# LIGHTPOINT.

An ETAP publication | 2007-2

*R8 with HaloOptics® diffuser*

Excellum: new ETAP subsidiary for light control systems

K2, robust and waterproof emergency lighting

ETAP Softlight range is extended

ETAP
EXCELLENT LIGHTING, SAVING ENERGY

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*K2: IP65 dust and waterproof luminaires*





## → NEW PRODUCTS

# UT1 and R4 now also with diffuser


**The UT1 recessed luminaires and the surface mounted and suspended luminaires from the R4 series are known for their low energy demand and lighting comfort. They have a very high efficiency with the EQUILUM® reflector ensuring uniform shielding of the light in all normal viewing directions. For some applications, however, it is indicated to increase the brightness perception of the room. That is why both series are extended with diffusers.**

### Diffusers make the light "visible"

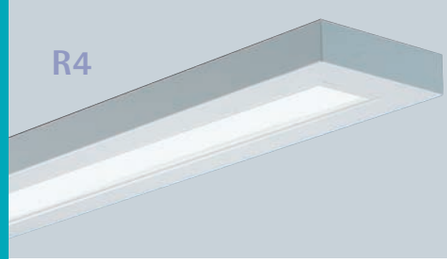
Good diffusers distribute the light over the optics in such a way as to prevent the creation of visible lamp images or large differences in luminance. They distribute the light uniformly into the space, so that also the walls are more illuminated. In conventional diffusers, this involves a huge amount of light loss, which is unacceptable from an energy point of view. That is why ETAP uses a special diffuser technique which combines a striking illumination with a substantially higher efficiency (HaloOptics®). These diffusers in fact allow for uniform illumination without excessive light loss. Both your energy bill and the environment will benefit. The diffusers are made either of polymethylacrylate (PMMA) (glow wire test 650°C) or polycarbonate (PC) (960°C). They are mounted in a metal frame that is hinged to the housing. This simplifies both installation and maintenance.

### UT1: recessed luminaires with curved diffuser

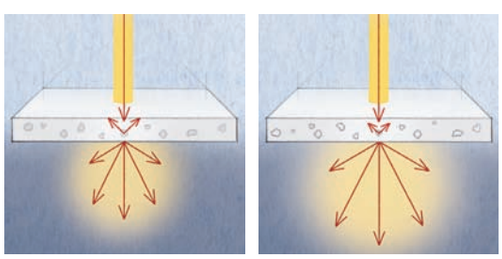
The curved diffuser sends a portion of the light directly to the ceiling, thereby making the space look even brighter. Standard versions are available for one or two T5-ø16mm-lamps, in lengths of up to 1,5 m. The ELS daylight dependent light control or an emergency unit can be integrated without problems. Solutions for an EMD sensor or a K9 emergency lighting module are available on demand.

### R4: surface mounted and suspended luminaires with flat diffuser

A flat diffuser goes best with the rigid design of the R4 luminaires. Here too, just as with UT1, standard versions are available for one or two T5- ø16mm-lamps, in lengths of up to 1,5 m. The range comprises ceiling luminaires and suspended luminaires, for both individual and in-line mounting. Light controls or emergency lighting can also be integrated into the R4.




*The HaloOptics® diffuser has a substantially higher efficiency and distributes the light uniformly into the space.*



*Traditional diffusor* *HaloOptics® diffusor*



# R8, the energy-efficient cylinder

**ETAP has extended its range of diffuser luminaires with R8. This decorative series now has a high efficiency, up to 95 %, thanks to the use of HaloOptics®. Another notch on ETAP's belt of achievements as an energy-friendly lighting manufacturer.**

### Pure design

With R8, only the cylinder-shaped luminescent element is actually visible. Any elements that could distract the attention have been eliminated. Details have been meticulously finished. The technique is completely hidden in the top of the cylinder. The diffuser – with a 90 mm diameter – is uniformly illuminated, without disturbing lamp images.

### Ease of installation and maintenance

The ceiling and wall versions are installed with a mounting plate which is fitted with set screws to allow the luminaire to be suspended perpendicularly in all circumstances. For the suspended versions, various suspension sets, with or without ceiling rose, are available. For in-line mounting, the necessary facilities are provided to form nice rigid lines. R8 is easy to maintain, including the line versions. The diffuser opens by turning two knobs. You can then remove the diffuser to clean the luminaire or replace a T5-ø16mm-lamp.

### A wide array of possibilities

R8 is available as a wall, ceiling or suspended luminaire, in individual and line versions. For even greater flexibility, the single and twin lamp luminaires have the same diameter. If desired, you can equip R8 with emergency units.

# HaloOptics®

**HaloOptics® is a diffuser with a high transmission factor. Conventional diffusers create their diffusing effect by including impurities in the material, whereby much of the light is lost. HaloOptics® uses transparent crystals, so that less light is lost and higher luminaire efficiency is obtained.**

# Excellum: new ETAP subsidiary maximises energy saving

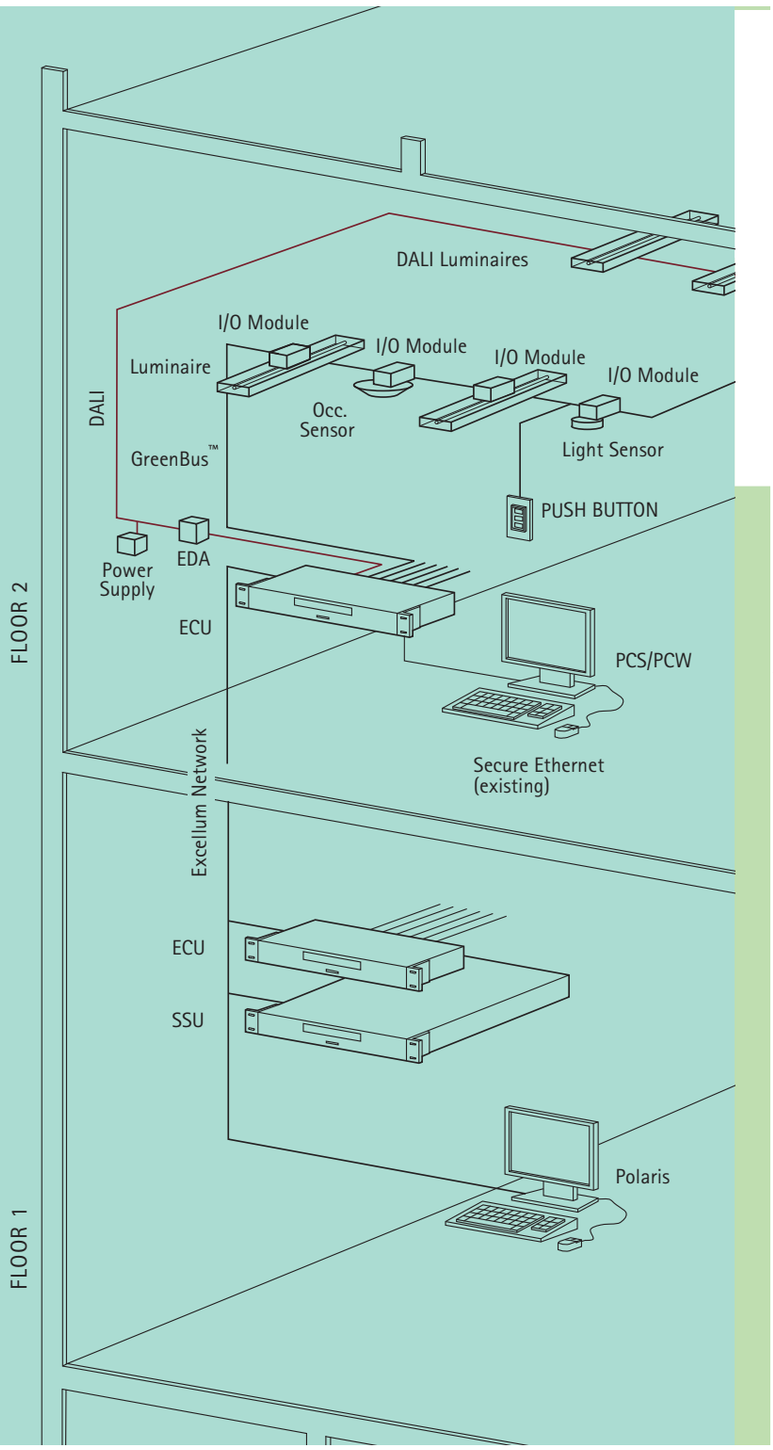
### Excellum: light controls, energy savings and comfort

Excellum, which specialises in building lighting control systems, is the youngest member of the ETAP group. Excellum aims to minimise the energy usage of new or existing lighting schemes and at the same time increases the visual comfort. Excellum offers an energy management system that is compatible with any lighting system, regardless of type or brand. In addition, Excellum provides a full service, from specification and configuration through to commissioning and maintenance.

### Energy & Light Manager (ELM)

The energy management system is called ELM, Energy & Light Manager. ELM is an advanced addressable control system that permits a energy saving up to some 75 % and optimises the light quality at the workplace. Moreover, it is easy to design, install and use. The cost recovery time starts from the first hour after putting into service.

The luminaires, operated by ELM, are addressable and dimmable. This can be done in analog form – via a special interface module – or in digital form – through the use of DALI ballasts. The combination of addressable luminaires and user-friendly software enables ELM to quickly respond to the ever-changing lighting needs in a building. So you get the right amount of light in the right place and at the right time. This is ensured by six control strategies (see p. 10) that are integrated into ELM. Energy that is wasted by lighting is virtually eliminated with ELM: lighting will from now on be an integral part of your energy control strategy.


*Thanks to the user-friendly ELM-software you can react quickly to changes in the lighting needs in a building.*

# K2, robust and waterproof



**K2 is ideally suited as emergency lighting in industrial and public environments where dust and moisture protection and mechanical robustness are at a premium.**

## IP65 & IK10

K2 offers you a wide range of IP65 dust and waterproof luminaires. The impact resistance adds up to 20 J, which matches to a protection index of IK10.

## Family concept

The K2 series is very complete and all mounting types are possible: surface mounting or semi-recessed, square or parallel to the wall or suspended. The design is in line with the K1 series from ETAP (IP42), so you can equip an entire building with the same style of emergency lighting. Obviously, the EST selft-test is standard and a wireless or wired ESM version (for centralised control) is available.

## Ingenious photometry

With its ingenious photometry, K2 meets all emergency lighting performance requirements with a minimum of luminaires.

### Wide-angle distribution

Anti-panic and escape route lighting calls for wide-angle distribution. The Fresnel lens has been specially designed for this purpose. The highly reflecting properties of the internal polycarbonate structure ensure a maximum light output. To obtain 1 lux on an escape route at a suspension height of 5 m, for example, you only need one luminaire every 21 m. At the same suspension height, only one luminaire is required to obtain an anti-panic light level of 0,5 lux across an area of 120 m².

### Signage with light window

The light window in the signage devices makes emergency exits better visible and contributes to escape route illumination. The single sided version produces a standard-compliant 1 lux on the floor at a suspension height of 2,25 m. The double sided version guarantees 5 lux on the floor at a suspension height of 3 m and thus meets the standard which prescribes 5 lux above crossings, fire extinguishers and at other curcial places.

### Single sided signage with LED's

The K2 single sided signage is also available with LED's. In this case, the lamp lifetime is ten years. A special light guide ensures homogeneous illumination, resulting in increased recognition.

## Reliable outdoor application

The K2 outdoor application with LED's is eminently suited for emergency exits, in accordance with the requirements of EN1838. The battery heating lengthens the life of the batteries and ensures operation down to -15 °C. Also at such low temperatures, the LED light source starts without problems. At night, the maintained version provides extra protection against theft and vandalism. To keep energy usage as low as possible, it has a standard built-in daylight sensor, which deactivates the light source during the day.

## Simple, IP65-proof mounting

The quick mounting brackets guarantee rapid and IP65-proof mounting, without requiring any drilling in the housing. An adjustment system, one of the wall mounting accessories, perfectly compensates for any irregularities in the wall. Specific power and bus cable glands are included in the supply, and looping is easy if you choose the through-wiring version.

# ETAP central Battery Systems (EBS)

**For the emergency lighting in your project, you can choose self-contained luminaires but also EBS (ETAP central Battery Systems). In such a system, backup power is supplied by a centrally installed battery. With the new EBS range, ETAP offers you a total solution for your central emergency lighting.**

Central emergency lighting may offer a suitable solution in specific situations. Think, for example, of the renovation of existing installations, industrial environments with high light levels, or architectural buildings where the escape route and anti-panic lighting is fully integrated into the lighting system. A central battery may also be indicated where the emergency lighting is not readily accessible or where evacuation takes more time and a long duration is desirable. The EBS range lets you choose the most appropriate solution for each situation.

## An extensive range

Within the EBS range, you can choose from three different system configurations:

- If the size and the required equipment of the emergency lighting are well known beforehand, we advise the **EBS Static**. During assembly, this system is fully preconfigured according to the needs of the building. As a result, connection and start-up of the installation requires only a minimum amount of time.
- For installations that may later have to be extended or altered, the **EBS Dynamic** is the preferred solution. This system can later be modified or extended to a total of 2640 luminaires. A few versions of EBS Dynamic are available from stock (EBS Group and EBS Dynamic Light).
- The pick of the crop is the **EBS Superior**. With this system, monitoring of the mains and control of the emergency lighting are accommodated in the various zones of the building. This increases effectiveness, as it also allows local mains failures to be taken into account without any additional measures.

## Increased reliability through centralised control

Emergency lighting luminaires connected to an EBS system can be equipped with address modules. This allows for detailed fault reporting, thereby enabling you to continuously and easily verify the proper operation of your emergency lighting system.

## ETAP, your partner in emergency lighting

With our centrally powered systems and vast range of luminaires, we can offer you a total emergency lighting solution for every possible situation. Not only do we supply the hardware, we also guide you through your emergency lighting project from design to implementation. Upon completion of the project you can continue to rely on our superior service.

| EBS Static | EBS Dynamic | EBS Superior |
|---|---|---|
| simple start-up, preconfigured | flexible, configurable on site | decentralised intelligence simplified wiring |

| EBS Group | EBS Dynamic Light |
|---|---|
| available from stock | |

# ETAP extends Softlight range

EBIND HR

EVER HR

**Two new series have recently been added to our range of Softlight luminaires.**

## EBIND HR and EVER HR

The classical EBIND and EVER series are now also available with a two-part, diffuse HaloOptics® lamp shielding. This allows the luminaires from the HR series to achieve exceptional efficiencies of up to 88%. The perfectly illuminated diffuser, without lamp image, also imparts a fresh and innovative look to the HR series. This luminaire is also available in a version that conforms to the 960°C glow wire test.

## XTRA

The XTRA series is extended with a new type of lamp shielding: two white, perforated shieldings, connected by a white intermediate plate, highlight the form of the lamp. This assembly is fixed to a white painted top reflector. The XTRAs constitute an extensive series, made up of square and rectangular recessed luminaires (EXTRA and ENEXTRA), suspended luminaires (SEXTRA) and wall luminaires (AXTRA).

Both new series, executed with T5-ø16mm-lamps, are easy to install and maintain.

| EXTRA | ENEXTRA | SEXTRA | AXTRA |
|---|---|---|---|
|  |  |  |  |

# Eurocopter


Helicopter manufacturer Eurocopter based in Marignane, France recently built a new plant for its operations in Albacete, Spain. The complex with a surface area of more than 80.000 m² employs over 700 people. To provide all of them with the right kind of light, ETAP supplied some 2.300 luminaires of different types. For the first time Eurocopter used reflector luminaires with fluorescent lamps in a hangar.

eurocopter
an EADS Company

**Project data**

- Customer: Eurocopter – new plant in Albacete, Spain
- Project management: engineering consultancy Ingiopsa
- Project implementation: engineering consultancy Jacobs Spain
- Lighting installation: Electrosur
- Luminaires: 1 500 x U1701/324HFW, 230 x Luxial® downlights (1 x 32W), 500 x E54/480HFW

# IN THE SPOTLIGHT.

## World leader in choppers

French-German-Spanish group Eurocopter is a subsidiary of EADS, the world's largest company in the field of military aerospace and defence and allied services. In 2006, the Eurocopter group, employing some 14.000 people, consolidated its position as the world's largest helicopter manufacturer with a turnover of € 3,8 bn. 615 orders for new helicopters and a 52 % share of the civil and para-public market.

The new plant in Albacete was a major project that required a hefty investment in the area of photometry. ETAP supplied more than 1.500 square recessed luminaires of the U1701/324HFW type, together with 230 Luxial® downlights of 1 x 32W for the office spaces and over 500 industrial luminaires for the lighting of the factory building and the hangars.

## Progressive

The project for the new plant was implemented by Jacobs Spain, an engineering consultancy that chose ETAP for all the lighting in Eurocopter's facilities. The project management of the works was entrusted to engineering consultancy Ingiopsa. On previous occasions this consultancy had already designed industrial infrastructure works for the EADS group, including projects for Airbus or the Eurofighter.

Jacobs Spain is an engineering consultancy that likes to incorporate progressive solutions into its projects. In this particular project, it wanted to make maximum use of natural light, so that part of the lamps could be switched off when there is sufficient daylight. Until then Eurocopter had adopted the basic principle that no fluorescent lamps were to be used in its hangars. Based on a study, however, Jacobs Spain demonstrated that this type of lighting offers significant advantages... and the customer accepted its proposal. For the large, high hangars, Jacobs Spain eventually chose E54/480HFW, with a HRA aluminium reflector with low symmetrical luminance and four T5-ø16mm-lamps of 80W.

## Energy-saving installation idea

To limit the works on the high ceilings to a minimum, an original installation concept was devised. Using prewired segments, it was possible to assemble the reflector and the ceiling grid on the floor, after which the assembly could be fixed to the ceiling in one operation. Electrosur, a company of the Eiffage group, carried out the installation of the luminaires.

At a suspension height of 18 m, the lighting was to produce a minimum output of 650 lux. E54/480HFW fully meets this requirement. In addition, this solution creates optimal visual comfort in the work area, allows for a significant energy saving as compared to high-pressure lamps and offers a higher level of uniformity. In short, better lighting quality at a lower price.

# Strategies for light control systems

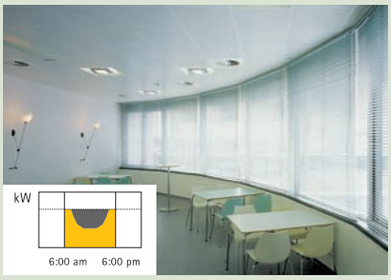
Lighting accounts for a substantial portion of the energy consumption in a building. Depending on the type of building and the activity, this share may amount to 35%. This means that a large energy-saving potential remains to be tapped. In many buildings, energy-saving measures are already being applied, such as the use of movement detection or daylight control. There is, however, still room for improvement: using advanced software and hardware it is possible to increase energy saving in the area of lighting to around 75%. This requires an integrated system that is capable of supporting different energy management strategies.
An overview of the six major strategies, with indication of the maximum saving potential, is given below:

### 1 Intelligent time control
**up to 50%**

In parts of the building where no occupancy detection is indicated, time controlled switching or dimming is possible.

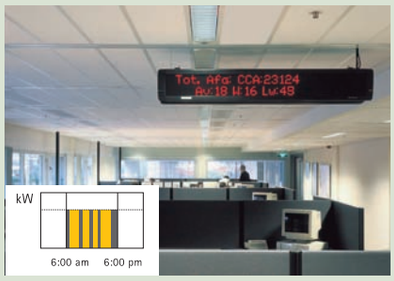

### 2 Daylight dependent control
**up to 20%**

Daylight sensors can automatically adjust the lighting levels as a function of the available amount of daylight.




### 3 Adaptation to the task environment
**up to 30%**

Each new lighting system has a certain amount of spare capacity. Optimal use of that capacity is obtained by setting a lighting level for each specific task.

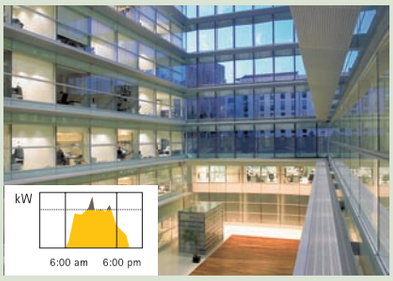




### 4 Movement detection
**up to 35%**

With movement dependent sensors you can automatically switch on, switch off or dim the lighting.


### 5 Individual control
**up to 35%**

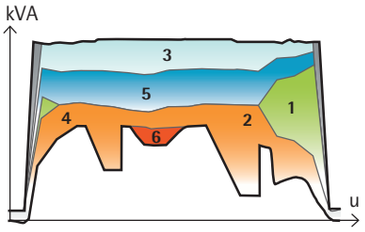
When users are given control over the lighting at their workplace, they can adjust it to suit their personal preferences.




### 6 Limitation of the peak output
**up to 10%**

Peak loads can be reduced by continuously monitoring the activated output in a building and automatically controlling the lighting via dimming or switching.

A maximum energy saving is achieved when all these strategies are applied simultaneously. The graphic shows how the six strategies can contribute to total energy saving in a building, as well as the combined effect on the energy usage of the lighting.



# Paint technology for a colourful environment

For a long time ETAP has been using two paint facilities: an electrocoating facility, which is used exclusively to apply white water-borne paint, and a conventional paint line, which processes both powder and solvent-based paints in all colours. The capacity of the latter was sometimes found to be inadequate during peak periods. Therefore, we have now constructed a new paint line with 3 to 3,5 times larger capacity. In day service, it processes up to 300.000 m² of sheet, so it can accommodate sustained production growth. Together with Glasbeek and Inplasco, construction of the line was started at the end of 2006, and today it is operational.

Orders can now be processed and delivered faster thanks to the smooth colour changes (around ten to fifteen per day!). Today, such a colour change takes less than 8 minutes, which ensures the necessary flexibility. In the pre-treatment phase, all parts are phosphated, which, in combination with powder coating, guarantees excellent durability. We always apply stringent environmental standards. The new facility consumes four times less water than the old one; taking into account the number of painted surface m², this is a reduction by a factor of 12 to 14. Some 95% of the powder paint is recovered, the spray mist is neutralised for almost 100% by using wet spray walls and solvent emissions into the environment are limited to an absolute minimum.

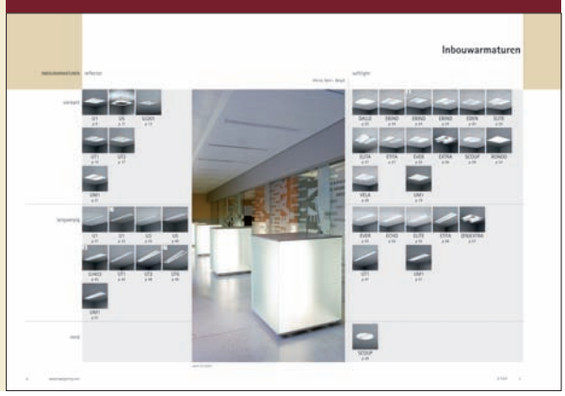
This again proves that both the environment and the customer benefit from a renovated production process.

# ETAP product range in a new outfit

Our restyled catalogue will be available by the end of this year. In it, you will find a wealth of information: order codes, detailed dimensional drawings, photometric data such as efficiency, polar diagram and average luminance... Product pictures let you 'feel' the material and detailed pictures highlight the perfect finish of the product. The many project illustrations are bound to be a source of inspiration for your future projects.

The visual layout shows you how to find the relevant product quickly. Product pictures illustrate the main categories and refer you to the right page. For each chapter, you find a complete overview of the series, so you can make the right product choice. If you know the ordering code, you can search even faster via the index at the back.

In short, a handy assistant for you to make the right lighting choice in no time!



# R4 and Spatial 360™ in harmony at Windmill Court

Architects: Centric
Consultant: Cundall
Contractor: Trilectrics

**BEFORE**
Cat 2, T8 lamps, HF ballast, suspended ceilings

**AFTER**
Suspended R4 and recessed U5 with Spatial, HF Ballast, open ceilings

Fidelity Investments are a multi-national financial institution providing experience and assistance in all areas of financial support from investments to pensions to share trading. The Fidelity site at in Kingswood, Surrey has over 400 personnel working from 3 separate buildings with Windmill Court being the first to refurbished.

The original environment within the Windmill Court office was of a very old, dark, typical LG3 Cat 2 installation with no upward illumination to counter the "cave" effect. In 2005, Building Services Consultants – Cundalls, were tasked with designing a new, lively and invigorating place for the primarily PC based staff to work. The old exposed T ceilings were removed over the central work stations and full use of the generous floor to ceiling height was employed.

A lux level of 500 was the specified target. To achieve this ETAP suggested R4 indirect/direct fittings in the main office areas with recessed U5 fittings in the central and notional corridors. After extensive mock-up and client presentations the R4 concept was specified and ordered.

In order to keep as much of the office space usable by the client the project was split into different batch delivery dates with delivery timed to meet each completed phase. ETAP commenced the first deliveries for Phase 1 of the project in July 06.

Approximately 3 months after initial occupation of Phase 1 the client asked if anything could be done to put light back on the ceiling in the central corridors. As these were recessed U5 fittings and there was not really enough floor to ceiling height to replace them with R4, we suggested retro-fitting the U5 with Spatial 360™ frames. The mock up process was undertaken with final client sign off and order following.

We have been asked to return to site to take light meter readings and, 1 year after initial installation, the average reading across the working area is 563 lux! To date we are still delivering on Windmill Court but the client has been so impressed with the final solution here, they are now considering the remaining 2 buildings at Kingswood and another office in Europe to be developed along the same lines.

ETAP

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