Radiance Simulations
Deanwood Community Center

July 2007

Prepared For:

Deanwood Community Center Radiance Simulations

Overview

Date: July 30, 2007
Name of Project: Deanwood Community Center
Location of Project: Washington DC, USA
Name of Architects: Ehrenkrantz Eckstut & Kuhn Architects
Name of Daylighting Technology: Solera®
Names of Daylighted Spaces: Pool, Gymnasium

DD+C Contact: Geordie Kennedy
Advanced Glazings Ltd. Contact: Corrine Brewer

DD+C has performed the enclosed daylighting analyses for the Deanwood Community Center in Washington DC.

Note

We work closely with architects and developers to maximize the design of spaces for daylighting purposes. Our group of specialists use project details such as CAD drawings, elevations, materials, orientation, and location of building to provide the most accurate representations and analysis possible. The team at Advanced Glazings, Ltd. has worked on over 100 projects throughout North America.

Figure 1
The glazing configurations used for the Pool simulations. Note: VLT stands for visible light transmittance.

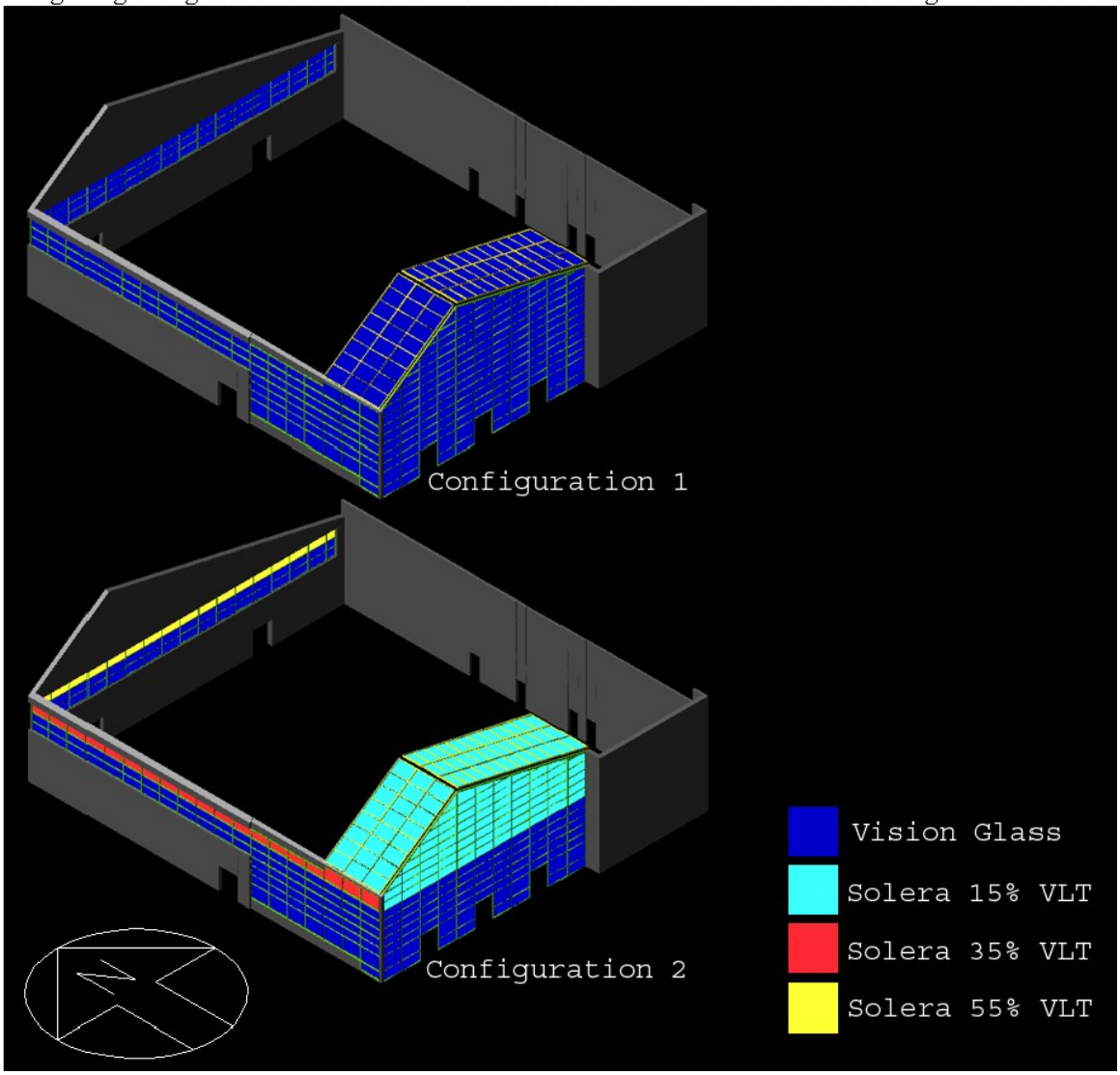

Figure 2
Two images of the pool rendered at noon on March 21. The top image uses configuration 1 and the bottom image uses configuration 2. See Figure 1 for the configuration details. The camera for these images was placed in the southwest corner of the building and looks toward the north wall.

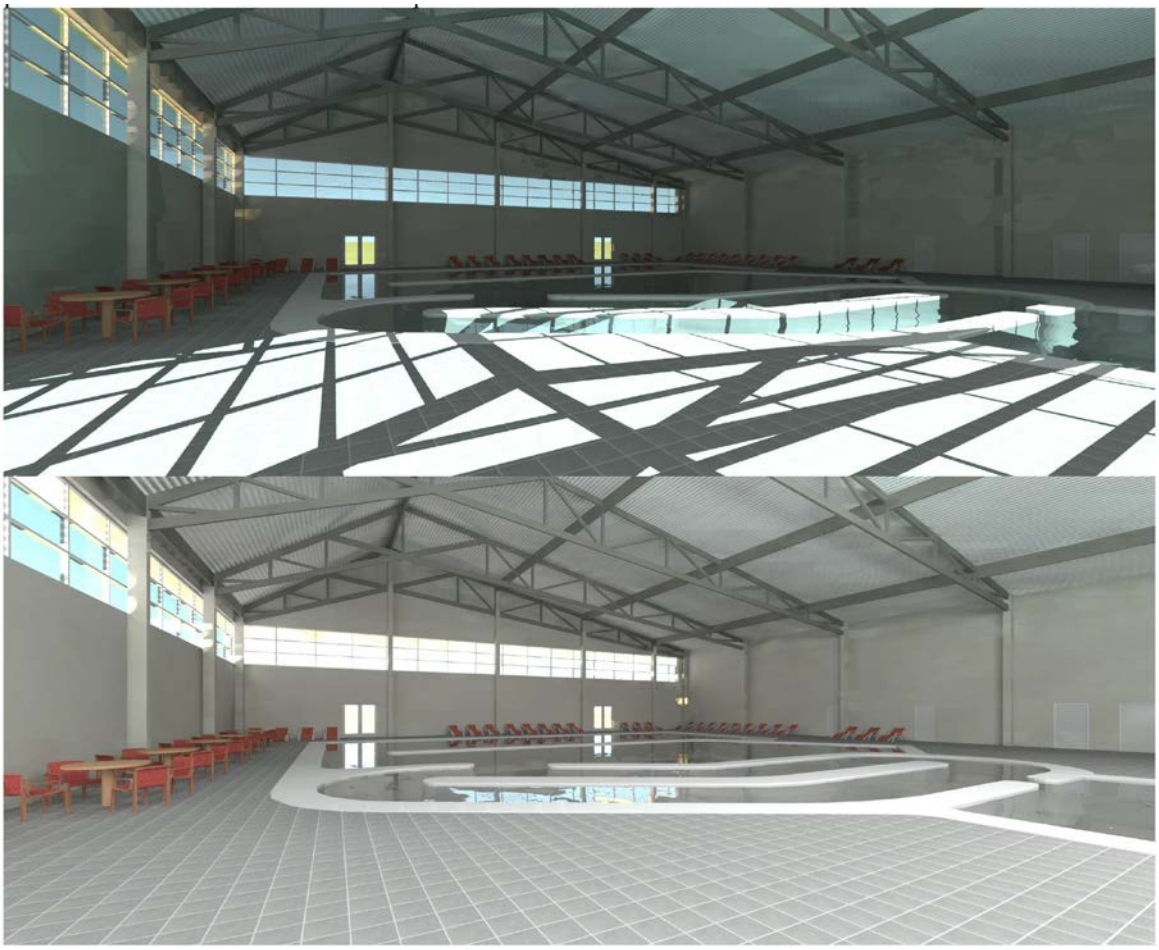

Figure 3
Two more images of the pool rendered at noon on March 21. The top image uses configuration 1 and the bottom image uses configuration 2. The camera for these images was placed high up in the southwest corner and looks toward north wall.

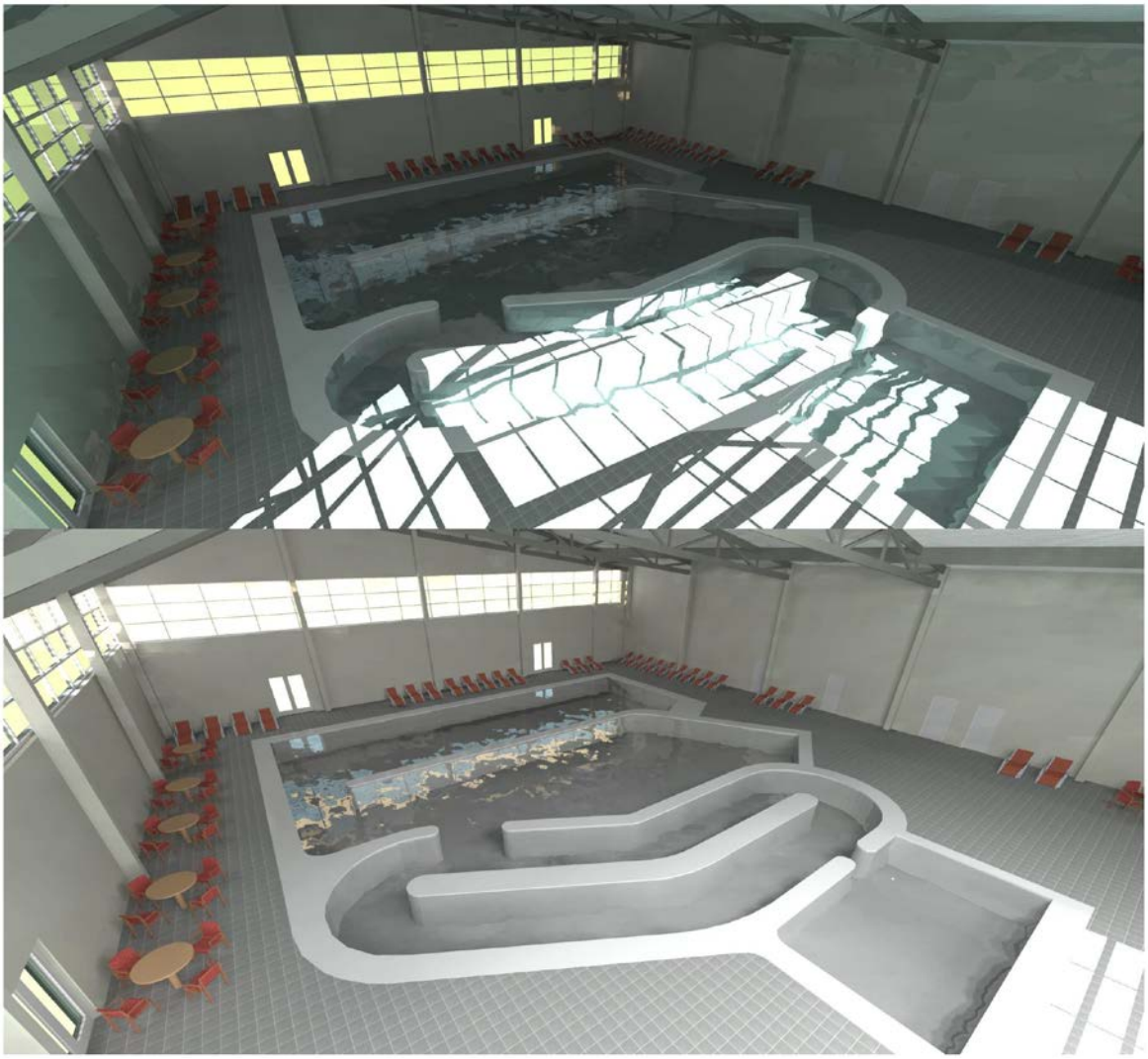

Figure 4
The two images from Figure 2 rendered using false colors to show the illuminance values of the surfaces within the pool space. The scale to convert color values to illuminance values, measured in Lux, may be found on the lower left hand comer of each image. Note: All areas where there is direct beam sunlight have Lux levels over 25,000 - well off the chosen scale.

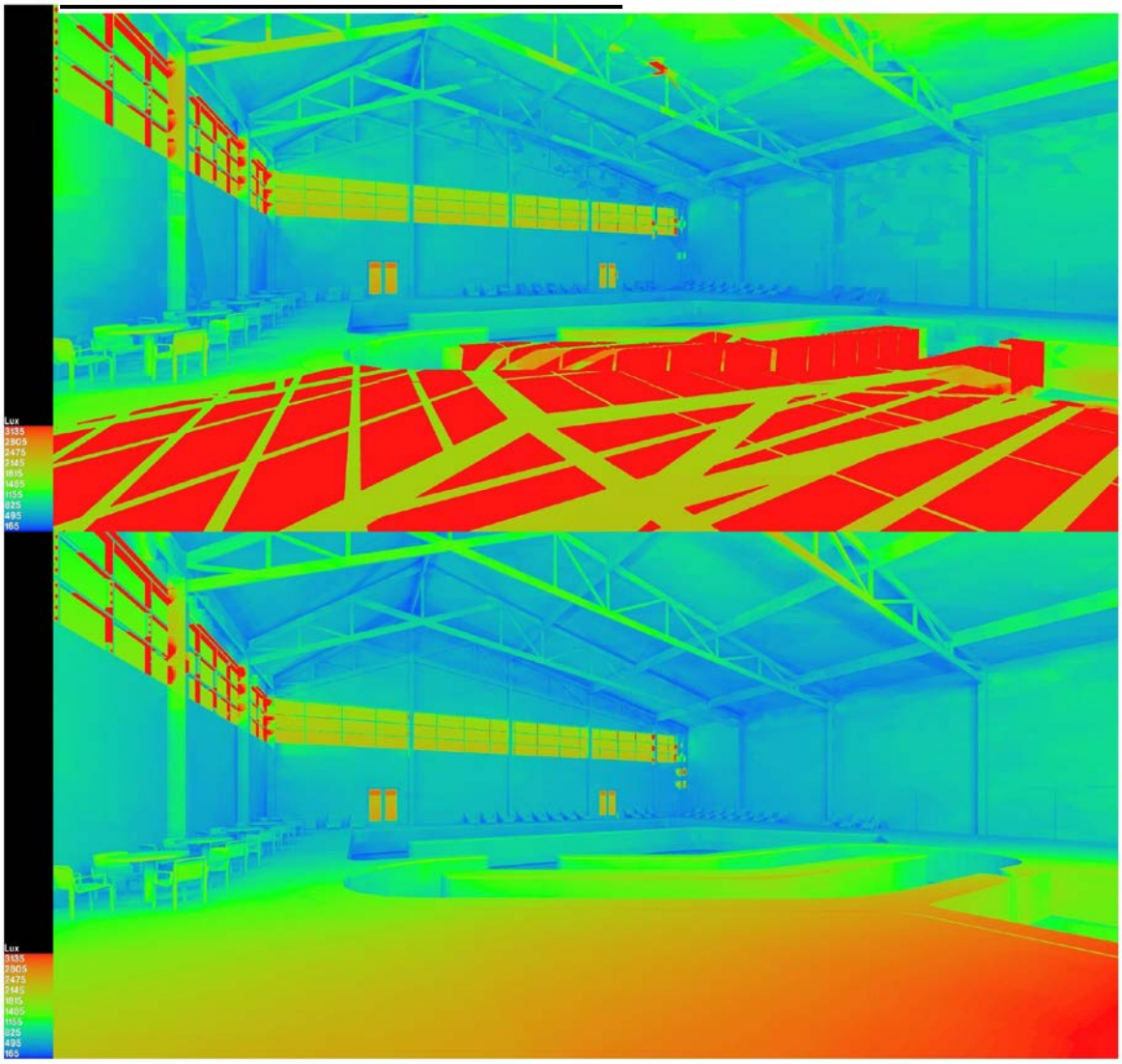

Figure 5
The two images from Figure 3 rendered using false colors to show the illuminance values of the surfaces within the pool space.

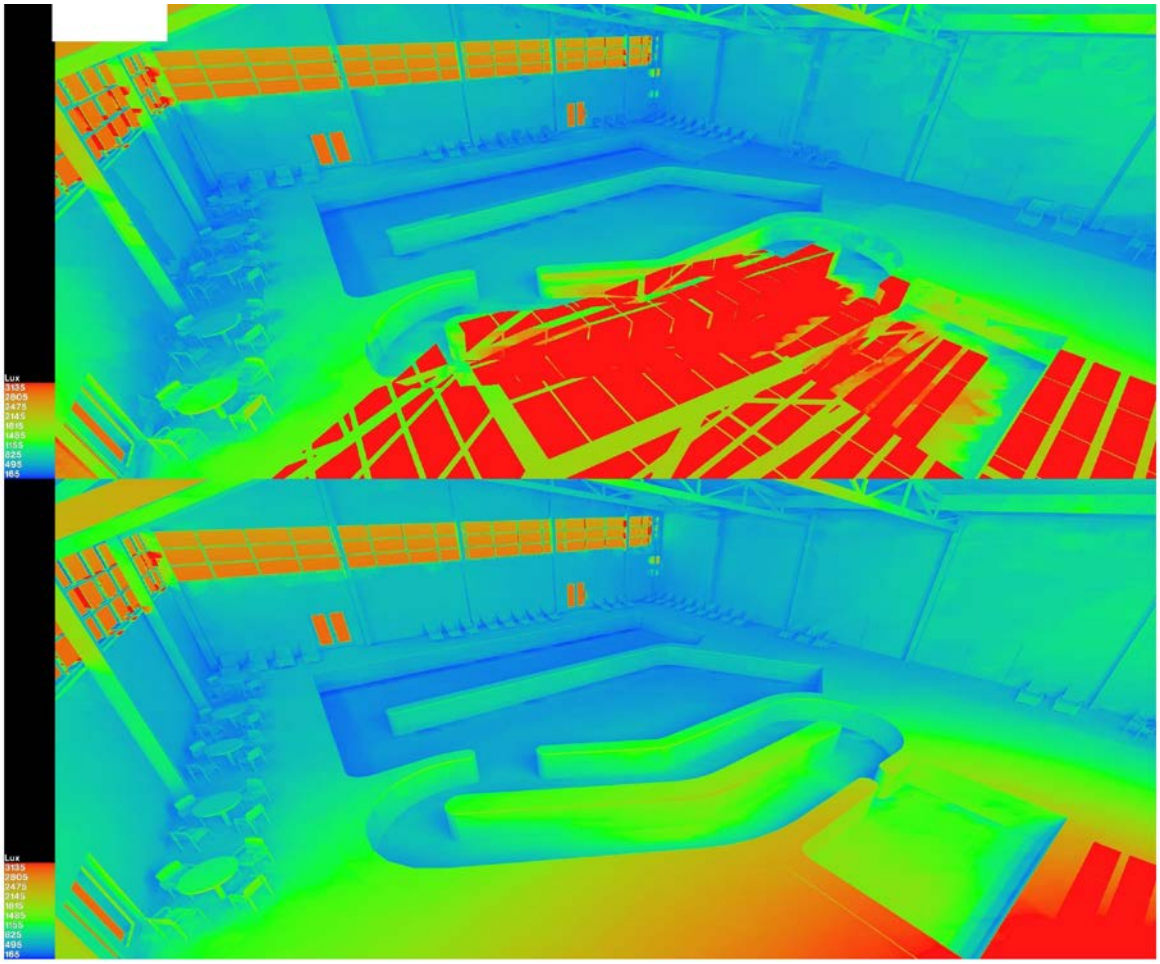

Figure 6
The glazings configurations used for the Gym simulations.

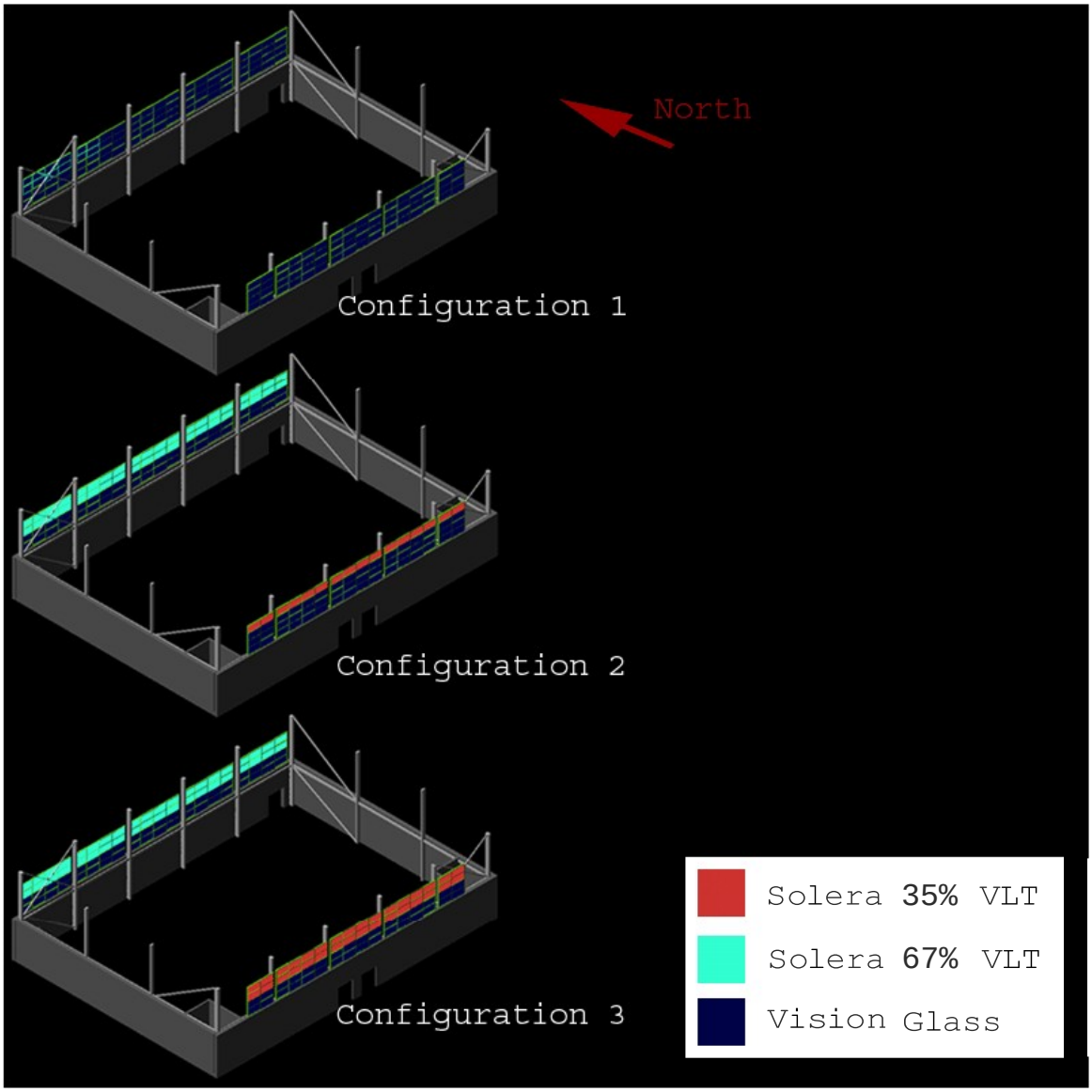

Figure 7
Two images of the Gym rendered at noon on March 21. The top image uses configuration 1 and the bottom image uses configuration 2. See Figure 6 for the configuration details. The camera used for these simulations was placed in the southeast corner and looks towards the northwest corner

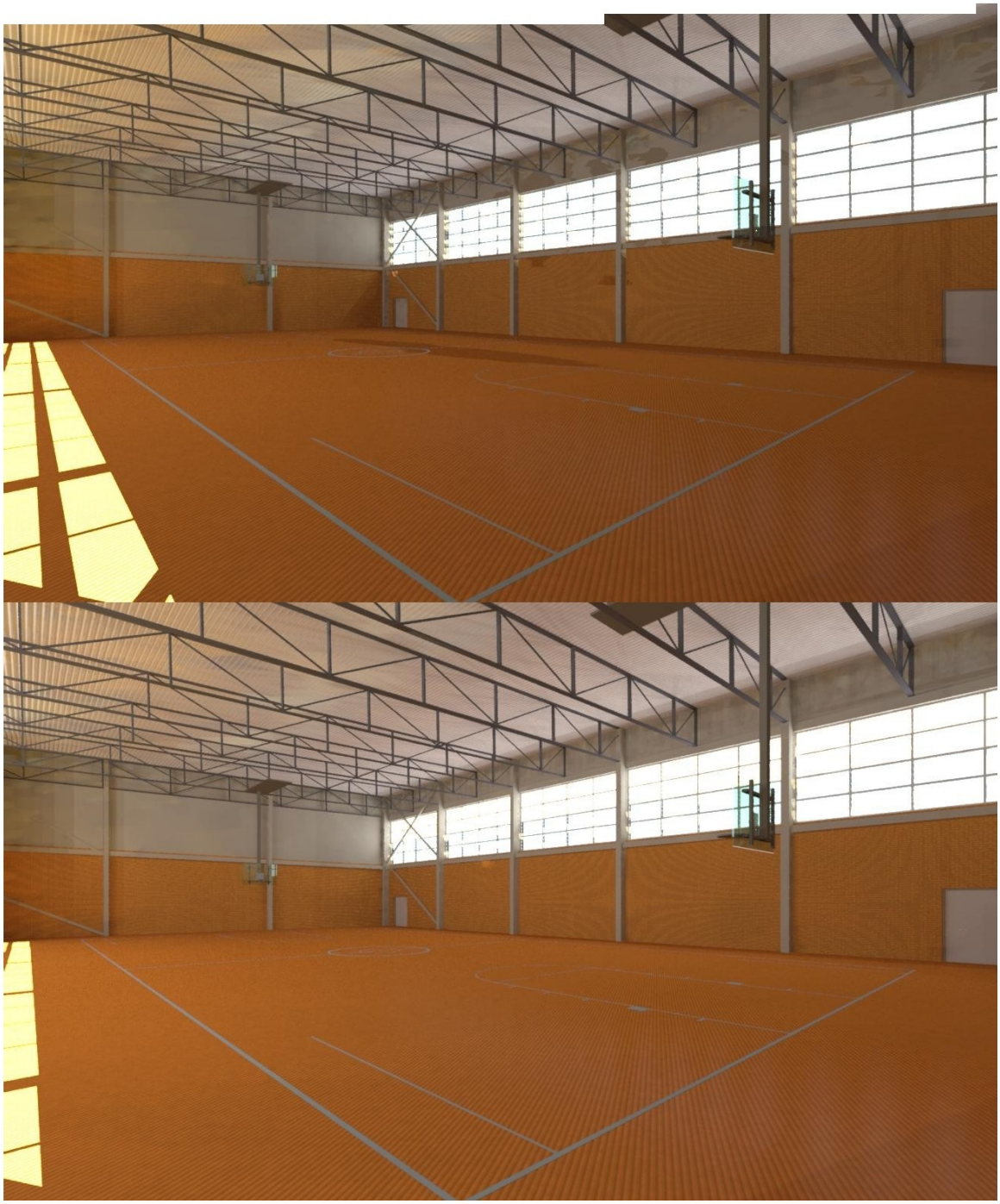

Figure 8
Two images of the Gym rendered at noon on March 21. The top image uses configuration 1 and the bottom image uses configuration 3. The camera used for these simulations was placed in the southeast comer and looks towards the northwest comer.

Figure 9
The images from Figure 7 rendered using false colors in indicate illuminance values, measured in Lux, throughout the space. Note: All areas where there is direct beam sunlight have light levels over 20,000 Lux well off the chosen scale.

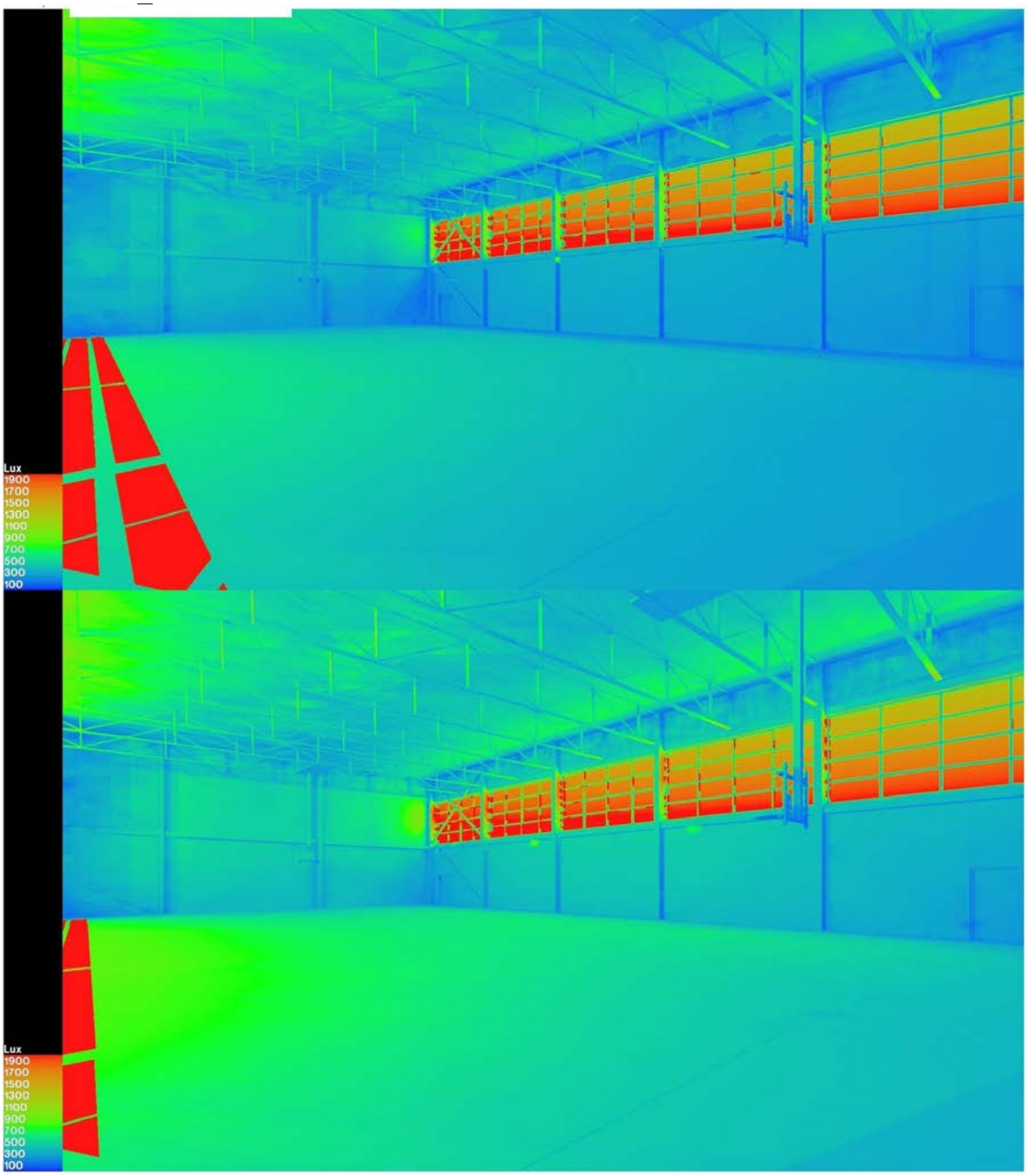

Figure 10
The images from Figure 8 rendered using false colors in indicate illuminance values, measured in Lux, throughout the space.