

LIGHTING

EQUIPMENT NEWS

AUGUST 1991

In brief . . .

- **Light Years** has been appointed UK distributor for miniature low voltage track systems and light strips by Lucifer Lighting Co, Texas.
- **Chelsom** has opened a £50 000 London showroom at unit 4, Hurlingham Business Park, Sullivan Road, SW6 3DU.
- **Gent** has a new multi-million pound headquarters and manufacturing plant in Leicester.
- **City Lighting Services** is now sole distributor in Scotland for Troll Lighting (UK).
- **The Lighting Group** has been formed to design and supply lighting. It is based at Nore Industrial Estate, Hovefields Avenue, Burnt Mills, Basildon, Essex SS13 1EB.
- **Thorn Lighting** has won contracts to supply fluorescent luminaires for underground car parks at Olympia and Canary Wharf in London.
- **Luna Lighting** has received orders for over £200 000 worth of lighting for shopping centres in Bromley, Worcester and Lincoln.
- **Chloride Group plc**, during the year ended 31 March 1991, made a profit before taxation of £5.1 million compared with £12.8 million in the previous year.
- **Silvertown Lighting Ltd** was the company responsible for the lighting of the Messeturm tower in Frankfurt, described in the July issue of *LEN*.
- **Thorn Lighting**, a joint venture by Jardine Matheson and Thorn EMI plc, has captured more than 20% of Hong Kong's lighting market, estimated at over \$500 million, in its first two years of operation.
- Thorn Lighting was formed by Jardine Engineering Corporation Ltd and Thorn EMI plc in 1989 as a 50:50 venture.
- **Abacus Municipal** is supplying the lighting columns and floodlights for the extension of Aden port in Yemen. In total, 18 high masts each measuring 30m have been used with Abacus AM510 floodlights to illuminate the container terminal.
- **Electrolite** has been appointed UK distributor for the PS Design range of luminaires from Sweden.

ElectroTech '92

Some 28 000 sq m of stand space – over half the available exhibition space – has already been booked for the July 1992 show. At present it seems that over 600 companies will be represented.

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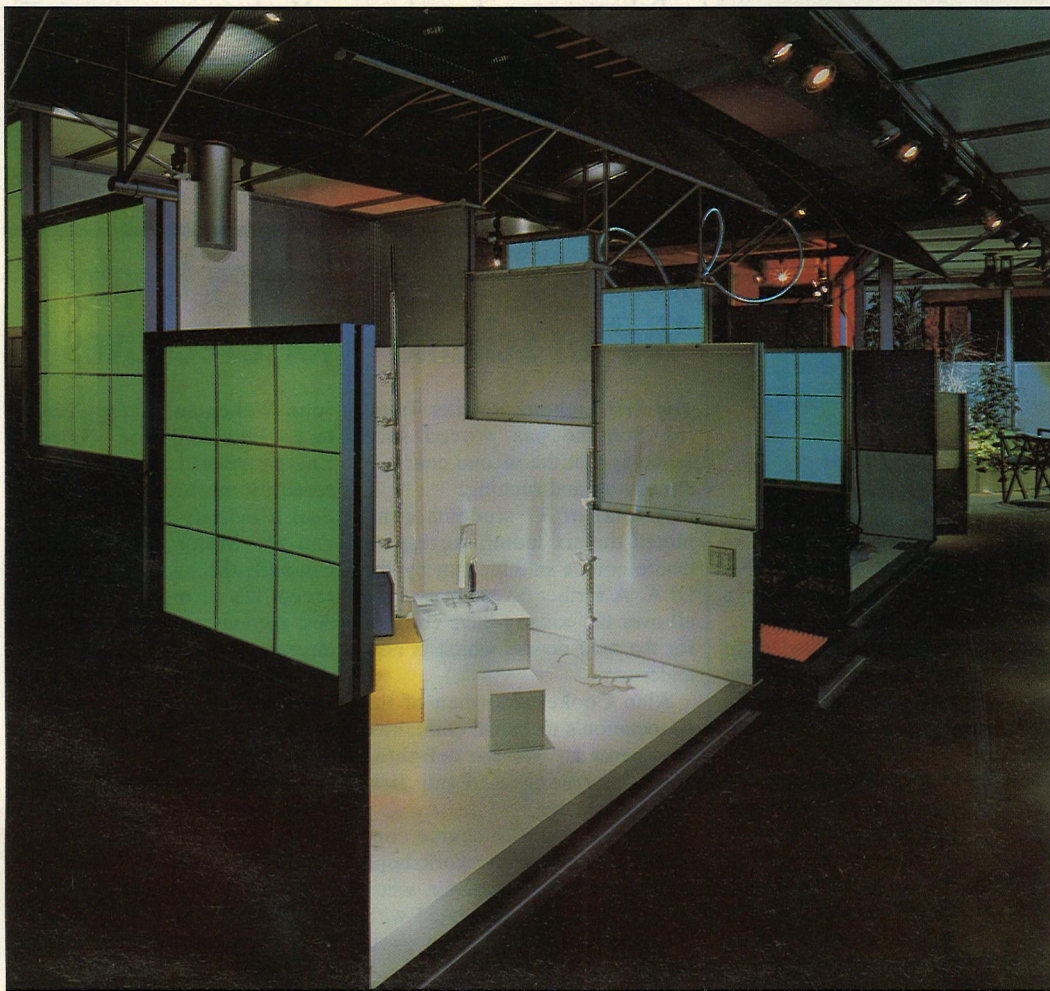
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Concord goes East

The opening of a lighting showroom designed by Yasuo Kondo marks the launch of Light Cube, the commercial fittings division of the Iwasaki Electric Company, set up to distribute Concord products in Japan.

The showroom – which occupies 180 sq m in Minato-Ku, the most prestigious business district of Tokyo – has been designed to display individually switched lighting products as well as to demonstrate lighting effects. Demonstrations can be tailor-made to customers' requirements to test the effect of various luminaires and lamp types on colour, texture and form.

Screens enhance the Japanese feel of the showroom and provide separate demonstration bays.



The sky's the limit

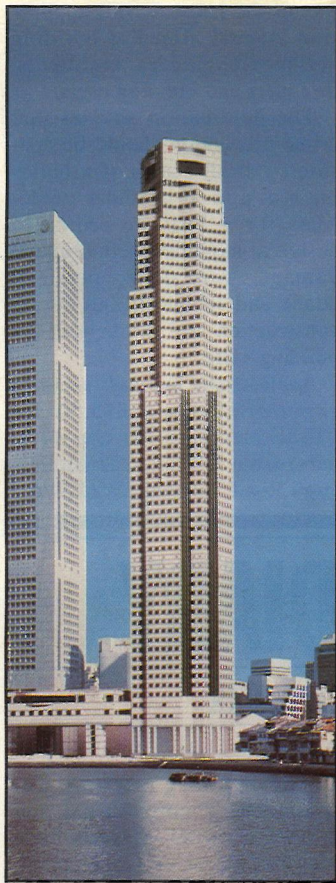
Thorn Lighting's Singapore operation has been awarded a £430 000 contract to light the sixty six floor, 280m high, UOB Plaza building – the largest office development in Singapore.

The Plaza, located on the banks of the Singapore River in Raffles Place – Singapore's business and financial centre – is designed by world-famous Japanese architect, Kenzo Tange.

Thorn will be supplying over 10 000 modular fluorescent fittings with low brightness louvers and compact fluorescent lamps and designing the scheme to provide an average of 500 lux in the office areas.

The company is now looking at ways in which the building can be floodlit using 1kW CSI floodlights.

Computer generated impression of the new Plaza building on the banks of the Singapore River.



Robin Aldworth elected president

Robin Aldworth, Thorn Lighting, is the new president of the Commission Internationale de l'Eclairage.

He was elected at the twenty-second session of the CIE held in Melbourne in July and will hold office for four years.

TUC and CBI urged to save energy

John Wakeham, Energy Secretary, has urged the CBI and TUC to promote energy efficiency.

Speaking at a meeting of the National Economic Development Council, he said, "Greater improvements in energy efficiency are essential if the UK is

to overcome the environmental challenges facing us. Energy efficiency not only makes sense environmentally, it makes good economic sense. . . I am determined to encourage and promote an energy efficient lifestyle at home, at work and in transport".

Winning lights

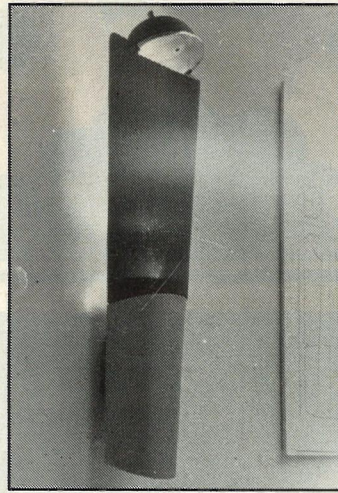
Concord has sponsored a lighting competition for students at Ravensbourne College of Design and Communication. Components for model making were supplied by the company and technical assistance was given throughout.

Winner was Paul Wylde who designed a wall mounted display luminaire supported on two curved arms. It uses a 12V capsule lamp and reflector. The fitting pivots at two points. Part of the prize is a six week placement with Concord.

Second prize was won by Phil Richards for a wall mounted ambient light for restaurants (see right). The housing, which conceals a transformer, is semi-cylindrical. By tilting the glass top, light from a 12V capsule lamp can

be directed wherever required.

Matthew Robinson's compact fluorescent wall light, which slides open for lamp replacement, took third prize.



GTE merger

GTE has merged three of its companies, Linolite, Lumiance and Sylvania. The new business, trading as GTE Lighting Ltd will be based at the company's Shipley site, but luminaire manufacture will continue at GTE's Malmesbury plant and lamp manufacture at Shipley.

Brian Doe, MD of Concord, is to be MD of all GTE lighting activities in the UK and Tony Armstrong becomes his group marketing director. Robin Natley, formerly sales director of Linolite, becomes commercial director of the new company.

The merger of the commercial and administrative departments of the three companies will lead to a reduction in staff of about 7% of the work force.

For customers, the combining of the two sales forces means that they will be able to order a much wider range of products from one sales point.

New identity for wholesaler

STC Distributors will be trading as Senate Electrical Wholesalers Ltd, following the company's takeover by the French wholesaling giant, CDME. This change of title was one of the requirements of the sale.

The company otherwise intends to retain existing trading names so that companies such as its lighting engineering subsidiary Lighting Design Service and Citadel, its fire alarm and emergency lighting specialists, will continue to operate as at present.

CDME is the largest electrical wholesaler in Europe, operating some thirty companies within France alone, and both the British company and its customers stand to benefit from the increased purchasing power of the group.

QUALITY ALWAYS SHINES THROUGH

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Banking on light

Warburgs, the merchant bankers, wanted a large luminaire to form a central feature in its 200-seat staff restaurant.

Luna Lighting turned the architect's idea into a 1m diameter, polished stainless steel disc carrying on the circumference 12 low voltage Nebular sparkle lamps

each rated at 20W. A central 50W downlight projects light through a Plexiglas tube to highlight a planter below.

Concealed above the disc, eight 18W PL lamps provide uplighting onto four acid-etched glass panels on the ceiling around the luminaire.

Euro standard for lamp starters

BSI has published a translation of EN 60927: 1991 *Specification for*

performance requirements for starting devices (other than glow starters).

Copies are available, price £38 (£19 to BSI members), from BSI Sales, Linford Wood, Milton Keynes, MK14 6LE.

Opportunity to consider visual values in design

Copenhagen is the venue for the CIBSE summer conference this year to be held from 6-10 September. The theme is visual and aesthetic values.

Delegates are welcomed at a reception on the Friday. The first technical session on Saturday includes *Services as architecture*, and *Relationships and responsibilities of architect and engineer towards achieving sympathetic integration*.

After lunch, *Anticipation and control of visual quality* will be considered, followed by *Lighting aesthetics*, and *Visualisation of lighting*.

Monday's sessions include *The role of the industrial designer*, and *How to envisage good design*. Technical visits are planned for the Tuesday.

Full programme and registration details are available from CIBSE on 081-675 5211.

Retailers say 'Yes' to scheme

The first Lighting Retailer Training Scheme has proved such a success that the second course is already up and running.

A total of 77 students completed the six month correspondence course in June run by the DLA. A further 33 students from all over the country have enrolled for the next course which is now underway.

Alan Cooke, chairman of the Association's technical committee commented: "We are delighted with the response to our first training scheme."

The first training course concluded with one-day workshops in London and Manchester, when the students were presented with certificates to display in their showrooms.

Energy trophy for executives

John Wakeman, Energy Secretary, launched the National Energy Award in June. Sponsored by the National Industrial Fuel Efficiency Service (NIFES) and the Major Users' Energy Council, the award is for chief executives of organisations who best demonstrate effectiveness in three areas.

These are the purchase of energy; the efficient use of energy, and care for the environment.

A glass trophy will be presented to the winner. Further details and entry forms, which must be returned by 2 September 1991, are available from NIFES, telephone 0602 625841.

CIBSE on security

Security engineering is the subject of the latest CIBSE application manual aimed at building services engineers, architects, designers and building users.

The publication advises that crime prevention should be considered at all stages of a building's design. It provides guidelines for a fully co-ordinated design to minimise theft, criminal damage, vandalism, personal attack and sabotage both during construction and throughout the building's life.

Applications manual: security engineering costs £15.50 for CIBSE members (£31 non-members) from CIBSE, 222 Balham High Road, London SW12 9BS.

DIARY

SEPTEMBER

6-10

CIBSE summer meeting, Copenhagen. Theme: visual and aesthetic values. Details from Member Services Department, CIBSE, 081-675 5211.

8-11

Light and Sound Show, Olympia 2, London. Exhibition of equipment for the leisure and entertainment industries. Details from Philbeach Events 081-370 8174.

24-26

Lightex, International Convention Centre, Birmingham. Annual conference and exhibition of the Institution of Lighting Engineers. Details from ILE, 0788 576492.

Interior Design North, G-Mex Exhibition Centre, Manchester. Details from ID Exhibitions, 0895 622233.



The Chartered Institution of Building Services Engineers

Visual display terminals – keeping up with changes

We have had the CIBSE VDT area lighting guide (LG3) with us now for two years. What have the effects been? What have the benefits been, and what are the problems?

The guide certainly seems to have percolated to most corners of the country and to certain far off shores to judge by some remarkably similar document that I have seen lately. I am still amazed, however, that despite the publicity, despite the numerous articles in the journals and trade magazines, some designers are still designing to Technical Memoranda No. 6 (TM6).

When manufacturers send back specifications to designers pointing out, very politely, that TM6 was superseded some 18 months ago by LG3, they say, "What's LG3? No one told me about it." How do these people stay abreast of changes to standards, design methods, equipment and legislation? Do they read any learned journal? Do they read the trade press? Do they attend seminars and continuing professional development courses? I suspect not.

It is the responsibility of each of us to remain fairly up-to-date with the changes within our profession. It may be easy to miss a new British Standard slipping quietly in with a small announcement on page 23 of *BSI News*, but surely not a guide that has had a couple of dozen articles published about it in many different publications over the last year or two.

On the positive side, many manufacturers have now finished the task of categorising their downlight ranges into categories 1, 2 or 3. Many have introduced new ranges or models to fill in gaps in their ranges. This should be a help to all those designing for the modern office workspace, most of whom seem to be using the freedom allowed by the three categories to tailor the lighting to meet the VDT tasks proposed for those spaces.

I should, however, warn a couple of manufacturers, who shall remain nameless – for the moment – that LG3 calls for luminaires to comply with the luminance limit of 200cd/m² at all angles of azimuth. In other words, wherever you view the luminaire from the office this luminance will not be exceeded above the luminance limit angle. If the luminance is 230cd/m² at 65° elevation in the 60° azimuth plane, then the luminaire is not category 2, it is category 3.

The guide does allow manufacturers to state the actual angle of compliance – such as "Our Rodeos range, with halophosphor lamps, meets the LG3 luminance limit at 67°". We do not expect this statement to appear in the small print at the bottom of a flyer announcing in banner headlines a new category 2 luminaire! It simply isn't a category 2 luminaire. Would that manufacturer describe a luminaire that "only leaks a little bit" as being an IP65 luminaire?

Still, at least we now have the new European Directive on VDT workplaces to worry about. "What European Directive?" do I hear you say? "Keep reading *Lighting Equipment News*," I say.

Paul Ruffles, chairman, Lighting Division Technical Committee.



- 12 Volt Eyeballs and Downlights.
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Lighting Egyptian style

The latest phase in Harrods' Egyptian hall, opened in late July. The bronze and glass lighting, designed and made by Maria McClafferty, comprises the monu-



mental capital to the carved stone columns, fan shaped lamps between the escalators, surrounding balustrades, and the chandeliers.

The luminaires by the escalators, use superimposed pieces of glass, each individually sand-blasted and etched to an ostrich feather design, and illuminated from within.

For the capital urns, 576 glass panels have been 'slumped' – a process of heating and softening glass to allow gravity to move it to take the form of the mould – to fit the bronze framework, and a traditional Egyptian palm leaf motif was etched onto each one. All the work has been carried out by hand – even the bronzework has been patinated using heat and acids to reproduce the ageing process.

Flashed opal glass has been cut into shape and sand blasted to form the chandeliers, while the balustrade is made from heavy bronze columns with glass infill panels. By the escalator, attached to the columns of the balustrade, are two cartouches with the Egyptian Hall of Harrods and the date, written in hieroglyphics, with the sun, epitomised in Ancient Egyptian culture by the god Ra, hovering above.

Top marks for energy saving

Trials staged by Gloucester County Council in Cheltenham's Bournside School and Sixth Form Centre showed that an electronic lighting timer from Chalmor could save 50% of the controlled lighting costs.

In January, a test was arranged in an average-sized classroom with the timer connected to the two rows of lights nearest the windows. The inner row and blackboard light were left to manual control. The trials ran for three months on a cycle of two weeks with control and two on manual switching.

The results were interesting. During January the average run times were reduced from 23.25 hours per week with manual switching to 13.5 hours per week when automatic control was introduced. Similarly, in February lighting was left on for an average 21.5 hours per week when controlled manually compared with 10 hours per week with the timer.

As the evenings grew longer and brighter, so March showed a higher percentage saving with a reduction from 18.5 hours to only five hours per week. Over the trial period as a whole, the average weekly saving was nearly ten hours, the running hours of the two outer rows had been reduced by 50%.

Using the timer to switch-off 0.5kW of lighting automatically could save 40p per week. Depending on installation costs, the payback period could be within the County's five year limit. Larger classrooms, corridors and laboratories can expect higher savings and shorter pay-back periods.

Lighting costs for the school represent over 65% of its electricity bill, so reductions in lighting run time could significantly reduce these costs. In addition to unit cost, any half kilowatt reduction in maximum demand for this school would save a further £4 on each bill.

Applying new lighting techniques

An advanced interior lighting course is tackling current problems in lighting.

Subjects covered recently include: designing for uplighting; the new approach of CSP (comfort, satisfaction and performance) to scheme evaluation, and illuminance from linear and area sources.

These courses are run basically by home study but with addi-

tional two-day seminars.

They are one of the training modules organised by the Lighting Industry Federation, (the other two are exterior lighting and photometry). They provide an opportunity for lighting designers and users to update themselves on lighting design techniques. More information is available from the LIF on 081-675 5432.

Trade Publications in brief...

● **Moorlite Electrical** has published a six-page leaflet on its Vector, fluorescent, suspended up/downlighting system (tel 061-330 6811).

● **National Signs'** brochure features cold cathode lighting and sintered electrode fluorescent tubing, both for interior lighting schemes (tel 071-485 3363).

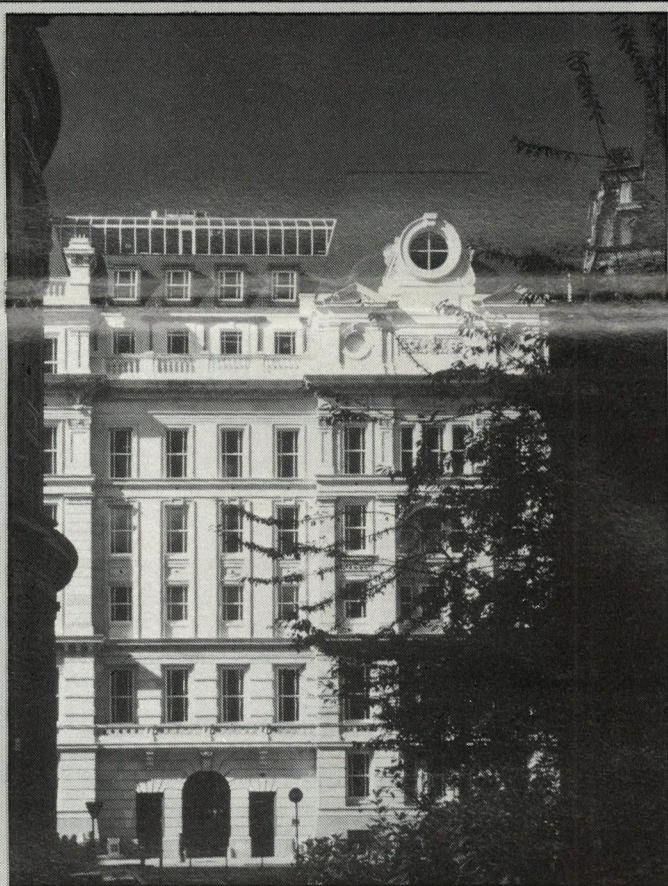
● **Montrose International's** 80-page catalogue illustrates its range of decorative lighting (tel 071-580 5316).

● **Thousand and One Lamps**

has a brochure on the Cornice lighting system which can also be used, for example, for handrail, bookcase and ceiling suspended lights (tel 081-698 7238).

● **Loret Electrical Systems** describes its TeleLynx personal environmental control system, which includes lighting, in a new leaflet (tel 081-643 8999).

● **Christopher Wray** has introduced a 64-page catalogue called *Contract Classics* specially for the contract lighting market (tel 071-736 8434).



The old postal headquarters building at St. Martin's-le-Grand has become the new headquarters of the Japanese bank Nomura International.

The traditional Portland stone exterior of the building has been retained while the interior has been totally restructured to meet the needs of a technologically-based company.

Architects Fitzroy Robinson were commissioned to give the building a traditional European feel throughout, the clients having rejected references to their Japanese origins in the brief.

The dealing rooms are located in the old Post Office courtyard occupying two 1700 sq m areas, housing 500 dealer desks. The problem of lighting such an extensive area of VDTs has been overcome by installing Zumtobel's Miral ceiling-mounted luminaires. These have been specifically designed for use in large work areas where there is a prevalence of VDTs.

Entertaining safely

The HSE launched two safety publications for the entertainment industry at the International Music Show. These reflect concern at the risks being run by people – often young musicians – who rig up electrical sound and lighting equipment to provide

entertainment. Shocks and burns are reported from time to time and occasionally prove fatal.

Electrical safety for entertainers is a free booklet aimed at the people who rig up equipment. It sets out the risks and how to minimise them in clear terms and in an accessible format. The other document, *Electrical safety at places of entertainment* reminds the operators of entertainment venues of their responsibilities for electrical safety.

COMMENT

Quality – the key to future success

As I write this editorial, it is now high summer and, with the rest of Europe poised to disappear on holiday for the whole of August, it seems an appropriate time to look at the one aspect of lighting manufacturing and design which is guaranteed to open the doors to these countries' markets and to a company's continued prosperity. By that I mean QUALITY.

Companies least badly affected by the recession have on the whole been those niche manufacturers whose high value, high quality products continue to find a market, albeit a reduced one.

Across continental Europe generally there seems to be less of a tendency to award contracts purely on price considerations, thus using the specification as the determinant of maximum rather than minimum quality requirements. This feature of the British building industry probably has a lot to do with the fact that the awarding of contracts is so dependent on the process of competitive tendering.

Negotiated contracts, although used regularly by design and build operators, have otherwise proved far less popular here. As a result, the final act to achieve the client's contract sum always seems to be the last minute cutting of specifications on the secondary building elements – including lighting and other building services. And, perhaps as a result, the UK appears to be lagging behind many other northern European countries when it comes to specifying such quality products as high frequency ballasts for projects.

But, as many companies have realised, the concept of quality goes way beyond product development and quality control. For the successful manufacturer it must represent a process of ongoing commitment to continuous improvement. And company culture must make this explicit so that every employee feels personally responsible for quality. In other words, having a quality department is a necessary but not a sufficient condition for this achievement.

Quality is also highlighted in the new lighting and crime study which looks back on the original Hammersmith project one year on, although in this case it is quality of life that is under examination, coupled with value for money in local authority terms. The continued reduction in crime and fear of crime is marked, particularly among certain groups of the adult population, and this at an estimated cost of 37p per household per week – or less than the cost of many daily newspapers. The results speak for themselves.

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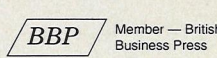
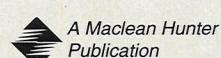
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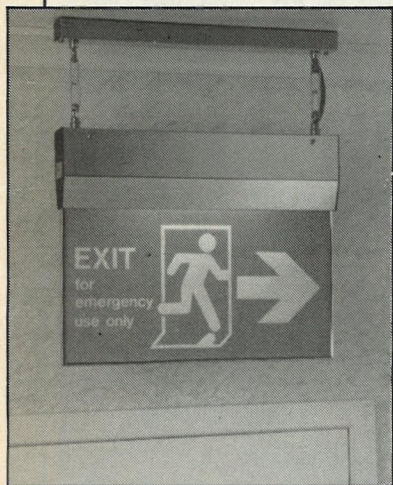
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NEW PRODUCTS



Exit pictogram shows the way

JSB Electrical is one of the first companies to offer emergency exit signs with pictograms, which are being gradually introduced as a European standard.

At the same time it is using a new process to produce its Royalux edge-lit sign (illustrated). This gives an exceptionally even spread of light and clearly illuminates the green background and exit pictogram.

Reader Service No 151



Versatile extruded lights

A luminaire system made of aluminium extrusions of different lengths is available from Formlight. Named Esprite, it uses a variety of lamps and locks into a selection of fixing plates which are compatible with most specialised ceiling systems.

The luminaire adjusts through 90° and is stated to give a wider spread of light than is usual.

Esprite can be tailored for use as pelmet lighting, for instance, or with special fixings can form uplights.

Other applications include signage. In this case, diffusers are screen printed with text and/or logos and PL type compact fluorescent lamps are used.

Reader Service No 153

LV lamp sealed with UV filter

GE Thorn Lamps has introduced a low voltage 50W tungsten halogen lamp fitted with a sealed ultra-violet filter.

The thin film layers of the filter are said to virtually eliminate ultra-violet radiation below 400nm. This makes the lamp particularly suitable for use in museums and art galleries.

A dichroic glass reflector is used and the lamp has a GY3.5 base. **Reader Service No 152**



Linear lighting system is triangular

Triaga 1 modular linear lighting system from Menvier Linear Lighting has a triangular profile. Its dimensions are 85mm x 65mm with softly curved edges.

It is suitable for offices and retail environments. Fluorescent modules have a choice of diffusers, louvres and/or reflectors. Modules with low voltage dichroic luminaires are also available.

High frequency ballasts can be fitted if required.

Mounting is either by wire suspension units, ceiling spacers, or for wall lights, by end-fitted brackets.

Variable ceiling heights and unusual room shapes can be taken into account when designing installations to provide a consistent quality of lighting. Couplers include three- and four-way units. Emergency lighting can be incorporated.

Free standing, matching tungsten halogen uplights are available to order.

Reader Service No. 154

Metal halide downlights

Two metal halide downlights have been introduced by Formlight. Available with square or circular bezels, Mirage and New Image can be used in solid or open cell ceilings.

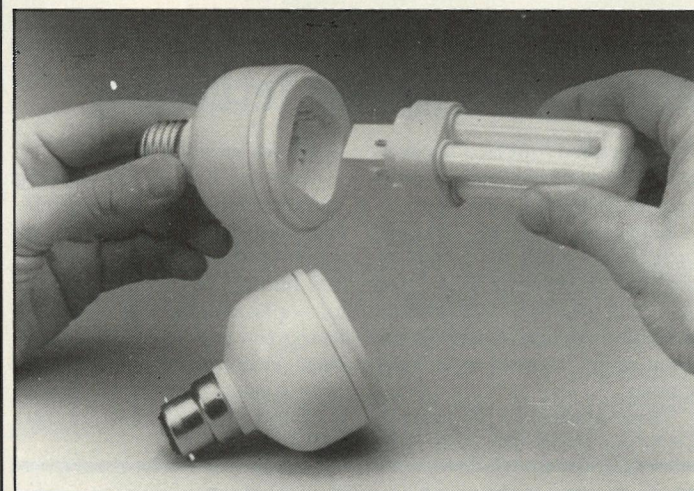
Mirage incorporates a decorative front safety glass which can help to reduce glare and can be ordered with designs to suit clients' requirements, even incorporating a company logo.

New Image has a recessed safety glass with either clear or diffusing finish.

The downlights, with slimline gear pack, fit through a small cut-out. Fixing into solid ceilings is made easy by a specially designed clip which does not damage mineral fibre tiles or plasterboard.

The luminaires are available with a plug and socket connection to suit Formlight's Pulseline 45 high insulated cable, and can be supplied with internal or external ignitor.

Reader Service No. 155



Adaptor for compact lamps

A new adaptor for PL type compact fluorescent lamps has been launched by Economy Lighting.

The EL compact adaptor is stated to have a life of 24 000 hours. This allows the lamp to be replaced without the need to purchase the complete adaptor unit every time.

ES and bayonet cap fittings are available. Model EL13 is compatible with 10W and 13W lamps; the EL18 is used with 18W lamps. **Reader Service No 156**

Longer lasting domestic lamp

GE Thorn Lamps has introduced a double life version of the Netabulb, lasting 2000 hours.

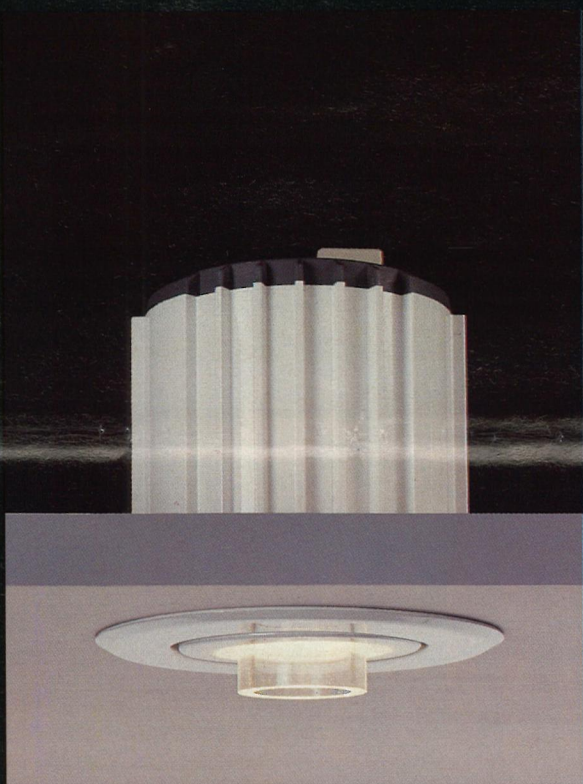
Available in 40W, 60W and

100W ratings, the mushroom shaped lamps are packed in twins in Mazda blister packs.

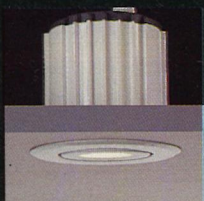
Reader Service No. 157

Low Voltage Downlights

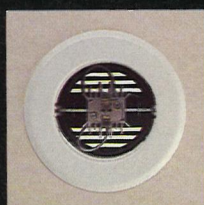
Just part of the wide range of quality fittings from Edison Halo Lighting.



Enclosed low voltage downlights designed to accept 20, 50 or 75W dichroic lamps.



Fitting features slotted end cap, porcelain terminal block and ribbed, extruded aluminium body to maximise heat dissipation.



Lamp holder mounted on purpose designed heat sink, providing cooler wiring and improved lamp life.

Edison Halo Lighting

5 Delaware Drive, Tongwell, Milton Keynes, MK15 8HG
Tel: 0908 617617, Fax: 0908 617205

NEW PRODUCTS



LV lighting made simple

Philips' Litapack offers a simple solution to choosing a low voltage downlight with lamp to match, (with correct beam distribution), and transformer.

The most compatible combination of 12V downlight, 12V dichroic lamp and electronic transformer has been selected, wired together and packaged in

one box. All the contractor or customer need do is select the required recessed downlight, either fixed or adjustable, and choose between white, gold and chromium finishes. The pre-wired cable is 1m long.

Benefits include reduced installation time.

Reader Service No 158



Decorative idea for low voltage downlights

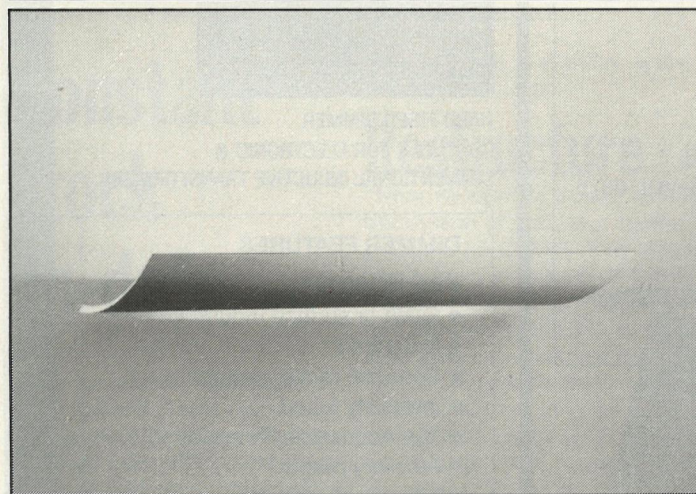
GE Thorn Lamps is about to introduce Halogem lamps for decorative lighting installations using low voltage downlights.

Designed for use in 50mm diameter downlights, Halogems consist of a tungsten halogen reflector lamp with permanently

attached decorative glass. There is a choice of wattages.

Five shapes of glassware are being introduced: cylinder, wedge, multi-point, dome and a fitting with prismatic lens that gives directional light. These attachments are to be produced in a choice of finishes and colours.

Halogems will be available to original equipment manufacturers, and to end users through wholesalers. Applications include hotels, restaurants, pubs and clubs. Reader Service No. 159



Asymmetric wall light

Into Lighting Design has a wall mounted, fluorescent uplight called Flood, designed by Daniel Bernard for Autographe, of Paris.

It uses two 36W PL lamps, and has an integral switch which allows the user to choose between two levels of illumination.

Flood has an asymmetric reflector in optical quality aluminium. This luminaire is available in black, white or metallic grey. It measures 700mm wide x 220mm deep and is 50mm high.

Reader Service No 160

For more information on any of the products listed, circle the enquiry number on the free reader reply service card.

Ballasts with increased safety

Transtar has extended its range of ballasts for high intensity discharge lamps to include units with a maximum winding temperature of 140°C. This gives users increased safety margins and luminaire designers greater flexibility in performance and style.

As a further safety feature, the range can be fitted with self-resetting thermal protectors.

Reader Service No 161

Toroidal transformers

Toroid Technology has extended its range of transformers to include four more power ratings: 60VA, 100VA, 400VA and 630VA, bringing the total to 15 ratings. Applications include low voltage lighting.

Maximum ambient operating temperature is 55°C. Physical size varies between 60mm x 31mm and 168mm x 84mm.

Reader Service No. 162



Bosch goes into security lights

Bosch has made its debut in the security lighting market with a range of security lights, movement detectors and a mini alarm.

A decorative security light available with clear or frosted glass sphere, a traditional lantern in black or white, and a floodlight kit with a 500W tungsten halogen lamp have been designed to welcome guests but startle intruders.

All the lights are operated by a built-in passive infra-red sensor, which reacts to thermal radiation emitted by people or other

sources of heat. The lights can be set to stay on from 25 seconds to 12 minutes.

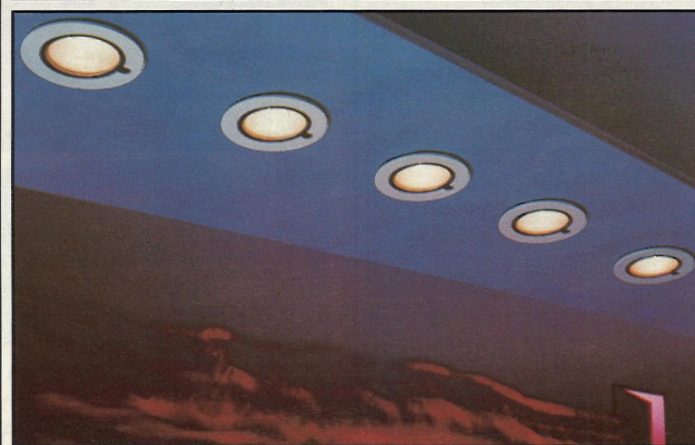
The sensors have a detection range of approximately 15m through an angle of 120°. They can be adjusted through 180° horizontally and 90° vertically.

There is also a daytime test facility.

The automatic porch light has a cylindrical diffuser and switches on automatically at night and off in the morning.

A movement detector with a switching capacity up to 1000W allows lights already installed in the house to be converted into security lights.

Reader Service No. 163



Emergency downlight

Routelite is a recessed downlight introduced by Marlin that gives non-maintained emergency lighting using a 10W tungsten halogen lamp. Glare is restricted by a combined diffuser and safety glass. It operates as a self-contained unit.

When unlit, the slim, white bezel makes it unobtrusive, only

the indicator light, showing that the batteries are on charge, signals its position.

There is a choice of remotely located battery box, or integral compact power pack designed to pass through the 70mm cut-out.

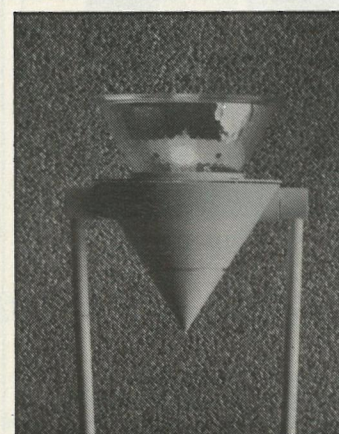
Routelite can be used, for example, to illuminate fire alarms and fire fighting equipment, and to indicate changes in floor levels. It can also augment other emergency lighting systems.

Reader Service No 164

Cones offer a choice of lights

Bright Light range from Staff Lighting features a cone shaped housing, swivel mounted between two supporting arms. Projecting above this is the cone shaped reflector of a single-ended, mains voltage tungsten halogen lamp.

The range includes ceiling and wall lights which have a choice of two arm lengths and can be used to give either upward or downward light. There is also a floor standing uplight and a table version. Another model is in a



free swinging arc.

Reader Service No 165

LIF LINE

Emergency lighting: a year of success

In 1990 the three principal objectives of the Industry Committee for Emergency Lighting (ICEL) were: to strengthen the need for certification in the emergency lighting market; to obtain EEC legislation which would bring all premises except private dwellings into scope and require the installation, maintenance and inspection of certified emergency lighting, and to formulate European standards for emergency lighting.

A year later ICEL's objectives have become reality and a very effective campaign has developed.

The Brussels seminar last October drew EC attention to the need for legislation on the safe evacuation of premises open to the public and ICEL officers have remained in contact with Ken Collins, MEP, who addressed the seminar as chairman of the EEC Committee on the Environment, Public Health and Consumer Protection.

Through him, ICEL hopes to convene a meeting with Karel van Miert who is responsible for consumer policy service, to persuade him to change the council recommendation on hotel safety into a directive and extend its scope to include all premises where tourists may be found including, for example, theatres and cinemas. Such legislation is necessary over and above directives covering health and safety at work, because tourists need greater guidance than workers.

The ICEL secretariat has also been in discussion with the Home Office, which will be responsible for implementing any law stemming from Europe and which is preparing a consultative document on this. The aim is to make a major input into Home Office thinking.

EEC legislation

ICEL has followed closely all legislation stemming from Brussels and had long discussions with the various EEC Commission Directorates on key elements. Relevant legislation can be summarised as follows.

1. Health and Safety Directives

Work Place Directive (L398-89/654/EEC, 30.11.89)

This requires emergency routes and exits needing illumination to be provided with emergency lighting of adequate intensity. Date of compliance is 31 December 1992 but existing workplaces have three years to comply.

Machinery Directive (89/392/EEC, 14.6.89)

Luminaires for industrial workplaces must conform with annex V of EEC Declaration of Conformity and have a CE mark affixed.

Draft Signs Directive (91/370/27)

This legislation on signs and signalling devices is intended to be effective from 1 January 1994. Relevant sections require: regular cleaning, maintenance, repair and replacement as necessary; guaranteed power supply to be provided for signs requiring power; signs to be activated for as long as it takes to complete action; and signs to be checked prior to service and at regular intervals.

These three health and safety directives go a long way towards meeting ICEL's objectives and the needs of the industry, ie all workplaces brought into scope and the installation, maintenance and inspection of certified emergency lighting required.

Further legislation refers to emergency lighting equipment and can be summarised as follows:

2. Construction Products Directive

This directive, Annex 2: Fire Safety Installations, overlaps with the Workplace Directive. The relevant section covers the installation of exit signs to indicate exits and the planned route of egress.

3. Council Recommendation on Hotel Fire Safety (86/666/EEC, 22.12.86)

4.2.1. Every hotel must be equipped with an emergency lighting system which switches on as soon as the mains lighting fails.

4.2.2. In the case of mains lighting failure, the emergency lighting system in an hotel must be capable of functioning for long enough to permit evacuation of everyone in the establishment.

The standards ICEL wishes to have mandated are:

- ☐ EN 60 598.22 - Emergency Lighting Luminaires
- ☐ Draft CENELEC norm 62-8 - Emergency Lighting Systems
- ☐ Draft amendment to IEC 924 modification units
- ☐ CEN TC169 Lighting Technology WG111 - Emergency Lighting.

It is, therefore, talking with the appropriate UK representatives, such as BSI, Department of the Environment and Fire Research Station, who are involved in this work, and arranging meetings with DG3 of the EEC Commission to discuss mandating these standards for emergency lighting, to ensure the European norms that have already been produced and those in the pipeline will have the Commission's approval.

NEW PRODUCTS



More compact lamps

A new range of 2L and 4L compact fluorescent lamps is being launched by GE Thorn Lamps.

Available in a full range of wattages, the lamps have a colour temperature of 2700K, similar to that of GLS lamps.

The 4L comes in two cap options, two-pin with an internal

starter, or four-pin suitable for dimming, emergency lighting and high frequency circuits. The 4L gives a higher light output from a shorter lamp. Its symmetrical light distribution makes it suitable for applications such as down-lighting and task lighting.

Reader Service No. 166

Recessed emergency lighting

Ring Electronics has developed the R series of emergency lighting for applications where a fully recessed, self-contained luminaire is required, providing a smart,

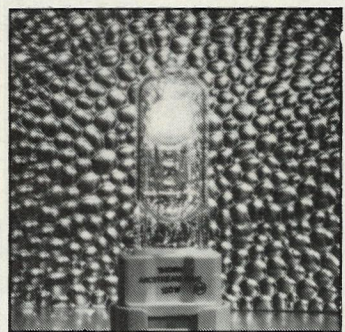
clean finish to the ceiling.

The R series is rectangular and uses an 8W fluorescent tube with prismatic diffuser; the housing is galvanised mild steel. Non-main-

Improvements to metal halide lamps

The Arcstream range of compact, single-ended metal halide lamps by GE Thorn Lamps has been extended by the introduction of a neutral white (4000K) 150W lamp, to complement the existing Warm White 150W lamp, and two new 70W lamps, one in each colour temperature.

Arcstream technology has also been transferred to higher wattage lamps to create the Kolorarc MBI-T tubular metal halide lamp. This 250W lamp has been redesigned to improve effi-



ciency by up to 20% and the tubular shape makes it easier to control the light output.

Reader Service No. 167

tained and maintained modes are available.

There are also versions with the company's Flashpoint infrared testing facility which uses a remote control handset to transmit coded signals to the luminaires.

Reader Service No. 168



Transformers are free of maintenance

Maintenance-free, multiple output, low voltage lighting transformers have been launched by Intram Barwell. This has been achieved by incorporating autotest mini circuit breakers instead of traditional fuses.

Freedom from fusing allows the transformer to be located in previously unsuitable areas where access is difficult. These transformers can be installed on a "fit and forget" basis states the company, which will prove a boon for electrical contractors and maintenance managers.

The range allows multiple luminaire, low voltage lighting installations to be supplied from one transformer. Easily accessible terminal blocks make wiring-in particularly easy with capacities ranging from 100VA, two outputs, to 400VA, eight outputs.

Dedicated circuit breakers not only provide short circuit protection for both primary and secondary windings (as stipulated by British and European standards), but prevent the transformer from overheating and guard against the hazards of overload.

Advanced toroidal technology means that transformers are compact with high power-to-weight ratios and are capable of supplying lamps from 20-50VA, giving exceptional flexibility.

Reader Service No. 169

Inspection light has high output

For microscopic and magnified visual inspection, image analysis and photography, the QFO20 offers many of the advantages of fibre optics.

In outward appearance the unit resembles a fibre optic light source with a single 20mm diameter x 500mm long flex-and-stay

swan or goose neck. However, it has a low voltage quartz halogen lamp, lens and heat filter fitted into the nose of the swan neck.

The other end of the neck is anchored in a metal enclosure which houses a transformer, switch, fuse, mains indication light and socket for the lead.

Fitting the active components of the QFO20 into the nose of the swan neck minimises coupling and transmission losses and gives a higher light output.

Reader Service No. 170

Designer uplight is stylish

A floor standing uplight called November has been designed for Chad Lighting by Robert Welch.

A wrought iron framework supports the chromium plated reflector bowl and stem. Standing 1730mm high, the luminaire uses a choice of mains voltage tungsten halogen lamps up to 300W.

A gold plated ring supported above the top edge of the reflector allows a gentle spill of light sideways.

There is also a matching wall light 260mm high.

Reader Service No. 171

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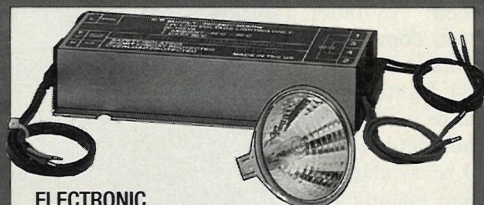


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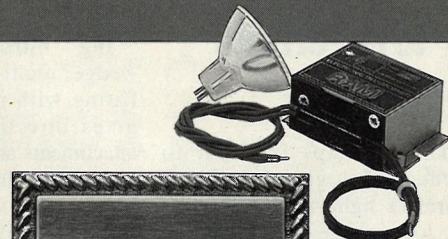
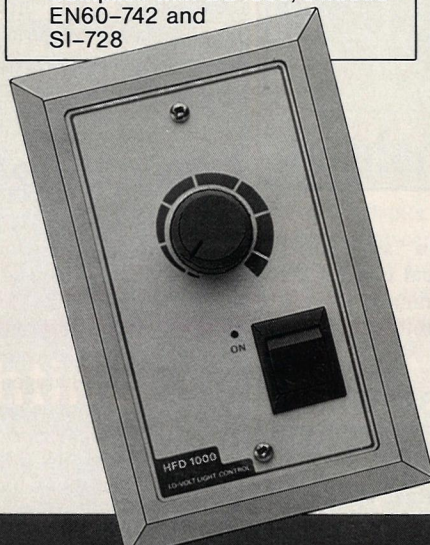
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A MEMBER OF THE AIR MOVEMENT GROUP

Centre of excellence

EDISON VOLTA moves into top gear after a dramatic restructuring and now provides a 'one stop shopping' service to wholesalers

With a reputation for reliability sales and technical after sales service – Edison Volta distributors has launched itself into a new phase of expansion which is guaranteed to re-write the meaning of customer care.

A complete range

EDISON VOLTA is now UK importer of 80% of Italian manufacturers entering the UK market: the scope of lighting is encompassed within their range from halogen to discharge through fluorescent, low voltage and flood, etc. At present the range exceeds 3,500 items, allowing the company to offer a wide range of alternatives on products, cost and quality of any single product.

A new sales service

"An initial problem we encountered in the UK was the idea of regional/area sales managers," remarks Romolo Cichero, UK Managing Director of Edison Volta. The idea that a representative could be in Bristol in the morning and in Oxford in the afternoon seemed inefficient. If he were covering such vast areas, dealing with hundreds of accounts, he would be physically unable to visit a customer more than twice a year. As we have new products coming on line all the time, we felt our customers were not receiving the service they deserved.

Faxfact

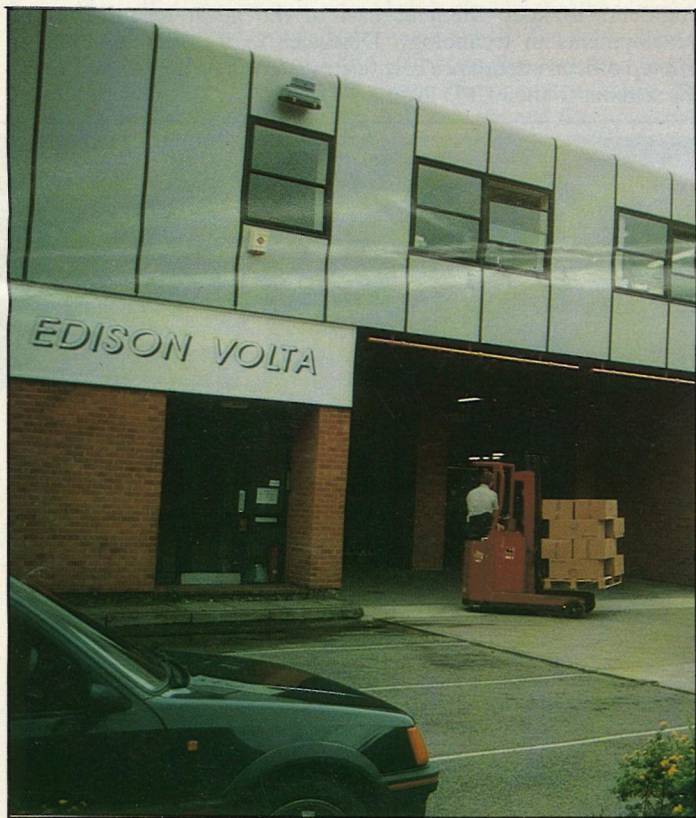
To further strengthen their commitment to customer care, Edison Volta will launch its Faxfact system in early September. This system enables any wholesaler to fax a computerised database free of charge and the database will fax back within seconds full and complete technical information on any products within the EDISON VOLTA range.

Quality control

A rigorous policy of product testing has resulted in returns being less than 1% and this, coupled with our policy of immediate replacement ensures customer satisfaction.



The Power House – Edison Volta's Aldershot Head Office



Computerised stock control ensures efficient dispatch

Constant stock up-date

From a central warehouse in Italy, Edison Volta operates a flexible stock pipeline to its computerised sales offices and warehouses in Aldershot. This ensures

constant stock availability across the complete range.

Restructure

"Now we operate a most effective system of 150 sales agents," continues Mr Cichero. Each agent has a town or group of towns which becomes their responsibility; obviously big cities have more than one agent, for instance three in Manchester, two in Birmingham and three in London. This system enables an agent to visit his customer more frequently and discuss new products.

Romolo Cichero

The Managing Director, who has a sound financial background and can deal with enquiries in French, German, Spanish, Italian and Russian!

Don Collier

Sales Manager with 17 years experience in the lighting industry, which gives him foresight into market developments.

Graham Baldwin

Warehouse Manager, with 10 years experience in lighting. Graham ensures that all orders are dispatched promptly.

Maureen Behan

Telephone Sales Manager. Backing up the sales agents is the telephone sales department, which also deals with day to day customer contact.

The team

A wealth of experience is on hand at EDISON VOLTA



At your service Edison Volta's management team from left to right Graham Baldwin, Tony Caruana, Don Collier, Romolo Cichero

Tony Caruana

Tony runs the accounts department, which is fully computerised, and enables customer queries to be sorted out efficiently.

We believe we have all the essential ingredients to give the wholesaler a service that is second to none. We have studied the American systems of giving customers what they want when they want it with competitive pricing. This policy, linked with courteous, efficient service, has resulted in expansion of both our product range and the company's activities.

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you name it ... we supply it

We are merely responding to the Industry's demands

For some years both suppliers and specifiers in the Lighting Industry have been calling for a comprehensive Lighting exhibition in the London area.

Recognising this need, IML Techpress has taken the two prestigious new halls at the Wembley Conference Centre on October 22nd, 23rd, 24th, Hall 3 for Light Fair '91, and Hall 2 for its sister exhibition Electrical Products '91.

The Wembley Conference complex is gaining an enviable reputation as one of the leading exhibition centres in the South. It is easily reached by car, via the M25, and there is parking space for 6,000 vehicles. Or, let the train take the strain. Wembley is very accessible to all main line termini and there is a courtesy bus service to take visitors quickly and smoothly from Wembley Park Station to the Conference Centre.

And the timing's not bad either!

Again working on research findings, which revealed that the favourite exhibition month for exhibitors and visitors was October; we asked for, and got, *October*. Twenty-second to twenty-fourth to be precise!



Lighting industry blasted

To support exhibitors, and to ensure that large numbers of the 'right people' get to Light Fair '91, IML has mounted a multimedia blast at the Industry. Trade Press advertising, direct mail shots, plus a commercial radio campaign running right up to the eve of the show. All targeted at potential visitors and purchasers.

Plus of course, the CIBSE "State of the Art" seminars.

A guarantee of "quality" attendance.

Says Andrew Castle "At IML we like to think of ourselves as a professional, dedicated organisation; and I am certain the success of Light Fair '91, despite all the doom and gloom that has been forecast for it in some quarters, will bring proof that we are fast becoming a force to be reckoned with on the British Exhibition scene."

All things to all people

Certainly not merely a "nuts and bolts" show. Light Fair '91 has got all the products, both simple and magnificent, to pull in those key specifiers - from Consulting Engineers and

Architects to Contractors and Wholesalers.

Here are some of the important names, who are already committed to Light Fair '91.

Philips Lighting - OEM and Professional Divisions.
Lutron EA Limited
Intram Barwell
Holophane Europe
JSB Electrical plc

NEI Victor
NEI Transtar
Strand Lighting
Plus such overseas names as Britannia Bargellini, Zumtobel and Wever & Ducre.

Lighting - the next decade

One of the busiest areas in Light Fair '91 will undoubtedly be the "New Products Section", where many just-released, innovative items of

lighting equipment will be displayed. . . . Visitors can then call at manufacturers' main stands to be given further information.

DIARY UPDATE

AUGUST

Retail Lighting Schemes feature - ELECTRICAL PRODUCTS.

SEPTEMBER

Light Fair Exhibition Preview - ELECTRICAL PRODUCTS.

OCTOBER

Energy Management Supplement - PREMISES & FACILITIES MANAGEMENT. Light Fair Exhibition Guide - ELECTRICAL PRODUCTS. LIGHT FAIR '91-WEMBLEY 22nd-24th.

Exhibitor Viewpoint

Light Fair will be an excellent platform to launch new products, being the only national show for contractors and specifiers this year. Many companies will take the opportunity to show new products including *Harvey Hubble* which will be offering a new concept in amenity lighting. "We will be showing an architectural luminaire which provides amenity AND floodlighting," says Bob Alan of Harvey Hubble, describing this novel idea.

"Light Fair represents the only real exhibition opportunity following the announcement of the new concept," he continued. "We decided to take space at the show because it will provide specifiers with their first opportunity to see our new products. Light Fair also represents good value for money for the exhibitor."

And Alan Mingay, Manager of *Britannia Bargellini* said "The combination of a specialist lighting exhibition such as Light Fair '91; plus the CIBSE seminars; plus the Electrical Products Exhibition in the next hall, meant that this was a package with considerable appeal to us."

Keith Rippon, General Sales Manager of *Holophane Europe Limited*, commented "We have been searching for a suitable lighting exhibition in London which could become a major exhibition in the future, and we hope that the response will justify the establishment of an annual exhibition for our industry."



The Lighting Division of The Chartered Institution of Building Services Engineers

An Industry Teach-In

The outstanding success of previous regional "Lighting - The State of the Art" seminars is another reason why Light Fair '91 will be the definitive exhibition for the industry.

Organised by the Lighting Division of The Chartered Institution of Building Services Engineers (CIBSE), the seminars will cover a wide range of subjects including; Industrial Lighting, indoors and outdoors; Retail and Commercial Lighting, Emergency Lighting and Lighting Control.

Seminar Chairmen will include Alan Wilson; Chairman of CIBSE Lighting Division; Robin Aldworth of Thorn Lighting Ltd, and President of the Commission Internationale De L'Eclairage; Bob Beer, Chief Electrical Engineer and an Associate of Flack & Kurtz.

Among the speakers are Mike Simpson of Philips Lighting; Ian G. Williamson; Head of Electrical Engineering, J. Sainsbury Plc; Phil Davies of PC Foreman & Partners; Bill Graham of the Birmingham Conference Centre; Paul Blackburn of Kirklees Metropolitan Council; John Hughill of Thorn Lighting; Grant Daniels of Zumtobel Lighting Systems Ltd and Chris Watts of Menvier (Electronic Engineers) Ltd.

The seminars will run on both mornings and afternoons of all three exhibition days, and each talk will be followed by a question and answer session together with practical applications where possible.

Another important advantage of the papers is that they can be logged on the Continuing Professional Development (CPD) programme. The CPD scheme run by CIBSE and certain other professional bodies provides for regular training of qualified engineers to keep them abreast of the latest techniques and developments in technology. Delegates to the seminars will be offered official attendance certificates and will be able to add any of the sessions to their CPD logs.

Jumping to the right conclusion

A recent research carried out for the Exhibition Industry Federation, using a sample of 400 UK trade shows revealed several conclusive and constructive facts to support the case for sponsoring, and taking space at exhibitions.

● 74% of sales leads generated at exhibitions are *brand new*.

● 29% of these are *converted*.

● 83% of exhibitors confirmed that exhibitions were very important in maintaining client contacts.

● 90% of exhibitors interviewed had a positive attitude to exhibitions and intended to exhibit again.

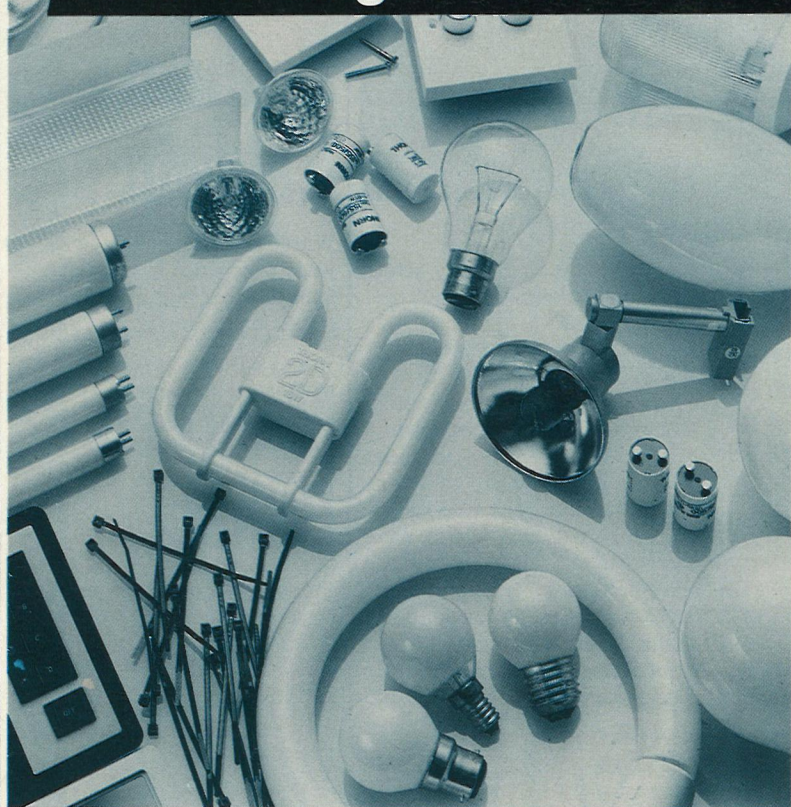
We have made a commitment

The Industry said "65% of the nation's specifiers for electrical and lighting equipment; plus the majority of large architectural practices and design groups are based in London and the South-East. This makes a case for a comprehensive Lighting Exhibition in that area".

It needed a commitment and IML has made it. It needed a lot of promotional money and, in today's cold climate, a certain amount of nerve. IML puts its money where its mouth is. A promotional budget for Light Fair '91 in excess of £120,000.00 and the support of some big names in the UK media list for our industry.



Where bright ideas come to light!



The Lighting Industry has at last, got the major national exhibition it deserves. Light Fair '91.

Light Fair '91, the definitive lighting exhibition, will take place at the prestigious Wembley Exhibition Centre, on the 22nd, 23rd and 24th October 1991. Every major participant in the Lighting Industry will be there. Light Fair has been designed as a forum for the best and brightest new products and ideas within the industry. A single platform from which the most innovative companies can inform and inspire consultants, architects, designers, contractors, wholesalers and maintenance engineers.

A major national show demands a major national venue. Wembley Exhibition Centre, with its excellent facilities, is purpose built to fulfil that role. It's just a 13 minute tube ride from Central London, well served by motorway and has parking space for over 6,000 cars.

To discover how the definitive lighting exhibition will be throwing new light on the Lighting Industry's brightest ideas, simply phone the following office Hotline numbers:

Head Office: 0732 359990.

Midlands Office: 0675 467255.

Northern Office: 061 445 7729.

A series of "Lighting - The State of the Art" seminars will take place in the Wembley Conference Centre at the same time as Light Fair '91. These will be organised by the Lighting Division of CIBSE and provide an opportunity to hear internationally-known speakers from the industry. Full details will appear in the trade press.

An IML Exhibition

LIGHT FAIR 91
22-24 OCTOBER 1991 - WEMBLEY
electrical products

Lighting the great outdoors

Why should town centres and historic buildings fade from the street scene the minute dark falls? *LEN* looks at recent schemes which focus night-time attention on these key visual elements.

The night-time landscape should be as interesting as the daytime scene; it is also potentially considerably more dramatic. The south of Europe has been conscious of this fact for many years. In northern Europe its discovery is rather more recent; and in the UK, we have been particularly slow to appreciate the excitement lighting and floodlighting can bring to the street scene.

Long, dark winter nights have made the Scandinavians experts in the art of lighting towns – both streets and pedestrian areas – but a recent project takes the scope of lighting still further, into the field of pure fun.

When Oslo's central railway station was redeveloped some five years ago, the building was given a steel and glass tower to distinguish it from surrounding modern developments. But the tower was frankly rather dull and, in an effort to win the people of Oslo over to the architecture, Norwegian National Railways approached the Lighting Design Partnership to add a bit of excitement to the tower.

Horizontal bands

The result is an installation which turns the building into a 'tower of time', a sort of twentieth century version of the sundial. The tower is divided into five horizontal bands by parallel lines of white neon; a vertical line of white neon also bisects each facade. These white lines are constantly lit.

Each horizontal band is filled in with lines of red neon which vary on a daily basis, so that even the sleepiest commuter can instantly see what day of the week it is on his way to work. For instance, each Monday the bottom band is lit; on Tuesday

the bottom band and the one above it are brought to life; and so on. By Friday, then, the entire tower is illuminated.

Saturday's the day for fun and the lights chase and flash around the facades of the building all day, creating a moving pattern. Sunday, on the other hand, is rest day and the colour scheme switches to a relaxing monochrome white. A manual override enables the Saturday scene to be played on occasional holidays and festivals like the Norwegian National Day.

In addition, the lighting scheme is programmed to vary with the season of the year and time of the day. The masts at the very top of the tower are lit with warm high pressure sodium lamps in the cold depths of winter; in summer the clear white of metal floodlights is used. During the day, only the bands around the facade of the tower are lit. The spiral staircase going up the tower is floodlit with blue mercury lamps. Both the staircase and the top of tower lighting systems are linked to a

photocell. The staircase lighting is switched to come on at dusk and the rooftop lighting a little later at 9 or 10 pm.

These effects are created using Electrosonic 7000 dimmers under Sceneset control, while the timing of the display is linked to a programmable digital clock.

From lighting the new to lighting the old and historic. Perched high above the Black Country in the West Midlands, Dudley Castle simply faded into the darkness each night. Now, a new floodlighting installation has restored the castle's profile.

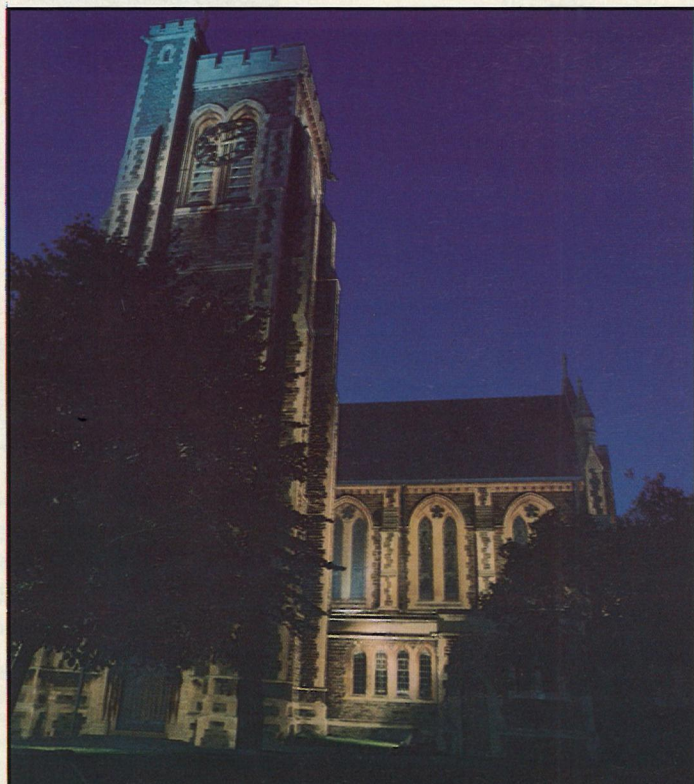
White masonry

The scheme illuminates the keep and defensive triple gateway, using 1kW CSI metal halide lamps to enhance the white stonework of the castle. Two cannons, standing proud of the keep, are each picked out with pools of light from two 400W MBIF lamps while other floodlights provide a broad wash of light across the building, emphasising the round forms of the two towers.

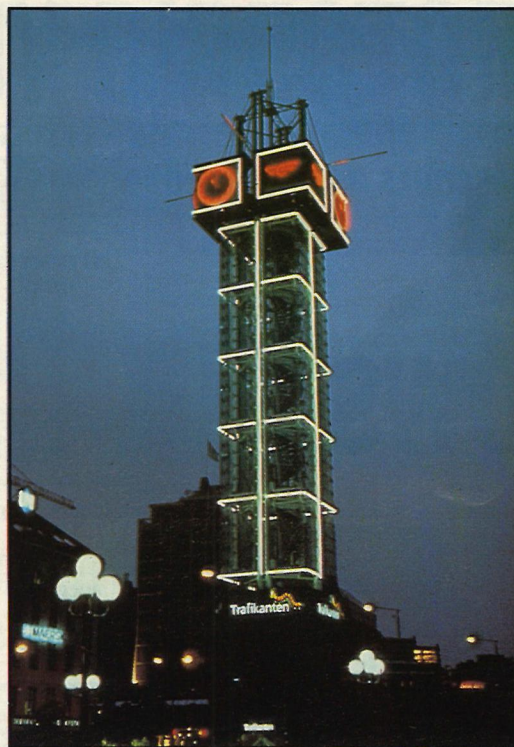


Dudley castle's keep, viewed from within the castle walls.

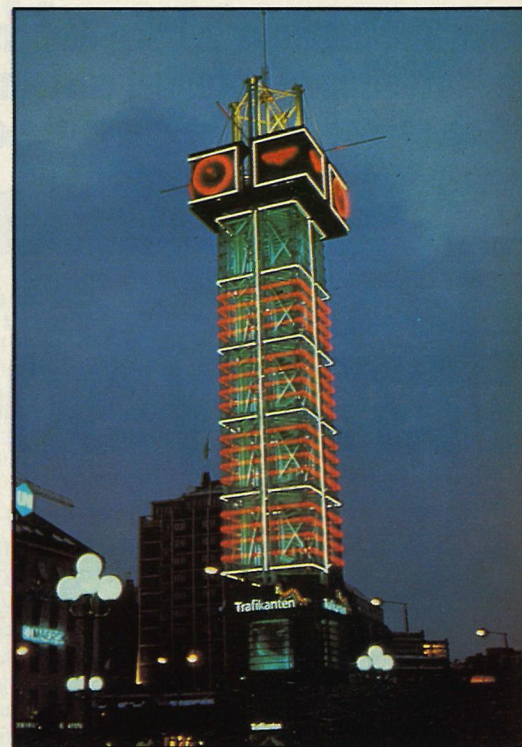
A single CSI lamp has been used to light the external walls of the triple gateway, the original entry point through the inner castle walls. Within the gateway structure a 250W high pressure



Floodlighting at St Mary's church, Swansea, deters vandals.



The lighting for Oslo's station tower varies on a daily, weekly and seasonal basis.



sodium floodlight creates a subdued, golden glow contrasting with the metal halide used elsewhere. Tungsten halogen floodlights complete this effect. The rear of the keep, viewed from within the castle walls, is also lit with CSI.

Siting the floodlights proved a matter of compromise because of constraints imposed by English Heritage, who wanted no fixings attached to the castle walls or holes drilled into them. They also wanted to keep the floods remote, but this proved technically impossible.

The solution was to recess the floodlights into the ground in stone, vandal-proof housings which maintain the daytime appearance. CSI lamps were chosen because of their compact size and flexibility, given by the wide variety of optical attachments available for them.

Power cables

Similar constraints were placed on the routing of power cables. These were eventually run through existing drainage holes, but where necessary trenches and cobblestones were excavated by Dudley Castle's own archaeologist.

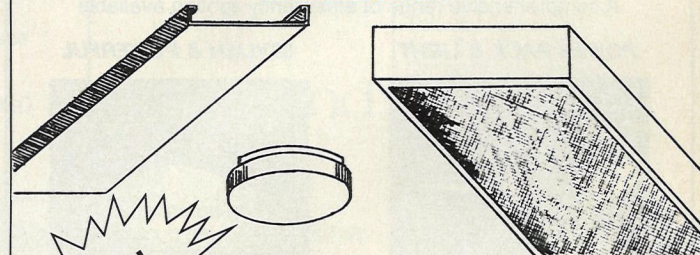
Floodlighting can also act as an important security measure, and it was this consideration as much as the desire to enhance the urban environment that persuaded Swansea council to fund a floodlighting scheme for St Mary's parish church in the centre of the city. The church had been subject to late-night vandalism.

St Mary's is now floodlit with high pressure sodium lamps from

GE Thorn in a variety of wattages to ensure even illumination from different mounting positions. Two 150W metal halide floods provide

colour contrast and highlight the clock tower. The scheme was designed by South Western Electricity and Thorn Lighting.

Damaged and discoloured diffusers?



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Shop and boutique lighting demands an original touch to attract the attention of potential customers, defying any notion of a universal solution. But there are certain principles basic to design. *Howard White*, of Philips, describes a market-led approach to retail lighting.

Variety shows

Perhaps the most open luminaire market in the UK is retail lighting. Certainly it offers the largest volume and value. The openness of the market is probably a function of the 'nation of shopkeepers' syndrome, with individuality creating market opportunities for different luminaire designs. The volume market characteristics of lamp production are entirely absent encouraging a plethora of manufacturers, each seeking to

present their individuality and unique solutions to retailers and specifiers. Despite the number of suppliers of accent and display lighting systems, a careful study of successful lighting reveals a few general principles, and quite often, reasons for breaking the rules.

Encourage buying

In essence retail lighting has a simple objective. It should encourage purchases to be made.

So lighting must:

- ☐ attract the punters' attention;
- ☐ generate their interest;
- ☐ make them feel comfortable;
- ☐ be part of the retail tactics;
- ☐ be flexible enough to meet changes in sales strategy.

It follows that there will be no universal solution because sales tactics and strategies vary considerably with the outlet type and the nature of the company. Nevertheless, generalised applications can be applied throughout. What follows can be no more than an outline.

The starting point should be the image that the outlet wants to project. This is defined by its marketing strategies. In seeking to help the retailer, attention should be focussed on his target audience, style of service, shop interior, point of sale, and product range. Note that four of these five items are internal or shop-based factors, with only the target audience being governed by external influences. Thus, the retailer has four fundamental degrees of trading freedom in influencing his target.

Matrix approach

Market research has shown that a simple matrix (as shown in Figure 1) can be developed, encompassing the four internal factors and a wide range of retail outlets. The matrix uses a pseudo-quantitative scale to differentiate recognisable retail outlets. Normal experience is sufficient to verify this important and fundamental concept. The matrix can be expanded from the generic shop to the more complex level (see Figure 2).

Having established this basic shopping formula the lighting criteria can be determined. Logic is necessarily the determining factor at this stage, in order to simplify a complex subject. There will always be reasons for diverging from the logic and that is acceptable. (This is sometimes called creative marketing!)

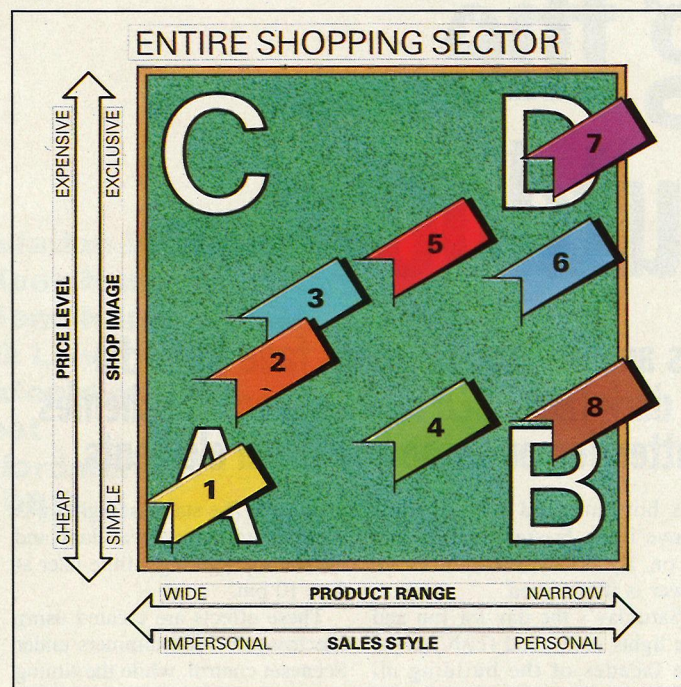
Considering detail, seven factors are commonly registered by a lighting scheme designer, whether consciously or otherwise. The customer has a contribution to make – he defines the target audience and it is his business and money the client is after. But the designer will need guidance to avoid a hotch potch, hence the logical approach has virtues in structuring the discussion.

Of the seven factors mentioned above four deal with general lighting and the remaining two with accent lighting. In each case the x, y coordinates from Figures 1 and 2 can be used to explain the design to the customer. Designers and salesmen may find it worthwhile to use the overlaps on Figures 1 and 2, for each of the seven factors. This aids the explanation on site.

Isolating the factors, for general lighting the following factors should be considered:

- ☐ the lighting level;
- ☐ colour impression;

Figure 1.



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Figure 2.

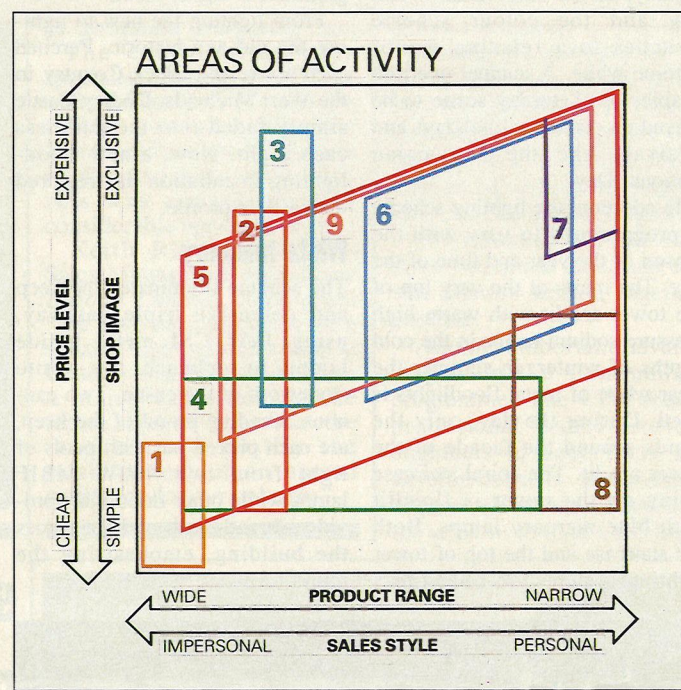


Figure 3.

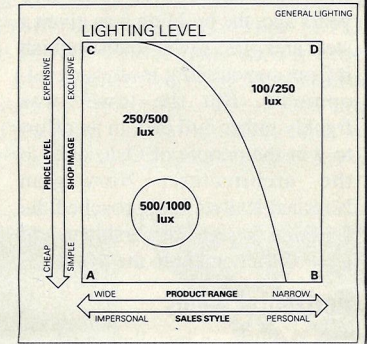


Figure 4.

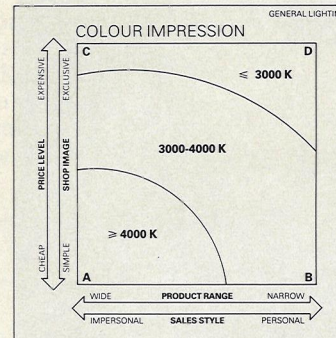


Figure 5.

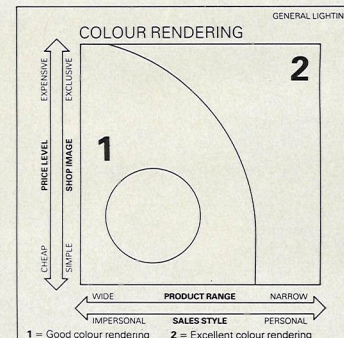


Figure 6.

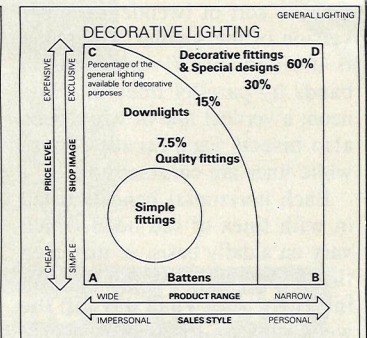


Figure 7.

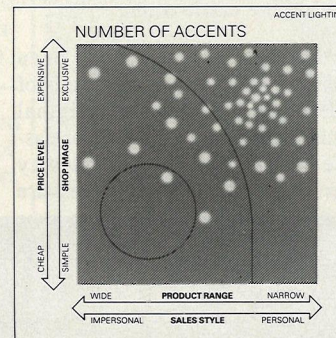


Figure 8.

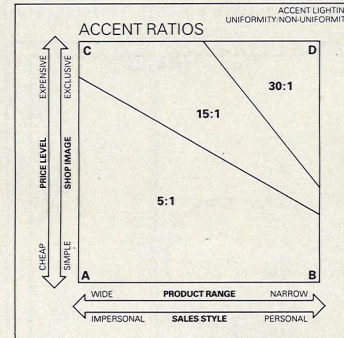
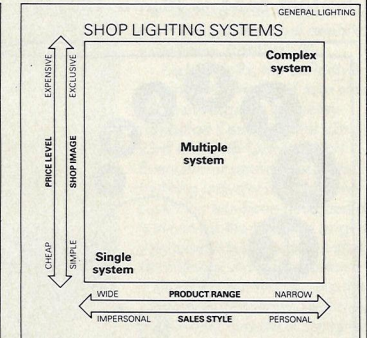


Figure 9.



- ☐ colour rendering;
- ☐ the degree of decorative (not accent) luminaires.

On the other hand, with accent lighting the main factors are:

- ☐ accent ratio factor;
- ☐ the number of accent luminaires.

Finally the control system should be considered.

The results for each factor are self evident, and are shown in Figures 3 – 9.

These procedures are merely guidelines. Market research has shown them to be excellent guidelines, but they do not include creativity. By following them in a purely mechanistic manner, a 'haute couture' shop would have a colour temperature of up to 3000K, excellent colour rendering and rely heavily on accent lighting. This would focus

attention on low voltage halogen and white SON, probably in narrow beam formats for the accent lighting with, say, chandeliers using incandescent lamps for general lighting.

In short, it does not account for say a contrast by using a markedly different colour appearance source to be used for that 'turning the head' sale. This is a matter of taste, and an extreme example, but designers should never follow rules slavishly. Lighting still remains an art in many ways.

Equally, it means the designer needs to have a mastery of the limitations of light sources. And in these days where accent lighting is playing a more significant role, relying on the given CRI, in the belief that the source will be equally effective across all colours of the

spectrum can be disastrous. White SON for instance has particular virtues for glassware, metal and the warm colours which are popular throughout Europe. In contrast, metal halides are excellent at the cool end of the spectrum. It's a matter of 'horses for courses'.

To conclude, the retail market provides many opportunities, even in the present economic climate. The numbers of luminaire manufacturers testify to this fact. So the variety of luminaires available, the number of variants in the shop-lighting formula, and the increasing number of new light sources guarantee that the retailer and the shopper should not be bored by the similarity of lighting schemes.

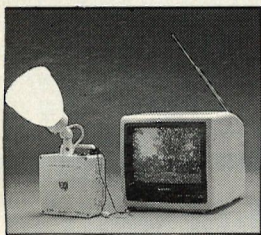
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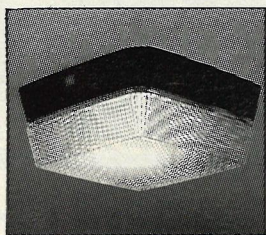
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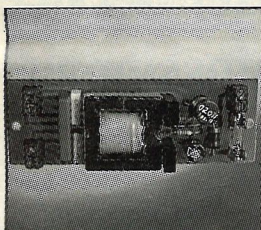


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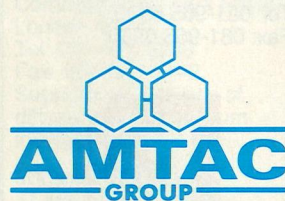
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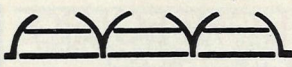
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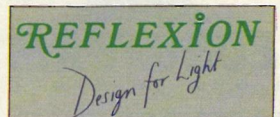


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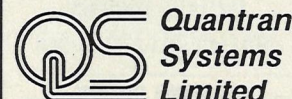


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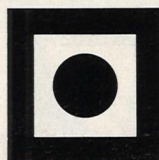
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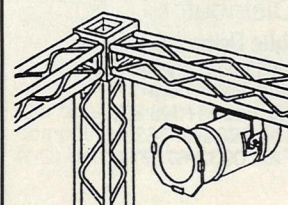


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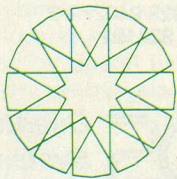
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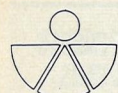
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Well designed lighting not only makes people feel safer in the night-time environment; it starts a self-fulfilling process. Because people feel safer they are more inclined to come out at night, and as the streets are fuller they actually become safer. This study, made one year after the original Hammersmith research project demonstrates the phenomenon very well.

Safety in numbers

A new crime study in Hammersmith has demonstrated that the improvements gained when new street lighting was installed were still benefiting local residents a year later – and at a cost of only 37p per household per week.

The research, jointly funded by the London Borough of Hammersmith and Fulham and Urbis Lighting, was backed by the Metropolitan Police. It monitored the impact of improved street lighting on crime and fear of crime in the re-lit area. This was a follow-up to a study carried out earlier under the auspices of the British Parliamentary Lighting group, 6 weeks before and after the new lighting was installed.

Twelve months later the researchers went back to check up and among the key findings of their latest study were:

- 90 per cent of residents felt safer using the re-lit road at night;
- 77 per cent of residents felt safer in their homes;
- there had been an 83 per cent reduction in incidents of crime, indecency and incivility occurring to householders (from 35 in the six weeks before relighting to only six in the 13 month period after relighting);

□ six out of every ten people interviewed thought that relighting was responsible for the reduction in crime;

□ one in three said they were more willing to go out after dark because of better lighting.

The study was conducted in Landor Walk in Shepherds Bush. The 43 residents interviewed both 6 weeks before the new street lighting was installed and 6 weeks after, were again interviewed.

One of the most striking findings of the study was the reduction in fear of crime and the increase in personal safety. Kate Painter, Lecturer in Criminology at Manchester University, announcing the research results at the British Criminology Conference said, "The positive impact of the new lighting was most marked on elderly people and women, using the street after dark. In addition these groups reported feeling safer during the day."

"It was interesting too that elderly residents felt safer in their homes as well as outside. Indeed, the surveys indicated both in the short and longer terms that the quality of life in Landor Walk had improved thanks to the new lighting. In short, it was a better place

to live."

The study also found that although the number of pedestrians using Landor Walk increased there was no increase in crime and nuisance. The majority of residents no longer took objects or personal alarms to protect themselves from possible attack when they went out or avoided public transport.

Individual accounts given by residents also highlighted unanticipated effects of the improved lighting such as increased confidence in mobility because any uneven, cracked pavement was lit; the ability to unlock the front door more quickly when returning home and no longer having to put up with drunks urinating or vomiting in the road and gardens.

The new lighting scheme in Landor Walk is highly cost efficient for the Council. Taking into account the cost of the lights and their installation, changing the lamps every three years and cleaning them, and the electricity they consume, the additional cost works out, at only 37 pence per household per week.

The two co-chairmen of the BPLG, both commented favourably on the study today.

Dr Ian Twinn, Conservative



Landor Walk, Shepherds Bush before (below) and after (above) relighting.



MP for Enfield, said, "There's no doubt about it – people do feel and act differently when there is good lighting. In my own constituency income raised by the Council from recycling glass is going towards improving lighting

and residents are very enthusiastic. There is no reason why other local authorities should not follow this example."

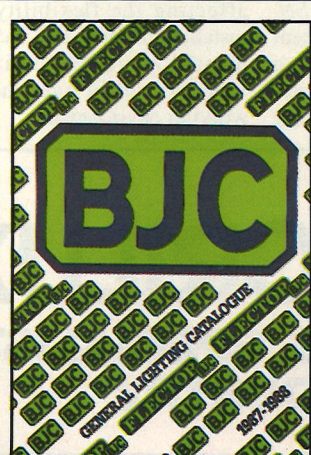
"Lighting does affect the quality of life for very many people, particularly the elderly", agreed

George Robertson, Labour MP for Hamilton. "The people in Whitehall who keep trying to thwart this kind of much-needed public investment should try walking through some housing estates themselves after dark."

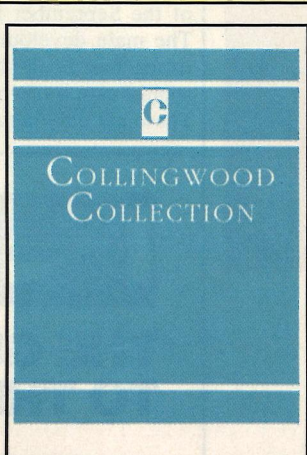
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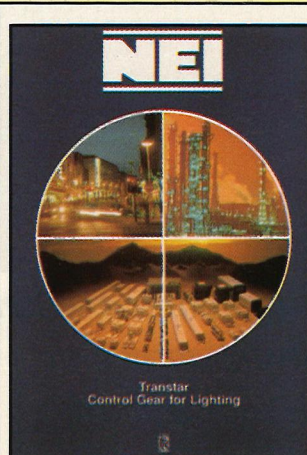
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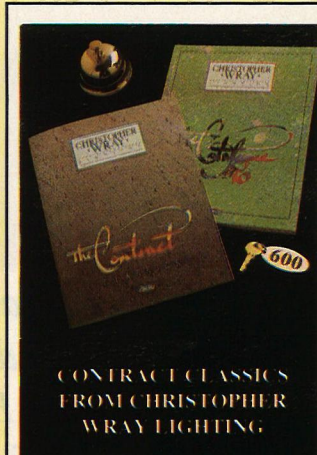
Acorn Lighting are pleased to announce that the BJC product range has been added to their portfolio of products. BJC offer a range that includes street & amenity lighting, industrial lighting, floodlighting & lighting for security. The whole product range is manufactured to the highest quality standards: circle 90



This new detailed and extensive catalogue from Collingwood illustrates many hundreds of components and accessories for use in building decorative luminaires. Product information includes dimensions, materials, temperature wattage and voltage ratings, approvals, interchangeability and compatibility: circle 91



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The Contract Classics from Christopher Wray Lighting is a 64-page full colour supplement to the company's Catalogue Number 10 especially designed for the contract market. With full technical information and advice on energy saving systems, The Contract Classics highlights the enhanced service Christopher Wray Lighting offers from each of thirteen outlets: circle 93



Channel Safety Systems Ltd announce the launch of 'Couturier', a new concept in emergency lighting for the nineties. An innovative range of emergency luminaires designed to present an opportunity to break away from the stolid conventions of the past and apply refreshing creativity to this sector of the market: circle 94

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LIGHTING

EQUIPMENT NEWS

Airside savings for Heathrow

The airlines at Heathrow suggested to BAA that road lighting in some airside areas was inadequate for the amount of traffic – particularly in service bay areas around Terminals 1 and 2. Airfield electrical engineering manager, Brian Sear, decided to carry out an in depth survey of the problem. He found there was a depreciation of light levels over a period; the existing luminaires – although quite adequate when newly installed or recently cleaned – rapidly became dirty and, hence, inefficient. In order to maintain maximum light efficiency it was necessary to clean fittings once every six months; but in these areas it was both operationally difficult to do this and work had to be carried out



overnight, this made the fittings expensive in maintenance and

labour costs.

A series of experiments was initiated together with Thorn Lighting to find a lighting fitting best suited to BAA's needs which satisfies three important criteria: improved lighting levels; lower power consumption; and lower labour/maintenance costs.

This resulted in a new fitting being designed, manufactured and installed. The unit was fully sealed with a high impact lens giving maximum light distribution and using a new type of lamp – 70W SON – which, although of lower wattage than the old 125W MBF/U lamp was far more efficient. This fitting required a maintenance interval of only 18 months. The area chosen for initial installation was under Piers 1-3. This scheme has now been evaluated and was found to give an estimated saving in energy costs of 40% while providing 28% more light.

Kings Cross fire inspires safety invention

London architect Brian Perry has reached the regional semi finals of the national Toshiba Year of Invention competition, organised by the CBI with a fire escape system using non-incandescent light beams.

Mr Perry, who worked as a consultant to London Underground Ltd for twelve years, said his invention was prompted by the 1987 Kings Cross fire disaster. But his Ariadne system would also provide a safe means of escape from outbreaks of fire in shopping centres, hotels, mines, sports stadia and ships.

'To my knowledge, none of the current methods of fire escape are highly visible in smoke conditions, nor are they able to indicate the best route or routes to safety points by remote control', he stressed.

Among those who have shown a keen interest in the invention is the Eurotunnel organisation. But they require to see a demonstration model prototype which Mr Perry estimates will cost around £50,000 and take 11 months to make.

The Kings cross disaster identi-

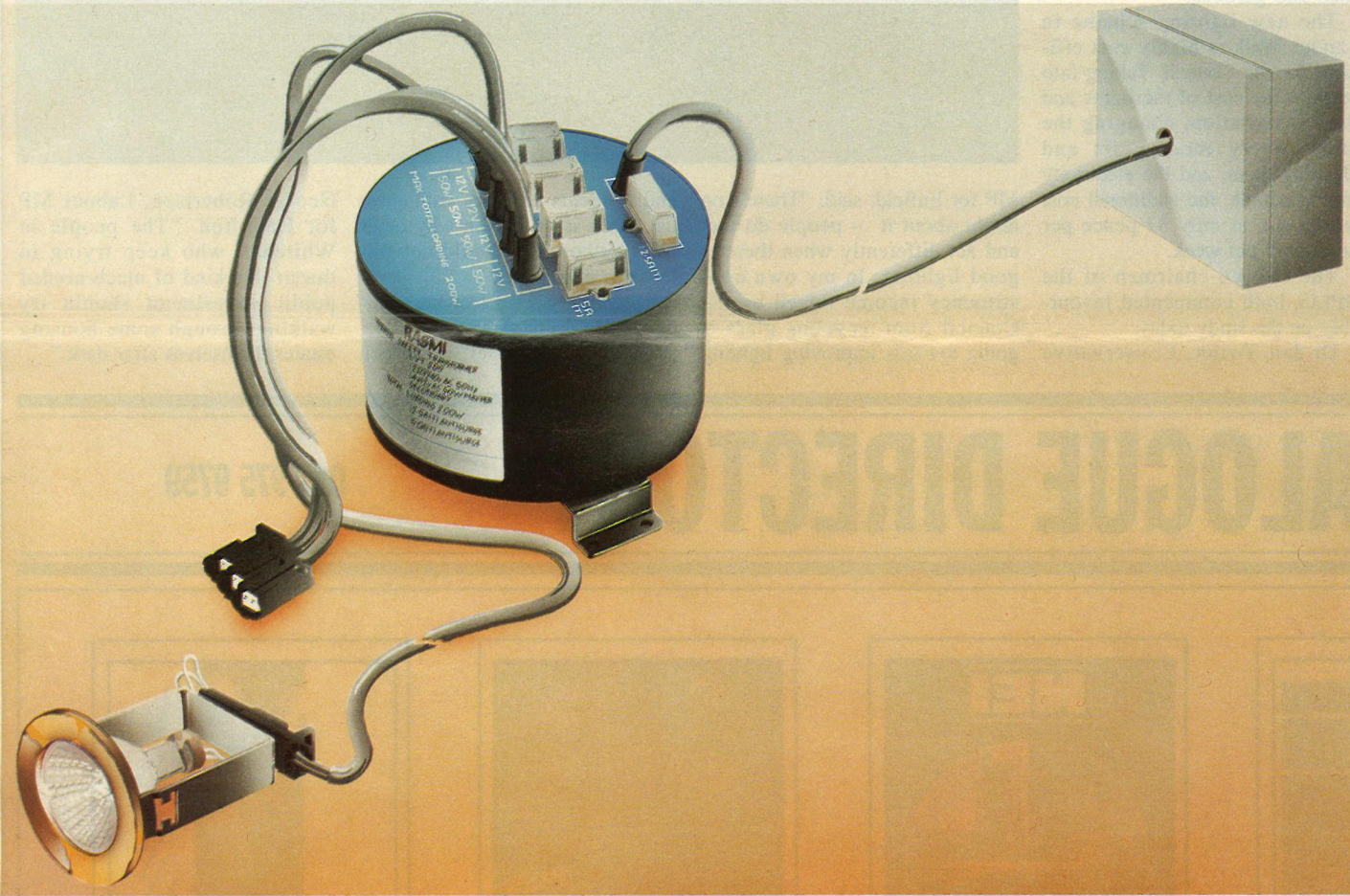
fied the need to overcome the shortcomings of conventional means of escape in fire risks, caused by poor visibility in smoke conditions and by electrical breakdown due to extreme heat or combustion.

Mr Perry's system solves these problems by using a continuous beam of light, highly visible in the presence of particles such as those found in smoke, and impervious to extreme temperatures. When installed, the system – remotely controlled from a central panel – indicates the safest routes by emitting non-incandescent light beams which remain visible when other forms of lighting or signs were obscured by smoke. The visual effect is the same as the laser lighting seen in nightclubs and discos.

In theory the system could be effective over any distance, even the entire length of the Channel Tunnel.

The luminescent beam is regulated by beam splitting and fibre-optics techniques which allow variations of routes. The beam can be bent to pass through a curved tunnel or around a corner, or diverted to illuminate permanent holographic signs of instructions invisible in incandescent or fluorescent light. All the components can be protected by heat shield housings designed to withstand temperatures of up to 1000°C.

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Rasmi Electronics Limited, Unit 14A, Tanfield Lea Industrial Estate, Stanley, County Durham DH9 9UU.
Telephone: 0207 232159 Fax: 0207 232016

come in various colours and should a non-standard luminaire be used a short lead with the correct connectors can be fitted before installation.

Rasmi Electronics Limited, Unit 14A, Tanfield Lea Industrial Estate, Stanley, Co Durham DH9 9UU Tel: 0207 232159.

Please forward further information on the Low Voltage Lighting System to:

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New distribution system for Crompton

Crompton Lighting is to introduce a new 'selective distribution' policy for its products. This will create new business partnerships with some 60 selected electrical wholesalers, to distribute and sell Crompton Lighting products throughout the UK.

The new trading arrangements form part of the major restructuring

of Crompton Lighting's manufacturing, distribution and sales policies. Crompton's 'just in time' manufacturing processes for light sources and luminaires will provide a minimum of two deliveries every week to each of the selected distributors to ensure pre-arranged stock holding levels are maintained.

IN YOUR NEXT ISSUE

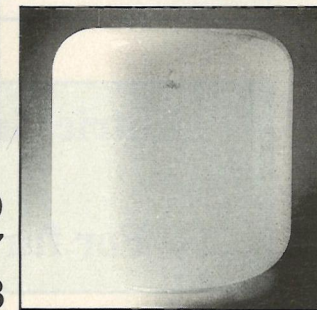
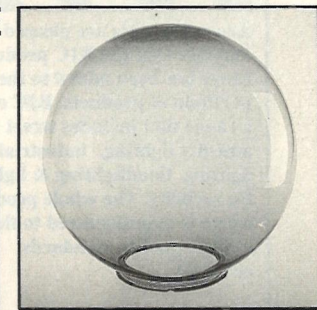
Office lighting is the major theme of the September issue of *LEN*. The main development in recent times has been the increasing sophistication of control systems. These not only provide for energy

efficiency without adversely affecting the flexibility of the installation. They also incorporate manual overrides to give individuals control over their own working environment.

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