

Project Overview

ASID Headquarters
Washington, D.C.

Corporate
Headquarters



Automated shading integrates seamlessly with lighting controls.

Description

The WELL Building Standard provides a model for space design and construction that uses performance-based systems to positively impact the well-being of the people in the built environment. Lighting and daylight control are essential pieces of this proverbial puzzle.

Lutron lighting and shading solutions played key roles in helping the American Society of Interior Design's (ASID) new headquarters in Washington, DC become the world's first building to achieve Platinum Level Certification for both the WELL v1 Building Standard™ (WELL™) and Leadership in Energy and Environmental Design (LEED), under the LEED ID+C rating system (v.3).

The Challenge

The new headquarters is designed to be a living laboratory for the design community and to exemplify the Workplace for the Future. To achieve this goal, ASID prioritized achieving Platinum certification from both the International WELL Building Institute and the U.S. Green Building

Council (USGBC) as a means of realizing innovative health and wellness features and promoting sustainability.

The lighting design, created by James Benya and Deborah Burnett of the Benya Burnett Consultancy, had to ensure circadian-optimized lighting (including tunable white fixtures) and daylighting, critical luminaire placement, as well as the ability to execute upon annual lighting schedules and sequences while reducing energy use. Access to daylight and views to the outdoors, a lighting system designed to mimic the progression of natural daylight, and motorized shading solutions that automatically adjust to preserve views, reduce glare, and minimize heat gain were all significant considerations.

Because LEED and WELL certifications provide complementary but different benefits, the control system had to effectively help maximize points in both programs, automatically adjusting shades and light to provide appropriate spectra, light intensities, and exposures throughout the building, and over the lifetime of the installation.

The Solution

Lutron's **Quantum** total light management and **Hyperion** solar-adaptive shading systems meet all these performance requirements. The **Quantum** system also provides actionable data from wireless occupancy and daylight sensors to help analyze building energy use and provide proof points to support certifications — an especially important feature considering the very high bar set for sustainable, wellness-oriented, energy efficient lighting design. The **Quantum** Vue graphical user interface also ensures data is easy to view, monitor, and adjust using any PC or tablet.

“The Lutron **Quantum** system was uniquely able to provide all the lighting control capability we needed for this landmark project — automated, solar-responsive daylight and shade control, astronomic time clock, manual overrides, precise control of



Automated shades in a sustainable fabric help meet mandatory preconditions in WELL concept areas.

“The Lutron Quantum system was uniquely able to provide all the lighting control capability we needed for this landmark project.”

— Jim Benya, Benya Burnett

several types of electric light sources, compliance with the energy code, and the data needed to prove LEED and WELL certification requirements. **Quantum** met every need,” said Jim Benya.

The Lutron automated shades not only integrate seamlessly with the lighting controls, they provide access to views, minimize glare and heat gain, and utilize a GreenScreen Evolve fabric — a GREENGUARD gold certified, PVC-free fabric made from 67% recycled content, which is also 100% recyclable.

Perhaps the most important aspect of the Lutron solution is the ability to ensure the space remains dynamic, and the facilities team is able to quickly make adjustments to meet changing space requirements.



The Quantum solution ensures the space remains dynamic.



Actionable data from occupancy and daylight sensors help analyze and optimize building use.

Lutron solutions contribute significantly to both WELL and LEED certifications.

WELL Certification – Lutron solutions helped ASID achieve 10 of the 86 features required to achieve WELL Platinum (12% of total).

Ultimately, Lutron solutions and the innovative lighting design contributed to the achievement of all lighting Features in the WELL Light Concept with the exception of daylight fenestration. By including Lutron automated shades and the selected shade fabric, ASID was able to meet mandatory preconditions and optional optimizations in four additional WELL concept areas: Air, Comfort, Mind, and Innovation.

Concept Area	WELL Feature	Precondition / Optimization	Lutron Solutions Helped ASID Achieve this Feature
Air	4. VOC Reduction	Precondition (Mandatory)	Greenscreen Evolve fabric is GREENGUARD Gold certified and low VOC.
Light	53. Visual Lighting Design	Precondition (Mandatory)	Quantum, Ecosystem dimming ballasts and drivers, Daylight sensors
Light	54. Circadian Lighting Design	Precondition (Mandatory)	Quantum, tunable white fixtures with Lutron ballasts, Drivers, Hyperion
Light	55. Electric Light Glare Control	Precondition (Mandatory)	EcoSystem dimmable ballasts and drivers
Light	56. Solar Glare Control	Precondition (Mandatory)	Sivoia QS shades, Greenscreen Evolve fabric, shadow sensors, Hyperion solar adaptive shading
Light	60. Automated Shading & Dimming	Optimization (Optional)	Sivoia QS shade drives, Greenscreen Evolve fabric, shadow sensors, Hyperion
Light	62. Daylight Modeling	Optimization (Optional)	Sivoia QS shade drives, Greenscreen Evolve fabric, Lutron radio window sensors, Hyperion
Comfort	74. Exterior Noise Intrusion	Optimization (Optional)	Sivoia QS shade drives, Greenscreen Evolve fabric
Mind	88. Biophilia 1 – Qualitative	Precondition (Mandatory)	Color tunable fixtures with Ecosystem ballasts, Sivoia QS shades with Greenscreen Evolve fabric, Quantum
Innovation	101. Innovation Feature 1	Optimization (Optional)	Educational outreach – GreenGlance, color tuning, circadian lighting, Quantum



Lutron solutions helped ASID achieve 10 of the 86 WELL Features and contributed to 21 LEED points.

LEED Certification— Lutron solutions helped ASID achieve 21 LEED points in 10 credits and 4 categories (26% of total LEED points earned).

LEED Credit Number	LEED Credit Name	Points	Lutron Solutions Helped ASID Achieve this Credit
Energy and Atmosphere Credit 1.1	Optimize Energy Performance: Lighting Power	2	Hyperion solar adaptive shading and task light controls help reduce connected lighting power density requirements
Energy and Atmosphere Credit 1.2	Optimize Energy Performance: Lighting Controls	3	Daylight sensors, dimming ballasts and drivers, occupancy sensors and Quantum
Energy and Atmosphere Credit 2	Enhanced Commissioning	5	Occupant training on Quantum and Hyperion solar adaptive shading
Energy and Atmosphere Credit 3	Measurement and Verification	2	GreenGlance and energy reports in Quantum
Materials and Resources Credit 4	Recycled Content	2	Greenscreen Evolve Fabric is made from recycled material
Materials and Resources Credit 5	Regional Materials	2	A number of Lutron products were manufactured less than 500 miles from the project
Indoor Environmental Quality Credit 6.1	Controllability of Systems: Lighting	1	Pico Remotes, seeTouch keypads and GRAFIK Eye
Indoor Environmental Quality Credit 8.1	Daylight and Views: Daylight	2	Hyperion solar adaptive shading reduces glare while keeping shades open as much as possible while ensuring occupant comfort
Indoor Environmental Quality Credit 8.2	Daylight and Views: Views for Seated Spaces	1	Hyperion controls glare and gives architects the ability to create open floorplans with views to the outside without glare
Regional Priority Credit 1	EQc6.1 Controllability of Systems: Lighting	1	Regional priority for lighting controls: Pico Remotes, seeTouch keypads and GRAFIK Eye
		21	Total Points

Results

Quantum is used to control every light in the space, and the system uses Lutron Hyperion solar-adaptive shading software to silently and unobtrusively adjust Sivoia QS shades over the course of the day. As the ASID team evaluates system data, adjustments can easily be made from the **Quantum** Vue software, accessible from a PC or tablet.

Co-principal Deborah Burnett emphasized the added value of the Lutron service team. “With our Lutron field service team, we were able to program all the wellness protocols and transitions, as well as provide everyday functions like personal task light dimming.” Burnett said, “Even better, the programming automatically adjusts light intensities and durations for seasonal solar angles, changing weather conditions, available daylight, and occupancy.”

“Lutron played a critical role in helping the space achieve its goals.”

— Randy Fiser, ASID CEO

Beyond achieving the metrics required for green building certifications, the ASID engaged in extensive pre- and post-occupancy research to understand and evaluate the impact of the sustainable workplace design on productivity and employee satisfaction. Results indicate vastly improved environmental quality compared to the Association’s original workplace. Specific to the lighting environment, all employees have access to daylight during work hours, work surfaces are 63% brighter, and employees report vast improvements in environmental condition satisfaction in the areas of physical comfort, light, and thermal comfort.

And while it is difficult to quantify the individual impact of each design decision, after more than 18 months in the new offices, ASID studies show a 9 percent increase in employee collaboration, and a 19 percent improvement upon employee absenteeism.

Lower energy use can be directly attributed to the lighting control solution. Based on initial data, annual savings equal \$7,653.60. Compared to lighting energy use at full on, strategies including daylighting, tuning, occupancy sensors, and personal control reduced lighting energy use by more than 78 percent. A comprehensive analysis and report is available at ASID.org.

The new headquarters embraces research and design, providing ongoing opportunity for the design community to engage with innovative technologies in a sustainable building environment. “Lutron is proud to be part of the new ASID headquarters, and we are committed to continued research and development of lighting control solutions that support and enable sustainability and well-being,” said Eric Lind, Vice President Global Specifications, Lutron Electronics.

Occupant comfort is paramount to delivering the right environment. Lutron integrated shading and lighting control solutions automatically adjust to help create a vibrant, inspiring workspace while saving as much energy as possible. ASID’s CEO Randy Fiser said, “Lutron played a critical role in helping the space achieve its goals. The automated shades and lighting control system enhanced the efficiency of the space while improving the comfort and productivity of the employees.”

Architect/Designer – Perkins+Will

Lighting Consultants – Benya Burnett

MEP Engineer – GHT Limited

Lighting Control and Shading Solutions – Lutron Electronics

Photography – Eric Laignel

☀, EcoSystem, GRAFIK Eye, GreenGlance, Lutron, Quantum, seeTouch, and Sivoia QS are trademarks of Lutron Electronics Co., Inc., registered in the U.S. and other countries. Hyperion is a trademark of Lutron Electronics Co., Inc.

Visit lutron.com for more information

World Headquarters 1.610.282.3800 | 24/7 Customer Support 1.844.588.7661

© 04/2018 Lutron Electronics Co., Inc. | P/N 368-5029 REV A

