Eneref Institute
Case Study
[Examination]

Sustainable Facility

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Blue Goes Green.

The Eneref Institute examines how Health Care Service Corporation repurposes a discarded Wal-mart building in Tulsa, OK into an attractive workplace by utilizing energy-efficient, glare-free lighting.

Last year, BlueCross relocated 525 of their call center staff into a former Wal-Mart retail store, yet not a single complaint was muttered. According to Jason Brown, Facility Manager for the Health Care Service Corporation (HCSC), their long-running policy of repurposing big-box stores into office spaces has been a great success for the company. Brown says that the high score he received for the project from the occupants was the result of a sophisticated lighting system that converted the Tulsa, OK Wal-Mart into an attractive workplace.

"I have been in facilities management for 18 years and it's very unusual", Brown said of his grumble-free occupants. "I attribute the fact that we haven't had any complaints to the direct-indirect lighting." In fact, Brown said, "They absolutely love it".

Much of the project's success can be credited to the lighting designer and consultant, Mitchell B. Kohn. According to Kohn, visual comfort and energy efficiency were the top priorities. Kohn said he achieved "glare free comfortable light levels" using Enform-MAX light fixtures from Energie (www.energielighting.com), which incorporate Miro reflective aluminum, an optical technology from German-based manufacturer, Alanod (www.alanod.com). It was Kohn's combination of the various fixture components that provided high-performance, glare-free lighting with significant energy savings. Yet, research by the Eneref Institute (www.eneref.org) found that in well over 60 percent commercial retrofit lighting projects, professional lighting consultant are not employed, resulting in reduced energy efficiency, poor visual comfort, or both.

Alanod's reflective Miro material offers two unique benefits to specifiers. First, it is nearly 100 percent reflective – wasting very little energy. Second, Miro is specular, which allows lighting designers the ability to point light only where needed. In that way, the new fixtures increase both the quantity and the quality of light, while at the same time substantially reducing energy consumption. The Enform fixture used a Trilux-designed louver to capitalize on the unique aspects of the Miro material, providing both energy-efficient performance and soft, glare-free lighting.

"We're just finding the lighting to be perfect" said Facility Manager Brown.

Energie Lighting direct indirect lighting system incorporated reflective Miro Aluminum to direct light where needed providing better color rendering and visual comfort for facility occupants at BlueCross call centre.

"Were not finding it too reflective, we're not finding it to be too under-reflective."

Kohn said that in order to create the best light distribution characteristics "the Miro optical material was critical because of its very high reflective capabilities." But efficient lighting fixtures require more than just the highly reflective material. To avoid unwanted glare, and achieve optimum performance, Kohn explained, Energie needed to "bend the material at exactly the right angles."

The 120,000 square foot space is the first such conversion for Health Care Service Corporation in the Tulsa area. According to the project's Architect, Anthony Zahner of ZPD+A Architects, its "lit really well, very clean and very efficient. Great overall luminosity."

Health Care Service Corporation has found that when converting other big box stores into BlueCross offices, reflective glare on computer terminals was a problem – not uncommon in such large open spaces – causing eye strain and fatigue. With the new optical technology, Kohn was able to create a visually interesting environment that added contrasts and depth while avoiding glare.

Brown says that as part of his job he looks to find fault with a space in order to make improvements or squeeze out additional efficiency. However, Brown said that he was "having a hard time doing that" because, like his coworkers, he's found no real problems to complain about.

"I can't say enough good things about it." says Brown.