Lighting Spaces

国际灯光经典设计

——建筑照明的艺术与技巧

[美]罗杰·易　编著

中国建筑工业出版社

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The Art & Science of Architectural Lighting

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Contents

Introduction

Turn on the Lights!

What does Old McDonald see when he peers into the nighttime sky?

Every city or town dweller knows the initial shock of viewing the starry canopy over the countryside. Evening in a modern urban landscape is so bright it routinely masks the splendors of the universe. However, there's nothing like being caught in a power blackout to demonstrate how much electric lighting has changed our lives since Thomas Edison invented the incandescent lamp in 1879.

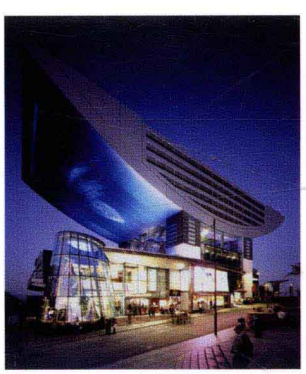
Nightlife, once celebrated in art as a source of danger, romance, confusion and supernatural phenomena, has become an indispensable way to extend daytime economic activities and intensify evening recreational pursuits--to the point that many Americans fail to get enough sleep. In fact, one in five adults in the United States currently suffers from daytime sleepiness, and 50 percent of those aged 18 to 34 say daytime sleepiness interferes with their work. Much of the credit goes to professional lighting designers for making the built environment so compelling that we perform our occupations with acuity and enthusiasm during the day, and ignore our natural circadian rhythms as night falls to keep working or playing.

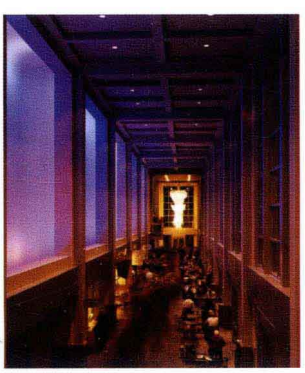
One basic measure of lighting's importance is the volume of energy Americans devote to it. Energy consumption for all lighting in the United States, according to a 2002 study for the Department of Energy, is estimated to be 8.2 quads (one quad equals 10^{15} BTUs), 765 TWh/yr (terawatt-hours per year) or about 22 percent of total electricity generated. Sector by sector, aggregate energy usage for lighting breaks down into residential at 27 percent, commercial at 51 percent, industrial at 14 percent, and outdoor stationary at 8 percent. For the two largest sectors, commercial and residential, lighting constitutes approximately 17.6 percent of total building energy consumption or some 30.3 percent of total building electricity use.

But another, equally dramatic sign of lighting's role in modern life is its growing use not merely to illuminate tasks but to influence perception. Of course, a surprising number of offices, hotels, courthouses, hospitals, restaurants, schools, convention centers and the like continue to embrace mediocre construction illuminated by nondescript lighting. Increasingly, however, the public is encountering unique environments envisioned by major architects and interior designers with help from lighting designers, in which the lighting is critical to the powerful inspirational message of the commercial or institutional space.

Professional lighting design at its best does more than enable us to accomplish whatever activities draw us to a space, indoors or outdoors. It adds meaning to whatever we do. The artistry and technology that today's lighting designers bring to bear on architecture and interior design is impressively displayed in the following pages of Lighting Spaces, where these talented individuals and organizations come with names, skills, talents and portfolios that make our days and nights worth seeing.

Roger Yee
Editor





Project: Yale University Art Gallery Renovation, New Haven, CT
Original Building Architect: Louis Kahn
Original Building Lighting Design: Richard Kelly
Renovation Architect: Polshek Partnership Architects
Renovation Lighting Design: Fisher Marantz Stone
Exhibition Lighting Design: Hefferan Partnership Lighting Design
Lighting Manufacturer: Lighting Services Inc

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Memorable guest experiences are expected from leading hotels and restaurants and Ann Kale Associates works closely with hospitality clients to make the most of each project. Consider four recent projects. Per se, famed-chef Thomas Keller's New York restaurant is elegant dining at its best. Lighting throughout accentuates Tihany Design's rich furnishings and bronze floor while providing complementary lighting to the patrons themselves. In Tihany Design's Club Prive at Bellagio, in Las Vegas, low, seductive lighting lets players relax in semi-privacy, amidst mahogany and glass panels and plush seating, at blackjack tables under recessed accentlights. At The Sea Grill, another project with Tihany Design in New York's Rockefeller Center, guests viewing the fabled winter ice rink and summer garden find their visit enriched by light filtering through a custom

1, 4: per se, New York, New York, Tihany Design, interior designer; Paul Warchol, photographer.

2, 3: Club Prive, Bellagio, Las Vegas, Nevada, Tihany Design, interior designer; Andrea Martiradonna, photographer.

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Hospitality

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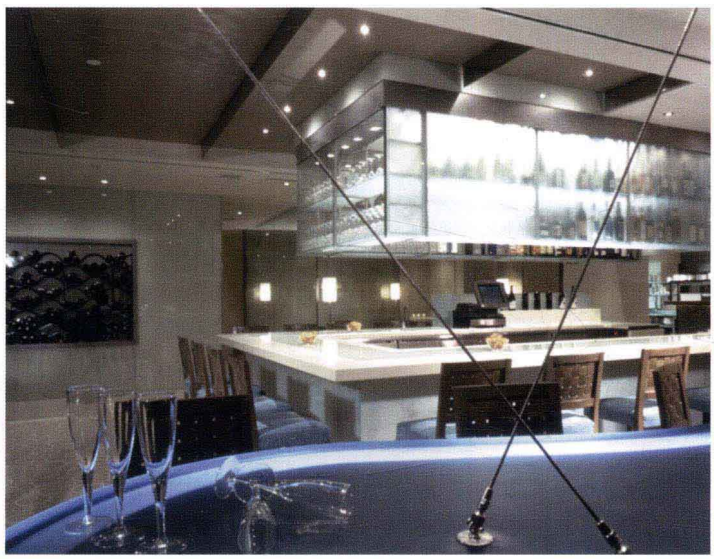

glass curtain, blue resin sheets, and sand-blasted glass panels, evoking the sea's changing moods. At Suba Ann Kale Associates and Ardre Kikoski Architect transformed a 1909 tenement storefront and basement into one of New York City's most unique restaurants. The lower level concrete dining platform is surrounded by a moat where concealed underwater fixtures gently bathe brick walls in shimmering dancing waves of light.

1, 2, 3: The Sea Grill, New York, New York, Tihany Design, interior designer; Paul Warchol, photographer.

4, 5, 6: Suba, New York, New York, Andrea Kikoski Architect, architect; Peter Aaron/ Esto Photographics, photographer.

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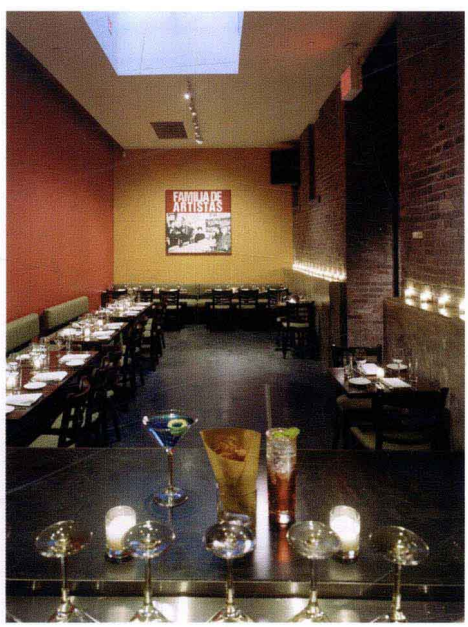

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Historic

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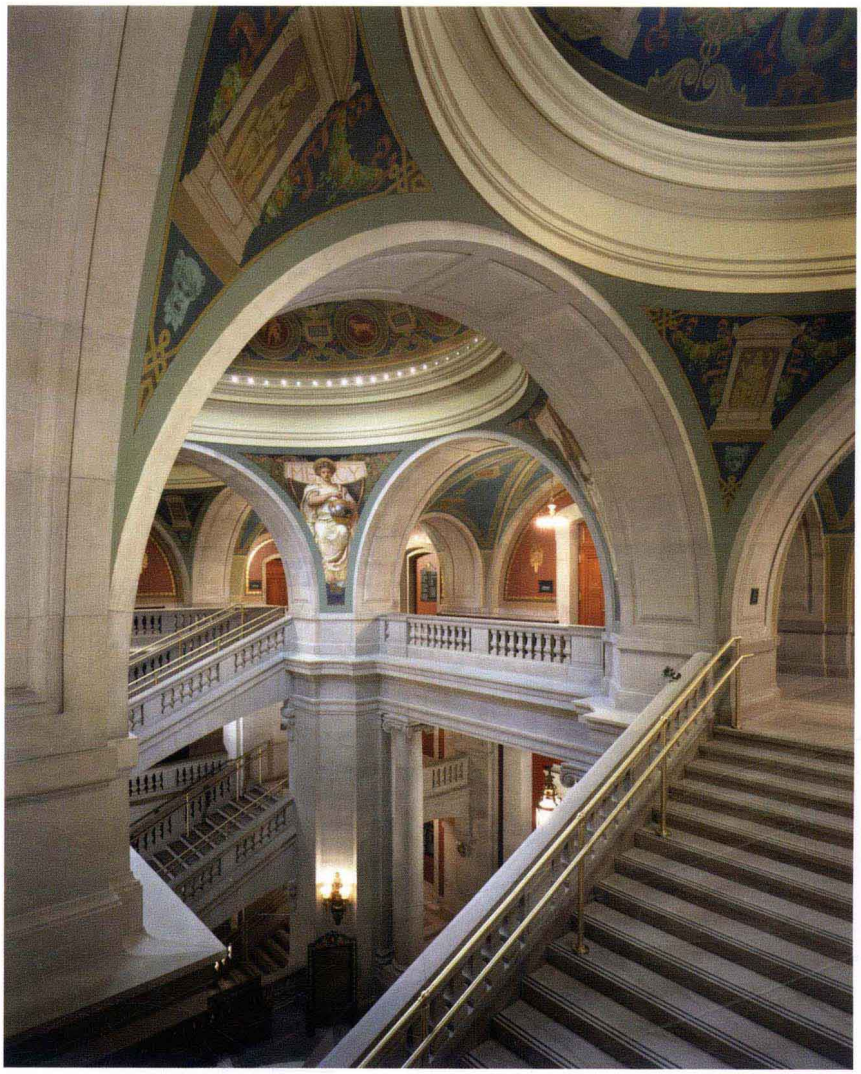

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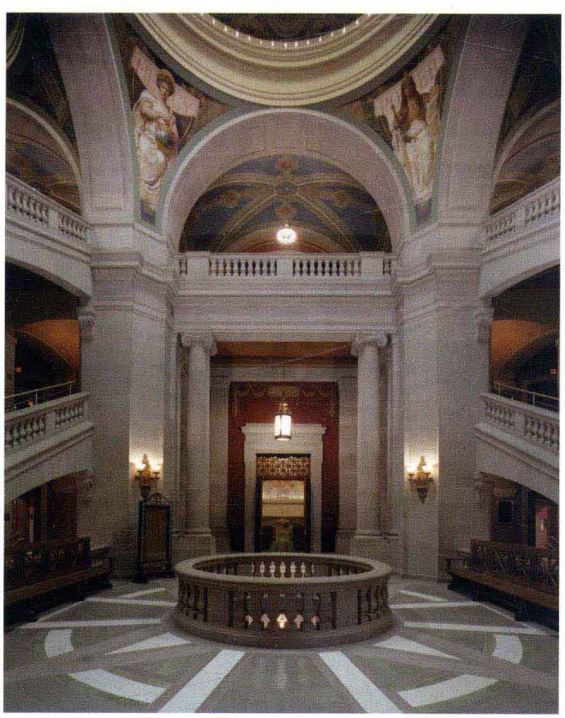

Can modern lighting let us see the past anew? While refurbished original decorative lighting fixtures can provide much of the illumination for restored historic buildings, such as the 1906 Essex County Courthouse, in Newark, New Jersey, originally designed by architect Cass Gilbert, they may not suffice to meet contemporary lighting standards. Farewell, Mills and Gatsch Architects recently worked with Ann Kale Associates as lighting designer to return the landmark, four-story, 120,000-square-foot Courthouse, featuring an atrium and central stair connecting three levels of courtrooms beneath three Tiffany skylight domes, to its former splendor. New lighting methods and technologies enabled Ann Kale Associates to increase illumination levels and highlight decorative forms and surfaces without disturbing the original architecture. The once dark stairs, for example, are now illuminated by a series of miniature fiber-optic accents lights recessed into the cornice below the Tiffany skylights. Courtrooms are properly illuminated for the first time by a combination of restored decorative fixtures and recessed miniature downlights concealed within ceiling coves, molding and beams. Where possible, once closed skylights are restored to provide daylight. The result is a magnificent Beaux Arts building with award-winning lighting (IES Lumen West Award of Excellence, IIDA Award of Merit, New Jersey Historic Preservation Award) that revives and even enhances its heritage.

1 - 5: Essex County Courthouse, Newark, New Jersey, Farewell, Mills and Gatsch Architects, architect; Brian Rose, photographer.

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Corporate

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Lighting's primary role in corporate facilities is to help architects and interior designers create superior workplaces for accurate, reliable and cost-effective operations. However, many businesses must also consider public image, especially at such conspicuous locations as corporate headquarters, giving lighting a broader assignment to portray their organizations to the public. This is the strategy Computer Science Corporation pursued at its new corporate headquarters in Austin, designed by Page Southerland Page, architect, with Ann Kale Associates as lighting designer. Inside the 7,500-square-foot ground floor lobby, the lighting design has produced a luminous environment with glowing glass walls that extends a simple, coolly modern greeting to employees and visitors alike. The effect comes from back lighting each glass panel with a row of halogen strip lights at the top and bottom of eight-inch deep cavities, and spotlighting furniture groupings with track-mounted overhead halogen lights placed above a metal grid ceiling. On the exterior façade, a series of wall-mounted sconces that hold four metal halide lamps apiece, two aiming up to dramatize the rough-cut limestone columns and two aiming down to illuminate the sidewalk, establish a dignified and attractive presence for the building in the community, laying a solid foundation for corporate citizenship.

1 - 4: Computer Science Corporation, Austin, Texas, Page Southerland Page, architect; Tim Griffith, Paul Bardagiy, photographers.

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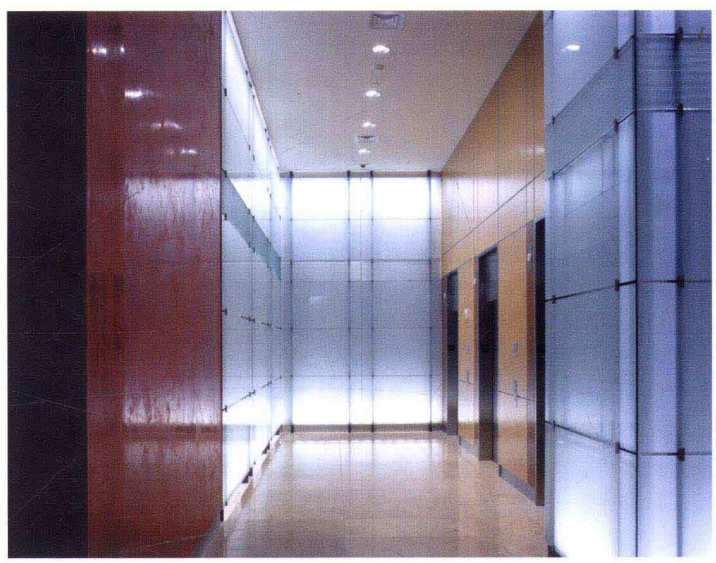

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Academic

Educational facilities demand a diversity of lighting solution to illuminate environments ranging from classrooms to stadiums. A typical example is the lighting designed by Ann Kale Associates for the new 43,000 sq. ft. K.C. Irving Environmental Science Center at Acadia University, Wolfville, Nova Scotia, Canada, designed by Robert A.M. Stern Architects. The university required that only energy efficient, long life sustainable sources be used. The architects required that minimal recessed fixtures be used and that the lighting appear to be incandescent. The solution proved to be a series of custom designed compact fluorescent chandeliers, pendants and wall sconces with custom amber tinted glass diffused shades, all carefully studied with the use of computer calculations. In the Garden Room, for example, fluorescent custom chandeliers, uplit barrel-vault coffered ceiling and table lamps provide students with a beautiful environmentally sustainable space to relax, socialize, work on laptops or read. The conference room incorporates a fluorescent lit lay-light ceiling to provide ample illumination for video conferencing high foot candle requirements. The auditorium uses a combination of fluorescent decorative fixtures and halogen downlights to accommodate the 1 to 30 foot candle range. Throughout the project Ann Kale Associates was able to conceal high tech solutions within traditionally decorative elements.

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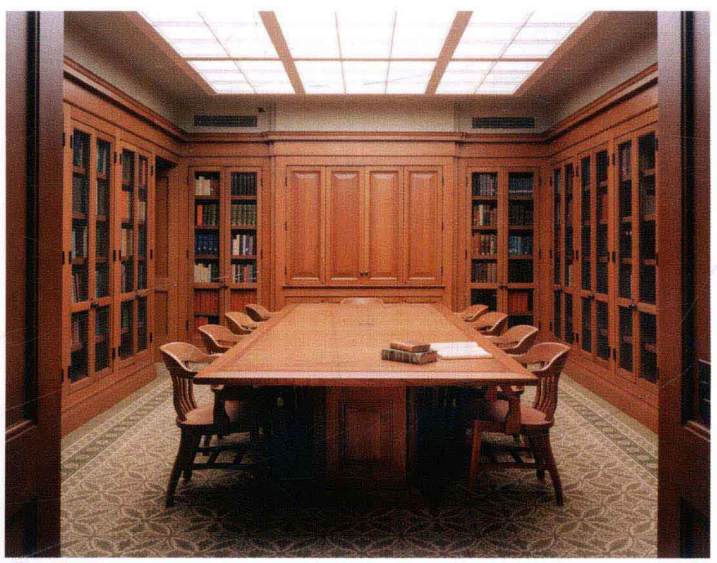

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1 - 4: Acadia University, K.C. Irving Environmental Science Center, Wolfville, Nova Scotia, Canada, Robert A.M. Stern Architects, architect; Peter Aaron/Esto Photographics, photographer.