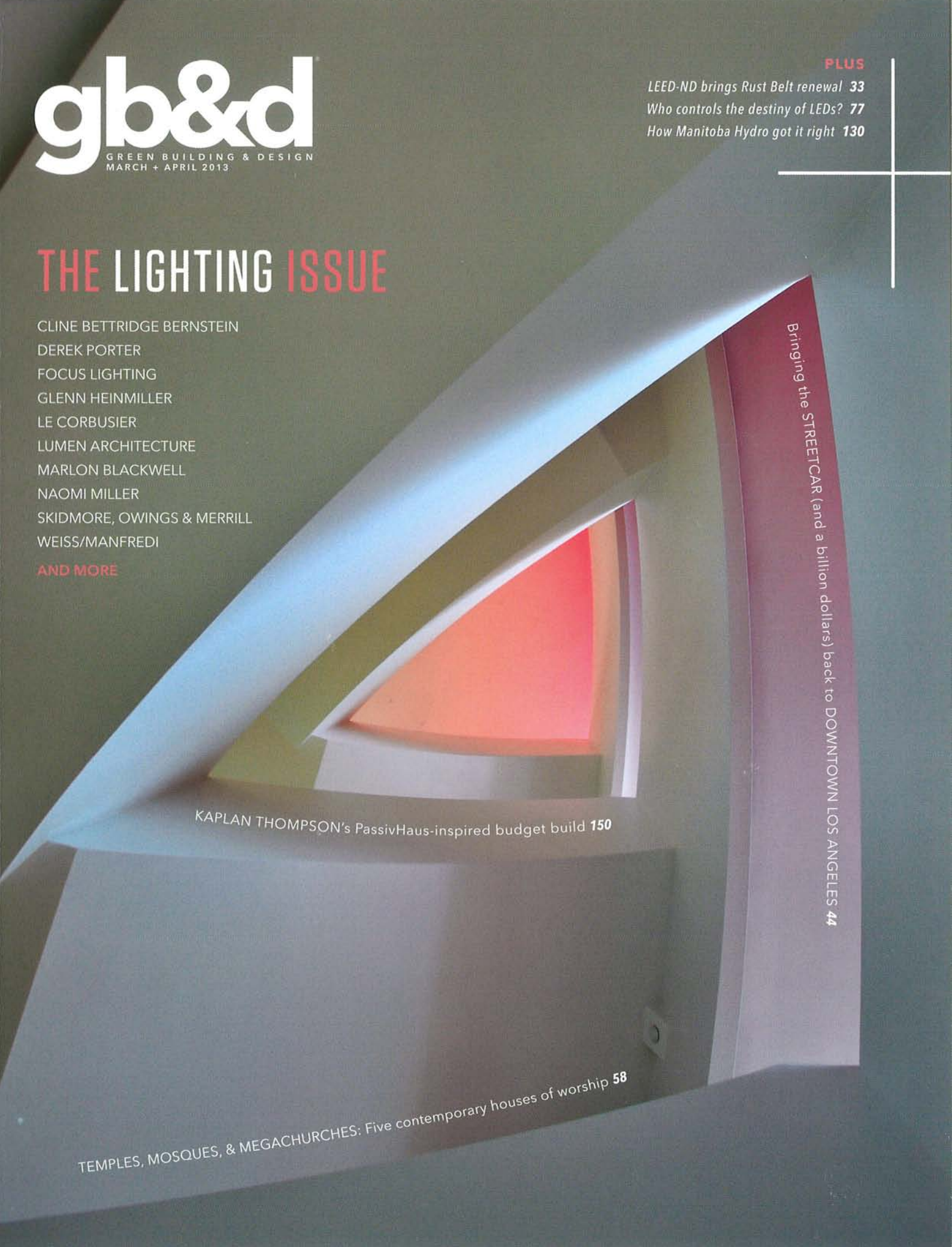
gb&d
GREEN BUILDING & DESIGN
MARCH + APRIL 2013

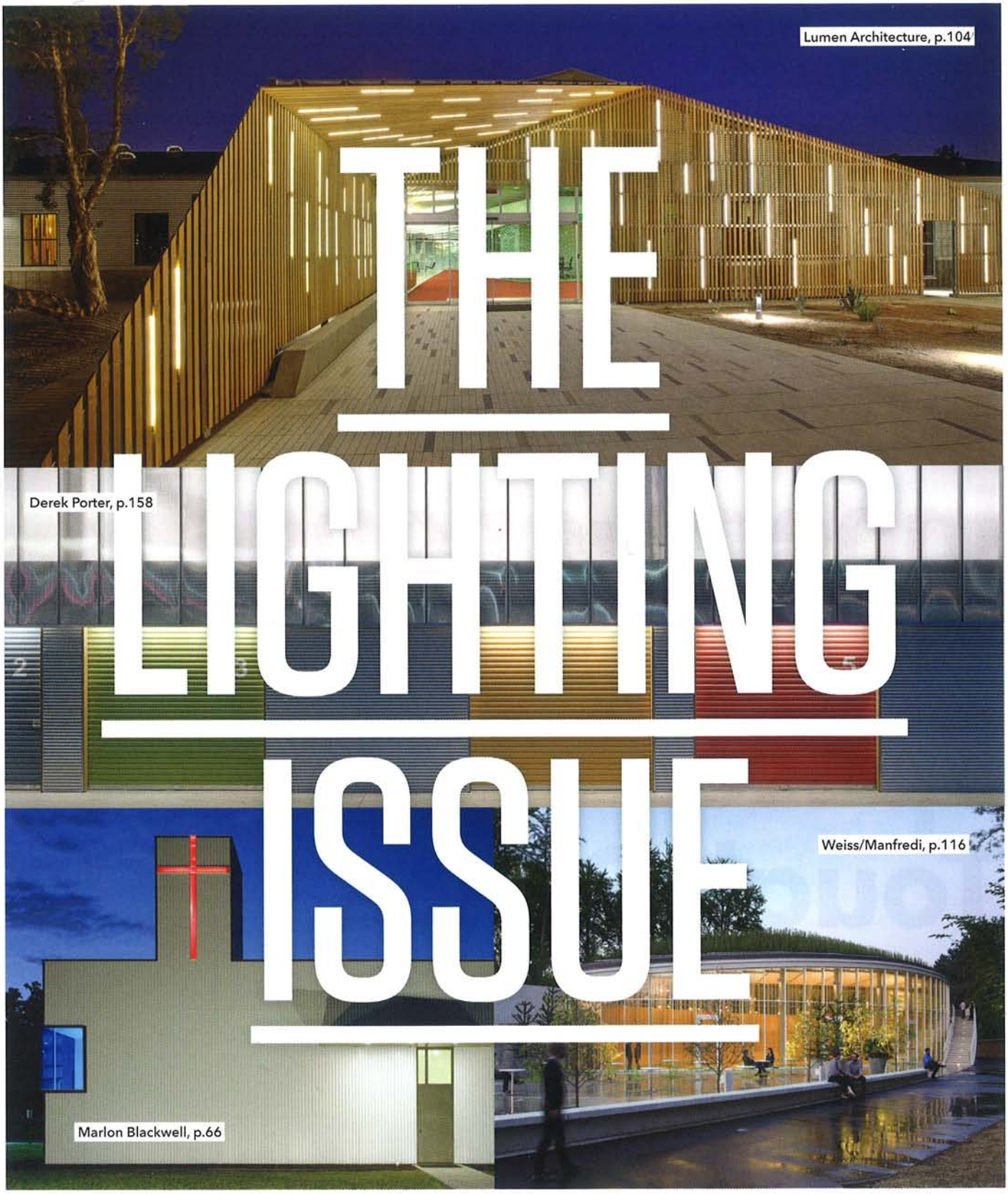
PLUS

THE LIGHTING ISSUE

CLINE BETTRIDGE BERNSTEIN
DEREK PORTER
FOCUS LIGHTING
GLENN HEINMILLER
LE CORBUSIER
LUMEN ARCHITECTURE
MARLON BLACKWELL
NAOMI MILLER
SKIDMORE, OWINGS & MERRILL
WEISS/MANFREDI
AND MORE



In This Issue



PHOTOS: MIKE SINCLAIR; TIM HURSLEY; ALBERT VERČERKA/ESTO

To mask the old maintenance building's utilitarian exterior, LTL Architects and Lumen Architecture collaborated on a contemporary cedar screen studded with baton-shaped white LEDs. The lighting is seamlessly integrated in the architecture, blending with the wooden structure that is the building's skin as it changes from wall to entryway to canopy.

Blurring Lines & Lights

Lumen Architecture pushes at the field's boundaries on an experimental revamp of a university office

The digital garden installation, executed by the Brooklyn artist Jason Krugman, consists of more than 6,000 bicolor LED pixel boards. The installation peacefully fades from cactus green to deep blue and back again as people pass by.

PROJECT

LOCATION Claremont, CA
Size 42,000 ft²
Completed 2011
Program Educational sector, administrative offices
Awards 2012 Lumen Award of Merit, Illuminating Engineering Society

TEAM

LIGHTING DESIGN Lumen Architecture
Client Claremont University Consortium
Architect Lewis.Tsurumaki.Lewis Architects
LED Artist Jason Krugman Studio, Electro-Kinetics
Architect of Record Grant / Takacs Architecture
Structural Engineer John Labib and Associates
Landscape Architect AHBE Landscape Architects

GREEN

CERTIFICATION LEED Silver (expected)
Site Adaptive reuse of existing maintenance building
Materials Cedar screen, LED interior and exterior lights, bamboo desks and furniture, recycled plastic-bottle felt
Energy Lutron Ecosystem controls, 168 Solatube skylights, high-efficiency dimmable fluorescents
Landscape Extensive native plant garden, water circulation , elevated interior succulent garden

The decade-old warehouse at the southeastern edge of campus had no notion that it was destined to become **Claremont University Consortium**'s (CUC) new administrative hub. The transformation from a simply functional facility housing a workshop to an architecturally stunning, LEED Silver-certified, cheerful work environment was to be executed by **Lewis.Tsurumaki.Lewis Architects** and spectacularly lit by **Lumen Architecture**. With offices just a few hundred feet away from each other in New York City, the two firms worked in close collaboration to bring something to life out of the existing, unbecoming space in Southern California, blurring the line between where one discipline ends and the other begins.

This fusion of architecture and lighting is most evident on the façade. A golden screen of narrow cedar slats sweeps along the side of the building with white LED lights pegged in at random intervals to create an ultra-modern shell covering the existing building. The gaps between the slats allow glimpses of the original structure, particularly near the windows, where they expand to allow more sunlight through. The wooden skeleton widens at the entrance to frame the entryway. In the back of the building, the skeleton morphs into a brise soleil shade for the outdoor café. During the day, those exposed Plexineon White 1X fixtures are camouflaged, but at night they set the building and the Sonoran Desert shrubs aglow.

The interior weaves sunlight and electric light together—with sunlight stealing the show. Because the HVAC and mechanical systems are located in the warehouse's ceiling, skylights really weren't an option. "There was not really an opportunity to just puncture the ceiling and let the sun come through," says **Francesca Bastianini**, a designer at Lumen. Solatubes, however, would be perfect.

Solatubes are basically the skylight's chimney-shaped cousins. There are 168 of them installed on the roof of the building today, and each reflective-capped dome conducts the sunlight down into a space through ultra-reflective tubing. These gain an advantage against the skylight when it comes to low-angle sunlight because Solatubes can easily grab small amounts of light

The conference rooms contain a mixed blend of fluorescent and Solatube fixtures, which in various shapes and sizes create a playful, starry-night effect.

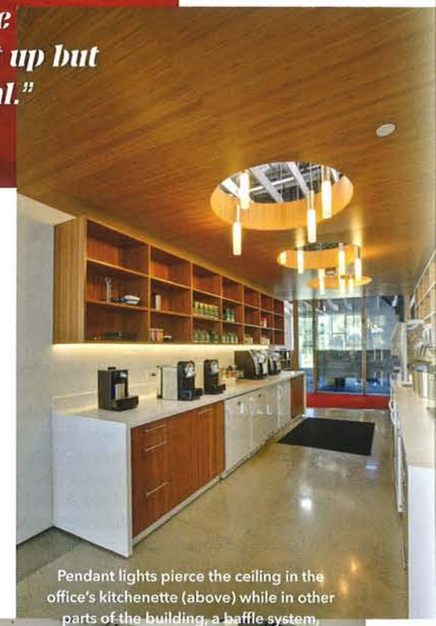
"You can see the structure in the final rendition of the building, yet it's still beautiful. You're not covering it up but bringing out a quality in the space that's quite special."
Nelson Jenkins, Lumen Architecture

and still diffuse bright, direct midday sun. In the Claremont building, the Solatubes are interspersed with circular fluorescent fixtures, similar in shape to the Solatubes but distinguishable by a slightly warmer color temperature—which was actually the client's choice, explains **Nelson Jenkins**, principal and founder of Lumen Architecture. "At first, we thought we would match the electric light and daylight in terms of color temperature, but [the client] actually wanted to have a difference so that people would know which one was electric and which one was daylight," Jenkins says.

Suspended beneath the fixtures is a system of baffles, another gesture that screens the building's original components. Through these abstracted cloud shapes, which are wrapped in recycled felt, the light is constantly changing in subtle ways. As clouds pass overhead, light shifts within the diaphanous baffle structure, connecting the CUC employees to the outdoors as they work.

The subtle partnership between sunlight and electricity had to be managed thoughtfully because too many green hopes are dashed to pieces when an automated system gets to be so annoying that office workers plaster duct tape over the sensors. Lumen chose the **Lutron Ecosystem**; as photocells and occupancy sensors pick up on the level of light, the system imperceptibly intensifies or dims the fluorescents to balance out the Solatubes as needed. With all the electric lighting on, the CUC building's system averages about one watt per square foot and far less when the fluorescents are dimmed during the day.

It started with a warehouse, and, in some ways, a warehouse it remains today. But the end result—a fusion of modern, sustainable architecture with an old, functional space—builds upon what was already there to make something more imaginative. "There's a peekaboo type of effect," Jenkins says. "You can see the structure in the final rendition of the building, yet it's still beautiful. You're not covering it up but bringing out a quality in the space that's quite special." **gb&d** —*Lindsey Howald Patton*



Pendant lights pierce the ceiling in the office's kitchenette (above) while in other parts of the building, a baffle system, wrapped in recycled plastic-bottle felt, obscures the ceiling's mechanical systems.