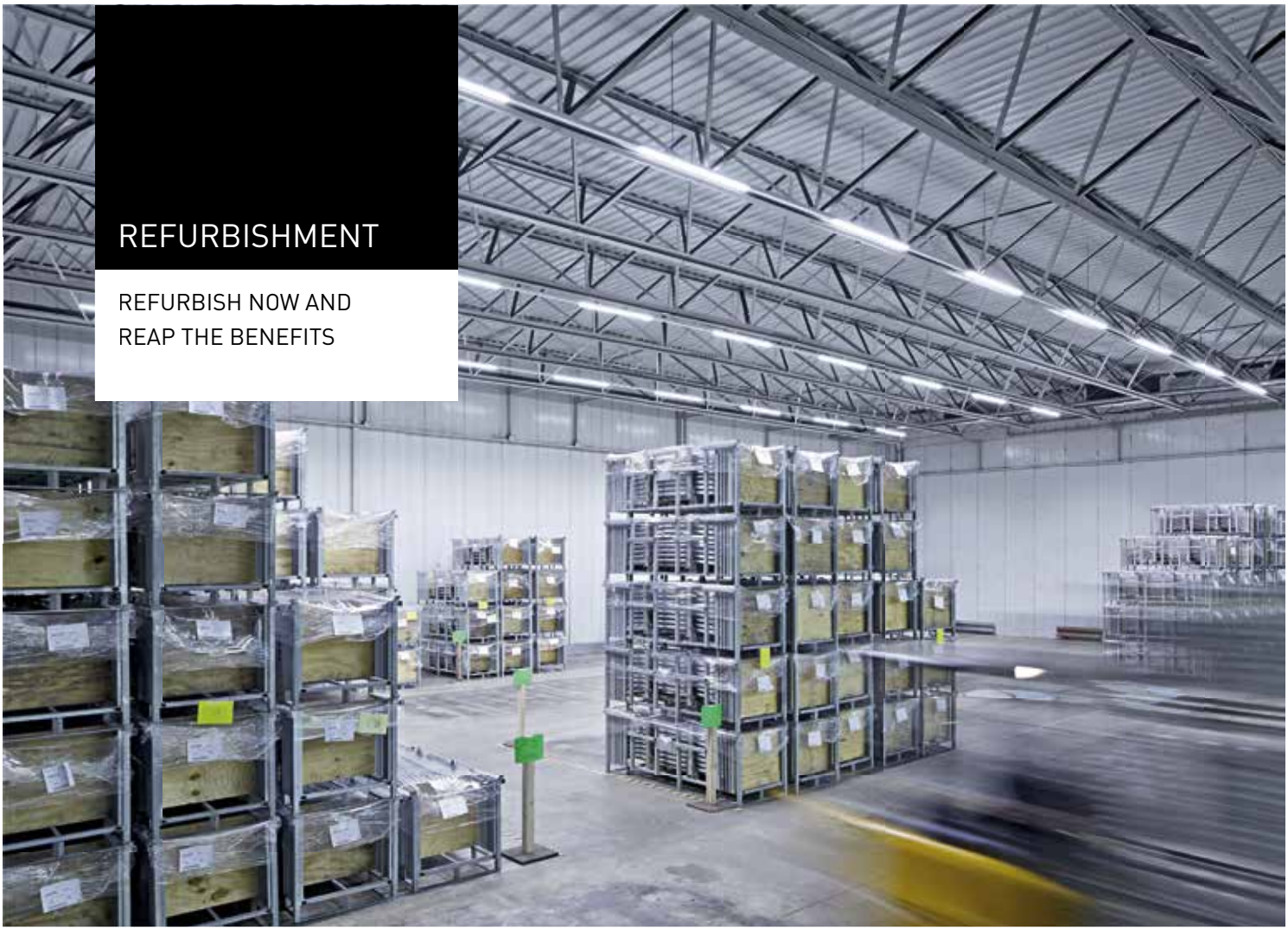
Simply configuring
It was never simpler to configure a product yourself, for example from a single module to a complete continuous line in less than one minute. Following configuration, a parts list is automatically created with prices and all requisite data.

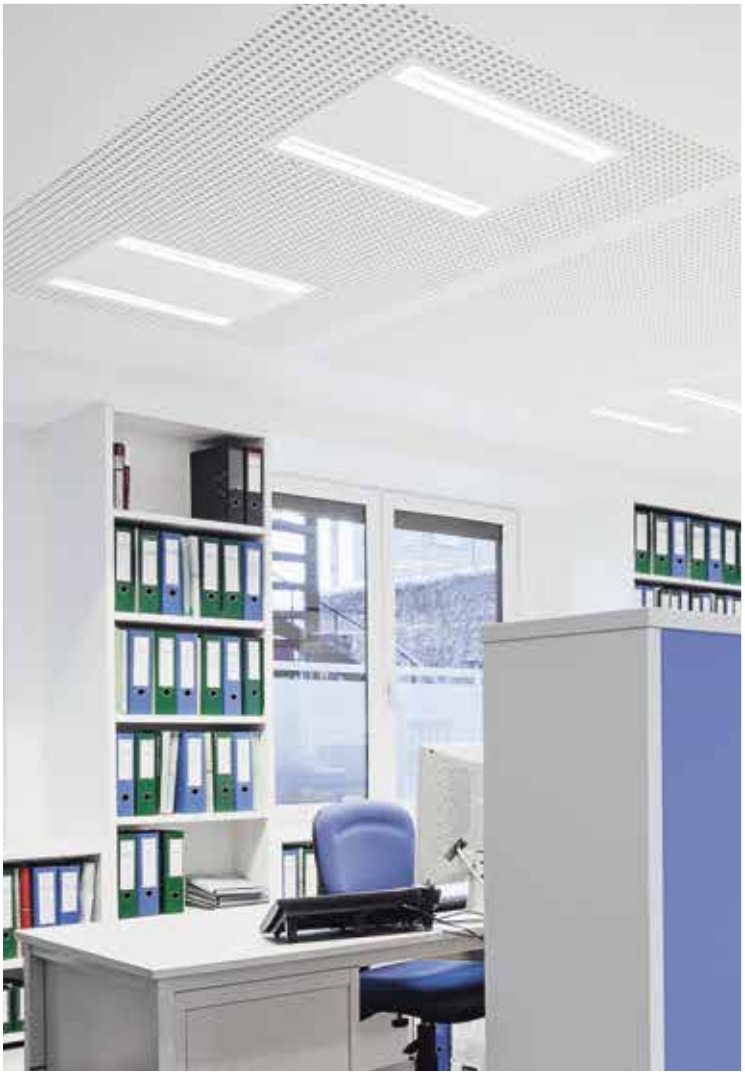
Simply managing projects
Product data from the online catalogue, your configurations or important website content – all of this can be saved in the TRILUX Portal. You can also create project folders and work simultaneously with several people as part of a team. The integrated timeline with comment functionality offers a continuous overview of the current project status.

www.trilux.com

REFURBISHMENT

REFURBISH NOW AND
REAP THE BENEFITS



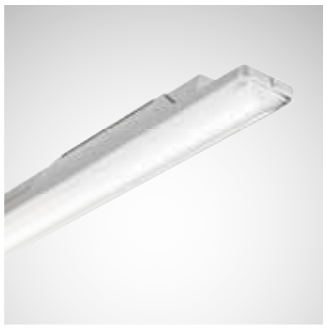


Many reasons exist for upgrading existing lighting installations. The refurbishing of lighting installations offers a whole host of advantages, be they reducing costs by increasing efficiency, extending maintenance intervals with modern, durable technology or improving the quality of light by implementing lighting design according to the latest recommendations.

Light according to requirements is an important competitive advantage, but poorly illuminated rooms and areas on the other hand represent sources of danger and errors. Whether it's for a company, an office or an external area – the demands made on modern lighting solutions are increasing across the board. At the same time, new forms of technology and systems enable the implementation of lighting concepts aligned to the needs of the people. Energy efficiency, light guidance, construction designs, control and networking – today's light is much more than merely illumination.

Ideally suitable for refurbishment projects:

E-Line LED



Araxeon LED

Mirona Fit LED

Arimo Slim LED

Lumega IQ LED

Cuvia 40/60LED

Lumena 40 LED

Lumena Star LED

From consultation to implementation, our light experts will be happy to support you with your lighting project: **www.trilux.com/light-experts**

LIGHT EXPERTS

REFURBISHMENT

REFURBISH NOW AND
REAP THE BENEFITS

The basis for economic upgrading is highly efficient LED products, with optimum savings potential achieved with the use of light management systems. With this in mind, TRILUX works intensively on researching and developing new principles and methods which help bring the benefits of the latest technology and the many years of experience the TRILUX Group has to our customers.

Applicable legislation and guidelines specify not just the responsible handling of resources – legislative authorities also often offer attractive subsidy programmes to support upgrading to modern lighting solutions. Refurbishment projects are frequently highly complex. This ranges from a precise knowledge of the application and exact development of individual solutions to expert implementation incorporating the best possible efficiency levels. TRILUX provides support for upgrading lighting installations, from assessing the current status and planning to installation and financing. Even with subsidy applications for the financing of lighting projects, TRILUX is the right partner for professional lighting. With high levels of experience and performance in production and technology, leading the way in research and development and with a close, direct proximity to customers in all applications.

That's the TRILUX philosophy – Simplify Your Light.

Modernisation of a conventional T8 system to efficient E-Line LED continuous lines (example: 4,000 lumens)

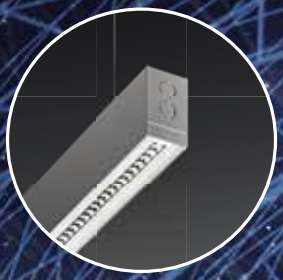
Energy efficiency example Warehouse	**Old system**	**New system LED**	**New system LED + light management (LM)****
Luminaire	Continuous line, 1 x 58 W, CCG	E-Line LED 4000 nw, narrow distribution	E-Line LED 4000 nw, narrow distribution
Power consumption per luminaire	66 W	29 W	29 W
Number of luminaires in building	63 pieces	63 pieces	63 pieces
Total power consumption	4,158 W	1,827 W	1,827 W
Kilowatt hours p.a.	16,632 kWh	7,308 kWh	4,751 kWh
Energy costs p.a.*	€ 4,973	€ 2,185	€ 1,420
Energy saving potential		**56 %**	**71 %**
Saved kilowatt hours p.a.		9,324 kWh	11,881 kWh
Energy savings Ø p.a.*		€ 2,788	€ 3,553

* Based on a nominal price of € 0.23 per kWh in 2016 and an annual inflation rate of 5% over 12 years (each with 4,000 hrs.) of service life.
** Additional energy savings of 35% can be achieved through the use of a light management system (presence detection and daylight-dependent regulation).

Calculate your LED refurbishment project for energy efficiency, CO_2 savings, costs and pay-back periods at **www.trilux.com/efficiency-calculator.**
Our light experts will be happy to support you with optimum planning and implementation. **Simply contact us!**

TRILUX XPERIENCE

DIVING INTO THE WORLD
OF LIGHT



With the new XPERIENCE internet platform, we transform the fascination of light in all its facets into genuine experiences, ranging from emotional effects to savings potential. A filter function sorts application examples where required according to themes and applications. Those searching specifically for energy savings potential in the industrial sector or looking for information about corresponding lighting solutions find suitable offers in next to no time, and of course projects, products and technical trends, provided in the form of articles, interviews, videos and image galleries.

www.trilux.com/xperience

Entrance areas

Polaron IQ LED
www.trilux.com/polaroniq

Inplana/Onplana LED
www.trilux.com/inplana-onplana

Inperla Ligra Plus LED
www.trilux.com/inperlaligraplus

Corridors, stairways

Polaron IQ LED
www.trilux.com/polaroniq

Inplana/Onplana LED
www.trilux.com/inplana-onplana

Inperla Ligra Plus LED
www.trilux.com/inperlaligraplus

Office rooms

Belviso C1 LED
www.trilux.com/belvisoc1

Coriflex MRX LED
www.trilux.com/coriflex

Arimo Slim MRX LED
www.trilux.com/arimosmrx

Production halls

E-Line LED
www.trilux.com/e-line

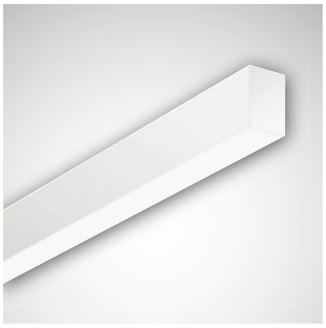
Nextrema G3 LED
www.trilux.com/nextremag3

Mirona Fit LED
www.trilux.com/mironafit

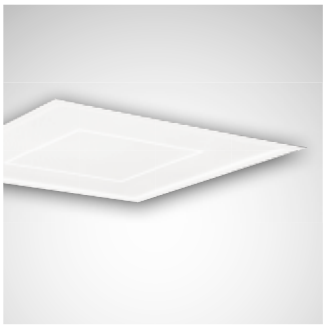
WW Control

LiveLink

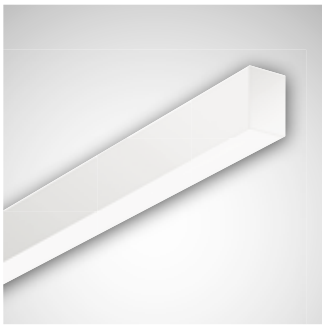
LC67 LED
www.trilux.com/lc67



Arimo Slim CDP and CDP-X LED
www.trilux.com/arimoscdpx

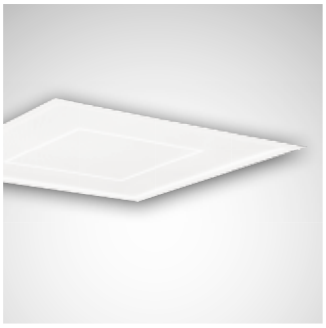


LC67 LED
www.trilux.com/lc67



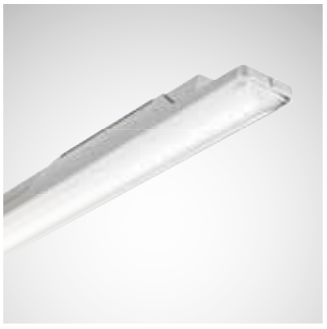
Ridos Slim LED
www.trilux.com/ridosslim

Arimo Slim CDP and CDP-X LED
www.trilux.com/arimoscdpx



E-Line IP54 LED
www.trilux.com/e-line

Araxeon LED
www.trilux.com/araxeon



Ondo LED
www.trilux.com/ondo

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Simply contact us!

Warehouses

E-Line IP54 LED
www.trilux.com/e-line

Mirona RL LED
www.trilux.com/mironarl

Ondo LED
www.trilux.com/ondo

Canopied outdoor areas

E-Line IP54 LED
www.trilux.com/e-line

Nextrema G3 HF LED
www.trilux.com/nextremag3

Mirona QXS LED
www.trilux.com/mironaqxs

Outdoor storage

Lumena Star 70 LED
www.trilux.com/lumenastar

Lumena 40 LED
www.trilux.com/lumena

Lumega IQ LED
www.trilux.com/lumegaiq70

Sanitary facilities

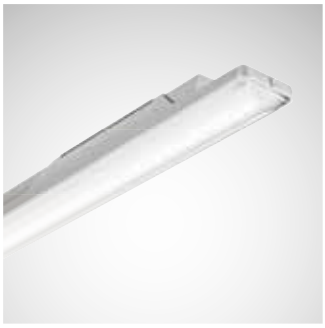
Inperla Ligra Plus LED
www.trilux.com/inperlaligraplus

Acuro LED
www.trilux.com/acuro

WW Control

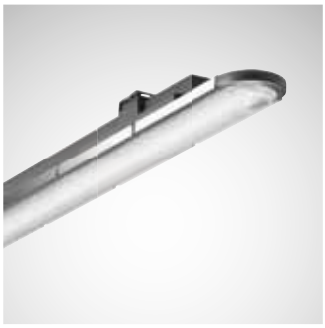
LiveLink

Araxeon LED
www.trilux.com/araxeon



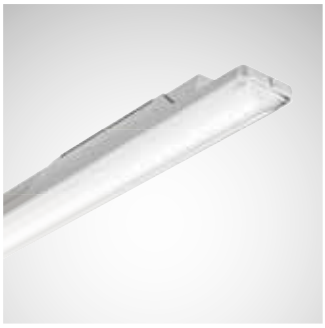
Mirona Fit LED
www.trilux.com/mironafit

Nextrema G3 LED
www.trilux.com/nextremag3



E-Line LED
www.trilux.com/e-line

Araxeon LED
www.trilux.com/araxeon



Viatana LED
www.trilux.com/viatana

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Parking areas/paths

Lumega IQ LED
www.trilux.com/lumegaiq

Cuvia 40/60 LED
www.trilux.com/cuvia40
www.trilux.com/cuvia60

ConStela LED
www.trilux.com/constela

884··· LED series
www.trilux.com/884

HS LED
www.trilux.com/hs

Pareda
www.trilux.com/pareda

Facade illumination

Lumena Star LED
www.trilux.com/lumenastar

Lumena 40 LED
www.trilux.com/lumena

Faciella LED
www.trilux.com/faciella

Lutera 90/100/200 LED
www.trilux.com/lutera90
www.trilux.com/lutera100
www.trilux.com/lutera200

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