

LIGHTING EQUIPMENT NEWS

JULY 1989

Thorn produces record results

1988-9 was a record year for Thorn Lighting. Profits rose substantially with turnover increasing by 30%, and sales outside the UK grew to represent 61% of turnover.

Profit before taxation for the Thorn EMI Group as a whole increased 28% to a record £289.1 million with turnover up 8% to £3 290.6 million.

Company chairman, Colin Southgate commented that Thorn EMI had focused on three clearly established core business: music, rental and lighting, all of which were successful multinational businesses and well positioned for future growth.

Thorn Lighting was now number one in the Nordic region and the UK, and ranked third in the rest of Europe, following the acquisition of Holophane. In addition, the acquisition of three lighting businesses last year had given the company the market lead in Australasia, and joint ventures in Hong Kong and Malaysia were keeping the company in step with the rapid pace of growth in the Pacific basin.

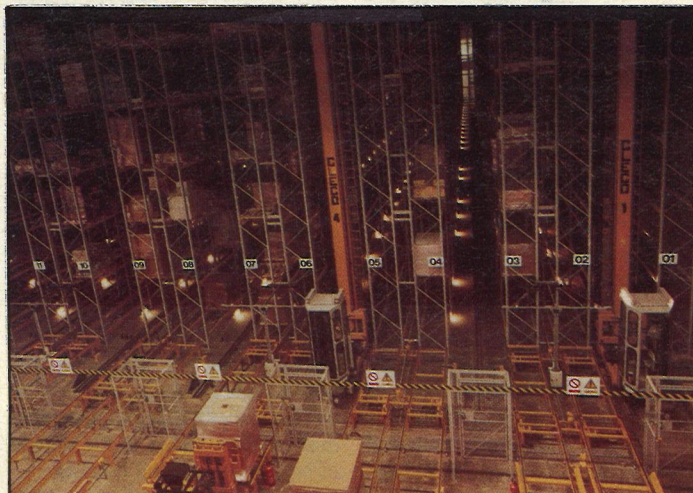
Staff to market DZ products

Staff Lighting has reached an agreement with the German exterior lighting manufacturer DZ Licht to act as sole agent for its products in the UK. All luminaires and fittings will be sold here under the name STAFF DZ.

The company will be marketing the complete range of precinct and wall mounted luminaires. Moving away solely from the traditional lighted sphere approach to external lighting, the fittings are modelled to create stronger street design utilising both direct and indirect lighting techniques.

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The 20 metre high storage area.

High tech on a large scale

Europe's most sophisticated distribution system for domestic lighting is expected to come on line in early August. WM Lighting's new £15 million Houghton Centre, a purpose built national distribution centre at Brackmills, Northampton, covers approximately 18 000 square metres.

The centre will ultimately be able to process 36 000 cartons per day and carry up to 4 500 items covering the needs of domestic lighting retailers ranging from large out-of-town sheds to independent high street electrical retailers.

Each working day will be divided into quarters so that, at initial working levels, a total of 232

orders can be processed and despatched daily. Commented managing director, David McLroy, "In such an expanding and competitive market, service to customers is all-important if we are to compete successfully."

The need for accuracy in handling such a large number of lines for a diverse range of customers led to the installation of sophisticated computer, radio control and laser-gun systems to handle and simplify the complex processes of controlling goods inwards and reordering, and picking and sorting into customer pallet loads. So, high-tech handling and storage equipment account for 25% of the total cost.



The high bay storage area again, showing the scale of the installation.



Goods are automatically sorted into customer pallet loads.

Security in a new light

Secured by design is a new initiative to fight crime in south east England. Under the scheme, builders whose houses and flats conform to recommended standards of security, which includes exterior lighting, will be able to display a Home Office-approved logo on their promotional material.

The joint initiative by ten police forces in the south east is supported by the Association of Chief Police Officers and the Home Office. Among the sponsors are the Electricity Council and Philips Lighting Ltd.

Minimum standards are set by



the scheme under three headings: estate design, for example landscaping to eliminate hiding places, physical security in relation to doors and windows, and fire and intruder alarms including the installation of basic wiring, and security lighting.

Mr John Patten, Home Office Minister responsible for crime prevention, said at the launch of the scheme, "Good design is of key importance in the fight against crime: crime can be quite easily designed out at little or no extra cost to the buyer or seller".



Waterloo is all lit up!

The famous Victory Arch and adjoining facade of London's Waterloo Station are now floodlit. The recently renovated arch forms an important part of the "new" Waterloo opened by Queen Mary in 1922. It commemorates those

employees of the Southern Railway and constituent companies who lost their lives during two World Wars.

Imagination Ltd designed the lighting scheme, which consists of three elements; a soft background wash of blue floodlighting; white light to pick out particular features; and amber light used at the main arch window to create a feeling of inner energy and warmth.

NLA - enter now

The third national lighting awards to find the best lighting schemes in the UK has been launched by the Lighting Industry Federation. The purpose of the award scheme is to promote an awareness of the unique role that good lighting plays in our everyday lives and to commend and reward the design skills and the technical expertise of those who create the lit environment.

The awards fall into four sections, industrial, commercial, civic and leisure. They are open to all owners or users of lighting installations in the United Kingdom which have been either installed or refurbished during the period 1 April 1988 to 14 July 1989.

The closing date for receipt of entries is 11 August 1989. The 1988/89 NLA brochure incorporates the official entry form together with guidance on the many types of installation suitable for entry. Entry forms can be obtained from the LIF, 207 Balham High Road, London SW17 7BQ. Tel: 01-675 5432.

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A Tudor house in the city centre.

Extra light for Exeter

Recently, Exeter City Council decided to extend the floodlighting of the city centre.

Burwood Lighting Co Ltd was chosen to design the scheme and supply the floodlights. Initially Burwood demonstrated a number of different floodlights at night with the use of a portable generator, so that an official of the Council could see the various lighting effects and any problems caused to road traffic if the siting was not correct.

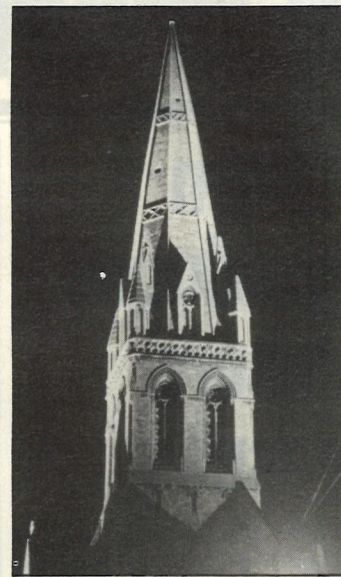
Light sources were selected for the building and the effect desired. For example, four 400W high pressure sodium, Jumbo 6, narrow beam floodlights by Faeluce light the spire of St Michael and All Angels Church, Mount Dinham.

A black and white timbered Tudor house is lit using 250W Faeluce, Jet 3, high pressure sodium floodlights with a special louvre to prevent glare to traffic.

Luminaires had to be installed near an electrical supply, be unobtrusive to tourists and be protected against vandalism. In one instance grassy banks had to be built to allow the equipment to merge into the landscape.

Subsequently the company co-operated with the City Council to get permission from private property owners for the installation of fittings on their premises and to arrange with the South Western Electricity Board to supply electricity.

The result is that timbered houses, five churches, the old Exe Bridge, the city wall and the cathedral are illuminated to the delight of both residents and tourists.



St Michael and All Angels



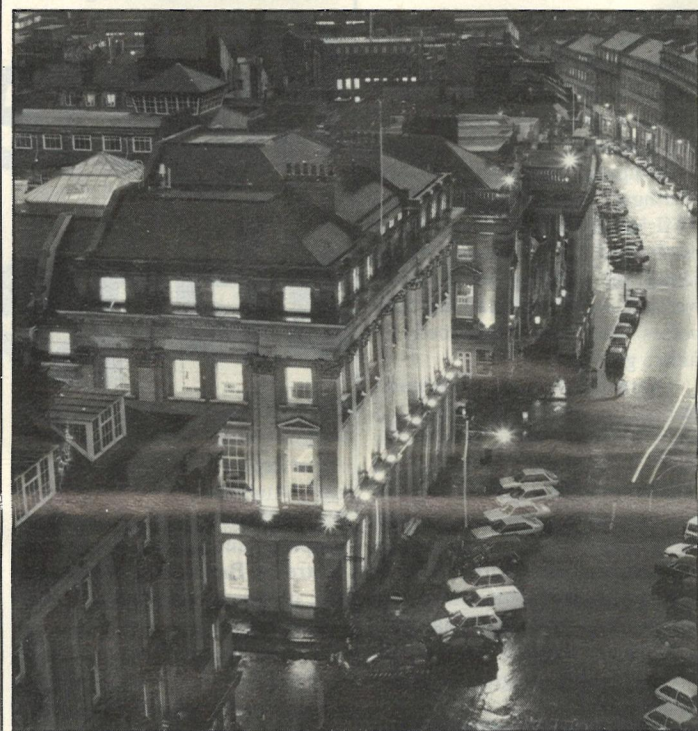
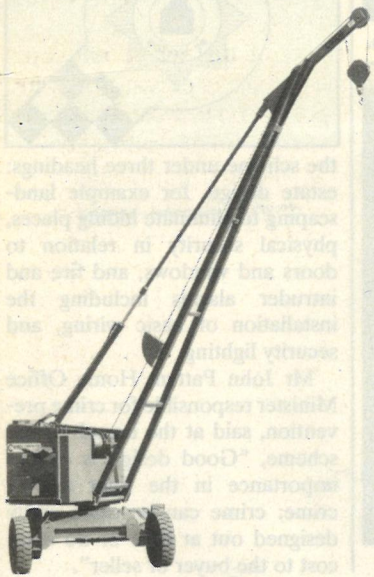
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Banking on lighting

A dramatic night-time effect is created at Lloyds Bank's Newcastle-upon-Tyne city branch, by means of Osram Sonstar floodlights.

Twenty Sonstar units, fitted with 150W Son-Plus lamps, are installed at first floor level, projecting beams of light vertically to

emphasise the Corinthian columns of the Grade 2 listed building, which was originally constructed in 1839 for local developer Richard Grainger. The compact size of the floodlights enables them to be positioned unobtrusively without detracting from the classical façade of the bank.

The installation, part of an overall refurbishment of the building, replaces a tungsten halogen scheme. It gives lower running costs, together with colour rendering better suited to the tone and texture of the sandstone building.

Enter your best lighting design

The International Association of Lighting Designers (IALD) has announced that entries for its seventh annual lighting design awards must be received by 15 September 1989.

Projects must be permanent interior or exterior architectural lighting design solutions completed since 1 June 1987. Entry is not restricted to IALD members.

For the 1989 programme the jury will be: Gordon Anson, chief lighting designer, National Gallery of Art, Washington DC, Justin Henderson, senior editor, *Interiors* magazine, New York; Carl Hillman, Carl Hillman Associates, Inc, New York; Hayden McKay, Hayden McKay Lighting Design, New York; L C Pei, I M Pei &

Partners, New York; Scott Strasser, director of design (Dallas), CRS Serrine Inc, Dallas; and André Tammes, partner, Lighting Design Partnership, Edinburgh, Scotland.

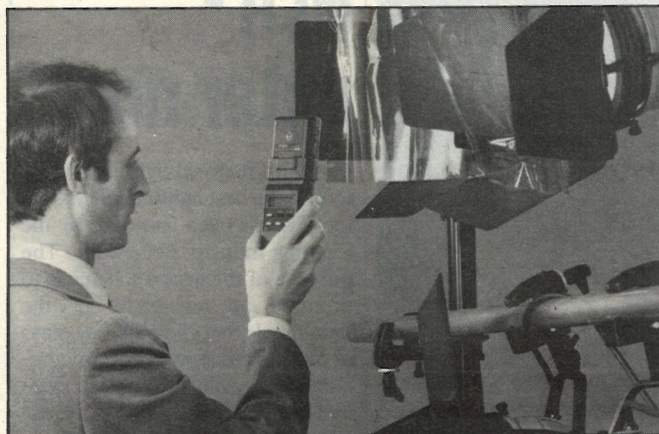
To receive an award, projects must demonstrate aesthetic and technical excellence and must complement the architectural concept.

There are two categories of awards: the Award of Excellence, the Association's highest award, and the Citation. Each project is judged strictly on its own merits. No limit is placed on the number of awards presented.

The 1989 awards will be announced at a dinner on 10 November at the Parker Meridien Hotel in New York City.

Submission forms can be obtained from Marion Greene, International Association of Lighting Designers, 18 East 16 Street, Suite 208, New York, NY 10003.

1992



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MINOLTA

Reader Service No. 3



British Telecom's network management centre lit by Concord. Low voltage recessed downlights with special anti-glare baffles light VDUs.

Designing lighting for people

Lighting can add interest and excitement, create a better environment for people and is paramount in the total design solution, interior designers were told recently.

Lighting's contribution to successful interior design, the role of the lighting consultant, and electronic developments in lighting were some of the topics discussed during a conference held in association with the Interior Design International exhibition in London in May. The conference was called *Lighting Design*.

Among the speakers was Jonathan Speirs, a partner in Lighting Design Partnership, which is claimed to be the biggest specialised lighting design consultancy in Europe.

Mr Speirs, whose subject was *Aesthetics of lighting: examples of successful development*, was one of several speakers who drew a parallel between commercial interior lighting and stage lighting. "Think in layered terms," he advised, "such as texture and form."

He said that lighting should add interest and variety; it could also modulate form. He suggested adding colour and shadows where appropriate.

Examples of well lit interiors were shown, ranging from offices in London to a museum in Taiwan, the Waldorf Astoria Hotel in New York and a shopping centre in Dundee.

A point he emphasised was that the client must always know how to operate the lighting system, so that later adjustments could be made successfully.

Jonathan Speirs felt there were three stages at which lighting consultants could be brought into a project: at the last minute for emergency surgery; a little earlier, for first aid, or at the beginning to practise preventive medicine.

He concluded by saying that "light should make spaces work for us . . . and create a better environment for people to work, live and play in".

Integrate or add?

Dr Harald Hofmann, technical manager of Erco Lighting, Germany, spoke on *Integrated lighting systems and additive concepts: diverging design features in recent architecture*.

After referring to the successful use of theatre lighting techniques in commercial buildings, Dr Hofmann said the difference between that and architectural lighting was that theatre lighting created an illusion while architectural lighting, to him, meant underlining and revealing architecture.

For today's lighting designers, three types of luminaire were especially important, he said: downlights, spotlights and light structures. He reviewed some of the latest equipment in these fields including low energy models.

As an example of lighting integrated into architecture he quoted

the pyramid shaped building in the Louvre courtyard in Paris. The opposite treatment was the additive concept where equipment was deliberately exposed to view, as in his company's new technical centre.

Manipulating perception

Lighting's contribution to successful design was the theme of Janet Turner, designer director of Concord Lighting Ltd. She said there was now an enormous lighting palette available and lighting concepts could be as varied and exciting as interior designers wished.

The public was becoming more and more design conscious. Retail interiors had prompted this awareness more than any other kind of interior. Mrs Turner said it was also easier to show the benefits of good lighting in a retail environment.

The interiors she showed included shops, offices, homes, exhibitions and a railway station converted into an hotel.

Interior designers were lucky to have such tiny lights available. There was also a choice of beam widths and it was possible to use a

small 20W lamp that threw a beam of light 4m. A warning was given however that lamps must be used in the correct type of luminaire.

"You can manipulate perception," Janet Turner said, "you can decide what people will see and how you want them to feel". She added a plea for lighting to make people feel good.

On the subject of chandeliers, she believed they should be low wattage and glow gently, as they were originally intended to do, and that they always needed additional "workhorse" lighting to make people look good.

When daylight was the main source of light, artificial light was needed around the perimeter because the eye adjusted to the brightest area in the field of vision.

Mrs Turner advised that as much attention should be given to the colour effect of light sources as to the colour of fabrics and furnishings. When using fluorescent lamps it was always necessary to specify the shade of white. The lighting design should also take into consideration energy conservation and ease of maintenance.

She concluded by saying that

lighting was paramount in the total design solution and should also satisfy the client's aspirations.

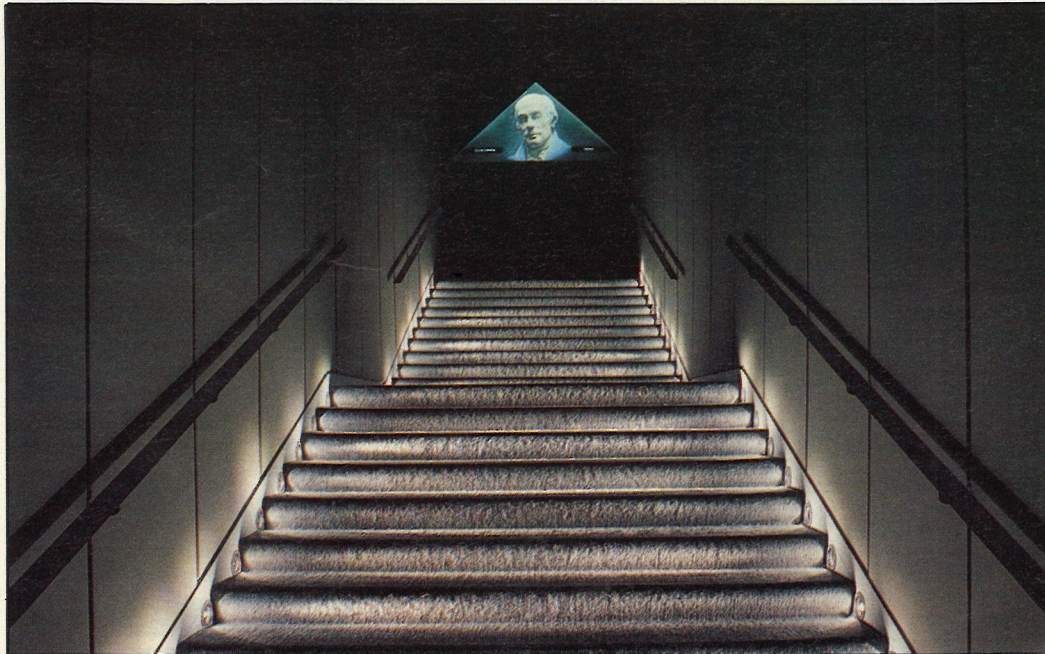
Other speakers at the conference included Dr Begemann, senior vice-president of Philips Lighting, who spoke on the implications of the electronic lighting revolution (see *LEN* April 1989).

Martin Shirley, of ORMS, talked about the place of the lighting consultant in the team. He believed that lighting consultants needed to improve their communication skills, they should not produce the concept design in isolation, but should keep in touch with other people in the team, offer options and present their information well, with models or pictures. They should ask questions and insist on answers.

He also advised them to avoid fashion and not to produce complex solutions when simple ones would do.

Mr Shirley did not believe that American lighting consultants were better than British consultants.

David Morgan, of David Morgan Associates, talked about luminaires he had designed.



Entrance to Enterprising Scot exhibition, Edinburgh, 1986, lit by Lighting Design Partnership.

COMMENT

More in sorrow than in anger

The Lighting Industry Federation should be congratulated on its initiative in inaugurating and subsequently nurturing the National Lighting Awards. NLA has already gained such prestige that in November 1988, only the second year in which the competition was run, presentations were made by no less a person than the Duke of Edinburgh.

It is sad, therefore, to report that this normally sensible trade association appears to be hell-bent on putting the very awards it sponsors in jeopardy. The cause of the problem is a so-called 'note' inserted at the foot of the rules of entry, and I quote:

"NOTE: Entries should feature substantially lighting equipment manufactured by members of the LIF who wish to see quality in the application of lighting technology recognised and commended."

A number of points emerge from this. Firstly, the offending clause is a 'note' not a 'rule' whose actual status is unclear and is nowhere defined. Secondly, the two halves of this 'note' are wholly incompatible; were the LIF members really concerned about quality in lighting they would not see fit to limit the competition in this way. Not only does the whole episode show a distinct lack of confidence on the part of the LIF members and their leadership, but one is forced to query whether such a competition can in any meaningful sense be called 'national'.

This ill-judged postscript to the rules, moreover, apparently managed to make its appearance without LIF even seeing fit to inform the organisations associated with it in the awards of the change, an obvious breach of courtesy.

However, the most serious aspect of this whole unhappy episode is that it puts the distinguished panel of assessors who judge the awards in an invidious position. How can they possibly determine what comprises equipment 'substantially' manufactured by LIF members. Would that imply lamps, or just luminaires, or both? And what about control systems?

I can only express disappointment that this stricture could limit both the quality and quantity of schemes presented and, thus, put the competition back years. I can only hope this will not prove the case.

And, as I do not wish to be accused of putting anyone off entering for the National Lighting Awards, may I propose a way out? I would suggest that if you are querying whether or not to enter, you should remember that in signing the entry form you are committing yourself only to accepting the 'rules' of the competition — not a word here about any 'note' — and you should then trust to the integrity of the judges to ensure that no scheme of any merit is disqualified on such spurious grounds.

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Wide choice of lighting for interior designers

Whatever project interior designers had in mind the lighting at Interior Design International offered ideas and solutions. *LEN* reports on the exhibition.

This year's Interior Design International exhibition, which covered two floors at Earls Court, London, and spilled over into Olympia as well, had 644 exhibitors. In addition, the show interconnected with Shopex which had over 200 stands.

With more lighting included than usual, there were many new luminaires for interior designers to see, with the accent on modern high-tech designs.

This review indicates the choice

of lighting on show and picks out some of the highlights.

To obtain more information about any of the products mentioned, circle the appropriate Reader Service Number on the Reader Enquiry Card.

Ultra modern

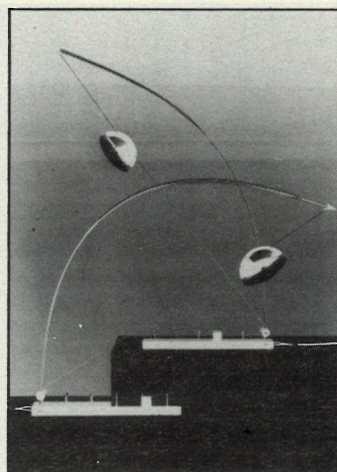
One of the largest stands showing modern lighting was that of **Hitech Lighting plc (No. 201)**. The most eye-catching product was a bare wire system called **Hi Wire** which puts light exactly where it is

required, either forming a feature in its own right or giving light with the minimum of intrusion.

The tiny low voltage spotlights are now more adjustable and have small handles for cool touch. Direction changers have also been introduced, small bars through which the wire tracks are threaded.

A range of low voltage lighting designed by Axel Meise, Germany, included an elegant table light called **Arco Nero** in the shape of an archer's bow.

Starlight was another low vol-



Arco Nero adjustable table light from Hitech Lighting.

tage range on display. These tiny recessed fittings with minute, unshielded M47 capsule lights give an effect of starlight and add sparkle to an installation.

At the exhibition, Hitech announced that it was launching two new divisions, one devoted to the supply of industrial and commercial lighting, the other, the Hitech Beghelli division, to handle emergency lighting with matching mains luminaires.

Lighting Workshop (No. 202)

had a low voltage track called **Suburb** in a curved shape. It accepts spotlights with Superspot lamps up to 100W and tiny triangular shaped indoor floodlights with diffusers. These use tungsten halogen lamps up to 75W with axial filaments and can also be used as uplights.

Thorn Lighting Ltd (No. 203) displayed its recently launched **Aria** range of low voltage spotlights which has won the German *Die Gute Industrieform* award.

A new wall-mounted uplight called **Cameo** was shown for leisure interiors. It can be supplied in either a low voltage 50W tungsten

has a glass "halo" around it.

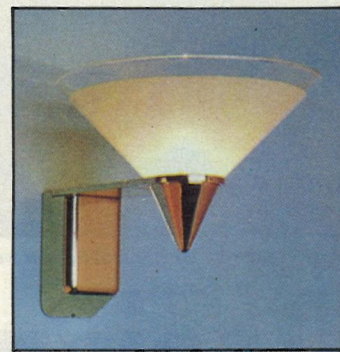
R & S Robertson Ltd (No. 207) unveiled an extensive new product range, from tungsten halogen uplights in a variety of metal finishes to low voltage downlights, spotlights and cast brass ranges.

The collection is designed to provide atmospheric lighting for contemporary or period interiors where varied lighting and lighting effects are important.

Several Spanish companies exhibited at IDI this year and are making a determined effort to corner part of the British lighting market.

Troll Lighting (No. 208) which has set up a UK subsidiary, exhibited its collection of modern lighting for the first time in Britain. A modular linear lighting system called **Jack** has a rectangular cross section and the elements plug into one another. There are modules for fluorescent, tungsten, linear tungsten halogen, low voltage tungsten halogen and compact fluorescent lamps.

Other products shown included low voltage spotlights with integral transformers and interchangeable plug-in heads to give different



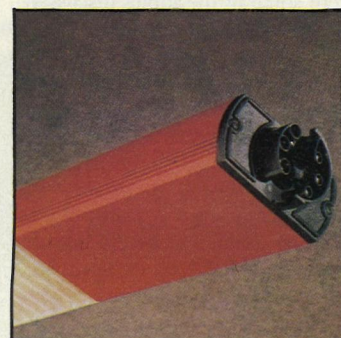
Cameo wall light by Thorn takes a compact fluorescent lamp.

halogen version with an electronic transformer in the wall bracket, or as a compact fluorescent model for use with either 10W or 13W PLC type lamps with a ballast concealed in the wall bracket.

There are three shapes in two finishes: coolie, sphere and tube.

In addition to display and general commercial lighting, part of the stand was devoted to Cityscape, a range of modern, decorative outdoor lighting.

Three new ranges were shown by **Philips Lighting (No. 204)**. For applications with a limited ceiling void, fully recessed down-



Part of a plug-in lighting system from Troll.

lighting effects. Accessories such as coloured filters and barndoors are available.

A track system was also shown.

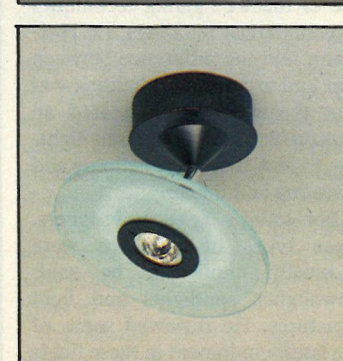
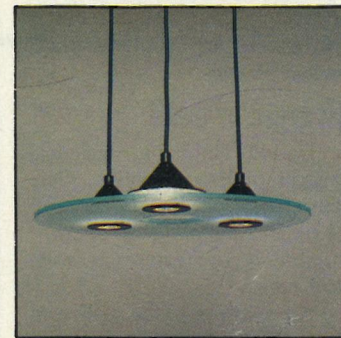
Gargot (No. 209), from Barcelona, showed a modern table light called **Gina** that has a lamphead supported on two adjustable, telescopic rods. The 50W 12V lamp gives direct and indirect light.

Conservatories

Building-on a conservatory is a popular home improvement these days and **Tindle (No. 210)** has a range of lighting fittings that is specially appropriate for garden rooms.

One pendant consists of a shallow, fluted bowl with realistic looking daisies hanging over the sides. The daisies are hand painted metal and the light source is either a concealed, 300W, dimmer controlled tungsten halogen lamp or three candle lamps.

This model also harmonises well with traditional kitchens with a country atmosphere. If required,



Dicro 3, a low voltage pendant by Alinea Lighting (top) with matching wall/ceiling light.

A spotlight from Philips' new Conical range.

lights are available using either compact fluorescent (PLC) or tungsten lamps.

Aztec low voltage spotlights have optional barndoors and holders for ultra-violet or coloured filters. Two models have integral transformers, while narrow-beam versions provide accent lighting against natural daylight in shop windows.

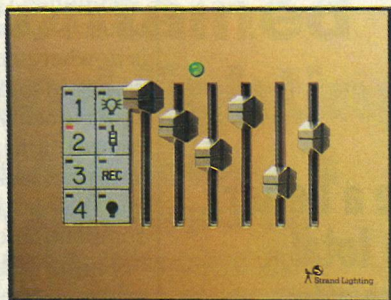
The new **Conical** range consists of seven spotlights. Five use mains voltage lamps (R63, R80, PAR38E or bowl reflector lamps), while two use low voltage tungsten halogen lamps.

Artemide GB Ltd (No. 205) displayed its **Fox** modular linear lighting system which is triangular in cross section and accepts linear fluorescent, mains voltage tungsten halogen and metal halide luminaires. It is available in six colours.

Tebe floor, wall and suspended lights use a 300W tungsten halogen lamp, the light from which is diffused by a sheet of softly curved, sandblasted glass.

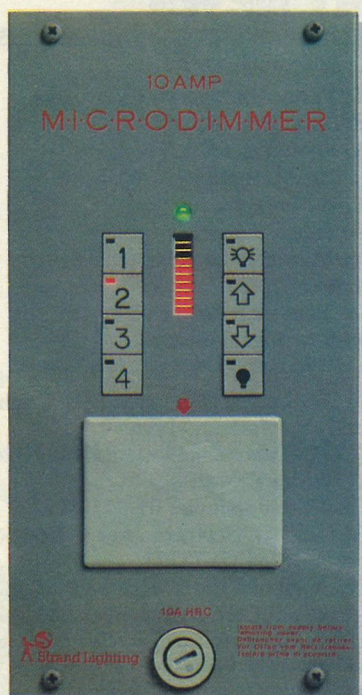
Alinea Lighting (No. 206) from Italy has a UK base in Brighton. Among its ultra modern designs was a decorative low voltage range called **Dicro**. A pendant uses three dichroic miniature spotlights suspended at the same level with the rims mounted into a single sandblasted glass plate. Versions of this fitting are available with one spotlight and there is a matching wall or ceiling spotlight which also

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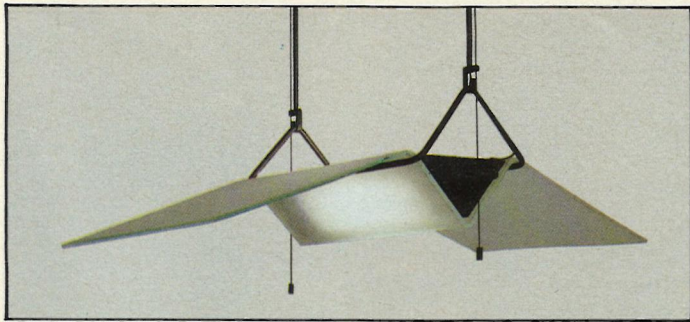
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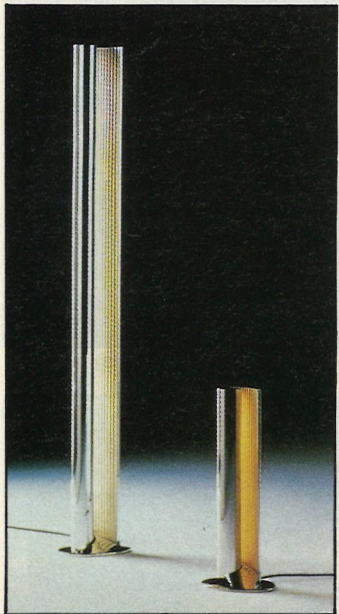


LEN/7/89

Reader Service No. 4



Bleriot, an unusual pendant available from Alinea Lighting.



Floor and table lights by Gargot, Spain.

the bowl can be finished to match the decor, for example rag rolled or drag painted.

Tindle, which aims to supply unusual classical lighting for interior designers, reports a renewed interest in real candles and has even been asked to de-electrify chandeliers for clients.

Davey Lighting (No. 211) specialises in traditional marine and transport luminaires for use in present day interiors. A large glass pendant with panels set into a copper, brass or painted frame is being used in conservatories. Type of glass can be varied to suit the customer and options include cathedral glass.

Fully enclosed wall lights for



A pendant for conservatories or kitchens by Tindle.

ships' berths, in 1920s' style, supplied by Davey Lighting are being used in bathrooms in London's Savoy Hotel.

Alectralink Distributing Co (No. 212) also exhibited a bathroom light, a downlight sealed with a heat resistant glass cover. The unit, which is flame retardant, uses a low voltage dichroic lamp up to 65W and is re-lamped from below; it accepts coloured filters. A flexible adjustment allows it to be used in ceilings of different thicknesses and a black baffle keeps glare to a minimum.

For the contract market, IGMA Projects Ltd (No. 213) showed table lamps from France in currently fashionable pastel colours with flowers grouped on the bases.

On the stand also were matching ranges of modern tungsten halogen floor, table and wall lights. One range in an intricate checked pattern included a suspended uplight. Uplights in vases, to stand on columns, were also available. All the product range is made of ceramics.

Traditional

Although the lighting at IDI was predominantly modern there were

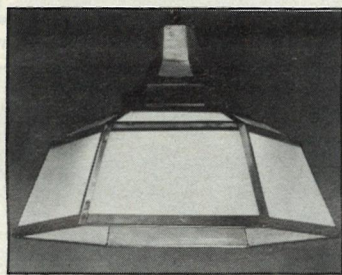
some traditional styles to be seen.

Strass crystal chandeliers, such as those exhibited by Starlite Chandeliers Ltd (No. 214), are always in demand. The centre piece of this company's stand was an empire style chandelier 2m high and 1.5m in diameter made for the Savoy Hotel in Moscow.

LightGraphix Ltd (No. 215) launched a range of chandeliers for modern hotels and cruise boat interiors.

Chelsom Ltd (No. 216) had new trumpet shaped uplights with an art deco influence. The floor, table, wall and ceiling models are produced in a variety of metal finishes. In addition to metal, the flared lamp section is available in white glass or alabaster.

Several companies displayed stained glass lighting. Among these was Studio One Glass Designs (No. 217), a company set up by Janet Harrison from Wigan with help from The Prince's Youth Business Trust. She specialises in



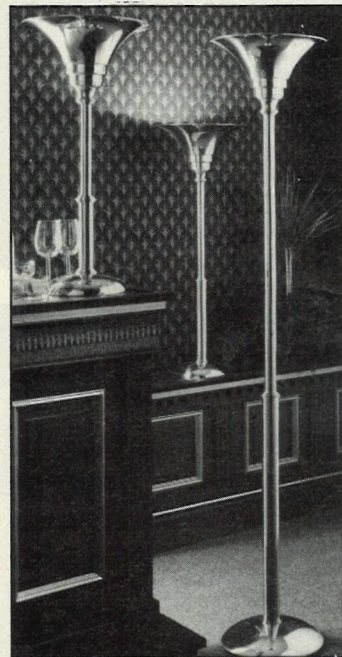
Lighting for a garden room by Davey.

co-ordinated ranges of lights, mirrors and office accessories.

Interior designers can take fabric or wallpaper and she will pick out a pattern or colour and use it as a motif in lampshades, clocks, etc. Because the products are individually made, she can offer exclusivity of such designs.

Inside Art and Design Ltd (No. 218) showed sliding glass screens back-lit by fluorescent lamps and back-lit stained glass panels. There were also new black and white glass pendants and a new range of Tiffany shades.

Sugg Lighting Ltd (No. 219) has extended its indoor lighting range to include pendants and wall mounted uplights in opal leaded glass with inserts of clear glass patterned in pink, green and white. Some of the inserts are set at an angle to the main line of a lampshade to give the effect of miniature louvres decorating one corner of a shade.



A new range of uplights by Chelsom.

Christopher Wray's Lighting Emporium (No. 220) had a splendid display of co-ordinated Tiffany lighting as well as pendants and wall brackets in carved and pickled pine, Chinese vase table lamps and cobra lights.

Innovation

Some of the most unusual lights at the exhibition were those of Box Products Ltd (No. 221) Designer Russell Bagley has used materials such as perforated metal, sand-blasted mild steel and sandblasted toughened glass to create highly individual shapes.

Light sources used include compact fluorescent, linear tungsten halogen and low voltage lamps.

Optical Dish is a pendant consisting of a borosilicate glass cylinder held between two metal spin-

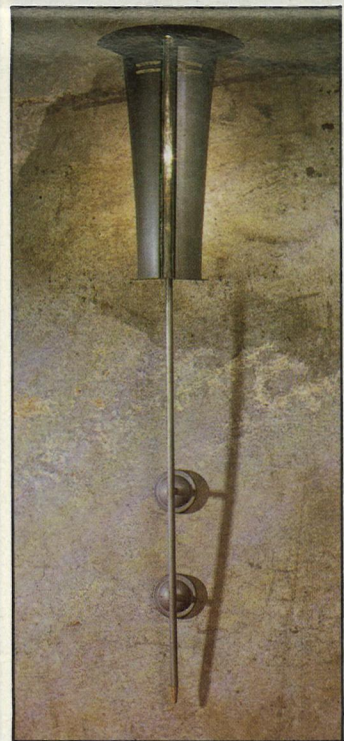


Optical Dish, a pendant shown by Box Products.

nings. A lens in the bottom of the fitting shapes the light beam. It was designed for use over dining tables.

A wall light has two rows of slots in a curved sheet of brass which conceals from view a PL lamp.

On the stand of C and C Designs (No. 222) there was a hi-fi unit in the form of a very large, floor standing clock finished in polyester lacquer hand painted to give a tortoiseshell effect. In the top of the clock was a 300W tung-



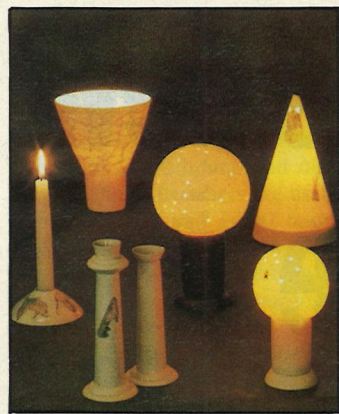
Torch Light, a wall light by Box Products.

sten halogen lamp which provided uplighting.

On a different scale, Northern Lights Porcelain (No. 223) showed small, delicate porcelain lamps. Slip-case by a centuries old method at the Alison Borthwick Pottery, the porcelain has a warm translucency that glows softly. Some models have a textural decoration worked into the porcelain and then hand painted.

One nightlight is a small illuminated sphere with perforations in the shape of the moon and stars. There are also vase shaped uplights.

Applied Lighting Technology (No. 224) featured a new fibre optic called Lumenyte which allows light to escape evenly along its full length. It can be contoured to outline swimming pools or hotel bars, for example, and after instal-



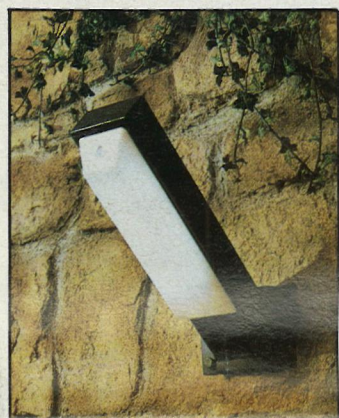
Porcelain lights with decorative perforations by Northern Lights.

lation hardens to form a permanent fixture.

Par Opti Projects Ltd (No. 225) also displayed fibre optic lighting materials and components.

Moving into the outdoor market for the first time, Linolite Ltd (No. 226) exhibited the Paragon amenity lighting system developed at its Wiltshire headquarters. Modern post, bollard and wall mounting fittings are included for use in leisure areas, precincts, terraces, campus locations, sheltered housing schemes and car parks.

Considerable variations of arrangement are possible within the range to suit individual requirements. Long compact flu-



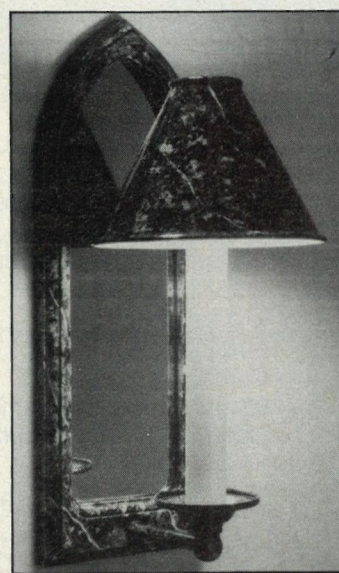
Part of Linolite's new outdoor lighting range.

orescent lamps (18W) and electronic starters are used.

Mike Smith Designs (No. 227) which makes exterior lighting for breweries and local authorities, had a new barley twist style lighting column and a new sign lighting system. Brass cylindrical modules with fluorescent lamps are available in 900 and 1200mm lengths to suit signs of different sizes.

Vector Lighting (No. 228), making its first appearance at the exhibition, specialises in interpreting and manufacturing lighting designs for architects and designers.

Projects have ranged from the Dinosaur desk light for Shiu Kay Kan to entire lighting systems for shopping malls. The company's manufacturing capabilities include balustrade lighting, low voltage luminaires, uplights, spotlights and corridor lighting. One-off "specials" can be produced competitively.



Wall light/mirror with Gothic influence, by David Hunt Lighting Ltd (No. 229).

LIF LINE

Product safety... or liability, the EC is leading the way

According to figures published by the BEUC (European Bureau of Consumers' Unions) each year, domestic or leisure-related accidents in the EC account for 80 000 casualties — of which 30% are children — and 45 million injuries. The European Commission has always held that in over 50% of the accidents, there is a direct or indirect link with 'a product' and that 90% of these could have been avoided.

Were the finger pointed at lighting equipment, the LIF can boast of being well ahead in promoting safety and quality. The federation has already announced that all members must have BS 5750 operating in their factories by the end of this year, and it is also making much progress towards the harmonisation of standards on both a European and an international scale.

Nevertheless, the setbacks suffered recently by the manufacturers of domestic lighting and lampholders after the BBC consumer programme *Watchdog* exposed that, in tests, 56% of lighting appliances bought from leading high street stores failed to meet safety requirements, have serious implications for all lighting manufacturers.

Furthermore, we're told that the Commission has opened infringement proceedings against the nine member states which have not yet implemented the Product Liability Directive.

Of the three that have implemented the directive — UK, Italy and Greece — only Greece, in the view of the Commission has done so correctly. The EC has, therefore, decided to open separate infringement proceedings against the UK and Italy.

To maximise our potential in overseas markets, in view of these events, it would be prudent to take early note of the proposed EC Product Safety Directive, which this month is being presented to the Consumers' Council: the directive states that a product is safe if it does not present an unacceptable risk (a notion based on 'the general viewpoint of society') for the safety or health of individuals, and that the safety of a product includes its disposal.

As for suppliers, as with the earlier Product Liability Directive, all 'economic operators' are responsible for product safety. In addition to marketing a safe product, the supplier has the obligation to assure permanent monitoring of the marketed product.

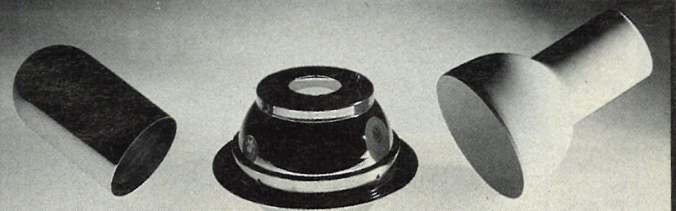
While we applaud the Commission's concern for consumer protection, we should not lose sight of our own set of criteria governing safety.

Some would argue that, under the proposed EC directive on safety and health in the workplace, the harmonisation of requirements for products is necessary to facilitate intra-community trade, but there are no similar benefits to be achieved in standardising lighting applications as national circumstances vary greatly.

Perhaps the keyword to establishing standardised safety requirements throughout the EC that are acceptable to all member states, is 'liaison' and then, in the words of LIF Director, Ernest Magog, 'to compromise on standards on the basis that this will speed up production of European norms and reference to them in EEC directives, and that such changes as may be necessary will open up new business opportunities'.



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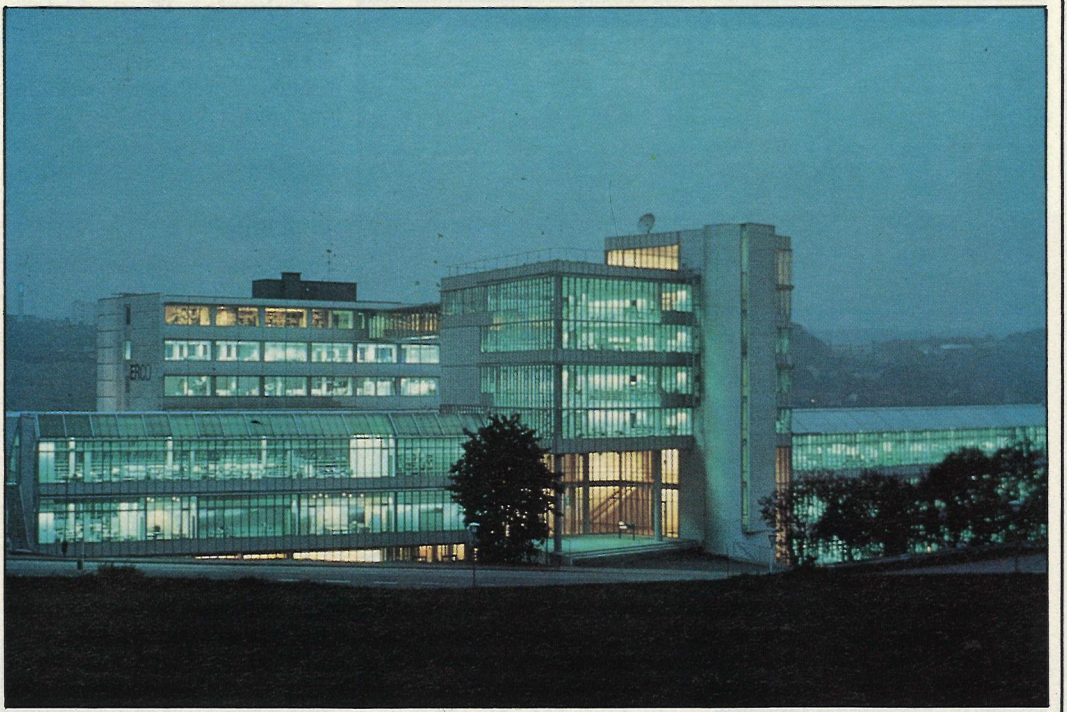
Ludenscheid's new lighting centre

Erco has recently gathered together its research and development, and lighting technology departments under one roof in an all-embracing lighting technical centre. *LEN* reports.

Some years ago Erco, the West German lighting company, was suffering from its own success. Sales had expanded so rapidly that the factory area was running

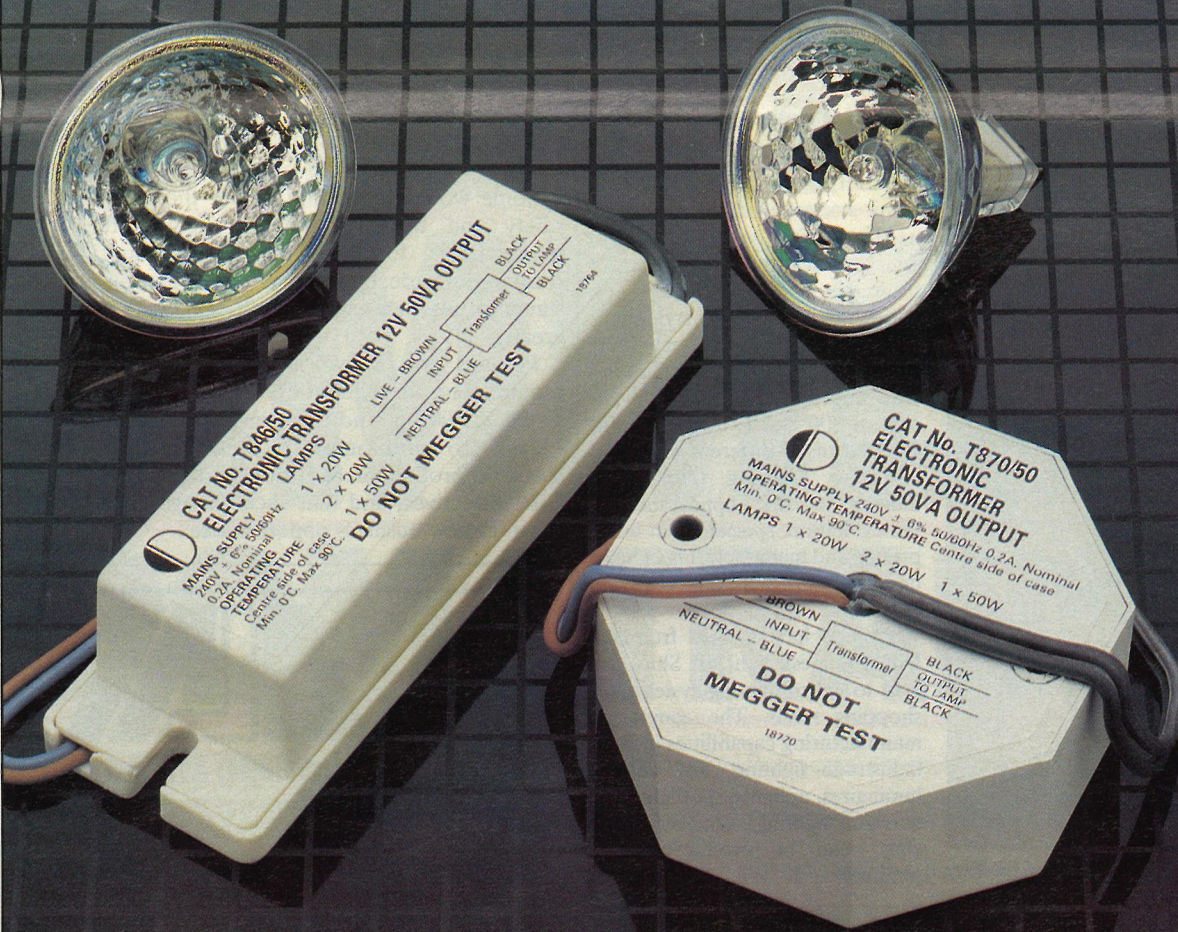
out of space and, if the anticipated sales trends were to continue, a major bottleneck in production could be anticipated. So, the idea was conceived to create further production space by moving all

non-productive departments out of the existing building. Routine management and planning would be housed in the existing administration building; while the research and development and marketing



The technical centre at night, showing the administrative building behind.

New Electronic Transformers from ORBIK



The new Electronic Transformer from OrbiK is an advanced design, high technology electronic transformer available in 20W/50W and 35W/75W versions.

The units are specifically designed to be lightweight (approximately 83% lighter than a conventional 50VA transformer) and extremely compact.

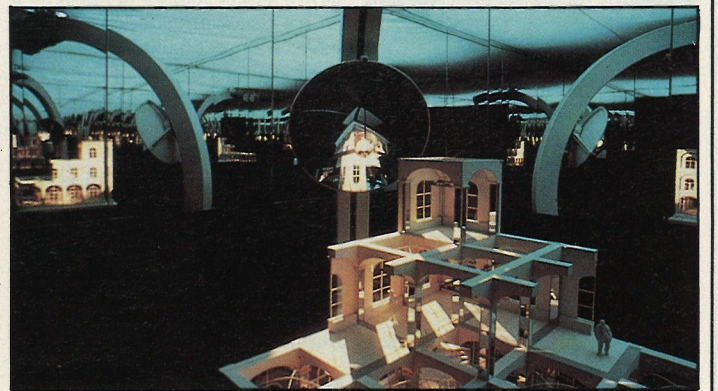
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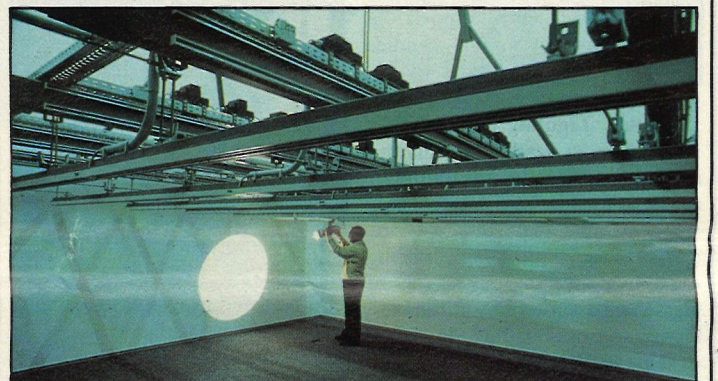
ORBIK

Electronics Limited

OrbiK House, Northgate, Aldridge, Walsall, West Mids WS9 8TH. Tel: (0922) 743515. Fax: (0922) 743173. Telex: 339612.



Daylight simulation room in the west wing.



Mock up room in the west wing.

departments would be moved into a purpose-designed building, a complete new technical centre.

This latter solution had the added attraction that these departments were the ones which attracted visitors to the company, facilities for whom would also be incorporated into the new building. Thus, the technical centre would serve as the first contact point for visitors, both from Germany and abroad, coming for seminars and training, and those wishing to discuss projects or seek solutions to lighting problems.

Multiple use

Thus, the brief evolved. The new building was to house a multiplicity of uses ranging from essentially industrial areas to corporate hospitality. These included a tool-making department; design and development functions; technical data processing facilities; electrical and electronic laboratories; a daylight simulator; a mock-up room; a light engineering application laboratory; and central services, comprising the purchasing department, photography and graphics sections, marketing and public relations and project coordination; finally, a conference room, an auditorium with interpreting booths, a cafe, and a basement garage with parking for 100 cars were also to be provided.

The nature of the visitors and their business required workshop area to be provided throughout the building, allowing flexible utilisation of the space. Although certain areas had to be separated by acoustic or other means, the building as a whole was to convey the feeling of one large workshop, making the visitor immediately

feel part of the organisation.

Erco has a clearly defined corporate image laid down in the company handbook. The company colours of black, white and grey had to appear in the new building although, to achieve good reflectance levels from walls and ceilings, white was to predominate.

Finally, the entrance area was to be designed to be used for receptions, exhibitions and similar events outside business hours, and had to provide a relaxed atmosphere, facilitating mixing between guests and their hosts.

The centre comprises a low central tower, linked by a free-span bridge 25.5 metres long to a 1960s administration building and the main factory building. The tower contains group activities such as publicity, marketing and — not least — the office of the managing director. It further acts as a link between the west wing, housing customer and design services, and a larger east wing containing facilities for product development. Split levels are used throughout to bring daylight into the centre of the building.

The structure is of reinforced concrete clad with aluminium sheet cladding mounted horizontally. In the vicinity of the curved staircase tower these sheets are fluted.

Generally, air conditioning is only used where production requirements so dictate, but natural ventilation to both wings of the building can be enhanced by using a back-up ventilation system. Various methods of central heating are employed including radiators concealed behind railed panels; convector heaters along perimeter

walls; a radiant heating system in the ceiling of the engineering workshops; and underfloor heating to multi-storey areas.

Plaster surfaces are painted white and the circular columns left in natural concrete; while in some places acoustic plaster and lined perforated steel panels have been added to improve the acoustics of the building. Floors in the engineering workshops are finished in concrete or timber; industrial parquet flooring is used in the entrance hall; and office areas are carpeted.

Lighting experiments take place in three main rooms. The first is a mock-up room where lighting situations in rooms of varying heights can be simulated with the aid of an adjustable ceiling. A room containing output rotating mirror measuring equipment enables the light output of test fittings to be established accurately. Finally, a daylight simulating room enables accurate shadows to be determined for any point in the world on architectural models with an infinite horizon.

Erco's claim to sell light rather than lighting had to be reflected in the lighting installation provided for the new building. The company similarly insisted that lighting should encourage the feeling that the whole place is one large workshop, and should in no way tend to produce a hierarchical division between luxurious reception rooms and more basic workshops.

Visual comfort

Finally, the building also had to underline the company's approach to technology and the technical expertise employed by its staff. Erco develops solutions to lighting problems, applying the latest ergonomic findings, thus visual comfort was seen as a must.

In the interests of energy efficiency daylight was to be used as widely as possible, with the exception of those areas that need to be dark rooms by reason of their functions. But the need for visual comfort decreed that direct glare from sunlight must be avoided, so external fabric blinds are used on the wings, vertical blinds on the main facades and external aluminium louvres on the glazed roofs.

In the workshop areas the need was for lighting to encourage the flexible use of space. The prototype workshop has an illuminance requirement of 750 lux on the drawing boards. Darklight luminaires with electronic controls are used here, giving an economic installed lighting load of 15W per square metre. In areas where VDUs are extensively used a maximum of 500 lux is provided.



Design department.



Tooling shop in the east wing.

In the machine tool shop illuminances of 800-1000 lux are provided using high mounted Darklight pendant downlights fitted with 250W deluxe mercury lamps, giving an installed load of 33W per square metre. The mercury light source combines long life with energy saving.

The entrance hall, in particular, demonstrates a diversity of lighting functions. The reception is located at the entrance level, while seminar conference and exhibition spaces are situated on the floor below. Both floors are, however, visually linked and form part of the same space.

The entrance hall also doubles as a space for receptions and exhibitions after the main building has closed. Here, incandescent lighting including both standard GLS and halogen lamps is used, depending on the needs of the various areas.

A computer controlled programmed lighting device makes it possible to create six different lighting scenes. During the daytime the porter's service lighting supplements natural daylight in the reception area. Low voltage directional spotlights mounted on lighting track provide adequate task lighting here.

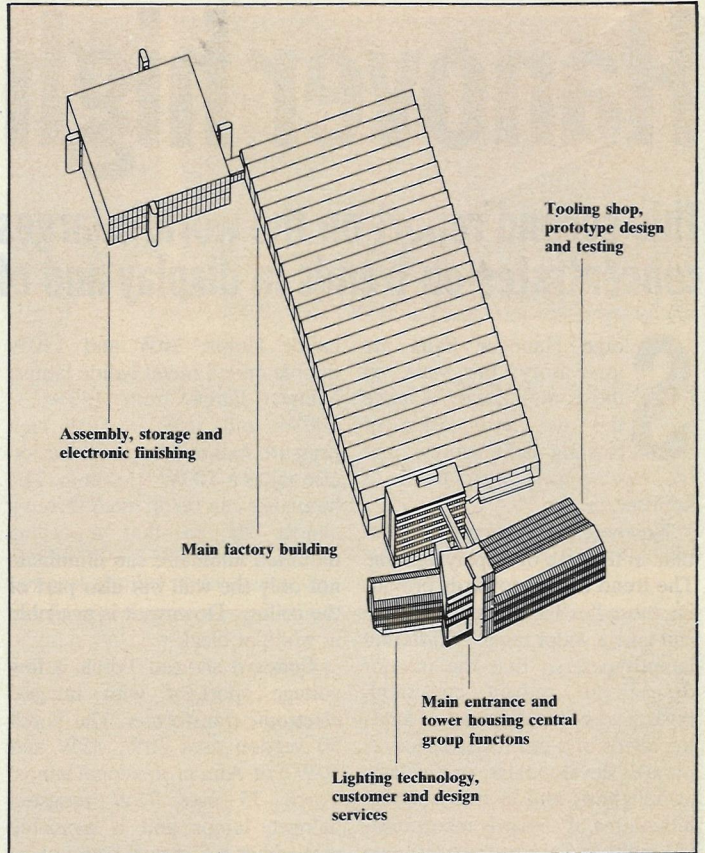
Surrounding wall surfaces are illuminated by wall-washers which are dimmed during the daytime to 60% performance level. Low voltage track lighting marks the passageways, while entrances to lifts

and staircases are accentuated by the use of overlapping cones of light from dimmed downlights.

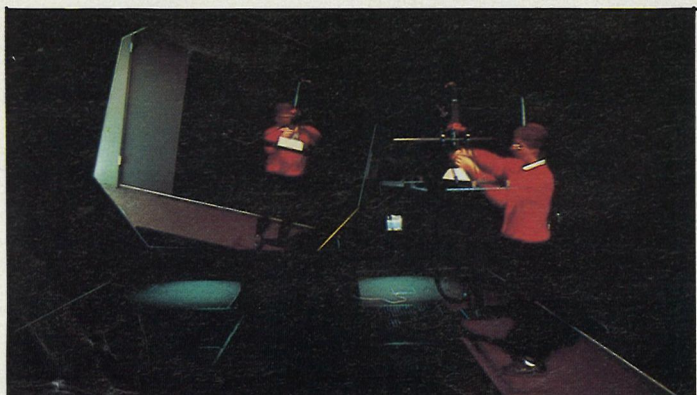
In the evening, lighting is increased to 80% performance level until 22.00 hours, and only some of the wallwashers are used. Between 22.00 and 24.00 hours lights are again dimmed to 60% full power. Overnight lightings is for safety and security purposes only, so lighting levels are again reduced. Passages and doors to lifts and stairways only are illuminated at 40% performance.

As a result of installing this lighting control system total energy consumption is effectively reduced by a factor of around 0.6 from a total installed lighting load of 30W per square metre. Dimming lighting to 80% performance, moreover, extends lamp life, minimising the need for maintenance work at high level.

A final notable feature of this development is the fact that the transparent nature of the construction of the building allows lighting from the illuminated technical centre to spill over into the grounds, making exterior lighting unnecessary.



The technical centre in relation to other buildings on the site.



Mirror room in the west wing.



Entrance hall with bridge to administration building.

METAFLOOD

METAL HALIDE FLOODLIGHTS



The Powerlite range of Metaflood luminaires offer the cost effective lighting solution to today's lighting designers, where colour rendition and economy are paramount.

The high luminous efficiency and long life of the Metal Halide lamp, along with accurate colour rendering, make them ideal for the lighting of parks, buildings, monuments, sports grounds and road traffic installations.

The Powerlite Metaflood range includes four fittings, from 70 watts to 400 watts. You can choose from CPW 70, CPW 100, CPW 250, CPW 400 and a range of accessories to suit all floodlighting applications.



Available from electrical wholesalers throughout the UK.

Hanover highlights

This second report on the world's largest lighting show concentrates on trends in display and office lighting.

Some Hanover Fairs are innovatory; this year, on the contrary, saw a move towards consolidation of existing light sources and an expansion in their fields of application.

Nowhere was this more evident than in the area of display lighting. The trend here is towards providing more flexible luminaires which can take a wider range of different lamp types, so that the interior design can remain consistent, regardless of the diversity of lighting needs of a particular space. A parallel development, particularly in uplighting and in free standing luminaires, is towards incorporating multiple light sources into one fitting to increase its flexibility or to enable it to double as emergency lighting.

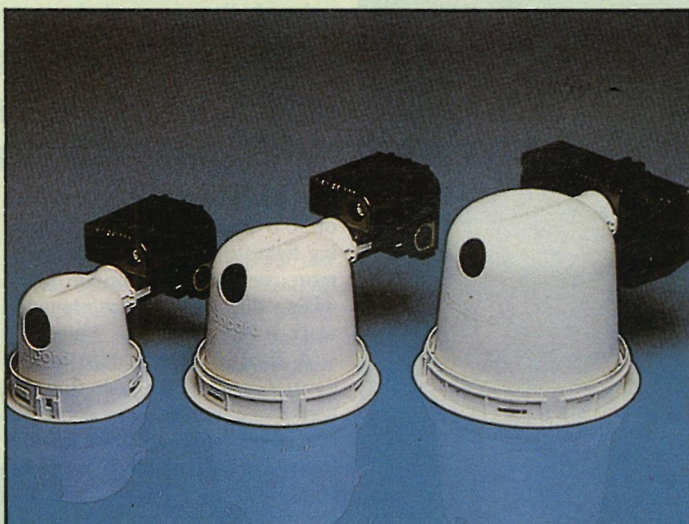
Reggiani's Downspot, one of this year's Gute Industrieform winners, demonstrates the trend towards light fittings which are flexible enough to take a wide range of different lamps. In this case the list includes 35W, 70W and 150W single ended metal

halide lamps; 70W and 150W double ended metal halide lamps; halogen lamps from 150W — 500W; and 35W — 50W high pressure sodium. A special version also takes a 100W spot bulb. The luminaire can be directed through almost 90° so that a ceiling mounted luminaire can illuminate not only the wall but also part of the ceiling. Downspot is available in white or black.

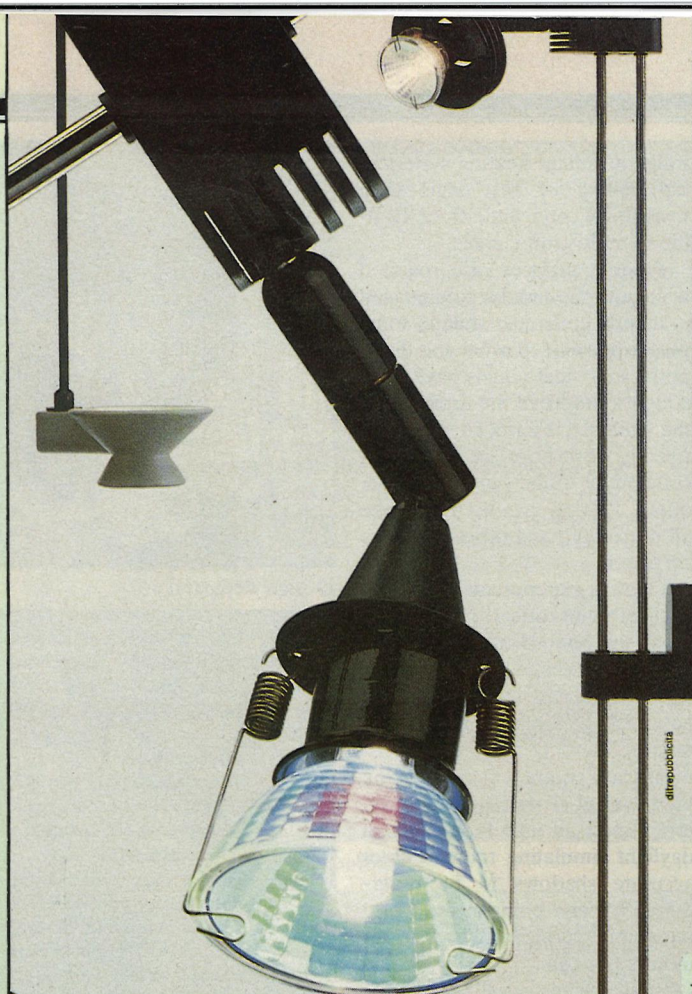
Concord showed Torch, a low voltage spotlight with integral electronic transformer. The Torch 50 version uses 20W, 35W and 50W Tru-Aim professional lamps. Torch 75 uses 75W tungsten halogen lamps and is available with either a 5° pencil beam of an adjustable 10°-20° beam. The spotlights will be available in the autumn. Also appearing at that time is a new range of energy-saving cone downlighters, LED 111. These come in three sizes to take 10W, 13W, 18W and 26W TC-D lamps. Flush diffusers designed for this model include a wall-washer version.

Card System is a new electrified

double rail lighting system from MFS of Italy, the first such system to use a printed card circuit which brings together the electrical connection, fuse, light emitting diode and clip fitting in one central body which is simply attached to the rails by pressing. Light fittings cover most types of light source up to a maximum wattage of 50W. The system is doubly protected by



LED III cone downlighter by Concord.



Double rail lighting system from MFS Lamps.



Reggiani's Downspot takes a wide range of lamps.



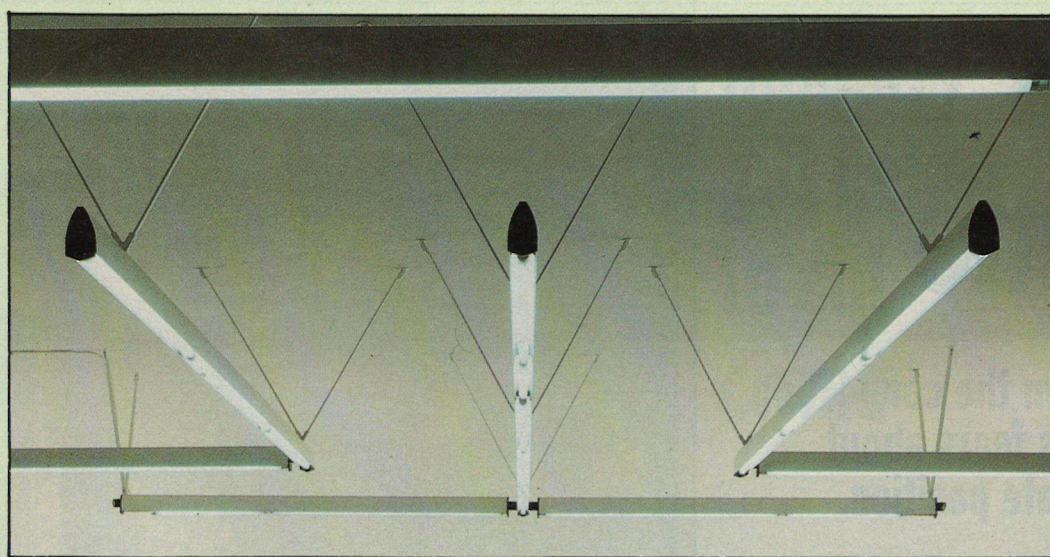
Concord's Torch is designed for track or surface mounting.



means of 8 amp fuses installed into both the card and the primary circuit. Transformers may be located above a suspended ceiling, on the floor or at either end of the rail.

Tube lighting systems are becoming more sophisticated and encompassing a wider range of light sources, including dichroics. Thus, their function is increasingly being seen to extend beyond the lighting of office work spaces and into office exhibition reception spaces. A new development from Hoffmeister anticipates one such system, albeit with a highly specialised luminaire, being used for display purposes in museums and art galleries. This trend towards differentiation between systems looks set to continue.

New from Guzzini is the XO tube system based on a parabolic section extruded aluminium tube. The system comes in two forms, suspended or built in; the latter version can be used to support a suspended ceiling. Tubes can span up to 3.75m without intermediate supports. XO uses fluorescent lamps with a wide range of diffusers and can be used to give the effect of a continuous line of light,



Guzzini's XO system uses parabolic tubes.

except where the tube turns through an angle and junction plates must be used.

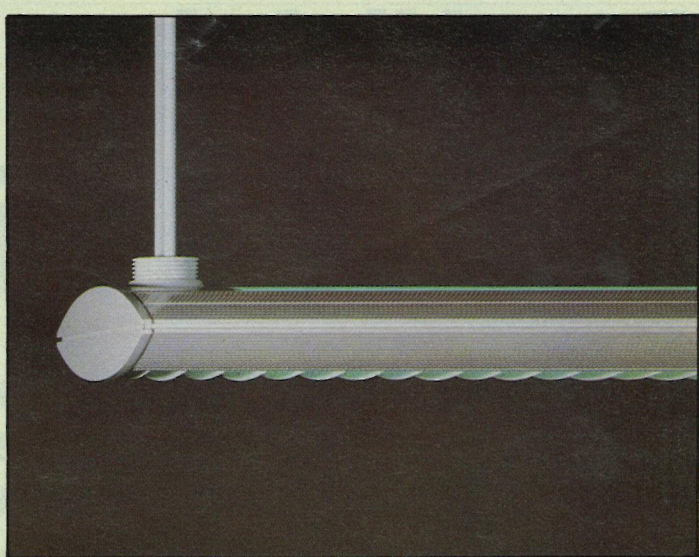
Hoffmeister has now developed the Multiflood luminaires into a tube lighting system. The asymmetrical cross-section of these luminaires limited the choice of configurations possible but, as the luminaires are used mainly for the close range lighting of vertical surfaces

such walls and shelves in sales rooms or paintings in galleries and museums, the major requirement is for interior and exterior angles of 90°-180°.

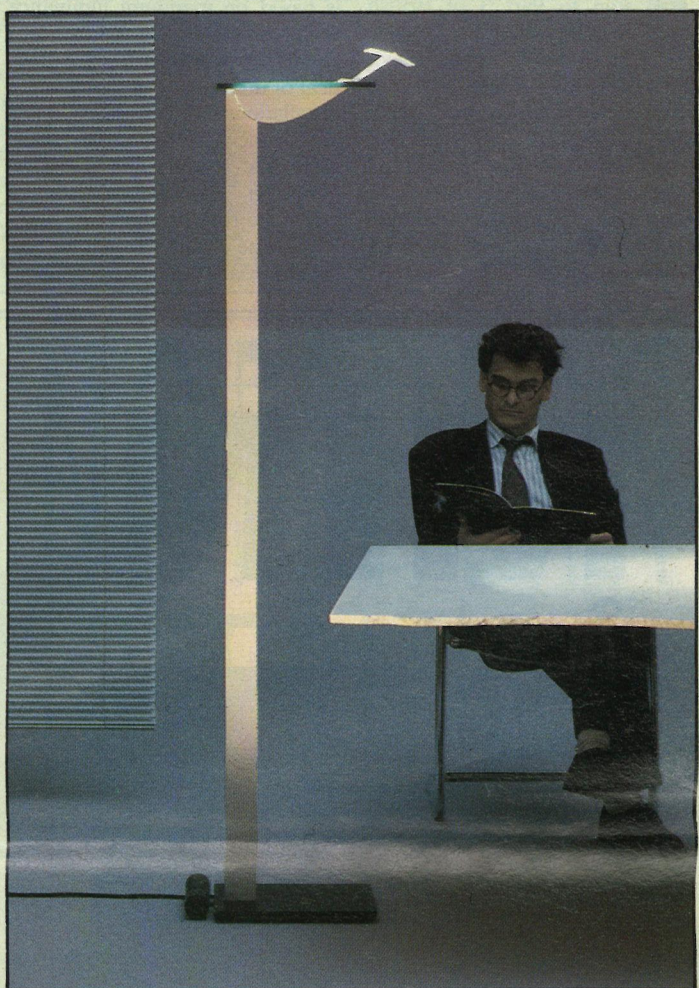
The system is primarily intended for suspended mounting, suspension rods being attached to the coupling elements and end pieces. For continuous lighting, standard luminaires may be

obtained for triple band fluorescent lamps of 18W, 36W or 58W. The Multiflood system comes in a standard white finish or is available to special order in a range of colours.

The company has also developed low glare components for lighting VDU work stations for its existing tube lighting systems, including Multitype 65/100, Mul-



Spheros slimline tube system by Zumtobel.



ID-S, a new range of uplighters from Zumtobel.

tional and Multiprofile. The components comprise a VDU reflector, identical for all systems, and a system-specific modification kit which ensures that in all cases the lamp is positioned at the focal point of the optical system.

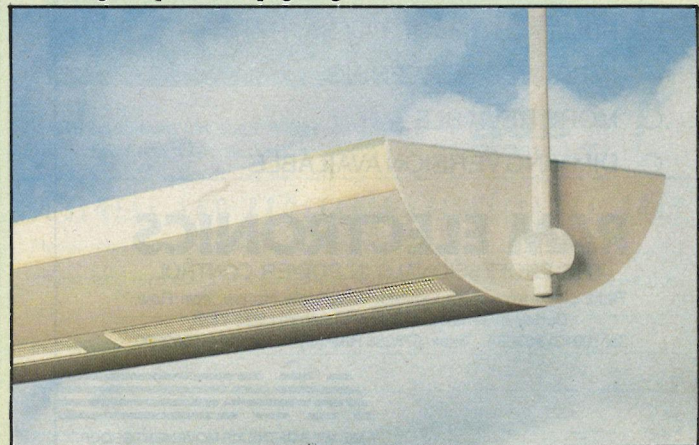
In the field of office lighting, Zumtobel offered the Spheros slimline tube system featuring a fitting the shape of an aircraft wing. The extruded aluminium luminaire is available in two different cross sections of 270mm and 360mm. The system, which uses 36W or 58W fluorescent lamps, gives a choice of optical systems including a darklight louvre, matt parabolic and perforated louvres, and — where a more visible light is preferred — opal and prismatic diffusers.

The increasing use of VDUs in the workplace was reflected in a growing interest in low brightness lighting. Attempts to minimise glare and ceiling reflections include not only louvre fittings, but an interesting new generation of ceiling suspended uplighting

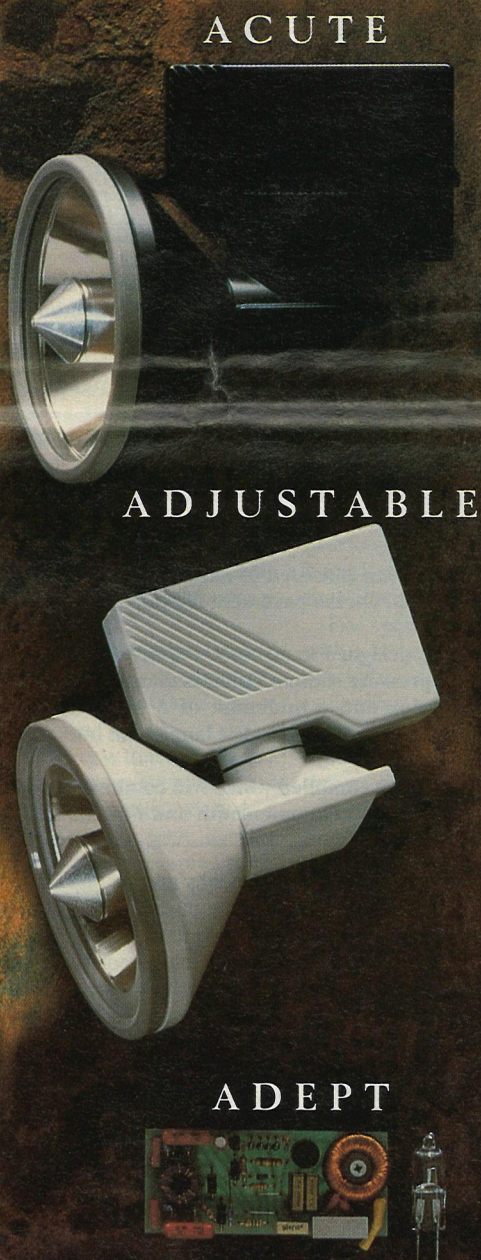
systems. In this vein, Zumtobel launched a classic free-standing luminaire designed by Softsax which uses an HQI-TS lamp. The ID-S directs most of the light towards the ceiling for indirect illumination. The direct lighting component is provided by a plastic reflector adjusted to beam light directly on the visual task.

Skylight by Kinkeldy is a ceiling suspended uplighting system that provides only a small element of direct lighting. Luminaires may be supported, individually or in rows, from rods or steel cables. Light sources include normal or compact fluorescents, halogen or metal halide, and these may be used separately or in any combination. Wall mounted and free standing luminaires are also available.

The system has been developed primarily for areas where VDU screens are intensively used and, because of the indirect nature of the light, screens may be arranged independently of the positions of the luminaires.



Skylight uplighting system by Kinkeldy.



Torch 75, the specialist companion to Torch 50.

Electronic low voltage spotlights for track or surface connection that accept the new 75W axial filament lamp.

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Road lighting, people and crime

At a time when several surveys have shown the connection between poor lighting, crime and people's fears about personal safety, *LEN* looks at the up-to-date position.

At the end of July the revision to Part 3 of British Standard 5489 *Road lighting* is due to be published. This long awaited revision, now entitled *Code of practice for lighting for subsidiary roads and associated pedestrian areas*, has changed the scope of Part 3 to place more emphasis on discouragement of crime and improved pedestrian safety.

Lighting design for traffic routes is based on minimum luminance requirements on the road surface and its surroundings. It is not practical or desirable to design lighting installations for subsidiary roads and associated pedestrian areas using that method and therefore minimum illuminance requirements are recommended.

Because of this, lighting for distributor roads has now been incor-

porated in Part 2 and the revised Part 3 concentrates on installations with preferred mounting heights of 4m, 5m and 6m.

The three categories of lighting requirements in the revision take into account high night-time public use as well as associated high crime risk and traffic usage.

The lowest category for solely residential areas that have a very low crime risk approximates to lighting standards obtained using the old Part 3 with 5m mounting height.

The highest category for roads with high night-time public use and where crime risk or traffic usage is likely to be high approximates to the old B8 distributor road lighting standard and is an increase over the lighting standards for 6m mounting height in the old Part 3.

There is now, therefore, some overlap between Parts 2 and 3 and lighting engineers need to carefully consider various factors, apart from lighting levels, in choosing the correct solution for each location.

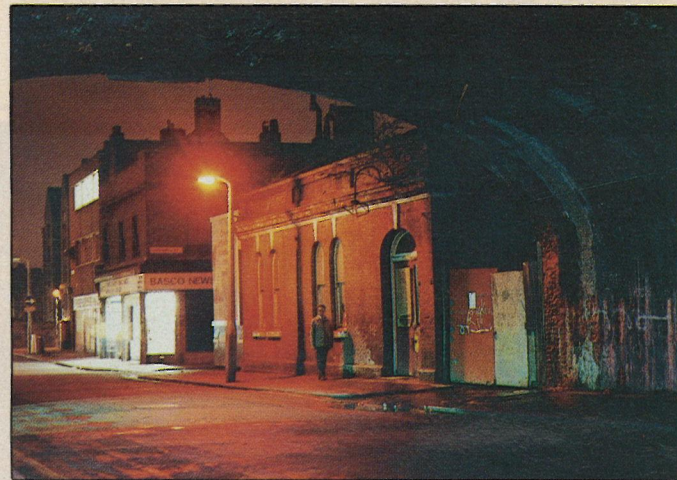
A major departure in the revision from the old Part 3 is the adoption of minimum point illuminances for each category. Meeting this requirement will limit the variation in uniformity which can occur when designing to average illuminance values only.

There is now a requirement for lighting designers to use design tables and photometric data for individual light sources and lanterns. Different spacings for similar lighting standards will now apply for different combinations of light source, lantern and mounting height depending on the degree of optical control achieved.

There is an increasing awareness



Crime and fear reduced



A before and after exercise to monitor the impact of improved street lighting on crime, harassment and community safety has been conducted in the London Borough of Tower Hamlets.

The survey was carried out by the Centre for Criminology at Middlesex Polytechnic and funded by Philips Lighting Ltd.

A badly lit road was chosen, 7m wide, which passes under a railway arch.

Before the re-lighting, 59% of people interviewed feared being physically attacked whilst using the road. Six weeks after the new lighting was installed there was a 45% reduction in fear of physical attack.

In the six weeks prior to the improvement in the lighting there were 18 incidents of assault, car crime and threatening behaviour. In the six weeks after the new installation there were four such incidents.

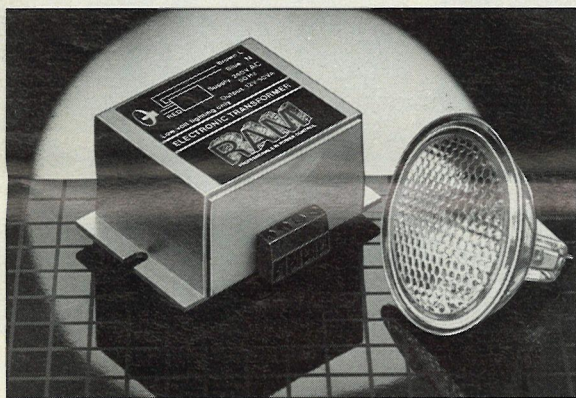
Originally, the lighting consisted of old 35W low pressure sodium lanterns at a mounting height of 5m and spaced at 40m. On the pavement illuminance was less than 6 lux. There was no lighting under the arch.

The new lighting, designed to meet the requirements of the revised version of BS5489 Part 3, used 70W tubular high pressure sodium lanterns mounted at 6m and spaced at 25m. This gave an average illuminance of 10 lux and a minimum of 5 lux. Measurements were taken along the centre of pavements and the centre of each traffic lane at 3m intervals. Five SON lanterns were installed under the railway arch.

A final report is to be compiled which will combine the data and findings from this project and the surveys in Edmonton, and Hammersmith and Fulham.

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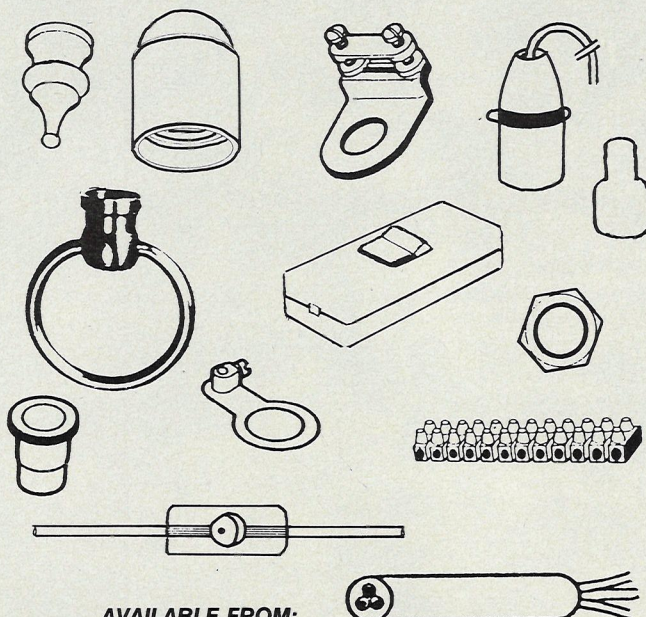
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of amenity and aesthetic aspects of lighting installations, particularly in residential areas, resulting in calls for increased use of decorative or traditional styles of lanterns and columns. Provision of such installations can be justified in many cases, but unless there is good optical control of the lamp, more units or larger wattage sources at greater mounting heights may be required compared with conventional installations.

The revised Part 3 also places emphasis on maintenance of lighting standards.

With the new code of practice there will be much greater opportunity for lighting engineers to provide installations more suited to individual locations and using a wide variety of equipment.

This will maximise the benefits of good public lighting installations in deterring on-street crime and increasing pedestrian safety and confidence during hours of darkness.

This report has been contributed by Brian Ruston, lighting engineer, Staffordshire County Council, who sits on the British Standards committee which revised Part 3 of BS5489.

Lighting schemes for people not cars

A survey of public lighting and safety commissioned by the London Borough of Brent in March 1988 has recently been published. It was conducted by the Safe Neighbourhoods Unit, an independent non-profit making organisation which specialises in research into longstanding problems associated with housing in urban areas.

The main purpose of the study was to examine the needs of residents and pedestrians in relation to lighting provision and its effect on crime and security.

Three housing estates which are acknowledged to be deprived areas, Stonebridge Estate, South Kilburn Estate and Chalk Hill Estate, were studied from the



Industry gift helps to cut crime

A dramatic drop in crime on the Hilldrop Estate in the London Borough of Islington has been achieved by a multi-agency approach involving the local council, police and local community groups. The initiative was launched in 1987 and new street lighting switched on in April this year marked a further step in fighting crime and creating a safer environment for local residents.

The lighting industry played a more significant role than usual in the new lighting scheme — Urban Enviroscape Ltd donated both the lanterns and lamps.

Eighty-eight high performance, sealed beam lanterns mounted at a height of 8m and using 150W high pressure sodium lamps have dramatically improved the illumination. No part of the road or footway has an illuminance of less than 8 lux now; a fortyfold increase.

Lighting columns were purchased from Abacus Municipal Ltd.

From being a "no go" area, the Hilldrop Estate has been transformed into a district where people feel safe walking around at night and can even be seen cleaning their cars after nightfall.

point of view of lighting immediately outside blocks of flats, lighting common parts within the blocks and lighting on main routes off the estates, for example to local shops and public transport.

Findings included a general fear of crime, especially after dark, and people avoiding certain routes because of inadequate lighting. This had a negative effect on community spirit and on support for social functions.

Many tenants said that behaviour of visitors and "service providers" was also affected by anxiety about personal safety because of inadequate lighting. Taxi drivers and electricity and gas employees, for example, were reluctant to visit the estates.

A strong preference was expressed for White SON high pressure sodium lighting rather than what was described as the "duller" low pressure sodium. Uneven spacing, inadequate levels of luminosity, insufficient lights, poor positioning of lighting, and trees obscuring lanterns were specific complaints. In some areas no lighting was provided.

Timeswitches were often faulty, the electrics were ripped out of column bases and lanterns and lamps were damaged. Vandalism was a major problem and in some incidents lighting was reported to have been deliberately vandalised in order to facilitate crime.

Tenants complained about the length of time taken for lighting to be repaired — sometimes lights had not been functioning for months and there were even some that had never worked at all.

A more efficient means of checking and reporting defective lighting was requested by residents.

They said improved lighting was crucial to aid identification in the case of attack, as often it was impossible to give an accurate

description to the police.

Another point made was that good lighting is necessary to prevent accidents due to potholes and cracked paving, especially in the case of the elderly and those with poor sight.

Tenants said: "Not enough thought is given to lighting. It's always a secondary consideration".

On all three estates the majority of residents felt that lighting of communal areas inside the blocks was also inadequate. They wanted brighter lighting as well as extra lights.

Conclusions

The report concludes that lighting throughout these estates is extremely poor and largely ineffective as a deterrent to crime and an aid to personal security. There is no co-ordinated policy; the situation points to a totally haphazard situation with people making on-the-spot decisions or no decisions at all.

In addition to complaints voiced by residents, the report comments on bad and often outdated use of lighting fittings.

It goes on to say that lighting as a tool of crime prevention and reduction of general anxiety is a new discipline. "As such, lighting has little to do with accepted criterion which traditionally has been overly concerned with lighting for traffic. Here we are concerned with lighting for and about people and traffic considerations must play a secondary role, not least because many of these areas are indeed pedestrian only."

Although many factors played a part in the situation, the major factor was seen by the researchers to be poor maintenance.

Recommendations

The report recommends that lighting improvements should correspond to tenants' priorities and if resources are limited they should be directed at the most vulnerable areas.

Surprise is expressed at the reliance on timeswitches. The Safe Neighbourhoods Unit says that action to replace such switches wherever possible with photo-electric switches should be seen as an urgent matter.

Speaking of external lighting, it is stated that traffic at night reinforces the amount of light with its own headlights, so although personal safety lighting appears to demand more light, in practice there is not much difference, except that where pedestrian lighting is concerned the local authority has to provide all of the lighting.

The report goes on to say: "It is this that seems to have led to confusion over the British Standards Code, plus the lack of understanding of pedestrian requirements."

An average of 10 lux is recommended with a minimum of 5 lux. These measurements should be taken 1.5m from ground level and some 10m from the light sources.

Just as important as quantity is evenness of illumination to avoid shadows, which are a major source of anxiety for pedestrians and can contribute to crime.

All low pressure sodium lamps should be replaced with high pressure sodium because the ability to recognise people's features is of prime importance and requires improved colour rendering.

On balance, the report favours wall mounted luminaires at a height of 5-6m where possible. When columns must be used, it is necessary to differentiate between luminaires for vehicular traffic and those for pedestrian traffic.

For vehicular lighting, columns with luminaires on outreach brackets are suitable, but for pedestrian areas the light cut-off from these is far too great, the report states. A luminaire that throws light not only downwards but in a circular pattern over 360° must be used.

A reassessment of procedures for reporting damaged or failed lights should be carried out as a priority. Information about the procedures should be circulated to tenants, including contact names, telephone numbers and office hours. Lighting columns should be clearly numbered to facilitate reporting. Pre-addressed cards should be provided at local housing offices to assist in reporting.

Inside blocks, the corridors, enclosed walkways and staircases should achieve an average illuminance of 20 lux, the report states, with entrances at around 25-30 lux. The answer to vandalism is given as constant maintenance.

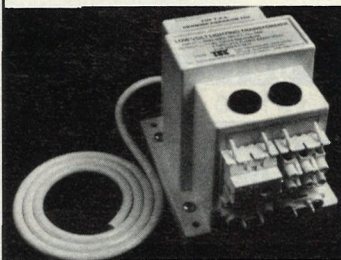
In general terms, corridors and walkways should be lit from either side of the corridor to give better modelling of people's faces.

Where centrally placed fluorescent luminaires have to be used they should be installed across the corridor, not parallel to it. As well as giving a better distribution of light this visually shortens the length of the corridor.

Copies of the report, *Lighting up Brent*, are available price £3 (including postage and packing) from the public relations department, London Borough of Brent, Brent Town Hall, Forty Lane, Wembley, Middx HA9 9HX.

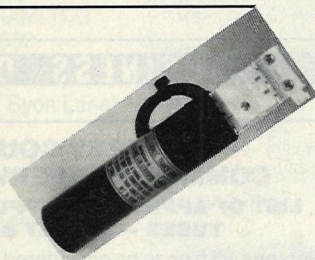
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It will provide an action plan for public lighting engineers wishing to set out a case for improved road lighting. Information such as where to find useful source documents and what central government funds are available for lighting will be included.



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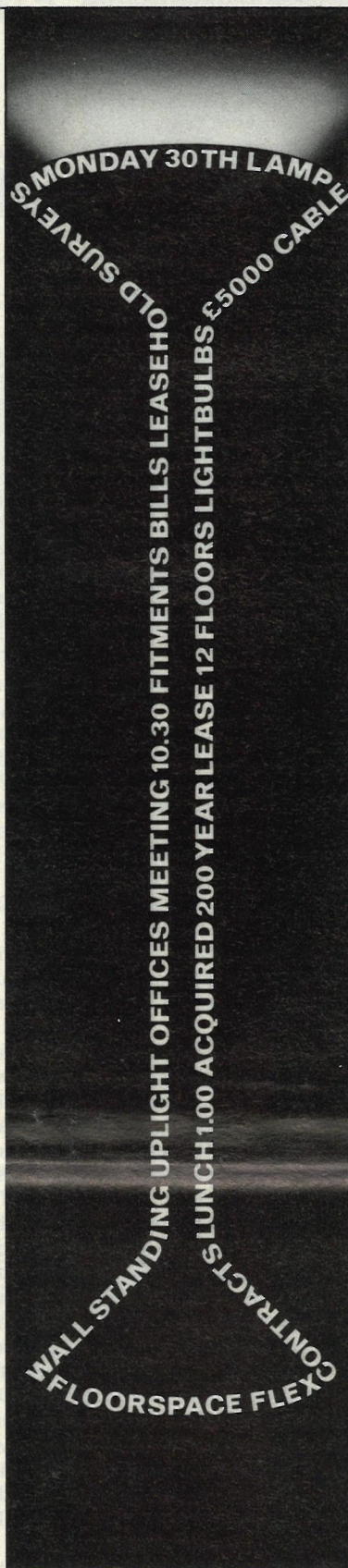
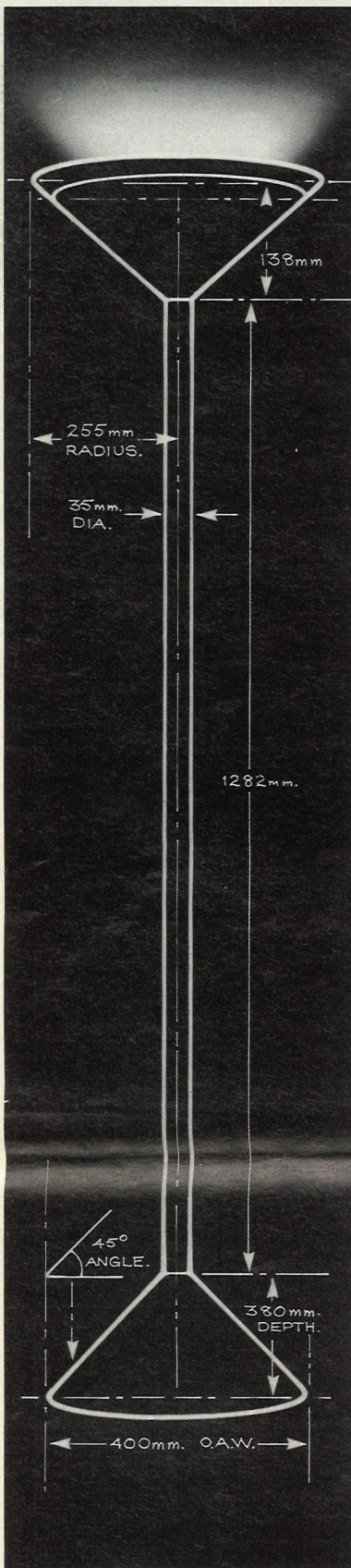
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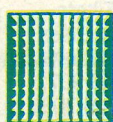
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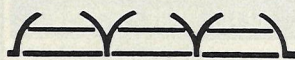
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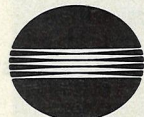
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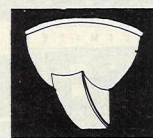


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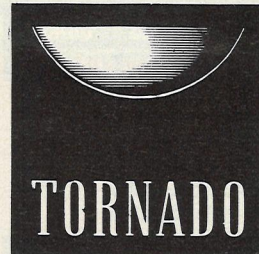
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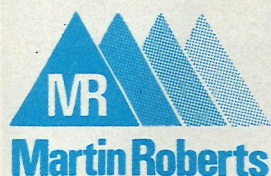
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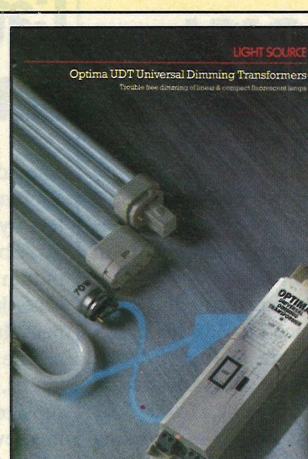
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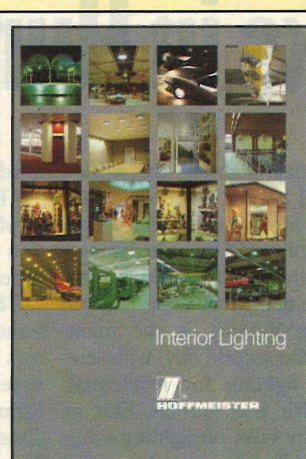
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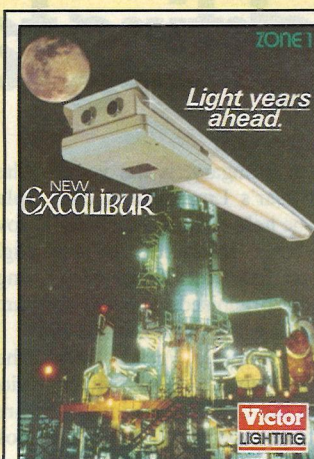
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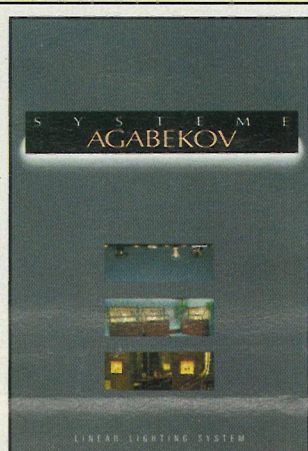
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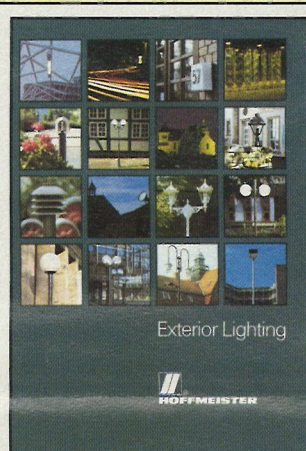
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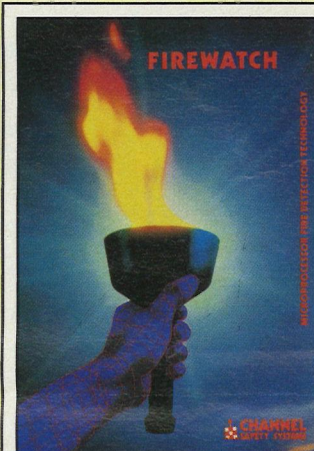
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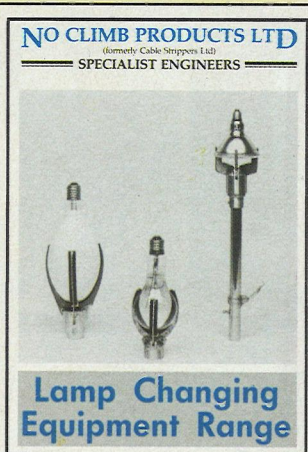
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voltage linear lighting system
which is used for display
cabinets, cornice lighting and
undershelf lighting in retail
applications. A wide variety
of lamps can be used from
3W Festoon to 35W Dichroic
lamps: circle 93



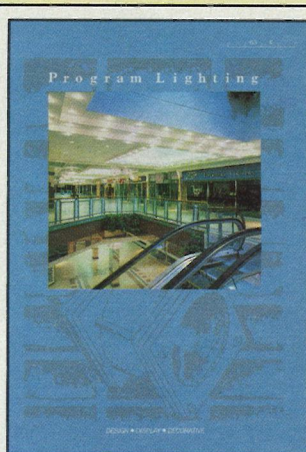
The Hoffmeister Exterior
Catalogue of 250 pages
features Pathway Luminaires,
bollards, 100mm tubular
system, street luminaires etc
which enable illumination of
public, office, church or
private garden lighting, from
this extensive exterior
luminaire programme:
circle 94



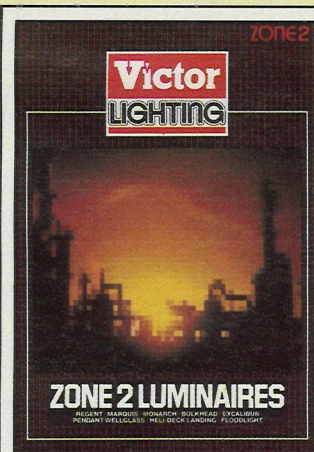
'FIREWATCH' is a fully
intelligent fire detection
system capable of monitoring
addressable fire sensors.
Precise locational data is
clearly displayed on all
'alarm' conditions, and the
selected response to each
condition pre-programmed to
meet the requirements of the
site. Channel Safety Systems
Ltd: circle 95



No Climb Products produce
a range of lamp changing
equipment comprising a
series of inter-connecting
insulated poles with three-
fingered grabs for changing
any lamps up to 30 feet high.
The apparatus saves time and
expense, avoiding the cost
and disruption of having to
hire/buy and set up scaffold-
ing or platforms: circle 96



Program Lighting's
reputation for quality
products, design and
technical expertise is
underlined by the launch of
their latest lighting catalogue.
This new luminaire collection
represents for the Designer,
one of the most exciting
product ranges available
today for all ceiling formats:
circle 97



NEI Victor produce a range
of Zone 2 luminaires
featuring floodlight, pendant
bulkhead and tubular
fluorescent designs, as well
as general purpose variants
offering the same quality
manufacturing materials:
circle 98

WHERE TO BUY DIRECTORY

To advertise
your Catalogue in this directory
contact Joanne Barker on 01-975 9759 ext 1154.

Lighting talks in Hungary

Budapest, Hungary, is the venue for this year's Lux Europa congress to be held from 3-5 October. The lighting committee of the Hungarian Electrotechnical Association has organised the event on behalf of lighting organisations in Belgium, Germany, France, Italy, The Netherlands, Spain, Switzerland and the United Kingdom.

Lighting experts from around the world, including Japan, India and Australia, will present papers on many aspects of lighting. On

the first day, lighting for workplaces will be the main topic followed by physiological aspects of lighting which will include damaging radiation and sensitivity to luminance contrasts.

Exterior lighting is the main theme of the second day, with sessions on lighting for residential areas, traffic and tunnels. This is followed by talks on lighting education.

Daylight, and architecture and lighting will be considered on the

third day.

There will also be an extensive display of posters giving information on lighting developments in different countries.

The registration fee of 360 Swiss francs is reduced to 330 for bookings made before 15 July. Conference programme and registration forms are available from The Chartered Institution of Building Services Engineers, 222 Balham High Road, London SW12 9BS (telephone 01-675 5211).

Cathedral puts lamp on trial

The advanced lamp technology of Wotan's Dulux EL was put to the test by the honorary engineers of St Alban's Cathedral over a nine month period before they replaced GLS lamps with electronic compact fluorescent lamps.

The cathedral used 216 GLS lamps, many of which were replaced every six weeks, in 18 medieval style chandeliers in the nave. A climbing tower was necessary to reach them.

The 11W version was specified

as it gives the same light output as the original 60W GLS lamp and has the same warm colour appearance.

The Wotan Dulux EL offered impressive energy savings. It was calculated that, based on £0.06 per kWh, the cost of electricity con-

sumed over 8000 hours by one 60W GLS lamp was £28.80 compared with £5.28 to run an equivalent 11W lamp over the same period: a saving of £23.52.

The cathedral calculated an 18 month pay-back period for the conversion.



Warning: INSTALLATION OF ARLEN PULSESTARTER GREATLY REDUCES LAMP CATHODE EROSION



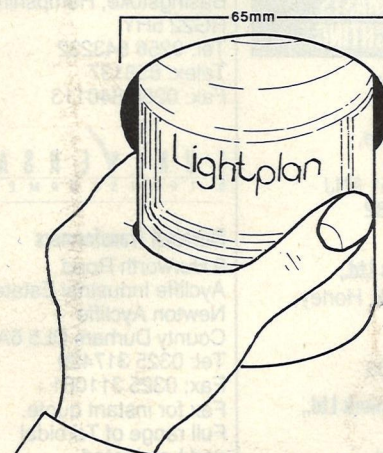
A low voltage, bare wire spotlighting system used by Prudential Property Services to light information cards in a shop window. The system allows the miniature spotlights to be positioned anywhere in the window, putting maximum light on the cards with minimum intrusion. Called Hi Wire, the system is from Hitech Lighting plc.

IN YOUR NEXT ISSUE

In the August issue of *Lighting Equipment News* the lighting of historic town spaces and conservation areas will be featured. Such environments need sympathetic as well as functional lighting in order to compliment the atmosphere.

Examples of the use of lighting equipment to provide high quality, energy saving indoor installations will be described, quoting from highly commended installations in the Energy Management in Lighting Awards Scheme.

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