LIGHTPOINT.

An ETAP publication | 2011-1

UM2 diffusers

ETAP
EXCELLENT LIGHTING, SAVING ENERGY

The crowning glory

The French Ministry for the Environment, located in La Grande Arche in the Parisian La Défense neighbourhood, also earned the GreenLight certificate.

In 2010 a number of our customers were once again awarded the GreenLight certificate by the European Commission. A crowning glory for their efforts in the area of sustainable lighting. The French Ministry for the Environment, located in La Grande Arche in the Parisian La Défense neighbourhood, also earned the GreenLight certificate.

At least 30 % energy savings

The European Commission aims to encourage businesses and authorities to light their buildings in an energy-efficient way with the GreenLight programme. GreenLight Partners commit to save at least 30 % energy in their lighting systems. In exchange they can use the GreenLight logo in their communication.

Would you like to become a GreenLight Partner?

ETAP will help you to secure the GreenLight certificate. For example, we conduct feasibility studies and assist you with the application process.
Interested? Contact your ETAP adviser.

New GreenLight Endorser:

- Roswag Architects (Germany)

New GreenLight Partners:

- Areva NP (France)
- Bosch Diesel Systems (France)
- CAF d'Arras (France)
- Collège Aimé Césaire (France)
- Kampffmeyer Food Innovation GmbH (Germany)
- La Grande Arche, la Défense (France)
- Nestlé France (France)
- Robert Bosch SAS (France)

[further information: www.etaplighting.com]
brochure: downloads > brochures > GreenLight
website: www.eu-greenlight.org

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LED

Ghent college of higher education sets example

The Catholic Sint-Lieven College in Ghent makes high demands on its lighting. The school familiarises students with the latest technologies in the area of home electronics in its home electronics lab. It is therefore only logical that they would look for the most advanced and energy-efficient solutions for their own lighting. ETAP's latest Flare LED downlights perfectly met these requirements.

With the excellent performance of the Flare LED downlights only nine units were necessary for the entire space.

Research on the latest home electronics technologies

In the centre of the home electronics lab at the Ghent Sint-Lieven KaHo, a small House of the Future has been set up. "It is our showpiece," according to coordinator Sylvie De Muynck, "it sets an example for the entire school. Here, electrical engineering students learn all about the latest home electronics technology. To do so we closely monitor the market. For lighting we partner with ETAP. We meet with them twice a year in order to exchange experiences and to discuss which new products we can integrate, new LED lighting, for example, or the latest light control systems."

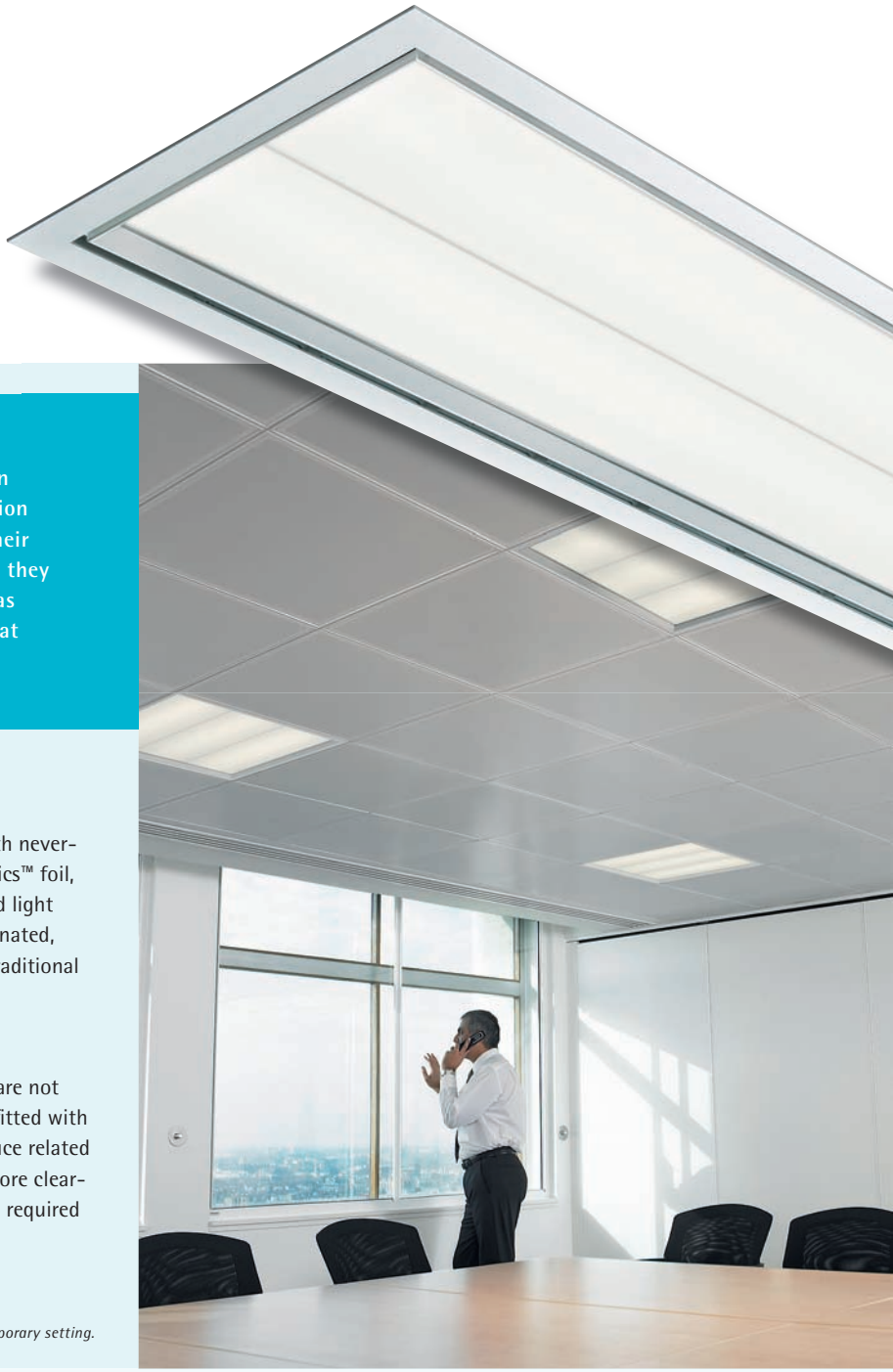
In the home electronics lab electrical engineering students learn all about the most advanced lighting technologies.

LED downlights save energy and costs

in the passageway to the polyvalent room was renewed. "Originally some 60 spots were planned to achieve a lighting level of 100 to 150 lux," states Eddy Snauwaert of ETAP. "With the high light performance and excellent light distribution of the new Flare LED downlights (D4), however, we were able to achieve the same lighting level with only nine luminaires, which not only saves energy, but also benefits the budget. And replacing light bulbs is so passé! Furthermore, the space is beautifully lit, thus showcasing the authentic atmosphere and the bricks in various colours."

UM2

A different perspective on diffusers



Diffusers are still gaining in popularity. They pop up in all possible sectors and applications. Pleasant perception of space and easy maintenance are major factors in their success. But in terms of light performance and design they often do not score as well. ETAP's UM series, which was recently expanded to include the UM2, breaks with that tradition.

MesoOptics™ for efficient diffusers

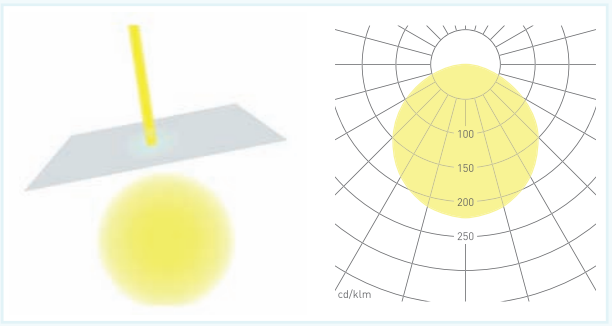
With the UM series, ETAP developed diffuser luminaires with never-before-seen efficiency, due, among others, to the MesoOptics™ foil, which lets through 92 % of the light and ensures controlled light distribution. The full surface of the diffuser is evenly illuminated, without lamp images. Light performance exceeds that of traditional diffusers.

More light with fewer luminaires

With the UM2, ETAP goes one step further. The luminaires are not only equipped with MesoOptics™ technology, but are also fitted with internal reflectors, which limit internal reflections and reduce related light loss to an absolute minimum. They provide an even more clear-cut light distribution. This results in fewer luminaires being required to light a space.

The UM2 perfectly fits into any contemporary setting.

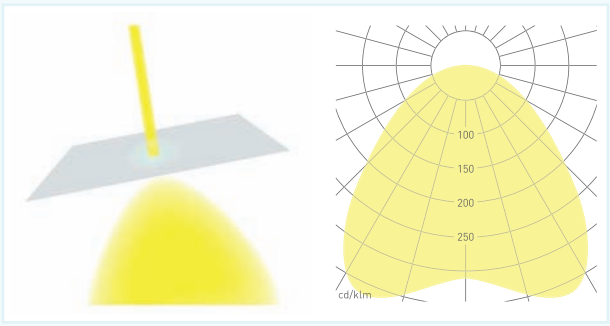
Traditional diffuser



Traditional diffuser with approximately 30 % light loss

Traditional diffusers evenly distribute light in all directions.

MesoOptics™



MesoOptics™ lets through 92 % of the light.

MesoOptics™ micro structures guarantee controlled light distribution.

Minimalist design, perfect finish

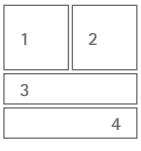
ETAP paid a lot of attention to design and finish in the development of the UM2. The simple lines give the UM2 a highly contemporary look and feel. The luminaires are stylishly finished with edges in extruded aluminium, lacquered white . MesoOptics™ foil is placed on safety glass.

The latest product in the UM family can also be easily built into the ceiling, with its mounting depth of just 100 mm. The UM2 series is available in square and rectangular versions and can be fitted with integrated daylight control, emergency power supply units or air extraction.

EASY MAINTENANCE

Replacing a light bulb? Thorough cleaning? General maintenance? Nothing is more simple. Thanks to its unique hinged system, no screwdriver is required. Press, slide, rotate and the optics open up on one side. The optics are secured on the other side by means of a hinged lock.

The luminaires are stylishly finished with countersunk aluminium edges.

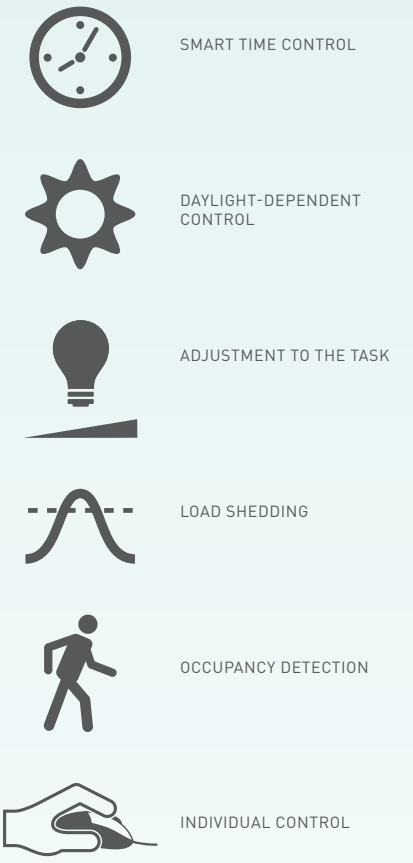


1. Square UM2 three-lamp with emergency power supply unit
2. VSquare UM2 four-lamp with air extraction
3. Rectangular UM2 two-lamp with ELS daylight control
4. Rectangular UM2 one-lamp

[further information: www.etaplighting.com]
brochure: downloads > brochures > UM2

Light control systems do not have to be complex and expensive

In practice a good light control system can save up to 75 % energy. However, the initial cost is often fairly high, which is why ETAP launches two lower priced control systems: EasyDim for local light control and ELM Lite, a new version of ELM, tailored for smaller buildings.



With Excellum's six control strategies you will save 75 % energy.

ELM Lite

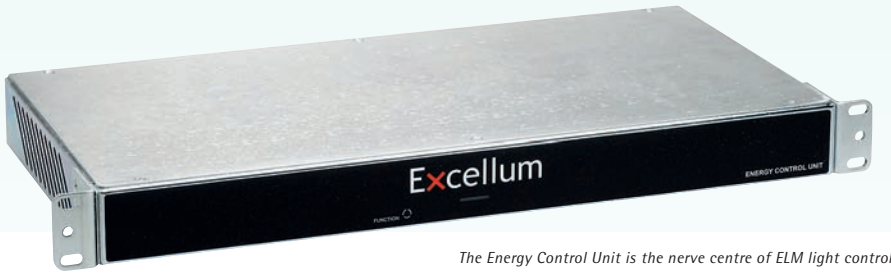
Full light control for smaller projects

ELM Lite is a slimmed down version of the smart light control for buildings developed by Excellum, ELM (Energy and Light Manager). Thanks to the lower investment cost, central light control is now also achievable for smaller buildings. Without losing its savings potential.

Just like its big brother ELM, ELM Lite consists of a series of hardware and software components, centrally controlling the lighting level in the various working spaces in a building. ELM Lite is, however, limited to a maximum of 300 nodes, which makes this version ideal for buildings with a surface area up to 1,500 m².

Saving up to 75 % lighting energy
ELM Lite offers exactly the same advantages as ELM. Lighting is adjusted everywhere in the building to actual needs, with a combination of six strategies: smart time control, daylight-dependent control, adjustment to task, occupancy detection, individual control and load shedding.

Expandable
It is furthermore always possible to upgrade to a full ELM system whilst keeping the installed components, which also makes ELM Lite attractive as an initial system for a building that is subsequently expanded or as a pilot system in a section of a larger building.



The Energy Control Unit is the nerve centre of ELM light control.

EXCELLENT LIGHTING
SAVING ENERGY

EasyDim

Plug in and save energy!

EasyDim is a local light control system that makes it easy for you to save energy. EasyDim automatically adjusts the light level as a function of the entering daylight and the presence of human activity.

EasyDim consists of two components: an intelligent sensor that receives and processes local signals, and a plug-in installation box that is connected to your DALI lighting luminaires.

Easy ...

For the majority of applications, EasyDim is easily put into operation. All software parameters are preset by ETAP, so that on-site commissioning is not required. The convenient installation box with Wieland connectors prevents mistakes during installation.

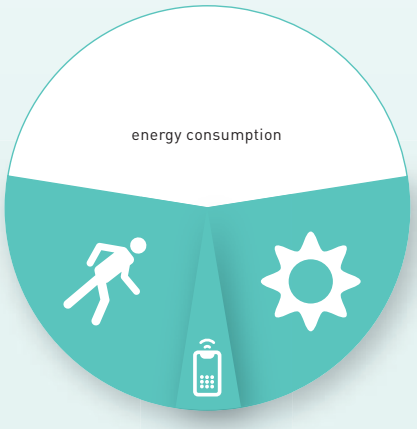
EasyDim is available in two versions:

- The EasyDim Pure is designed for basic stand-alone applications such as individual offices, classrooms and sanitary facilities. EasyDim Pure comes standard with separate outputs for luminaires on the window side and luminaires on the corridor side, allowing you to make optimal use of the available daylight.
- The EasyDim Advanced allows various movement sensors to be connected. This is useful, for example, to control the light in long corridors.

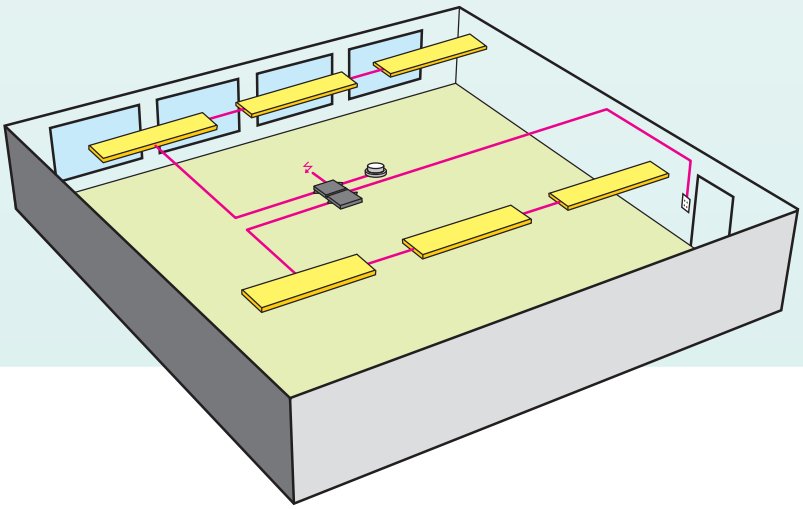
... but flexible

EasyDim is so flexible that it can also be customised to your specific needs. You can count on ETAP's expertise to make EasyDim suitable for use in complex environments such as landscape offices, conference rooms, etc. We can connect up to 22 EasyDims, and configure EasyDim to individually control 4 groups of luminaires, and we can set each parameter to suit your particular requirements. Your ETAP representative will support you with the definition of the best solution. If desired, ETAP can also carry out the on-site commissioning.

EasyDim consists of an intelligent sensor and a plug-in box.



EasyDim enables you to save 55 % energy.



The plug-in box of EasyDim Pure comes with a seperate output for luminaires on the window side, and luminaires on the corridor side.

[further information: www.etaplighting.com]
brochure: downloads > brochures > EasyDim

First in emergency lighting

ETAP bans cadmium

NiMH batteries are not only better for the environment, they are also more compact and more economical...

As of January 2012 ETAP will only deliver emergency lighting luminaires with NiMH batteries, which are not only more environmentally friendly, but are also 50 % more compact and use less energy. In doing so, ETAP is the first emergency light producer to offer a full cadmium-free range, for both fluorescent and LED luminaires.

ETAP only offers emergency lighting luminaires with NiMH batteries, for both fluorescent and LED.lamps

In terms of sustainable emergency lighting, ETAP is able to show a fairly decent record of achievements. For example, since 2009 we have been exclusively developing emergency lighting luminaires with LEDs, which save up to 70 % energy compared to fluorescent luminaires. The ISO 14001 management system also guarantees that we systematically limit the environmental impact of all our activities. With our cadmium-free product range we go one step further.

ETAP trendsetter once again

For the time being, emergency lighting does not fall under the general 2006 European cadmium ban, since no alternatives to cadmium batteries were available at that time. But now they do exist, and therefore ETAP aims to do better than the norm in this area as well, since batteries represent one fifth of the total environmental impact of an emergency lighting luminaire.

Standard NiMH batteries

Currently ETAP fits its emergency lighting luminaires with NiMH batteries as standard, which immediately translates into major energy savings. Whilst NiCd batteries must be charged continuously, NiMH batteries only require four hours per day. The charging process also extends the battery's life, which will have to be replaced less often. Without influencing the quality or reliability of emergency lighting.

Further information on ETAP's sustainable approach?
Consult our Sustainability Report at www.etaplighting.com.

LED EXCELLENT LIGHTING SAVING ENERGY

Smaller surface area, increased comfort

The central management of the Vlaamse Maatschappij voor Watervoorziening (VMW) moved to a new modern property in the area of the Brussels North Station. An obvious choice in terms of sustainability. Whilst the company was just as keen on design. VMW found this combination in ETAP.

Opting for sustainability

Up to November 2010 the management was housed in the busy Rue Belliard in Brussels. With the move to the North Station neighbourhood, VMW hopes to motivate more employees to take the train to work, thereby reducing their ecological footprint.

Using space more efficiently

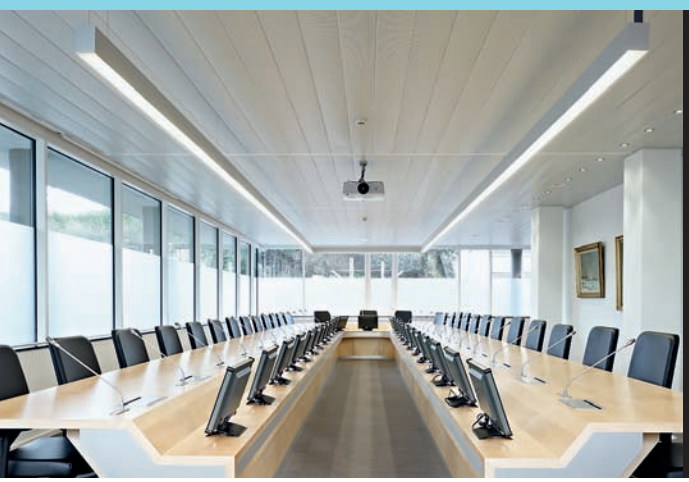
With a surface area of 5,000 m², the new property is approximately half the size of the building in Rue Belliard. Yet there is no lack of space for the more than 200 employees, on the contrary. "The layout is much more comfortable," states Francis Lambert, project coordinator at VMW. "We opted for the right balance between office landscape, well-defined spaces such as cockpits and a number of closed rooms. Therefore we use the available space much more efficiently. We also manage energy better: we have efficient climate ceilings, a green roof, and of course economical lighting."

No ordinary design

ETAP solutions were chosen for that lighting. Energy-savings and efficiency obviously played an important part but there was more to it. "For a number of spaces on the ground floor, VMW was looking for a unique, original design," according to ETAP's Yolande Spildooren. "We have met that requirement with a flexible Kardó lighting line, which follows the shape of the table in the conference room. The Dipp4 LED spots, in turn, provide mood lighting in the reception area. We use R8 with high efficiency diffuser in the canteen in a fairly whimsical setup. In the office spaces on the top floor, we installed custom-made recessed luminaires, fully integrated into the ceiling strips."

Dipp4 LED spots in the reception area.

R8 suspended luminaires and square downlights in the canteen.



Kardó light line and Dipp4 LED spots in the conference room.

PROJECT SHEET

- 399 custom-made recessed luminaires
- 259 square downlights
- 25 Dipp4 LED spots
- 27 R8 suspended luminaires with HaloOptics® diffuser
- 22.5 m Kardó with HaloOptics® diffuser

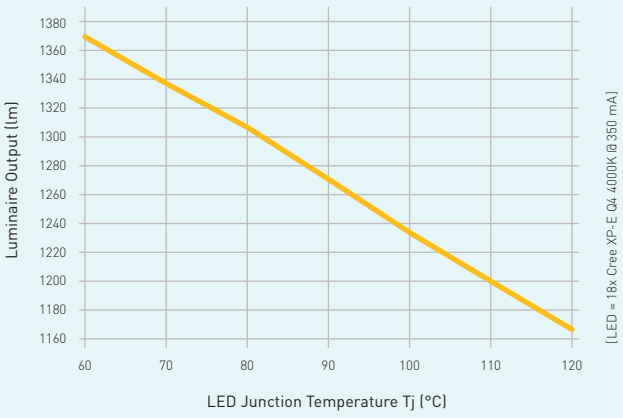
Thermal management critical to performance and lifetime

Why LEDs better keep their cool

Today LEDs are primarily known for their high efficiency and long life. What is less known is that these two are highly dependent on the working temperature. "The lower the temperature, the higher the light efficiency and the longer the LEDs will last. Well thought-out thermal management in the luminaire is therefore critical," states ETAP's LED specialist Gert Huysmans.

THE COLDER, THE MORE EFFICIENT

LED light performance is highly dependent on working and environmental temperatures. "The reference values provided by manufacturers are based on an internal temperature of 25°C, which is seldom achieved in practice," according Gert Huysmans. "In addition, there is no such thing as an optimal working temperature for LEDs, as is the case for other lighting types. In fluorescent lamps, for example, 35°C is the ideal temperature. Above and below you will clearly see decreased efficiency. In LEDs on the other hand, the following applies: the lower the temperature, the better. We notice this, for example, in deepfreeze applications, where LEDs perform considerably better than the reference values."



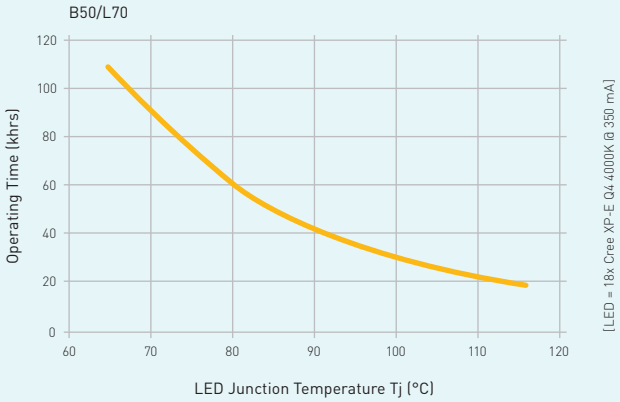
The colder, the better – the light efficiency of LEDs drops as the temperature increases.

ACTIVE OR PASSIVE COOLING

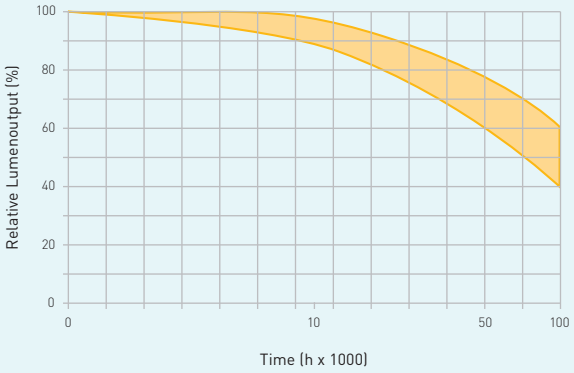
In order to keep the working temperature of the LEDs under control, proper thermal management within the luminaire is therefore critical. Today various cooling systems are available, both active and passive. "Active systems, such as ventilation, have the advantage that you can adjust the temperature independently from the mounting method. The disadvantage is that they introduce extra energy use and extra costs, are subject to wear and tear and potentially produce disturbing noises. That is why ETAP, wherever possible, opted for passive cooling, whereby free air flow is created in and around the luminaire."

LED

Working temperature impacts lifetime – LEDs achieve the reference value of 50,000 hours between 80 and 85°C.



Performance decreases gradually - after 50,000 hours on average the luminous flux drops to 70 % of the initial value.



TEMPERATURE DETERMINES LIFETIME

The LEDs' lifetime also depends on the working temperature. "Today 50,000 hours are often assumed for quality LEDs," according to Gert Huysmans. "However, two major conditions are linked to this very long lifetime. Firstly, it was calculated on the basis of a working temperature between 80 and 85°C. Higher temperatures will considerably shorten their lifetime. However, those who are able to stay below those temperatures, will be able to extend the lifetime even further."
"Secondly, we have to take into account the fact that LEDs gradually lose their illuminance during their lifetime. On average, after 50,000 hours, the LEDs' luminous flux has dropped to 70 % of its initial value – in practical terms, 50 % of the LEDs still meet minimum performance of 70 %."

IT ALL DEPENDS ON THE APPLICATION

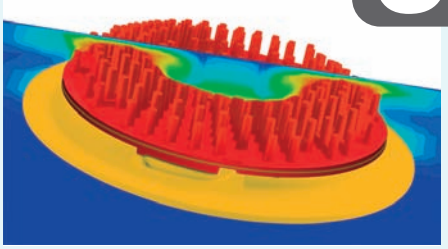
This drop is perhaps not an immediate issue for residential or architectural applications, but is for the most part not acceptable in professional environments. For the latter the useful lifetime is therefore quite a bit shorter. "That is why ETAP prefers to assume the project's realistic lifetime in its lighting studies."
"At the end of the day, everything depends on the application," concludes Gert Huysmans. "For some applications 25,000 hours are more than enough, for others – 24/7 environments, for example, or applications where replacement is difficult – 50,000 hours is a minimum. The same also applies to the drop in performance, which in one situation is more disturbing than in another. Ambient temperature and practical cooling options also play an important role. Only by factoring in all of these criteria and weighing them against each other, can we bring out the best in LEDs."

EXTRA ATTENTION TO COOLING IN FLARE DOWNLIGHTS

ETAP has paid a lot of attention to the thermal management of Flare downlights, which appears, among others, from the sophisticated (and patented) design of the cooling plate and the special heat conductive foil for heat transfer. As a result the working temperature of the LEDs stays below 65°C, which considerably extends their expected lifetime.

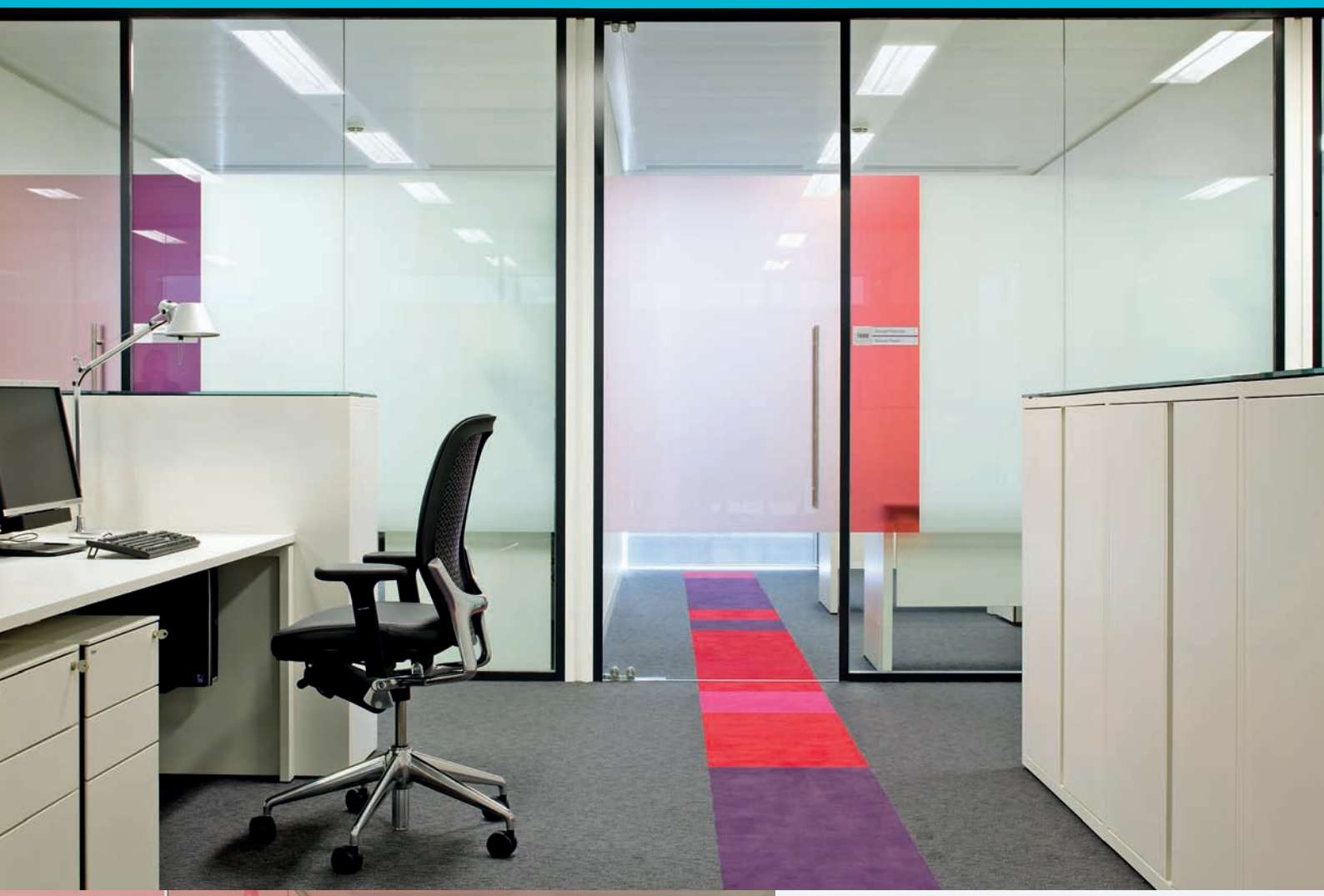
YEAR 6 WARRANTY

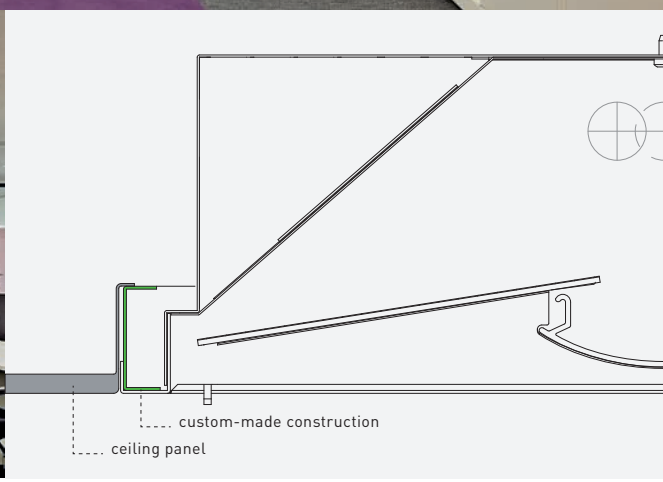
Optimal lifetime and performance – the working temperature of Flare downlights never exceeds 65°C.



Further information on LEDS?
Consult our manual at www.etaplighting.com.

Reconciling efficiency with great design





The UM1 luminaires were integrated into the ceiling structure's c-profiles, making them part of the supporting structure.

EXCELLENT LIGHTING
SAVING ENERGY

The British law firm of Burges Salmon made high demands for the design of its new office building at One Glass Wharf in Bristol. They wanted to reconcile top design with durability and energy-efficiency. ETAP was able to convince the architects to light the offices with an adapted UM1 solution.

Tailored office lighting

The design team behind One Glass Wharf wanted to achieve a lighting level of at least 350 lux in the office spaces, but also imposed stringent conditions in terms of total energy consumption. In addition, the lighting had to be seamlessly integrated into the ceilings. "Their request was quite unique," clarifies ETAP's Andy Purkiss. "They wanted to integrate the luminaires into the ceiling structure's c-profiles, making them part of the supporting structure. They had clear aesthetic reasons, but such a requirement is quite exceptional. At least we had never experienced this before."

Lead-times strictly adhered to

ETAP suggested a solution on the basis of UM1 diffuser luminaires with MesoOptics™. "We did have to custom-make all luminaires, adjusted to the structure's measurements of 600, 900 and 1200 mm," according to Purkiss, "To do so we worked closely with the design team. Fortunately we fully produce our own luminaires and do not depend on third parties. This enables us to flexibly capitalise on such requests and deliver strictly on time, which was also critical here."

"FORTUNATELY WE FULLY PRODUCE OUR OWN LUMINAIRES AND DO NOT DEPEND ON THIRD PARTIES, ENABLING US TO FLEXIBLY CAPITALISE ON SPECIFIC REQUESTS."

PROJECT SHEET

1,681 custom-made UM1 recessed luminaires

- of which 461 with emergency power supply unit
- versions in 54W, 39W and 24W

One Glass Wharf

New gem for Bristol

Burges Salmon's new building is one of the latest gems in Bristol, this resurgent business centre in south-western England.

The name One Glass Wharf refers to the old glass factory that once stood on this site on the banks of the Avon. The site, known as Temple Quay Area, had been neglected for years, but is experiencing a revival today as a result of several investment projects.

A paragon of ecology

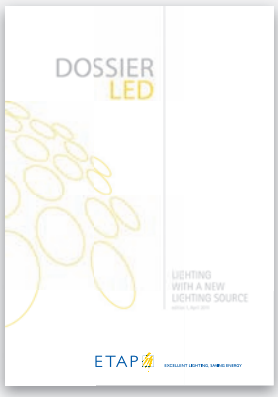
One Glass Wharf is an office building with a surface area of approximately 20,000 m². Sustainability and ecological considerations were a top priority in the design of architectural firm Sheppard Robson. They relied on advice from the Carbon Trust to keep the building's ecological footprint as small as possible. The building is fitted with advanced environmentally friendly technology such as water cooling, rain and waste water recycling, and sensor-controlled ventilation, cooling and lighting.

ETAP DESIGN WINS THREE IF AWARDS

ETAP recently received three iF Product Design Awards, The Flare downlight, the Flare spot and the UW orientation lighting took top honours. The iF Awards are issued every year in Hannover. The international jury once again made its selection from thousands of products from various countries.

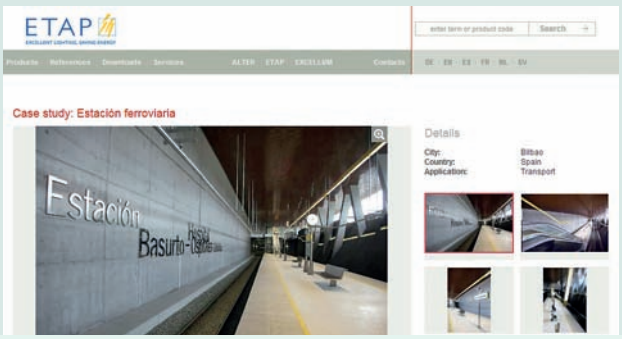
ETAP's new generation of LED products were widely applauded by the international jury

ETAP's LED manual – mandatory reading for anyone professionally involved in lighting.



ALL ABOUT LEDS

Do LEDs actually score better than fluorescent lights and why? What about their lifetime? How do you conduct lighting studies for LED luminaires? To these and a lot more questions you will find an answer in our recently published LED manual. Request the manual through your ETAP adviser, or download it from our website. And you will be immediately informed of the latest state of affairs.



On our website you will find a good selection of reference projects.

BE INSPIRED

Do you like to know what your colleagues are up to? How they use ETAP products in their projects? Under the "References" section on our website you will find an overview of a number of striking achievements. The section was thoroughly revamped recently – you can now create PDFs, among others, and make easy selections according to country, project or application. The photos have also become quite a bit larger, allowing you to admire the projects in all their glory.

ETAP achieves ISO 14001:
SYSTEMATICALLY LIMITING ENVIRONMENTAL IMPACT

ETAP has been in possession of the ISO 14001 certificate since 23 March 2011. The introduction of the environmental management system ensures that care for the environment is embedded in all business processes. It represents another important step in our continuous efforts towards better environmental management. And the best guarantee for our customers that we also actually implement sustainable entrepreneurship.

Our attention to the environment is not new. Sustainable entrepreneurship has been part of our mission since our creation in 1949. Throughout the years we have been achieving this on various fronts. For example, back in 1990 we had our own water purification system, long before it became obligatory in Belgium. Recently we were the first producer to switch to the environmentally friendly NiMH batteries for our emergency lighting. And obviously we have been helping customers for years to use sustainable lighting, with energy-efficient luminaires, ecologically aware light control systems and thorough lighting studies.

Environmental protection in every business process

With the ISO 14001 certificate ETAP translates its commitment into a management system that integrates care for the environment into every business aspect, from product design to waste disposal. We systematically factor in all processes, study their impact on the environment and take measures to decrease said impact year after year. Nothing is left to chance.

Staff closely involved

A large number of our employees receive additional training to put the environmental protection system into practice. This includes, among others, the daily measurements of critical parameters and the systematic registration, processing and reporting of data.

An additional guarantee for customers is the certification and the annual audits of the system by an outside party. To this end, ETAP called on BVQI, who have also certified ETAP's general quality system.

ISO 14001
BUREAU VERITAS
Certification

Seris Security

Energy-conscious lighting also provides increased comfort

Energy-efficiency was a top priority in the renovation plan for the new Seris Security offices. The company invested, among others, in new energy-saving luminaires and a light control system at the building level. The project also improved the lighting comfort for employees.

Seris Security, the Belgian pioneer in corporate security, had the more than 20-year old office building in Diegem completely renovated and made over. In this, a lot of attention was paid to energy consumption, including that of lighting.

In black and white

Initially the company wanted to install a light control system on the existing luminaires, which soon proved to be an poor solution. The luminaires were a few decades old. They were not energy-efficient and it was also impossible to fit them with dimmers, which hugely limited the light control options. ETAP's calculations showed that it would be more economical to invest in new, energy-efficient luminaires.

Always the right light

After close consultations, ETAP provided a total solution that is not only particularly economical, but also considerably improves lighting comfort. In the meantime we have developed a broad range of energy-efficient luminaires, enabling us to provide the necessary variation, with among others, UT office lighting, Dipp3 LED spots in the reception area, architectural accents with R8 mood lighting and OELITE lighting.
With ELM (Energy & Light Manager), light control for Excellum buildings, the lighting is in tune with activities everywhere in the building . The system is even linked to the badge readers, thus automatically lighting the route to one's office. Despite the considerably higher luminous intensity, the achieved saving is estimated at more than 50%.

"ETAP'S CALCULATIONS SHOWED THAT IT WOULD JUST BE MORE ECONOMICAL TO INVEST IN NEW, ENERGY-EFFICIENT LUMINAIRES."

PROJECT SHEET

- OELITE surface-mounted luminaire with HaloOptics® diffuser
- Dipp 3 LED spots
- R8 suspended luminaires with HaloOptics® diffuser
- UT1 recessed luminaire with Equilum™ reflector
- K5 emergency lighting
- D1 round downlight
- ELLO wall luminaire
- ELM central light control system

OELITE surface-mounted luminaires and Dipp4 LED spots in the reception area.

UT1 recessed luminaires in the offices.

R8 suspended luminaires in the coffee corners.

ETAP
EXCELLENT LIGHTING, SAVING ENERGY

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