



How daylight modeling helped Studio Hillier win the competition for the Felician University's Rutherford Campus Gymnasium Renovation/Addition

Project

Felician University

Location

New Jersey, USA.

Architects

Studio Hillier

Contractor

DelSano

Products Used

Solera® L

VLT:

35%

Felician University is situated just ten miles from New York City, in Bergen County, New Jersey. Its Lodi and Rutherford campuses with over 2000 students are located only three miles from each other. The Gymnasium, located on the Rutherford campus, is home to the University's Golden Falcons sports teams and doubles for community events.

The University recognized the importance of the facility in terms of the student body and the community and was interested in giving the space a facelift and extensive addition.



Original to the existing building were single pane clearstory windows, which provided little visibility, viable natural daylight, and were very energy inefficient. The goal was to find a product that could improve the 'feel' of the space, enhancing natural daylight by mitigating high contrast glare and help overall energy efficiency. The Solera product solved all these issues for the design team.

When Studio Hillier presented their design to Felician University, they also presented a series of daylight models to accentuate the differences in the light levels and light distribution between vision glass and Solera glass daylighting units. "The daylight modeling provided by Advanced Glazings Ltd. helped us show our client what the space looks like with the current vision glass...

and how the same space could be dramatically improved using engineered light diffused glazing instead. In addition, the daylight models helped our client to visualize the impact of natural daylight before construction began" says Felix Heidgen, Senior Project Manager at Studio Hillier.

To create a high-performance energy efficient building, the project employs insulated low-e vision glazing in the thermal envelope. Daylight glazing results in improved solar heat gain coefficients over that of regular insulated vision glazing units.

The University was aware that the existing clearstory windows were causing glare and high contrast issues due to the eastern and western exposures, resulting in visibility issues for players and spectators during games. Like most sports teams, the University wants to record games for training purposes. However, the high contrast light levels from the existing windows made it difficult for video equipment to focus and capture players moving in this environment.

The client asked Studio Hillier about applied window film as a cost-saving alternative, but once they saw the daylight model and Solera's impact on this space, they knew it was the right solution. "Solera was an enhanced design option for environmental control and natural daylight. It made sense budget-wise, and it will save the University the cost of artificial lighting during daytime hours for years to come," says Felix.



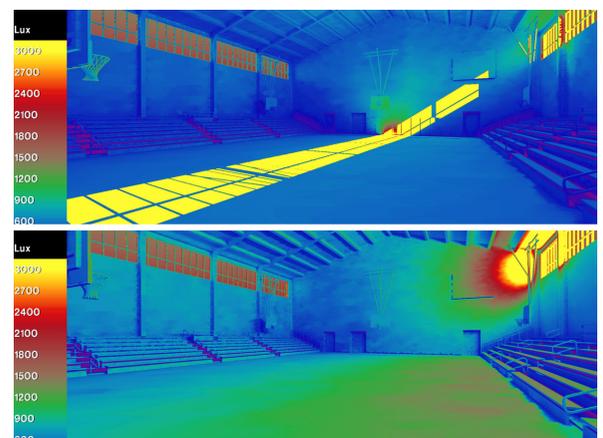
Daylight models with vision glass (top) and Solera engineered daylight diffusers (bottom).

"The daylight models were fantastic for us to have in our back pocket during the presentation, and it clearly shows the multiple benefits of using Solera to help diffuse natural daylight throughout the space." Studio Hillier won the competition for the Felician University project by presenting a well-developed design that solved problems known to the selection committee.

Daylighting was the major architectural element they focused on in the renovation of the space. "Felician chose to change the light levels in the gymnasium completely and bring them up by painting the ceiling, new light fixtures, lightening the floor, and renewing all of the finishes in the space." After reviewing their daylighting options, including vision glass and window film, the project team chose the natural daylighting solution, Solera glass daylight units.

Studio Hillier completed their design in keeping with their original intent – maximizing natural light by applying a daylighting solution in the space. "Solera was a smooth application for this space. The installation was seamless, and everything went very well."

Felix shared that the University and its students are pleased with their new space, and they can use the Gymnasium without worrying about glare or contrast going forward. Not only that, they're ready to use Solera again in their future projects. "We're planning to use Solera again in other projects to add beautiful diffused natural daylight in more of our designs," says Felix.



False color rendering with vision glass (top) and Solera engineer daylight diffusers (bottom).