

LIGHTING

EQUIPMENT NEWS

AUGUST 1992

LIF announces new lighting awards

The Lighting Industry Federation is launching a new awards scheme – the Lighting Awards – which combines two previous award schemes – the National Lighting Awards (which operated for 4 years) and EMILAS (which ran for 15 years). The new scheme will commend a combination of both good design and effective energy management with the actual balance between the two factors varying with the building category.

Schemes must be entered for the 1992/93 award before 30 October 1992 by either the owner or user of the building, or by the lighting designer. To be eligible for the award, the installation should have been completed during the period 1 January 1990 – 30 April 1992. The competition takes in a broad range of lighting applications – categories cover commercial, civic, industrial, leisure and exterior lighting. Only street lighting and domestic lighting are excluded from the scheme.

In assessing the installations the judges will take account of relevant standards and codes of practice, the efficiency of the lamps and luminaires chosen and good energy management generally. Designs must be appropriate in both engineering and aesthetic terms to the application, and stress will be placed on innovation at all stages of the design from the concept to the management of the installation.

For full details see pages 7-10 of this issue.

In brief...

● **Andrew Chalmers and Mitchell** has taken over the operation of its sister company, Davis Alumex Lighting, which makes indoor fluorescent luminaires including specials.

● **David Webster** has been awarded a £140 000 contract for street lighting and electrical work on the A20 Folkestone to Courtwood route.

● **Full Spectrum Lighting** has moved to Unit 1, Riverside Business Centre, Victoria Street, High Wycombe, Bucks HP11 2LT (tel 0494 526051).

● **Thorn Lighting Controls** is the new name of Thorn Lighting Management – the controls partnership between Thorn Lighting and Thorn Security. The renamed company now reports to Thorn Lighting.

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Northern lights

Leeds – arguably Britain's brightest town centre – now boasts one of the most stylish amenity lighting schemes in Europe as part of its new urban landscape design. The city, which used to have a traditional northern image, has gone overboard for a vibrant, modern look using over 260 purpose-designed luminaires from Thorn to light the pedestrian

precinct in the city centre.

In creating the new street scene, architects Faulkner Brown used the existing fabric of the city centre to develop routes, vistas, spaces and points of activity. Architectural structures and gateways create a basic urban order. Brightly lit, these become focal points by night as well as by day.

Each street has been given a

different lighting character which echoes the existing architecture, the type of commercial property it houses and natural pedestrian circulation patterns.

All this is accomplished using four basic types of fitting. The Villette Line, designed by Philippe Starck, is a sleek modern luminaire, formed from a 230 mm diameter aluminium tube

with a post top cylindrical prismatic controller that houses four 36W 2L compact fluorescents. A further version has an additional controller situated at bollard height.

Runway lighting

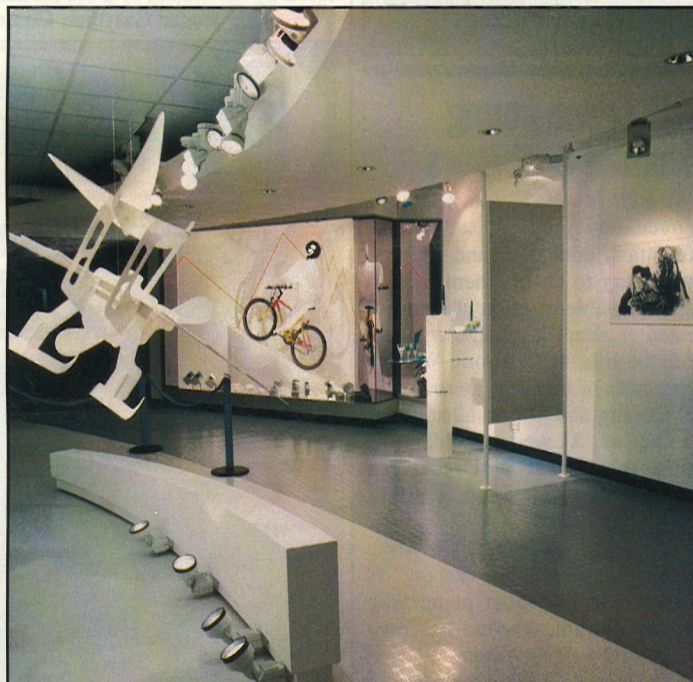
The second fitting is a distinctive circular lantern, with a halo shaped diffuser, using a 250W MBF super deluxe mercury lamp. The cool colour of this lamp enhances the colour of the steelwork to which it is fixed. A third group of fittings was originally designed for airport use. Runway fittings are set into the pavements

and post mounted floodlights and red obstruction lights add high-level interest.

But perhaps the most exciting single fitting is the lantern and column combination. A purple perforated aluminium cylinder houses four 1500mm outdoor fluorescent fittings with blue lamps. This is fixed near the top of a tubular column which is surmounted by an aircraft warning light.

The scheme was designed by the architects in conjunction with the city's chief lighting engineer, Ian Butterworth, and engineers from Thorn Lighting.

Focus on commercial lighting



An architectural lighting centre has been opened by Siemens Lighting at the company's Sunbury-on-Thames headquarters. Designed to show architects, lighting consultants, and other specifiers the potential of commercial lighting, the 180m² centre is divided into three main sections: a presentation room, and demonstration areas for both accent and office lighting.

The presentation room, which seats up to 30 people, features custom designed luminaires. Siemens intends to make this space available to clients and lighting industry bodies for meet-

ings, seminars and conferences.

The accent and display lighting area covers a retail section including a shop front and island display site, showing the lighting configurations and switching sequences that can be used with track-mounted fittings to create different effects. A further area looks at display lighting for museums and galleries.

Finally, a simulated office takes account of the EC directive on the use of display screens. Two workstations enable visitors to experiment with louvred lighting and determine the best solutions for their particular office

situation. Curtains and floor-to-ceiling mirrors show the effect of both wall coverings and extended spaces on lighting the office environment.

A feature of this space is a cityscape mural incorporating buildings lit by Siemens including the Lloyds Building and the Hong Kong and Shanghai Bank. The mural, which was painted by three students from the Royal College of Art, stretches the full length of the rear wall of the centre.

Thorn opens in Prague

Thorn Lighting is opening a sales office in Czechoslovakia. In addition to fittings, this will also offer consultancy and lighting engineering services. Local knowledge and accountability will be pro-

vided by Dr Pavel Sedlacek.

Thorn project engineers already cover Bulgaria, Hungary, Poland, Romania, Yugoslavia and the CIS from the company's Vienna centre, and recent successes in Eastern Europe include lighting for Sofia Airport, the Vitinda tunnel in Bulgaria and a Burger King restaurant in Budapest.

JSB to sell Tenby lighting products

Mains lighting products manufactured by Tenby will now be marketed and sold by JSB Electrical, the emergency lighting company

in the Emess plc stable. This will enable specifiers to benefit from JSB's lighting expertise and will leave Tenby free to concentrate on lighting accessories.

Nigel Singer has been appointed chief executive of both Tenby and JSB Electrical.

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NEWS

Wide ranging advice to be given on Spanish market

The president of the Spanish Chamber of Commerce, Nicolas Delmonte, has agreed to open the seminar on The Lighting Market in Spain, being held in London on 16 September. It is organised by Single Market Briefings and sponsored by *Lighting Equipment News*.

A talk by an expert from the Technical Help to Exporters department of BSI will be included in the programme and will deal with technical compliance required by the Spanish authorities, which can sometimes present major difficulties.

Other topics covered will be: cultural differences between the UK and Spain – how to do business in Spain, law, agency/distribution agreements, and finance.

Information will be given on the lighting market in Spain (commercial, public, industrial and residential), local manufacturers of lighting and components, existing importers and foreign companies operating there, distribution of lighting, and import and export procedures.

Publicity, market research and how to contact local specifiers such as architects, interior designers and engineers, will be discussed.

The Spanish government as customer will be considered, also hotel groups and retail chains.

If you are thinking of doing business with Spain have you investigated UK government aid for exporting there, or Spanish government assistance for exports

from Spain? These and other matters will be discussed.

Because Spain has one of the fastest growth rates in the EC, new building projects are creating a large demand for capital equipment and professional services.

Managing directors, sales and marketing directors, architects, lighting designers and consulting engineers will hear how to take advantage of these opportunities. It will also be helpful to senior representatives of companies already doing business with Spain to hear the advice of speakers such as Rafael Pittman, founder of Market Research Spain.

For more details contact Single Market Briefings, 41a Turneville Road, London W14 9PS (tel 071-385 2674).

New standard on lampholders

BSI has published BS EN 60400 : 1992, *Specification for lampholders for tubular fluorescent lamps and starterholders*. This supersedes BS 6702 : 1991.

Copies are available price £74 (£37 to BSI members) from BSI Sales, Linford Wood, Milton Keynes, MK14 6LE.

Another decorative lighting exhibition

A new exhibition, *Lighting '93*, is to be held from 24-27 January at the National Exhibition Centre, Birmingham. It will be a display of decorative lighting and will be held alongside the Furniture Show.

The organiser is Blenheim Exclusively, a London based exhibition company.

Trade publications in brief...

- **Knight Smith Lighting** has two leaflets on its ranges of uplights (tel 0327 41550).
- **CP Lighting's** latest trade price list is now available (tel 081-547 0500).
- **MBM** has a brochure describing its plastic mouldings, extru-

sions, fabrications and aluminium louvres (tel 021-553 7551).

- **Fibre Lite's** brochure explains the advantages of its fibre optics downlight system (tel 021-585 6078).

- **Guzzini** has a 288-page catalogue in English and Italian of its commercial indoor and outdoor lighting (tel 081-646 4141).

- **Martin Roberts** is celebrating its 10th anniversary and a brochure gives information about its luminaire and louver design service for lighting manufacturers (tel 0695 33068).

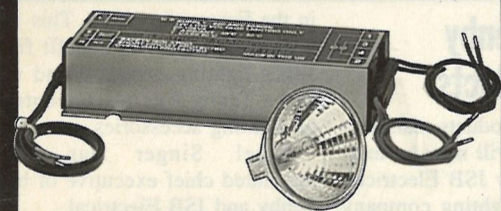


Two gas flambeaux are attracting attention to the Lanesborough Hotel at London's Hyde Park corner. However, unlike the flambeaux used in Edwardian times, these have electronically controlled ignition to protect the flame under all weather conditions and remote indication of flame failure. They have been re-developed by Sugg Lighting to use natural gas.

RAM

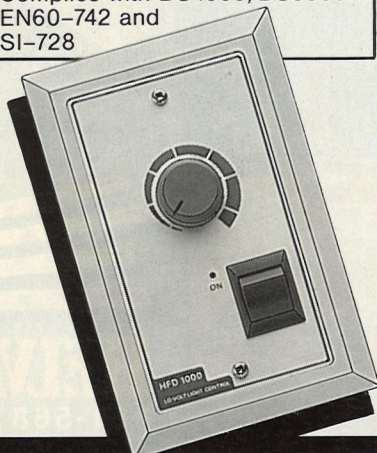
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Attention young women engineers

Women under 30 who have successfully completed all the technical education and training necessary to enable them to hold a responsible position at incorporated engineer level, can compete for the title 1992 Young Woman Engineer of the Year award.

Closing date for nominations is 1 October. As well as holding the title, the winner will receive a cheque for £500 and a silver rose bowl.

An additional award, the Mary George Memorial Prize, is offered to the most promising young entrant, who will receive £100 and a silver salver.

For a nomination form apply now to the IEEIE, Savoy Hill, London WC2R 0BS.

People in brief...

- **Roger Mudditt**, founder of Woods Electrical, has joined R Hamilton & Co as group marketing executive.

- **Emma Hatcher** has been appointed contract sales consultant at Christopher Wray's new trade and contract centre.

- **Fred Saunders**, chairman of LDMS Lighting, has died aged 59. His son Mark takes over the position of chairman.

CIBSE

The Chartered Institution of Building Services Engineers

Extra guidance on office lighting

The imminent publication of a new CIBSE Lighting Guide for Offices prompts some thoughts on the wide range of new perspectives the lighting designer must take into account. The traditional image of a clerk labouring in Dickensian conditions has been swept away by advancing technology. A parallel development has occurred in lighting equipment and techniques. Add the flow of lighting-related EC Directives and professional lighting designers should be in demand for the foreseeable future!

Not so long ago it was considered necessary only to establish a suitable task illuminance for the provision of an acceptable lighting scheme. Other criteria emerged due to a better understanding of the true role of lighting in the working environment.

Many of these aspects of design are often left unspecified, for the tenderer to satisfy in a manner that he feels will secure the job, and this can dominate the thinking behind the pricing of an offer. Unfortunately, the resulting installation may then have a completely different finished appearance from the original concept.

The availability of suitably qualified office staff is forecast to be increasingly limited in the future, so the working environment provided by employers is likely to become relatively more important. Consequently, a general improvement in the quality of office accommodation is expected, including more sophisticated lighting.

Members of the Task Group have cast their net widely in terms of scope and treatment. Design criteria will include: task illuminances, the plane of the task, uniformity, obstructions, surfaces and finishes, glare, energy aspects, lighting controls and maintenance.

Under the heading lighting systems, the group has evaluated daylight, electric lighting and the integration of the two, the interaction with heating, ventilating and air conditioning, and especially air-handling luminaires. Emergency lighting is thoroughly examined.

Appendices will deal with lamps, lighting calculations and lighting for plants.

Even nowadays, it is tempting to define the type of office lighting required by the task to take place in an area, but the fact is that many workers are multi-functional and many areas undergo a change of use. It may therefore be highly desirable for a scheme to be adaptable to several needs, calling for very careful assessment.

Colours and finishes, including that of the furniture, are vital components in the overall effect. In this context, the modern trend towards dark woods for office furniture is to be deplored. It should be remembered that although an interior requires a certain level of illuminance, it is by the luminance (brightness) of room surfaces that the interior is actually seen. The interior design scheme therefore has a great influence on overall appearance because of the reflection and inter-reflection of light.

Bad office lighting is not yet the rarity it should be. CIBSE Lighting Division expects the office lighting designer's task to be considerably eased by the wealth of good lighting practice the new guide will offer.

Roger Gardner, Chairman, Office Lighting Task Group.

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NEWS

Crompton looks to the future

Crompton Lighting, since November 1991 part of the BTR Group, recently unveiled its plans for the future. Some £5 million has already been spent on refurbishing the Doncaster luminaire factory, buying new plant and reorganising the production lines. This has increased efficiency, enabling the company to make luminaires for the cost sensitive volume market, while providing the flexibility to supply specifier products quickly.

The factory layout has been organised into four areas according to product type: fluorescent batten fittings, recessed fluorescent luminaires, industrial and amenity luminaires, and emergency lighting.

Overall, there are nine production 'cells', each complete with the plant and components required to make and package a particular product. Each team is responsible for the quality of its products and for meeting delivery schedules.

In addition, a £1M computer system now handles orders, passing information to the production department and planning deliveries.

New products are the cornerstone of future strategy. Product development will be market driven, concentrating on worldwide appeal, energy saving, environmental considerations and technological innovation.

Major launches

Two major new ranges are planned for the autumn. The company plans to increase its share of the UK market for battens to 25% by launching a new design. It is also planned to introduce recessed fluorescent luminaires meeting CIBSE LG3 and the EC directive on office lighting.

Other new products will include a floodlight called Galaxy, a family of bollards that can easily be tailored to individual requirements and a high bay luminaire.

In an entirely new departure, Crompton is moving into the field of lighting controls and plans a competitive system with a pay-back period of only 10-12 months.

Customer care heads the list of priorities. A recently announced consumer services charter promises a faster response to enquiries with a delivery period of three days for 95% of fast moving products, quotations to be sent the day after receiving the enquiry and design schemes to be prepared within 10 days.

Profits down at Whitecroft group

The Whitecroft group has reported a profit of £4.49 million before taxation for the year ended 31 March 1992, a 27% reduction compared with the previous year.

Lighting Division profits for the year were reduced to £4.52 million from £6.68 million the previous year.

Silvertown Lighting continues to lead the division's thrust into mainland Europe. To support this growth, subsidiary companies have been formed in Germany and France. The division is expected to at least maintain profits in the current year.

Infinite — a winner

The Infinite lighting system from Concord Lighting has won a British Design Award in the consumer products and contract goods category.

Each product selected has to satisfy the stringent criteria which include design innovation, effective use of materials and resources, efficiency of manufacture, outstanding appearance, ergonomics, reliability, ease of use and maintenance and value for money.

The idea for Infinite came from independent product designer Ter-

ence Woodgate who, while changing a lamp with a screw cap, realised that low voltage electro-mechanical components could be screwed together to construct a lighting system.

Infinite is based on double-sided, modular tracks with power rods and spotlights and these components simply screw together and need no other electrical connection. As there are curved sections, even circular layouts can be constructed, and up to three levels of track can be hung

one from the other, giving a total ceiling-to-track drop of 3m. This assembly method allows even large, awkward spaces to be effectively lit from just one configuration.

Additions to the system are being planned.

One of the judges said, "Infinite was greatly admired by the panel as an innovative and well-engineered product from a company with consistently high standards of design. The system is beautiful to manipulate."



Before: a dated commercial office block.

Floodlighting does not have to be expensive or complicated to have quite an effect, as the pictures here show. When the South Wales Electricity Company refurbished its offices in Cwmbran town centre a simple scheme using Thorn Sunspot floodlights with 150W metal halide lamps was used to emphasise the green structural supports for the building cladding. Fittings located at both ground and eaves levels direct light upwards and downwards. The building is shown both before and after renovation.



After: the floodlighting scheme makes the building come alive by night.

COMMENT

One for all and all for one

Like the three musketeers, the UK lighting industry should stick together in these troubled times. But this it is clearly not doing at present. An obvious example of this lack of cohesion is the current unsatisfactory situation with respect to industry exhibitions.

A trip this week to ElectroTech showed a small band of lighting exhibitors split almost 50:50 between those who were extremely glad to be there and those who were rather disappointed at the low response levels they were getting. But many of the dissatisfied were unable to tell whether the poor response they were experiencing was due to the restyling of the exhibition and its inconvenient midsummer timing or to the current economic situation leading to less people actually attending.

With the return from summer holidays, we are in the run-up to Hilight at the Business Design Centre, an exhibition which aims at encouraging the high-design, high-cost element in the lighting market. Geared to the needs of the architect/designer, its most obvious attraction to this type of specifier is an ambitious conference programme.

In the New Year, we have Lightshow, now scheduled far more conveniently for mid-February after being held for two years in early January at a date when most people are still recovering from seasonal dyspepsia.

Its major problem up to now has been a certain reluctance on the part of the major professional lighting companies to throw in their lot with their decorative colleagues, leading to a certain amount of fence-sitting and the attitude that 'if you go in I'll come too'. If this situation continues the event could either be a tremendous success or quite the reverse, depending on the whims of a couple of the market leaders — hardly a very satisfactory state of affairs.

A January slot has now been taken up by a new exhibition, Lighting '93, to be run at the NEC as an add-on to the Furniture Show, and which is presumably calculated to attract the interior design end of the market. How this will differ from IDI, which has recently seen a decline in the amount of lighting exhibitors it attracts, it is hard to tell.

Thus, the situation is one where there are far too many exhibitions for a relatively small industry. It is very doubtful whether all of these can possibly survive in the long term, and it would be healthier for lighting if a predominant exhibition emerged as soon as possible in order to promote confidence among potential exhibitors and minimise confusion.

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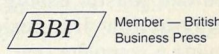
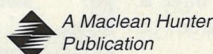
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NEW PRODUCTS



Lytetube goes outside

Lytetube, Concord's modular linear lighting system, has been extended by the introduction of Lytetube 150MP, a version for use either outdoors or indoors.

It is ingress protection rated IP65 and claimed to be virtually vandalproof, with impact resistant lenses.

The system uses single and twin lamp fluorescent modules with a choice of louvres or lenses. Individual modules can be

reversed to give uplighting.

To extend its design capabilities, mitred corners and radiused bends between 45° and 180° are available. Complementary dummy modules can be used for requirements such as signage and public address equipment. The system has three circuits for individual or group switching.

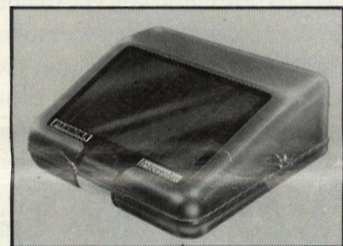
Applications include railway stations and airports.

Reader Service No 151

A solar powered welcome

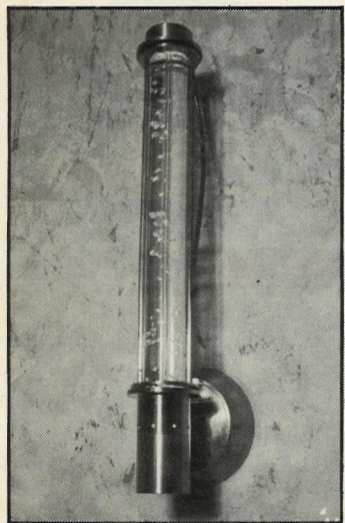
Pandora outdoor lighting control operates on solar power and uses passive infra-red technology to switch on a welcoming glow outside the home when it detects a presence within a distance of 8m and an arc of 120°.

The unit uses a 3.5W krypton torch lamp and is therefore not intended to provide security lighting, but the makers, Intersolar, point out that its special advantage is that no wiring is required. It is simply mounted on a vertical surface in a position where it will receive ample natural light.



Alternative models give a flashing blue light and an audible warning. Reader Service No 152

Luminaires are innovative



Dr Jekyll is a floor standing luminaire with matching wall light (illustrated) by Mass. It creates atmospheric illumination by combining the elements of light, air and water.

The cylindrical aluminium body is topped by a heat resistant glass tube containing water with columns of bubbles. Uplighting for the tube is by a concealed 12V 75W tungsten halogen lamp.

A transformer and silent air pump are also incorporated in the base. Pigment kits are available in red, blue or green to tint the water and there is a water purification solution. The tube is easily removable for maintenance.

Standard finishes for the housing are satin or polished anodised aluminium, but special colours can be provided. The glass tube can be either clear or etched.

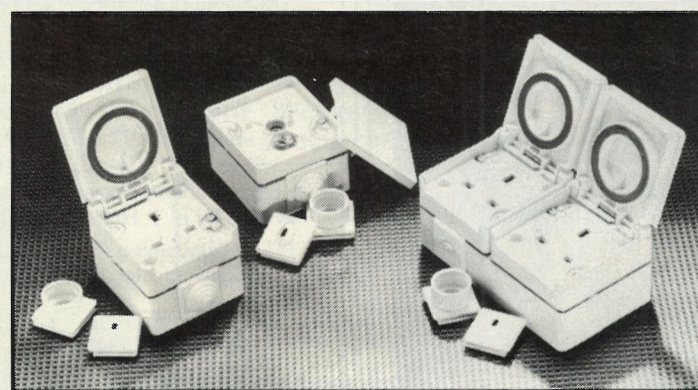
Reader Service No 153

Outdoor socket and switch

Micromark has weatherproof outdoor sockets and switches.

The one-gang MM5396 and two-gang MM5397 are 13A outdoor sockets with an IP55/5 protection rating. Their tough, moulded plastic casings have a spring-action lid designed to provide a complete seal.

There is also a one-gang, two-way 10A switch, MM5395.



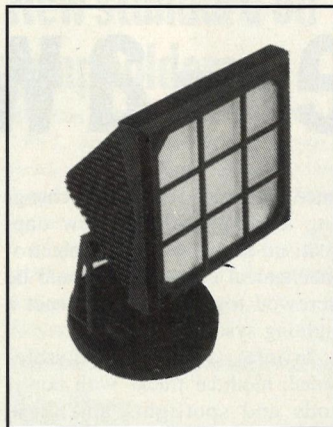
Reader Service No. 154

Floodlight is versatile

Triangolo is a red, white or black floodlight for either indoor or outdoor use. It is ingress protection rated IP55. Made in Italy, it is available in the UK through Europa Lighting Technology.

There is a choice of light sources: tungsten halogen up to 500W, either 70W or 150W metal halide, or 70W high pressure sodium. The diecast aluminium body is triangular in cross section and houses the control gear when discharge lamps are used.

As well as conventional wall



and post mounting, there is a corner bracket, an extension arm and a garden spike.

Reader Service No 155

Task light is adjustable

Midland Machinery Services has a glare-free industrial task light made in Germany that uses PL compact fluorescent lamps.

Aluminised parabolic louvres prevent glare at adjoining workstations. Electronic ballast units are available as an option.

The lamphead is made of anodised aluminium and has a new articulated joint to allow positioning in any plane. Interme-



diate joints on the arm have thumb screw adjustment to allow setting of tension to individual preference.

Reader Service No 156

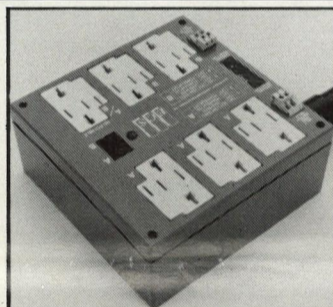
Installation of lighting simplified

Wiremaster system from ECS consists of a number of lighting connection units, each of which supplies up to six luminaires connected to it by a plug and socket. The connection units also contain relays and logic circuitry for switching purposes.

Because the lighting connection units replace individual ceiling roses, there is considerable scope for a reduction in cabling, trunking, conduit and labour.

The other part of the system is a lighting area control unit connected to the lighting connection units by a single-core signal cable which can share the same conduit as the mains supply.

Wiremaster is not only cheaper



and easier to fit than conventional cabling, it also provides flexibility for future reconfiguration and local switching.

The lighting connection unit has two output circuits, each of which responds to any one of up to 16 switching channels. Lighting patterns can be switched by this means to suit different activities throughout the day via the lighting area control unit.

Reader Service No 157

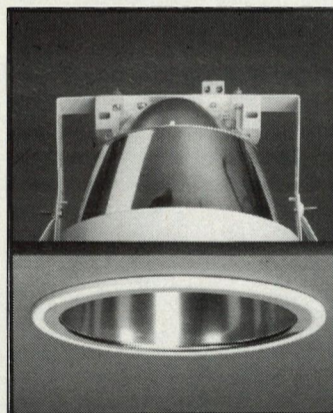
Ballasts for compact lamps

High frequency ballast modules from Advanced Lighting Industries are specifically designed to soft start certain fluorescent lamps, giving improved life and light output.

They can be used with the following lamps: all 2D, all PLC, PLL up to 36W, and linear T8 fluorescent up to 36W.

The modules are small and lightweight. They have a 0.9 power factor correction. Surge and transient protection is incorporated, with additional short and open circuit protection for the lamp output.

Reader Service No 158



Downlights are recessed

Profile Lighting Services has added recessed metal halide downlights to its range of products. They use either single- or double-ended lamps in 70W or 150W ratings. Access for relamping does not involve removing the bezel.

Models with either integral or remote control gear can be supplied.

There are various designs to suit different ceiling systems and customised designs can be produced to integrate with architectural features.

Reader Service No 159

LIF LINE

Seeing the wood for the trees

In the last four weeks, in spite of difficulties in confirming the Maastricht Treaty and while Europeans watch with interest to see whether or not Jack is reappointed president of the EC Commission, down at grass roots level, the ground has shifted yet again:

- ☐ Moves are afoot to bring the Low Voltage Directive into the scope of the CE Mark Regulations, thus making certification and quality assurance compulsory for luminaires.
- ☐ The format of illuminated escape and exit signs has been changed again.
- ☐ The Council of Ministers has taken a look at the Signs Directive, requiring the maintenance, cleaning and checking of illuminated escape and exit signs and so moving this another step nearer to the statute book.
- ☐ Work has started in CENELEC to produce an RFI emission standard for luminaires – compliance will be compulsory after 1994.
- ☐ Energy labelling, in our sector, will only apply to light sources, not lighting appliances, as before.
- ☐ The various directives concerning the energy auditing of buildings have been replaced by one framework directive.
- ☐ Lighting has been struck out of the Construction Products Directive Interpretative Document on Energy.

If you need a helping hand to guide you through this lot and the many developments to come, you know where you can get it!

Just as interesting are the consultative documents issued in the UK following decisions taken in Brussels:

The Draft Regulations enacting the EC Utilities Directive.

The Draft Health and Safety (Display Screen Equipment) Regulations.

The Draft Workplace (Health Safety and Welfare) Regulations.

The Draft Fire Precautions (Places of Work) Regulations.

Soon we will see the Draft Electromagnetic Compatibility Regulations.

All of this is due to be implemented in the UK next year, but do not be daunted by this ever growing list. It is to be welcomed, giving, as it does, enhanced status to standards, quality assurance procedures and codes of practice.

The one fundamental change which has taken place in law-making is that not only is it now done in Brussels instead of Westminster, but that a large part of it is now done by the standards makers in CEN and CENELEC instead of civil servants in Whitehall. Manufacturers, users and enforcers now decide the detail. The consequences of these changes will be more important to us, I suspect, than any moves to have a common defence policy or common foreign policy, although a common currency could be useful down at micro level where real life has to continue.

What is interesting to speculate on is not so much what John Major will do as president of the Council of Ministers, but where he will do it.

Edinburgh was chosen for the first British summit but maybe after that John Major will show a little imagination in his choice of venue, perhaps Oswaldtwistle or Llanfairfechan, particularly if there is another treaty to be signed.

Nobody talks about the European Union Treaty, only about Maastricht as though that says it all. So it would be fun to think of European newsreaders getting their tongues around some good old-fashioned British names for a change.

Behind his broad political agenda John Major has, according to his minions, four priorities for his six month presidency. He intends to sort out:

- ☐ public procurement,
- ☐ trade marks and copyright,
- ☐ energy and transport markets,
- ☐ and those states who do not implement EC directives on time.

Most of it is good basic down-to-earth stuff which is going to impact in some way on our businesses. If we stay on top of it, the benefits will flow; if we don't, it could be our undoing.

Recent press coverage has worried display screen workers in offices but European legislation requires certain health and safety provisions to be met. In this two-part feature **Bob Bell**, of Siemens Lighting, outlines the directive and the onus it places on the employer.

On screen now



Conventional overhead lighting, showing reflections in visual displays.

One scare headline has yet to appear in the national press:

Research in the UK now proves that visual displays can kill!

If they are dropped on you from a great height.

But isn't that different from those that have. Press coverage over recent years has worried many display screen workers. Fact and fiction have become badly confused.

In recent cases, employees have obtained substantial damages against their employers for injuries caused by the incorrect use of visual display equipment. The number of cases is small, but the size of the settlements has hit the headlines.

The injuries go by many different names: repetitive strain injury (RSI), tendonitis and so on. What they have in common is that they are slow to develop and tend to go unnoticed until it is too late. The general name for these sort of ailments is gradually developing diseases or GDD.

Although the name GDD may be new to you, these illnesses are commonplace. For example, if you don't do enough exercise and suffer from stress at work, then you will probably develop heart problems – that's GDD. They can be caused by many factors over a long time, so it is difficult to link cause and effect.

It is recognised that the incorrect design and use of display screen equipment can cause certain GDDs and, by creating needless mental stress, can contribute to other forms of GDD. In addition to this, short term problems such as visual fatigue, headaches and so on can also be caused.

EC display screen directive

On 29 May 1990, the EC issued a directive on the health and safety provisions for workers who use visual display workstations. The directive details the obligations of employers and sets minimum requirements for the workstation, the environment and the interface with the operator.

It is called the:

"Council Directive of 29 May 1990 on the minimum safety

and health requirements for work with display screen equipment (fifth individual Directive within the meaning of Article 16(1) of Directive 87/391/EEC)"

With a snappy title like that, it is no surprise that it gets called the EC Display Screen Directive. Directives are stodgy things to read, tend to be written in EC legal language and have dull titles.

It must be implemented throughout the EC by 31 December 1992. Workstations first put into service after that date must comply. Workstations already in service on that date must be brought up to standard within four years.

Effect of the directive

There are many vested interests in this matter. Opticians, furniture manufacturers, ergonomists, lighting manufacturers and many others hope that the legislation will be tough, have sharp teeth and create a sales bonanza. Employers and their federations hope that it will vanish without a trace. The battle is still in progress but the outcome is clear.

The British government can, if it wishes, pass legislation that is tougher than the directive, but it cannot pass legislation that is weaker. It plans to bring in legislation that follows closely the directive and does not go beyond it.

The directive

This section outlines the directive

and, hence, the proposed UK law. To clarify the meaning some of the language has been altered.

Scope

The directive does not apply to drivers' cabs; control cabs for vehicles or machinery; or computer systems on board a vehicle or mainly for public use. It also does not apply to portable systems not in prolonged use at a workstation; or calculators, cash registers or small displays on measurement equipment. Typewriters of conventional design with a small 'display window' are also exempt.

Quite sensibly, mobile equipment and simple calculators and meters are not covered. The dividing line between typewriters with a simple one line display and some of the more sophisticated word processor typewriters is becoming blurred. The intention is to draw a distinction between typewriters with a simple edit window and those in which the document is composed on a screen first.

Definitions

Display screen equipment: an alphanumeric or graphic display screen, regardless of the display process employed.

Those who keep talking about the VDU directive should note that it doesn't matter how the display screen produces its image. A microfiche system is also a display screen.

Workstation: an assembly comprising the display screen equipment. This includes the keyboard, mouse and other input devices, the machine, the output devices, the desk, the chair, the document holder and so on – in fact all of the things that make up the workstation. It also includes the software and the immediate work environment.

The definition of a workstation is broad and includes the hardware, the software and the environment that the worker experiences. This last point is very important because many of the problems are caused by the effect of the visual environment on the screen and worker.

What is a new workstation? A significant change to any of the elements of the workstation would create a 'new' workstation. This means that the 4 year breathing space would cease to apply.



SON de luxe uplighter installation showing reflections in VDUs.



Reflections in display screens eliminated by reflector optics within the appropriate limiting angle.

Worker: anyone who habitually uses display screen equipment as a significant part of his/her normal work.

The aim here is to identify those people who input or extract information from the display screen as part of their job. These are the people exposed to musculoskeletal problems, visual fatigue and stress. Those who, for example, manufacture, sell or maintain display screens, would not be users.

Employers' obligations

Analysis of workstations

The employer must analyse each workstation and evaluate the safety and health risks to the worker.

Risks to eyesight, physical problems and mental stress are particularly important. The employer must then take appropriate steps to remedy the risks found, taking into account their combined effect. The workers or their representatives must be informed about the results.

There must be an analysis with a risk assessment (this may be beyond the skill and expertise of the employer). It means that neither a workstation nor an installation can 'comply' with the directive. The analysis is the test of compliance. A set of conditions that is fine for some workers and work, may be unacceptable for another worker and work combination.

Training and information

Workers must receive information and training about the health and safety aspects of using their workstations; they must also be kept informed about any measures that are taken. Workers must also be trained to use their workstation before starting work on it and if the workstation is substantially changed. They must also be consulted.

Correct training can eliminate many of the musculoskeletal risks and will ensure that the worker flags up other problems. Several good video

training programmes are available and these offer the easiest approach. Training to use the workstation (especially the software) is often ignored.

Work routine

The employer has to plan the workers' activities to periodically interrupt display screen work with breaks.

Breaks are essential to reduce fatigue. Many short informal breaks are better for the worker and for productivity than a few longer breaks.

Eyesight

Workers are entitled to eye and eyesight tests before they start display screen work and at regular intervals afterwards. This and any special correction required must not cost the employee.

Many people have wrongly blamed visual displays for harming their eyesight. What actually happens is that they already have eyesight defects that only become apparent when they are asked to do demanding visual work on the screen. The employer has to pay for basic spectacles needed specially for display screen work. He doesn't have to pay for better frames or for correction for vision at distances other than that of display screen.

Minimum requirements

The directive lays down minimum requirements for the equipment, the environment and the operator / computer interface. These are shown in the accompanying annexe.

The minimum requirements avoid any quantitative measures. There are, for example, no recommended luminance limits for luminaires, or illuminances.

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IMI

Draft European standards will alter UK requirements for emergency lighting systems and bring more building types than ever before within the scope of the legislation, says *Chris Watts*, of Menvier.

A safe way out in Europe

European Community legislation and directives, some of which have already been incorporated into UK law, are beginning to have a dramatic effect on the design and installation of emergency lighting systems in the United Kingdom.

It is clear that many more buildings will require some form of emergency lighting system. Building owners and operators will be relying on specifiers and contractors to offer informed, up-to-date advice on the products and systems best suited to their premises.

System design

Designing a safe emergency lighting system involves using approved components and equipment. Many of the practical guidelines defined in BS 5266 are incorporated in the new application standard.

Major requirements include:

- ☐ emergency lighting must be activated in the event of local sub-circuit failure;
- ☐ each compartment on an

- escape route should have at least two luminaires;
- ☐ specific hazards, such as lifts, toilets and escalators, should be protected;
- ☐ extended operational use (3 hours) when evacuation does not take place in the event of supply failure, or if the normal lighting can be dimmed;
- ☐ requirements for commissioning and subsequent tests, together with maintenance procedures and system record.

In future, it is likely that exit signs in areas used by people unfamiliar with their surroundings will require maintained luminaires.

Where an escape route passes through an open area, a decision is required as to whether the lighting in this area will be treated as part of the emergency escape route or an anti-panic open area. Open areas are defined as places that allow people to identify their escape route.

The need for external illumination outside exit doors should also

be determined. Some local authorities may accept street lighting as emergency lighting.

Design criteria

Three specific areas of system design can be highlighted. These are:

- ☐ specific hazards/safety equipment;
- ☐ escape route lighting;
- ☐ high risk areas.

Specific hazards/safety equipment

An emergency lighting unit should be used within at least 2 metres of horizontal distance to emphasise the position of specific or potential hazards and to show the location of safety equipment.

A number of points should be borne in mind when considering system design. Luminaires should be fixed:

- ☐ at each exit door;
- ☐ near staircases – each flight of stairs should receive direct light;
- ☐ near any other change in level;

- ☐ to illuminate mandatory exit and safety signs;
- ☐ near each change of direction;
- ☐ near intersections of corridors;
- ☐ near each piece of fire-fighting equipment;
- ☐ outside each final exit and close to it;
- ☐ near each first aid point.

Escape route lighting

Additional luminaires need to be installed to ensure that every point along the escape route meets the minimum lighting level. For the UK, this is likely to be:

- ☐ normal risk areas – 1 lux minimum;
- ☐ permanently unobstructed routes – 0.2 lux;
- ☐ high risk areas – 10% of normal lighting level.

Photometric design

Although the light levels proposed for anti-panic open areas are similar to those in current use, the procedure for calculating these levels will be significantly simplified. The new European requirements call for verification of light spacing data and manufacturers are now producing spacing tables to allow these different levels to be engineered.

Draft European standards offer two methods of calculation for open areas. Open areas should now be engineered to a minimum of 0.5 lux, as defined by the spacing tables. In addition, a spacing height ratio of a maximum of 4:1 is required to prevent the use of a very few light output luminaires which would give poor light distribution.

High risk areas

High risk task areas involving physical danger, such as acid baths, conveyors or rotating machinery, require 10% of normal lighting, with a minimum of 15 lux within 0.25 seconds of the normal supply failing. This can easily be achieved using fluorescent lighting with conversion packs containing ballast lumen factors in excess of 10%.

Installation

When specifying emergency lighting luminaires, the products selected should be certified either to BS 4533 (the Kitemark standard) or to the 1988 ICEL standard. These two standards are effectively identical and comply with the new European product standard EN 60 598 2.22.

The new standard on exit signs incorporates a pictogram of a running man, in addition to the EXIT legend. This international symbol is growing in use all over Europe. All new UK buildings should now be fitted with exit signs incorporating pictograms.

Extensions or replacements to existing systems must have a consistent format, so if you are fitting new pictogram signs in any part of a building, then exit signs elsewhere in the building must be converted to incorporate the pictogram symbol.

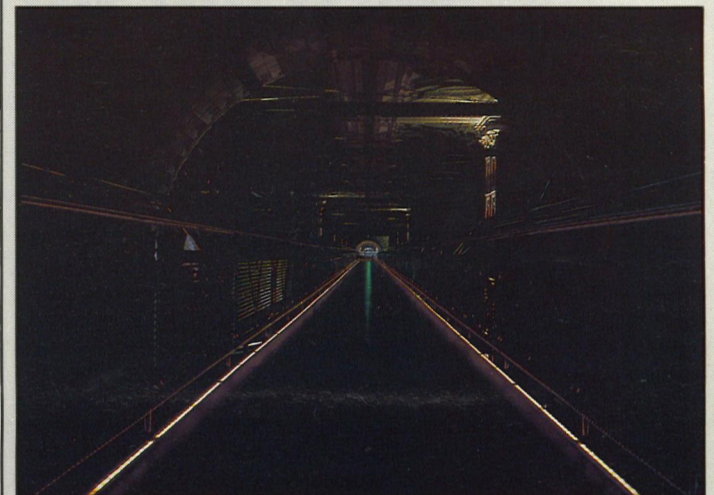
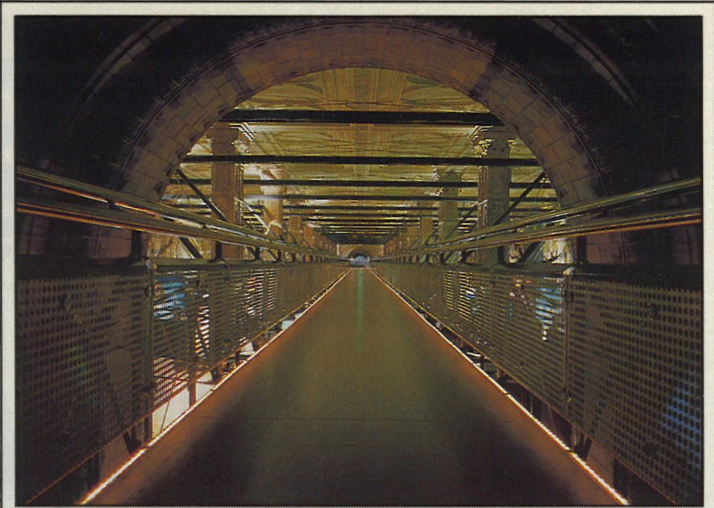
The new standard defines both lighting requirements and viewing distances for exit signs. For a back-illuminated sign, for example, this is the height of the panel x 200. Signs with remote illumination will need to be twice as large, as they are less easily noticed.

Central battery systems

A European standard for central battery systems is to be published shortly. This is intended to work alongside the luminaire standard already in place.

The major points covered by this are:

- ☐ The battery has to have excess performance to



The walkway under normal (above) and emergency lighting conditions (below).

An escape from dinosaurs

A linear emergency escape lighting system has been provided for the refurbished dinosaur gallery at London's Natural History Museum.

The system was provided by Existalite, working in conjunction with the designers, Imagination, who designed a suspended walkway running the entire length of the main gallery and encompassing the animatronics exhibition.

In addition to meeting emergency and escape lighting requirements, the lighting instal-

lation also had to provide continuous linear edge lighting to the walkway.

It operates from a number of independent central battery units, which provide maintained illumination as well as 3 hour battery back-up in the event of power failure or a fire alarm.

Since the renovated gallery was opened by Princess Diana at Easter this year some 250,000 people have already ventured along the walkway through the exhibition.

ensure it will still meet the required output at the end of its design life.

- ☐ All lead acid batteries must have low voltage disconnection circuits to protect them at the end of their operational cycle.
- ☐ The charge must be matched to the battery and ensure total system recharge to 90% within 12 hours.
- ☐ Monitors should be more specific and easier to understand for non-technical users.
- ☐ Central invertors must be capable of blowing any distribution fuses and not electronically shutting down without being isolated from any fault.

Installation and maintenance

Installation of emergency central battery wiring systems (and fire alarms) is now covered by the IEE Regs (16th edition) and these are being harmonised with Europe in HD 384.5.

It is important to note that all the safety wiring systems requirements must be met. A separate protected emergency circuit is needed from the normal supply and normal lighting sub-circuit fuses have to be monitored and results recorded in emergency operation.

Testing of emergency central battery wiring systems has now been simplified and the new requirement will be for monthly operational tests and annual full rated discharge test and system check.

In most buildings, emergency

lighting will be required to be illuminated within 1 second of failure. It is unlikely, therefore, that generators will be suitable for providing power for safety or escape lighting.

As everything depends on the starter supply, attention is being focused on ensuring that the batteries used meet the same industrial standard as that required for central battery systems. The main application for generators will probably be the provision of power to standby lighting.

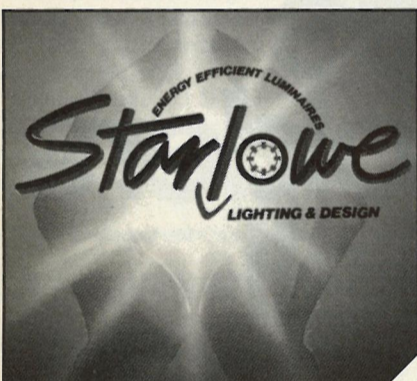
Aid to designers

To avoid expensive retrospective modifications to an emergency lighting system, the project must be carefully planned from legal requirements through to final commissioning. Menvier is running an industry education campaign which includes a series of leaflets and an information helpline on 0295 256363.

To help installers and end-users check whether emergency lighting levels are correct, the company has also produced a hand-held light meter, specifically designed to cover the emergency lighting range.

Legislation checklist of harmonised European standards:
Lighting requirement: CEN 169 WG3
Application standards: CENELEC 62/8
Photometric standards: CEN 169 WG7
Wiring standards: HP384-5
Luminaire product standards: EN 60 598-2-22
Central system product standards: CENELEC 62-8.

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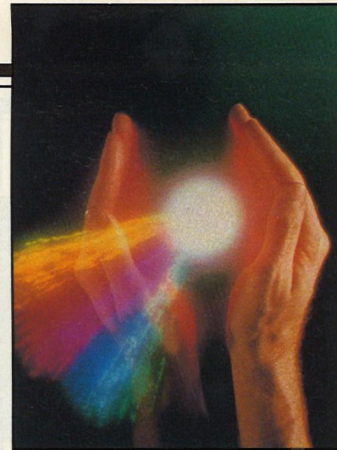
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EMILAS and NLA give birth to THE LIGHTING AWARDS



The Awards' conception

After a long period of consultation, the Lighting Industry Federation is launching a new Awards scheme – THE LIGHTING AWARDS.

THE 1993 LIGHTING AWARDS will commend new and refurbished lighting schemes that best exemplify good energy management AND excellence or innovation in design – both for interior and exterior lighting schemes.

THE LIGHTING AWARDS have been developed from the LIF's two previous lighting award schemes – The National Lighting Awards and The Energy Management in Lighting Award Scheme, better known in the industry as NLA and EMILAS respectively.

Both NLA and EMILAS enjoyed great success over the years and served as effective vehicles to promote an awareness of the unique role that good lighting plays in our everyday lives and highlighted the many benefits that can be achieved from investing in more efficient modern lighting equipment with modern controls – namely lower energy bills, less environmental damage



GUS CATALOGUE ORDER LTD in Manchester is an excellent example of a modern commercial interior refurbishment project. A new suspended ceiling incorporates the new lighting system which utilises low-brightness high frequency luminaires. The result is a 52% energy saving plus a glare free, comfortable and efficient visual working environment where good housekeeping and staff morale have been noticeably improved.

and quantifiable improvements in productivity and staff morale.

After fifteen years of EMILAS and four years of National Lighting Awards, LIF decided it was time to review the two Awards and assess the value of one scheme commending both good design AND energy management.

Under the new scheme LIF hopes that negligence of environmental concerns in the name of aesthetics will be tempered. Conversely the risk of inadvertently commending negligence in assessing refurbished schemes will be countered by maximum attention to good design in all

aspects of the installation.

Balance and differentiation between installations in the various categories will be achieved by a sophisticated weighting system and a panel of professional lighting assessors representing various disciplines in the industry.

What will the LIGHTING AWARDS represent?

The LIGHTING AWARDS will provide a show-case for the very best of UK lighting and will commend and reward the lighting professional whose design and energy management skills enhance the environment.

But what constitutes a 'good scheme'? What factors make a scheme 'well designed' or particularly 'energy efficient'?

To answer this we must recognise that lighting should do more than just provide a specific illuminance on a working plane with minimum energy used. Visual comfort, lighting matched to the task, and appropriate contrasts and highlights enable the occupants to perform their work efficiently without strain or fatigue.

The characteristics of the lighting in terms of intensity (brightness), direction and colour can enhance the appearance of spaces, objects and people and help create a particular mood or special ambience. And that mood or ambience will most certainly affect the performance of tasks, our productivity, our safety, even the quality of our lives.

Environmental concerns are at the top of everyone's agenda and this places additional emphasis on the need for intelligent energy management in lighting. Widespread introduction of energy efficient lighting and control gear in offices, factories and homes would cut Britain's electricity demand by 8 per cent, cut UK emissions of carbon dioxide by two per cent and cut greenhouse

gases by 5 per cent. That would be a major contribution towards achieving national Government targets of holding emissions in the year 2005 at today's levels and help achieve government energy savings of £7 billion by 1995.

For owners and users, such savings are quantifiable not only in reduced electricity bills achieving paybacks within two years on

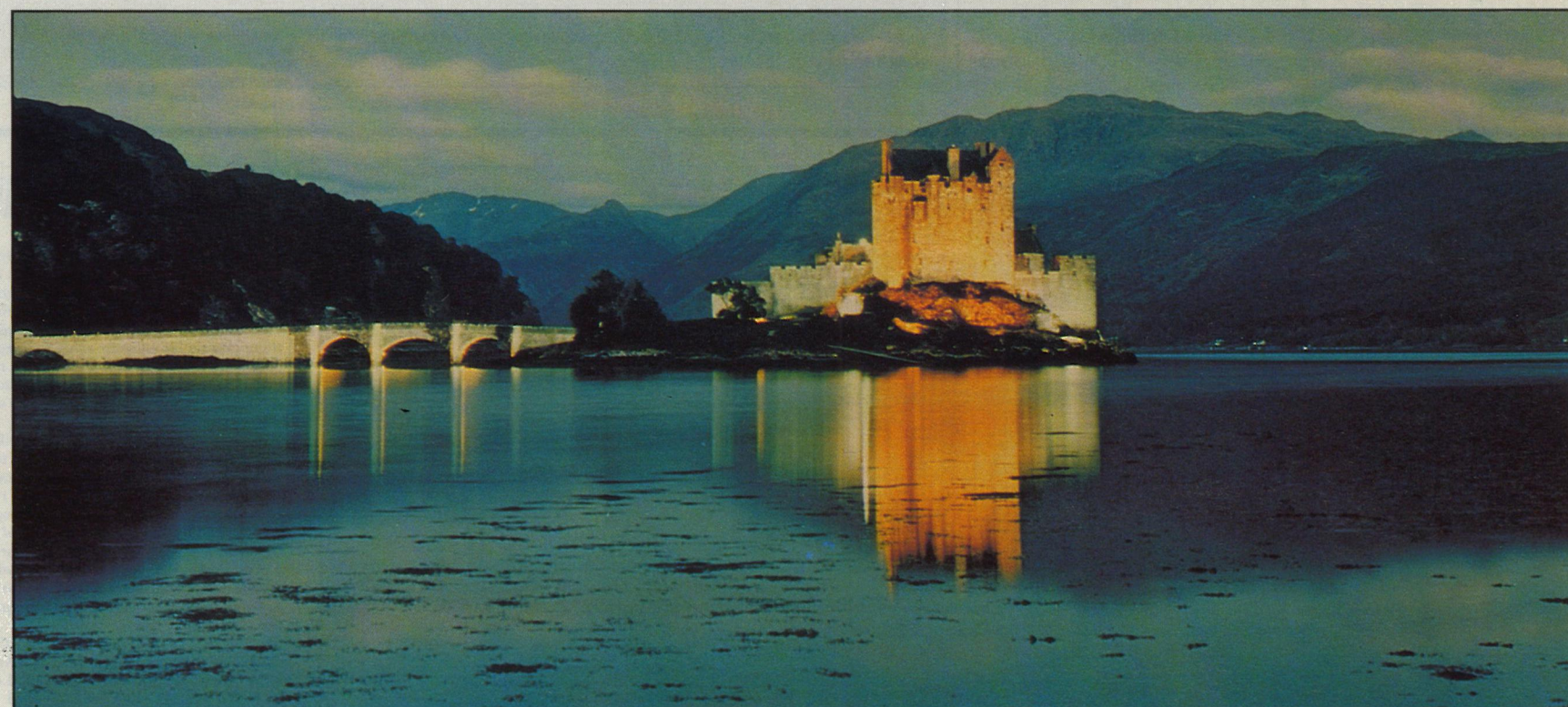
refurbished lighting schemes, but also by boosting productivity through improved working conditions, reducing eye strain and fatigue among employees.

EMILAS and NLA illustrated that in the UK we have in high measure that combination of lighting technology, skills and design flair that is necessary to create the very best in lighting design.

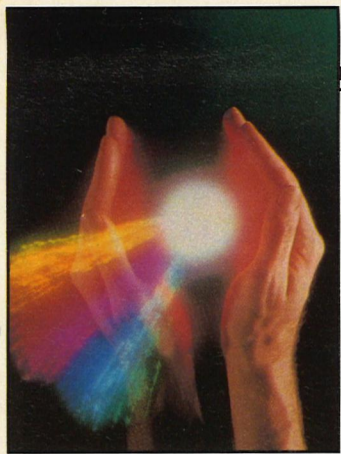
THE 1993 LIGHTING AWARDS will provide the ultimate showcase for high calibre schemes such as past Award winners, and many more besides which are being designed and installed all over the United Kingdom. We ask you to bring these to our attention so that your scheme receives the national commendation it deserves.



Horsham Library typifies a highly commendable lighting scheme and demonstrates what a public utility building can achieve with a simple, flexible, low glare, energy efficient lighting system.



Floodlighting of Scotland's spectacular Eilean Donan Castle not only brought it a major design Award, it has more than doubled the number of tourists and increased its revenue from postcards, calendars, filming and advertising. The high efficiency of high pressure sodium overcame the relatively limited electric supply and complements the stonework colours.



Potential sponsors

In restructuring the Award scheme and launching the LIGHTING AWARDS, LIF acknowledges the contributions made by the following organisations:

The Energy Efficiency Office
Chartered Institution of Building Services Engineers
The National Illumination Committee of Great Britain
The International Association of Lighting Designers
The Royal Institution of Chartered Surveyors
The Royal Institute of British Architects
The Chartered Society of Designers
Trades Union Congress
Institution of Lighting Engineers
Electrical Contractors Association
The Electrical Contractors Association of Scotland
The Electricity Association
The Electrical Wholesalers Federation
The Institution of Electrical Engineers
The Lighting Association
The Confederation of British Industry
The Design Council

LIF is currently discussing nominal sponsorship with these organisations and, encouraged by the support shown so far, is hopeful that they will lend their names to the 1993 LIGHTING AWARDS and provide Judges for the final assessment panel.

Entry details

The crucial factor now is to generate entries for the 1993 LIGHTING AWARDS before the Cut-Off date of October 30th 1992.

Schemes may be entered in THE LIGHTING AWARDS competition by either the Owner/User of the building or area being lit, or by the lighting designer. As will be seen from the rules, entries can be from individual companies or organisations, local authorities, government departments, the public and private sector.

Qualifying period

The competition is open to all UK schemes that have been completed or improved during the period 1.1.90 to 30.4.92.

The range of lighting that may be entered is almost endless, *only street lighting and home lighting being excluded.*

Categories

There are five categories; **Commercial, Civic, Industrial, Leisure and Exterior.**

As a guide to entrants, given below are some typical examples of the types of lighting installations in the respective categories:

Commercial

Offices; Computer Rooms; Drawing Offices; Shops and Stores; Banks and Services; Shopping precincts.

Industrial

Foundries; Shipbuilding; Power Stations; Manufacturing and Assembly Shops; Food Processing; Clean Areas; Printing; Distribution and Storage; Agriculture and Horticulture; Vehicle maintenance;

Laundries; Inspection and Special Processes; Industrial Working and Movement Areas; Security; Petrochemicals and Off-shore; Mines.

Leisure

Hotels and Restaurants; Theatres; Exhibition Halls; Museums and Art Galleries; Indoor Sports.

Exterior

Car Parks; Filling Stations; Floodlighting of commercial premises; Floodlighting; Public Buildings; Sports Floodlighting Interchanges; Tunnels and Subways; Bridges; Decorative Floodlighting of Buildings; Parks and Public Gardens; Outdoor Shopping Precincts.



With a 25,000 all-seater capacity, 612 floodlights were required to provide Don Valley Stadium with the highest standard of sports lighting. The quality of floodlighting produces excellent colour TV pictures and complies with recommendations of the major international sports codes of practice, and the Lord Justice Taylor's report on crowd safety. The functional lighting also meets an aesthetic requirement of revealing the contoured roof of the splendid cantilever stand.



Cardiff's Llanedern High School gymnasium, like many of its type, was lit with a 25 year old scheme using incandescent lamps. Following an initiative by the local authority's energy conservation unit, the gymnasium was refurbished using 250W high pressure sodium units and achieved a remarkable 225% improvement in illuminance with a 76% saving in energy. The place is now brighter and safer and the scheme will pay for itself within eighteen months.

Assessment

In the assessment and judging of entries, consideration will be given to the following criteria:

- engineering and aesthetic design appropriate to the installation
- compliance with the requirements of relevant standards and legislation, lighting guides and codes of practice, and consideration of all aspects of health and safety
- efficiency of lamps/luminaires compared with the optimum efficiency reasonably practicable for the lighting installation
- evidence of good energy management practice in respect of the installation
- innovation of any aspect from design concept to installation management

The criteria are not listed in any order of importance and a sophisticated weighting system will be employed to give fair assessment in each of the five categories.

The Awards

The Awards which will comprise framed certificates will be presented to the Owner/User AND the Designer of the best entries in each category. 5 highly commended Awards will also be presented.

From the five winning entries, two special category Awards - the Design Award and the Energy Management Award will be presented to the scheme which most embodies the qualities of excellent design or good energy management.

The Design Award will be presented to the Scheme Designer

The Energy Management Award will be presented to the scheme Owner

Closing date

*The Closing Date for entries is **OCTOBER 30th 1992** so complete the following Entry Form and return it as soon as possible to:*

The Lighting Awards

Organiser

Swan House
207 Balham High Road
London SW17 7BQ

THE LIGHTING AWARDS '93 is your opportunity to gain the highest recognition that the lighting in your premises, or the scheme that you designed, is of a quality and standard that deserves national recognition.



L'Oreal's factory in Pontyclun, Mid Glamorgan is operational 24 hours a day yet with the installation of a computer control system, major power savings are achieved by controlling the lighting according to prevailing daylight conditions. The installation achieves an efficiency of 2.3 watts/m²/100lux

THE LIGHTING AWARDS 1993

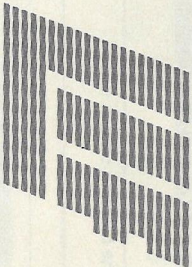
RULES

1. The Lighting Awards are open to all owner/users of lighting installations in the United Kingdom which have been completed or improved during the period 1.1.90 to 30.4.92
 2. The Awards cater for all types of lighting installation.
 3. ONLY ROAD LIGHTING AND HOME LIGHTING ARE EXCLUDED.
 4. Five Categories apply: Commercial, Industrial, Civic, Leisure, Exterior (see Competition criteria for entrants guide to category)
 5. All entries MUST BE ACCOMPANIED by suitable labelled photographs and, if necessary, installation design drawings to enable judges to assess the installation. The Judges reserve the right to visit any installation that may be short-listed for an Award.
 6. While copyright of photographs will remain the property of the entrant, the organisers reserve the right to use such photographs for purposes associated with the competition and its publicity. Submission of an entry implies full acceptance of this Rule by the owner/user, designer and all others involved with the installation.
 7. The Organisers require that the owner/user of the lighting installation and the designer shall approve (AND SIGN) the entry form.
 8. Submission of an entry form will signify acceptance of all Rules. The decision of the Judges will be final.
 9. CLOSING DATE FOR THE RECEIPT OF ENTRIES IS OCTOBER 30TH 1992.
- All entries should be sent to: LIGHTING AWARDS Organiser
 Swan House, 207 Balham High Road, London SW17 7BQ.
 TEL: 081 675 5432 FAX: 081 673 5880
- The Winners of the Lighting Awards will be announced in March 1993
 For further information about the 1993 LIGHTING AWARDS contact: LIF,
 Swan House, 207 Balham High Road, London SW17 7BQ. Tel: 081 675 5432
 Fax: 081 673 5880



The Lighting Awards 1993

Entry Form



LIGHTING INDUSTRY FEDERATION

LIF USE ONLY:

Section: ☐ C ☐ I ☐ CI ☐ L ☐ EX

No: _____

1	NAME OF ORGANISATION (OWNER/USER OF THE LIGHTING INSTALLATION)	
2	Address _____ Post Code _____ Tel No. _____	
3	EXACT ADDRESS OF LIGHTING INSTALLATION (if different from 2) _____ Post Code _____ Tel No. _____	
3a	CONTACT FOR POSSIBLE SITE VISIT Name _____ Tel No. _____	
4	APPROX SIZE OF TOTAL AREA _____ m ²	
5	WHAT ARE THE PRINCIPAL TASKS CARRIED OUT IN THE AREA, AND THE ILLUMINANCES (LUX), IF RELEVANT _____	

6	LIGHTING EQUIPMENT INSTALLED AND INSTALLATION PERFORMANCE <i>b</i> A summary of the predominant lamp and luminaire types used should be shown below
LAMPS: Quantity: _____ Colour: _____ Manufacturers: _____ LUMINAIRES: Quantity: _____ Type: _____ Manufacturers: _____ CONROLS: Type: _____ Manufacturers: _____	

7	Date installation completed
Area lit/veit (100 square metres min), m long x _____ m wide = _____ m ² (include gear losses, where relevant) _____ kW	
Refurbishment installation <input type="checkbox"/> Maintained illuminance (lux) _____ or new lighting scheme <input type="checkbox"/> Initial <input type="checkbox"/> Measured <input type="checkbox"/> Average operating _____ _____ hours per annum	
Energy Management (tick appropriate boxes)	
<input type="checkbox"/> Photocell control <input type="checkbox"/> New Local Switching <input type="checkbox"/> Time switches	<input type="checkbox"/> Computer control <input type="checkbox"/> Group lamp changing <input type="checkbox"/> Regular cleaning schedule <input type="checkbox"/> (More) reflective decor <input type="checkbox"/> Energy Manager appointed <input type="checkbox"/> Other (give details)

7. Old Scheme: Service illuminance _____ (lux) <input type="checkbox"/> measured <input type="checkbox"/> estimated	
Installed lighting load (kW) (incl. gear losses where relevant) _____	
Light source (quantity, rating & type) _____	Date installed: _____ (if known)
Type of luminaire (fitting) and quantity _____	
Cost of installing/refurbishing lighting scheme _____	Payback time (if known) _____ (months)

Scheme Associates

Designer of the lighting scheme	
Name _____	
Address _____	
Post Code _____	Tel No. _____

Architect	
Name _____	
Address _____	
Post Code _____	Tel No. _____

Consulting Engineer	
Name _____	
Address _____	
Post Code _____	Tel No. _____

Interior Designer	
Name _____	
Address _____	
Post Code _____	Tel No. _____

Electrical Contractor	
Name _____	
Address _____	
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Name _____	
Address _____	
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This entry form has been completed by:	
Name _____	Status _____
Company/organisation _____	
Address _____	
Signature _____	Date _____

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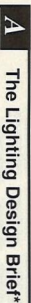
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Owner's/User's Statement

LIGHTING INDUSTRY FEDERATION



In support of entries, a statement by those responsible for the design of the lighting installation must be included.

This statement should cover:

B the means by which the requirements of the brief have been met;

C the main innovative feature(s) of the installation entered in the 1993 Lighting Awards.

B How the installation meets the Design Brief*
(Identify points of excellence in the installation)

*Where necessary, a fuller statement can be continued on separate sheets and attached securely to the form.

C What do you consider to be the major innovative feature(s) of the installation in terms of design, equipment or application technique?

This statement has been completed by:

Name _____

Address

Signature _____

Tel

Completion of this statement by the Lighting Designer implies acceptance of all Rules pertaining to the 1993 Lighting Awards, in particular Rule 6 relating to photographs and copyright thereof.

Owner's/User's Statement

Owner's/User's are invited to summarise the features of the installation, paying particular regard to points of excellence, points of innovation and other features which particularly satisfied them and their needs. The following headings are suggested for guidance:

- Aesthetics-Visual Comfort
- Productivity-Sales-Increased Usage
- Cost and Energy Effectiveness
- Safety-Security-Flexibility

Quantification should be included where appropriate.

Please note: The importance of these headings will vary with each installation and thus appropriate weighting will be applied by the Judges.

This statement has been completed by:

Name _____

Status

(If signed by someone other than the owner, user, appropriate authority should be held)

Signature	Date
-----------	------

Date _____

Name _____

Status

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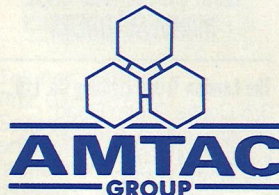
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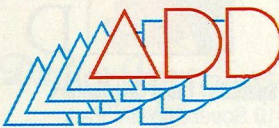


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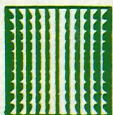


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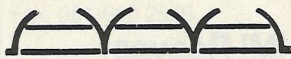


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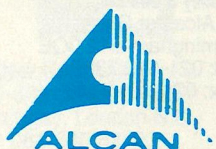
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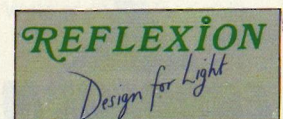
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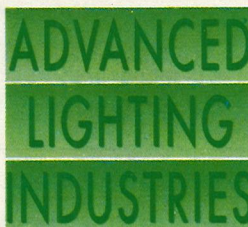


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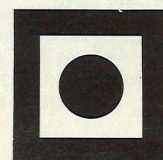
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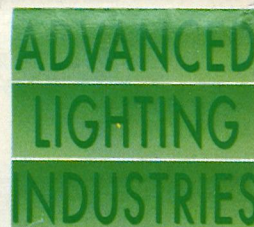


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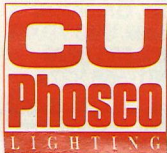


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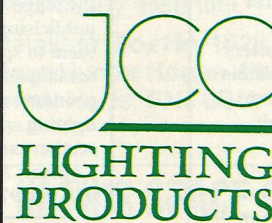


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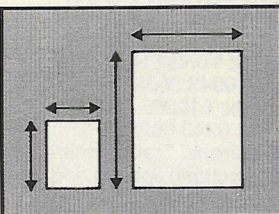
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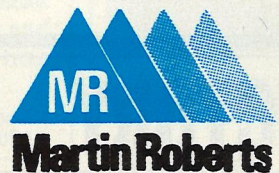


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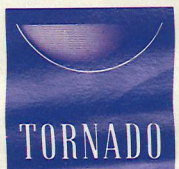


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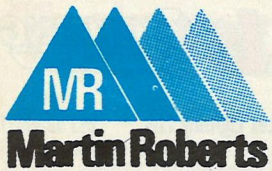


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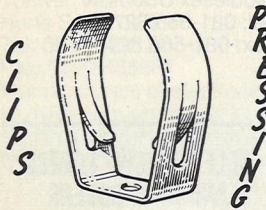
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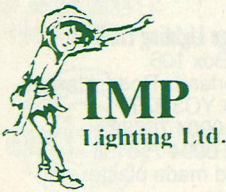
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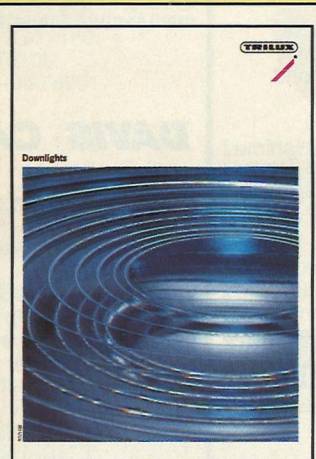
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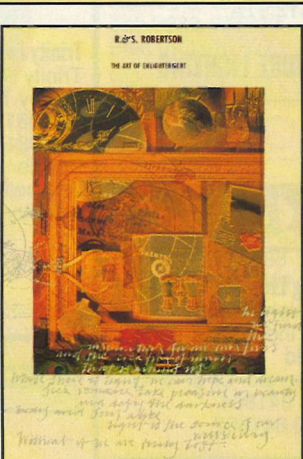
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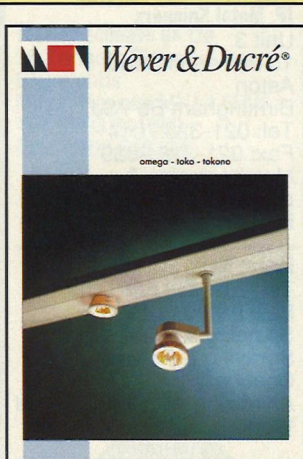
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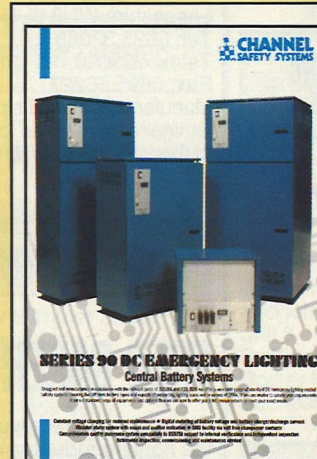
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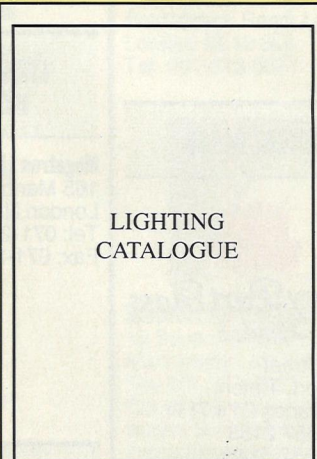
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lighting specifiers then this
section can help you.
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Well established and expanding U.K. company would like to hear from European Manufacturers wanting to break into the U.K. market. Principles please contact: Box No. 1529, Lighting Equipment News, Maclean Hunter House, Chalk Lane, Cockfosters Road, Barnet, Herts. EN4 0BU.

DISTRIBUTION OPPORTUNITY IN SCOTLAND

U.K. manufacturer of energy efficient lighting products, marketed through independent distributors, wishes to appoint a distributor in Scotland to sell its range of lighting products.

Knowledge of the lighting industry essential.

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**TO ADVERTISE IN THIS SPACE CALL
ALASTAIR MOYES on 081-975 9759**

Funtastic lighting

A children's theatre is providing hundreds of hours of entertainment for younger visitors to Garden Festival Wales in Ebbw Vale.

The Funtastic Theatre – one of three purpose-built theatres on the festival site – stages everything from top class music, dance and drama events for children to storytelling, puppetry and even a circus-in-a-suitcase.

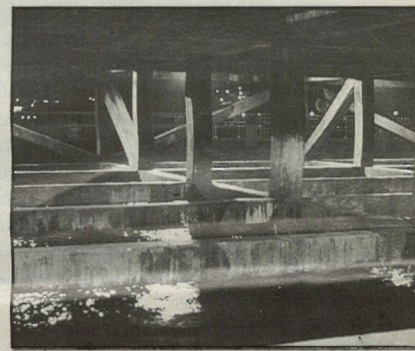
The theatre is the only venue on site with full blackout facilities, so a high quality lighting rig was called for. Light Relief were approached and fitted the theatre with a Strand system on a triangularly-trussed Trilite rig in a sponsorship deal.

Garden Festival Wales's 142-acres of theme rides, exhibitions, lakes, waterfalls and spectacular horticultural displays are expected to attract 2 million people to Ebbw Vale in Gwent before 4 October.



Celebrations at the Bournemouth International Festival included a temporary lighting scheme under the local pier. The installation, designed to be viewed after night-fall, uses 31 Philips MNF250 metal halide floodlights to focus attention on an area not normally given more than a passing glance.

The idea behind the scheme, the work of artist Ray Smith and consultant David Colmer, was to make people look at what goes on beneath the surface of things. Under the pier the lighting has revealed a strange and vast structure with powerful atmosphere and one that constantly changes with the mood of the sea as it slaps against the concrete.



FOR SALE

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**COPY DATE FOR
THE SEPTEMBER
ISSUE IS
20th AUGUST**



A finer diner

Newcastle Civic Centre's staff restaurant, located in the basement of the building, has been refurbished to give a pleasant place to meet and eat, and provide better working conditions for the kitchen staff. The lighting design, incorporating a tubular lighting system, is a major feature of the improvements.

The hundred seater staff restaurant is lit by a grid of Tonduluce luminaires, with metal halide spots located at T-junctions on the grid. The Italian tubular system, supplied in the UK by Moorlite, is suspended from the structural ceiling and original features, such as the air ducts are integrated into the grid.

Stylish new lighting, air conditioning, new furniture and a cool, restrained colour scheme have transformed an unprepossessing space at relatively low cost into a comfortable and relaxing interior.

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FAO: Kim Simpson Electrolite Limited Entrance A Rembrandt House Whippendell Road Watford Hertfordshire WD1 7PN.

Street lighting news

The Association of Street Lighting Contractors has decided to join the Confederation of Construction Specialists.

Sun shines on LIGS golfers

Camberley Heath Golf Club was the venue for the Lighting Industry Golf Society meeting in July when 28 members and guests played in glorious sunshine.

In the morning a foursomes competition was played for prizes presented by Julie Johnson of Osram to D Sanderson and J Butler, who came first, and runners-up T Smith and A Thoroughgood. D Proctor, GE Lighting presented first tee gifts.

A Single Stapleford competition was played in the afternoon, when T Rose of Philips Lighting presented the first prize to B Watts and second prize to G Jacobs.

T Smith, even though he recorded the highest score of 48 points by parring the course in the afternoon round, was prevented from receiving two prizes by the society's rules.

The next meeting is on 20 August at the Wilderness.

LA finds a new home

The Lighting Association is investing £350 000 in new headquarters at Telford, Shropshire, which will accommodate offices, its own test laboratory equipped to NAMAS standards, and product label printing equipment. The building is scheduled to be fully operational early in the new year.

Months of careful investigation to find the best site preceded the decision to move from Bishop's Castle, where the association has been based for the last 10 years.

Albert Shaw, recently elected vice president of the association, and the driving force behind this project, says that members had been aware for some time that the organisation had simply outgrown its former accommodation. "Moving to Telford and building our own purpose-designed premises means we will be able to provide an even better service and be more accessible to our members, thanks to the town's good communication links," he said.

"Equally important, however, is the fact that Telford will enable us to retain continuity of existing staff," he added.

LIGHTING EQUIPMENT NEWS

Lighting the mail down-under

London's most unusual underground railway has been relit using energy saving lighting. The Post Office Underground Railway which runs for over twenty miles beneath the streets of the capital city carrying letters and mail between Paddington and Whitechapel began operation in 1925. It carries no passengers and the trains have neither drivers nor guards.

The trains run on 2 foot tracks in 9 foot tunnels between stations, and the two-way tunnels separate at station approaches into two 7 foot tunnels each carrying one track. The 27 foot cars have four containers, each of which can

carry fifteen bags of letters or six bags of parcels.

The automatic operation of the system is controlled by track circuits. One of the running rails is bonded to earth and acts as a common return for both traction and track circuiting. The other rail, comprises a series of individual lengths which are insulated from each other.

When the wheels of a train bridge the rails, the relay connected to that particular track circuit operates, removing the power from the preceding section and not restoring it until the train has moved into the following section.



Because the train brakes operate in the absence of traction circuit, the system is fail-safe.

Throughout its existence, the Post Office Underground Railway has been lit by screw-in gls lamps. Now they are being replaced by Gewiss 80 Range

Zenith polycarbonate luminaires.

The new fittings give an excellent glare-free light distribution. Labour costs incurred in replacing lamps have been drastically cut, and the scheme costs one third less to run than the previous installation.



A health centre in Market Rasen has been lit using Marlin's low energy Opaline luminaires.

The 6m vaulted ceiling in the reception area is designed to provide a calm, ecclesiastical atmosphere. Extensive use of daylight throughout the space demanded a similar horizontal illuminance from artificial light while providing the CIBSE recommendation of 150-200 lux.

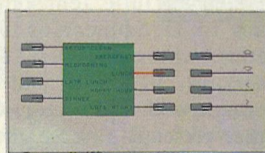
Two 425mm Opalines were positioned back-to-back - as their low energy 38W 2D lamps have a low heat output - and suspended from steel conduit. The control gear is integral to the luminaire and is power factor corrected for energy efficiency.

S T R A N D S C A P E S

— No. 3 —



At the gallery



Strand's sophisticated Premiere system brings new dimensions to the fine art of lighting control.

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Student designs go into production

Collaboration between Edison Halo Lighting and third year design students from Brunel University has produced three new display fittings for Edison Halo.

The project was initiated by Thames Valley Technology under a scheme which offers students exposure to industry and commerce.

In July 1991, Brunel design students Colin Codrington, James Braithwaite and Dan Vincent were briefed by Edison Halo to design a track and surface-mounted spotlight for use with 70W or 150W single or double-

ended metal halide or high pressure sodium lamps.

The brief required the designs to be geared to low material costs, minimum tooling and ease of assembly and service; and the fittings were to be ready to launch at the Hanover Fair in April 1992.

Three designs were chosen for further development to production state, and the students were asked to make working models, taking responsibility for tool making, model making and electrical assembly. The completed models were presented at Hanover by the students themselves and the designs have now been tooled up with a view to future production.

IN YOUR NEXT ISSUE

Next month *LEN* will look at energy efficiency in the public sector, starting at the top with central government. New lighting in the Houses of Parliament is proving cost effective while giving the lighting levels

needed for TV broadcasting.

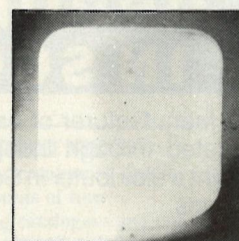
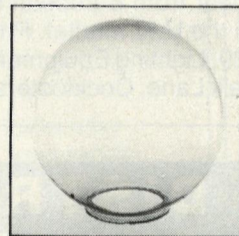
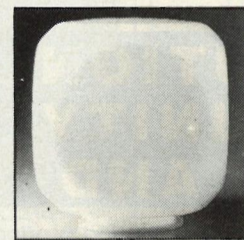
The retail sector is the first to move ahead when the economy moves out of recession. With this in mind we look at what's new in shop lighting.



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