

LEADING BY EXAMPLE





TWO LIGHTING FIRMS EXPLORE ENERGY-EFFICIENT LIGHTING STRATEGIES FOR THEIR OWN OFFICES

Lighting designers and architects are often so busy working on projects for their clients that they don't devote time to designing their own offices. But for two well-known lighting practices—Lighting Design Alliance (LDA) in Long Beach, Calif., and Focus Lighting in New York—designing a new office was a necessity. Each firm had worked in less-than-ideal conditions for several years and had significantly outgrown their workspaces. LDA had a series of small semi-detached buildings and Focus Lighting had a four-story townhouse on the Upper West Side. After finding real estate that was ripe for transformation—a dark, old auto warehouse for LDA and three adjacent storefronts for Focus—LDA's president Chip Israel and Focus Lighting's principal Paul Gregory knew they needed to act.

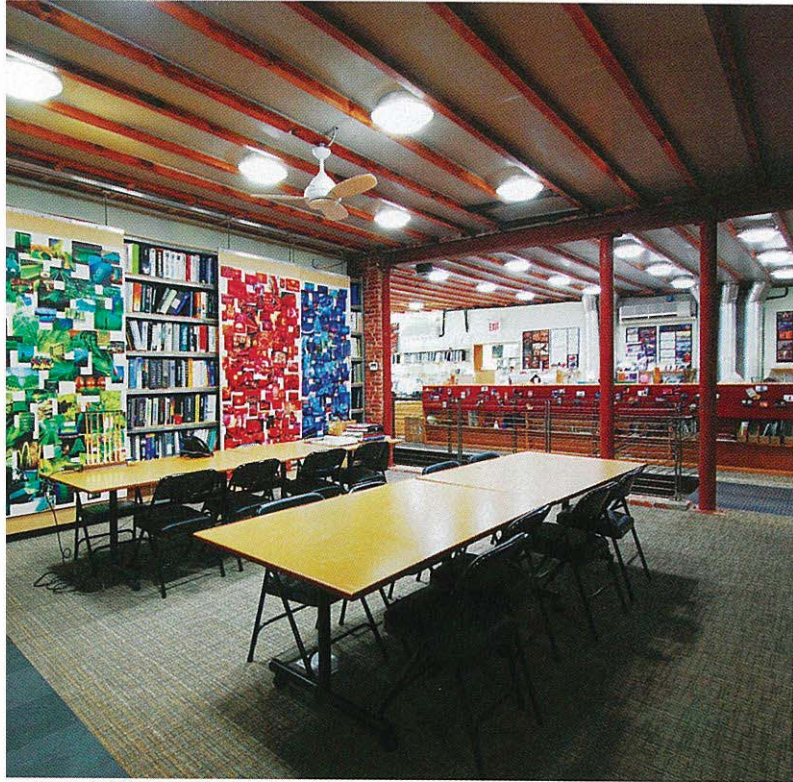
For both Israel and Gregory, the chance to build a new office was not just about square footage, but about creating a workspace that would foster communication between staff and serve as laboratory for ideas and strategies. Also, both wanted to implement energy-efficient measures, not merely because they felt it was the right thing to do, but because it was a way to practice what they preach. "I wanted the office to be a place where we could show clients, in real time, what we were communicating in the drawings," Israel says.

To that end, a range of market-available lighting is on display, from active and passive daylighting systems to solar-fed fiber-optic accent lights. "You can have the best of intentions," Gregory says. "But you never know if you are doing a good job until the electric bill arrives. That's when you really see if your lighting choices are on target." With the aid of basic energy monitoring software, both firms have been able to better understand their energy use and how that translates into kilowatt-hours and dollars. "Once you see how the lighting is translating into real-time energy use you can adjust and turn lights on and off so you eliminate the peak periods," Gregory explains.

The offices have become more than just places for people to work, they represent a communal sense of ownership. "The staff takes great pride in the space," Israel says. "Everyone is fully invested in it and wants to see it perform to its highest levels." **ELIZABETH DONOFF**

Forty-five, 14-inch-diameter tubular skylights with custom-designed socket assemblies that hold 23W 3500K CFL lamps, bring natural light into the second-floor main workspace at Focus Lighting's new office.





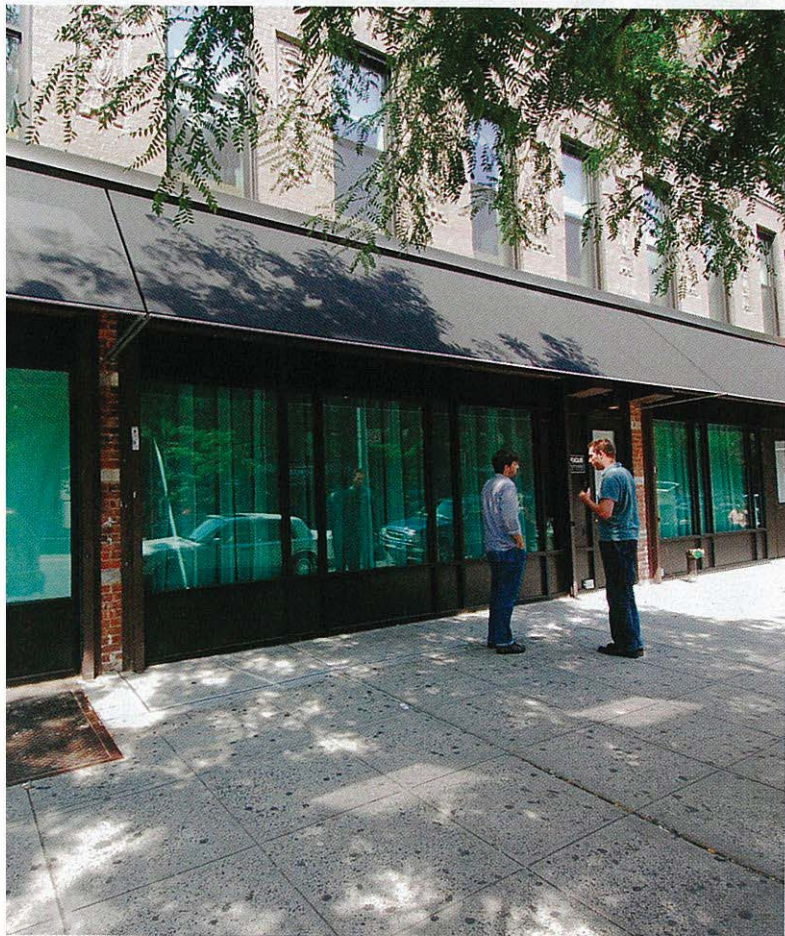
FOCUS LIGHTING OFFICE

DETAILS • **Project** Focus Lighting Office, New York **Design Team** Focus Lighting, New York (lighting designer); Paul Bennett Architects, New York (architect); DeSimone Consulting Engineers, New York (structural engineer); Guth DeConzo Consulting Engineers, New York (mechanical engineer)

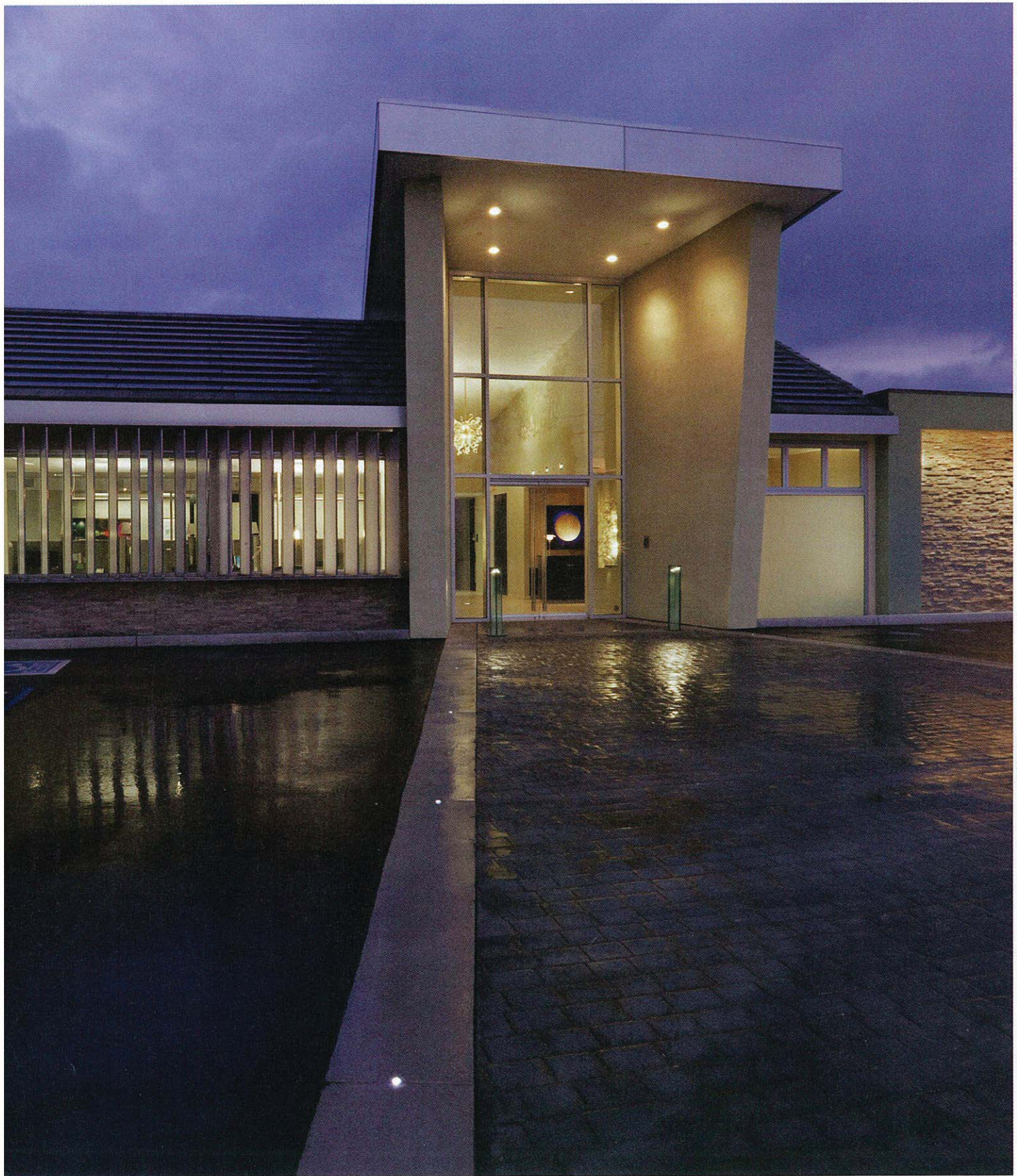
Photographer J.P. Lira/Focus Lighting, New York **Project Size** 8,334 square feet **Construction Cost** \$800,000 (total), \$95/square foot **Lighting Cost** \$65,000 (total), \$7.80/square foot **Watts per Square Foot** 1.3

Manufacturers / Applications

Belfer Two-lamp recessed wallwash fixtures, half with LEDs and half with 20W MR16 lamps • **Edge Lighting** Phi ProAim trackhead on monorail track with 20W MR16 • **Edison Price** Recessed downlights with 23W CFL PAR style lamp • **Juno Lighting Group** Undercabinet light with 20W halogen bi-pin lamps • **Lightolier** Alcyon trackheads on current-limited track with 20W MR16 lamp to accent artwork • **Lithonia Lighting** RT5 2-foot by 2-foot direct-indirect fluorescent with 3500K T5 lamps • **Louis Poulsen** Surface-mounted decorative fixture with 23W CFL lamp • **Lucifer Lighting** Recessed adjustable accent light with 20W MR16 lamp • **Solatube International** 14-inch tubular skylight with custom-designed socket assembly to hold 23W 3500K CFL lamp • **WattStopper** Occupancy sensors system



For its new office, Focus Lighting joined three separate buildings on West 116th Street, giving the lighting firm a unique storefront and street presence on a busy Harlem thoroughfare (bottom right). With ample space, the new office has room for an informal staff meeting-lunch area (top right) and a double-height mock-up area that, by all accounts, can function as a small black box theater (far left). Natural light permeates the space thanks to a system of 45 tubular skylights. Electric light sources are used to supplement the natural light in the work area, which brings the staff of 25 together in one space as opposed to the seven different areas, as when the office was divided at its former location on West 101st Street. Lighting and HVAC equipment each have their own breaker panel installed in the basement so that each load can be monitored and tracked separately via a data logger. The commercial-grade data logger is a small box measuring 5-inches-square and only cost a few hundred dollars, a small investment for the firm to track its energy use. To make sure the office design would meet the applicable energy code stipulations (90.1-2004), Focus Lighting used the COMcheck software program to make sure each space was in accordance with its interior lighting and power needs. Not only does the lighting comply, but the design is 23.9 percent better than allowable code levels.





LIGHTING DESIGN ALLIANCE OFFICE

DETAILS • **Project** Lighting Design Alliance Office, Long Beach, Calif. **Design Team** Lighting Design Alliance Office, Long Beach, Calif. (lighting designer), Archint Associates, Long Beach, Calif. (architect) **Photographer** RMA Architectural Photography, Tustin, Calif. **Project Size** 22,000 square feet **Building Cost** \$1.8 million **Lighting Cost** \$320,000 **Watts per Square Foot** 0.8 (connected load); 0.07 (actual load)

Manufacturers / Applications

Architectural Area Lighting Parking lot ceramic metal halide pole lights • **Cooper io Lighting** LED lightbar • **Edison Price** LED downlight at entry-reception area • **Exterieur Vert** PAR 20 uplight • **GE Lighting** various lamps throughout the projects including T5, metal halide, and ceramic metal halide • **Kim Lighting** Ceramic metal halide parking lot fixture head • **Lightolier** 4-foot 54W T5 linear fluorescent striplights throughout office • **Lucifer Lighting** 1W LED downlight in kitchen • **Lutron** Energy modeling software • **NeoRay** Linear fluorescents in skylights • **RSA Lighting** Pinhole accent lights for conference room video-conferencing • **Solatube International** 72 active sun-tracking skylight lenses • **Tokistar** LED tapelight under mezzanine



Lighting Design Alliance transformed what was once an auto parts warehouse into a luminous showcase for energy-efficient lighting design. Designed to meet LEED Platinum, daylight harvesting and dynamic dimming coupled with 10kW of photovoltaic panels on the roof reduce the lighting load to 0.07W per square foot. On the main façade, vertical louvers block west-facing light during the day but still allow ample natural light into the front office. Metal halide downlights illuminate the office entrance at night, while linear LED lightbars graze the textured stone surfaces (far left). The conference room (top right), is illuminated with natural light thanks to a full-height window wall. But at night the space is supplemented with a variety of electric sources—including color-changing LED cove lights, direct-indirect fluorescent pendants, MR16 downlights, and compact fluorescent wallwashers—which are all dimmed separately with multiscene presets. In the work area (bottom right), concealed linear T5HO fixtures in clerestories provide general lighting. All the fixtures dim and are connected to photo cells, occupancy sensors, and a time clock. The skylights are triple glazed for thermal heat gain and a clear north-facing window allows for full sky view. The 4-foot-by-4-foot skylights are equipped with suntracking mirrors and energy modeling software tracks energy savings.



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