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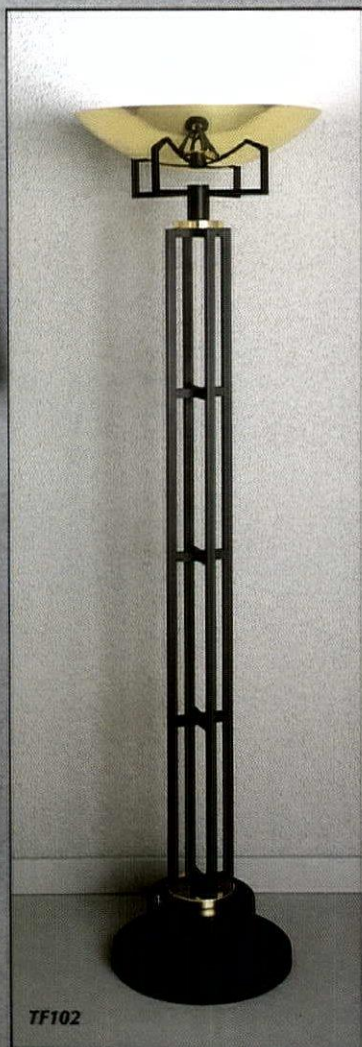
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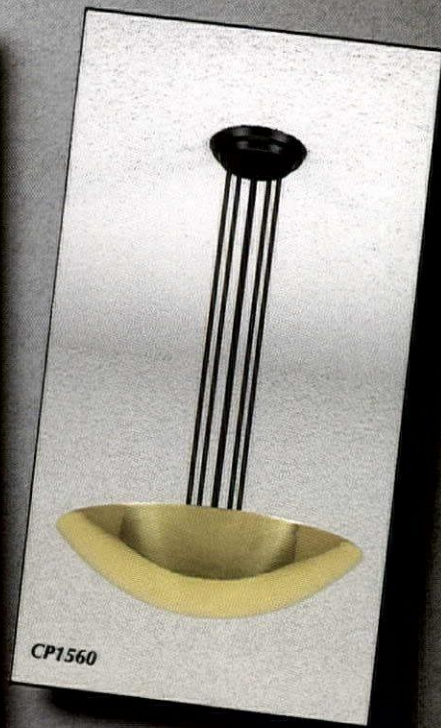
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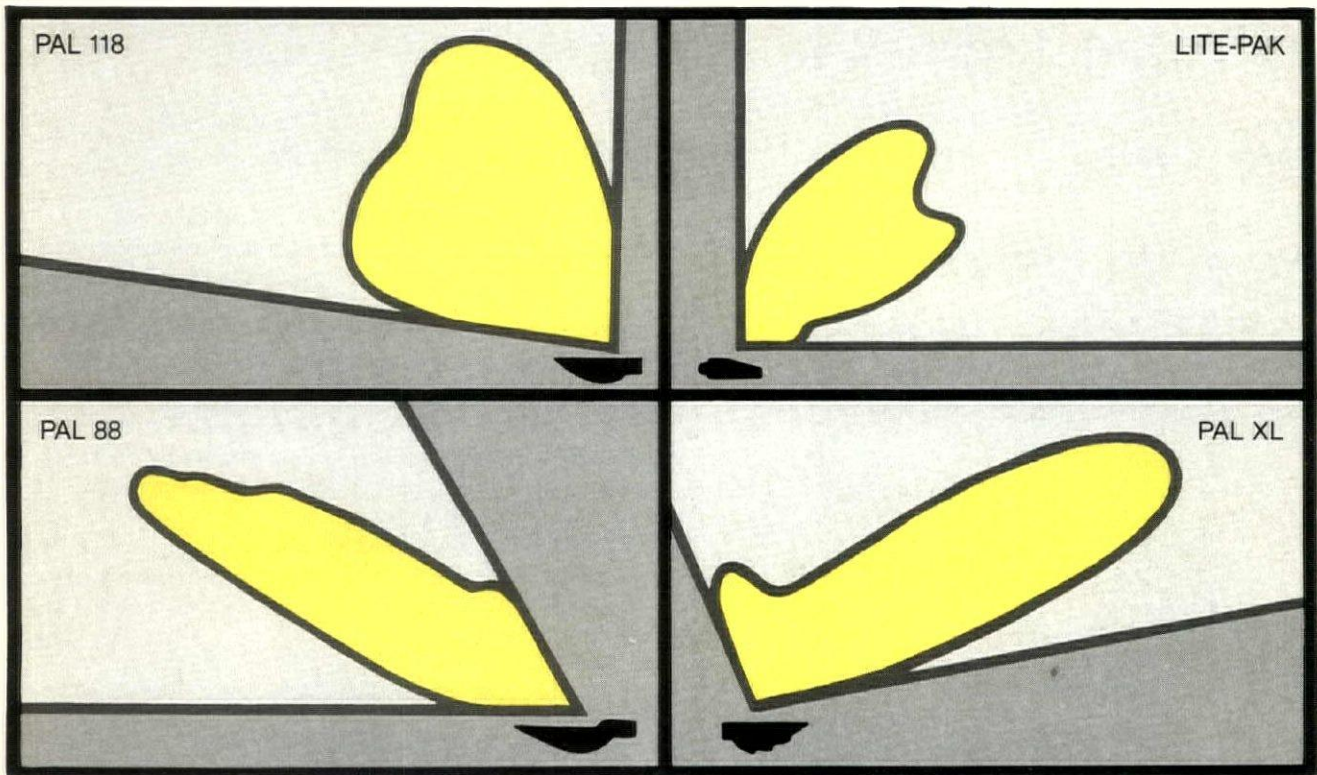
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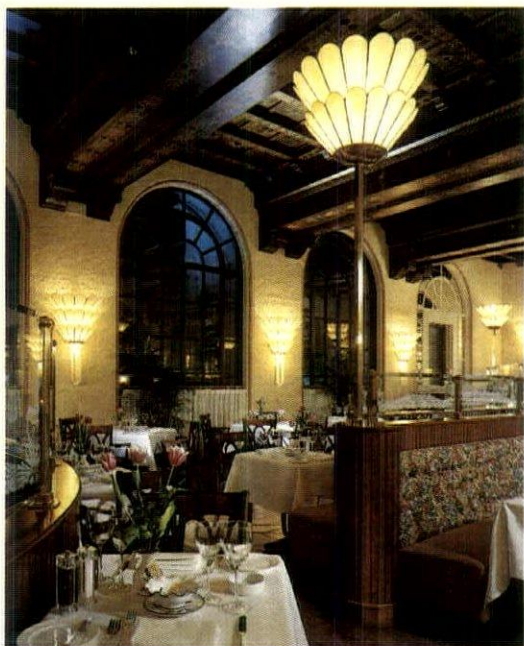
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MAY 1990
VOLUME 4, NUMBER 5



COVER PHOTO BY PETER PAIGE

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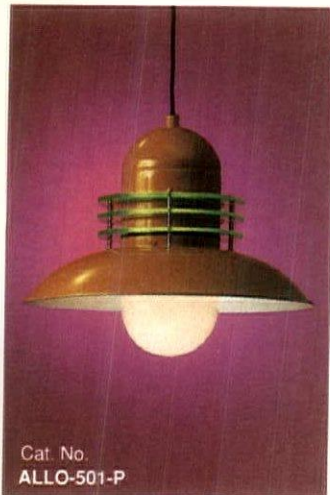
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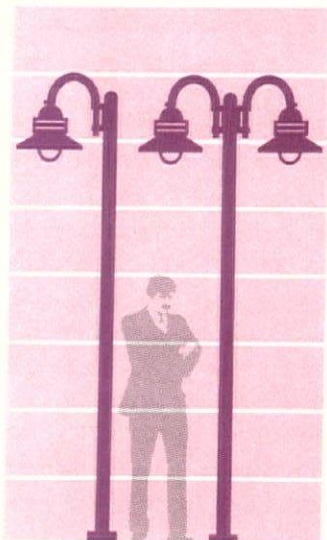
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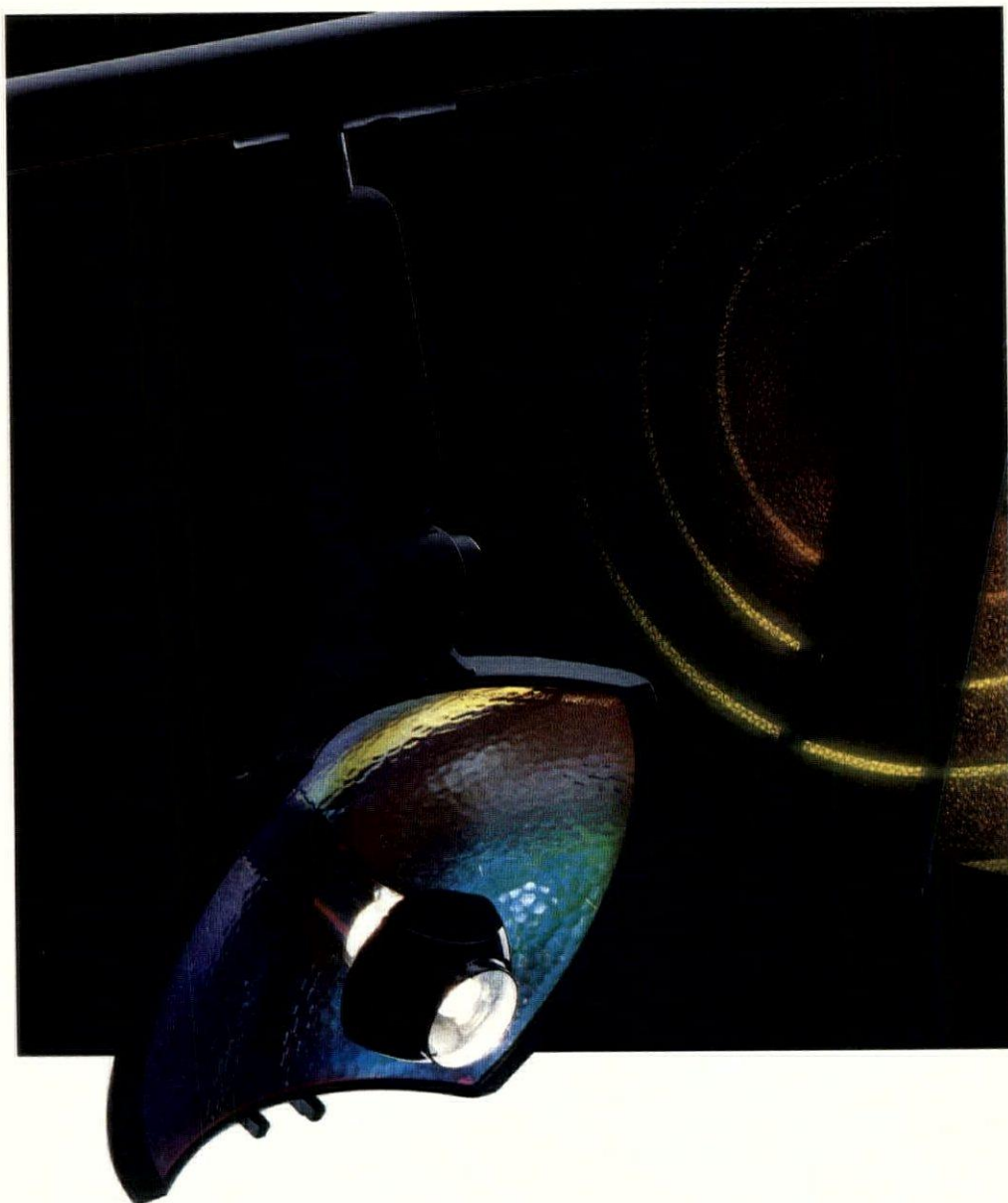
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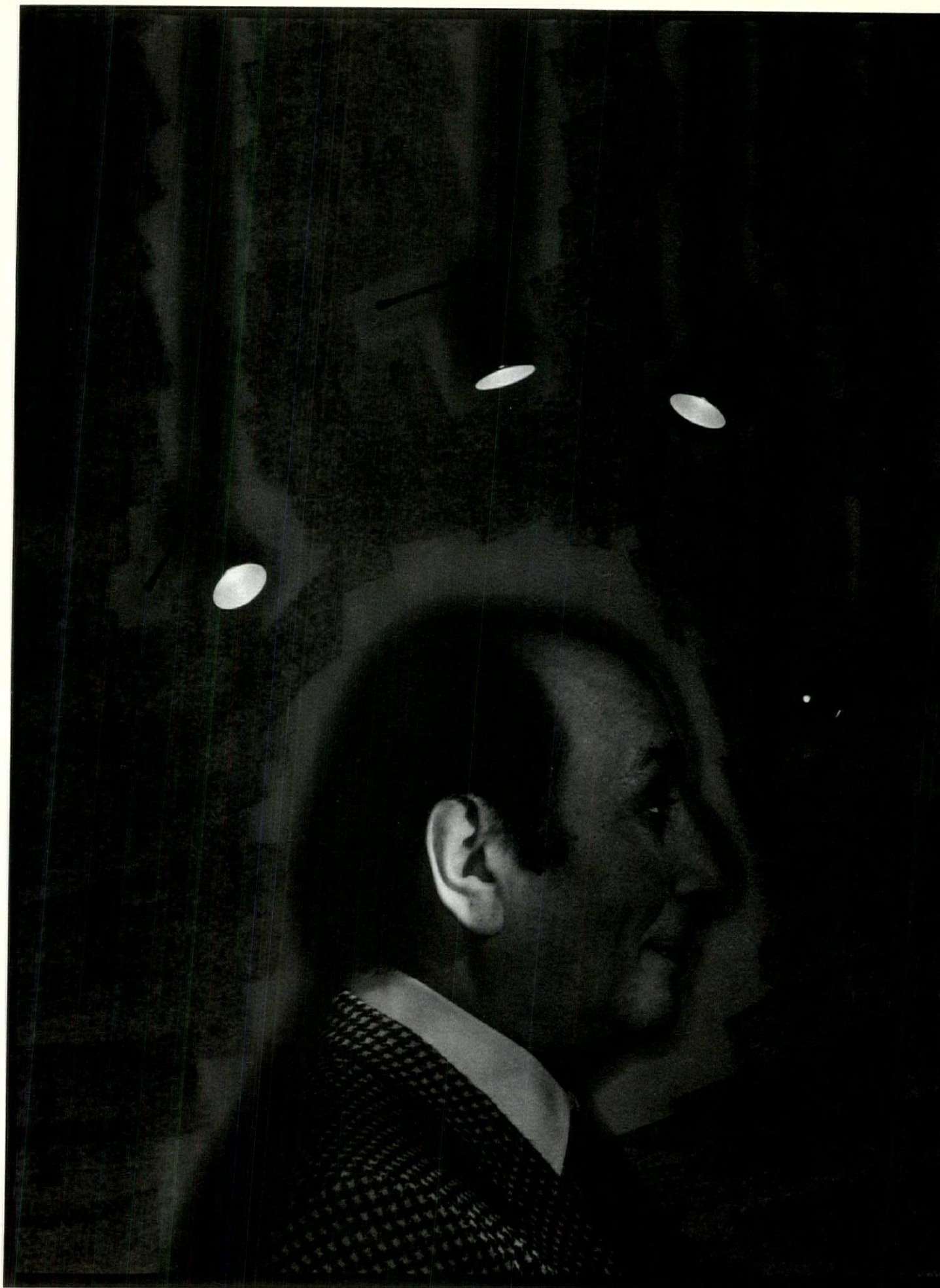
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HOW A DESIGNER BECOMES A FIXTURE.

The work of Milton Glaser encompasses a wide range of design disciplines, including graphics, architecture and environmental design. The following excerpts are from a recent interview.



"I think I'm the only one in history to fail the Pratt night school examination. But I went to Cooper Union and got a marvelous education. Then I received a Fulbright and went to Europe, where I had the good fortune to study with Georgio Morandi!"

"When I came back to the States, a bunch of former fellow students and I started Pushpin Studios, which developed its own little reputation in the world of New York design. Then Clay Felker and I started New York Magazine. To our delight and surprise, it became a part of the life and activity of the City!"

"When I studied at the Academy in Bologna, I drew from casts for two years. And if you draw from casts you have to observe light. I think without that kind of rigor, you're not as conscious about light and form. You gain a greater understanding of its effect in dimension."

"During the Renaissance it was discovered that form interrupted light, and that light in a portrait doesn't change as it does in life. That meant you could actually freeze time, and through a portrait one could become immortal. Which is why it occurred to me later that rich people are so interested in art."

"At the Aurora Restaurant, we tried to make a very controllable light system. We did a series of different colored lights within the fixtures, and by adjusting the intensity of any one of them, you have a kind of control over the light quality, at least in terms of hue. But we found that we also had to have table light at night. Even then, ideally, you still have to change the lighting, because the emotional content of light at lunch is different from its emotional content at dinner."

"Believe it or not, I learned a lot about lighting in supermarkets. The first thing I experienced thinking about the supermarket was how tiring it was. Which is due, in part, to the relentlessness of both the physical space and the uniformity of the light. So what you do is vary the light in order to create a series of places: open it, close it, modulate the space...I really shouldn't be giving away all of these tips!"



Mr. Glaser is lighted by Pinpoint Focal Jacks from the Lytejacks System. To learn more about Lightolier products and designing with light, the "Lightstyles" catalogue is available for \$5.00 plus shipping. To order, or for your nearest Lightolier Authorized Dealer, call 1-800-526-8928.

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CONFERENCES & EXPOSITIONS

JUNE 4-6 GE Lighting Institute Conference—Distributor Sales Representatives. Conference Center at Walt Disney World, Orlando, FL; (800)255-1200.

JUNE 6-8 GE Lighting Institute Conference—Distributor Telemarketing Management. Conference Center at Walt Disney World, Orlando, FL; (800)255-1200.

JUNE 12-15 A/E/C Systems '90. Georgia World

Congress Center, Atlanta; (203)666-6097.

JUNE 13-15 GE Lighting Institute Conference—Consulting Engineers and Architects. Conference Center at Walt Disney World, Orlando, FL; (800)255-1200.

JUNE 14-16 Lighting World/Chicago. McCormick Place, Chicago; (212)391-9111.

JUNE 18-20 16th Annual Conference of the Solar Energy Society of Canada. World Trade Convention Centre, Halifax, Nova

Scotia; (613)236-4594.

JUNE 19-21 International Lighting Exposition. Metro Toronto Convention Centre, Toronto, Ontario, Canada; (416)890-1846.

JUNE 27-29 GE Lighting Institute Conference—Lighting Educators. Conference Center at Walt Disney World, Orlando, FL; (800)255-1200.

Auditorium, New York City; (212)966-8658.

JUNE 12 Right under our noses, (DLF event). Proceeds benefit local AIDS charity. San Francisco; (415)626-1950.

SEPTEMBER 9-12 World Store. Miami; (212)391-9111.

SEPTEMBER 10-14 Lighting Design and Applications Workshop. The Lighting Center, Philips Lighting Co., Somerset, NJ; (201)563-3600. ■

SEMINARS & WORKSHOPS

MAY 21 "Breaking into Architectural Lighting." G.E.

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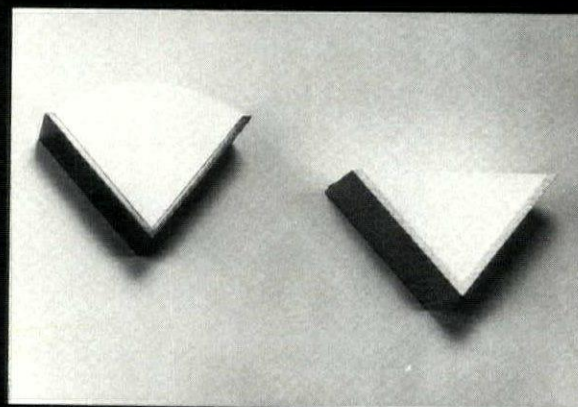
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Site Lights Make Brewery Park Secure

BY CHRISTINA LAMB
ASSISTANT EDITOR



RECALLING HISTORY: Multi-globed period-style poles flank the major entryways to Brewery Park, (above), while shorter single-headed poles mark the building's main entrances (below).



CHALLENGE Brewery Park, a multi-phase commercial development near the edge of downtown Detroit, sits on the former site of a historical brewery. The main entrance to Brewery Park is on a major thoroughfare leading into the city, and the site is noticeable from two major interstate highways. To ensure Brewery Park's visibility, appropriate site lighting is essential. The site's nighttime appearance, as is lighting that provides a sense of security and well-being.

DESIGN/TECHNICAL CONSIDERATIONS It was important that the project integrate security, pedestrian, and landscape lighting, while coordinating with the Detroit Central Business District Association's master lighting plan.

METHOD Incandescent uplights illuminate the building, while the grazing effect of these luminaires emphasizes the cast concrete medallions at the top of the pilasters. The narrow spot PAR 56 lamps operating at 12 volts are controlled by the uplights for their high-intensity beam and excellent beam control. To make the building entrances easily recognizable, shorter, single-headed, 12-foot-high poles are used. These poles have a period-style base with an opal acrylic globe that references the history of the site, and utilize incandescent A-lamp technology to provide a soft, non-glare glow with good vertical illumination.

All of the incandescent sources, including the low-voltage uplights, are powered on reduced-voltage circuits to extend lamp life and reduce maintenance. The major entrances and main entry boulevard on the site are illuminated by the taller, multi-globed, period-style poles with incandescent lamps. These luminaires provide a decorative rather than functional element to the site. The building, parking lots, and service areas are illuminated by the shorter poles with post-top, single head, cut-off luminaires. The luminaires use 400-watt, 3000K phosphor-coated metal halide lamps and Type III photometric distributions.

CONCLUSION The project took approximately nine months to complete, design through installation, and the completion of Phase II of this project is slated for later this spring. The sources and equipment for the second phase will mirror those of Phase I.

DETAILS

PROJECT: BREWERY PARK

LOCATION: DETROIT

OWNER: KIRCO REALTY AND DEVELOPMENT CO. LTD.

ARCHITECT: GENSLER AND ASSOCIATES

LIGHTING DESIGNER: GARY STEFFY LIGHTING DESIGN INC.

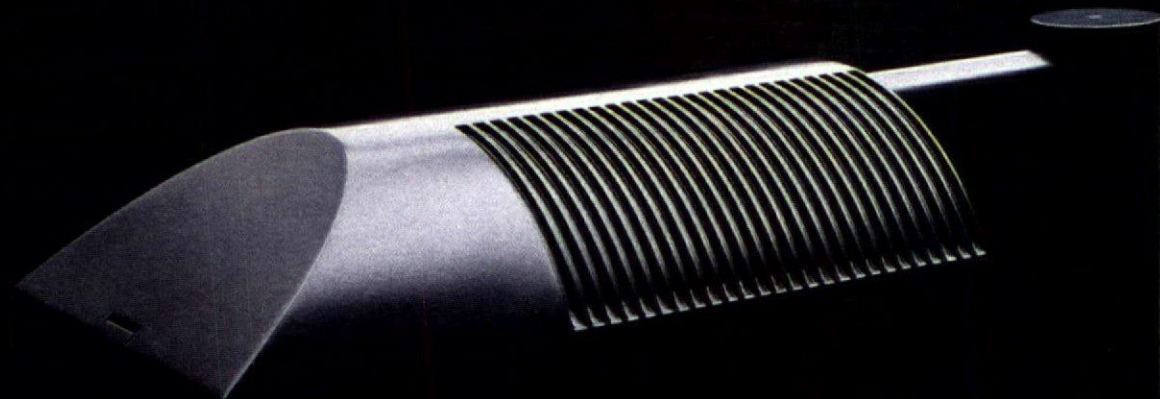
CONSULTING ENGINEER: EDELSTEIN ASSOCIATES, INC.

PHOTOGRAPHY: ROBERT J. EOVALDI

MANUFACTURERS: GARDCO: cut-off equipment; WESTERN LIGHTING

STANDARDS: period lighting; PRECOLITE: low-voltage uplights; GE: low-voltage PAR 56 lamps and A lamps; SYLVANIA: 3000K metal halide lamps

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die castings with an ingenious latch that is beautifully detailed into the nose. Four light distributions, six mounting configurations and up to 400 Watt lamp sizes provide total project flexibility for street or area lighting. Simply stated, The Archetype is the new state-of-the-art in cutoff lighting.



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Several years ago a challenge went out to lamp manufacturers. Designers asked, "Can you push lighting even further and give us something that saves still more energy without losing light output?"

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Even though the Octron lamp is one-third thinner than a standard fluorescent, it produces light more efficiently and with better color quality. The secret isn't a secret. An Octron fluorescent uses enriched rare-earth phosphors to pump out more lumens per watt and achieve good color balance.

Lots of companies have seen the wisdom of specifying Octron lighting. From a prestigious financial company located in downtown Manhattan to a prestigious package goods company located in downtown Cincinnati to dynamic retailers located all across America. Why did all these people go with Sylvania Octron lamps?

Reason #1: Since lighting can constitute up to 40% of a company's electric bill,

is so important engineer.

using one of the world's most efficient fluorescent lamps makes sense. And that's just what Octron is. Its output efficiency is among the highest of any general lighting fluorescent system. So you can significantly reduce



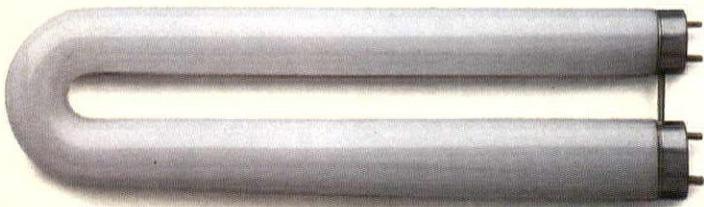
energy consumption with no loss of light.

Rare-earth phosphor technology produces great color rendering and important energy savings.

Let's put this in real terms. In Philadelphia, where electricity costs between 8-10¢ per kilowatt hour, Octron lamps replaced standard 40 watt fluorescents in a high-rise office building and produced energy savings of \$6.00 per hour over the life of the lamps.

Reason #2: People simply like the quality of Octron lighting better. A major university switched to Octron lamps and found their faculty and students used the facility more often and felt more relaxed than before. This says a lot about the comfort quality of Octron lighting and the way it accents subtle differences in colors and textures so important to successful interior designs of all kinds.

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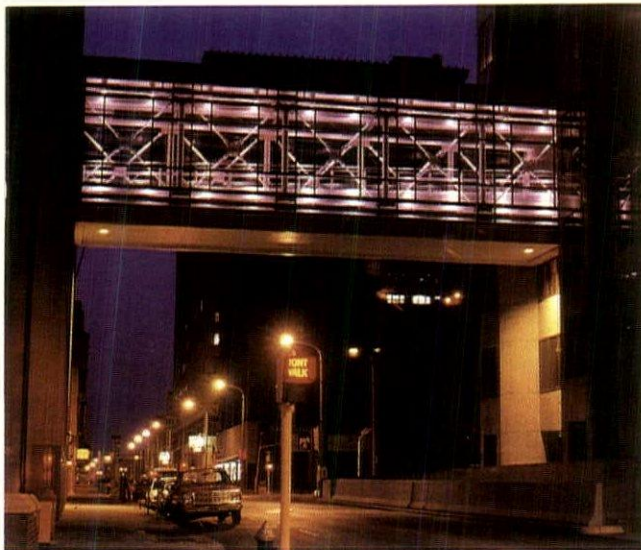
Sylvania makes more energy-saving lighting than any other company any place in the world. Octron is just one example.

So if you want to help make your business run leaner, give us a call at 1-800-LIGHTBULB. Or contact your nearest Independent Electrical Distributor. Our obsession with lighting may be the right diet for you.

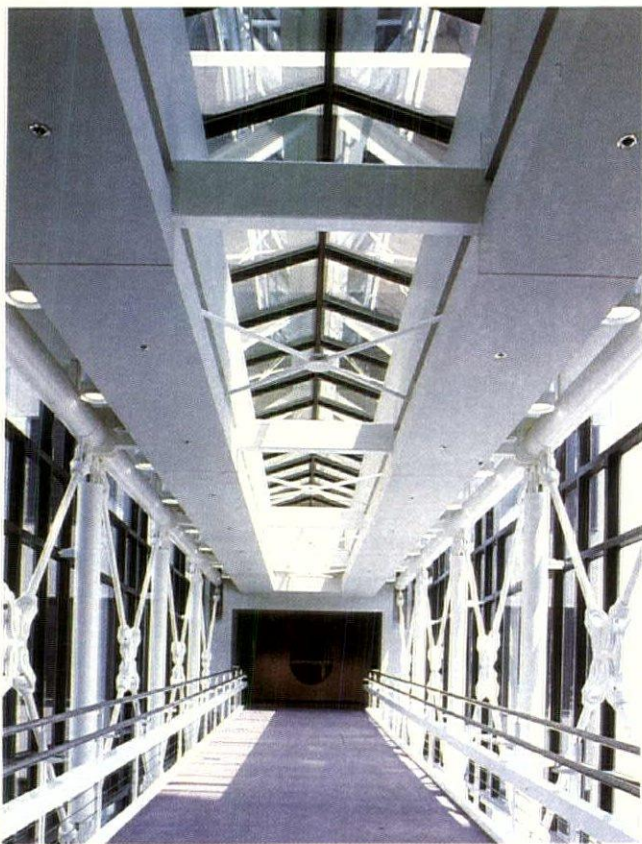
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WHERE THE BEST COMES TO LIGHT.™

Pedestrian Bridges Connect Drama to Function

BY CHRISTINA LAMB
ASSISTANT EDITOR



LIGHTING UPS AND DOWNS: Tubular steel trusses that connect Southwestern Bell's four buildings (above) provide a sculptural element in downtown St. Louis. Inside the bridge, an up/down lighting system and a linear fluorescent system provide light (below) for the 2,000 individuals who use the bridge daily.



CHALLENGE Mackey Associates, P.C., the architectural and lighting design firm for the highly visible pedestrian bridges at Southwestern Bell Corporation Headquarters, wanted to develop a sense of drama in a structure that stresses useful rather than aesthetic qualities. The tubular steel trusses span 75 feet, uniting the corporation's four-building complex.

DESIGN/TECHNICAL CONSIDERATIONS The construction design of the bridges dictated that an indirect/direct lighting system be strategically installed to conceal the light source from pedestrian traffic both inside and outside the bridges.

METHOD Illumination of the bridges is broken into two separately controlled, energy-efficient systems. System A provides soft, up/down lighting of the interior bridge space, and accents the gray-tinted glass curtain wall projecting from the face of the bridge in front of the trusses. Surface-mounted cylinders are installed on either side of the sloping ramps connecting the buildings and the bridge. Each bridge has 32 surface-mounted cylinders—16 ceiling, 16 floor—and each fixture accommodates a tubular, high-efficiency, 70-watt metal halide lamp. These luminaires are designed with a linear light output allowing the fixtures to be mounted closer to the glass.

System B is a concealed, linear fluorescent lighting system installed in the handrail to downlight the sloping ramps. Connectors, angled to the ramp's slope are used to maintain the continuous 75-foot long extruded aluminum, 4-inch-square housing that conceals single tube, 40-watt T 12 lamps. Both systems are controlled by individual relays activated by a three-circuit programmer.

CONCLUSION At night, the illuminated bridges are a distinctive element in St. Louis' downtown setting. The estimated energy usage for this project is:

8 KW load \times 8 hrs/day = 64 KW = \$5.15 (daily)

64 KW load \times 7 days/wk = 448 KW

448 KW \times 48 weeks = 21,504 KW = \$1,720 (annual)

Total construction cost—\$80,000

DETAILS

PROJECT: SOUTHWESTERN BELL PEDESTRIAN BRIDGES

LOCATION: ST. LOUIS

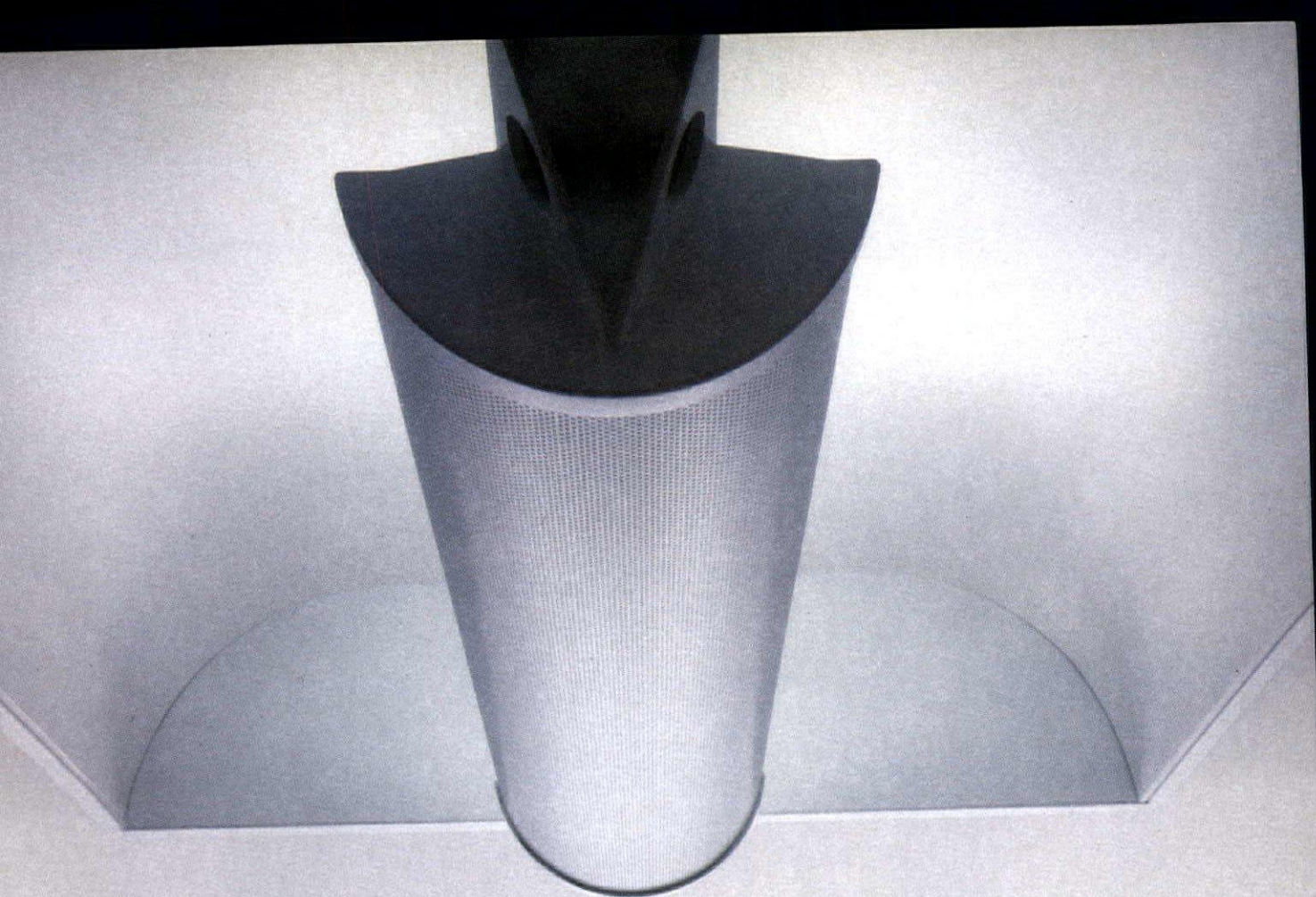
OWNER: SOUTHWESTERN BELL CORPORATION

ARCHITECT: MACKAY ASSOCIATES, P.C.

LIGHTING DESIGNER: EUGENE J. MACKAY, III, MACKAY ASSOCIATES, P.C.

PHOTOGRAPHER: BARBARA ELLIOT MARTIN

MANUFACTURERS: PEERLESS: 430 MA rapid start linear fluorescent lighting system; MIROFLECTOR: 70-watt tubular halide reflector with linear beam; PROFILE SYSTEMS, INC.: curtain wall; PPG INDUSTRIES: gray-tinted glass



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The "Standard" fixture that is anything but standard. Zumtobel's Recessed Comfort RC™ Luminaire combines the sensation of indirect lighting with the performance of direct lighting.

Engineered and designed to satisfy every expectation of the discriminating specifier...the result is harmonious light.

Take a close look at Zumtobel. Innovative lighting solutions. Uncompromising quality and performance. State-of-the-art manufacturing facilities. A worldwide commitment to excellence in lighting.

ZUMTOBEL 

The Recessed Comfort RC™ Luminaire Series by Zumtobel. For further information and the name of your local Zumtobel Sales Representative, please contact us at:
Zumtobel Lighting, 141 Lanza Avenue, Bldg. 16D, Garfield, NJ 07026 201 340-8900. FAX 201 340-9898.

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HILTON

THE HILTON SERIES

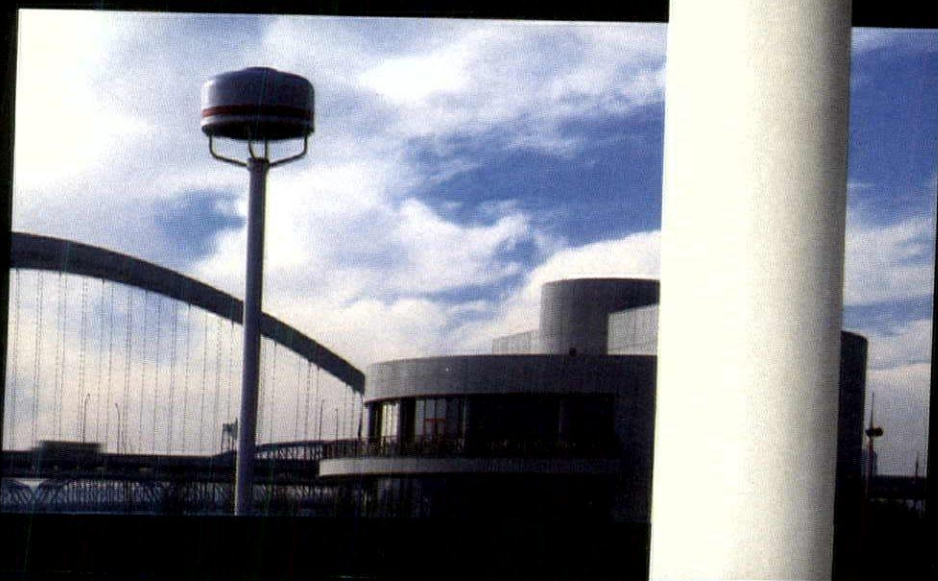
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Energy Codes

Will We Be Legislated Into The Dark?

The debate was heated. "We are regulating lighting equipment because most lighting decisions are made at the supply counter and not by designers," said Eric Noble, energy technical specialist for the New York State Energy Office.

"But why encourage the process to be done by appealing to the lowest common denominator? Why not encourage the development of good lighting design?" said Jules Horton, Horton•Lees Design Inc.

"The purpose of the codes is not to promote good design, but to restrict bad design. The standards address what are reasonable minimums. They do not address design," Noble responded.

"Why weren't IES and IALD involved early on in the code formulating process?" asked Stephen Lees, Horton•Lees Design Inc.

"It is not a consensus process. We looked at what everybody else had done and the range of current practices," said Noble.

This exchange was part of the question and answer period held during the IES New York Section's "Energy Update 1990" meeting on March 15, 1990.

Between the lines of that dialogue lurk far-reaching controversies and concerns that surround how lighting energy codes are being written and enforced today. Lighting professionals and manufacturers see problems such as:

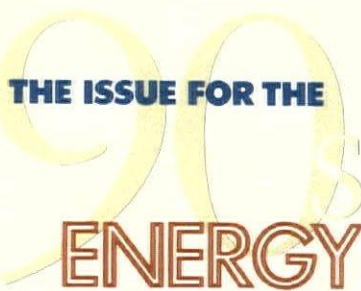
- Lack of sufficient solicited input, in some cases, from lighting industry representatives in the formulation of codes.

- Restrictions on individual components—lamps, ballasts, and fixtures—that do not take into account the variations in levels of energy usage that occur when those components interact in a lighting system.

- Oversimplified approaches that assign single watts per square foot limits to whole buildings, and do not take into account varied types of tenants and tasks, and the quality of light in addition to its efficiency.

- Lack of consideration by code-makers of the economic effects of restrictions on lighting equipment. For example, the costs to lighting manufacturers to retool plants to meet increased demand for energy-saving lamps, and the effects on owners of the mandated purchase of more expensive energy-saving equipment.

We present an overview of some of these complex issues in the following report:



- Details on why energy is an issue for the 1990s

- A glossary of terms and concepts common to all lighting codes and standards

- Insights into the development of California's Title 24 1991, cited by some lighting professionals as a good example of government and lighting specialists working together

- Controversies surrounding the

proposed New York State code, from the state, manufacturer, and designer points of view

- A look at a unique case—Massachusetts, a state strapped for energy, which has proposed perhaps the most stringent regulations with enforcement at point of sale.

Why does the lighting community have to fight, in many instances, to be heard at the federal and state levels? Unfortunately, the lighting industry is a David standing in the shadow of Goliath energy lobbyists. Long-time bureaucratic battle-fighter Howard Brandston, H.M. Brandston & Partners, Inc., boldly states, "What you have are multi-million dollar lobbyists driving standards. Their goals don't always match the real needs of the country. And these special interest groups are dedicated to reaching their goals by any means."

Battles to establish meaningful lighting energy standards have been going on for years—for example, with Brandston and others working to shape the federal standards that have led to the current ASHRAE/IES Standard 90.1P. Unfortunately, winning a battle doesn't guarantee winning the war. Ironing out problems in a federal or state code doesn't prevent another state from ignoring the concerns of the lighting industry.

The most successful tactic for the lighting community to date has been the proverbial "bur in the saddle" method—to be vigilant, persistent and perseverant in making its point of view known until attention is paid.

We all owe a great deal of thanks to the nucleus of individuals who are spending considerable time and effort to protect not only the interests of the lighting industry, and the organizations they may represent, but the welfare of the end user as well.

We'll keep you posted on future developments in lighting energy standards.

WANDA JANKOWSKI
EDITOR

THE ISSUE FOR THE

90s
ENERGY

Why Is Energy The Issue Of The '90s?

BY HELEN DIEMER

IALD

The author is an associate of David A. Mintz, Inc., New York, and president of the International Association of Lighting Designers.

In the 1970s, energy issues were defined by supply and demand, and their impact on the pocketbook.

The 1990s will be a decade when the preservation of the environment, in which energy conservation plays an important role, will be a major issue. Energy conservation and environmental awareness will have a major impact on the lighting industry.

Lighting is a prime user of energy—25-40 percent of the energy used in buildings. The perception by many who write energy legislation, and those who influence it, is that the

opportunity is available through existing technology to save significant amounts of energy.

Increased attention also is being paid to lighting because it is one of the most obvious, physical elements in a space. Lighting fixtures can be seen and touched, unlike HVAC equipment which is concealed and goes virtually unnoticed by the user. Recent adopted and proposed codes not only restrict the use of energy for air conditioning and the building envelope, but put heavy restrictions on the use of energy for lighting.

Since the cost of energy is still relatively inexpensive for clients, specifiers of lighting are caught between the popular movement to save the environment and conserve energy, and the desires of clients who don't want to spend more short term to save energy long term via more costly energy-saving equipment.

Professionals who deal with lighting are going to have to deal also with energy codes in the years to come, and sometimes be the bearers of bad news to clients.

Energy legislation is important to the lighting industry. It's a subject we need to keep abreast of to guard against a rush to limit lighting energy at the expense of other considerations.

GLOSSARY OF ISSUES COMMON TO LIGHTING CODES

MANDATORY VS. VOLUNTARY

ASHRAE/IES (American Society of Heating, Refrigerating, and Air-Conditioning Engineers/Illuminating Engineering Society) Standard 90.1P is part of the national consensus Standard 90. As such, it provides guidance and a framework for other standards and codes, but has no force of law. The Department of Energy (DOE) has developed a standard, based largely on Standard 90, which is mandatory for federal buildings, but voluntary for all others.

In the past, most states based their energy codes on earlier versions of Standard 90. Since the last revision, published in February 1990, has taken 10 years, many states have been producing their own codes, and making them mandatory by state law. There is an association of code officials (NCSBCS) that takes national consensus standards and creates a model code, to make adoption by states easier. But there is no requirement that there be any standardization among state energy codes.

WHOLE BUILDING ANALYSIS VS. BUILDING COMPONENT ANALYSIS

Many standards and codes offer several alternative paths to determining a total building energy allowance (upper limit). The "whole building" analysis is an integrated approach that recognizes energy trade-offs between the various systems of a building. Certain assumptions are made for a "reference building" to determine the energy limit. After the project has been designed, it is analyzed, and must not

NOTE: Glossary compiled by Helen Diemer, IALD; Carol Jones, IALD; Joanne Lindsley, IALD; and Hayden McKay, IALD.

Title 24 1991's Impact On Lighting

BY JAMES R. BENYA
PE, IALD

The author is senior principal and CEO of Luminae Souter Lighting Design, San Francisco, and a member of the Advanced Lighting Professionals Advisory Committee (ALPAC).

Design professionals in California are cautiously awaiting the 1991 Building Energy Efficiency Standards, now being written by the California Energy Commission.

In general, the staff of the California Energy Commission has been doing a better job of listening to the design and enforcement communities than ever before. I believe that the result in 1991 will be an exemplary, useful, practical energy

standard.

The primary intent of the 1991 standards is to bring all building occupancies into the new era. This means establishing simplified lighting power densities (LPD's) for packages of all other building types. Such standards will be set so that when facilities are designed in an energy efficient manner, the allowed LPD will permit a minimally competent design to comply. Occupancy types such as hotels and churches, which presently are governed by the older "first-generation" standards, will be covered. Also, 1991 standards were meant to update the controls credits and other minor points.

As part of the process, a major overhaul of the light-

ing standards will take place. Unfortunately, the 1985 Second Generation Office Standard and the Second Generation Retail and Wholesale Store Standard have not been well conceived or implemented. A number of problems have been discovered:

The most simple method only applies to whole buildings of a single occupancy type. Many multi-occupancy buildings and multi-tenant buildings need an equally simple method of demonstrating compliance. The IES Regional Energy Committee has proposed a Whole Space method having slightly higher LPD's than the equivalent whole building numbers, and completely divorcing LPD's from envelope and HVAC packages. This concept makes compliance easier and less costly to demonstrate for modest conventional designs, and is easier to enforce.

The extremely complex Tailored Method must presently be used for any improvement (including tenant improvements). A new Whole Space Method will eliminate the problem for conventional designs.

Spaces with greater needs, especially retail stores, must use the complex and poorly written Tailored Method. The IES Regional Energy Committee has proposed a simplified Tailored Method, wherein a special single form exists for each major occupancy type. There would be a simplified Tailored Form for offices, for retail stores, etc. The very complex IES Illuminance Category-based Tailored Method would be kept for unusual situations.

The list of controls credits needs to be updated for evolving technologies. The IES Regional Energy Committee proposed credits for devices not presently covered,

exceed the established energy limit, although the energy distribution can be very different.

"Component" standards treat compliance of each component system of a building individually. The main components are envelope, HVAC, and lighting.

LIGHTING INCLUDED AND EXCLUDED

Each code or standard has excluded some types of spaces (for example, residential living spaces, hotel guest rooms) and functions (lighting for museum display, theater, etc.). There is wide variation on whether portable lighting or furniture-mounted lighting is included.

BUILDING COMPONENT PATHS

ENERGY REQUIREMENTS (SWITCHING, CONTROLS): Previous generations of standards and codes emphasized power (connected load) only. All current versions include some recognition that length and intensity of operation are the factors that determine how much of the connected load is turned into energy usage. Most have minimum switching requirements, demanding more local control and small control zones. Some recognition of daylight is usually evident, with window wall lights switched separately. A variety of control strategies can be used to meet the minimum requirements.

CONTROL CREDITS: In order to encourage the use of lighting controls beyond the minimum requirements, some standards and codes offer incentives, generally at the compliance stage. If certain

GLOSSARY CONTINUED ON PAGE 20

DEVELOPING TITLE 24

1978—California implemented "first generation" building energy efficiency standards as part of Title 24 of the State Building Code. The standards, developed by the California Energy Commission (CEC) working with local lighting professionals, included:

- LPD limits based on tasks and square footage
- mandatory features, including requirements for double- and daylight-zone switching, and high-efficiency sources in home kitchens and baths.

Enforcement: Title 24 Form 5, the state-designed certification of LPD compliance, had to be furnished as part of the building's permit for construction. Missing, fraudulent or erroneous forms were cause for withholding the building permit. Thus, Title 24 became the most enforced building energy code in the U.S.

1982—California required all common fluorescent ballasts be super-premium or energy-saving types.

1985—New second generation standards issued,

including tuning, equi-illumination, and preset dimming systems.

The mandatory features list needs to be updated and made more comprehensive. Requirements that have not been cost effective will be dropped. The best features to be added will be automatic

controls for exterior and some places of interior illumination where fixed lighting schedules make sense.

To be certain that good practice is being performed, the energy commission is investigating the possibility of licensing lighting designers.

effective January 1, 1987 for office buildings. (In July 1988, the standards were extended to include retail and wholesale stores.) They include: mandatory switching requirements, control credits, and three compliance methods, which are:

1. Whole Building allows 1.5 w/ft² for office buildings and 2.2-2.9 w/ft² for retail stores, depending upon fenestration.

2. Tailored Approach is based on zonal cavity calculations for various illuminance categories and room cavity ratio (RCR) ranges. Allows watts per square foot based on tasks and need.

3. Performance approach, where lighting energy is included in whole-building computerized annual energy calculations.

1991—The second generation standards revised by the CEC with advice from the Advanced Lighting Professionals Advisory Committee (ALPAC) to include all building types, major improvements made, and adding Whole Space method.

This is being carried out with complete liaison to the IES and IALD.

Title 24 is the key to lighting designers being accepted as professionals; by being able to certify designs as complying, lighting designers become more valuable to the design and construction

process.

This article is adapted from "California's Title 24 Non-Residential Energy Standards: The 1991 Standard and Its Impact on Lighting" by James R. Benya, PE, IALD, which appeared in September/October 1989 IALD News.

GLOSSARY CONTINUED FROM PAGE 19

automatic control systems are actually installed, the connected load on those circuits is "discounted," that is, counted as less when determining if the overall designed load is less than the building's power allowance.

EQUIPMENT REQUIREMENTS (PRESCRIPTIVE): Minimum requirements are placed on ballasts, lamps, and luminaires, to insure that the equipment used for the majority of lighting in the building meets some minimum efficiency standards related to energy use.

POWER LIMIT(ALLOWANCE)—EXTERIOR: Typically, the exterior lighting power allowance is determined by summing up component power allotments, such as those for entrances, overhangs, and facade lighting.

POWER LIMIT(ALLOWANCE)—PRESCRIPTIVE PATH: Typically, a single watt per square foot value is assigned for a building type or primary building function, which assumes all buildings of the type perform the same. It sometimes includes minor adjustments for large or small buildings, or for a building-wide average room cavity ratio (RCR).

This path can be offered as the only option, or as a simplified path, which is an alternative to the more accurate performance path.

POWER LIMIT(ALLOWANCE)—PERFORMANCE PATH: This approach is also called budgetary, room-by-room, customized, or tailored. The calculation procedure takes into consideration some of those aspects of the actual project that have an effect on lighting, such as the tasks performed, the size of the task area, the geometry of the space, the presence of partial height partitions. etc.

Generally, for a large selection of space functions (for example, a hotel ballroom, an office meeting

Proposed Codes: In Pursuit of Common Ground

BY CATHERINE SCHETTING SALFINO
MANAGING EDITOR

Global warming. Rain forest preservation. Air pollution. In the wake of these much-publicized environmental concerns, measures are being taken to promote conservation in other areas, including energy, which affects the lighting industry.

But, where there's change, there's dissention. And, in the cases of the energy code proposals that are being considered across the U.S., there's no exception.

New York and Massachusetts are tightening the language in their respective energy codes. But the more stringent proposals have raised the ire of lighting designers and manufacturers who claim that, while they are proponents of energy conservation, the changes impede design freedom.

NEW YORK

At press time, New York's proposed amendments were to be adopted in late April or early May. They will go into effect October 1. The lighting industry says it did not find out about the proposal, which the state claims was issued in December, until late Janu-

ary—one week before the state's informational seminar on the document.

The proposed New York amendments met with opposition because of regulations intended for various lamp types, fixtures, and lighting power limits. Protests from the International

Association of Lighting Designers (IALD), the Illuminating Engineering Society (IES), and the National Electrical Manufacturers Association (NEMA), resulted in promised revisions to the proposed amendments to the New York State Energy Conservation Construction Code.

The state has said that PAR and compact fluorescent lamps will be now excluded from the code regulations.

"I think we got helpful comments on how to limit the restrictive characteristics of the requirements on lamps and fixtures, and we've made amendments in

room) a watts-per-square-foot value has been determined, called the Unit Power Density (UPD) value.

The area of all similar space functions is multiplied by the UPD value, and further adjusted by an average RCR. The total watts allowed for each space function is summed for a whole building lighting allowance, customized for the specific project. The designer may use power in any way, as long as the allowance is not exceeded, and the minimum requirements are met.

COMPLIANCE

After the allowances and requirements have been established, the designer should proceed to design the lighting system in such a way as to achieve good quality and the goals of the project. This will involve a process of design and check, redesign and check. The final compliance usually occurs when submitting plans for building department approval.

COMPUTER ASSISTANCE

Many of the standards and codes are accompanied by software to speed the process and reduce mathematical errors. They can be used by junior staff, as generally no decision making is required. Enter a room number, dimensions, and choose a space function, and the software determines the interior power allowance.

EDUCATION, CERTIFICATION

States vary widely on certification requirements and education efforts offered. The challenge is to perform energy conserving lighting design using the code while protecting the design quality.

response," says Eric Noble, energy technical specialist for the New York State Energy Office. "However, most of the lighting in New York is not designed by lighting designers. It's mostly done by untrained people who over-design the lighting and waste a tremendous amount of energy.

"There is no legitimate reason why a knowledgeable lighting designer would use the least efficient fixture except to save money for clients at the expense of long-term energy consumption. The trick is to arrive at requirements that don't unreasonably restrict design freedom but prevent the use

of equipment that knowledgeable people agree is inappropriate to use. We believe the code, as written, provides that flexibility."

Not so, claims Carol Jones, chairperson of the IALD Energy Committee. She says the code proposal still spells trouble for lighting designers and architects, as well as

the end users.

"If they have a problem dealing with lay people who buy and install equipment using the wrong calculations, New York should come out with simplified, user-friendly computer equipment at cost. That will take care of the problem," Jones says. "If people can't figure

SELECTED STATE CODE COMPARISONS

	CA TITLE 24	MA EXISTING	MA APPLIANCE	NYS EXIST. CODE	NYS PROPOSED
WHOLE BUILDING OR LIGHTING COMPONENT OPTION	BOTH	COMPONENT SYSTEMS	N/A	COMPONENT SYSTEMS	BOTH
PORTABLE FIXTURES INCLUDED	YES	YES	N/A	YES	NO, PERMANENT ONLY
LAMP EFFICIENCY	NO	NO	YES	NO	YES
BALLAST EFFICIENCY	YES	YES	YES	NO	YES
LUMINAIRE EFFICIENCY	NO	NO	YES	NO	YES
MINIMUM SWITCHING	YES	YES	N/A	YES	YES
CONTROL CREDITS	YES	YES	N/A	NO	NO
EXTERIOR POWER LIMIT	NO	YES	N/A	YES, TRADEOFF	YES, PRESCRIPTIVE
PRESCRIPTIVE POWER LIMIT	YES	YES	N/A	NO	YES, ONLY PATH
PERFORMANCE POWER LIMIT	YES, ILLUMINANCE CATEGORIES	YES	N/A	YES, IES STANDARD 90.75	NO
SOFTWARE AVAILABLE	NO	YES, H. BRYANT	N/A	NO	NO
DESIGN EDUCATION PROGRAM	YES + CERTIFICATION	NOT BY STATE	N/A	DESIGN MANUALS	SEMINARS

NOTES: All existing and proposed codes listed here are mandatory. Massachusetts proposed code would be enforced at point of sale, unlike all others. Table compiled by Helen Diemer, IALD; Carol Jones, IALD; Joanne Lindsley, IALD; and Hayden McKay, IALD.

out the calculations, the state should address the problem, not destroy the code."

Jones says one of the major problems with the proposed amendments is that all references to unit power density (UPD) and performance and task based requirements have been removed.

"Instead the new code bases its calculations on building types," she says. "The state wants to be able to say, 'This building falls under this category, so it should be using this amount of power.' But that's an oversimplified method of determining energy usage because in a 14-story building, there could be many different uses."

Another point of concern within the lighting industry regards proposed regula-

tions for the F 40, F 40U, F 96, and F 96HO 4-foot and 8-foot fluorescent and incandescent A lamps. Certain types of these lamps will no longer be permitted to be used for general lighting in new construction or major renovations. However, Jones says, a given fixture may be very efficient, but it could create glare, which could decrease occupant comfort and productivity.

Jones says if the New York State Energy Office had adopted the ASHRAE codes as they were updated, the state would not have such a problem now.

"We're going from a code that has been neglected for 15 years to one that is unprecedented and technically unfounded," Jones says.

"Ideologically, ASHRAE and the current New York

codes are similar. But the ASHRAE 90.1 standard has been revised so that the numbers are more accurate, and the power limit is lower than what New York currently allows, reducing the amount of energy used and considering technology advances," Jones says.

Peter Bleasby, chairperson of the lamp section of the National Electrical Manufacturers Association says his group feels the ASHRAE standard is sensible.

"The alternative proposed by the energy industry to regulate each component—lamps, ballasts, and fixtures—separately, makes no sense," he says. "Different components interact in very different ways. Each may be appropriate and efficient for a given situation. Lighting installations must be addressed as a system. Give us an energy limit, and let the design profession figure out the best way to convert that to effective lighting."

However, Noble says New York has had a calculation method in place since 1980 that is virtually identical to the new ASHRAE 90.1 standard.

"We have experience with that kind of unit power density requirement," he says. "And our experience is that it is not easy to calculate, it is not consistent, and it is not enforceable. Their position is based on opinion and ours is based on our experience. And given the extent of energy taken up with commercial building lighting, we simply can't continue to leave lighting out of the set of enforceable code requirements. It must be included."

Noble says his office estimates that, with the code

changes, there will be an average electrical savings of 6.3 kilowatt hours per square foot per year and this translates into a 14 percent reduction in electrical energy state wide. In dollar figures, Noble says energy savings are predicted to exceed \$2.2 billion by the year 2000, and payback from the requirements will be seen in two-and-a-half years.

The lighting associations say they feel a better code proposal could have been drawn up if they had been contacted before the state issued the proposed amendments.

"They didn't contact any associations in an official capacity," Jones says. "We are not mindreaders. How were we supposed to know they were preparing for amendments to the code? There was no way for us to know."

Noble disagrees.

"We did make it known that we were changing the code and we talked to lighting designers," he says. "We did not have official communications with the IES or IALD because their positions have been very clearly documented in the ASHRAE developmental process. Their position has been that equipment standards are unnecessary and restrict design freedom. And our position is that they are necessary and do not unnecessarily restrict design freedom."

"New York avoided the industry," says Bleasby. "Instead, it relied on its own opinions and those of the energy lobby."

Noble says his office looked "very closely" at the Massachusetts standard. He says his office feels the level

CON EDISON PAYS TO SAVE

In 1989 Con Edison of New York began the Commercial and Industrial Energy Management Rebate Program. Con Edison studied options, which included building new power lines to meet the increased demand, and buying back power from customers as a way to cut down on energy usage, and found that the most effective solution would result from a combination of both.

In addition to lighting, the rebate program involves electric, steam and gas air-conditioning, cool storage, and motors. Since January 1, 1990, Con Edison received applications for \$3.5 million in rebates. Con Edison has committed \$21 million to the program for 1990.

Lighting rebates are available for ballasts, fluorescent lamps, compact fluorescent lamps, lighting control devices, fixture retrofits and replacements.

For information on the Commercial and Industrial Energy Management Rebate Program, contact: Alfred M. Ornstein, Con Edison of New York, 4 Irving Place, New York, NY 10003, 212-460-6545.

Similar rebate programs are available in other states. Contact your local utility for further information.

—WANDA JANKOWSKI

of stringency between the two states is virtually identical, except that the Massachusetts requirements refer to any installation of lamps, and have been proposed to restrict all affected lamps at the point of sale.

"So our requirements are

much less stringent and much less extensive in scope than the code in Massachusetts. Our requirements only apply to general lighting in new construction or substantial renovation," Noble says.

However, Bleasby says Massachusetts must have

more stringent codes than the rest of the nation because it suffers from a natural energy shortage, to the point where it closes down buildings in the summer rather than air condition them.

Bleasby says a point that isn't considered by either

proposal, but should be, is the amount of time luminaires are in use and how that affects energy consumption.

"Ultimately it is kilowatt hours saved that matter in the context of emissions and global warming," he says.

MASSACHUSETTS

In 1988, the Massachusetts Energy Office (MEO) passed legislation that empowered the state agency to mandate minimum efficiency standards for fluorescent, high-wattage incandescent, reflector incandescent, and tungsten halogen lamps, which would be installed in commercial and industrial applications.

As of this writing, the state was in the process of determining the minimum efficacies—or minimum lumens per watt—for these lamps. This is the third draft for this code requirement. The new standards were to be adopted in late April or early May.

A new piece of proposed legislation is asking that the lamp efficacies that will apply to commercial and industrial uses also apply to residential applications. Additionally, the proposed bill would empower the MEO to set minimum efficiencies on HID sources, and incandescent, HID, and fluorescent luminaires. It also would require that all floor and table lamps be able to accommodate compact fluorescent lamps. Some standards would be effective immediately, and others would be implemented over time, from now through January 1995.

Perhaps one of the more

interesting enforcement tactics of all state policies is Massachusetts' decision to enforce its code at the point of sale. This, says IALD Energy Committee Chairperson Carol Jones, means that the lamps not meeting minimum efficacies cannot be purchased anywhere in Massachusetts or be purchased out-of-state and installed. Unless someone has bootlegging on his mind, certain lamps will never see the light of day in the New England state.

Jones says that since the MEO states that the high-wattage incandescent, PAR, and R lamps must emit a certain number of lumens, some light sources will be forced into early retirement. The lumen-per-watt equation is not an appropriate way to determine the efficacy of PAR and R lamps, she says.

"These lamps obviously don't emit enough lumens to meet the standard, so they won't be able to be used; they'll be eliminated come May," Jones says. "The numbers that Massachusetts is proposing eliminate almost all of the PAR and R lamps."

The idea behind setting minimum efficiencies for separate components is flawed, she says.

"If you put lamp A with ballast B, you're going to get a different result than if you

put lamp A with ballast C," she says. "One combination may be energy efficient and one may not. The energy office has to take into consideration that when you have lamps, fixtures, and ballasts, and put them all together in different combinations and applications, you will get different energy usage figures."

The state's suggestion to replace these lamps with ER and BR energy-saving lamps isn't a viable solution, says NEMA's lamp section Committee Chairperson Peter Bleasby, who is also manager of application engineering for lamp manufacturer Osram Corp.

"For one thing, these lamps are shaped differently, so you won't get the same light distribution," he says. "Also, the proposed lamps are longer than the others, so they can be seen hanging down past the ceiling recess."

If the situation is looked at from the manufacturers' points of view, Bleasby says, the codes might look great because all of the companies' premium products will be sold. Energy-saving lamps are cost more initially than other less efficient products.

"No one will believe we manufacturers weren't in league with the code makers

and the energy lobby," he says. "But regulations like this that force the usage of premium products are such a waste of natural resources in many areas."

Bleasby says more energy could be saved with occupancy sensors that switch off lights when not in use.

"One of the things people aren't thinking about is the fact that the industry doesn't have the capabilities to mass produce the highest efficiency lamps," he says.

And, Bleasby says, the cost of retooling the manufacturing plants and re-cataloging is high.

"There is no logic involved in the decision-making that's going on in the government offices," he says. "Their motto is, 'Save energy no matter what the cost.'"

"In some cases, these proposals don't save energy—they substitute one 40-watt lamp for another giving the user a higher light output or rendering whether or not it's needed. It just increases the cost of lighting for the end user," Bleasby says.

Meanwhile, he says, the federal Department of Energy (DOE) is watching what the various states do.

"If they make too big a mess of things, the DOE is going to step in with its own federal standards for lamps and fixtures," he says. ■

ILLUMINATING READING.

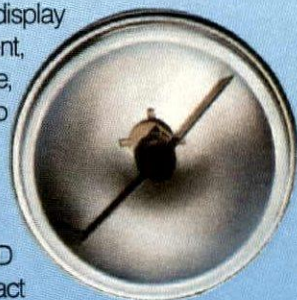
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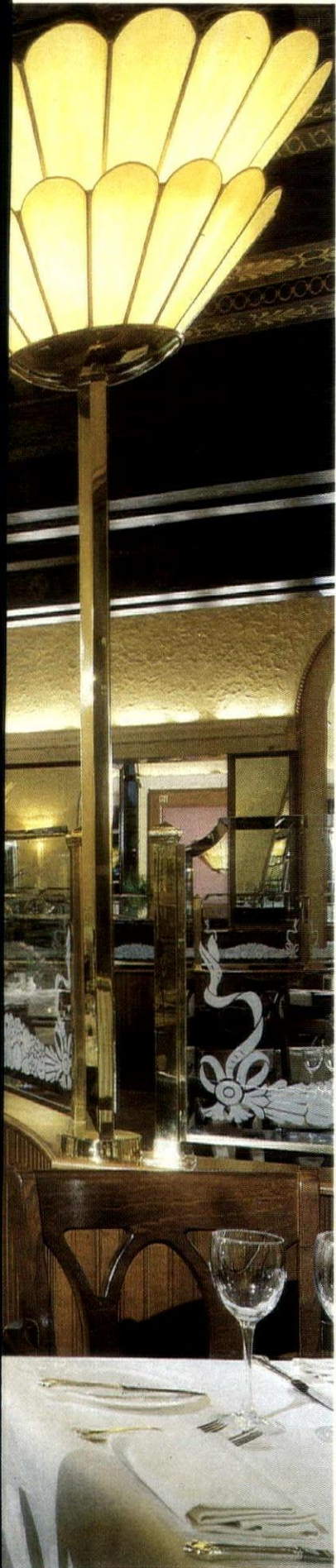
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Elegance Restored

The renovation of Washington, D.C.'s,
Sheraton Carlton preserves features of the
original Italian Renaissance
palazzo styling

BY WANDA JANKOWSKI
EDITOR

Though the Sheraton Carlton Hotel in Washington, D.C. was built in 1926 in the style of an Italian Renaissance palazzo, over the years its elegance had been diminished through everyday wear and tear. Brad Elias, ASID, Hochheiser Elias Design Group, Inc., New York and Richmond, VA, has redesigned the interiors while maintaining and refurbishing many of the original, ornate features of the small, 200-room hotel.

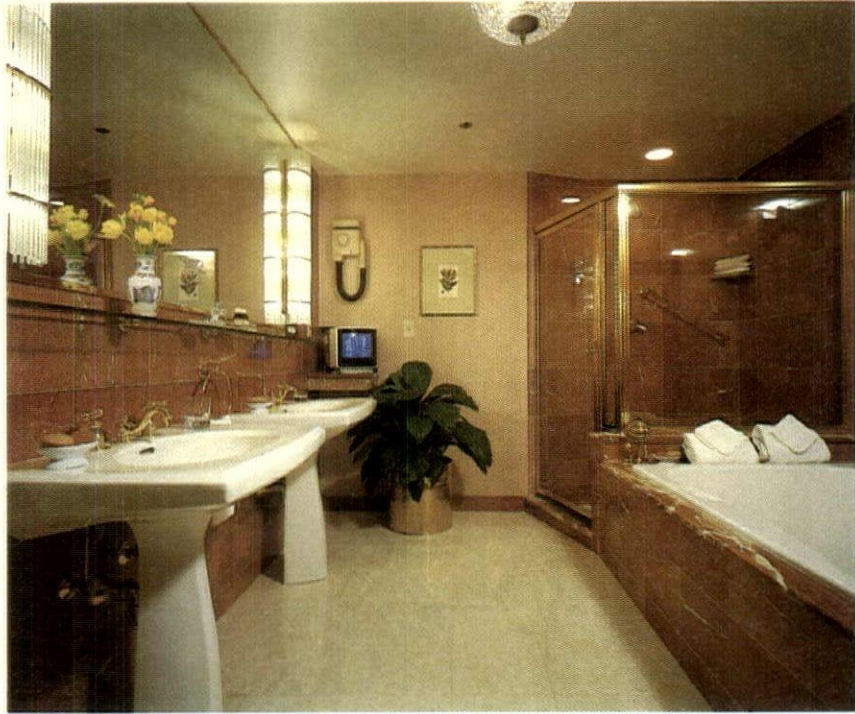
Before the renovation, the hotel's restaurant had been a gloomy place, with heavy draperies covering the windows and illumination from only four ceiling-suspended chandeliers.

The redesigned restaurant reflects a blending of old and new. The original ceiling appears to be wood, but it's actually plaster painted to resemble wood, with detailed stenciling applied over it.

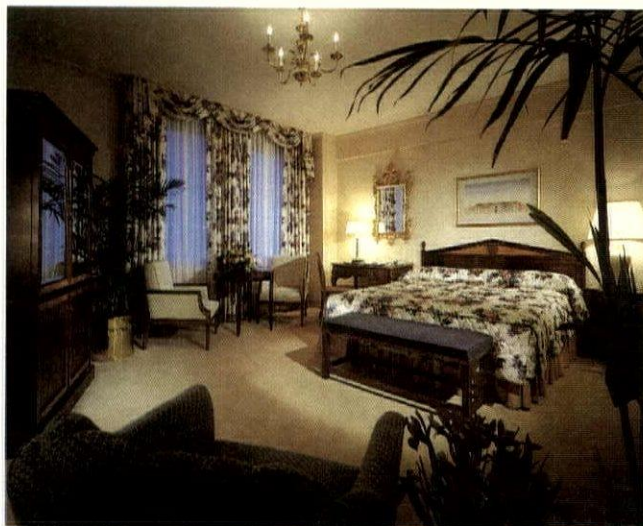
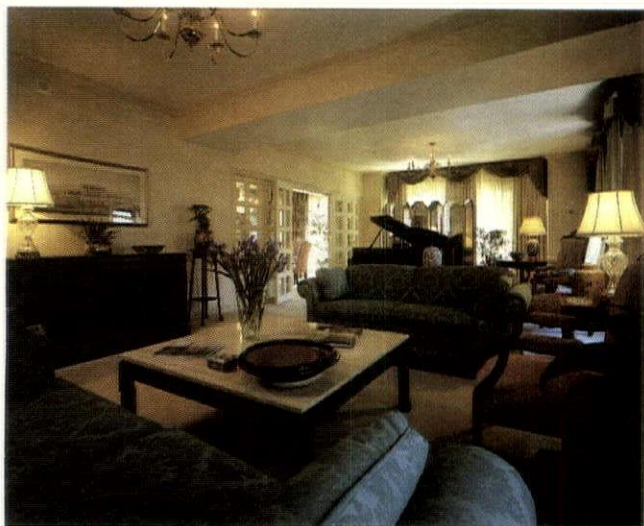
Elias has redesigned the layout of the restaurant as well as the furnishings, adding materials and details—polychrome and sponge painted stucco walls,

PRESERVING BEAUTY: To preserve the original ornate ceiling, designer Brad Elias chose to leave it free of fixtures, and created custom sconces and torchieres to illuminate the hotel restaurant.

PHOTOS BY PETER PAIGE



In guest rooms, ambient light from small chandeliers eliminates shadows that would result if fixtures were placed only lower than shoulder level.



CRYSTAL CLEAR: Adequate lighting for all tasks is provided in guest suites (opposite page top and above) by a range of luminaires placed overhead and at varied heights. In the Crystal Ballroom (left), wall sconces have been installed to complement the original large crystal chandeliers.

brass trims, and etched glass panels—that capture the flavor of an Italian cafe.

The large, arched windows are fitted only with white privacy curtains to allow in ample daylight and provide a feeling of openness.

Rather than reinstall chandeliers or add recessed fixtures, Elias opted to preserve the ceiling and leave it free of fixtures, except for some previously-installed track fixtures. Wall sconces and torchieres, fitted with 300-watt shielded quartz lamps, have been custom-designed to furnish uplight. The ivory, marbleized glass backlighting with A lamps creates an amber, peachy glow that “looks like sunset in Rome,” Elias says.

The wall-mounted sconces are larger than they look—4 feet long. The brass stem of the torchieres are mounted in the wood-based partitions that divide the eating areas.

Low-voltage halogen strip lights—20-watt, 12-volt lamps installed 6 inches on center—that furnish uplight and graze the textured wall have been recessed into moldings near the bar area. Existing downlights in archways have been retained.

In the hotel ballrooms, though the decor has been refurbished, the original antique crystal chandeliers have been retained. Sconces with 25-watt candelabra base lamps have been add-

ed in the Crystal Ballroom.

In the guest rooms, the usual portable table lamps are found, creating a residential environment for guests; however, small chandeliers have been added in each room to create a more open, airy atmosphere. The overhead ambient light eliminates the oppressive shadows that result when the only illumination in the room comes from fixtures placed at shoulder level or lower.

The bathroom contains a variety of lighting to accommodate varied tasks—vertical sconces containing three 60-watt A lamps on either side of the large mirror for even illumination during grooming, as well as fixtures located near the shower and tub areas. ■

DETAILS

PROJECT: SHERATON CARLTON HOTEL

LOCATION: WASHINGTON, D.C.

CLIENT: SHERATON CARLTON

INTERIOR AND LIGHTING DESIGNER FOR AREAS

FEATURED: BRAD ELIAS, ASID, ELIAS HOCHHEISER DESIGN GROUP, INC.

PHOTOGRAPHER: PETER PAIGE PHOTOGRAPHY

LIGHTING MANUFACTURERS: CORONET LIGHTING:

restaurant custom torchieres and sconces, ballroom wall sconces, guest bedroom chandelier, and guest sitting room chandelier; DANALITE: low voltage cove lights; CUSTOM LIGHTSTYLES LTD.: guest suite bath sconces and chandelier; ROYAL HAGER: night-table lamps; PAUL HANSEN: guest room table and desk lamps; REMINGTON LAMPS: guest sitting room table lamp.





Cutting Edge Creativity

**Custom fixtures make the look work in
this Manhattan hotel with post-modern style**

BY CATHERINE SCHETTING SALFINO
MANAGING EDITOR

Daring to be different without intimidating the viewer is no easy task. It is a feat that requires knowledge of what already exists in order to create something fresh, but not overwhelming.

The professionals at a prominent New York lighting design firm have achieved the right balance of refined boldness in their renovation application for the Royalton Hotel, located in mid-town Manhattan. Lighting designers Paul Marantz and Bill Sherman of Jules Fisher & Paul Marantz, Inc., working with renowned French designer Philippe Starck, and Anda Andrei, who was with the New York architectural firm Gruzen Samton Steinglass during the project, sought a look that would match the post-modern interior of the world-class hotel.

The project was presented with the 1989 International Association of Lighting Designers' Award of Excellence. The association noted that the lighting has a consistent, though varied, sensibility that exactly fits the architecture. The awards jury called the lighting "fresh, innovative, romantic, and dreamy."

Using illumination to capture the flavor of the Royalton's interior architecture required large amounts of design creativity, and patience, Sherman says.

"The owner, Ian Schrager, wanted Philippe to create a very different look for a hotel," Sherman says of the project, which was completed in 1988 after two-and-a-half years of renovation work. "Our lighting had to illuminate that new look as much as be a part of it. But it could not be so avant-garde that it would either intimidate people or date itself."

The plans called for a look that made a design statement, Sherman says, something that would leave people saying, "I've never seen anything like this before."

Reaching this goal led Marantz and Sherman to call on their fixture design knowledge because existing luminaires would not meet the unusual needs of the job. The unique application warranted custom fixtures, to the extent that there are now more custom luminaires than off-the-shelf products in the hotel.

Since the lobby/lounge area is dark, due to the muted colors of the carpets and walls, many small fixtures were needed to illuminate the space without glare. Dramatic accents were also part of the scheme in order to draw out certain points of interest. But, Sherman says, the furniture layouts were changing on a daily basis throughout the construction process, so they

STRIKING INTIMACY: The small lobby lounge of the New York Royalton Hotel sports plush velvet seats and a checkered floor, all lit with indirect dome cove lighting and AR 70 50-watt custom downlights.

PHOTOS BY TOM VACK AND ANDREW GARN



had to provide the most flexible fixture they could devise.

"We developed a multi-purpose fixture, which is the main lobby luminaire," Sherman says. "It provides ambient coverage, as well as accent light. There are three lamps per fixture. We used two metal reflector, AR 70 50-watt adjustable accent lamps, which are self-shielded to reduce glare, and a single ambient PAR 20 50-watt downlight."

Each fixture's envelope or aperture was to be as small as possible for this long, tunnel-like space. Marantz and Sherman used rectangular 4-inch X 10-inch apertures that run perpendicular to the long axis of the space.

"But the rectangular opening created a problem because we couldn't get a 360-degree adjustment on the accent lights," he says. "So we cross-aimed them, with one accent light taking care of 180 degrees in one direction, and the other providing light 180 degrees in the other direction. The PAR 20 lamp is in the center and aimed straight down."

Sherman says there are three different types of these custom fixtures. A straight downlight luminaire using PAR 36 tractor head lamps illuminates the carpeted area, which runs from 44th Street to 43rd Street. Another fixture has one circuit for the accents and another circuit for the downlight. A line of fixtures that run along the wall have three separate circuits for each of the three lamps. All of the fixture types are on a four-scene preset dimming system.

The small but striking lobby lounge is noted for its black and white circular checkered floor and plush booth seating. Sherman says Schrager envisioned the type of clientele that would frequent the hotel as being a literary group, so he wanted to recreate the roundtable ambiance that the Algonquin Hotel had in the Thirties. He wanted a very intimate, remarkable space, Sherman says, something that those who visited could tell others about.

The blue velvet seats and white chairs with chrome backs are illuminated by a dome cove that houses 2.5-watt low-voltage strip lamps, which are recessed behind the lip of the opening. Sherman and Marantz allowed 20 watts per linear foot on the light strip, so each lamp is 2 inches on center. Small 3.5 aperture custom downlights were also installed in the space. Low-voltage, 50-watt AR 70 halogen lamps that have metal reflectors and shielded filaments were used to make the fixtures have as low a brightness as possible in order to promote the intimate environment.

A floor-mounted, PAR 30 50-watt, recessed uplight was installed in the center of the checkered pattern. The luminaire has a glass lens over it and is flush with the floor.

"We installed this for drama—something to create interesting lighting effects," Sherman says. "Although there is some glare, we're trying to create an unusual atmosphere, and sometimes glare is necessary for that."

However, the guest room is the last place any-

A CUSTOM LOOK: Specially-designed recessed fixtures and wall sconces illuminate the carpeted hall (above), which runs the length of the hotel. Custom recessed luminaires wash the lobby/lounge area with bright, non-glaring light (opposite page).



WORKING WITH THE OWNER

SIDE LIGHTS

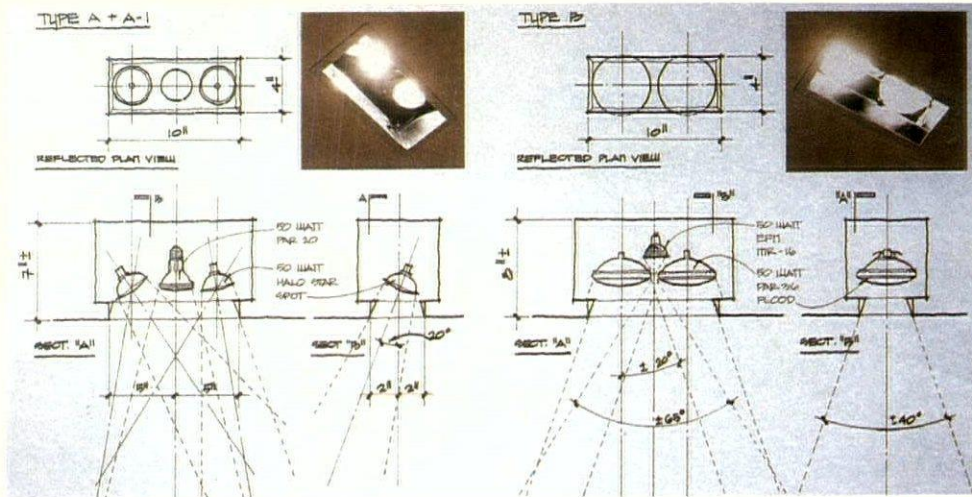
ABOUT A YEAR INTO the project, lighting designer Bill Sherman recalls the Royalton's owner Ian Schrager was concerned that the whole look, including the lighting, was too advanced and considered throwing out the entire architectural design for a more conservative approach. Sherman says that with the help of Paul Marantz, Schrager was convinced that the design would work and the project continued as intended.

However, they still met with some stumbling blocks. Sherman says one of the most controversial aspects of the job involved one of

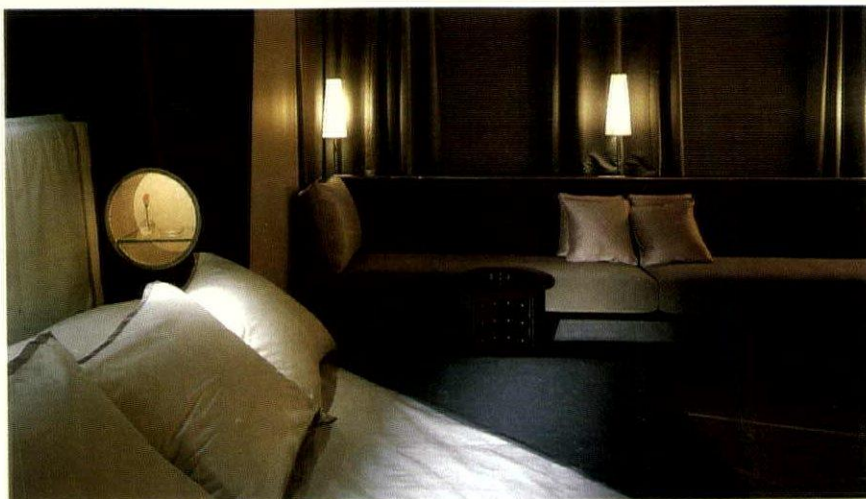
the custom-designed fixtures—the wall sconces that are installed in the long hall's carpeted area.

The designer, Philippe Starck, created these sconces, which were flown in from France, and, after they arrived, Schrager wasn't sure if he wanted them to be installed, Sherman says.

"He thought they were a little too avant-garde. But, at that point, although the lobby was finished, there were no furniture or curtains in place. The space had a very slick and smooth look. So, to him, it seemed like the sconces would be sticking out too much. With much finagling by myself and architect Anda Andrei, we assured him it was an important thing to have, and he really likes them now."



UP CLOSE: The diagram (above) clearly shows how two AR 70 metal reflector lamps and a single PAR 20 lamp were used to create the custom recessed fixture that brightens the main lobby of the Royalton Hotel (left).



SPECIAL TOUCHES: Bedside portholes provide soft light in the guest rooms (above). Above each bed is a custom adjustable reading lamp/wall-washer, which houses three 20-watt MR 11 lamps. The guest bathrooms feature specially-designed globe sconces, which with the spigot appear to hold the mirror in place.

one wants to find glare, so Marantz and Sherman added a different but unique touch. On either side of the head of the bed are porthole-type drums that have glass shelves in them. These perforated polished steel cavities, which function as nightlights, are lit from behind with A lamps so the whole interior is illuminated.

Above the bed is a custom adjustable reading lamp/wall-washer, which houses three 20-watt MR 11 lamps. The fixture is covered with a partially frosted 6-inch glass disc.

The beams of the three lamps are cross-aimed through the glass. Sherman says the left lamp is the reading light for the person on the right, and vice versa, and the third lamp is aimed at the mahogany wall to wash it with light. Each lamp is individually controlled from bedside switches.

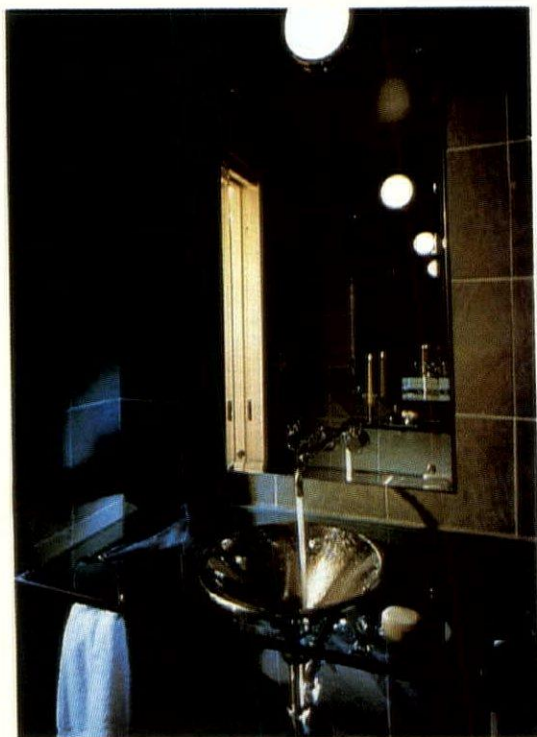
The post-modern style is continued in the guest

room bathroom, reflecting the look of the rest of the hotel. Here, a 7-inch diameter opal glass globe is illuminated with a 75-watt PS 14 incandescent lamp, which is installed in an intermediate base fixture.

"We notched out the bottom edge of the stainless steel trim of the fixture so that it would fit partially over the top of the mirror," Sherman says. "This makes the fixture appear more integrated with the design. It looks like the light fixture holds the mirror in place—which goes along with the look of the spigot that is coming out of the mirror."

An identical mirror and globe are opposite this arrangement so that the reflection is multiplied infinitely between the two looking glasses.

"We worked with many talented people to make this project succeed," Sherman says. "They helped keep our ideas fresh—so we were always looking forward, coming up with something new. Expanding on what we know to make it better." ■



DETAILS

PROJECT: ROYALTON HOTEL

LOCATION: NEW YORK

CLIENT: MORGANS HOTEL GROUP, NEW YORK

DEVELOPER: IAN SCHRAGER, 44TH HOTEL ASSOCIATES

LIGHTING DESIGNER: JULES FISHER & PAUL MARANTZ, INC.; PAUL MARANTZ & BILL SHERMAN, design team

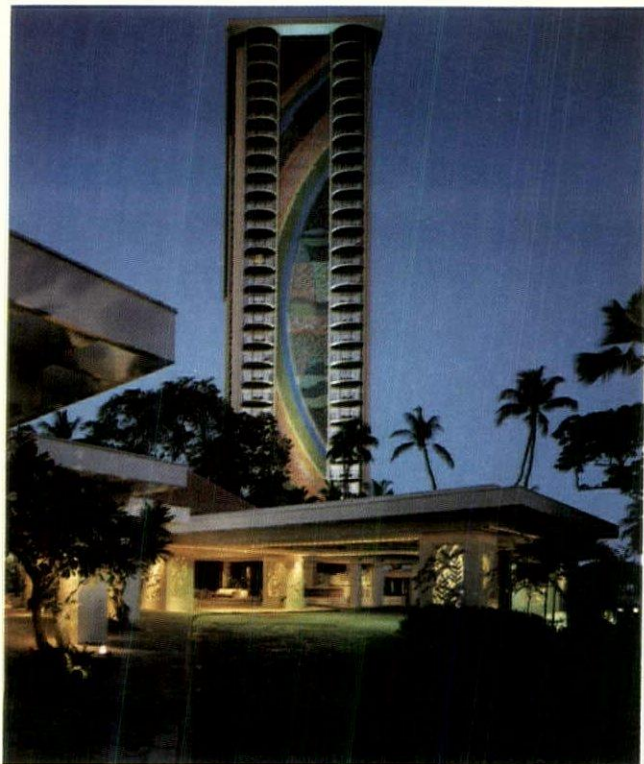
INTERIOR DESIGNER: PHILIPPE STARCK

ARCHITECT: GRUZEN SAMTON STEINGLASS; RALPH STEINGLASS, ANDA ANDREI, EDURINA ALVAREZ, ISABEL KRAUT, PAUL MITCHELL, design team

PHOTOGRAPHERS: TOM VACK: bathroom, page 35;

ANDREW GARN: all others

LIGHTING MANUFACTURERS: BEGA/FS, MARTIN GELLMAN ASSOCIATES, INC.; BERGEN ART METAL; C.J. LIGHTING CO., INC.; CSL LIGHTING INC.; HARRY GITLIN, INC.; HIGH-TECH APPLICATIONS, INC.; HORLBECK METAL CRAFT; IPI LIGHTING DIVISION; KOCH + LOWY, INC.; LEGION LIGHTING; LIGHTOLIER; ERIC MAVILLE INTERIORS; DAUM GLASS; MCPHILBEN, LIGHTING UNLIMITED; NESSEN LAMP; OMEGA, LIGHTING UNLIMITED; PERFECTLITE, CONTINENTAL LIGHTING SYSTEMS; EDISON PRICE INC.; SIMES *d/o* SPECTRO LUME, INC.; STARFIRE LIGHTING, INC.; WILLEM WIRTZ RIBBONLITE, LIGHTSCAPE; WORK-o-LITE, LIGHTING UNLIMITED



Rooms With A View

Lighting enhances the tropical paradise surroundings of the Hilton Hawaiian Village

BY CHARLES LINN, AIA
EXECUTIVE EDITOR

The Hilton Hawaiian Village, located on 20 acres of beachfront in Waikiki, is considered by many to be one of the most beautiful settings in the world. The locals boast that the spot attracts guests on business and pleasure travel from the world over.

Wimberly, Allison, Tong & Goo's master plan for the renovation of the Hawaiian Village called for the removal of a maze of ancillary buildings that had sprung up over the years, the restoration of the landscape, and the construction of new lagoons and swimming pools.

"The challenge," according to Don Goo, president of WAT&G, "was to create a sense of place. Most people travel to Hawaii with a certain image in mind of what they expect it to look like. So, to produce that look we used artwork, landscaping, and the history of this area. Then we enhanced it by using lighting and finishes in appropriate volumes and proportions.

"We attempt to elicit an emotional response to the place. If we are to be successful as architects and designers, we have to move people on an emotional level. We can intellectualize about why we designed this or that—but when we create the right kind of emotional response, then we've done a good job."

The approach taken by lighting designer, Raymond

Grenald, FAIA, Grenald Associates Ltd., to lighting the Village reinforces Goo's theory. Grenald says he believes that to evoke different responses, different lighting strategies must be put into play. For example, rows of low-voltage incandescent strip lights were installed beneath the entry building's porte cochere, where it was appropriate to catch the eye and establish a sense of warmth and welcome.

The following pages present details on the exterior and interior lighting features of the Hilton Hawaiian Village.

DETAILS

PROJECT: HILTON HAWAIIAN VILLAGE

LOCATION: WAIKIKI, HAWAII

OWNER: HILTON HAWAIIAN VILLAGE JOINT VENTURE

ARCHITECT: WIMBERLY, ALLISON, TONG & GOO; DON GOO, PRINCIPAL-IN-CHARGE; JON PHARIS, PROJECT DESIGNER

LANDSCAPE ARCHITECT: WOOLSEY, MIYABARA & ASSOCIATES, INC.

INTERIOR DESIGN: HIRSCH, BEDNER & ASSOCIATES

LIGHTING DESIGN: GRENALD ASSOCIATES, LTD.; RAY GRENALD

PRINCIPAL-IN-CHARGE: ENRIQUE NORGUERA, PROJECT MANAGER

ELECTRICAL ENGINEER: DOUGLAS V. MACMAHON, LTD.

PHOTOGRAPHER: AUGIE SALBOSA PHOTOGRAPHY

MANUFACTURERS: LUTRON: dimming systems. LIGHTOLIER: track and downlighting. LUCIFER: low-voltage strip lighting. HUBBELL: landscape lighting. HYDREL: landscape lighting. INFRANOR: exterior area lighting. TNC: Cold cathode.

PHOTOS BY AUGIE SALBOSA



EVOCATIVE ENTRYWAY: Strings of low-voltage lights illuminate the Hilton Hawaiian Village's entry building (above and right). Incandescent lighting, uplighting of trees, and warm fluorescent backlighting of bas relief column sculptures help continue the transition from the cooler metal halide lighting of the roadway to the Village's entry.

The mosaic mural that covers the side of the Rainbow Tower guest rooms (opposite page) is uplit by a 1,500-watt metal halide lamp housed in a fixture with a reflector that produces a very narrow beam. The beam is projected almost straight up, so there is little chance of glare when the vista is viewed from balconies.

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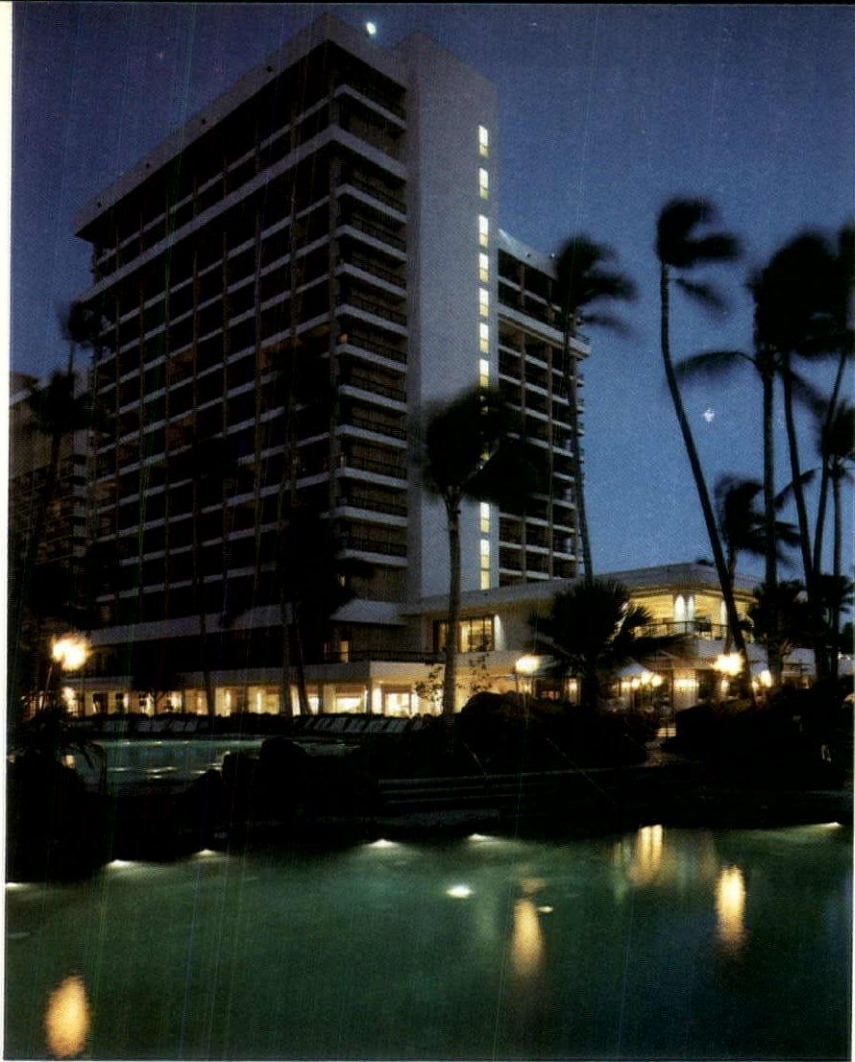
CREATING A MASTER PLAN

SIDE LIGHTS

UNTIL THE EARLY 1980s, the Hilton Hawaiian Village was an accumulation of buildings that had been constructed in rather haphazard fashion since the 1950s. The site included guest room towers and condos, shops, restaurants, swimming pools, a catamaran pier, and a geodesic dome used as a nightclub by singer Don Ho. Word has it that Barron Hilton himself looked down from a room in a newly completed guest tower on this

disorderly maze of buildings, rooftop ductwork, exhaust fans, and air conditioning units, and decided that this definitely wasn't what guest came to Hawaii to see.

The architectural firm of Wimberly, Allison, Tong & Goo went to work, drawing up a three-year, four-phase master plan that involved construction of a new lobby building for the entire complex; renovation of the existing convention center; the removal of buildings, and restoration of the beach; the addition of water features; and the renovation of guest room buildings, restaurants, and bars.

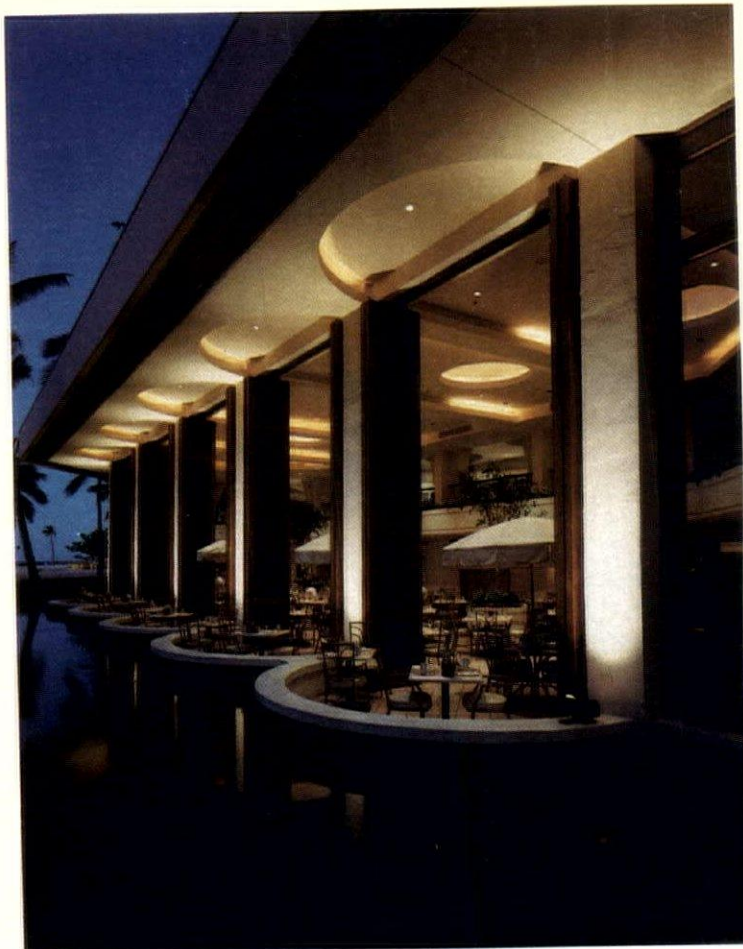


OUTDOOR AMBIENCE: Soft, indirect lighting balances the downlighting in the Rainbow Lanai restaurant, making the large area seem intimate and romantic (right top). After renovation, the restaurant became one of the most successful in the Hilton chain.

Elsewhere, concealed and indirect lighting is used in concert with the natural elements that guests associate with Hawaii: pools, rock-laden waterfalls, and tropical plants and palm trees (below left). Building-mounted metal halide "moonlighting" now gently bathes the site after dark. The response it elicits is very different from that garnered by the original high-pressure sodium floodlighting, which rendered the beach and surf in dirty burnt-out browns and yellows.

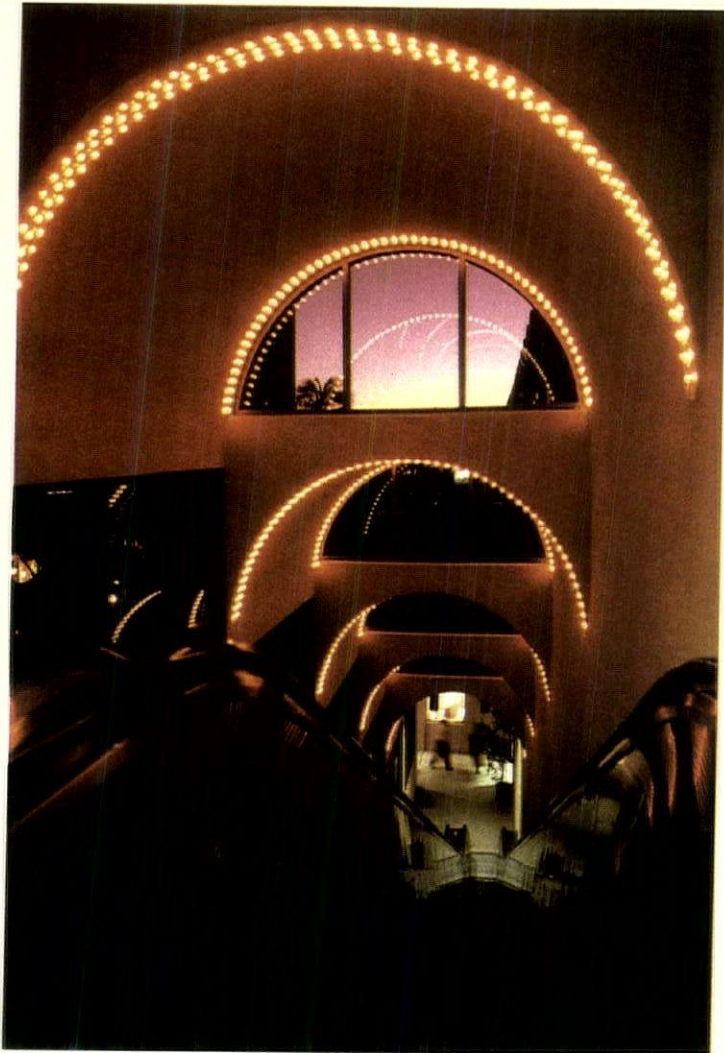
Since the renovation, the ambience is established by landscaping, water, and natural gas fueled tiki torches, landscape lighting, and submerged pool lighting (left).

Near a terrace outside the entry lobby, uplights illuminate the jets from beneath the water's surface, the waterfall (below) is illuminated from the front and below.



CONTINUED ON PAGE 40





BALLROOM CHANDELIERS: Relighting the conference center ballroom was difficult, Grenald says. The existing ceiling coffers were packed with equipment from the air handling and audio systems, and the lighting budget was minimal.

Grenald Associates worked with interior designers from Hirsch-Bedner to design inexpensive chandeliers that would be bright enough to conceal the equipment, but would not be sources of glare. The designers used racks of exposed low-voltage S lamps diffused by curtains of transparent beads.

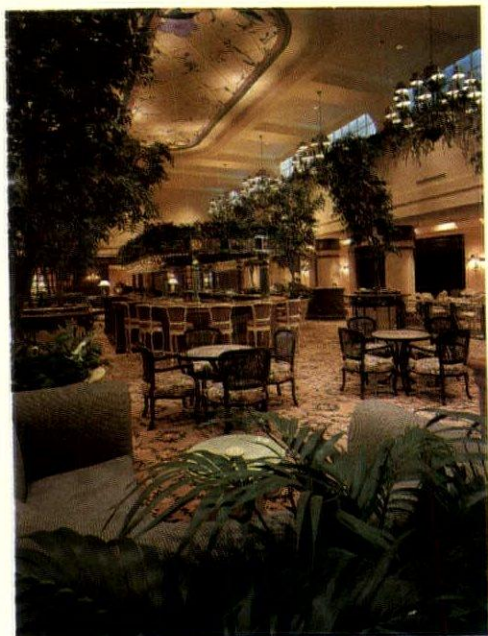
The structural assembly that forms the edge of each coffer made it impossible to recess accent lighting required for trade show purposes, so track lighting was installed.

"They're supposed to take the track fixtures down when there's no trade show," says Grenald, but experience shows they don't."

Fluorescent wall-washers are used to brighten the room around the perimeter.

"The escalators in the convention center were so dark before the renovation, no one used them," says Ray Grenald. "Hundreds of people used to pack into the lobby and take the elevators instead. We felt we could make them playful, and added triple strands of low-voltage lights along the arched cove, and placed metal halide downlights at the top and bottom of them. Now no one waits for the elevator, they all take the escalator. It's just a delightful experience to go through those arches. That was successful." ■





DAYLIGHT PLUS BACKLIGHT:

The restaurant enjoys daylight from clerestory windows which are backlit with neon to insure a perpetual glow (left). Downlights emphasize the arches and sconces carry through the decor of the main dining area (right).



Eye-Level Enticement

Residential fixtures and dramatic neon draw in customers to San Diego's Marriott Suites at Symphony Towers

BY MARY ELIZABETH NAEGELE
CONTRIBUTING EDITOR

Visual excitement at eye level was the designer's lighting aim in the sky lobby at the new Marriott Suites at Symphony Towers, San Diego. "It is the link between the office tower and hotel," says project manager Michael D. Ward, AIA. "So we had to create a situation where people changing elevators for the office or hotel would catch glimpses of the lobby and be enticed to come in."

Ward, president of Victor Huff Partnership, a Denver-based design concern, also oversaw the lighting of the street-level lobby, the restaurant, and an elegant boardroom, as well as the ballroom and health club.

To turn the sky lobby into a drawing card, Ward says

it needed more than that "twilight-zone" lighting—such as step lighting and recessed cans—to do the trick.

"We wanted sources at or near eye level—like wall sconces, floor and table lamps, dropped chandeliers, and an illuminated area over the bar, so light would catch the glasses," he explains.

Three types of lighting are employed to illuminate the bar area: low-voltage, 40-watt recessed pin spots; low-voltage, 50-watt track uplights that illuminate the ceiling art; and twinkle lights that are half-watt per lamp at four lamps per foot. Ceiling recessed ellipsoidal quartz downlights are 500 watts.

Once passersby are "caught," Ward says, they must

PHOTOS BY KARL FRANCETIC

be wooed by drama. To pursue this courtship, he employed the daylight of the high clerestory windows, uprights in the trees and low-voltage tracks. The clerestory windows—the room's only natural light source—are backlit with neon that is left on all day for a glowing effect.

A marble-floored, columned corridor off the sky lobby is lit by 120-watt classic wall sconces, 150-watt recessed downlights and 42-watt low-voltage pin spots.

Ward says the goal of the dramatic lighting scheme paired with the visual stimulation at eye level is to get workers from the office tower to come in for a drink after work, enjoy the ambiance, move on to an appetizer, and then walk the 15 feet to the restaurant to have dinner.

"As designers, it is up to us to create a room that will draw them in," Ward says. "Then it's up to

operations to get them to stay. And it seems they're doing a lot better than even they expected."

An image of quality had to be established in the street-level Motor Lobby, the designer says. But an important consideration that figured into the lighting scheme was that the area would not always be manned by hotel personnel. Therefore, plug-in fixtures and other removables were out of the question. High chandeliers, with 12 40-watt lamps, 100-watt shell wall sconces, 150-watt recessed incandescent downlights, and white neon were chosen as secure but stunning solutions.

"The neon gives a lot of drama to the barrel vault," Ward adds.

Bringing a residential flavor to the commercial property was a design goal, Ward says. Table

COVERED CORRIDOR: A Sky Lobby corridor (below) is lit with sconces, downlights and pinspots. Neon adds drama to the barrel vault of the Motor Lobby corridor (right).







HOME SWEET HOME: The meeting room (above) features one-watt incandescent lamps around the perimeter of the cove. One of the design goals was to bring a residential flavor to this commercial space (below).

lamps next to sofas in a seating area adjacent to the bar, and a boardroom with 150-watt table lamps and small, scale-reducing chandeliers with six 60-watt lamps help set a homey tone, Ward says. The floor and table lamps in the sofa area have 150-watt lamps, as do the recessed downlights.

The pair of chandeliers in the meeting room are split to prevent blockage of an audio-visual unit that is hidden behind two panels in the middle of the wall, Ward says. A strip of 1-watt incandescent lamps, spaced three-quarter inches on center, in the microdome create a wash light for the dome and adds diversity to the levels

of lighting. Recessed, 150 watt downlights and low-voltage, 75-watt recessed pin spots complete the lighting in the boardroom.

Flanking the boardroom's double doors are windows. When the room is not in use, its lights are set at a low level so passersby can look in to admire the furnishings. When a meeting is in session, drapes may be drawn for privacy.

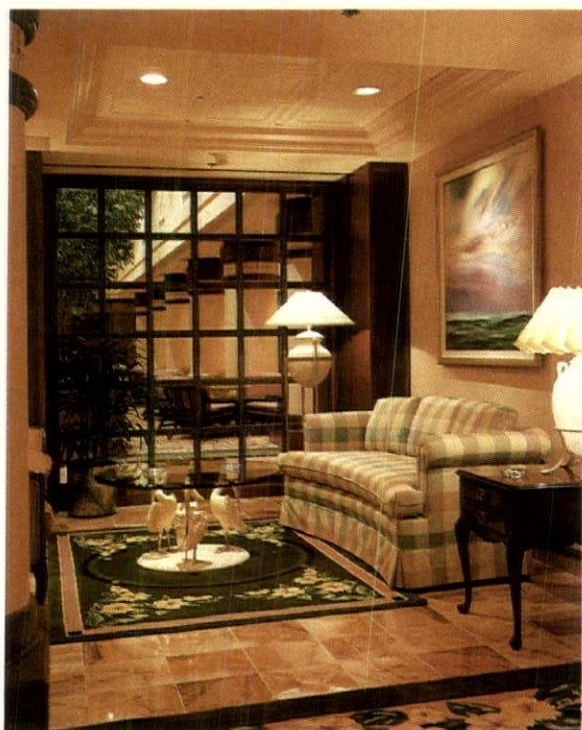
Ward points out that the sources of light are not the only players in the lighting game. The furniture and furnishings also have important roles. The use of granite, glass, and marble flooring for sparkle, sheen, and light reflection and refraction were intentional.

The project, completed in January 1990, features dimming systems in all of its spaces. The sky lobby fixtures are preset so that the designers can "maintain control over how the lighting accents the space," Ward says.

"The boardroom has slide dimmers because different meeting groups have different needs. But we wanted to control the public spaces."

Another way VHP exercised its control was to avoid fluorescent lighting.

"Color-corrected fluorescents are really good, but it seems that the first time lamps are changed, you're back to cool white," Ward points out. "So we used neon and incandescent."



DETAILS

PROJECT: MARRIOTT SUITES AT SYMPHONY TOWERS

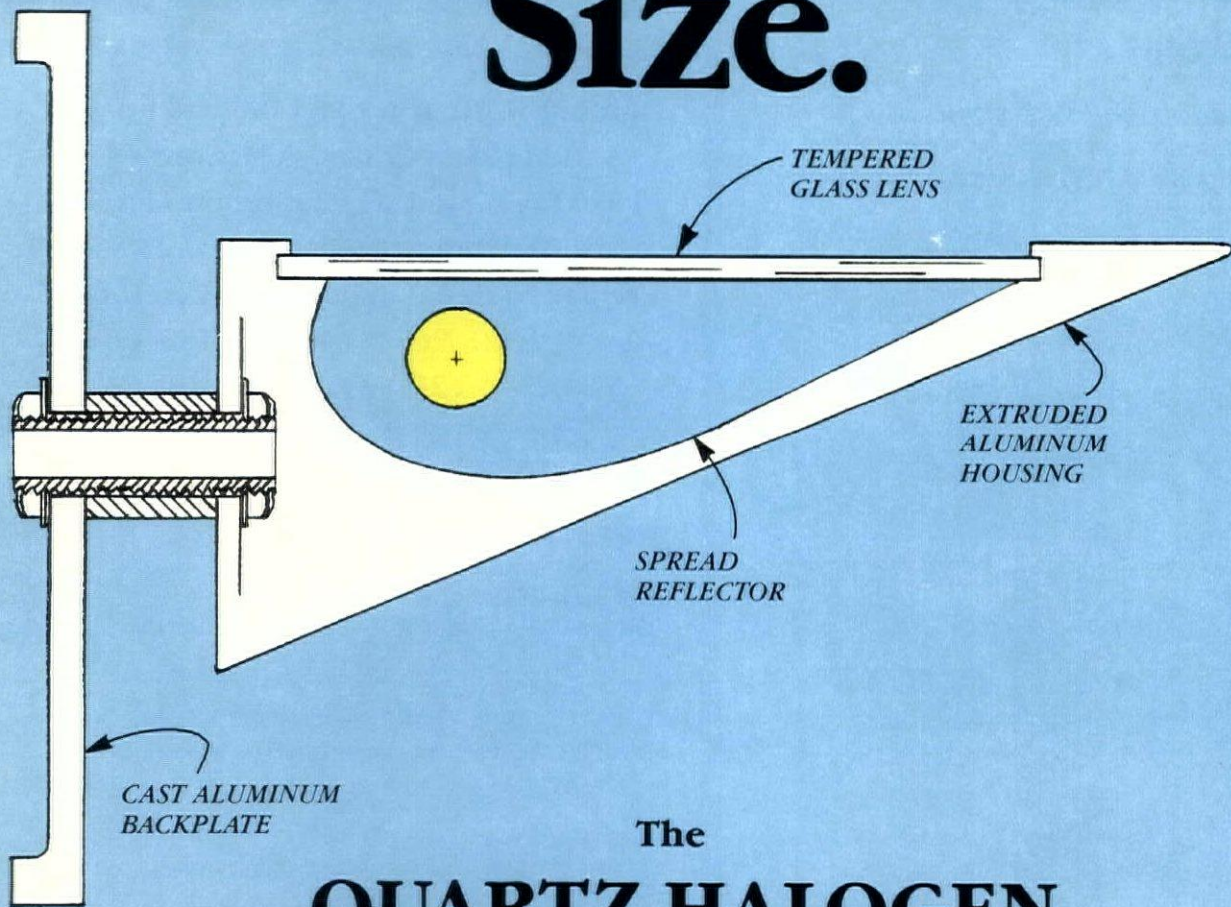
LOCATION: SAN DIEGO

LIGHTING DESIGNER: MICHAEL D. WARD, AIA, VICTOR HUFF PARTNERSHIP

PHOTOGRAPHER: KARL FRANCKETIC


LIGHTING MANUFACTURERS: CAPRI: Recessed downlights, low-voltage wall-washers; HALO: Track lighting; NEORAY: Tube lighting; LITHONIA: Quartz downlights; ORIGINALS 22: Sky Lobby floor and lobby lamps; BOYD: Motor Lobby wall sconces; LA SPEC: Motor and Sky Lobby chandeliers, and Sky Lobby wall sconces; HOUSE OF TROY: Sky Lobby picture lights.

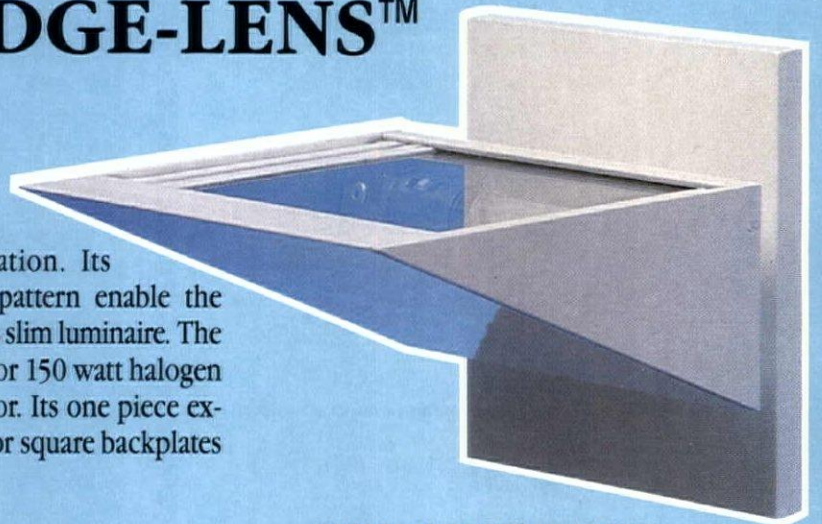
Actual Size.



The
**QUARTZ HALOGEN
WEDGE-LENS™**

Tempered Glass covers this versatile low profile, wall mounted uplight suitable for any general area lighting situation. Its simplicity, size and wide light distribution pattern enable the designer to provide high lighting levels from this slim luminaire. The Wedge-Lens™ utilizes either single or twin 100 or 150 watt halogen lamps accented by a wide angle spread reflector. Its one piece extruded body can be mounted on either round or square backplates or on any Belfer extruded raceway.

 Listed - Damp Label
FOR INFORMATION WRITE ON COMPANY LETTERHEAD



SINGLE LAMP UNIT 5 1/4" LONG
TWIN LAMP UNIT 10" LONG

norbert belfer lighting

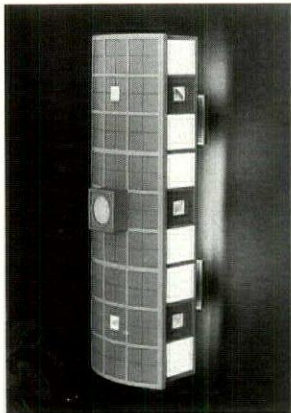
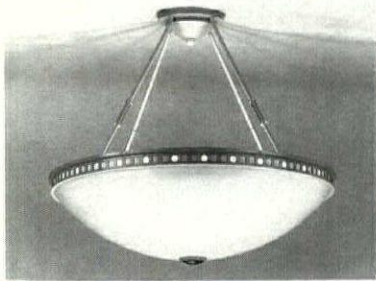
P.O. Box 2079 • 1703 Valley Road, Ocean, NJ 07712 • (201) 493-2666 • FAX (201) 493-2941

Appleton Lamplighter.

The first choice of the design community for custom lighting, architectural metal fabrication.

GUARANTEEING:

- Integrity of design • Professional staff
- Engineering • Quality materials & products
- American craftsmanship • Affordability
- North American wide representation
- Delivery



Minneapolis Convention Center • Minneapolis, MN

Pendant
4'0" x 1'2" x 3'5"
Painted aluminum, opal acrylic and tinted glass lenses. Four 100 watt A-19 and one 50 watt MR-16 lamps.

2'2" x 7" x 10" painted laser cut steel and aluminum. One 17 watt Octron lamp. Glass lenses.



9" x 2'3" x 11" Painted laser cut steel and aluminum. One 75 watt MR-16 and two 150 watt halogen lamps.

Minneapolis Convention Center Collaborative
• Setter, Leach & Lindstrom, Inc. • The Leonard Parker Associates • Loschky, Marquardt & Nesholm, Minneapolis, MN • Lighting Designers: Lightsource Seattle, WA

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Lamplighter™**

P.O. BOX 1434, APPLETON, WI 54913 USA
PHONE: 414-739-9001 FAX: 414-739-1656

Specifiers catalog available on request.
Call for the contact in your area.

Lighting World Preview

Lighting World International will be held June 14-16 at Chicago's McCormick Place. For more information on Lighting World, contact Denise Bigo, show director, National Expositions Co., Inc., 15 West 39th St., New York, NY 10018, or call (212) 391-9111.

SEMINARS

THURSDAY, JUNE 14

9:30 a.m.—10:30 a.m.

LIGHTING STRATEGIES FOR THE RETAIL ENVIRONMENT

9:30 a.m.—10:30 a.m.

THE IMPACT OF NEW LAMP AND BALLAST TECHNOLOGY

SPEAKER: Michael Lane, lighting design specialist, Lighting Design Lab

10:45 a.m.—11:45 a.m.

A SYSTEMS APPROACH TO SELECTING LIGHTING EQUIPMENT

10:45 a.m.—11:45 a.m.

LIGHTING FOR LIFE IN OUTER SPACE: NASA'S PROJECT SPACE STATION AND THE SPACE SHUTTLE

SPEAKER: Daryl Mossman, manager, Aerospace Products Group, ILC Technology

10:45 a.m.—11:45 a.m.

THE IMPACT OF LIGHTING ON RESTAURANT ENVIRONMENTS

SPEAKER: Mark Knauer, AIA, president, Knauer Inc.

FRIDAY, JUNE 15

9—11 a.m.

PLANNING AN ENERGY MANAGEMENT STRATEGY: A PANEL DISCUSSION

PANELISTS: Lindsay Audin, manager, Energy Conservation, Columbia University

Patrick Field, Utility Conservation Program manager, Division of Capital Planning and Operations, State of MA
Raj Kumar, group manager, Mechanical and Energy Systems, Ralston Purina Co.

Michael Lane, lighting design specialist, Lighting Design Lab

Paul Linton, operations manager, Tishman West Cos.
Colum McReynolds, Energy Engineering Dept., Ford, Plant
Engineering Office

Phil Sprague, corporate manager, Energy, Radisson Hotels
International

MODERATOR: Richard Mullin, editor-in-chief, assoc.
publisher, Energy User News

9-11 a.m.

MERCHANDISING WITH LIGHT: A DISCOURSE ON
SOURCES, COLOR, AND TECHNIQUES TO MAXIMIZE
CONSUMER IMPACT

SPEAKERS: Elsa DePalma, ISP, vice president, The DePalma
Group; president, Chicago Chapter, ISP
Daryl D. Sullivan, MIES, president & CEO, Amerlux, Inc.

9:45 a.m.-10:45 a.m.

DISPLAY OF NATURAL LANDSCAPE FEATURES WITH
ILLUMINATION

9:45 a.m.-10:45 a.m.

INCORPORATING DAYLIGHT/SKY SIMULATION

10:45 a.m.-11:45 a.m.

PLANNING APPLICATIONS FOR LIGHTING IN HEALTHCARE
ENVIRONMENTS

SPEAKER: Lawrence Lammers, AIA, FAAHC, president,
Lammers & Gershon Associates

11 a.m.-12 p.m.

INCORPORATING LIGHTING IN URBAN DESIGN

SATURDAY, JUNE 16

8:45 a.m.-10:15 a.m.

EFFECTIVE LIGHTING FOR THE WORK STATION: THE
INTEGRATION OF LIGHTING AND FURNITURE

10:15 a.m.-12:15 p.m.

LIGHTING SOURCES AND THEIR APPLICATIONS

SPEAKER: Ronald N. Helms, Ph.D, PE, FNSAE, FIES,
professor, Architectural Engineering, University of Kansas

10:30 a.m.-12:00 p.m.

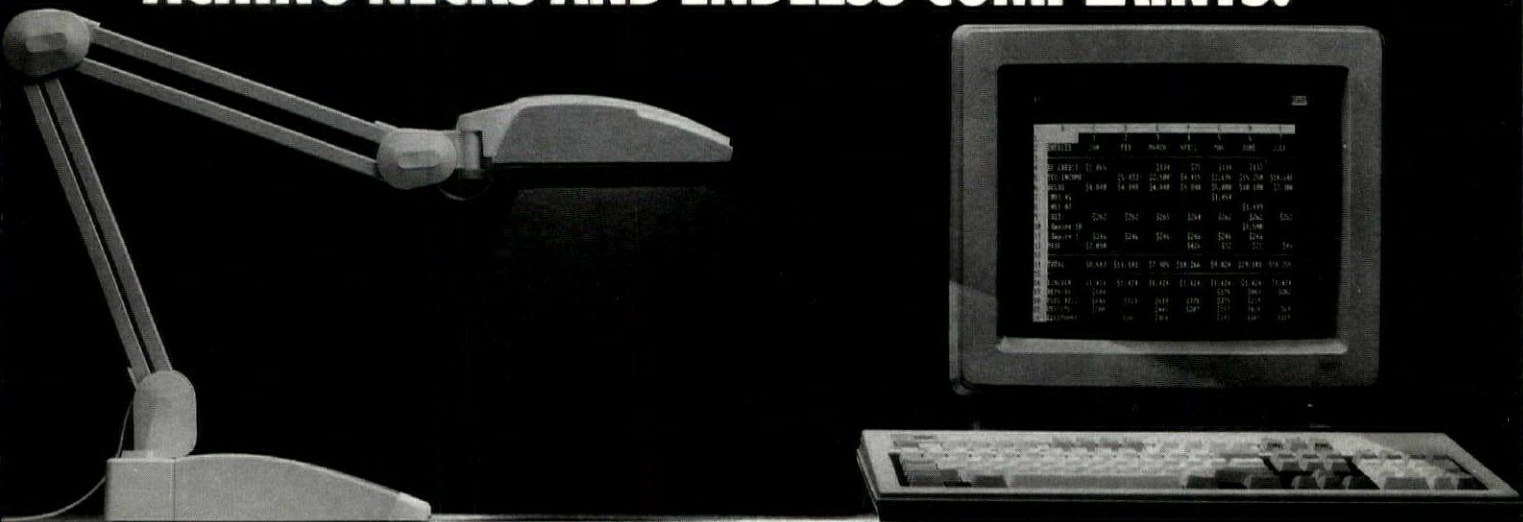
A STRATEGIC APPROACH TO LIGHTING DESIGN AND
MAINTENANCE FOR CORPORATE FACILITIES

MODERATOR: Robert D. Vrancken, Facilities Management
Program, Grand Valley State University

11 a.m.-12 p.m.

INTERPRETING AND APPLYING THE CHICAGO ELECTRICAL
CODE

INTRODUCING THE ANSWER TO TIRED EYES, ACHING NECKS AND ENDLESS COMPLAINTS.



LUXO ASYMMETRIC TASK LIGHTS.

Much of the lighting for today's offices is a disaster. So much light is provided for keyboards and desks that computer screens are washed-out and obscured with glare. Productivity decreases, complaints increase.

Luxo solves the problem

with a breakthrough lighting technology—asymmetric task lights. These new task lights use computer-designed reflectors that sharply cut off the light to prevent wash-out and glare, and compact fluorescent lamps for ample illumination.

Light spreads across a wide area. Lamp heads can be placed outside of the work area. Desks and keyboards are well lit; computer screens aren't. Call: **LUXO**
1-800-222-LUXO
(In NY) 914-937-4433

Available in 13W, 18W and 24W lamping. Mounts on desks, walls, inclined surfaces or with Space Saver Rail Mount.

Circle No. 15 on product card.

Architectural Lighting May 1990 47



Philips White SON



One small step for man.

Our new display lamp is such a big breakthrough, we feel confident promising you the moon.

Philips White SON lamp is the first and only High Intensity Discharge light source of its kind. It produces a brilliant, warm, full-spectrum light that lets you see color and texture the way no other HID lamp can.

No less remarkable is its longevity. The White SON lasts an incredible 10,000 hours. And it does so with outstanding color stability.

In addition, the White SON is efficient with up to 47 lumens per watt.

One giant leap for mannequin.

All of which makes it excellent for use in retail environments, boutiques, museums, atriums and landscaping. Anywhere, in fact, where directional light with true-to-life color is essential. For a full range of display applications, the White SON is available in 35, 50 and 100 watts.

To learn more about the exciting White SON lamp take one small step to the nearest phone. Once there, call Philips Lighting Team at 1-800-631-1259.

It's time to change your bulb.™

Philips Lighting

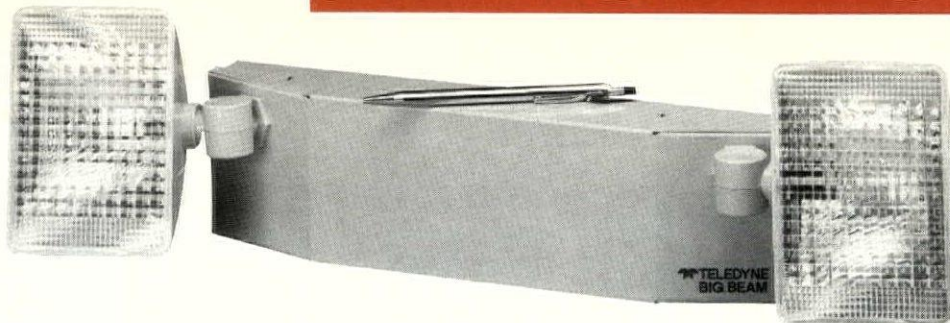


PHILIPS

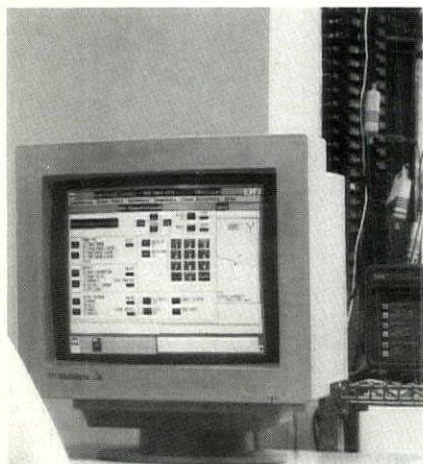
Circle No. 16 on product card.

NEW PRODUCTS

LAZER, THE LATEST IN TELEDYNE BIG BEAM'S LINE OF EMERGENCY LIGHTING UNITS, measures 18½ inches × 4⅝ inches including its two lighting heads. The Lazer is available in standard beige and a variety of custom colors. Teledyne Big Beam, Crystal Lake, IL. **CIRCLE 40**



POWERTALK SOFTWARE VERSION 3.0 FROM BASIC MEASURING INSTRUMENTS helps designers monitor and screen power-quality, harmonics, and power-cost data collected by the company's power monitoring instruments. Basic Measuring Instruments, Foster City, CA. **CIRCLE 41** ▼



Designing Architectural Dimming Systems?

Keep your most creative ideas from ending up like this.

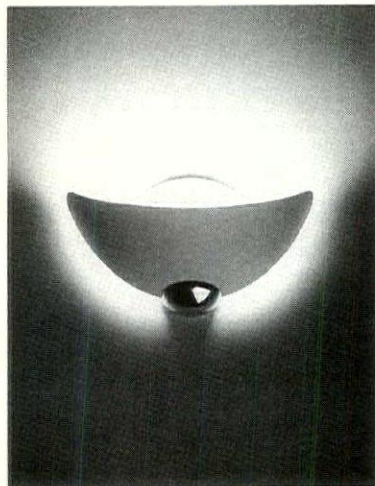
Crestron Lighting Controls provide price, performance and elegance that turn your best ideas into reality. Take advantage of our unique support team. Call the control hotline today 1 800 237-2041.

CRESTRON[®]
ELECTRONICS INC.

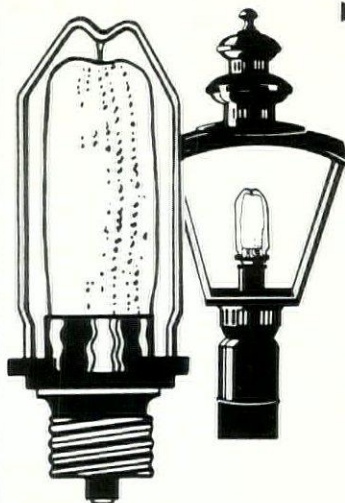
101 Broadway Cresskill, NJ 07626 201 894-0660 Fax: 894-1192

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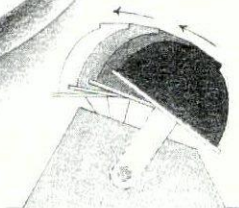
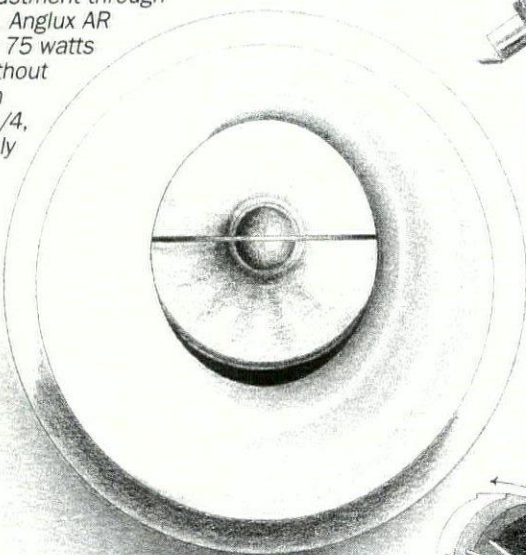
◀ **AURA, DESIGNED BY PERRY A. KING AND SANTIAGO MIRANDA,** and manufactured by Atelier International Lighting, is a wall sconce available in two sizes. Aura provides a combination of direct upward and indirect reflected light. Atelier International Lighting, Long Island City, NY. **CIRCLE 42**



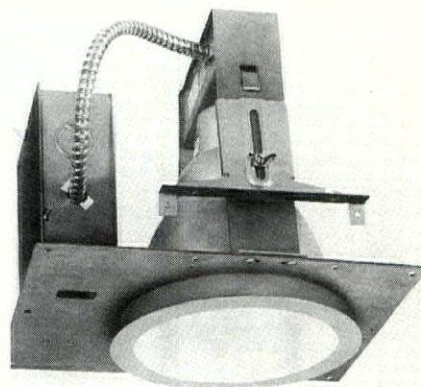
▶ **ALCA INDUSTRIES' ELECTRIC GAS-MANTLE** may be used for outdoor fixtures such as post lamps, porch or entry lights, driveway lanterns and large street lamps, and for indoors on chandeliers and sconces. Alca Industries, Inc., Fairfax, VA. **CIRCLE 43**

ANGLUX™ AR

A recessed, adjustable accent fixture for OSRAM's AR70 quartz low-voltage lamp. Easy one-finger rotation of the lamp with secure locking that preserves your adjustment through years of relamping. Anglux AR provides 20, 50 or 75 watts of quartz punch without glare. A companion fixture, Darklite™ AR/4, is available for highly controlled downlighting. Two new Standards from Edison Price. Call or write Dept. A for further information and the name of your local rep.



EDISON PRICE'S COMPLETE LINE OF ENERGY-SAVING DOWNLIGHTS AND WALL WASHERS use a compact fluorescent double twin tube lamp. The fixtures are available in diameters of 4, 5, 6, 7, and 8 inches and each size can be purchased as a downlight or any of the wall-wash varieties. Edison Price Lighting, New York. **CIRCLE 44 ▼**



EDISON PRICE LIGHTING
ARCHITECTURAL LIGHTING AT ITS BEST

Edison Price Inc., 409 East 60 Street, New York, NY 10022 Tel: 212-838-5212 Fax: 212-888-7981

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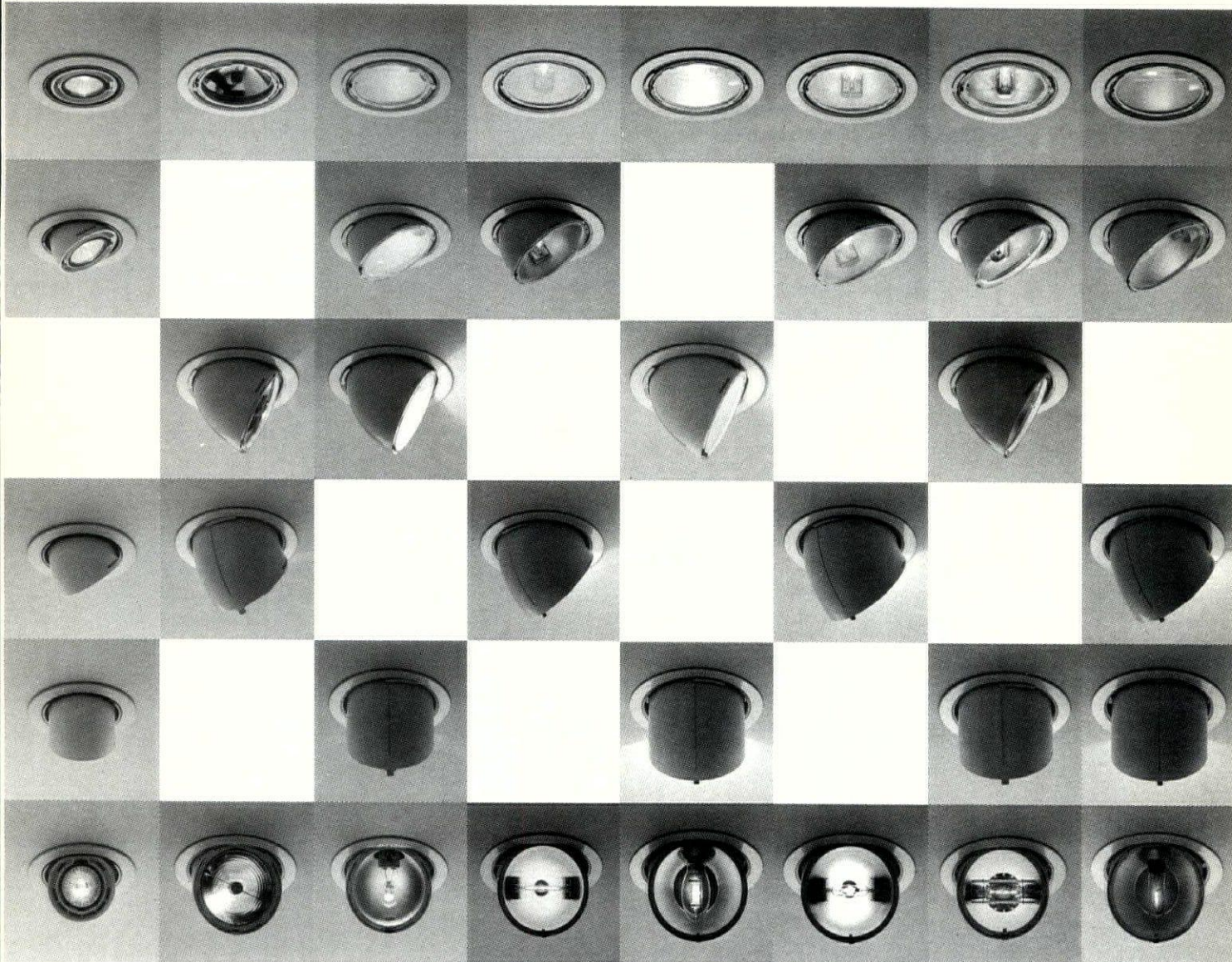
DOWNSPOT

by **REGGIANI**



PRODUCT
DESIGN
AWARD

Design Fabio Reggiani



Low Voltage
MR11-MR16-35-75W

Low Voltage
Superspot-50W
& Par36 50W

Single Ended
Tungsten Halogen
100W

Linear Double Ended
Tungsten Halogen
100-300W

Metal Halide-Single Ended
100W-Sylvania

HQI-Double Ended
70-150W

Linear Tungsten Halogen
100-300W

High Pressure Sodium
70-100-150W
White-Son

DOWNLIGHT+ SPOTLIGHT= DOWNSPOT

ADJUSTABLE ∇ 60° VERTICAL ⊕ 356° HORIZONTAL • FOUR SIZES IN ONE UNIFIED DESIGN



POLYBLOK - New system for ventilation and lampglass retention Downspots are UL listed and IBEW made. Two recessed

housings accommodate entire series - 3-5/8" recess depth for MR16, Par36, and linear halogen, HQI. Metal Halide and HPS-8" recess depth.

Specification catalog available covering complete "Downspot" Series.



REGGIANI

USA INC ILLUMINATION

Circle No. 19 on product card.

FACTORY: 65 RIVER ROAD - NEW WINDSOR, NY 12550 - PHONE 914-565-8500 - FAX 914-562-3082
HOW ROOM: REGGIANI LIGHT GALLERY - 800A FIFTH AVENUE, NEW YORK, NY - PHONE 212-421-0400



▶ **ROYAL HAEGER'S NEW SERIES OF CERAMIC LAMPS** features a ceramic jar suspended within a two-pillar mounting/holder. Floor model 1431 is 61 inches high, and table model 1430 is 32 inches high. The lamps are available in four colors with coordinated opaque shades and marbled mountings. Royal Haeger Lamp Co., Macomb, IL. **CIRCLE 45**



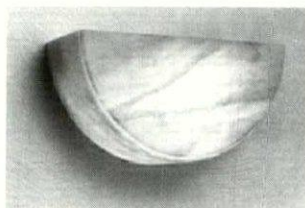
▶ **SCHONBEK'S CRYSTA-LOCK CRYSTAL SECURITY** fastener works by means of set screws that make the removal of a fixture's finial ball virtually impossible. This fastener is in place on Quattro foyer pieces, the Olde World Collection, the Regency Collection in Stress, and a variety of the Heritage Handcut Collections. Schonbek Worldwide Lighting Inc., Plattsburgh, NY. **CIRCLE 46**

*LaMarbl'*TM
IT COULD
FOOL MOTHER NATURE

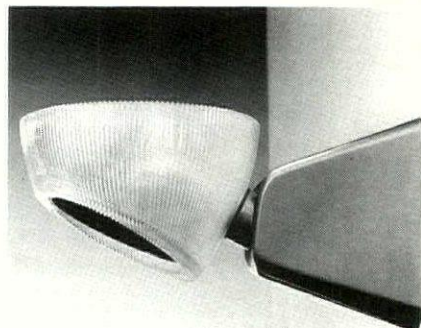


Now there's a new freedom of choice in styles and colors of decorative sconces for contract lighting. We've combined the beauty of marble and the translucence of alabaster... but without their drawbacks. Elegant, durable LaMarbl', with PL fluorescents, offers an energy-saving, low-maintenance combination that fits easily into hospitality industry budgets.

See for yourself. Contact: LaMar Lighting Co., 80 Albany Avenue, Freeport, New York 11520. Tel: 516-379-4200. Fax: 516-379-4205.



GRALL BETA, A MEMBER OF THE GRALL SYSTEM is a large-scale wall sconce that provides upward illumination through white or aquamarine frosted glass. Beta is available in glossy metallic anthracite gray, or white baked enamel. Flos Incorporated, Huntington Station, NY. **CIRCLE 47**



LAMAR
LIGHTING CO., INC.

"COME VISIT US AT
LIGHTING WORLD CHICAGO AT
BOOTH #836"

LIGHTING THE HOSPITALITY INDUSTRY FOR OVER 30 YEARS

Circle No. 20 on product card.

**HOLOPHANE CLASSICS.
LIGHTING THAT PUTS NEW LIFE INTO WOOD.**



Prismatic light brings out the richness of wood like nothing else. Its combination of single- and multi-point light source accentuates grain, texture and color in ways no other single technique can duplicate.

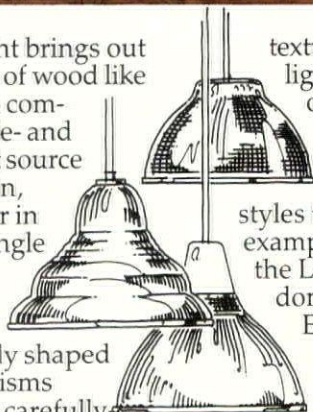
We use hundreds of precisely shaped and arranged prisms to direct light in carefully determined patterns. Balancing the overall output so

textural details can be highlighted, *without* washing out the subtle colors.

And Holophane® gives you twelve Classic prismatic styles to choose from. Three examples shown are: the Liberty™ (left), Paradome® (below), and Edmund Stevens™ (above).

Twelve elegant ways to highlight the natural beauty of wood. For more information,

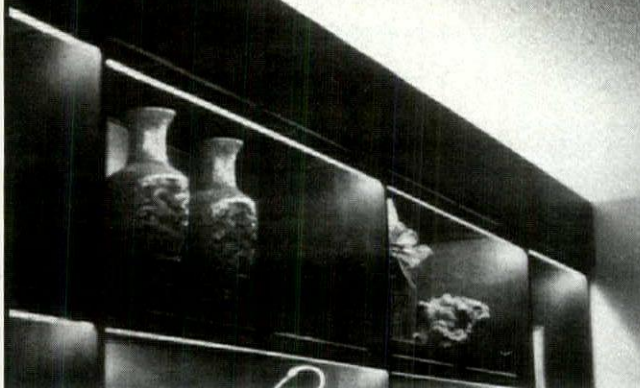
contact your Holophane representative or write Al Warner, Holophane Company, Inc., 214 Oakwood Avenue, Newark, Ohio, 43055. (614) 349-4116.



HOLOPHANE
LEADER IN LIGHT CONTROL

CHANNEL

12V/24V



**Always Eye-Catching
NOW: Easy to Relamp**

LIGHT BUDS CHANNEL's new EZ construction makes relamping a snap. This bright, uniform low-voltage lighting is ideal for soffit, shelf or niche lighting. Easy to install, easy to maintain, easy on the eye. Contact:

SYLVAN DESIGNS, Inc.

8921 Quartz Ave., Northridge, CA 91324

Circle No. 22 on product card.

ARCHITECTURAL
LIGHTING

Coming in the
August issue

**1990/1991
DIRECTORY**

of lighting equipment
and accessories

Attn: Suppliers
Look for the directory
questionnaire in the mail.
Deadline for its return:
June 11, 1990.



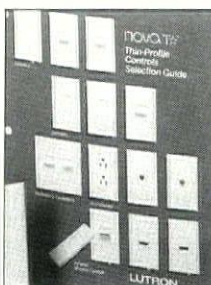
**Power Protection
Equipment**

Siltron Illumination's short-form catalog features information on its complete line of power protection equipment. The catalog provides brief descriptions of this family of emergency power systems and also describes the SIL-232 UPS Diagnostic Interface Option, which provides remote or local computerized supervision of Siltron UPS equipment. Siltron Illumination, Inc., Cucamonga, CA. **CIRCLE 35**



Wallighter 175 Luminaire

LSP-1021, a four-page publication from GE Lighting Systems, describes the improved Wallighter 175 luminaire designed for wall-mounted lighting of building perimeters, loading docks, or parking garages. The luminaire uses low-wattage HPS or metal halide lamps. Benefits, suggested applications, ballast and photometric data, dimensional drawings, and ordering information are featured in the publication. GE Lighting Systems, Hendersonville, NC. **CIRCLE 36**



**Selection And
Specification**

Lutron's Nova T* Thin-Profile Lighting Controls and Accessories are featured in a pair of brochures. The Nova T* Selection Guide provides photos, descriptions, a color selection chart, and ordering information for the entire line. The Nova T* Specification Guide contains the information necessary to specify an installation. This 48-page brochure allows specifiers to select the product, complete the control station detail, and write specifications. Lutron Electronics Co., Inc., Coopersburg, PA. **CIRCLE 37**

RATES

The Marketplace is a monthly feature of Architectural Lighting, offering readers easy access to lighting products and services for commercial, industrial, and institutional applications. Listings in this reference section are sold on an annual basis. First Line (Bold Face) \$990/yr. Additional lines \$690/yr. Mini Display \$3600/yr., \$1990/6 months.

Career Opportunities, Situations Wanted and Used Equipment For Sale Ads are sold on a monthly basis. Ads are \$28 per line with a 4 line minimum. Mini Display ads are \$160 (1X), \$140 (6X), \$110 (12X).

For full information and closing dates, contact Nancy Berman 800-950-1314 or 212-869-1300.

CAREER OPPORTUNITIES

Staff Scientist

LBL seeks an experienced scientist to direct research aimed at measuring and improving energy performance of lighting systems. Design experimental procedures and instrumentation for fluorescent lighting systems. Manage research for measuring effect of natural and artificial cooling systems on fluorescent lamp efficiency. Develop design procedures for promulgating widespread use of advanced lighting concepts. Publish papers in archival journals.

Requirements: Experience in designing and managing experimental facilities for measuring lighting system performance. Strong record of publications in measuring and improving performance of lighting systems. Knowledge of HVAC systems and design procedures and experience in use of thermal analysis programs preferred. Ph.D. in architecture, physics or engineering preferred.

Salary Range - \$3000 to \$6200/Mo. To apply send resume to, Lawrence Berkeley Laboratory, Employment Office, #1 Cyclotron Road, 90-1042,

Berkeley, CA 94720. Refer to Job C/5701. An Equal Opportunity Employer M/F/H.



**LAWRENCE
BERKELEY
LABORATORY**

MARKETING

● **PRODUCT MANAGER** ●

A leading manufacturer of lighting fixtures has an excellent opportunity for a Product Manager who will be responsible for management of planning, development and implementation of all new products and/or major marketing projects.

The ideal candidate will have a minimum of 3 years experience as a sales representative and 3 years experience in a marketing position, preferably in product management in the lighting industry. Must be creative and have excellent presentation and sales skills.

Excellent benefits and salary, if interested, please send resume and salary history to:

PERSONNEL MANAGER
P.O. BOX 7307
LOS ANGELES, CA 90022

ACCENT AND DISPLAY LIGHTING (INTERIOR)

- DANALITE, 16392 Gothard St., #A, Huntington Beach, CA 92647 Fax 714-848-1669 714-841-4325
Low voltage/slim profile linear lighting system/high intensity halogen lamps/extensive apps.
- FIBERSTARS, Int. & Ext. Lighting, 47456 Fremont Blvd., Fremont, CA 94538 800-327-7877
- MARCO LIGHTING, 6100 S. Wilmington Ave., Los Angeles, CA 90001 213-583-6551
Recessed Architectural Lighting: Compact Fluorescents—Low Voltage Capsyllite—HID—Incandescents.
- NL CORP., 14901 Broadway, Cleveland, OH 44137 Fax 216-662-9069 or 216-662-2080
Recessed HID and incandescent; decorative; custom; church; 20, 30 & 60 amp track; fluorescent lighting systems. Call for more information.

ACCESSORIES AND COMPONENTS

- MAXIMUM TECHNOLOGY, 80 Industrial Way, Brisbane, CA 94005 415-468-2560

AMBIENT LIGHTING SYSTEMS (INTERIOR)

- LITHONIA LIGHTING. We cover the lighting spectrum 404-922-9000 Fax: 404-922-1841
- PEERLESS LIGHTING CORP., P.O. Box 2556, Berkeley, CA 94702 Fax 415-845-2776, Phone 415-845-2760

AREA LIGHTING (EXTERIOR)

- EMCO LIGHTING, 7300 50th St., P.O. Box 1640, Milan, IL 309-799-3111
- SPRING CITY ELECTRICAL MFG. CO., Spring City, PA 19475 Call 215-948-4000 or Fax 215-948-5577
Historically authentic, cast iron ornamental lighting posts, bollards and adaptations.
- WESTERN LIGHTING INDUSTRIES (see ad below)

NEW HEAVY-DUTY SWIVEL

- U.L. "Wet Location" listed
- Full 180° rotation
- Use on fixtures to 20#

Western Lighting Ind.
3540 Valhalla Dr., Burbank, CA 91505
818-841-7896 (FAX: 818-841-8910)

CONTROLS

- STRAND ELECTRO CONTROLS, 2975 S. 300 W., Salt Lake City, UT 84115 801-487-6111
Manufacturing full line of lighting controls and dimmers for Restaurants, Hotels, Board Rooms, etc.

EMERGENCY LIGHTING

- ELECTRO POWERPACS CORP. (see ad below) 617-876-9220

DYNARAY EMERGENCY LIGHTING

Compact, self-powered exit, only 7 1/2" high. Mounts over doorways under most 8" ceilings. Integral sealed ni-cad batteries and charger board. Architecturally designed, anodized extruded aluminum exit available with incandescent or fluorescent lamps.

253 Norfolk St., Cambridge, MA 02139
FAX 617/661-4400 TEL 617/876-9220

GLASS

- CLOSEOUT—MCGRORY GLASS, INC., FRONT & LLOYD STREETS, CHESTER, PA 19013 ... 800-548-9553
Specialty glasses, borosilicates, flashed white opal, lozenge, ground, DR acrylics.

LAMPS

- GTE/SYLVANIA LIGHTING, Sylvania Lighting Center, Danvers, MA 01923 508-777-1900 617-777-1900
- OSRAM CORP., 110 Bracken Road, Montgomery NY 12549 914-457-4040
- USHIO AMERICA, 20101 S. Vermont Ave., Torrance, CA 90502 ... FAX 800-776-3641 or 800-326-1960
Manufacturer of MR11, MR16, T3 Quartz, Minican and DC Bayonet Halogen Lamps.
- VENTURE LIGHTING INTL., 32000 Aurora Rd., Solon, OH 44139 800-437-0111
Metal Halide, High and Low Pressure Sodium, Mercury, MR-16 and MR-11 Display Lamps. Many new and unique products not available from other manufacturers.

LANDSCAPE LIGHTING

- DINICO PRODUCTS, INC., 123 So. Newman St., Hackensack, NJ 07601 201-488-5700
- ELECTRO-ELF, 10011 Olive St., Temple City, CA 91780 800-728-0081 Fax 818-579-1333
Energy Efficient Fluorescent lighting. Sealed Waterproof Fixtures available in many styles.

LIGHTING POLES (WOODEN)

- J.H. BAXTER & COMPANY, P.O. Box 10797, Eugene, Oregon 97440 503-689-3020
Manufacturer of Timberwood Lighting Standards. A superior pressure treated Douglas Fir laminate for decorative outdoor lighting support. Contact Richard Baxter.

OEM MANUFACTURERS

- EDWIN GAYNOR CO., 200 Charles St., Stratford, CT 06497 ... 203-378-5545, outside CT 800-EGAYNOR or FAX 203-381-9019 For more information about fluorescent wiring devices, switches and lamp holders, call and ask for Jill Sapak.

Corrections

We apologize for the following errors on page 34 of the January issue, "Sidelights" box: As non-electrical pendant sculptures, ball-and-socket swivel connectors were not required. It was not an exception to California rules because the rules did not apply in this case.

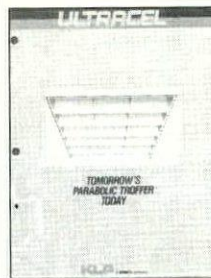
In the case of even a severe quake, the rods might possibly bend, but the pendants would not fall.

Additional credit for the Orlando County Convention/Civic Center, which appeared in the March 1990 issue: Associate Architects: Vickrey/Ovresat/Awsumb Associates, Inc., Orlando, FL.

In the March 1990 Spotlight, "Designers Display Creativity For AIDS Benefit," DIFFA should have read: Design Industries Foundation for AIDS.

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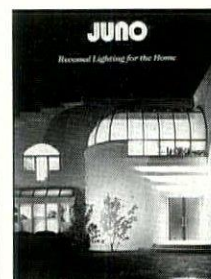
Parabolic Troffer

A six-page brochure from KLP describes its new parabolic troffer for office and other commercial applications. The brochure lists features and benefits of the Ultracel, as well as the 50 different lay-in grid ceiling systems into which it can be installed. Line drawings, photographs, and charts are offered. Keene Lighting Products, a Genlyte Co., Wilmington, MA. **CIRCLE 55**



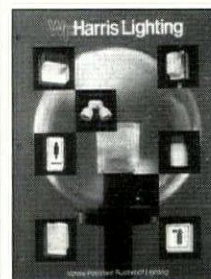
Light Level Switching System

MagneTek Triad's two-page flyer contains specifications and wiring diagrams for the Ballastar light level switching system. The bulletin describes the one-step light level switching system, lists model numbers, and calculates cost savings. This system reduces glare on computers, and reduces maintenance and security costs for nighttime lighting. MagneTek Triad, Huntington, IN. **CIRCLE 56**



Recessed Lighting Products

Juno's "Recessed Lighting for the Home" 32-page catalog is fully illustrated, and features lighting suggestions and application photos utilizing the company's wide range of recessed lighting products. New products are introduced and educational sections are featured in this five-color catalog. Juno Lighting, Inc., Des Plaines, IL. **CIRCLE 57**



Vandal And Rust Resistant Housings

Harris Lighting's color brochure illustrates its UL listed product line for commercial and residential applications. Harris' Lexan polycarbonate housings are nonconductive and lightweight for safer and easier installations. The luminaires never need replacing due to rust or corrosion. Harris Lighting, Inc., Monroe, NC. **CIRCLE 58**