

## **Assignment 6 – Daylight Availability Metrics and Glare Analysis**

In this individual assignment you will be calculating a series of daylight availability and glare metrics for your daylighting model of the classroom.

### Task 6.1: Daylight Factor Calculation

Starting with your DIVA model of the classroom, please calculate the daylight factor distribution in the classroom with the complex fenestration system from Assignment 4 fully opened. Submit your Rhino model with the results loaded in and complete Excel Table 6.1 for the 12 sensors from assignment 2. Please comment on your finding and name the file <Your name>\_DaylightFactor.3dm. Make sure that you save the Rhino file right after you ran the simulation.

### Task 6.2: LEED Credit Calculation

Please calculate the LEED Daylighting Credit for the space. The daylighting credit requires two CIE sunny sky calculations to be run on an equinox day at 9AM and 3PM. Submit your Rhino model with the results loaded in and complete Excel Table 6.1 for the 12 sensors from assignment 2. Please comment on your finding and name the file <Your name>\_LEED.3dm. Make sure that you save the Rhino file after you ran the simulation.

### Task 6.3: Daylight Autonomy Calculation

Calculate the daylight autonomy distribution in the classroom assuming occupancy from 8AM to 6PM and a 300lux target illuminance. Submit your Rhino model with the results loaded in and complete Excel Table 6.1 for the 12 sensors from assignment 2. Please comment on your finding and name the file <Your name>\_DaylightAutonomy.3dm. Make sure that you save the Rhino file (named <Your name>\_DGP.3dm) right after you ran the simulation.

### Task 6.4: Point in Time Glare Analysis

Assume that the shading device is fully opened all year. Using the view point from assignment 2, please calculate the daylight glare probability for the time when you took the HDR image of the space for assignment 2. Submit the Radiance HDR image with the DGP reported in the top left and comment on your finding. Make sure that you save the Rhino file (named <Your name>\_DGP.3dm) right after you ran the simulation.

### Task 6.5: Annual Glare Map

Calculate the annual daylight glare probability for the view point from 6.4 and submit the resulting temporal map. Please comment on your finding. Make sure that you save the Rhino file right after you ran the simulation.

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