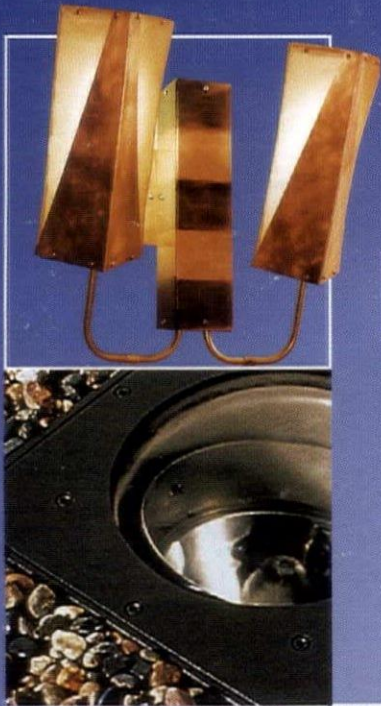


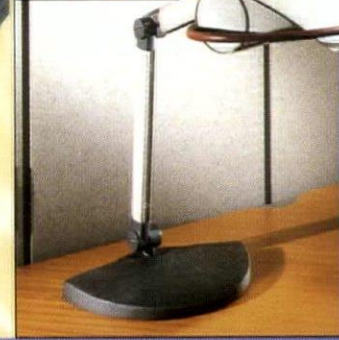
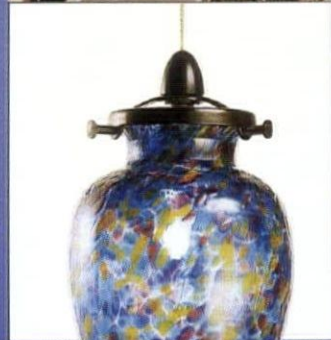
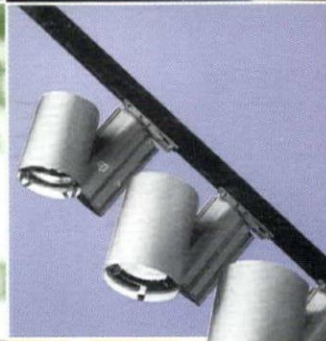
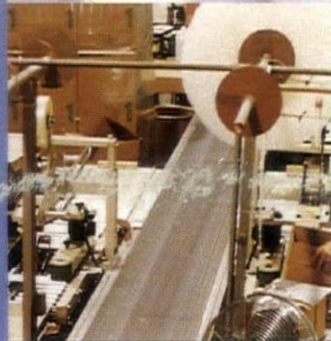
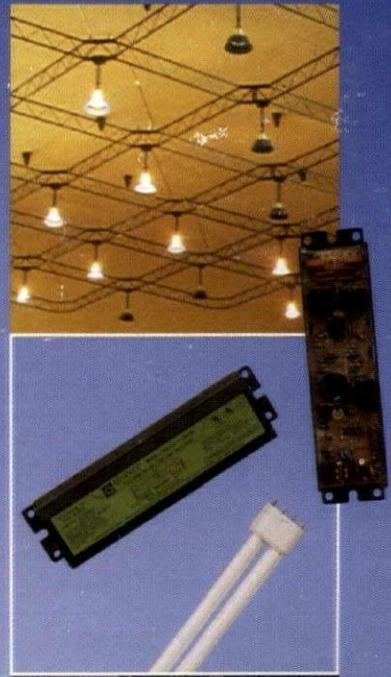
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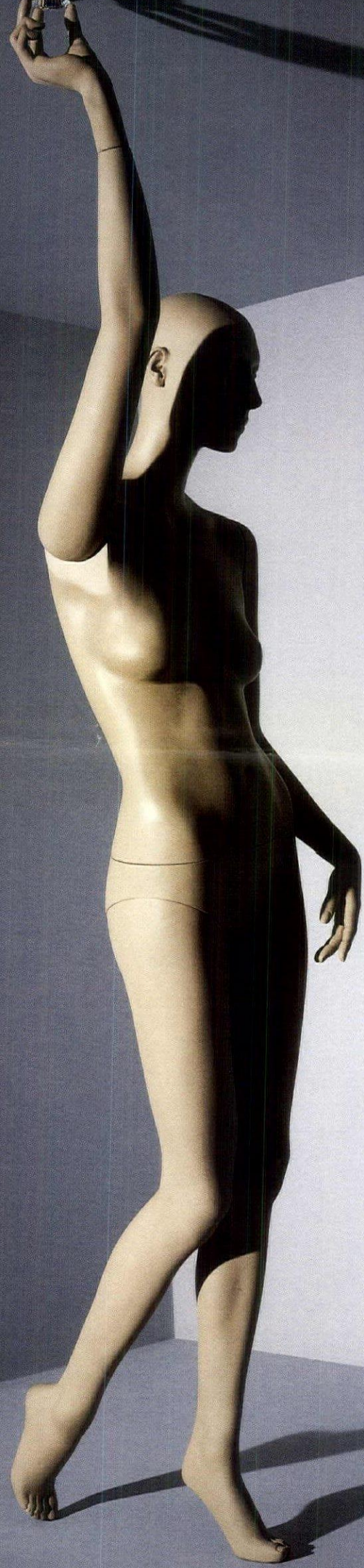
SPRING PRODUCT ISSUE



100+ PRODUCTS
BOOK GUIDE
WEB SITE DIRECTORY
DESIGN SOFTWARE ROUNDUP

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08

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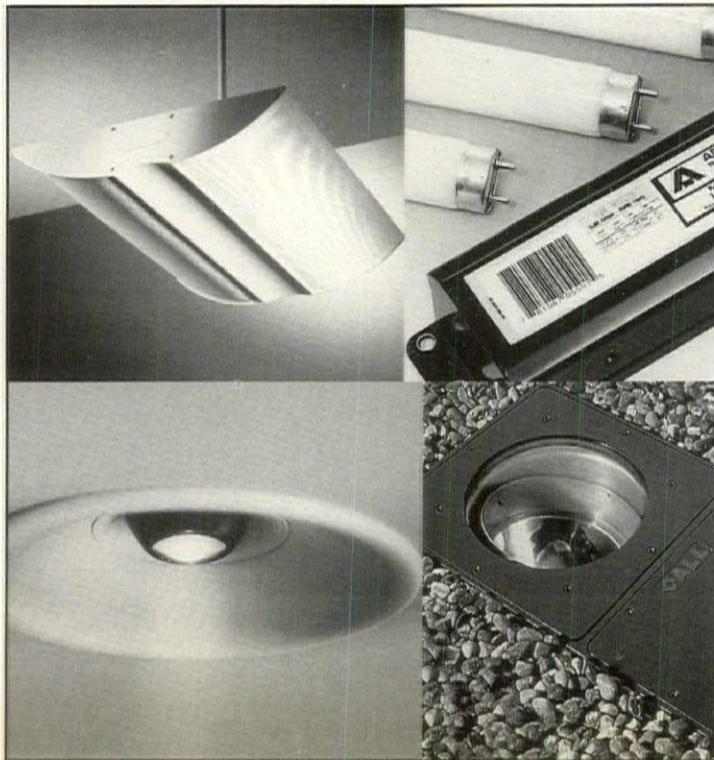
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PRODUCTS

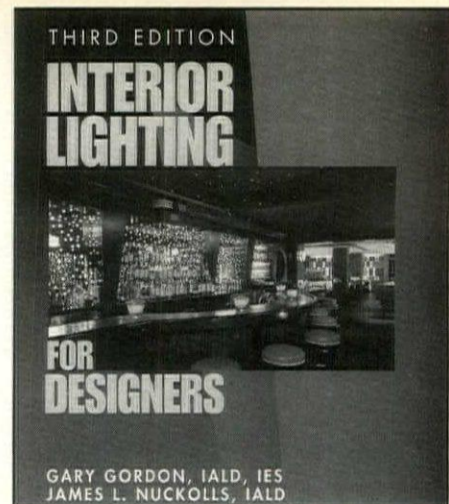
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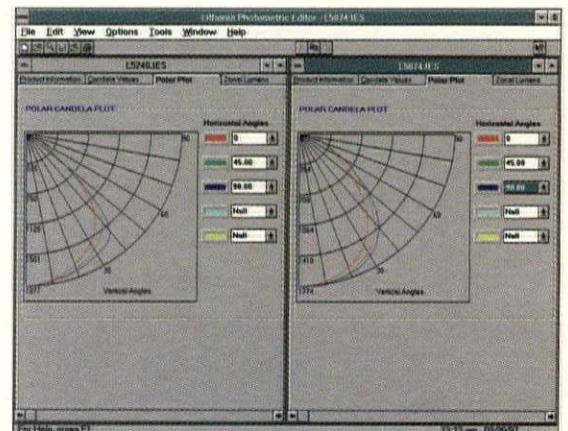
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LIGHTING LIBRARY

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SOFTWARE ROUNDUP

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Project: Cypress Creek Station, Fort Lauderdale, FL
Architect: Perez & Perez Architects Planners
Engineer: William A. Berry & Associates
Luminaire: 60° Forward Throw Indirect

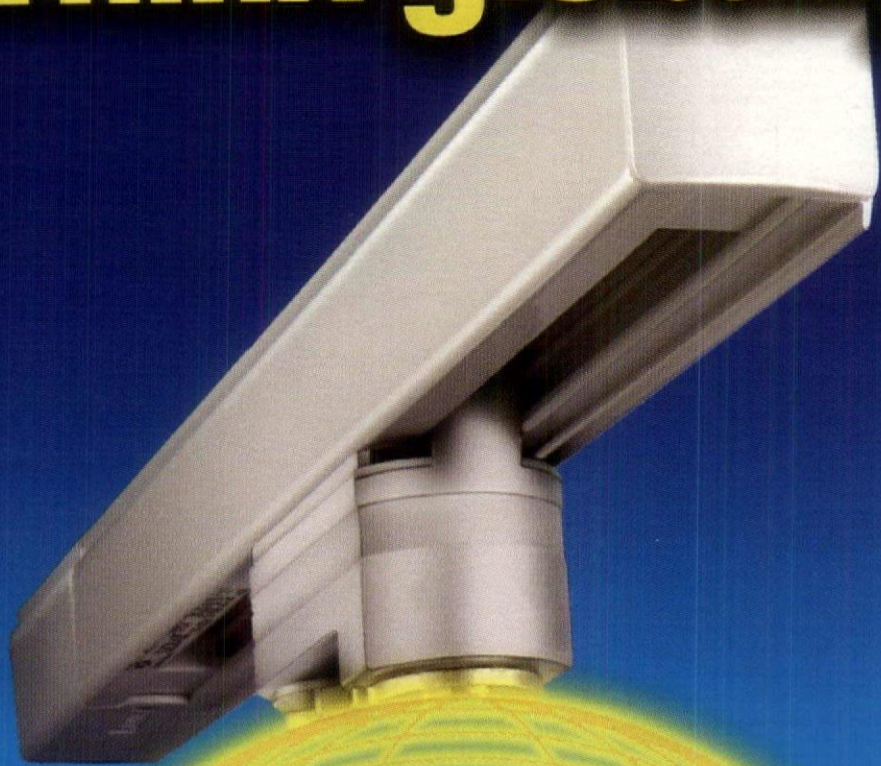
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Circle No. 3

architectural lighting

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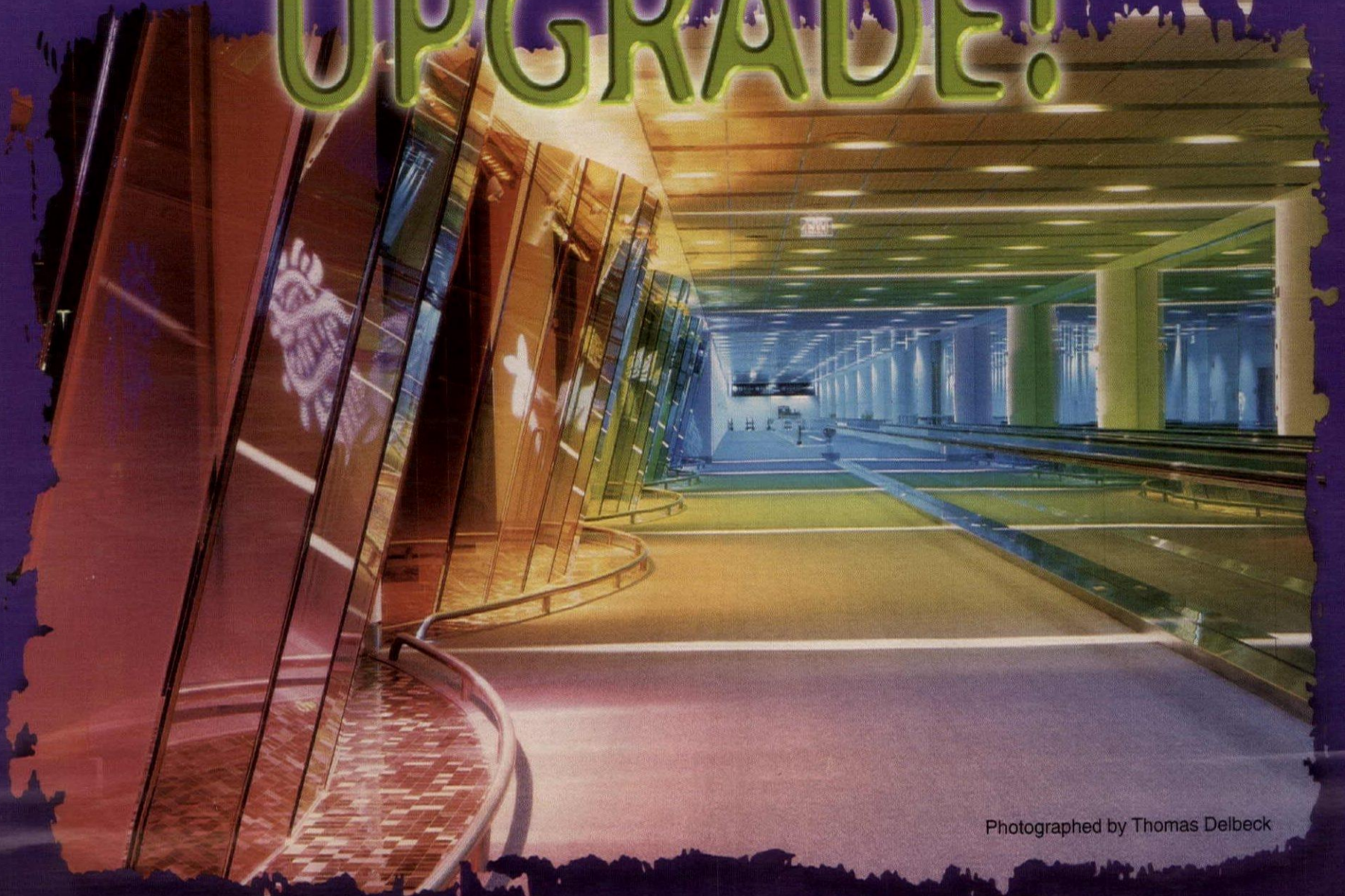
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USHIO 10,000 Hour MR-16 Lamps

Travelers arriving at Miami International Airport will happen upon an oasis for the senses called the Harmonic Runway. This achievement of "interactive architecture" by PhenomenArts, Inc. is a spectacular mix of color, changing light and sound. As visitors stroll through a rainbow of color, the 180 foot-long corridor resonates with a harmonious blend of musical instruments tinged with the calls of the Everglades' native wildlife.

Recognized for excellence in the use of lighting, the Harmonic Runway was presented with the prestigious G.E. Edison Award in 1995.



How do you go beyond "excellence"? Designer, Christopher Janney chose to relamp his creation, with MR-16's from the Ushio Ultraline™ series of reflector halogen lamps.

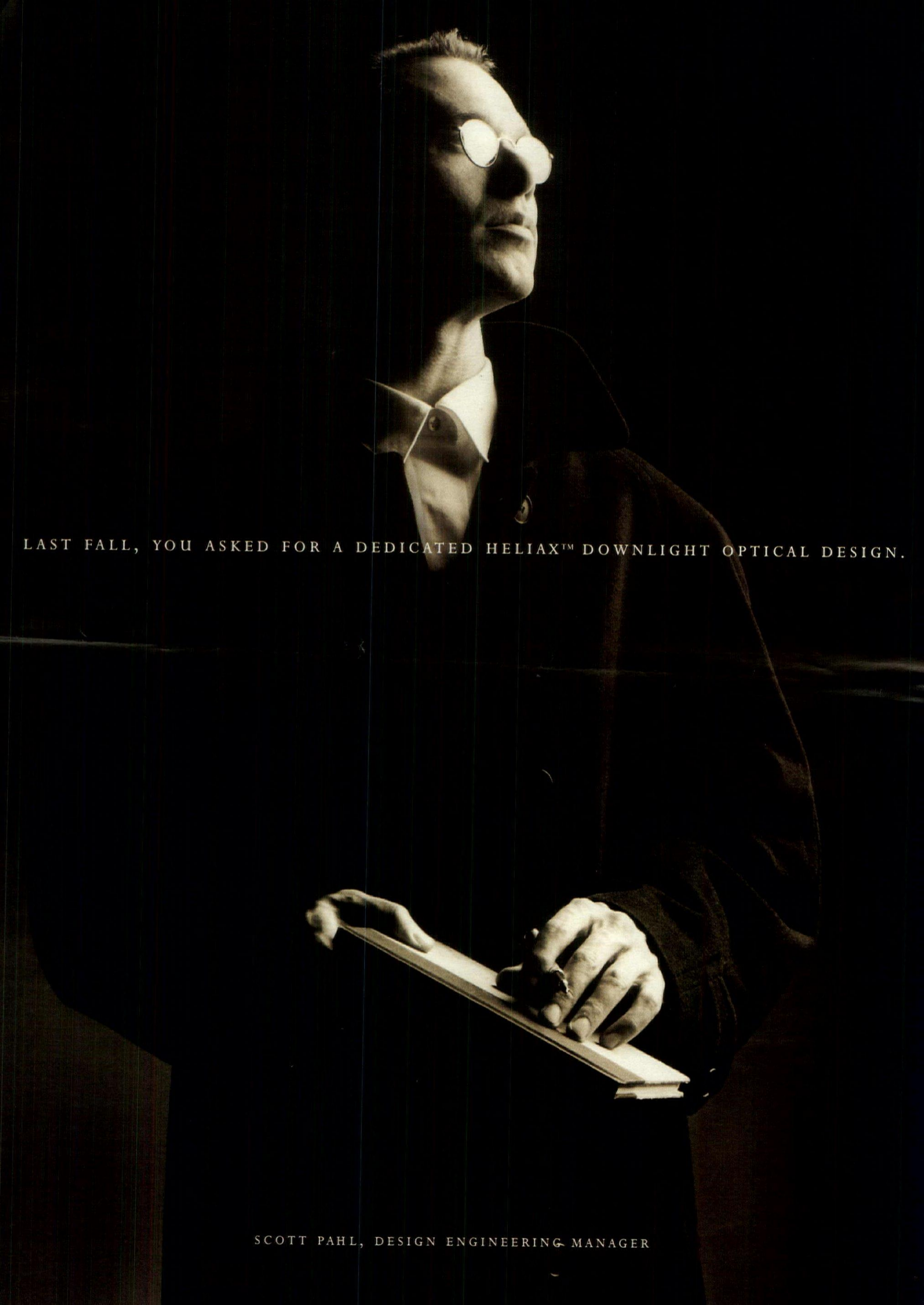
At 10,000 hours average life — twice the life of any MR-16 on the market today — the Ushio Ultraline's™ special titanium reflector coating provides consistent color throughout the life of the lamp.

Designers no longer have to compromise their creative vision...

because life's too short.

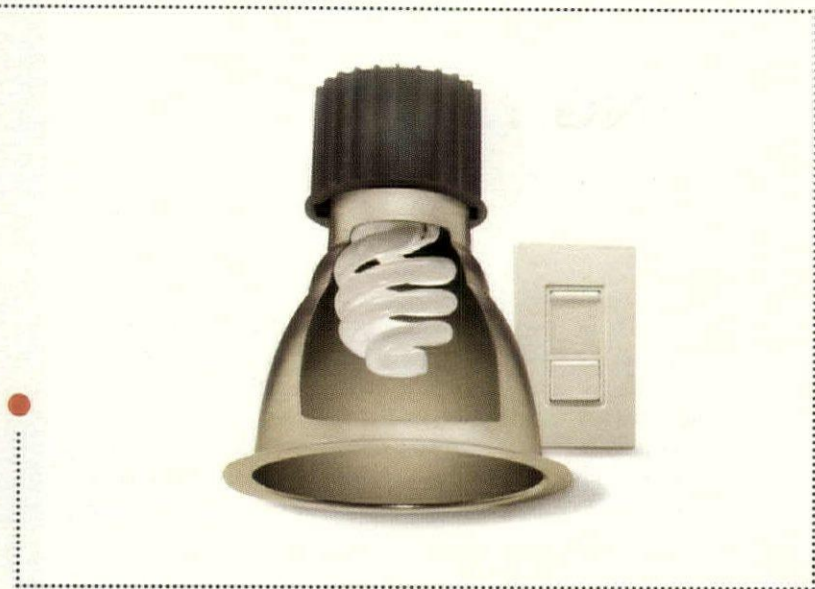
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Prescolite HeliAx downlights offer major advantages over traditional compact fluorescent downlights. Thanks to our exclusive Virtual Source™ optics — cutoff is sharp, brightness is low and the "look" is near incandescent. But that's not all. Because of their unique helical design, less light is trapped by the tubes. Because they utilize

our Intelect™ electronic ballast, they provide dimming to 5%. And, because we design and manufacture our own dimmers and emergency battery packs, Prescolite is the only manufacturer that can offer you a single source warranty on every component. The Prescolite HeliAx Downlight — another industry "first."

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Circle No. 5

Contact your Prescolite representative today about any of our products or call 510.562.3500. Visit us at LightFair at Booth #901.

INTRODUCING ...

Welcome to a very special issue of *Architectural Lighting*. In 1996, we conducted reader surveys and asked what type of information you wanted and how we could serve you better. Readers overwhelmingly said they wanted more product information, and so the idea for a special fifth issue was born. We also wanted the issue to stand out from our standard four issues and be used year-round not only as a product directory, but as a resource directory.

The result is the Spring Product Issue, debuting at Lightfair International in New York City. It includes nearly 100 products broken out by category plus a full-color gallery of 24 products from our supporting advertisers. In this directory, we offer a broad range of new product introductions, as well as some products introduced in 1996. You'll find indirect, task, fiber-optic, track, decorative and other popular categories of architectural lighting, as well as lamps, ballasts, controls and accessories.

CRAIG DILOUIE,

EDITOR-IN-CHIEF/

ASSOCIATE PUBLISHER

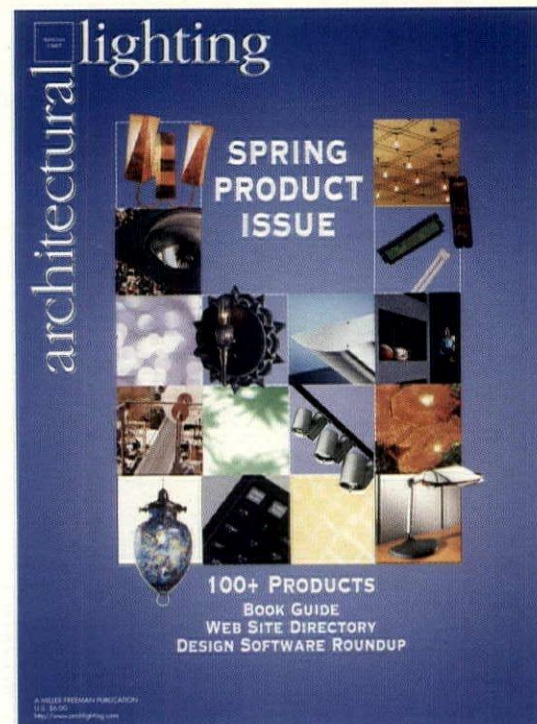
In addition to products, we provide resources such as our new Lighting Library, a listing of manufacturer's Web sites and a guide to lighting design software. Finally, we offer several feature stories.

We expect the Spring Product Issue to be popular as a total resource directory; look for it to expand next year to include even more directories, sections and features.

The "supply side" of our industry is growing, predominantly fueled by a growing domestic economy, international sales and technology. In a recent *Architectural Lighting* survey of some 300 manufacturers (10 percent responding), 90 percent of respondents reported that sales grew in 1996, with 80 percent expanding manufacturing capacity last year and nearly 80 percent saying they anticipate expansion in 1997.

Regarding international sales, 70 percent of respondents said sales to foreign markets increased in 1996, with most of these sales attributed to the Pacific Rim (58 percent) and Canada/Mexico (29 percent).

Regarding technology and innovation, 30 percent said they were reinvesting 7 percent or more of sales back into research and development of new products, with 30 percent reinvesting 4 to 6 percent (note that 17 percent did not answer; the remainder invested 3 percent or less). When asked what product attributes were most important to specifiers when specifying their product category, the answers ranked:



design/construction/materials (30 percent), modification capabilities (19 percent), durability (11 percent), energy efficiency (11 percent), availability (7 percent), breadth of product line (7 percent), "other" (7 percent), cost (4 percent) and service (4 percent). Manufacturers are also using new information technology, with nearly half (47 percent) reporting they now have a Web site, and about one-fourth (23 percent) reporting they offer literature on CD-ROM.

That is a brief glimpse at the state of the industry.

Now turn the page and take a look at the state of the art...

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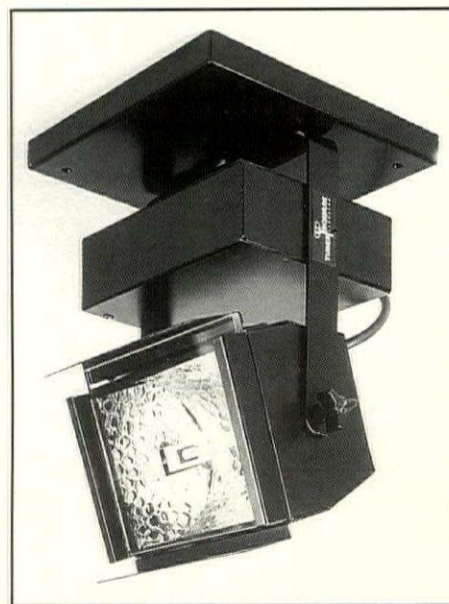
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Times Square Lighting designs metal halide fixtures that conform to your needs. Black or silver fixtures add drama, while custom colors complement your themes. Barndoors, hoods, louvers and spread lenses create special beam effects. Many mounting options are available.

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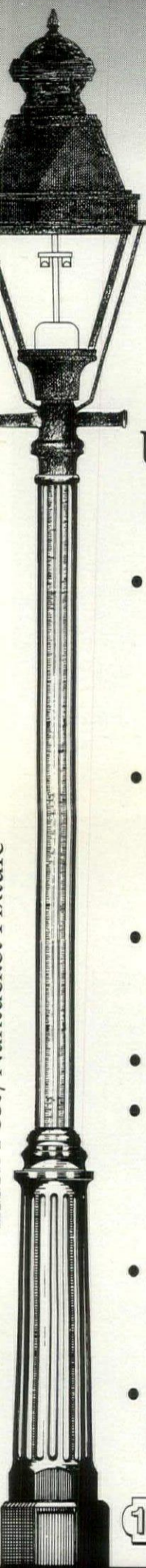
3mm mirrored chrome backplate, evenly distributes illumination throughout the oval diffusers creating an illusion of a floating island of light.

Subtle details of polished brass or polished nickel. Internal lamp source discreetly disguised with acrylic side baffles.

3" projection provides ADA compliancy at any mounting height.

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updates

LITHONIA ACQUIRES LUMAID

Lithonia Lighting, the fixture manufacturer, announced that it has acquired the assets of Lumaid, Inc., a supplier of emergency lighting products to the Canadian market. According to Lithonia, the move builds a more comprehensive offering that includes exit signs, emergency lighting units, fluorescent battery packs, remote fixtures and other accessories.

Louis Breton, former president of Lumaid, will continue to serve a lead role on the new management team. All products, manufactured at a new facility in St. Laurent, Quebec, are CSA-listed and will be backed by Lithonia's warranty; in addition, products will be marketed under the Lithonia Lighting Emergency Systems brand name and are represented by Lithonia's Canadian sales force.

LSI INTRODUCES NEW COMMERCIAL/INDUSTRIAL LIGHTING GROUP

LSI Industries, headquartered in Cincinnati, OH, has introduced its new Commercial/Industrial Lighting Group at Lightfair in New York City. For the first time, LSI Lighting Systems, Abolite Lighting and Greenlee Lighting jointly displayed their indoor and outdoor lighting products at the show.

"IDEA HOUSE" EXTENDS THOMAS' DESIGNER SHOWROOM PRESENCE

Westweek 1997 saw the opening of the new Idea House at the Los Angeles Pacific Design Center. The Idea House is a traditional home adapted to contemporary living, illustrating the integration of new technologies with quality interior design. The Accent Division of Thomas Lighting has contributed a variety of lighting solutions to the space, demonstrating good lighting techniques for the design community and the general public in a practical setting. A selection of Capri incandescent, low-voltage and fluorescent task and downlight fixtures employing a warmer color temperature is used to create a comfortable environment.

EXPANDED SELECTION IS AVAILABLE FOR PRESCOLITE QUICK-SHIP

Prescolite•Moldcast has announced availability of an expanded product selection guide for the quick-ship program, Prescolite Express. The 26-page product guide provides specifications and line drawings for more than 400 products available for shipment within five business days of receipt of order by Prescolite. A separate Canadian product guide is also available.

AMX CELEBRATES 15 YEARS

Started in 1982 by Scott and Ros Miller, the AMX Corporation celebrated 15 years of operation on April 1, 1997. Now a manufacturer of advanced control systems, the company began with one product—wireless controllers for slide projectors—and has grown into a publicly held facility, manufacturing more than 350 products with worldwide distribution and two subsidiaries, AudioEase and PHAST.

NATIONAL LIGHTING BUREAU ELECTS OFFICERS FOR 1997-98 TERM

Richard V. Morse, vice president of marketing at Lithonia Lighting, has been elected to a third term as chair of the National Lighting Bureau (NLB), a group that advocates quality lighting. Morse has been with Lithonia for 10 years.

TECH LIGHTING OPENS OFFICE IN NYC

Tech Lighting has announced the opening of its New York City office and showroom at Millenium Collection. The 5,000-sq.-ft. showroom displays MonoRail, a hand-bendable low-voltage system, as well as the company's Kable Lite, TwinRail and FreeJack systems. The loft space allows the fixtures to be displayed in application, lighting the furniture and art collections also represented in the showroom.

WIREMOLD COMPANY PURCHASES DIVISION OF DUAL-LITE

The Wiremold Company, through its Airey-Thompson subsidiary, has acquired the Wiring Products Division of Dual-Lite, a business of General Signal Corporation's Electrical Group unit.

LAM LIGHTING APPOINTS BOSSON VICE PRESIDENT, GENERAL MANAGER

Lam Lighting Systems, Inc. has announced the appointment of George C. Bosson as vice president and general manager, the operating head of the company. Bosson succeeds Warren G. Meltzer, who has retired after more than 40 years in the commercial lighting industry.

PRESCOLITE PROMOTES MARK BENGUEREL

Prescolite•Moldcast has promoted Mark Benguerel from director of marketing operations to vice president of manufacturing.

FIBERSTARS ANNOUNCES THREE SENIOR VICE PRESIDENTS

Fred Martin has joined Fiberstars, Inc. as senior vice president for Engineering, Research and Development. Fiberstars has also named Barry Greenwald, general manager of the Pool and Spa Division, and Steve Keplinger, director of Operations and general manager of the Retail Products division, as senior vice presidents.

LRC AND MOYER LAUNCH LANDSCAPE LIGHTING INSTITUTE

The Lighting Research Center (LRC) at Rensselaer Polytechnic Institute in Troy, NY will be offering the Landscape Lighting Institute, a week of intensive instruction led by Jan Moyer, IES, IALD. Designed to address the need for practical and comprehensive instruction in landscape lighting, this course will take place October 4-8 and cover in-depth topics such as planning, design development, technology and equipment, installation, maintenance, plant materials, climate considerations and client relationships.

Moyer has regularly taught classes in the fundamentals of landscape lighting at the University of California at Berkeley and at Rutgers University. She is the author of *The Landscape Lighting Book*.

Enrollment at the Landscape Lighting Institute is limited to 30; tuition is \$1,500, which includes continental breakfast, group buffet lunches, one dinner at the president's home and transportation to and from hotel to class locations. Course materials, lighting equipment and copies of *The Landscape Lighting Book* will be supplied.

For more information, call Kevin Heslin at the LRC at (518) 276-8716.

RSLI AND YAMAGIWA SIGN JAPANESE DISTRIBUTION AGREEMENT

Remote Source Lighting International, Inc. (RSLI) of Raleigh, NC and Yamagiwa Corporation, an independent lighting company in Asia, have announced a multi-million dollar, multi-year exclusive understanding to distribute RSLI technology in Japan.

NEW BATIMAT TO RUN WITH INTERPLAN

Miller Freeman, Inc. has announced that the new Batimat North America event will now run October 29-31, 1997, the same dates set for the established Interplan event.

Adjoining Interplan at the Javits Convention Center in New York City, Batimat North America will focus on the commercial and residential construction market.

The expected audience will span the combined markets for commercial and residential construction: home and commercial builders, facilities managers, corporate executives, consultants, remodeling companies, contractors, architects, interior designers, engineers, retailers, distributors, specifiers, real estate developers and consultants. According to Miller Freeman, attendance at the premier event and Interplan combined is projected to exceed 15,000.

Miller Freeman also produces Batimat in Europe, a long-established event drawing more than 600,000 attendees and 4,000 exhibiting companies—making it the world's largest annual construction industry exhibition. For more information, call (800) 950-1314 x2658.

ALT.OFFICE TO PREMIER IN SILICON VALLEY

Miller Freeman, Inc. has announced the 1997 debut of alt.office, a conference and trade show focused on the latest developments in alternative officing concepts such as team offices, just-in-time offices, home offices and others. Alt.office will be held August 14-16, 1997 at the San Jose Convention Center, San Jose, CA.

Miller Freeman anticipates conference attendees to include managers of technology, human resources and corporate facilities, as well as real estate executives, architects, interior designers, telecommuting program managers and home-based workers.

Attendees will be able to see state-of-the-art office furnishings, computer hardware and software, networking

and telecommunications equipment, as well as on-line service providers. For more information, call (800) 950-1314 x2612.

ARCHEWORKS MOVES TO NEW HEADQUARTERS

Archeworks, the alternative architecture and design school founded by interior designer Eva Maddox and architect Stanley Tigerman, will remain in Chicago but move from its current location at 1727 South Indiana Avenue to a new building on North Kingsbury and West Ontario Streets.

The new building, designed by Tigerman, is expected to be completed by the start of the fall semester in September 1997. For more information, call (312) 913-0043.



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SCHEDULED EVENTS IN 1997

May 5-6 "Museum Lighting," GE Lighting, Cleveland; (800) 255-1200.

May 7-9 "Lighting Fundamentals I: Lighting Basics," Cooper Lighting; (847) 956-8400.

May 7-11 Environmental Design Research Association conference, "Space Design and Management for Place Making," Montreal; (514) 330-4863.

May 12-14 "Lighting for Office Buildings," GE Lighting, Cleveland; (800) 255-1200.

May 20-July 8 "Intermediate Lighting Design: A Practical Course for Non-Electrical Engineers," College of Engineering, University of Wisconsin, Madison, WI; (800) 462-0876.

May 19-21 "Lighting Essentials," Osram Sylvania, Danvers, MA, (508) 750-7464.

May 28-30 Conference for consulting engineers, lighting designers, sponsored by GE Lighting, Cleveland; (800) 255-1200.

June 2-3 "Retail Lighting Seminar," Philips Lighting, Somerset, NJ; (908) 563-3000.

June 2-6 "Fundamentals of Commercial & Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

June 9-11 Neocon, The Buildings Show, The Merchandise Mart, Chicago; (312) 527-4141.

June 11-13 "Lamps, Ballasts & Controls: A Systems Approach," Cooper Lighting; (847) 956-8400.

June 12-13 "Healthcare Lighting," GE Lighting, Cleveland; (800) 255-1200.

June 16-19 "Lighting Design & Application Workshop," Philips Lighting, Somerset, NJ; (908) 563-3000.

June 25-27 Conference for teachers of lighting at the college and university levels, sponsored by GE Lighting, Cleveland; (800) 255-1200.

July 13-16 "Industrial Products and Application," Cooper Lighting; (847) 956-8400.

July 17-18 "Specification Products and Application," Cooper Lighting; (847) 956-8400.

July 23-25 "Fundamentals I: Lighting Basics," Cooper Lighting; (847) 956-8400.

August 14-16 alt.office conference and trade show, San Jose Convention Center, San Jose, CA; (800) 950-1314 x2612.

September 15-18 "Lighting Design & Application Workshop," Philips Lighting, Somerset, NJ; (908) 563-3000.

October 4-8 Landscape Lighting Institute with Jan Moyer, The Lighting Research Center; (518) 276-8716 (ask for Kevin Heslin).

October 29-31 InterPlan conference and trade show, Javits Convention Center, New York City; (800) 950-1314 x2658.

October 29-31 Batimat North America conference and trade show, Javits Convention Center, New York City; (800) 950-1314 x2658.

November 10-13 "Lighting Design & Application Workshop," Philips Lighting, Somerset, NJ; (908) 563-3000.

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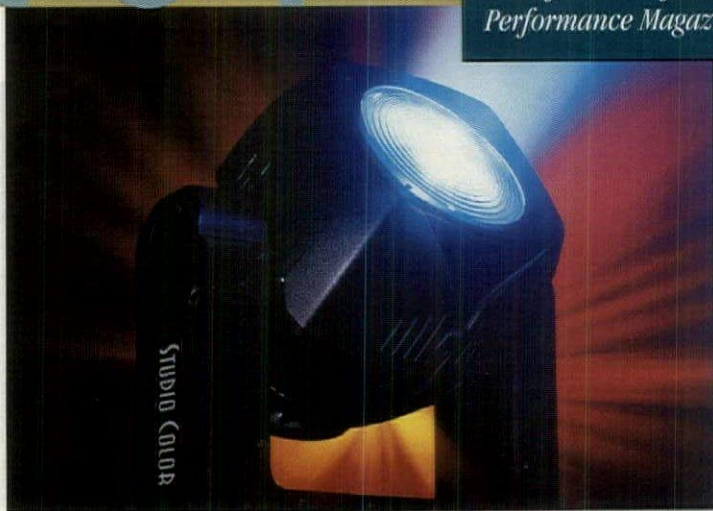
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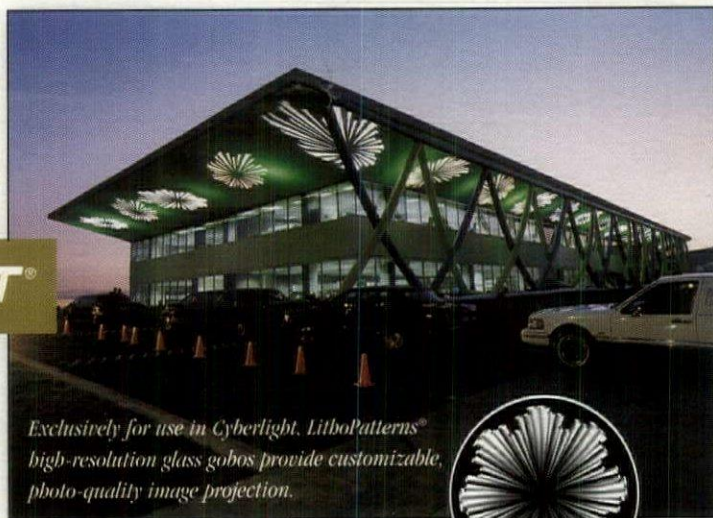
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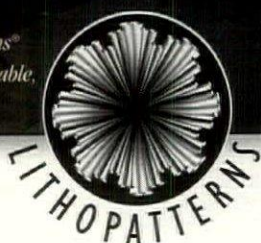
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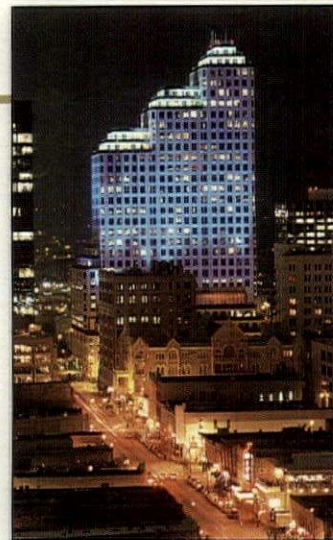
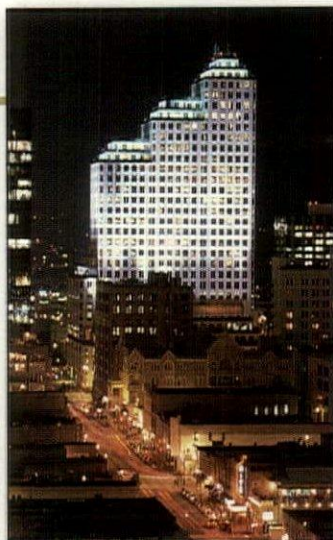
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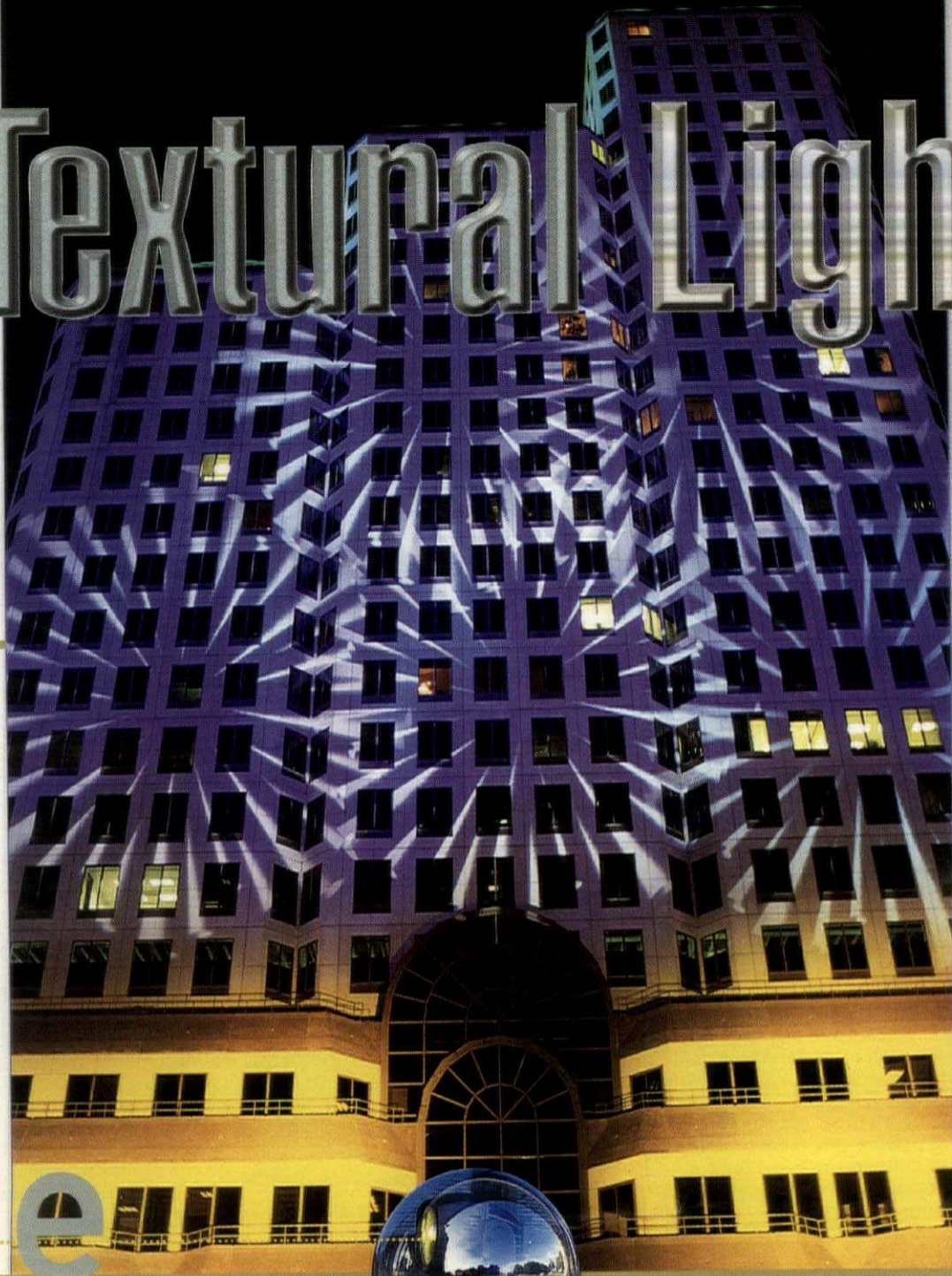
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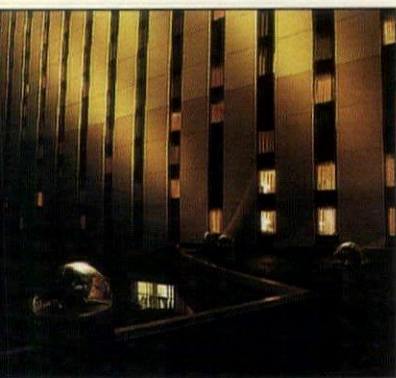
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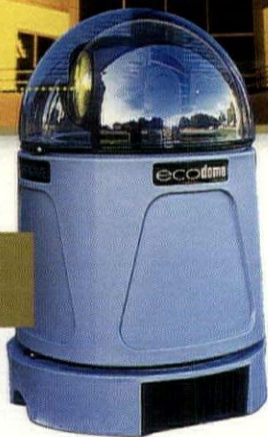
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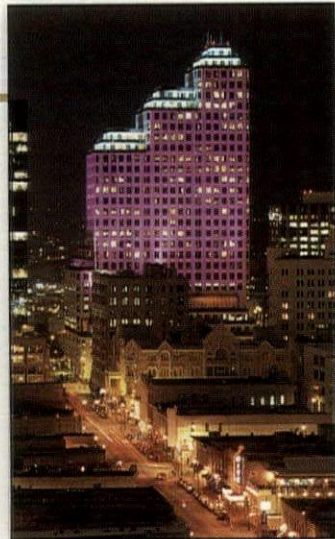
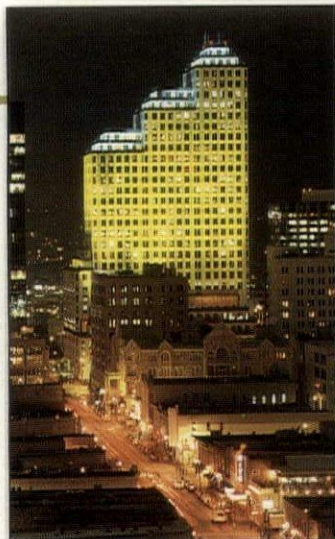
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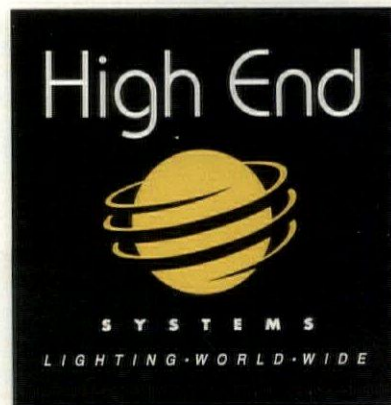
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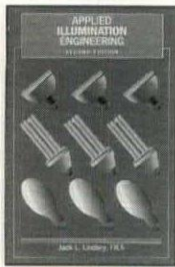
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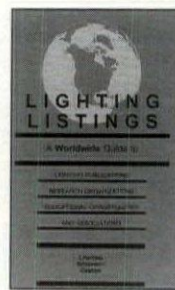


Applied Illumination Engineering, Second Edition
Jack L. Lindsey, FIES
The Fairmont Press, Inc.

This reference provides a fully illustrated guide to lighting design, specification and application. The full scope of light sources is examined and basic methods for both indoor and outdoor lighting are presented, along with optimum application strategies for a variety of sites. The second edition features a new chapter on skylights for industrial buildings, covering layout parameters and daylight availability calculations used to predict skylight performance. The chapter on lighting retrofits has been revised to emphasize methods for analyzing potential retrofits, examining how retrofit results can be predicted, how to evaluate retrofit proposals and how to avoid common mistakes. Lighting maintenance, as well as the economics of lighting design, including life-cycle cost analysis, are also covered. *ISBN: 0-88173-212-5; 6 x 9; (Hardcover); 514 pp., Illus.*

Code# DS001

\$74.00



Lighting Listings (Revised & Updated)
The Lighting Research Center

This reference is an up-to-date international guide to lighting organizations, professional associations, publications and educational programs. Each listing includes a business address, telephone and facsimile numbers, electronic mail address, contact name and a brief description.

Code# DS022

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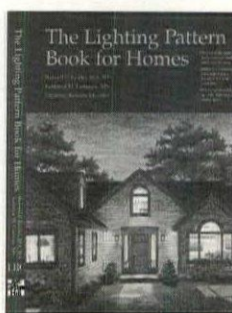


Energy Effective Industrial Illuminating Systems
Kao Chen, P. E., FIEEE
The Fairmont Press, Inc.

This reference is specifically written to provide much needed guidance to engineers and managers involved in efforts to improve lighting system performance and reduce lighting-related energy consumption in any type of manufacturing or industrial workspace. The text is loaded with practical information on lighting controls, daylighting, floodlighting and the full range of options available to improve energy performance. Specification guidelines are provided for both new installations and retrofits. Case studies illustrate typical energy savings for various types of lighting options. Applicable standards are also addressed. *ISBN: 0-88173-168-4; 6 x 9; (Hardcover); 180 pp., Illus.*

Code# DS002

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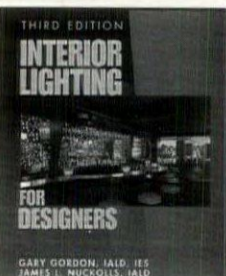
The Lighting Pattern Book for Homes
Russell P. Leslie, AIA, IES and Kathryn M. Conway, MS
Published by The Lighting Research Center
Distributed by McGraw-Hill

This residential lighting resource supplies the practical designs, details and plans needed to select, design and install efficient lighting that suits both aesthetic and economic needs. The book includes typical model designs—plus over 100 energy-efficient alternatives—for 36 rooms and spaces of all types and sizes, from kitchens to home offices. Annual operating cost is fully calculated for each model design. In addition,

all common lighting techniques are explained and illustrated; details on the very latest lamps, fixtures and controls are provided; and a comprehensive worksheet and instructions for completing economic analyses are included. *ISBN: 0-07-038079-1; 8 1/2 x 11; (Hardcover); 208 pp., Illus.*

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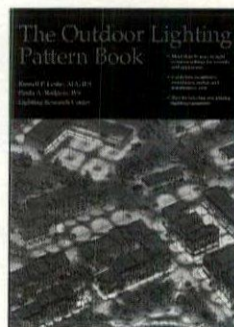
Interior Lighting for Designers, Third Edition
Gary Gordon, IALD, IES and James L. Nuckolls, IALD
John Wiley & Sons, Inc.

This book addresses both why and how a particular lighting design should be used. Completely revised and reorganized, the material in this edition of the classic text has been arranged in the sequence that a lighting firm would follow. Reorganized to focus on the creative aspects of lighting design and the equipment, components and materials used, this resource delivers a simplified and straightforward approach.

Illustrations have been updated and raised to a consistent level and style of quality. A vocabulary of lighting terms and a review of lighting resources, fixtures and controls is also included. *ISBN: 0-471-50970-1; 8 1/2 x 9 1/2; (Hardcover); 300 pp., Illus.*

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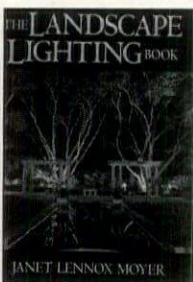
The Outdoor Lighting Pattern Book
Russell P. Leslie, AIA, IES and Paula A. Rodgers, IES
Published by The Lighting Research Center
Distributed by McGraw-Hill

Featuring ready-to-use lighting patterns, this resource provides the practical information and expert guidance needed to design outdoor lighting for all types of residential and commercial spaces. The book offers proven solutions for the typical design, upgrade and redesign of a variety of sites. Each easily adapted pattern contains basic site information; details on the location, types and light distribution of the fixtures used; and a full performance summary, including

annual operating cost and security and appearance ratings assigned by a panel of experts. Complete descriptions of common lamps and fixtures are also provided, as well as useful application tips. *ISBN: 0-07-037188-1; 8 1/2 x 11; (Hardcover); 208 pp., Illus.*

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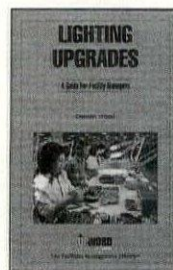


The Landscape Lighting Book
Janet Lennox Moyer, IES, ASID
John Wiley & Sons, Inc.

A national authority on this emerging field offers a comprehensive guide to the art and science of designing, erecting and maintaining an outdoor lighting system. Packed with detailed photos, sketches, plans and drawings, this resource presents in-depth coverage on how to plan, design and build a project. The book also includes reviews of all technical components and materials and a discussion of specific issues of landscape design setting and its elements—plants, sculptures and structures, water features, etc. *ISBN: 0-471-52726-2; 8 1/2 x 11 1/2; (Hardcover); 304 pp., Illus.*

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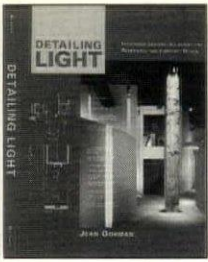


Lighting Upgrades: A Guide for Facility Managers
Damon Wood
UpWord Publishing, Inc.

Green Lights lighting specialist Damon Wood takes you step by step through upgrading a lighting system—in a retrofit or redesign—for energy cost savings and productivity. Contents include lighting quality, upgrade strategies, applications, technologies, economics, maintenance, project implementation and how to assess specific opportunities. *ISBN: 1-57730-425-X; 6 x 9; (Hardcover); 422 pp., Illus.*

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Detailing Light: Integrated Lighting Solutions for Residential and Contract Design
Jean Gorman
 Whitney Library of Design/ Watson-Guptill

One hundred examples of lighting installations designed by internationally renowned architects and designers offer innovative solutions to practical problems. A variety of architectural spaces is profiled to show how different types of lighting meet highly specific demands. Each case study includes descriptive text of the overall project plus relevant technical data, costs and manufacturing information; full-color photographs; and large-scale construction details of fixtures. ISBN: 0-8230-1341-3; 8 1/4 x 11; (Hardcover); 208 pp., Illus.

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NLPIP
The Lighting Research Center

The National Lighting Product Information Program (NLPIP) is an objective source of manufacturer-specific performance information and an evaluation of efficient lighting products. The publications present manufacturers' data and independently tested data in useful, comparative formats for lighting specifiers.

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Demonstration and Evaluation of Lighting Technologies and Applications (DELTA) is an international program to design, evaluate and publicize energy-efficient lighting solutions. DELTA Portfolio case studies evaluate the lighting and lighting control systems at retail, office, industrial and other sites.

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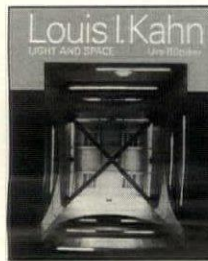
\$100.00; Code# DS013

Lamps and Lighting, Fourth Edition
J. R. Coaton and A. M. Marsden
 John Wiley & Sons, Inc.

Fully updated, this definitive book on light sources and applications discusses new technology such as electrodeless lamps. This resource covers theories of light and vision and examines the research, production and development of all types of lamps as well as various applications such as floodlighting and interior lighting. Featuring numerous illustrations and photographs, this edition outlines both British and U.S. standards and practices. ISBN: 0-4702-3589-6; 7 x 10; (Hardcover); 546 pp., Illus.

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Louis I. Kahn: Light and Space
Urs Büttiker
 Whitney Library of Design/ Watson-Guptill

Louis Kahn (1901-1974) is one of the preeminent figures in the history of American architecture, and today his body of work is receiving renewed attention. In this book, Büttiker analyzes Kahn's imaginative solutions for bringing natural light into buildings and his innovative applications of artificial lighting. The author examines the lighting in 49 of Kahn's best-known projects, showing the effect of each lighting plan on the space. The illustrations include sketches by Kahn, diagrams by the author tracing the path of light into buildings, line drawings illustrating lighting details and photographs showing the effects of light in space. ISBN: 0-8230-2772-4; 9 1/4 x 8 5/8; (Paper with flaps); 184 pp., Illus.

Code# DS010

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Light Conversations
The Lighting Research Center

This pamphlet, amply illustrated with photographs and graphics, highlights a lively discussion of lighting quality; Topics in this reference include aging, color, cost, daylighting, energy, expectations, eyestrain, glare, maintenance and style.

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Is Light Linked To Breast Cancer?

BY MARK S. REA PHD, CONTRIBUTING EDITOR

Breast cancer is the leading cause of cancer-related deaths among women, and it is getting worse.

Lighting may play a role in this disease. Dr. Richard Stevens and Dr. Scott Davis have put forward what they term "the melatonin hypothesis." Their argument poses a link between electric lighting and breast cancer through melatonin suppression. They carefully refer to their own scholarly investigations as a "hypothesis," not a conclusion, because the links have not been well-established.

Evidence developing over the past 30 years has begun to show that there is a link between light and circadian (approximately daily) melatonin production in humans. Most of us go through a 24-hour-per-day (h/d) cycle of activity and sleep determined by a biological clock in the pineal gland of our brain. Left in the dark, our circadian system would cycle at 24.5 h/d rather than 24 h/d, but it is reset to "zero" each morning when we wake up and are exposed to light. Light also suppresses melatonin.

Usually, melatonin levels are at their lowest concentration in the late morning and highest at night. Exposure to light at any time, however, will immediately suppress melatonin and begin to reset the biological clock.

In the last 20 years, scientific evidence has begun to show that breast cancer was associated with low levels of melatonin. Rats with the pineal gland removed do not produce melatonin and are more likely to develop breast cancer. There also seems to be a correlation between low levels of melatonin and breast cancer in women. Since light suppresses

melatonin, there is an implication that electric lighting may increase the chance of breast cancer if it disrupts or delays the time at which melatonin levels would climb naturally in the dark. Working late into the night or failure to have proper light exposure during the day may confuse the circadian system and contribute indirectly to breast cancer in some women by disrupting their natural light-dark cycle.

It is important to point out that "biologically meaningful light" is not directly related to "visually meaningful light." A discrete pathway from the eyes to the pineal gland exists in most vertebrates, including humans. The peak spectral sensitivity for melatonin suppression appears to be around 500 nm, but the peak for the daytime (photopic) visual system is around 555 nm. Most electric light sources are designed to maximize radiation near 555 nm, not 500 nm. In terms of intensity, the visual system can respond well at much lower light levels than are needed to strongly influence the circadian system. At common indoor light levels, the visual system can process visual information quite well, but the circadian system is just getting started. Clear evidence for suppression of melatonin occurs at much higher light levels, like those found outdoors just after sunrise. Thus, much more "light" consisting of shorter wavelengths than typically used for indoor lighting is needed to affect the biological clock and melatonin suppression to any degree.

As light is the foremost synchronizer of the biological clock and a natural part of our existence, it is probably "friendly" to humans. But darkness is also an important part of our lives.

Most of us sleep at night when melatonin rises to peak levels. A strong dose of cool, white light in the morning following a good night's sleep in the dark will provide the proper conditions for a daily cycle of melatonin and, perhaps, a lifetime of good health. If applied at the right time and with the right spectrum, light, with darkness, may become a therapeutic instrument.

This idea is supported in a recent study of Alzheimer's disease patients. In an institution with conventional lighting, some patients had random activity periods throughout the day and night, disrupting staff and fellow patients. Their activities were synchronized with daytime hours when they were subjected to very bright light levels during the day followed by darkness at night, making treatment and care-giving more effective. This study shows how powerful a tool light can be to well-being when given in the right dosage at the right time.

We know much less about the effects of light on our hormones than we do about light as a stimulus for vision. Currently, I am collaborating with Dr. Richard Stevens at Pacific Northwest Laboratories (PNL) and Dr. George Brainard at Jefferson Medical Hospital to understand the role of light (intensity, timing, spectrum) in breast cancer. Perhaps there is no link, but it is important to determine whether light does play a role. What is most exciting is that light might become a therapeutic treatment when properly designed and applied.

(Sources used in article continued on page 40)

Dr. Mark Rea is director of the Lighting Research Center in Troy, NY.

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The Web: Lessons Learned

BY DAVID BURTNER, CONTRIBUTING EDITOR

Barely two years have passed since the first www.company.com crept into our consciousness, so it may seem premature to talk about "lessons learned" on the World Wide Web. But in the time warp of cyberspace, two years might as well be two decades.

The explosion of the Web has been so dramatic that even old time computer hacks have been awestruck. The Web is everywhere and the lighting industry is certainly in the middle of it. Before long, a Web address will be as common on company business cards as a fax number. The medium has become, almost overnight, the place to be.

But why? Who is using the Web? Are they finding what they want? Is the Web making a productivity difference for professionals? Is it making a profit difference for companies?

USING THE WEB

At inter.Light, a site that was launched in the fall of 1995 as an independent lighting site designed for lighting professionals, we have spent considerable time looking at these questions. The purpose of the site is to provide specifiers with search capabilities that emulate the way they currently specify—with the benefit of being able to draw on a much larger and more up-to-date pool of companies and products than they have in binders on the shelves of their product library. With detailed product query capabilities, the specifier can narrow the list of companies and then contact them either by links to the company Web sites or by requesting information via direct connections from inter.Light.

The rationale for a site like inter.Light was based on the assumption that lighting specifiers, just like other Web users, need a search tool that works. The standard Web search engines seemed woefully inadequate when faced on the one hand with a general query: Find "lighting" (300,000+ Web pages matching the query) or, on the other hand, on a site like inter.Light we could make a specific query such as: Find "120V electronic dimming ballasts for compact fluorescent 42W triple tube lamps."

To become the place lighting professionals would go to begin their Web sessions, inter.Light needed to develop a search tool customized for the needs of lighting specifiers. While we have made what we believe are considerable strides in that direction, we have yet to meet all of the criteria specifiers told us they wanted.

The following brief analysis of "lighting on the Web" is based on what we've learned from focus groups and from seeing more than 10,000 requests for company information that have been generated from on-line literature request forms on inter.Light.

Our focus group sessions revealed two primary reasons for using the Web: 1) specifiers would use it if they could get current specification and photometric data for products (i.e., more current than what they had in their library binders) and 2) they would use it if they could search with specification-level detail for companies providing products required for a project (i.e., products not found in their company binders).

For designers, architects, engineers, facility managers and other professional specifiers, the test for lighting on the Web was simple: If it can deliver everything printed product binders do, but do it with a larger pool of possibilities, be more current and provide greater responsiveness from companies, then the Web was worth the trouble. Specifiers also said they wanted all of the above while spending less than 15 minutes on-line.

WHAT DESIGNERS WANT FROM THE WEB

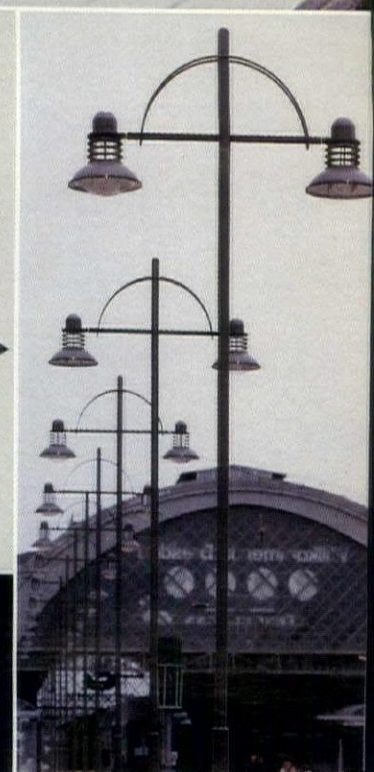
There are important lessons here for companies designing Web sites. The first is what specifiers left out as a reason for going to the Web—namely, to view "advertising" (at least advertising like we're used to seeing in print). In fact, graphic-intensive Web sites were the least attractive to specifiers. The



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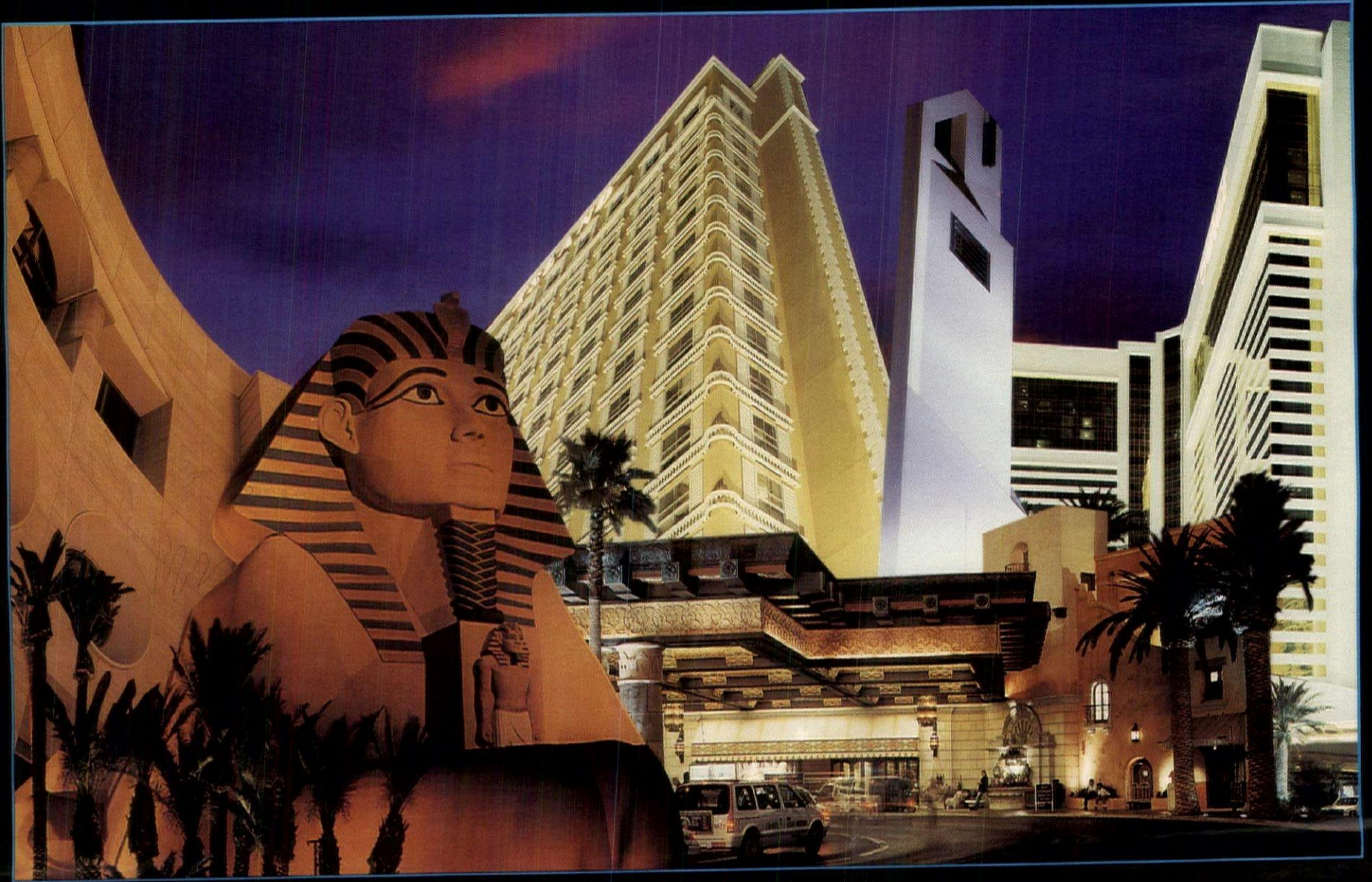
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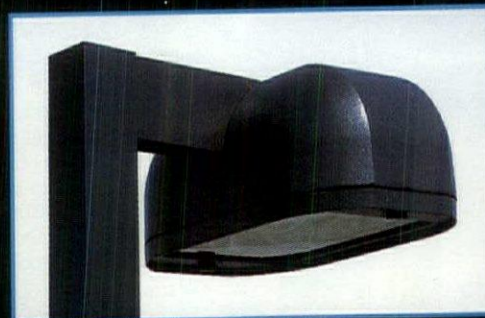
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7200 Series pole mount



7801 and 7800 Series



12881 BRADLEY AVENUE SYLMAR CALIFORNIA 91342 TEL 818/362-9465 FAX 818/362-6548

Circle No. 14

reason? Web pages loaded with graphics can be agonizingly slow to render. This constraint will change as access speeds increase, but for now, if superfluous graphics stall a specifier's search, they'll likely hit the stop button and go on to somewhere else.

Ideally, the specifier wants a site where products can be searched for by type or application, where all the specs and a useful graphic can be found on one page suitable for printing, where photometric files can be downloaded and where the local rep can be quickly identified.

A review of literature request forms generated from inter.Light confirms that even though some specifiers were simply ordering binders for their shelf, others had specific projects in mind and needed equally specific information.

A few examples:

Engineer: "I'm looking for high CRI metal halide 150W retrofit kits to replace incandescent 500W parabolic down-burning lamps in chandeliers in a church."

Lighting Designer: "Gymnasium project. Need photometric files ASAP for your high-bay metal halide fixtures."

Interior Designer: "Looking for alabaster ceiling lights and pendants with low-voltage halogen source."

Many Web users expect more than a brochure and certainly more than an ad. And as the user becomes more sophisticated, expectations will grow. It has become a common truth that the Web, at least for professionals, is all about content and how fast it can be delivered.

MANUFACTURERS AND THEIR WEB SITES

But what about companies? Is the Web worth the trouble and expense? Or does it, as one CEO said, give new meaning to the term "black hole"?

It is too soon for most lighting companies to evaluate their Web sites in terms of financial return. Some companies probably never expect their site to turn a profit, but view it as simply another cost of doing business. As designers and other lighting professionals increasingly turn to the Web to specify products, companies who have what the specifiers want will probably get the business. Some Web capabilities present irresistible opportunities for company marketing departments. The Web is interactive. It can respond dynamically and precisely to user needs. It can provide useful information about who is using a site and what the users are looking for. It can reach anyone in the world connected to the Internet.

In some cases, however, what appears to be an advantage of the Web can actually turn out to be a problem.

For example, suppose Lighting.com manufactures specification-grade landscape fixtures. The company develops a Web site and registers with all the Web search engines. Two months later, Lighting.com finds itself swamped with requests for catalogs from homeowners—midnight Web cruisers looking for the perfect \$9.95 porch light. Lighting.com's real customers are few and far between.

One of the biggest challenges for companies targeting a defined specifier market, therefore, is to figure out how to attract target customers to the site, but be invisible to the millions of cruisers who are just fishing for glossy catalogs. It turns out that for most in the lighting industry, the "reach 60 million users" mantra of Web promoters is actually a "cost" rather than a gold mine.

On the other hand, for a company with limited resources looking to start or expand an export market, the Web may be the most viable and cost-effective approach available. In an average month, about 12 percent of inter.Light users come from outside North America.

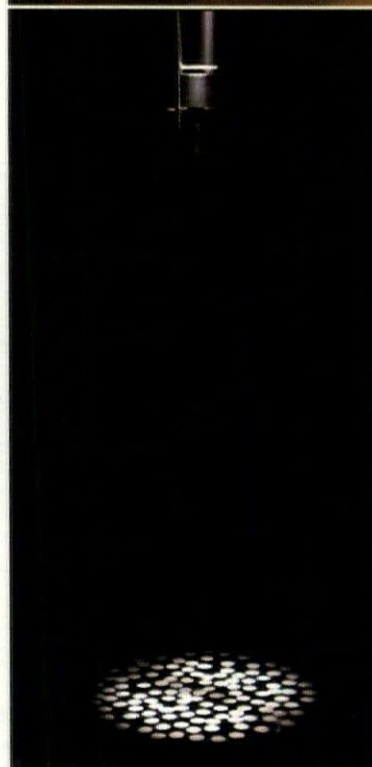
Right now, just like the early days of company newsletters that sprang from desktop publishing, we're finding that Web sites look a lot alike. That will change as companies discover the unique advantages the Web can provide given their product line, their current distribution channels and other factors. Some will find the Web is a cost-effective way to serve an existing rep network. These companies may not be interested in reaching any other audience. Others will find the Web can be a way to avoid having a rep network altogether. Still others will see the Web as a way to reduce costs by providing complete catalogs that can be downloaded. Small companies will view the Web as a place they can compete for exposure on an equal footing with the biggest lighting companies in the world. Finally, some companies will find they have the right product and the right infrastructure to sell on-line.

WHERE TO FROM HERE?

The vast majority of lighting sites has been launched in the last year. The vast majority of Web users have become Web literate in the same time frame. We are definitely on the front end of the learning curve. Company CEOs may complain that precious little Web investment has been returned to the bottom line while specifiers may complain that there are too many superfluous graphics and too few specifications on-line to make it worth the trouble. But that will change.

One year from now, today will look like a very long time ago. You may not be able to find a lighting company without a Web site. You almost certainly won't be able to find a lighting professional who hasn't spent some serious "work" time on the Web. And, like the fax machine, we won't be able to fathom how we got along without it.

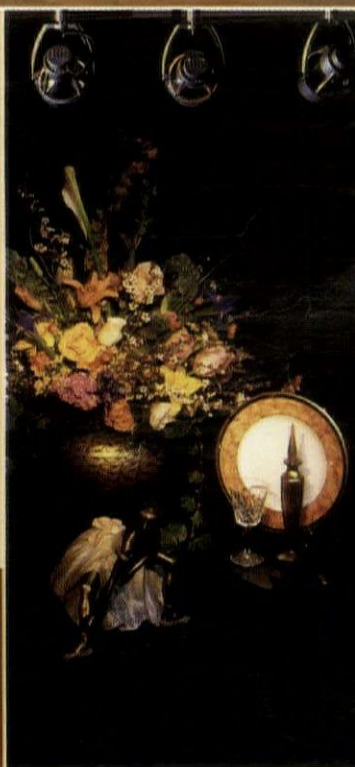
Dave Burtner is president of inter.Light, a Web site for lighting specifiers that allows users to find manufacturers and products using a sophisticated search engine. Readers can visit inter.Light at www.light-link.com.



▲ Recessed downlights, Clickstrip™ cornice and showcase lighting and suspended flexible track... all from a single source. Best known for showing off the work of others, Ardee fixtures themselves are design triumphs.

◀ Perhaps the smallest MR-11 halogen fixtures made, retractable SpeX 30 units present countless, high drama possibilities. This unique theatrical gobo aims and focuses at a touch.

The impact of light itself can be as compelling as the subject it defines. SpeX specification grade fixtures grant selective, predictable control over any and all desired effects.



They arrest attention.
They direct traffic.
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The more you expect from
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Maximum effect, minimal
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ARTFUL NEW LOWS

Circle No. 16

Lighting Design Software Roundup

BY LOIS I. BURGNER, CONTRIBUTING EDITOR

In choosing a software package, the question is not what the software does, but what do you do? Concentrate on the services you currently provide, those you would like to provide and what your client base is willing to pay. Some of the high-end calculation and rendering packages are reasonably priced, even free. But add training, endless hours of model building and compute time, and often it becomes difficult to justify the expense. Most designers' bread and butter—schools, healthcare, retail, offices—are unlikely to demand more than a good calculation engine and fixture schedule.

None of these programs will do a quality lighting design by itself, though several invite the participation of lighting novices. A professional's training, experience and judgment are required through every step, from space simulation through evaluation of the output. In a restaurant, are the reflectances input absolutely correct? Will a more efficient source still create the appropriate mood? An understanding of photometrics is imperative. A corridor will demand an excessive number of wallwashers if the center-beam candlepower is pointed the wrong way. Is the workplane light level in this corridor really relevant?

Recognizing the limitations of a program is at least as important as taking advantage of its assets. Calculations are definitely made easier, faster and more accurate. Repetitive layouts and tracking fixture counts and electrical loads are also facilitated. Renderings are used only to help evaluate a design or as a marketing tool. No metric or rendering can depict the discomfort, even danger, posed by an improperly aimed outdoor floodlight.

Finally, program compatibility is becoming increasingly important. In this age of electronic communication and design, drawings and their associated information should be electronically interchangeable for the entire design team. All of the programs listed below (save the first) utilize IESNA standard format photometric files. The vast majority interchange graphical information in DXF format files. But watch for data loss during interchange, particularly when translating back into less sophisticated programs. In the future, those programs that can translate all information and changes back and forth will prove most useful.

CALCU-LITE/PAYBACK EFFECTIVE LIGHTING SOLUTIONS

Calcu-Lite/Payback by Effective Lighting Solutions is a pair of Windows-based (3.1, 95 or NT) programs that provide fixture layouts, quick zonal cavity calculations and simple payback comparisons from input room parameters; lamp and fixture data, including coefficient of utilization; and light level desired or quantity of fixtures. This program will not accept IESNA standard format fixture photometrics. Users can fine-tune their design with the on-screen slider dimmer. Payback compares up to three lighting systems simultaneously. **Circle No. 80**

QLITE QUADRELEC ENGINEERING CORPORATION

QLite works as an application of the Microstation CAD program to automatically place light fixtures and provide zonal cavity calculations. Developed by an electrical engineer to ease the task of repetitive layouts, QLite tracks fixtures, costs and electrical loads for later circuiting to panelboards; the program also tracks each room's watts per sq. ft. (unit power density). Microstation's graphical user interface (GUI) provides ease of use and printing of reports. Runs on any PC with Microstation 95 operating under Windows 95 or NT. **Circle No. 81**

LIGHTCAD ELECTRIC POWER RESEARCH INSTITUTE

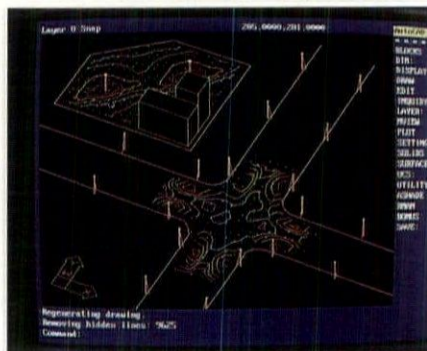
LightCAD comprises linked drawing and database utilities to produce lighting layouts within AutoCAD. In addition to zonal cavity calculations, LightCAD automatically analyzes connected load, power density and kWh by building type. LightCAD now includes the BEEM routine for economic comparison of daylighting options. BEEM accounts for daylighting controls, fenestration type and size, shading options, HVAC impacts and capital and energy costs. LightCAD and BEEM operate in DOS. Also available from the Electric Power Research Institute is LightPAD, an energy audit program. **Circle No. 82**

AUTOLUX INDEPENDENT TESTING LABORATORIES

Like LightCAD (above), AutoLUX also operates within AutoCAD, but runs more complex point-by-point calculations for indoor and outdoor applications. By placing and aiming fixtures within AutoCAD, the user obtains illuminance (or exitance in interiors) data for up to 12,000 calculation points. For exterior applications, the user can drag and drop pole fixtures, overlapping their contours. In interiors, interreflections are accounted for, but not obstructions such as partitions. Any lightmeter orientation can be simulated outdoors for facade or television lighting; indoors, only horizontal or vertical. DOS- or Windows-compatible. **Circle No. 83**

AUTO-SITE-LITE LIGHTING SCIENCES INC.

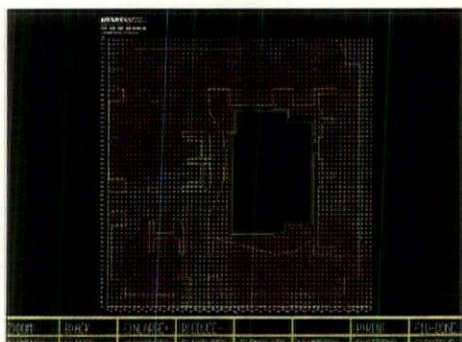
Auto-Site-Lite, operating within AutoCAD, provides for detailed analysis and comparison of large outdoor area and roadway lighting systems. With a simulated lightmeter orientation at any angle, outputs include illuminance, pavement luminance, veiling luminance and small target visibility. Reflective obstructions can be included, so the program will account for both shadowing and reflected light from walls or buildings. Also DOS-based, Micro-Site-



Lite is essentially the same program operating independent of AutoCAD. Tunnel-Lite is also available. **Circle No. 84**

LITE•PRO COLUMBIA LIGHTING

Lite•Pro is designed to facilitate project management, from area definition through the written specification. DXF drawing files can be imported and layouts exported the same way. Lite•Pro will perform indoor and outdoor calculations of horizontal and vertical light levels, power density, project cost analyses and payback. Graphical outputs include point-by-point values, isocontours and gray scale. Interior obstructions are included in calculations and can have different reflectances on each side; outdoor obstructions are restricted to zero reflectance. Specification documents include fixture schedules, area and light level summaries. Use with DOS, Windows and Windows 95. **Circle No. 85**



CALA/PRO HOLOPHANE

CALA/Pro performs indoor and outdoor light level and exitance calculations for a wide array of applications. To provide quick comparison of multiple options, a zonal cavity utility estimates the number of fixtures required or average footcandles, but does not provide automatic layouts. The Roadway Estimator provides fixture spacing. Point-by-point analysis accommodates areas of any shape and these are defined in three dimensions; isocontours are displayed, but not gray scales. Obstructions must be planes or cubes and are assigned a reflectance in both indoor and outdoor calculations. An unlimited number of fixture types may be used in a single calculation; fixture schedules can be output. The Photometric Data Manager displays data graphically on-screen and groups selected fixtures into "palettes." DOS-based. **Circle No. 86**

VISUAL LITHONIA LIGHTING

Visual incorporates a CAD utility to allow users to model complex spaces and provide indoor and outdoor calculations. Accommodating domed and sloped ceilings (which are given an effective cavity reflectance) and partitions, any layout can be viewed in 3D to verify the input. The Photometric Editor tool displays and prints the contents of IESNA data files, allowing side-by-side comparisons. Lighting Economics provides quick simple payback as well as complex life-cycle costing. It can account for demand charges, lighting controls and HVAC impacts. Point-by-point data can be viewed as isocontours or gray scale. Layouts can be exported as AutoCAD DWG files or in DXF format; such drawings can be imported. Visual is described by Lithonia as "Windows friendly." **Circle No. 87**

AGI LIGHTING ANALYSTS, INC.

AGI stands for advanced graphical interface for lighting, and the program includes CAD-like drawing and 3D modeling utilities to model complex spaces. Partitions and sloped ceilings are accommodated; outdoor obstructions may be opaque, translucent or reflective. The Estimator utility provides an approximate fixture quantity (zonal cavity method) to meet specified light levels in a given room. It then automatically creates a layout, room model and workplane analysis grid. To save calculation time, AGI automatically computes any changes in a layout without recalculating the entire job. The Roadway command produces a layout given light level or fixture criteria. The number of fixture, fixture types, analysis areas and shapes and meter orientations is unlimited. Currently DOS-based, a 32-bit (Windows 95 and NT) version is expected this year. **Circle No. 88**



**LUXICON
COOPER LIGHTING**

Developed by Lighting Technologies Inc. for Cooper Lighting, Luxicon allows the user to design, specify and graphically render lighting designs in black-and-white. A library of objects and architectural items speeds model construction (DXF in and out), while "Wizards" offer automatic layouts for several types of indoor and outdoor applications. Several calculation options are available, including quick calc, isocontours and continuous readout of average light level and power density. Daylighting effects can also be evaluated. "Light accurate" renderings are based on radiative transfer algorithms, which account for interreflections but treat all surfaces as having perfectly diffuse reflectance. Renderings include architectural objects and offer movable perspective. This Windows-based program will be offered in a 32-bit version this year. **Circle No. 89**

**LUMEN MICRO
LIGHTING TECHNOLOGIES INC.**

Lumen Micro offers simple zonal cavity calculations through complex renderings that incorporate interreflections and obstructions. Daylighting analyses are based on latitude, longitude, time of day and date; users may adjust the transmittance and reflectance of windows and skylights. Radiative transfer renderings include daylighting contributions. Because it is a manufacturer-independent program, Lumen Micro comes with a library of 14,000 photometric files from more than 50 manufacturers. Economic analyses range from simple payback to life-cycle costing, and the program can compare up to four different lighting systems side-by-side. Project layouts and fixture schedules can include both indoor and outdoor areas. Available as a 16- or 32-bit application. **Circle No. 90**

**RADIANCE
LAWRENCE BERKELEY NATIONAL LABORATORY**

Radiance aids designers by predicting light levels and the appearance of objects in design space. The suite of programs models scene geometry, fixture data and material properties (including reflectance, color and texture). Ray-tracing rendering algorithms produce a photorealistic image from a single viewpoint. Light level and brightness values can also be displayed and analyzed. The images produced are superior to radiative transfer renderings because they include highlights and reflections of specular materials, which can be defined as plastic, metal, glass, etc. Daylighting contributions are also represented. Unfortunately, the complexity of the program makes it difficult to run, requiring a UNIX platform on a Silicon Graphics or Sun workstation. Still, calculation times of up to 20 hours for highly complex spaces are common. The results, however, are highly accurate and often beautiful representations. **Circle No. 91**

**ADELINE
LAWRENCE BERKELEY NATIONAL LABORATORY**

Adeline stands for Advanced Daylighting and Electric Lighting Integrated New Environment, and is used for predicting the performance of daylighting and electric lighting in complex buildings. Adeline contains the Radiance rendering engine, Superlite interior light level calculator (electrical and daylighting) and Superlink, which links to outside energy analysis and building performance programs. Besides computing possible energy savings, the impact of various daylighting options (fenestration, geometry, overhangs, shades) on HVAC can also be determined. Runs under DOS, but offers a Windows-like interface. **Circle No. 92**

**GENESYS
LIGHTOLIER**

Genesys Lighting Workstation incorporates design, calculation and report utilities to assist the user through project management of both indoor and outdoor applications. In addition, Genesys contains the Radiance calculation engine and produces accurate, full-color, ray-traced indoor renderings. Genesys shares many of the assets listed in other programs, including an estimating utility, automatic fixture layout, monitoring of power density (by area and project wide), fixture schedules and advanced economic analysis. Daylighting contributions are not accounted for, however. The program is currently DOS-based, but look for 16- and 32-bit versions this year. **Circle No. 93**

**LIGHTSCAPE VISUALIZATION SYSTEM
LIGHTSCAPE TECHNOLOGIES, INC.**

Lightscape Visualization System offers calculation and rendering of indoor lighting applications using proprietary under-color lighting algorithms (called radiosity) along with a ray-tracing engine to add specular highlights and reflections. Lightscape's progressive refinement radiative-transfer algorithms produce a useful image quickly; the quality of the image improves as interreflection calculations continue. At this point, the user can take a real-time walkthrough simulation (depending on the model complexity and the speed of hardware). A final sweep by the ray-tracer adds view-specific highlights to surfaces assigned as specular or semi-specular. LVS must be provided a 3D model of the space, and files are fully interchangeable with a range of modeling programs. Once available only as a UNIX application, the program now comes in a substantially debugged 32-bit version (NT and 95). **Circle No. 94**

Lighting Vendor Web Directory

- ACL Testing Laboratorieswww.light-link.com/acltesting
- ADA Enterprises, Inc.www.life-light.com
- Advanced Environ. Recycling . .www.aerc.mti.com
- ALP Lighting & Ceiling Prod. . .www.alp.ltg.com
- Alta, Division of CSLwww.annex.com/csl
- AMX Corp.www.amx.com
- Analytical Spectral Devices Inc. .www.asdi.com/asd
- Angelo Brothers Co.www.angelobrothers.com
- Appleton Electric Co.www.appletonelec.com
- Artemide Inc.www.artemide.com
- AstraLitewww.led.com/astralite
- Beghelli Inc.www.light-link.com/beghelli
- Beta Lightingwww.light-link.com/beta
- Bodinewww.bodine.com
- Capri Lighting/Thomaswww.thomaslighting.com
- Chimerawww.chimeralighting.com
- Concealite Emergency Lighting .www.concealite.com/info
- Consortium Lumina Lighting . .www.designlight.com
- Cooper Lightingwww.cooper-light.com
- Crouse-Hinds, brand of Cooper .www.crouse-hinds.com
- CSL Lighting Mfg.www.annex.com/
- Dazor Mfg. Corp.www.dazor.com
- Electronic Lighting Inc.www.light-link.com/eli
- Electronics Diversified, Inc. . .www.edionline.com
- Electronic Theatre Controls . .www.etconnect.com
- EMCO Lighting/Thomaswww.thomaslighting.com
- Enerfficient Lighting Equipment. .www.enerfficient.com
- Energex Lightingwww.lookup.com/Homepages/79646
- Enertron Technologies Inc.www.enertron.com
- Estiluz Inc.www.sidi.es/estiluz
- EUA Novawww.euanova.com
- Exitronixwww.exitronix.com
- Fiberstars, Inc.www.fiberstars.com
- Finelite Inc.www.finelite.com
- Fire & Wateraecnet.com/~bergarch
- Gardco Lighting/Thomaswww.thomaslighting.com
- GE Lightingwww.ge.com/lighting
- GE Lighting Systemswww.ge.com/lighting systems
- GE Total Lighting Controlwww.ge.com/tlc
- Guth Lightingwww.guth.com
- High End Systems, Inc.www.highend.com
- Holcorwww.lighting-fixtures.com
- Howard Industries Inc.www.howard-ballast.com
- Hunt Control Systems Inc.www.hunt-control.com/HUNT
- Hydrelwww.hydrel.com
- Indy Lightingwww.light-link.com/indy

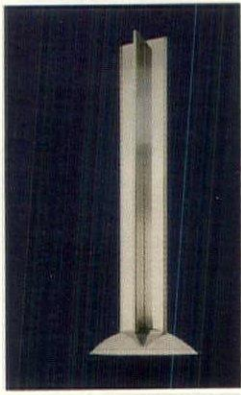
- Infrared of New Jersey Inc. . . .home.earthlink.net/~irnj
- Interface Engineeringwww.light-link.com/interface
- Interlectric Corporationwww.interlectric.com
- Janmar Lightingwww.light-link.com/janmar
- K-Tronik Industries Corp.www.k-tronik.com
- Kirlin Companywww.light-link.com/kirlin
- Lamp Recyclers of Louisiana . .www.grn.com/grn/home/lamp-
recycler
- Lamp-Fashionswww.lamp-fashions.com
- Ledalite Architectural Products .www.ledalite.com
- Ledtronicswww.ledtronics.com
- Legion Lighting Co. Inc.www.light-link.com/legion
- Levitonwww.leviton.com
- Lexalite International Corp. . . .www.lexalite.com
- Light Corporationwww.lightcorp.com
- Lighting Analysts, Inc.www.lightinganalysts.com
- Lighting Images Technology. . . .www.light-link.com/lit
- Lighting Integration Technology. www.pictographer.com/lit
- Lighting Services Incwww.LightingServicesInc.com
- Lighting Technologies Inc.www.lighting-technologies.com
- Lightly Expressed Ltd.www.lightlyexpressed.com
- Lightolier Inc.www.lightolier.com
- Lights of America Inc.www.lightsofamerica.com:80
- Lightscape Technologieswww.lightscape.com
- Lightway Industrieswww.light-link.com/lightway
- Litecontrolwww.litecontrol.com
- Littronics Internationalwww.light-link.com/littronics
- Lithonia Lightingwww.lithonia.com
- Lucifer Lightingwww.thelightingcenter.com/lucifer
- Lumatech Corporationwww.light-link.com/lumatech
- Lumenyte International Corp. . .www.lumenyte.com
- Lumière Design & Mfg Inc.www.lumieredesign.com
- Lutron Electronics Co. Inc.www.lutron.com
- LuxArtwww.luxart.qc.ca
- Macro Electronics Corporation . .www.macro-elect.com
- Magnaray Internationalwww.magnaray.com
- MagneTekwww.magnetek.com
- Marlin Controls, Inc.www.marlincontrols.com
- MaxLitewww.light-link.com/maxlite
- Mercury Technologies Intern. . . .www.aerc-mtl.com
- Mitor Industries Inc.www.light-link.com/mitor
- Motorola Lighting Inc.www.motorola.com
- Mule Emergency Lighting Inc. . .www.lightworld.com
- Novitas Inc.www.light-link.com/novitas
- Omega Lighting/Thomaswww.thomaslighting.com
- Optilight, Inc.http://optilight.com/opti
- Osram Sylvaniawww.sylvania.com
- Outwater Plastics Industries, Inc. www.outwater.com

- Panasonic Lightingwww.light-link.com/panasonic
 - Pathway Lighting Products Inc. .www.uconnect.net/~pathway
 - Peerless Lighting Corporation . .www.peerless-lighting.com
 - Philips Lighting Companywww.philips.com/lighting
 - Photo Research Inc.www.photoresearch.com
 - Power Lighting Products Inc. . . .www.valmont.com
 - Quantex Corporationwww.us.net/quantex/el.htm
 - SEDCOwww.netdec.com/sedco
 - Skanda Lightings IIwww.skandalights.com
 - Soft Lighting Systemswww.softlite.com/soft
 - Solium Inc.www.light-link.com/solium
 - Sportlite Inc.www.sportlite.com
 - Starfire Lighting Inc.www.starfirelighting.com
 - Strand Lightingwww.strandlight.com
 - Super Vision International, Inc. .www.svision.com
 - Targettiwww.targetti.nl
 - Tech Lightingwww.techlighting.com
 - Thomas Lightingwww.thomaslighting.com
 - Triatekwww.ttk.com
 - Unenco Services Inc.www.unenco.com
 - Ushio America Inc.www.ushio.com
 - Venture Lighting International . .www.adlt.com/venture
 - Visa Lightingwww.visalight.com
 - WAC Lighting Companywww.light-link.com/wac
 - The Watt Stopperwww.wattstopper.com
 - Wide-Litewww.light-link.com/wide-lite
 - Wildfire Inc.www.WildfireLA.com
 - Zumtobel Staff Lighting Inc. . . .www.zumtobel.co.at
- Organizations & Resources**
- alt.officewww.alt.office.com
 - Architectural Lighting Magazine .www.light-link.com;
www.archlighting.com
 - ArchiText Construction Index . .www.afsonl.com
 - Construction Innovation Forum .www.cif.org
 - EPA Energy Star Programwww.epa.gov/energystar
 - FMLinkwww.fmlink.com
 - IALDwww.iald.org
 - IESNAwww.iesna.org
 - InterLightwww.light-link.com
 - InterPlanwww.interplanshow.com
 - Lighting Research Centerwww.rpi.edu/dept/lrc/LRC

adVeNT

LIGHTING

Advent Lighting introduces the Custom Indoor Torchiera. Measuring 56 in. high x 18 in. wide, the fixture is constructed of stainless steel vertical tube legs with a mirror polish finish and a spun brass dome with a mirror nickel-plated finish. The light sources are four 26W quad tube fluorescents with integral electronic ballasts. **Circle No. 173**

**gARCy**

SLp

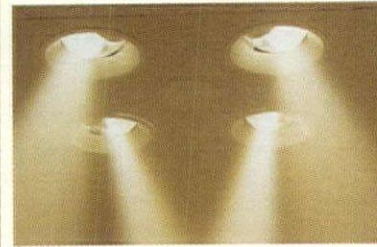


The AL12 ambient light provides indirect general illumination to the open-plan office environment. Its inverted bell shape and sleek 6-in.-wide x 4-in.-high profile complements any office decor. The AL12 features a high-performance specular reflector and an open top for maximum light output. Adjustable mounting brackets provide easy attachment to the top of all open-plan furniture system panels ranging from 1 1/2 in. to 4 in. thick. T8, 3500K, 265mA, tri-phosphor lamps and electronic ballast standard. **Circle No. 174**

edISON PRICE

LIGHTING

Edison Price Lighting has developed a line of molded glass color filters for use with recessed accent lights and SightLine track fixtures. Six colors are available, all with a special beam-smoothing surface and extreme heat resistance. Unique colors are "surprise pink" for enhanced skin tones and "daylight blue" for use with ambient daylight. **Circle No. 175**

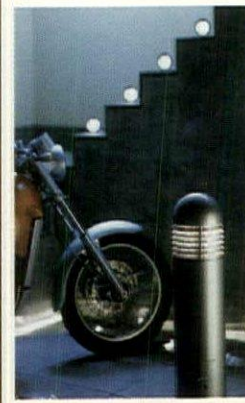
**LigHTRON**

The MultiBeam 2000 is a "light conveyance system" that can transport multiple images from a single point source simultaneously. Each aperture can be adjusted independently between 0-45 degrees vertical and 0-360 degrees horizontal. The following results are achieved: up to 70 percent reduction in energy; elimination of lamps from individual luminaires; simplification of electrical distribution; reduction in installation labor; reduction in air conditioning loads due to A-thermal beam content; and the ability to project images, graphics and various beam sizes and shapes. **Circle No. 176**

B-k

LIGHTING, inc.

B-K Lighting, Inc. introduces the Everest and the Sierra Series of floodlights for use with PAR20 and PAR30 MasterColor metal halide lamps. These precision-machined aluminum fixtures are available in three different shielding types, eight standard polyester powder-coated colors and four different ballast housing options, including a remote ballast option. The Sierra and the Everest fixtures also feature B-K Lighting's Posilock and 360SL mounting knuckle system. **Circle No. 177**

**CSL**mfg., inc.
LIGHTING

Creative Systems Lighting's outdoor product offering is a result of CSL's joint venture with SIMES Apparecchi D'Illuminazione. The CSL/SIMES product line specializes in specification-grade architectural outdoor lighting. The durability of these outdoor fixtures is disguised by their sleek design. A wide range of styles is available, including wall, ceiling, recessed step, bollards and drive-over fixtures. Lamp sources include incandescent and energy-efficient fluorescent. Fixtures have a durable powder-coated finish for high corrosion resistance. **Circle No. 178**

hiGh END

SYsTEmS

New from American lighting manufacturer High End Systems comes the award-winning Ecodome architectural housing. The Ecodome, which was recently awarded Architectural Lighting Product of the Year at the 1996 LDI tradeshow, allows the use of the company's Cyberlight and Studio Color automated luminaires in outdoor architectural applications. The units are UL-rated for use with High End's fixtures. **Circle No. 179**

**LitHonia**

LigHTING



Lithonia Lighting introduces the Monarch KFL Series architectural floodlights for floodlighting, wall washing and accentuating details. The compact KFL housing is available with a full range of mounting options and a wide variety of architectural colors. KFL luminaires provide beam-pattern distributions from 70W to 400W in both metal halide and high pressure sodium light sources, ensuring high light levels and uniformity. Installation and maintenance are facilitated by a hinged lens frame, a hinged and removable power tray and quick-disconnect electrical connections. **Circle No. 180**

BOyD

LIGHTING

Boyd Lighting presents the Aero Wall Sconce. ADA compliant at any mounting height. Incandescent, halogen or compact fluorescent lamping available. Standard in 12V, 120V or 277V, with an integral electronic ballast. This streamlined design was engineered for switch-box or mud-ring mounting. Created for architects and designers by Doyle Crosby, this fixture is an architectural lighting solution for reception areas, lobbies, corridors and executive offices. **Circle No. 181**

**fiBERStARs**

inC.



BritePakII is highly luminescent fiber-optic tubing. Custom-manufactured cabling equipment, exclusive to Fiberstars and designed specifically for fiber-optic cables, incorporates a patented twisting process before drawing the bundles through the outer jacket, producing dense, more luminous fiber-optic tubing. A more clear and pliable PVC outer jacket is the result of a new chemical composition that facilitates optimum luminescence and lasting flexibility. This cost-effective product is 40 percent brighter than Fiberstar's original BritePak. **Circle No. 182**

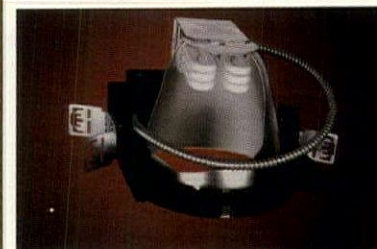
oSRAm

SyLVAnIA Inc.

Osram Sylvania presents a new technology for electrodeless induction lamps that uses a magnetic field to generate electron flow (unlike the electrodes used in conventional fluorescent lamps), resulting in an average rated lamp life of 60,000 hours. The new Sylvania inductively coupled electrodeless lamp will be available in two system wattages (100W and 150W) and three system lumen packages (7,500, 10,000 and 12,000). **Circle No. 183**

**preSCoLITE**

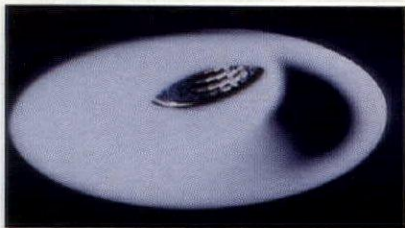
MOldCasT



Two-Lamp Triple Tube recessed ceiling downlights and wall washers combine exceptional lumen output, high energy efficiency, economical spacing ratios and evenly distributed, glare-free light. Three lumen packages are available; 3,600, 4,800 and 6,400. Six proprietary Alzak downlight reflector designs are offered. Two-Lamp Triple Tube features Prescolite's Intellect integral compact electronic ballast with optional full-range dimming. **Circle No. 184**

LuCIfer — LIgHTING cOmpany

Lucifer Lighting Company introduces Gum, a recessed downlight with an elastic trim face. After installation, Gum may be tilted from below in any directional orientation. Gum is designed for use with 50W MR16 lamps and offers the designer unlimited choices in downlighting and accent lighting. **Circle No. 185**



hYDrel

The Hydrel/Sill 7800 and 7801 are compact, Euro-style, state-of-the-art precision floodlights manufactured by Hydrel to U.S. standards through an exclusive licensing agreement with Franz/Sill of Germany. The 7800 has a profile of less than one sq.ft. and accepts lamps to 100W. The larger 7801 accommodates lamps to 400W. **Circle No. 186**



pROlIghT

A new 26W and 32W gimbal track-head luminaire features ProLight's patented multi-parabolic reflector system. The reflector system delivers maximum candlepower from triple twin-tube 26W and 32W lamps for display lighting. A choice of lamp color temperatures allows lighting designers flexibility in design. The ProLight track heads replace up to 150W floodlamps, saving nearly 80 percent in energy costs and reducing HVAC loads. Electronically ballasted. **Circle No. 187**



rSA — LIgHTING

RSA Lighting's revolutionary electroluminescent EL Lightstrip is designed as a breakthrough alternative to neon, fiber-optic and traditional cove, aisle and sign lighting. The EL Lightstrip produces consistent brightness along the length of the strip over distances up to 1,500 ft. The level of brightness can be specified at various intensities, from 8-50 footlamberts (brighter than a computer monitor). A range of colors is available. **Circle No. 188**



leXALite — InteRNATiONAl cORPORATIOn

LexaLite introduces Citizen, a low-glare, historically styled borosilicate glass component for post-top lighting applications. Citizen is designed to blend with the popular nostalgic appearances of downtown, residential and park landscapes. High luminaire efficiency and uniform illumination are two key benefits of Citizen's advanced Type III optical design. **Circle No. 189**



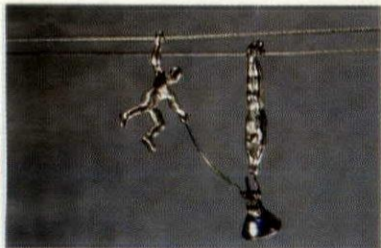
kaLTEK, — inC.

The North American stocking distributor of Nordic Aluminum (formerly Nokia) "Open Architecture" lighting track introduces the new Global Trac products. Fixtures for the specification-grade one-, two- and three-circuit Global Trac systems are currently available from a wide number of high-quality manufacturers, providing design flexibility and retrofit ease. UL-listed and sold in over 70 countries worldwide. **Circle No. 190**



TEch — LIgHTing

Tech Lighting introduces the Acrobat fixtures for its Kable Lite, Radius Wire and TwinRail systems. Tiny sculpted men in action poses support an adjustable MR11 halogen bulb. Available in steel, gold or patina finishes. The Kable Lite fixture includes two Acrobat styles: Arc or Hang; the TwinRail features one style: Hang. **Circle No. 191**



tiMeS sQUaRE — LIgHTING

Times Square Lighting introduces the MC420, a compact linear metal halide floodlight ideal for accent, decorative and display lighting. The MC420 features a 70W MasterColor lamp, which provides warm color temperature (3000K), excellent color rendering (82-85 CRI) and an average life of 6,000 hours. A wide beam pattern is controlled by easy-fitting barn doors, louvers and filters. The MC420 is equipped with tempered safety glass and offers numerous mounting options. **Circle No. 192**



luXO — cORPORATIOn

Halogen 3 is based on the same design principles of all classic Luxo adjustable task lights. A patented, fully articulating, counter-balanced concealed-spring arm is available in two lengths. Each allows precise vertical and forward placement of the light to suit specific needs. A semi-elliptical translucent or opaque shade is available, as is Luxo's popular "stepped" shade design. Mounting options comprise table base, floor base and desk-edge clamp. **Circle No. 193**



pEnNSYLvAniA GLOBE — gASLIghT cO.

The Coronado Series offers a unique combination of Old World charm and current lighting technology. It is available in three sizes as a wall-bracketed or post-mounted fixture. A complete array of reflector and refractor systems provides excellent photometric performance. The Grande Coronado is shown; also available in smaller sizes. **Circle No. 194**



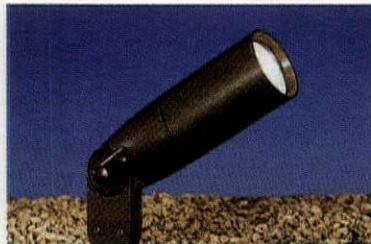
USHIo — InC. AMerIca,

At 10,000 hours average life—twice the life of standard MR16 lamps—the Ushio Ultraline series' special titanium reflector coating provides consistent color throughout the life of the lamp. Available with 12V-50W and 12V-75W. **Circle No. 195**



LUMieRE deSiGn & — mANuFACtURiNg inC.

Presenting the newest member in a proud line of award-winning outdoor architectural and landscape lighting fixtures—the first member of Lumière's Coronado series (Cat. No. 720). Take advantage of its patented design and the new-technology natural-color-rendering metal halide lamps to "light your way to the future." **Circle No. 196**



Section Advertising SPECIAL

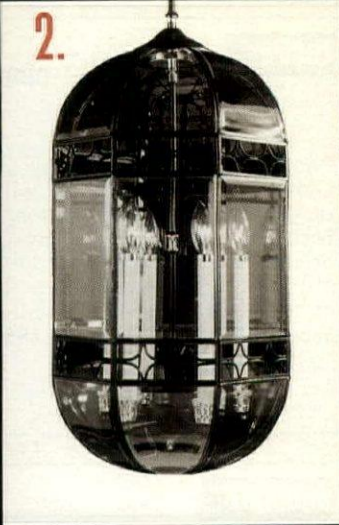
decorative

1. The Vela torchiere from **Constellation, Inc.** consists of two 66-in. parallel steel rods topped by a custom sheer silk shade. Clear incandescent lamps create the illusion of a colorful veil floating in air. The fixture was a winner of the 1996 Distinguished Furniture Award at the New Chicago Furniture Exhibition and Competition.



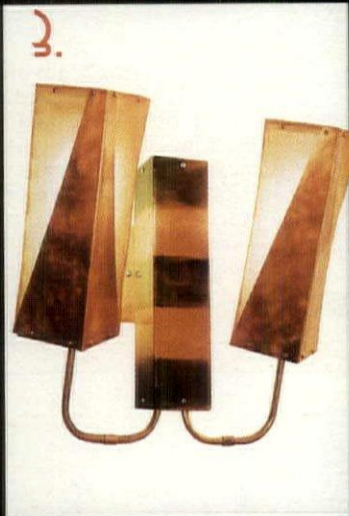
Circle No. 30

2. **Design House** has expanded its Cupola Series with the Pendant Chandelier, which features six 40W C candle-style lamps, clear beveled glass and solid brass construction with a bronze finish. Measures 27 in. high and 14 1/2 in. in diameter.



Circle No. 31

5. The new American Classics by **Justice Design Group** is a recreation of the classic antique wall sconce. In keeping with the antique look, these ceramic fixtures are offered in a variety of glazes and faux finishes and are designed with a pull-chain switch (for unswitched applications; a decorative brass cap is also included to replace the pull-chain if desired). Other options include a socket extension and glass shade.



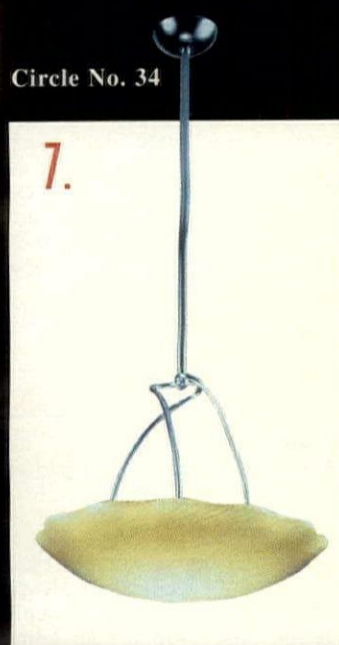
Circle No. 32

6. The Venus collection from **Leucos USA**, designed by Venetian architects Renato Toso and Noti Massari, includes floor, table and suspension fixtures as well as two wall sconces (white murrine floor lamp fixture shown). Light sources are halogen and incandescent, providing upward, downward and diffused illumination. The collection features five hand-blown glass diffusers, polished chrome and gold details.

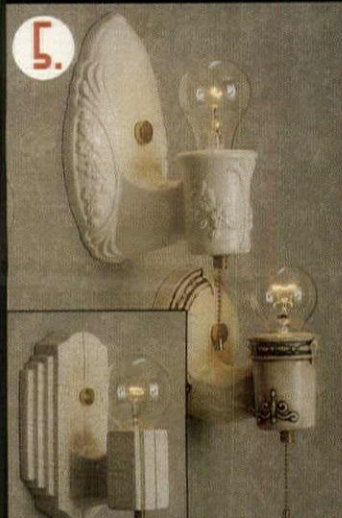


Circle No. 33

7. The fixtures in the Nubia series from **Leucos USA** feature cloud-like formations, created through an intricate glass working process. Nubia is available in wall, ceiling, suspension and telescoping suspension versions. The glass formations are created in both round and oval shapes, and in various sizes. Glass colors are satin amber or white, as well as amber striped. Two wall sconces in the series are ADA-compliant.

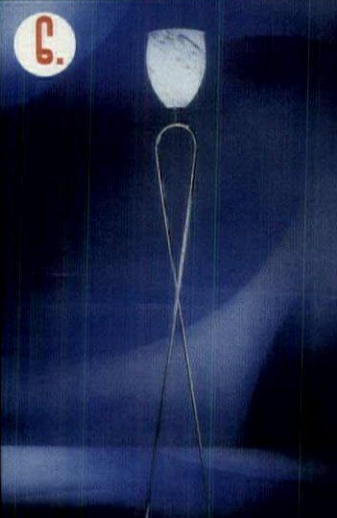


Circle No. 34



3. Building upon its Energia series of dimmable energy-efficient decorative fixtures, **Fire & Water** introduces Energia II. Using the same electronic compact fluorescent technology, Energia II includes a table-desk lamp, a ceiling pendant and an ADA-compliant sconce (shown). Energia II features a triangular copper and copper-mesh design, open on one side to make better use of the high-output lamps while reducing glare. Some models dim to 10 percent.

Circle No. 35



4. **Itre USA Inc.**'s Actus line includes sconces, table/night table lamps, ceiling fixtures, chandeliers and a floor lamp. The blown Murano glass diffusers are available in white, amber, cool yellow, red, green and cobalt blue; mountings are polished chrome, while the bases on both the floor and table lamps are in embossed black metal.

Circle No. 36

10. The 3 Wishes Fixture from **Translite** is available in two mottled and seven solid color choices. It works as a pendant with the company's Cable, Radius Rail, Twin Rail, Basis and Galaxis systems. It is also available as a Monopoint Pendant and wall sconce.

Circle No. 37



8. The Accents collection from **Mirage** provides a line of thematic sconces for residential and contract use. Shown is the Deco Sun sconce in a slate finish and featuring a hand-made ceramic body with brass hardware. The shade style is antique parchment, 60W maximum. The sconce is ADA-compliant without the shade.

Circle No. 38

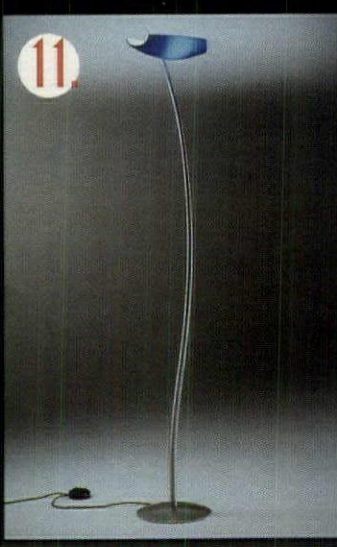


9. Cast brass birds perching on the arms of this chandelier and candles springing like flowers from their petals add a touch of whimsy to this introduction from **New Metal Crafts**. Measuring 25 in. high x 22 1/2 in. wide, it is designed for applications such as glass-windowed porches, breakfast rooms and dining areas. Includes six lamps. There are two matching sconces to choose from.

Circle No. 39

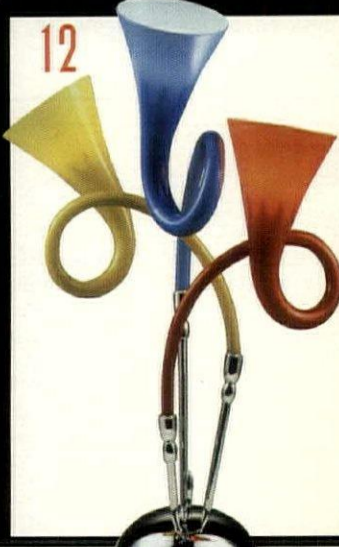


11. & 12. A variety of fixture designs from **Vetzeria deMajo** will debut in the U.S. at Lightfair this year. The fixtures are distributed exclusively through **Illuminating Experiences**. Among the designs are Nido (right) and Belleglorie (far right). Nido is a nest-shaped Murano-glass halogen wall sconce and floor lamp available in blown satin finish glass in white, amber, Tangiers red and light green. Wall structure and floor stem



are embossed black with a titanium-effect painted metal frame. Belleglorie is a blown Murano satin glass incandescent fixture available in floor, table, wall, ceiling and pendant designs. Hand-worked glass colors are available in aquamarine, orange, light blue, yellow, light green and white. The fixture's frame is chromed metal.

Circle No. 40



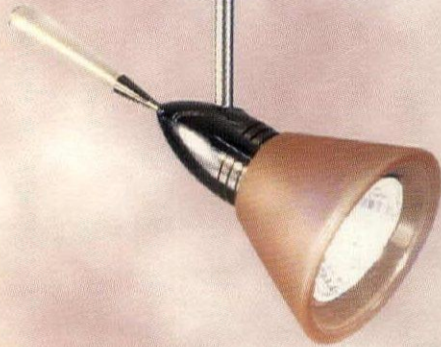


FLOWER STEMS

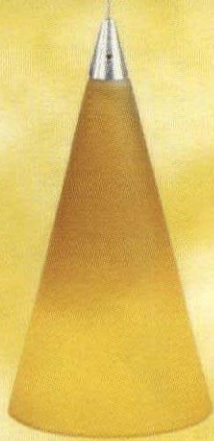


PYRAMID

Elegant Alternatives



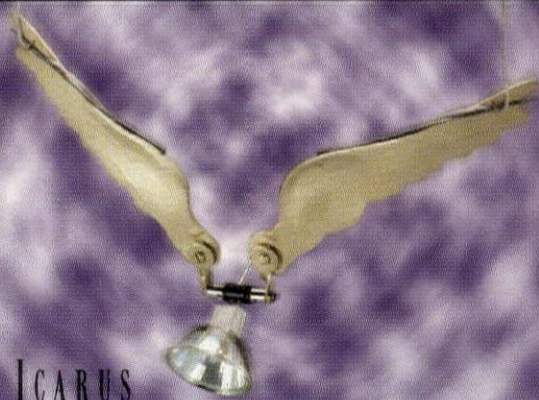
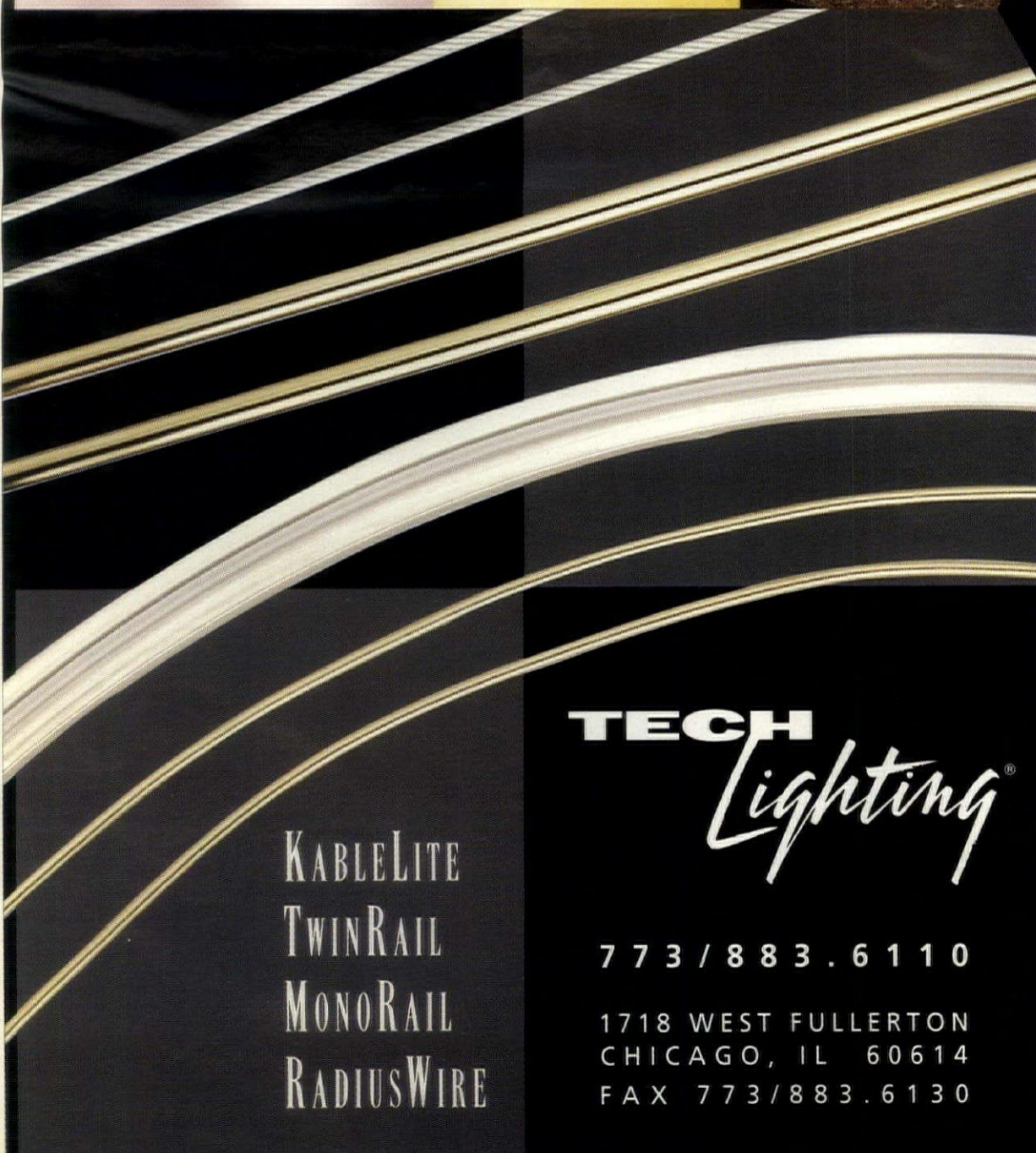
AERO



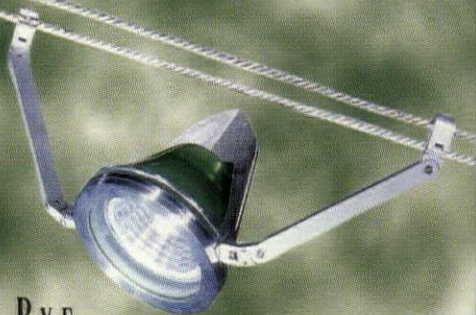
CONE



to Track Lighting



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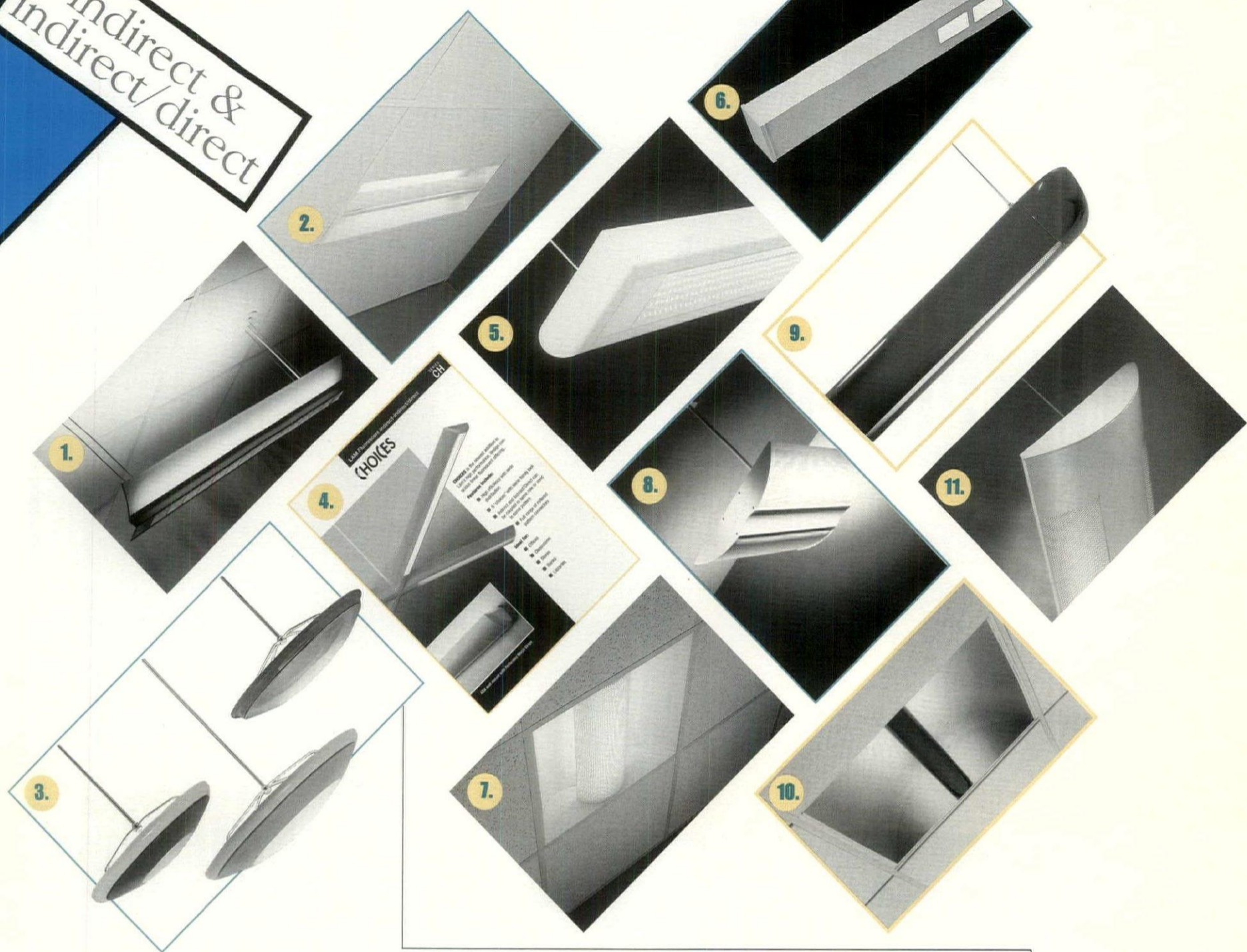
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indirect &
indirect/direct



1. The Europa from **Neo-Ray** features fully perforated metal sides for a soft glow, a parabolic louver for the independent downlight component and an articulated cable/stem hanger system for an elegant continuous appearance. The fixture offers three distributions—indirect, direct and direct/indirect—by switching the separate single-lamp direct and/or the two-lamp indirect compartments of the fixture. Meets IES RP-1. **Circle No. 107**

2. **Lightolier's** Alter Direct/Indirect Recessed Luminaires are totally recessed direct/indirect fixtures in 2-ft. x 2-ft. and 1-ft. x 4-ft. sizes for ceiling- and wall-mount applications. Light sources include T5 Bi-Tube fluorescent lamps in 28W, 36W, 39W, 40W and 50W, and linear T5 lamps in 54W and 55W. The ballast is available with dimming capability. **Circle No. 108**

3. **Lam Lighting Systems** has expanded its Litedisc line of indirect light fixtures to include models in three distinct sizes (29-in., 35-in. and 41-in. diameters) and with perforated or solid light diffusers. Each model uses four compact fluorescent lamps (40W, 50W or 55W). Outer housings are available in 11 textured paint finishes (polished brass and chrome plating optional). **Circle No. 109**

4. The Choices family of indirect and indirect/direct light fixtures from **Lam Lighting Systems** features pendant and wall sconce models (shown is a new spec sheet now available). The spec sheet offers photographs of fixture models along with schematic drawings, ordering information and complete specifications in addition to product features and benefits. **Circle No. 110**

5. The Minuet from **Ledalite Architectural Products Inc.** is available in three different configurations: direct/indirect using a perforated parabolic louver; semi-indirect featuring a luminous concave lower optic (shown); and indirect-only. The Minuet is designed for use with T5 lamps, although it is able to accept both T8 and biax compact fluorescent lamps in addition to T5 lamps. Meets RP-1. **Circle No. 111**

6. The Lightline series from **Peerless Lighting** includes indirect fixtures and indirect fixtures with the Lightvent feature for downlight. A 2³/₄-in. x 2¹/₂-in. rectangular channel housing is available with T8 or compact fluorescent lamps. Lightline offers continuous rows and configurations of indirect fixtures, low-brightness downlight components and high light output. **Circle No. 112**

7. The Avante from **Lithonia Lighting** is a recessed direct/indirect lighting system recommended for small office applications and other spaces where low-angle shielding and the elimination of "cave effect" are important. The direct and indirect light distribution combines to provide desirable brightness control at low angles as well as balanced illumination between task and proximate walls. Avante utilizes T5 compact fluorescent lamps and is available in a 2-ft. x 2-ft. size. **Circle No. 113**

8. **Luxo Corporation's** Isy Collection of direct/indirect fixtures, designed by Italian architect Romolo Lanciani, features a modular extruded aluminum profile; curved micro-perforated steel panels emit light from each side. An opal-frosted polycarbonate "membrane" inside the perforated sections softens and controls the downlight. Isy includes

office floor lamps and wall- and partition-mounted fixtures in a design similar to pendant direct-indirect fixtures. **Circle No. 114**

9. The Contura fluorescent indirect fixture from **Columbia Lighting** is designed to produce wide light distribution. A downlighting component can be specified for up to 10 percent of available light output. Fixture housing is constructed of extruded aluminum; each fixture is 10 in. wide by 3 in. high. A matte white finish is standard, although a range of phosphate-bonded powder-coated paint colors is available. **Circle No. 115**

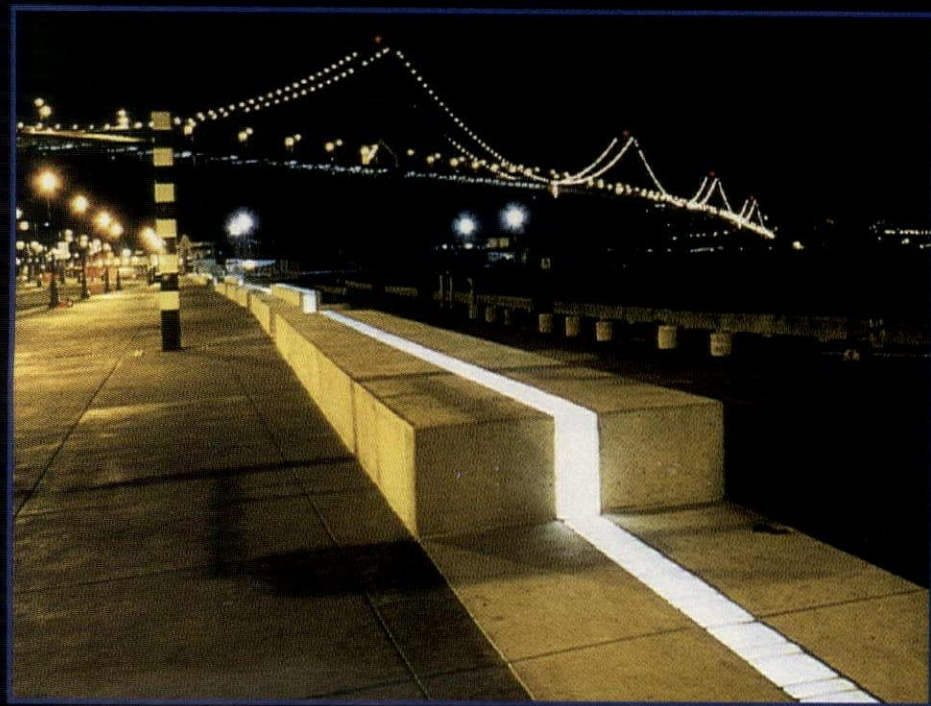
10. **Engineered Lighting Products' ID Series** is an indirect lighting system designed for computer environments with 8- to 9-ft. ceilings. The formed reflectors are diffuse silver, high-purity aluminum with a stepped cross section for

glare control. Light sources include a choice of 40W, 50W or 55W biax compact fluorescent lamps. Available in 2-ft. x 2-ft. and 2-ft. x 4-ft. sizes for T-bar and dry-wall installations. **Circle No. 116**

11. **Litecontrol's** Arcos Perf is a pendant-mounted indirect fixture that is 2³/₈ in. high x 9⁹/₁₆ in. wide. Frame-finished perforations are designed to produce a softly lighted appearance on the fixture that is intended to match the brightness of the ceiling. Available in 2- and 3-lamp T8 and 2-lamp compact fluorescent versions. **Circle No. 117**

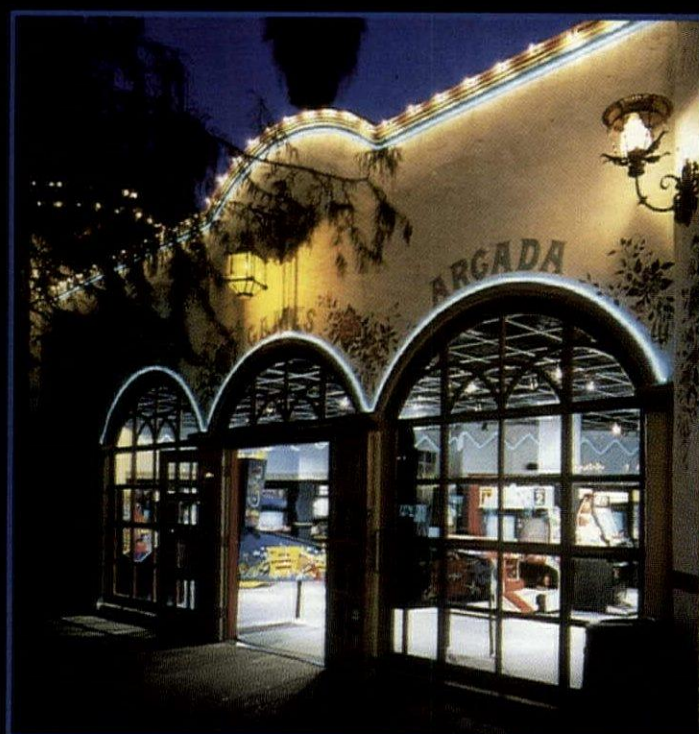
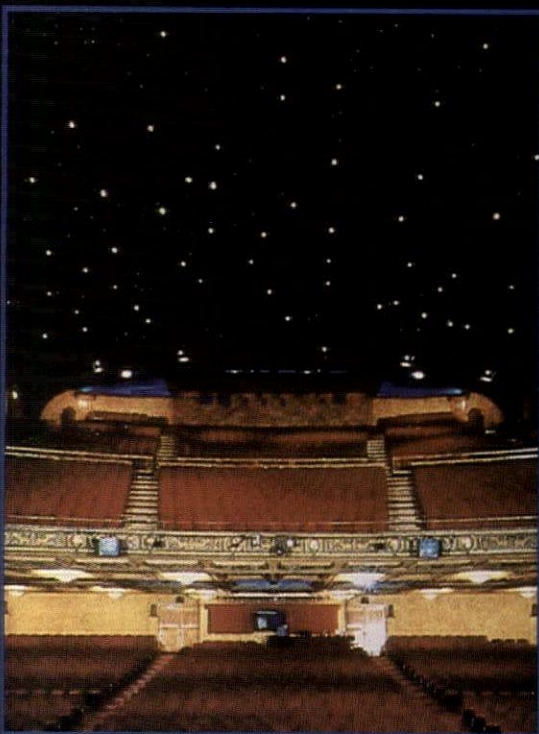
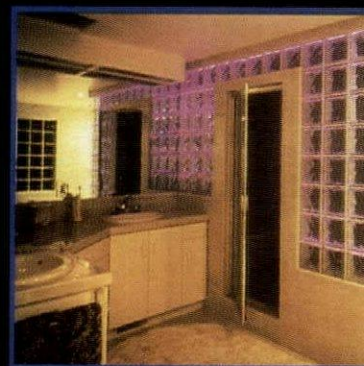
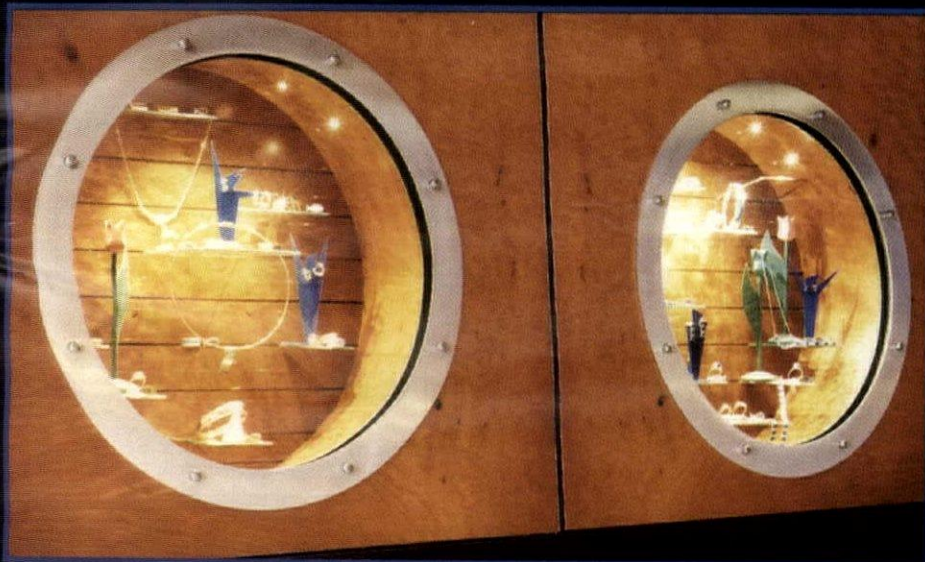
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Circle No. 19



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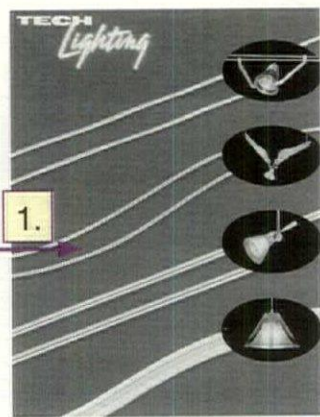
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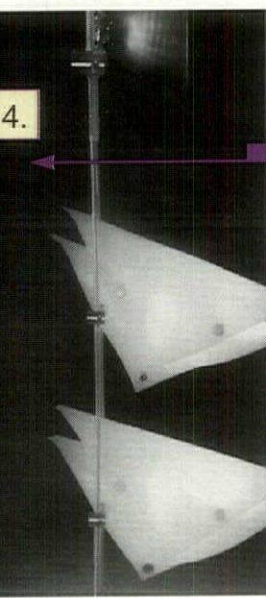
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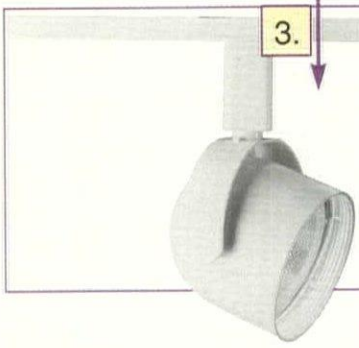
Track lighting



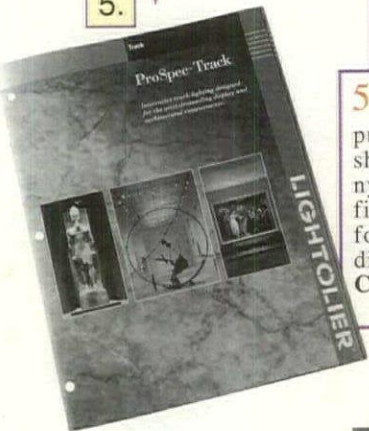
1. & 2. Tech Lighting has published a new catalog (left) showcasing its low-voltage halogen systems: Kable Lite, RadiusWire, TwinRail and MonoRail. Tech Lighting's Sprocket is one of a range of elements for the company's TwinRail, MonoRail and FreeJack canopy systems. Sprocket, with its removable handle, has a number of accessory options (shown right is the Spy accessory). Sprocket takes MR16 lamps, comes in chrome or gold finish and is available in several lengths. **Circle No. 140**



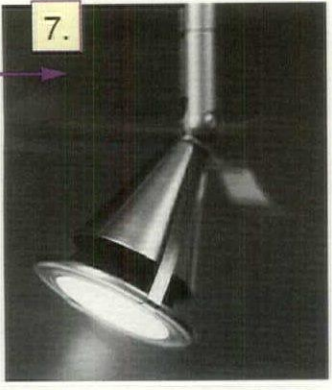
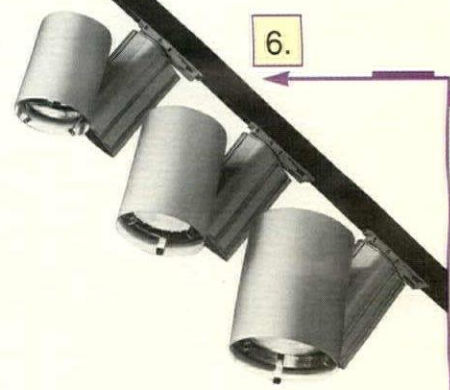
4. Outwater Plastic Industries, Inc.'s Starlit Kit wire lighting system "floats" three to six halogen fixtures between two parallel insulated wire cables; four different kit formats allow a variety of configurations. Comes with mounting hardware, one transformer and enough insulated wire to cover 20 ft. **Circle No. 141**



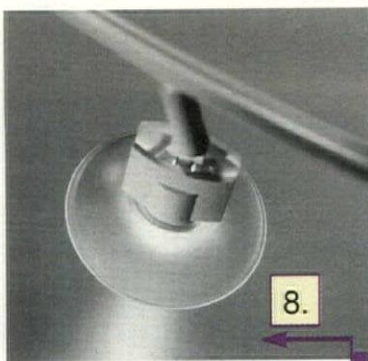
3. Halo Lighting has added White-On-White track fixtures to its line of Power-Trac fixtures. The fixtures are available in three styles and 11 sizes to accommodate commercial, retail and residential applications. Designed to blend with Halo's all-white recessed downlight trims; accepts a range of R and PAR lamps; available with barn doors, color filters and a choice of lenses. **Circle No. 142**



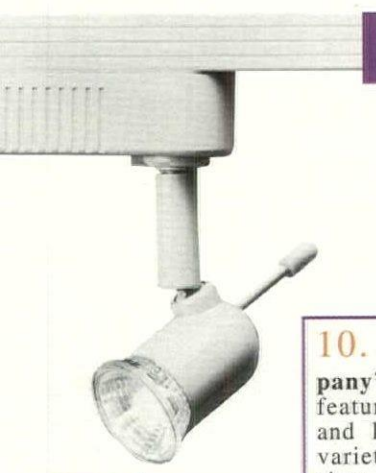
5. Lightolier has published a catalog showcasing the company's ProSpec Track fixture line designed for architectural and display applications. **Circle No. 143**



7. & 8. The Ringer from Lucifer Lighting (left) is a low-voltage spotlight utilizing an MR16 quartz halogen lamp (50W maximum); it can be both track-mounted or monopointed from a fixed location. Available in white, black or satin silver; features a suspended ring that retains the lamp with clasping spring clips. The spotlight is both stem adjustable and rotatable. Lucifer Lighting's Camba (right) is another low-voltage spotlight that can be track-mounted or monopointed. Utilizing an MR11 or MR16 lamp, it is typically used with the company's Altima miniature track system, which is available in both fixed and radiused sections of 4-ft. and 8-ft. lengths. The glass shade is frosted white and the design elements of its body, which clasp the lamp stem, are available in white or black. **Circle No. 144**

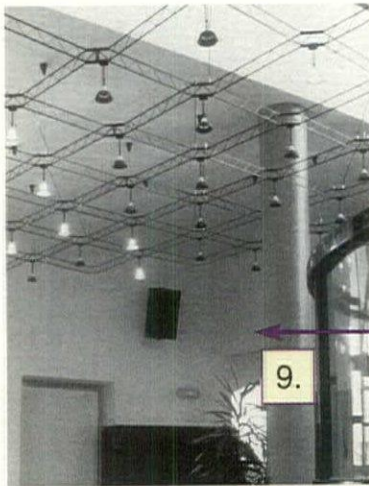


6. The Metal Halide Spotlight and Cylinder lines of fixtures from Lighting Services Inc are designed to accommodate PAR20, PAR30 and PAR38 metal halide screw-base lamps, including Philips MasterColor lamps. Available in LSI black, white and silver finishes; will accept a complete range of lenses and accessories; features adjustable focus. **Circle No. 145**



10. WAC Lighting Company's Die-Cast Track Heads feature units for low-voltage and line-voltage systems in a variety of shapes, styles and sizes. The track heads accommodate halogen lamps, from the MR11 through the PAR38, and are designed for use with the company's 2-wire, 3-wire and new 2-wire JAX track systems. Available with extensions, suspension kits, accessories and other components. **Circle No. 146**

9. Tivoli Industries, Inc.'s Stellaria Open-Conductor Grid System & Spotlights are designed for lighting large open commercial spaces. The modular ceiling-suspended grid system is comprised of metal "zig-zag" elements joined by insulated quick connector bridges, creating low-voltage grids with no external wiring. A range of lampheads can be fitted to the grid. Combination matte black and polished chrome finish. **Circle No. 147**



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downlights

1. **W.L. Gore & Associates** has introduced Aspen Lighting Systems, a line of compact fluorescent kits for retrofitting recessed downlights. **Circle No. 96**

2. **Gem** from **Lucifer Lighting** is a low-voltage recessed downlight that features a regressed contour with a colored glass inset to diffuse the quartz halogen light evenly over the face of the fixture. Housings for the Gem downlight and its related family of trims provide for installation in new and existing construction, for accessible and non-accessible ceilings, both insulated and non-insulated. **Circle No. 97**

3. **Prescolite's** Two-Lamp Triple Tube is a recessed downlight housing two electronic-ballasted triple-tube compact fluorescent lamps for maximum light output of 3600, 4800 and 6400 lumens. Full-range dimming optional; choice of reflector designs, finishes and accessories. **Circle No. 98**

4. **Prescolite's** LVH4IC is a low-voltage halogen recessed ceiling downlight designed to provide ambient, accent and wall-washing in applications where the lamp housing will come in direct contact with ceiling insulation. It accommodates standard dichroic or aluminized non-dichroic MR16 halogen lamps. Choices in lamp wattages, reflector styles and finishes, beam shapes, accessories and trims. **Circle No. 99**

5. **Nora Lighting's** small-aperture line-voltage MR16 fixture provides a range of beam spreads, trims, baffles and reflectors for remodeling and new construction. Approved for feed-through and UL-listed for damp locations. **Circle No. 100**

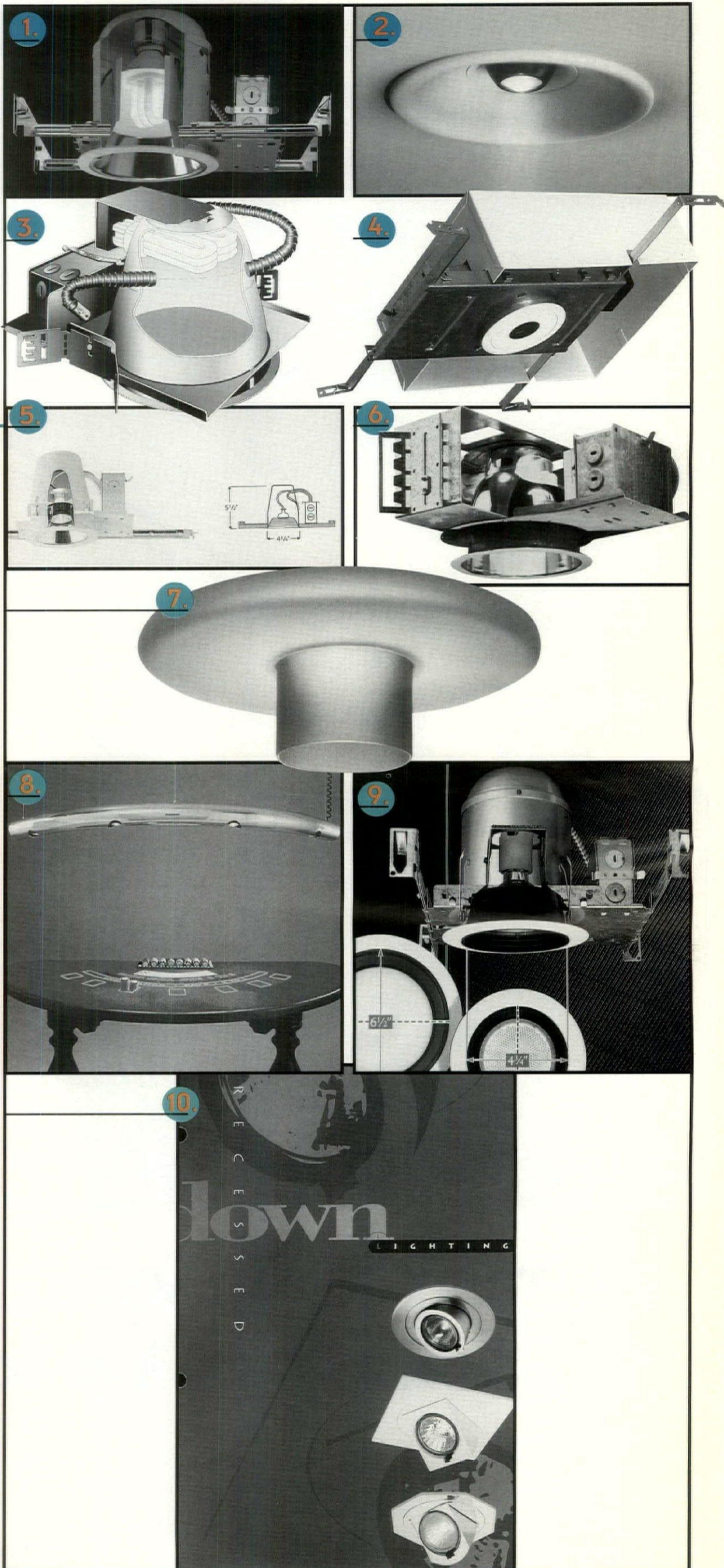
6. **Thomas Lighting's** new Omega family of 6-in. aperture compact fluorescent downlights (EY3682, EY3683 and EY3685) utilize two 13W, 18W or 26W quad tube lamps powered by a two-lamp electronic ballast. The reflectors are made of aluminum-clad material and are offered with the full range of Omega finishes, including clear, champagne gold, pewter, bronze and others. **Circle No. 101**

7. **Zumtobel's** Optos Downlight Series, traditionally offered with its glass accessory Saturn, is now available with other decorative glass accessories: Auriga, Tauri and Mizar (shown). Accessories are suspended from the Optos fixture by tabs attached to the accessory ring and are available for both 6- and 8-in. apertures. **Circle No. 102**

8. **Paravision** from **Tivoli Industries** combines low-voltage aimable suspended linear downlighting with continuous microvideocamera technology for gaming casinos, high-end retail store counters, cashier checkout stations and "cash wrap" offices. Employs multiple non-dichroic MR16 halogen lamps (20-50W per lamp) in a straight or arched aluminum tube. In the center of its underside is a color or black-and-white 1/3-in. CCD computer-controlled high-resolution video-display camera for security needs. **Circle No. 103**

9. **Halo Lighting**, a division of Cooper Lighting, offers the H5 Series of small-aperture recessed downlights. Featuring a 4 1/4-in. aperture, the series offers 16 trim choices including baffles, reflectors, opens and adjustable eyeballs. Designed to work with R, PAR and A lamps. **Circle No. 104**

10. **Con-Tech Lighting** has published a new 16-page recessed downlighting catalog covering the company's line of commercial and residential low-voltage 120V downlights and accessories. **Circle No. 105**



wall/sconces

1. The MQM70 series from **Lighting Services Inc** is a line of wall washers designed as efficient wide-angle floodlights that utilize a computer-designed reflector working with a 70W double-ended metal halide lamp. Recommended for medium- to long-throw applications such as malls, atriums and architectural and retail spaces. Available in standard LSI black, white and silver finishes, and with accessories. **Circle No. 57**

2. **Prescolite's** Lite Trac Biax is a compact fluorescent wall washer that utilizes either single or dual T5 compact fluorescent lamps to offer a range of light output. Track heads are available in 12-, 18- and 24-in. lengths and feature an extruded aluminum body with welded die-cast end caps (there is no visible hardware). Parabolic metal louvers in each model reduce glare and optimize lateral shielding. **Circle No. 58**

3. **Hampstead Lighting & Accessories**, the exclusive distributor for the Vistosi Group, offers the Demon Sconce, available in different colors. The light source is a 100W linear Halo-S lamp. Width: 12 1/2 in.; height: 9 in. **Circle No. 59**

4. **Excelite's** Quadris Wall Sconce provides direct/indirect lighting and a soft glow from a translucent faux alabaster or white acrylic diffuser. Quadris is ADA-compliant and is available plain or with brass accents. It utilizes an Osram Sylvania Dulux F36 compact fluorescent lamp operated by an electronic ballast. **Circle No. 60**

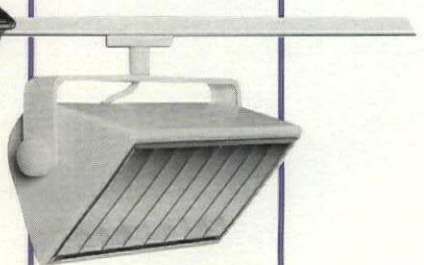
5. **Translite Systems'** Safari Wall Sconce is a member of Translite's Pacific Reflections collection of hand-blown glass fixtures. Seven shapes are available in 10 colors as wall sconces, monopoints and pendants for the company's Cable, Radius Rail, Twin Rail, Basis Track and Galaxis low-voltage lighting systems. **Circle No. 61**

6. **Advent Lighting's** Colonnade sconce features either a perforated stainless steel or an aluminum lens with a mylar backing. The perforated lens is available in a brushed, polished or cycloned finish. The mylar may be removed to expose the lamps and interior components for an "industrial" look. Available in a 14-in. high or 18-in. high version; uses two 13W twin-tube compact fluorescent lamps. ADA-compliant. **Circle No. 62**

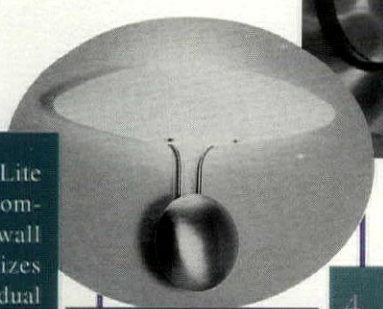
7. **Hinson Lighting's** Volcanos is designed with an industrial look, featuring a fixed wall bracket finished in matte metallized graphite gray. The matte tempered glass diffuser is placed over a halogen lamp. **Circle No. 63**



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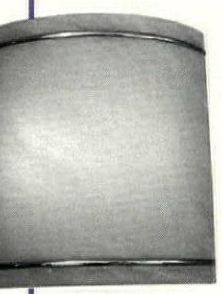
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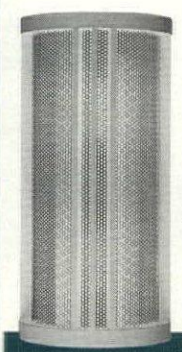
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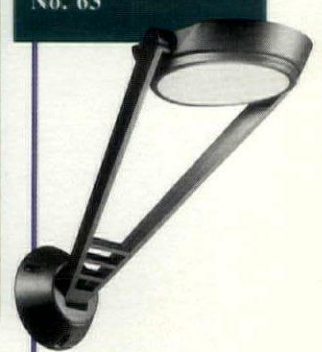
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A CROWNING ACHIEVEMENT IN FIXTURE DESIGN

Each new member of Lumière's Coronado line of metal halide fixtures is a unique specification grade fixture designed to use the newest in high technology natural color rendering metal halide lamps.

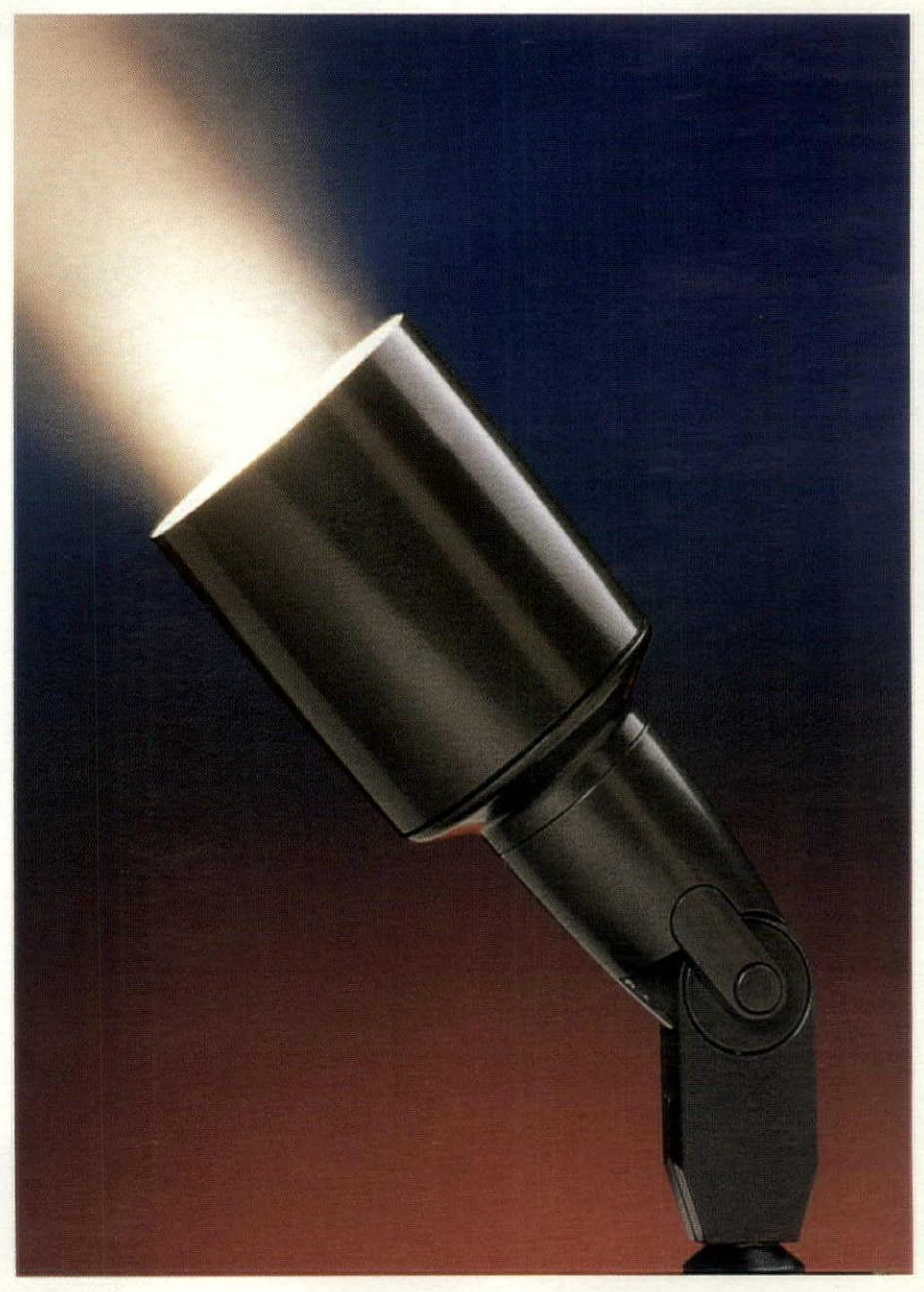
Unique, timeless, and patented design (U.S. Des. 373,437), and patent pending fixture aiming mechanism set these fixtures at the summit, above all others in their class. The ADEX Award winner for landscape lighting, the Coronado series adds to the roster of Lumière fixtures honored for design excellence.

Available in versions to accept the PAR 20, 35 watt (Cat. #720), PAR 30, 35 or 70 watt (Cat. #730, pictured), and PAR 38, 70 or 100 watt (Cat. #740) metal halide lamps. Coronado fixtures can be mounted in the ground, on trees or walls, and can be remoted from their waterproof composite ballast compartment.

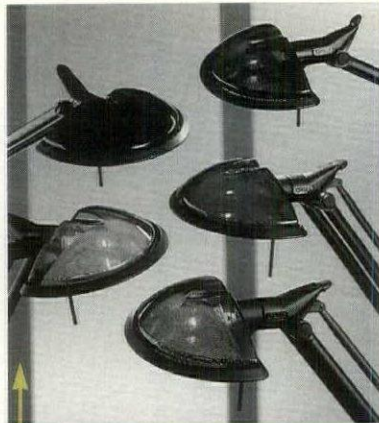
Another groundbreaking, award winning fixture?

Of course, its Lumière!

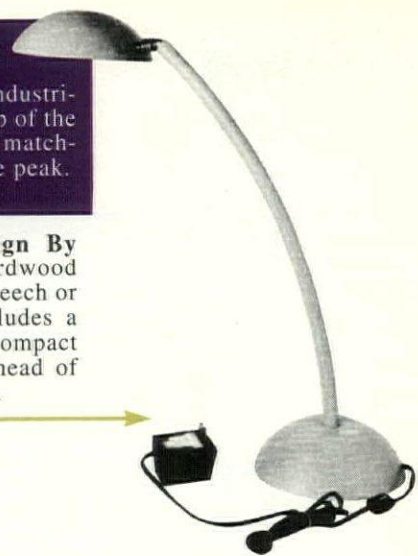
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Design & Manufacturing, Inc.
31360 VIA COLINAS #101, WESTLAKE VILLAGE, CA 91362
TELEPHONE: (818) 991-2211 □ FAX (818) 991-7005



task lighting

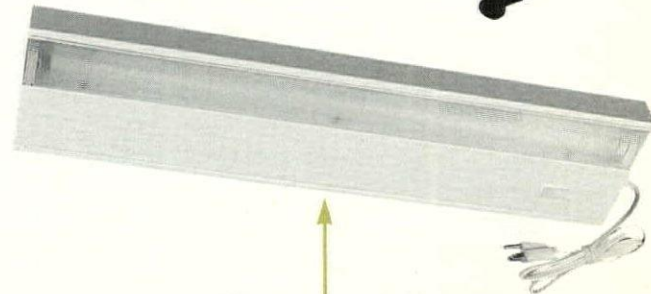


The Magnita from **Hinson Lighting** is a stainless steel portable table lamp that can also function as a wall bracket. Designed with a swiveling arm, it features an industrial rubber base balanced by wrap-around coiling at the top of the polished column. The wide conical shade is available in matching metallic or parchment, with a choice of a red or blue peak. **Circle No. 53**

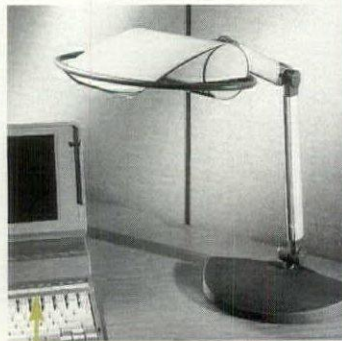


Woodforms from **Design By Nature** is a solid hardwood desk lamp available in beech or cherry. The fixture includes a 9W 2700K quad tube compact fluorescent lamp. The head of the fixture is adjustable. **Circle No. 54**

Luxo Corporation's Halogen 3 family features a fully articulating, counter-balanced concealed-spring arm. The fixture is available with a choice of two translucent shade designs—a new rounded-edge version of Luxo's "stepped" shade or a new semi-elliptical shade. Shades are available in a range of colors. The fixture houses a 35W halogen lamp controlled by a switch that allows off, 50 percent light output and full light output. Mounting options include oval table base, floor base and edge clamp. **Circle No. 51**

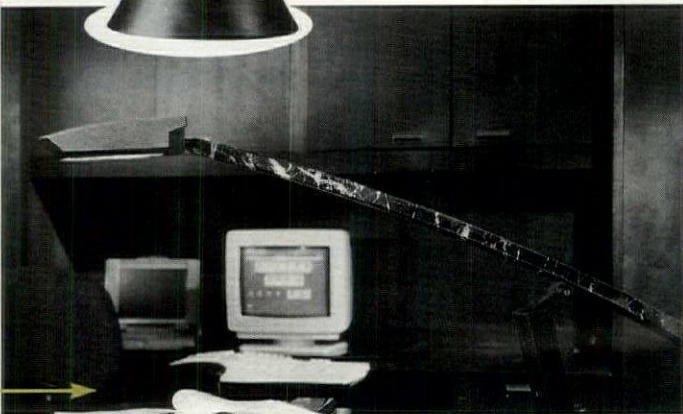


Lithonia Lighting's Finesse is a low-profile undercabinet task light featuring a snap-in proprietary lens and a solid-front design that combine to provide diffuse and uniform light distribution. Finesse utilizes T8 lamps and is available in six lengths, from 12 in. to 60 in. The hinged design of a separate housing and the removable service tray aid in installation and maintenance. **Circle No. 55**



Garey/SLP's Pavo portable task light features dual articulating arms with a unique integral grab ring (black, slate blue or burgundy) encircling the head for ease of adjustment. The head houses a 13W compact fluorescent lamp. Three mounting styles: clamp, panel-mount and free-standing. **Circle No. 50**

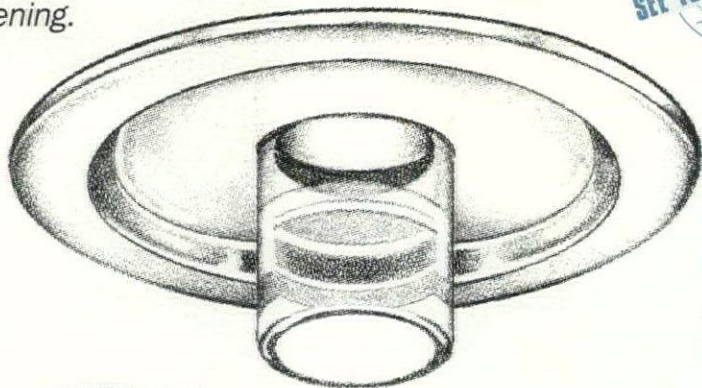
Waldmann Lighting Company's Sonoma task light features a unique head design equipped with a built-in sensor switch that instantly turns the lamp on or off with the touch of a fingertip. The matte black head includes a parabolic louver and houses an 18W "flat" compact fluorescent lamp. The "radius"-style arm rotates 48 in. in diameter. **Circle No. 52**



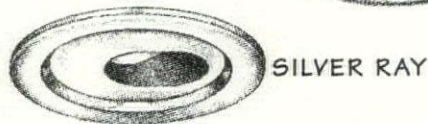
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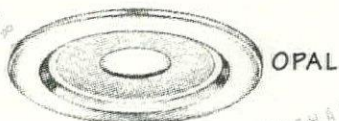
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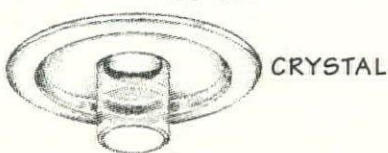
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FLEXIBILITY
A LIGHTING STATEMENT
OUR COMMITMENT.**

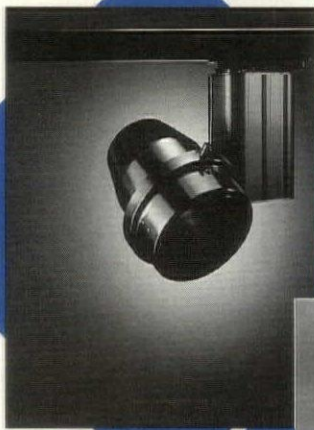
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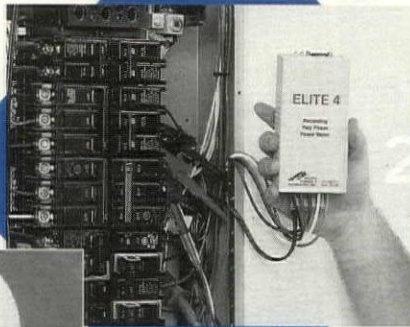
CYCLOP

Circle No. 23

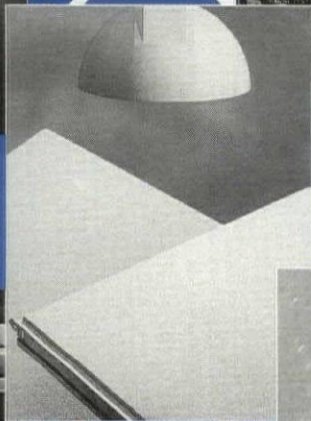
fiber optics,
tools & specialty



1.



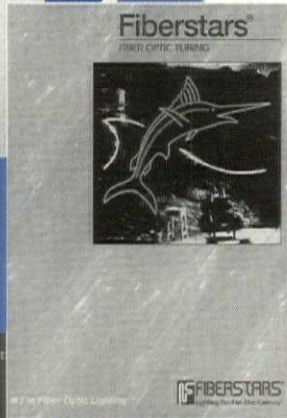
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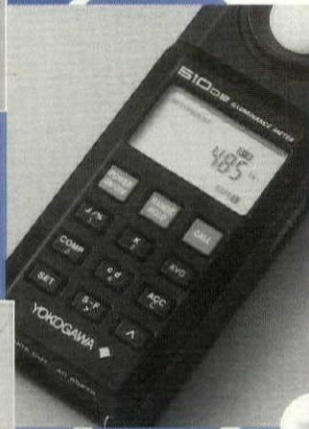
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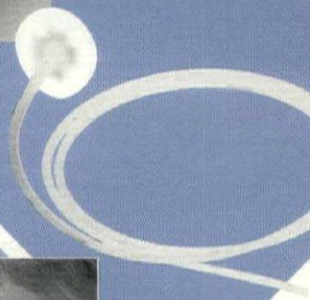
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11.

1. The BL38 Blacklight Series from **Lighting Services Inc** is specifically designed for producing high-intensity focused ultraviolet (UV-A) light to illuminate materials that fluoresce in applications including retail, display and exhibit areas. The unit creates spot, flood and wide-flood beam spreads; it features self-locking horizontal and vertical focusing. **Circle No. 65**

2. **Pacific Science & Technology** has expanded the Energy Logger series of recording meters with the Elite, a device that records true RMS volts, amps, kW, kVA, kVARs and power factor for single- and three-phase loads even with harmonics present. It can be used with a modem for remote data reading and retrieval. Designed for parallel metering, submetering and end-use metering. **Circle No. 66**

3. Hi-LR Ultima RH90 ceilings from **Armstrong World Industries** are a new line of acoustical panels designed to maximize reflectance of light directed at the ceiling. The Ultima has a light reflectance value of 0.89 and is intended for use with indirect lighting. Other features include acoustical performance, resistance to humidity and scratch-resistance. **Circle No. 67**

4. The LumiTred line of step lights from **Tivoli Industries Inc.** features scuff-resistant, translucent step material that lights and defines step edges with a soft glow. Uses 7W 16V replaceable lamps; an LED version is available with amber, green, red or yellow LEDs. Also available with matching end caps and lighted numerical or lettered row indicators. **Circle No. 68**

5. A new "overview" brochure from **Fiberstars Inc.** showcases the company's fiber-optic lighting products, including illuminators, fiber-optic cabling and point-source fixtures and accessories. **Circle No. 69**

6. **Lighting Services Inc** has published a brochure describing the features, benefits and technical aspects of its glass fiber-optic lighting system. **Circle No. 70**

7. **Yokogawa Corporation of America's** 510 Series Digital Illuminance Meters measure a wide range of lighting conditions, and feature switchability from lux to footcandles, fast/slow response settings, range hold/data hold/timer hold, percent deviation display, recorder and digital outputs, silicon photo diode element, auto power-off. **Circle No. 71**

8. **Juno Lighting Inc.'s** Trac-Signs are track-mounted backlit signs designed to utilize traditional transparencies or inexpensive digital inkjet graphics that can be changed quickly by means of a patent-pending drop-down base. Trac-Signs can be rotated 358 degrees horizontally and are double-faced to target traffic patterns. **Circle No. 72**

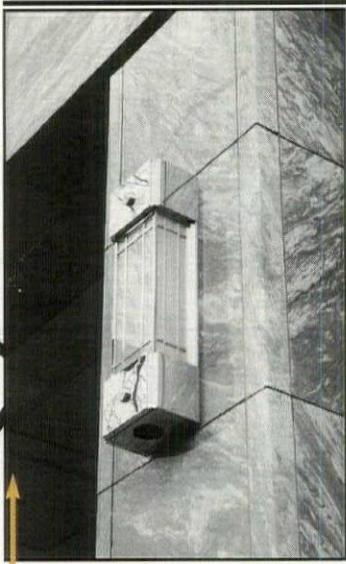
9. **TecnoLux Incorporated's** Neon Specifier is a specifying tool for selecting neon colors for commercial sign and architectural lighting applications. It is comprised of high-gloss color cards that are designed to be faithful to actual three-dimensional lit tubing. **Circle No. 73**

10. The OptiFlex light pipe from **Rohm and Haas** is a large-diameter, solid-core fiber-

optic cable, available in both side- and end-emitting versions. The cable evenly distributes light from 8 ft. to 50 ft. Available in 3.2-mm, 5.1-mm, 7.1-mm and 12.7-mm diameters. **Circle No. 74**

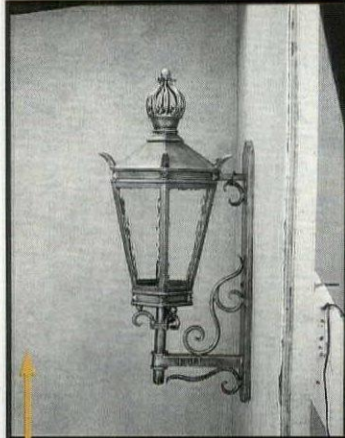
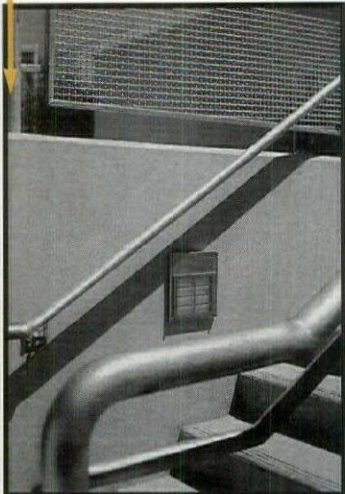
11. **The Cooke Corporation's** cal-Light 400 is a lightmeter used for measuring ambient illumination. It is designed with an angled sensor to allow pointing to the light source while simultaneously reading the output. A new built-in bracket allows it to be placed on a surface and the reading taken from a distance. Individually calibrated. **Circle No. 75**

outdoor/landscape



Bega's Recessed Stainless Steel Luminaires are heavy-duty, recessed wall fixtures with a 9-in. x 9⁷/₈-in. laminated steel and "eight window" faceplate backed by a precision tempered glass spread lens. Available in 70W metal halide, 50W HPS and 18W compact fluorescent, with a 30-degree cut-off "micro-louver" film. Suitable for wet locations and installation within 3 ft. of ground. **Circle No. 120**

Advent Lighting's Custom Outdoor Wall Sconce measures 56 in. high x 18 in. wide x 12 in. deep, and is constructed of solid stainless steel and bronze finished to a mirror polish. The lens material is frosted opal glass. **Circle No. 119**



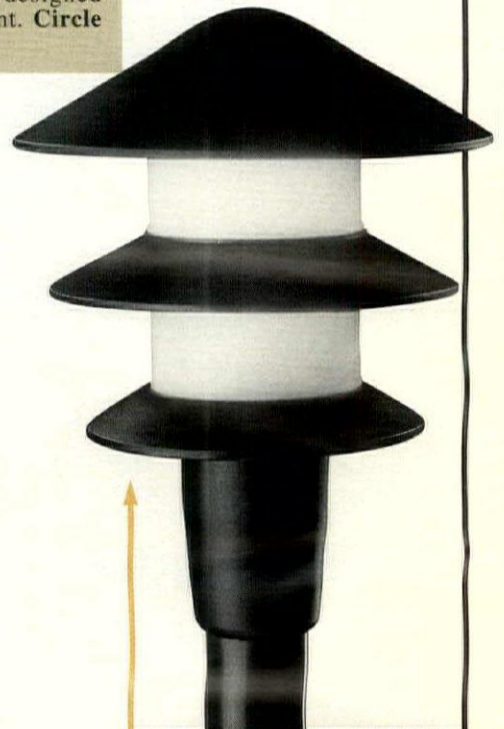
Arte de Mexico offers a collection of hand-forged iron lighting that includes this classically designed exterior wall mount. **Circle No. 123**



The Paver System, part of the Fiberscape series from **Fiberstars, Inc.**, won a 1996 New Product Showcase Award of Distinction. The Paver System consists of small-scale point-source light fixtures designed to be embedded in concrete or stone. The fixture heads are lighted with fiber optics, thus featuring all the benefits of fiber-optic lighting. The fixture is constructed of a two-part stainless-steel fixture head, a frosted, high-impact Pyrex lens and an O-ring weather seal. **Circle No. 121**

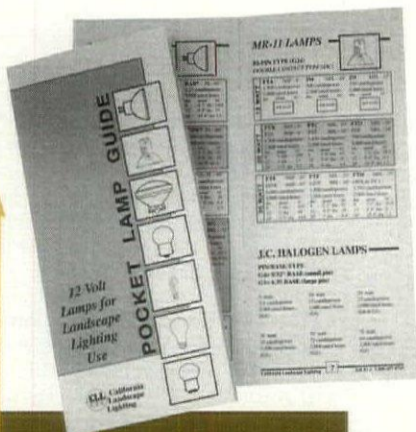
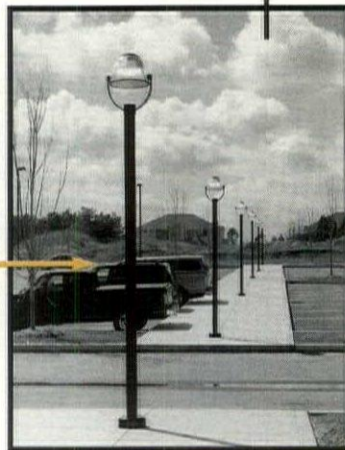


Elliptipar's Style 454 outdoor fixture features a low-profile asymmetric reflector that can project light evenly across expansive surfaces from one edge. Available for metal halide or high pressure sodium lamps, the Style 454 features an integral ballast, non-corrosive construction and water-tight operation. **Circle No. 122**

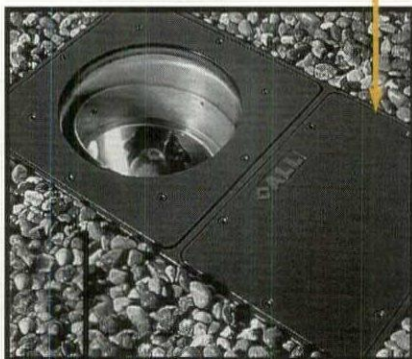


Alpan, Inc.'s low-voltage Pagoda Garden Lights, part of the company's Monterey Series, use a 9W compact fluorescent lamp. A photo sensor and/or timer for auto switch-on at dusk can be set to come on for four hours, six hours or automatic turn-off at dawn. **Circle No. 125**

Beta Lighting's Prismatic Architectural/Area Lights (Series BAH) feature even illumination and uplight. The pedestrian-scale fixture accommodates 70-250W HID lamps, while the 4¹/₂-in. steel pole houses a slide-in ballast assembly beneath the pole cap. Available with a clear top or a partial shroud design, the Prismatic Area Light also includes a variety of mounting styles, a seven-year DeltaGuard warranty, and a selection of color finishes. **Circle No. 124**



California Landscape Lighting, a distributor, has published the *Pocket Lamp Guide* on 12V lamps for landscape lighting use. The brochure includes specifications for a variety of lamps, as well as information on wattage, candlepower, beam spread and rated lamp life from their manufacturers' catalogs. **Circle No. 126**

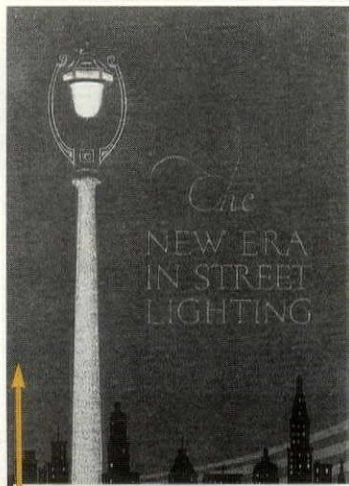


Architectural Landscape Lighting, Inc. (ALL's) SL-04 (left) is designed for applications that require highly aimable illumination from an in-ground uplight. Available in a range of durable baked enamel coatings, the cast-aluminum or bronze outer housing is pressure checked for 10 psi under water. Reflectors are rigid spun aluminum with an Alzak finish, for flood or spot beam distribution with "E" lamps adjustable to a 20-degree tilt and 360-degree horizontal rotation. The company also offers two composite-construction, specification-grade lighting fixtures—the above-ground SL-34 (shown right), available in three heights, and the in-ground SL-33. **Circle No. 127**



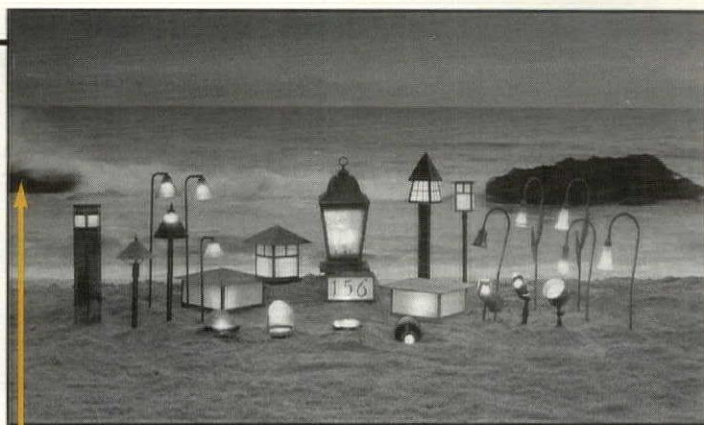


Holophane Corporation's PoleStar line represents a family of parking lot fixtures. PoleStar is available in two sizes with wattages ranging from 250W to 1000W. The fixture also includes three lighting patterns (square, asymmetric, and forward throw) and three fixture shapes (round, soft square and octal). Various mounting styles add maximum visual impact. **Circle No. 128**

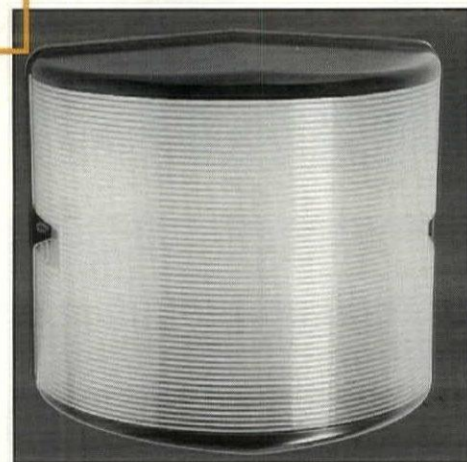
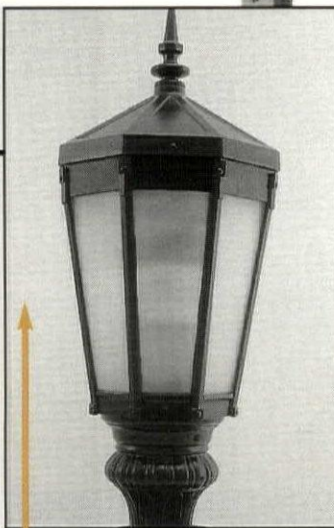


Unique Solutions, a division of Holophane Corporation, has reprinted a booklet the company originally published in 1918. *The New Era in Streetlighting* provides a historical perspective on the development of street lighting, complete with vintage photographs. **Circle No. 129**

Thomas & Betts' Interstate II 775 series is designed for interstate roadways, expressways, railway switchyards, shipping docks and large parking lots. The line includes 70-400W high pressure sodium, 175-400W metal halide and 250-400W mercury vapor; features die-cast aluminum housing; and is UL-listed for wet locations. **Circle No. 130**

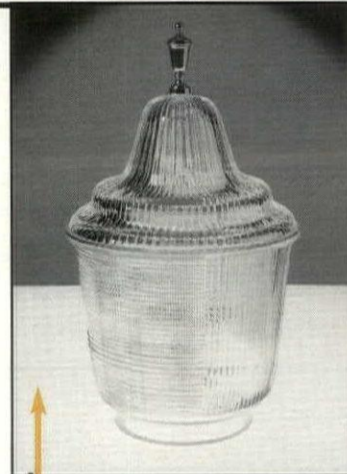


Rocksapes Lighting, Inc. offers a family of solid brass architectural outdoor fixtures. A wide variety of lanterns are also available, from Craftsman and Prairie styles to Victorian and Tudor. **Circle No. 131**



Prescolite Moldcast Lighting has published a brochure (left) detailing the Washington Globe and new Savannah Lantern post-top outdoor fixtures. The company's Savannah Lantern ContraCline's design (right) is early-20th century, but the fixture employs the patented ContraCline multi-tiered reflector optical system which provides for control of virtually all radiant light. Features include internally mounted, high-power-factor CWA-type ballasts; UV-stabilized, fully gasketed polycarbonate panels; and a selection of finishes and pole designs. **Circle No. 133**

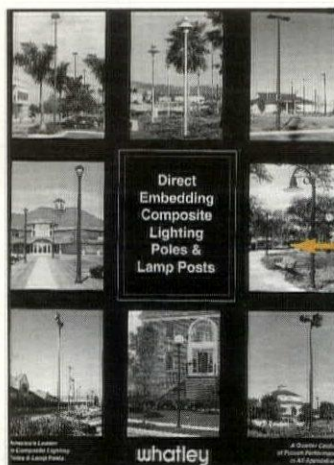
Greenlee Lighting Inc.'s Composite Well Light (WLC) series is designed for residential and commercial applications where glare is a concern; the WLC series offers a variety of optics and aiming options to achieve a soft, subtle illumination. FLW and SPW optics with E-17 lamps offer high efficiency. Equipped with a five-year warranty, the composite housing construction is highly resistant to corrosion. **Circle No. 132**



The new **Small Canopy** from **Thomas Day-Brite Lighting** is a versatile exterior fixture with a half-circle shape to mount on walls or ceilings. The Small Canopy is offered with metal halide and high pressure sodium lamps, but also accepts fluorescent dual triple-tube lamps. Lenses are constructed of UV-stabilized 0.125-in. polycarbonate injection-molded blondel prisms that distribute light while obscuring the lamp image. Differently styled trims on each of the five fixtures create a variety of wall effects. **Circle No. 135**

Lexalite International Corporation's Citizen is a low-glare, historically styled borosilicate glass component for post-top lighting applications. Citizen is designed to blend with the popular nostalgic appearances of downtown residential and park landscapes. **Circle No. 134**

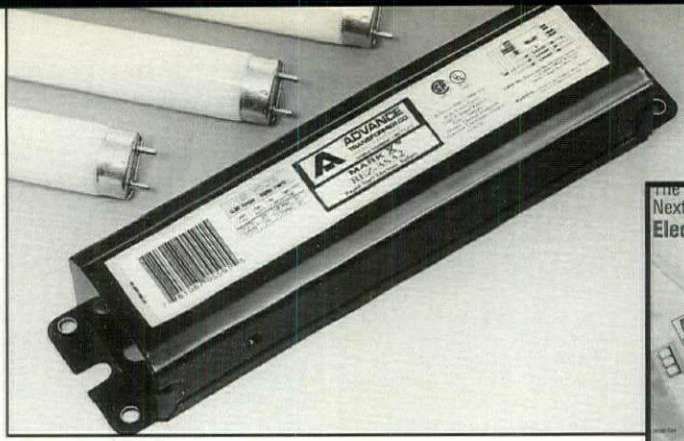
Hydrel's 7100 and 7200 Series (left) provide power capabilities to 1000W with eight possible standard distributions for each unit. Tough die-cast aluminum housing, positive sealing and an optical system with internal glare control. A wide range of mounting accessories provides project design flexibility. The company's 9000 Series in-grade lights (middle) offers Hydrel's watertight modular design that eliminates water penetration problems. All critical components—lamp, ballast and connectors—are installed as presealed, watertight modules. The 9600 Series (right) of recessed wall fixtures provides low-level, controlled illumination in wide and narrow distributions, and are capable of a 10:1 mounting height to spacing ratio. Modular units feature polymeric back boxes, sealed lamp modules and encapsulated power supplies for elimination of condensation, easy installation and simplified maintenance. HID sources to 100 watts. **Circle No. 136**



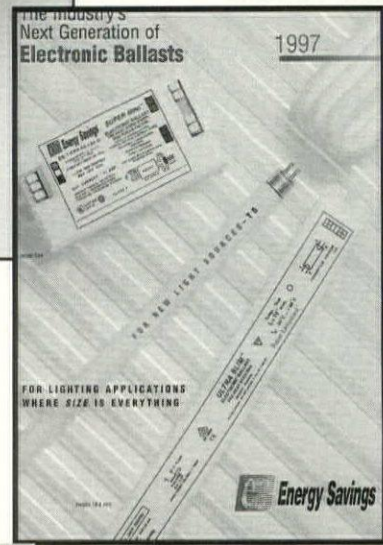
W. J. Whatley, Inc. has published a guide: *Direct Embedding Composite Lighting Poles & Lamp Posts*. This booklet answers some frequently asked questions about direct embedding. **Circle No. 137**



lamps, ballasts & controls

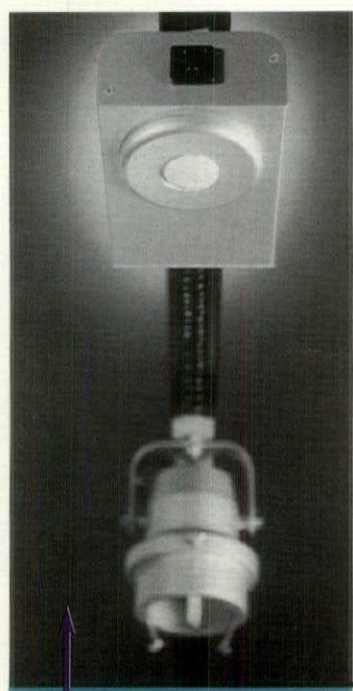
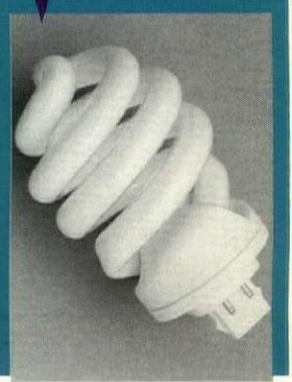


Advance Transformer's Mark X architectural dimming ballast (top) provides continuous dimming of T8 lamps from 100 percent down to 5 percent of full light output directly from the power line and requires no additional control leads. It is operated manually by a compatible two-wire phase-cut-style dimmer. The company also published a new brochure (right) on its Mark VII Controllable Electronic Ballast for T8 rapid start systems. **Circle No. 150**



Energy Savings, Inc. has published a new catalog describing its line of electronic ballasts. **Circle No. 151**

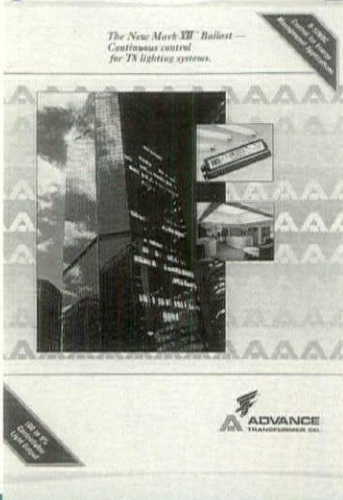
GE Lighting's Heliac lamp employs a helical design to deliver more lumen output from a smaller package. Available in 32W and 42W plug-in or 4-pin-based dimmable models and a 20W screw-in lamp. **Circle No. 153**



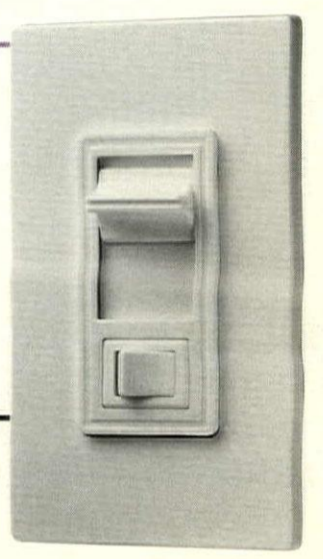
Lighting Services Inc's OS10 Occupancy Sensor features a compact design, 360-degree controlled field-of-view adjustment, a user-adjustable time delay that can be set from 15 seconds to 30 minutes, and a user-adjustable four-setting sensitivity switch. **Circle No. 154**



Litetronics International, Inc.'s Xtra-Life Halogen PAR lamp family offers 5,000 hours of operation. Includes a series of 50W lamps available in PAR20, PAR30 (short and long neck) and PAR38 sizes; 60W lamps available in PAR30 (short and long neck) and PAR38 sizes; and 78W lamps available in the PAR38 size. **Circle No. 155**



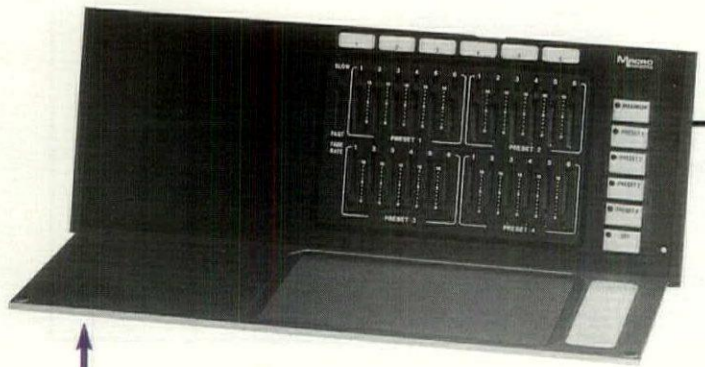
Hunt Control Systems' PS-600 Mark X is a new dimmer for use with Advance Transformer Company's Mark X electronic fluorescent dimmable ballasts. It provides 100 percent to 5 percent continuous 2-wire dimming control; available with the option of white, ivory or custom color for single-pole or three-way installations. **Circle No. 156**



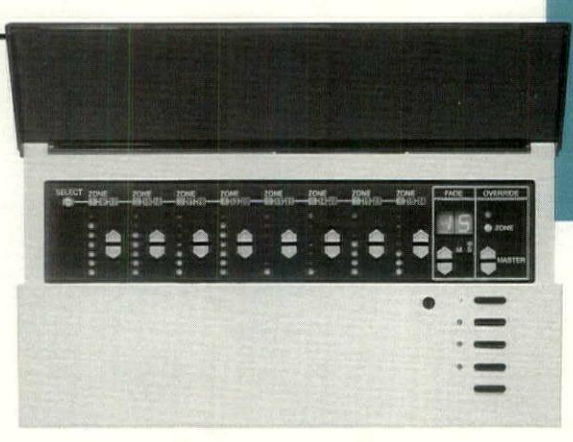
Infrared of New Jersey Inc.'s IR4000 series of industrial remote controls feature an infrared receiver and three-button transmitter that can control a wide range of industrial equipment from up to 100 ft. away, including lighting, machinery, lifts, door operators and winches. **Circle No. 157**



Lumatech Corporation has added an 18W model to its line of Reflect-A-Star compact fluorescent floodlights. Two lengths: 6.1 in. or 6.8 in. Available in three screwbase types: medium, locking or with the company's patented PermaTwist system, which turns a standard socket into a hard-wired fluorescent conversion. **Circle No. 158**



Macro Electronics Corporation's DPS-Power is a programmable multiscene light dimming and control system that has four preset buttons to allow four lighting "scenes" to be recalled on demand or on a timed fade. Handles up to 16A/1920W, allocated to up to six individual circuits and mixed lighting loads. **Circle No. 159**

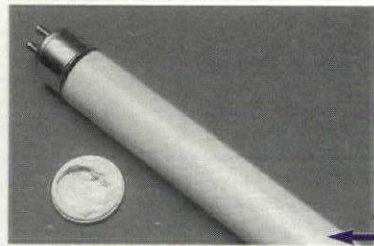


Lutron's Grafik Eye series of multiscene preset dimming controls provides multiple lighting scenes for as many as 16 or 24 zones at once from a single wall control unit. **Circle No. 160**

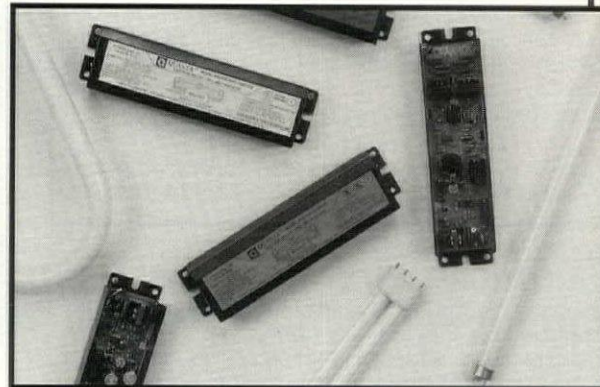


MagneTek's Ballastar line of high-frequency electronic dimming ballasts for F32T8 and F25T8 lamps allow control of light level from 100 percent down to 20 percent. Available in one- and two-lamp versions in 120 and 277 volts. **Circle No. 162**

Paragon Electric Co., Inc.'s EL Series of electronic programmable time controls features sensing capability, ease of programming, "batteryless" power outage carryover and other features. Can be used as around-the-clock SunTracker controls; can be used to control lighting plus HVAC, security, motors, pumps or any other load with a time-of-day schedule. **Circle No. 161**

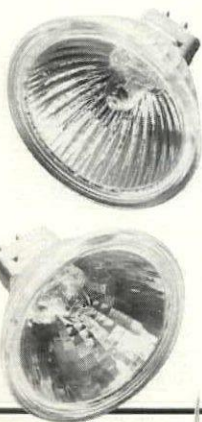


Osram Sylvania's T5 lamp-and-electronic ballast system provides opportunities for smaller fixture designs. The lamp, rated at 82 CRI, is manufactured in four lengths and lumen packages; available in 4100K, 3500K and 3000K. **Circle No. 163**

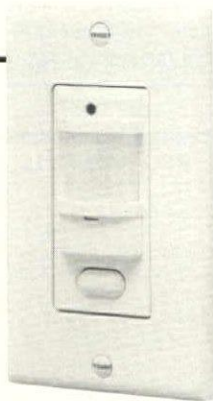


Q Technology, Inc.'s Electronic Controllable Ballast (120/277V) can be switched on or off with a 12-24V DC/AC signal and is compatible with nearly all lighting control technologies such as DDCs, time clocks, photocells and occupancy sensors. Power factor is over 99 percent; total harmonic distortion is less than 8 percent. Six-year warranty. **Circle No. 165**

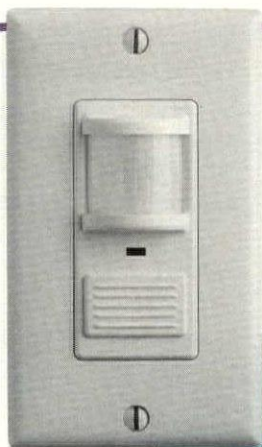
Philips Lighting Company's Continuum halogen MR16 is designed to provide more stable, consistent white light than standard MR16 lamps. Available in 20W and 50W versions. **Circle No. 164**



RAB Electric Manufacturing, Inc.'s LightAlert! SmartSwitch is a passive infrared wall-switch motion detector that incorporates zero arc point technology for compatibility with electronic ballasts. This technology switches at that zero arc point of the electrical cycle, which protects the relay contacts from high in-rush and kick-back currents. **Circle No. 166**

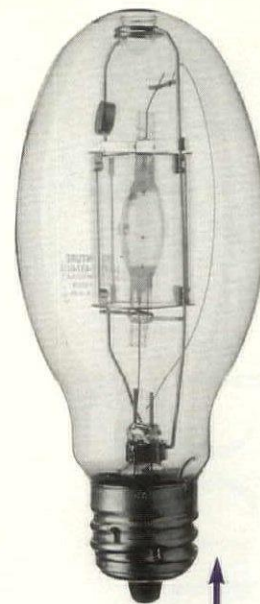


The Watt Stopper now offers a series of dimmable automatic wall switches that combine dimming and occupancy sensing into one unit. The new units work with electronic dimming ballasts as well as incandescent loads. **Circle No. 167**

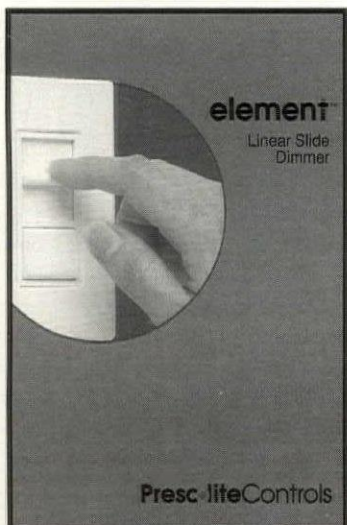


SensorSwitch, Inc.'s new and improved Decorator Wall Switch (WSD) now features a new switch cap to enhance aesthetics, an LED light to indicate proper operation, and a vandal-resistant lens. Available in ivory or white. **Circle No. 168**

Venture Lighting introduces UVGuard, a new metal halide lamp that shields ultraviolet (UV) light to prevent the yellowing of polycarbonate fixture lenses. Tests conducted by Lexalite International, a manufacturer of lighting plastics, showed the new lamp to extend the life of polycarbonate fixtures six to 10 times longer because discoloration is minimized. Available in 100W, 150W, 200W, and 350W. **Circle No. 171**



Unenco's Model IWS-ZP passive infrared wall-switch occupancy sensor features microprocessor control that allows load switching at the lowest input power value—zero arc point switching. This protects lighting control equipment, particularly those with relay contact output, from destructive in-rush and kick-back currents. 120V and 277V versions. **Circle No. 169**



Prescolite has published a brochure about Element, the company's newest line of multifunction preset slide dimmer switches. **Circle No. 170**

element
Linear Slide Dimmer

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