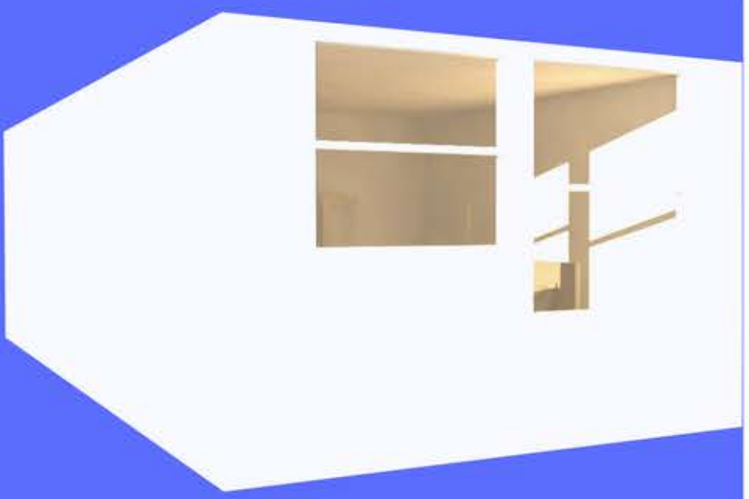
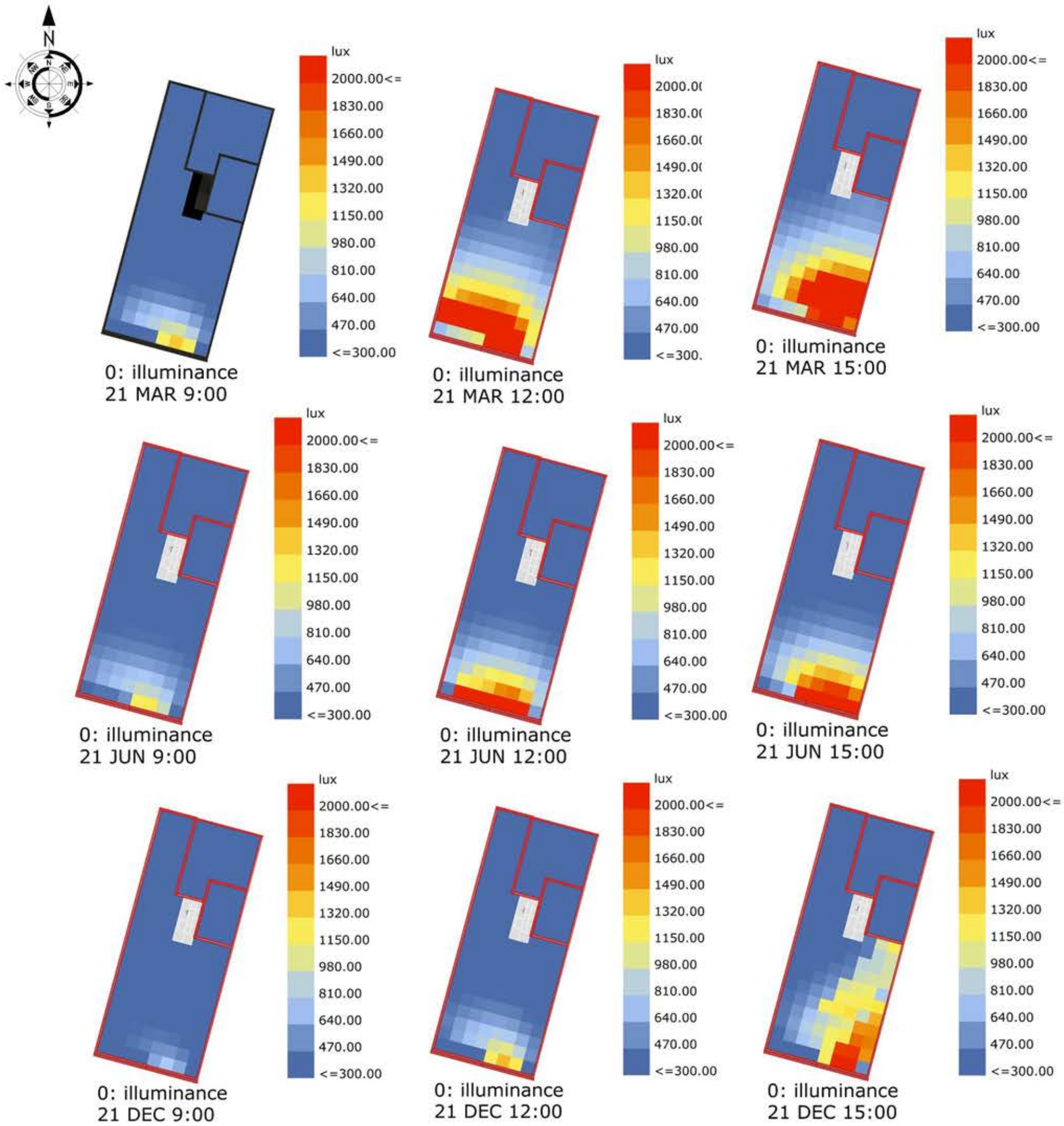
Building Performance Simulation
Assignment 6
Daylight & Glare Analysis of your Dream Room

Revised Daylight Analysis For Existing Model

In the revised analysis model, material, thickness of the objects and surfaces, radiance parameters have been taken into consideration. The result shows that a difference is accured by adding these parameters. It seems that illuminance levels is much lower and the amount of glare is

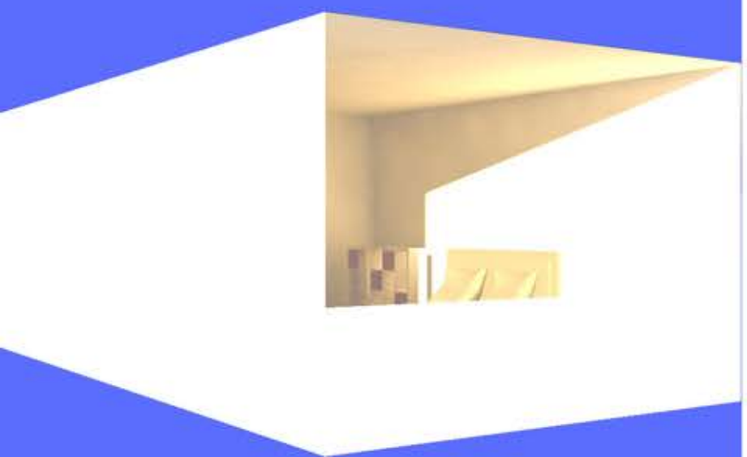
analysis. The problamatic times remained the same, but the illuminance levels is much less problamatic.

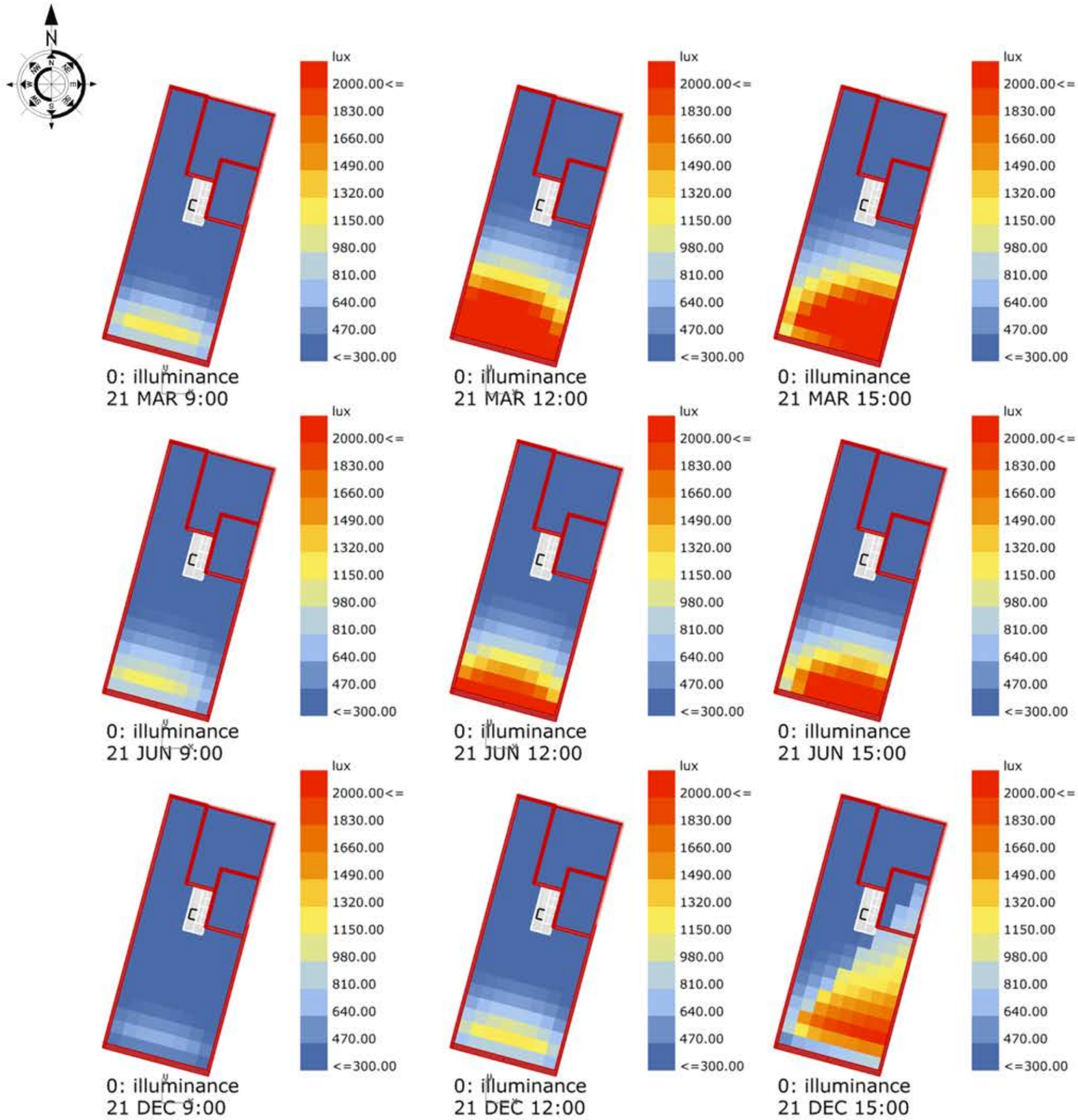




Revised Daylight Analysis For Full Window

Same thing happens with daylight analysis in full horizontal window condition. The proposed idea is for imorove the amount of light comes into the space and try to control the glare and unwanted lights with shading designs. Definitely, the amount of glare is more compared to the existing model. But the solution is to cover it with a shading design and the reason was to take the control of light coming into the area and also improve aestetic part of design simultaneously.

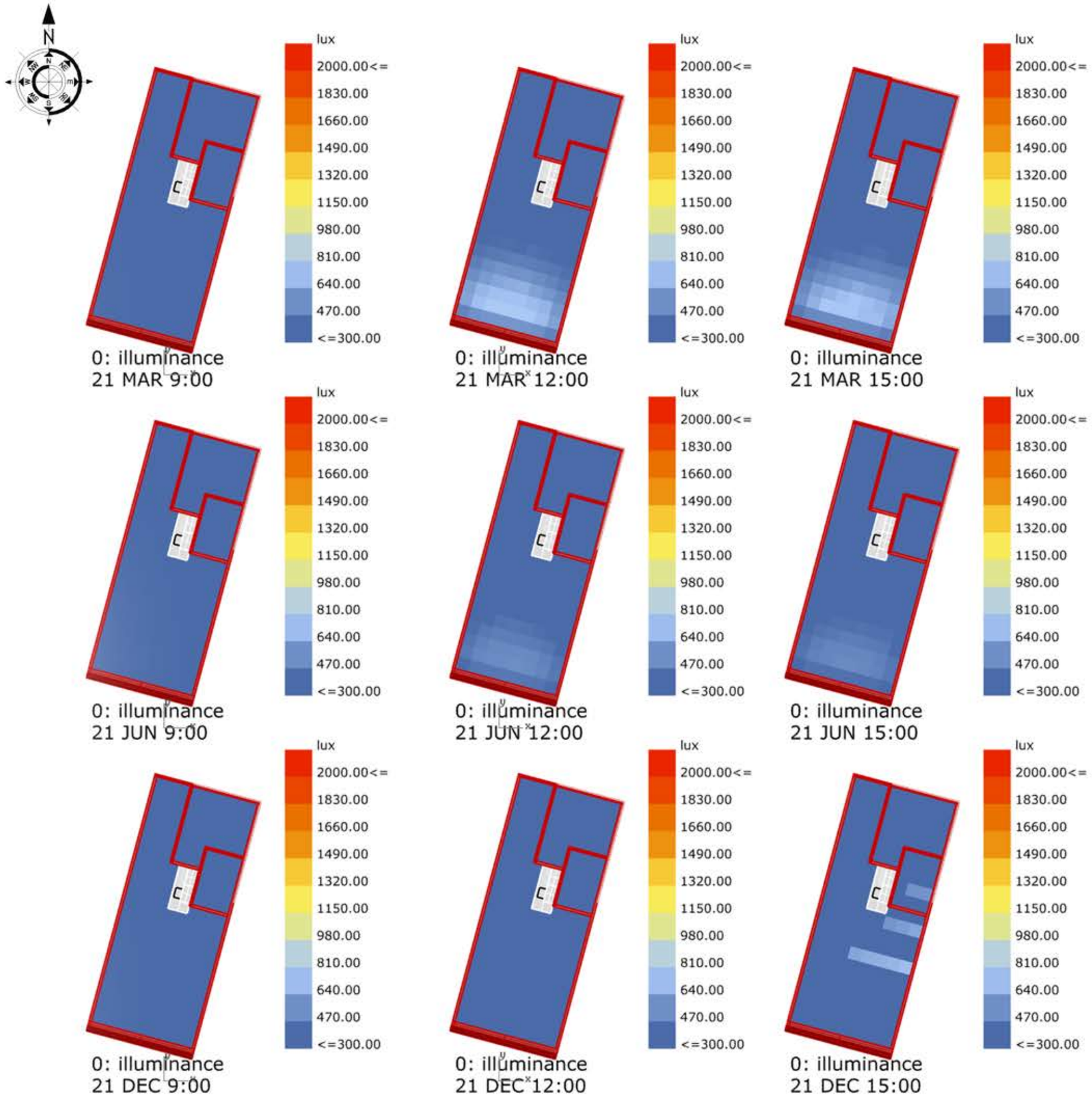


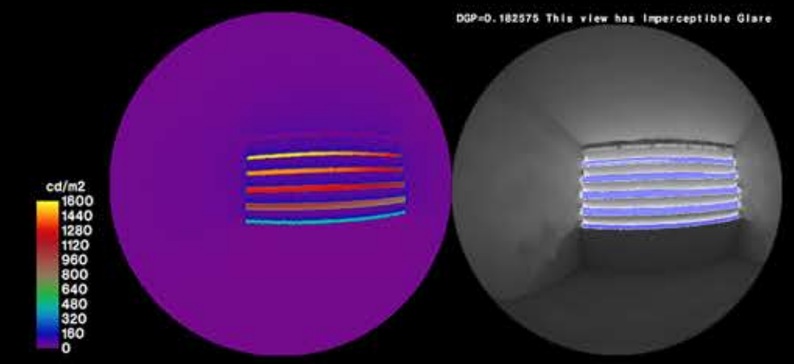


Revised Daylight Analysis For Horizontal Shading

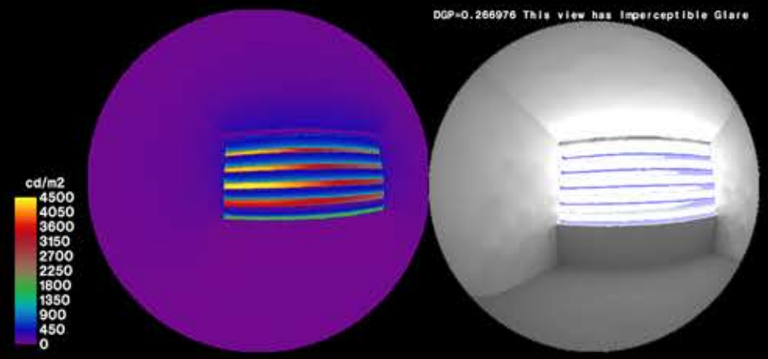
In this level, I tried to design a horizontal shading to cover much of the glare and compared to the analysis withought considering Rad Parameters, the amount of daylight coming to the space has became pretty low. Most of the times the illuminance values are 300 Lux or less than that.

daylight penetration into the area. The resaon to add horizontal shading was to control a huge amount of glare and see how this kind of shading can effect the internal spaces.

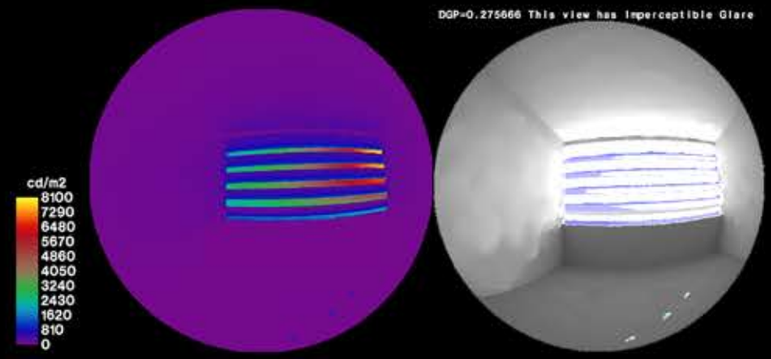




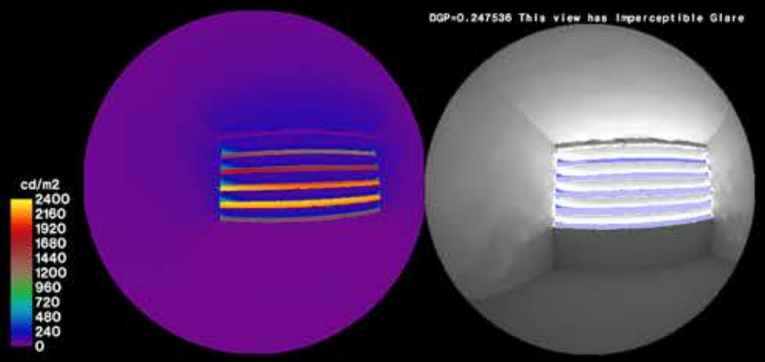
21 March 9:00



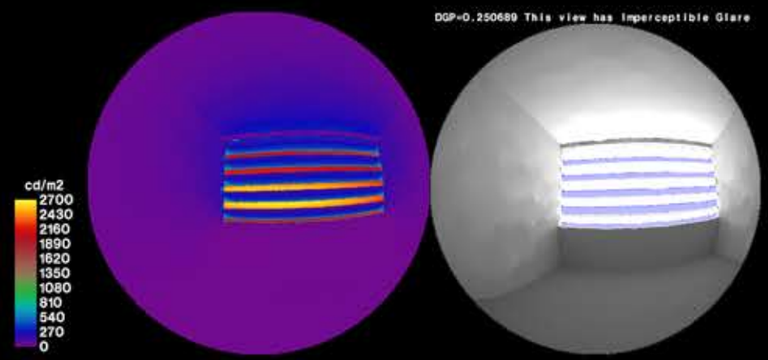
21 March 12:00



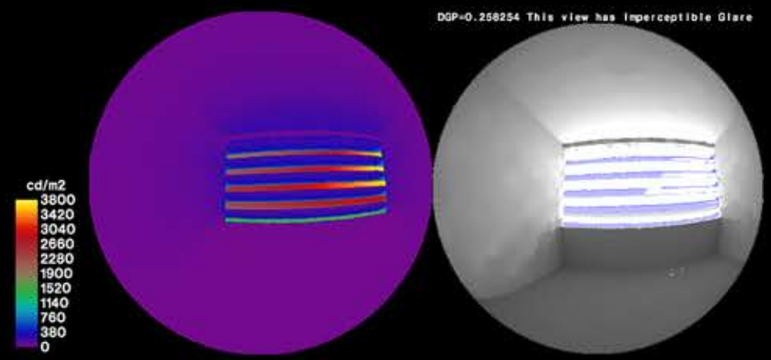
21 March 15:00



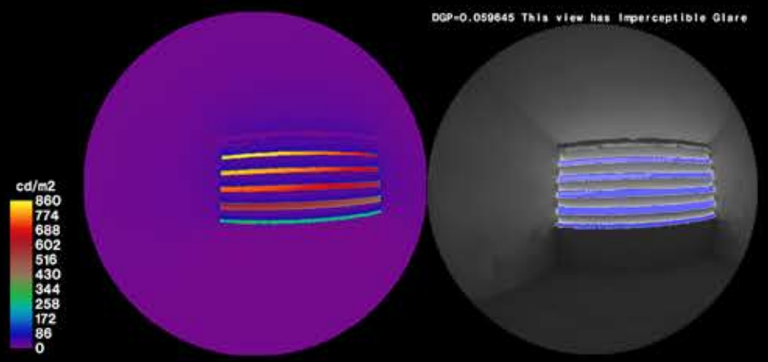
21 June 9:00



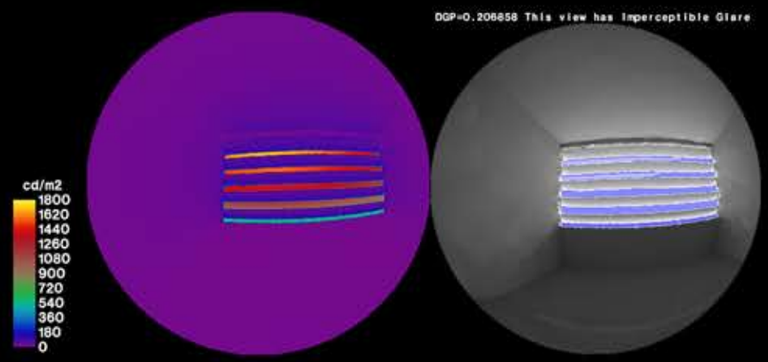
21 June 12:00



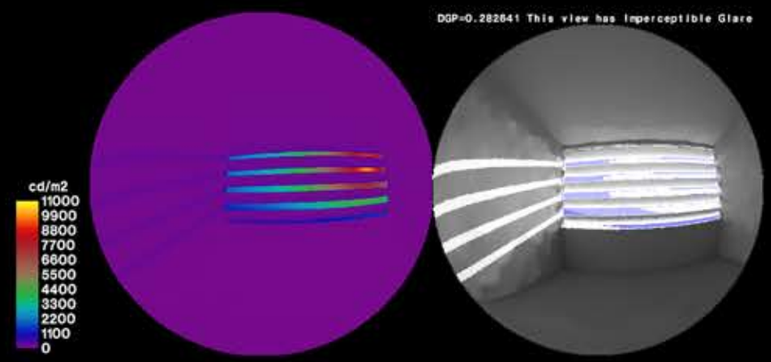
21 June 15:00



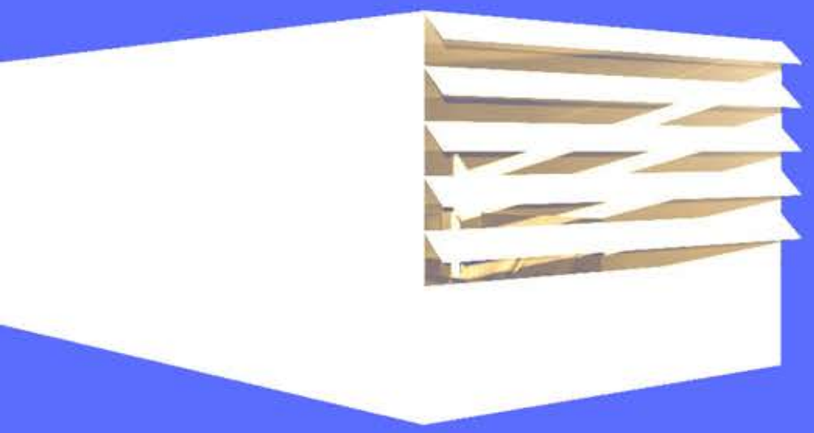
21 Dec 9:00



21 Dec 12:00



21 Dec 15:00



Glare Analysis for Final Design

In terms of glare analysis for the final design, it seems that for these nine analysis there is just imperceptible glare which is not problamatic for the interior spaces. The highest amount of DGP is alocated to the month June. And specifically afternoon time of Dec month. The amount of DGP for March becomes high during noon and afternoon, but none of them have glare issues with regards to the analysis results.

Building Performance Simulation, Assignment 6, Instructor: Mostapha sadeghipour, Student: Mitra Sajjadi