

Professional Perspective

# How to Meet Performance Specs Using Sustainable Interiors

BY KATE GRIFFITH



We interview Brian Aske, project director with design-builder Lease Crutcher Lewis, to find out how SunOrShade is helping his project achieve its building goals.



When it came time for the design-build team of **Lease Crutcher Lewis** and **Miller Hull Architects** to maximize energy efficiency and occupant comfort in the design of the University of Washington’s new Population Health building, the team turned to **SunOrShade**. The open source window covering solution considers a building’s entire system to optimize integration with natural light for the occupants’ thermal, visual, and physiological comfort while reducing energy consumption for lighting, heating, and cooling—a perfect fit for the structure’s future occupants.

Under construction as of late summer 2019, the space was conceived as a meeting ground for researchers studying human health, environmental resilience, and social and economic equity. Dubbed by the University of Washington as the Population Health Initiative and funded by the Bill & Melinda Gates Foundation, Aske’s clients have ambitious standards for the cradle of their research.

● Lighting design is integral to achieving LEED Gold and Fitwel certifications.

Their team had a high bar to meet. “The building will mimic the challenges the initiative is solving,” Aske says. “Preserving natural resources like water and electric, minimizing global impact, and reducing carbon footprints, but when we competed for this project, the client hadn’t started any design other than identifying the need for a 300,000-square-foot building by summer 2020.”

After winning the Progressive Design-Build contract on qualifications, project management approach, and price factor, limited to the overhead and profit markup of the team, they began meeting with all of the different representatives of the groups moving into the building to determine the space’s needs. The conversations were progressive and collaborative. “As we understood the performance expectations, we started to develop the design, and we purposefully brought on more expertise, such as structural engineers and ultimately lighting designers, including NAQCLP Lighting Certified designers **Ray Hamo** and **Marti Hoffer** of **lumenomics**, to help us understand the best approaches for meeting them.”

The \$230 million building is reaching for a number of goals, including LEED Gold and Fitwel certifications. Lighting design is integral to both: aesthetic focus on glass to maximize views and natural light; streamlined maintenance and operation to minimize energy use; elimination of Red List materials wherever possible, including shades; and reduced energy consumption and increased occupant comfort by minimizing solar heat gain. “As those design goals came into play, we started to connect with natural lighting firm lumenomics, the supplier of SunOrShade window treatment systems, on opportunities for managing intense light and heat gain.”

With a three-story glass window functioning as a design highlight, the design-build team needed shades that could reflect solar radiation away from the building and its occupants. Air speed is a key aspect of temperature comfort in built environments, and the more solar radiation that can be reflected away from a building occupant, the less mechanical airflow is needed to maintain the space temperature.

SunOrShade window treatment systems meet the high-performance design objectives of well-known brands with options for minimal to total smart automation and the integration of lighting devices, heating and cooling, sun sensors, and timing technologies, all controlled using computer software and user-friendly interfaces.

In the Population Health building, more than 480 translucent SunOrShade roller shades automatically enabled by sun sensors will ensure comfort and efficiency. Another 475 translucent shades will allow for manual operation of comfort. “The project has been very successful,” Aske says. “We topped out in July, and the components that manage the light and thermal comfort are going in now. In the future, we’ll be monitoring occupant comfort in lighting and thermal. The people in this building will be solving world health challenges, and it’s important they can do their best work.”

