All-LED Campus Building Evaluated

Rosetti Hall, a new 25,000 square foot, 3-story, contemporary brick building at Siena College in Loudonville, NY, includes classrooms, meeting rooms, and offices. The New York State Energy Research and Development Authority (NYSERDA) awarded funding to upgrade the lighting specification from conventional fluorescent lighting to all light-emitting diodes (LEDs) and to have the project evaluated as a DELTA (Demonstration and Evaluation of Lighting Technologies and Applications) project.

One of three common area lounges used for informal gatherings of faculty and students in Rosetti Hall.

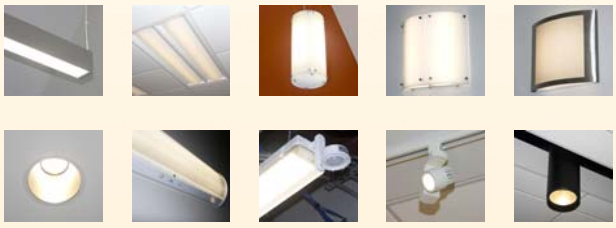
Key Findings

- The LED system saves considerable energy (33%) compared to the fluorescent system originally specified and uses 57% less energy than a comparable, adjacent classroom building.
- Overall, most occupants believe their lighting is about the same or better than similar campus spaces.
- The LED lighting is usually indistinguishable from conventional fluorescent lighting due to shielding with opal diffusers and a neutral (4000 K) color temperature.

The main lobby is illuminated by LED downlights, LED accent lights, LED sconces, and daylight.

The LRC evaluation highlights guidelines and recommendations to operate the LED systems in Rosetti Hall most effectively. The DELTA publication is available for free download at: www.lrc.rpi.edu/programs/DELTA/pdf/DELTAPortfolio_Siena.pdf

The DELTA team assessed the performance of the LED systems, including luminaires, dimmers, and occupancy sensors; measured illuminances in a typical classroom, office, meeting room, common area lounge, hallway, stairs, and restroom; and administered questionnaires to 200 faculty, staff, and students onsite.



Several types of LED luminaires were installed in Rosetti Hall.

Sponsor

New York State Energy Research and Development Authority (NYSERDA)

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