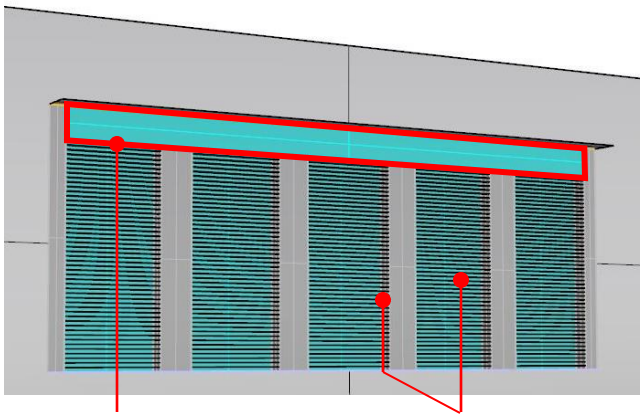
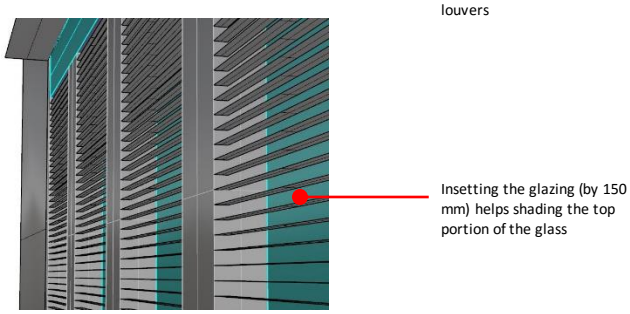
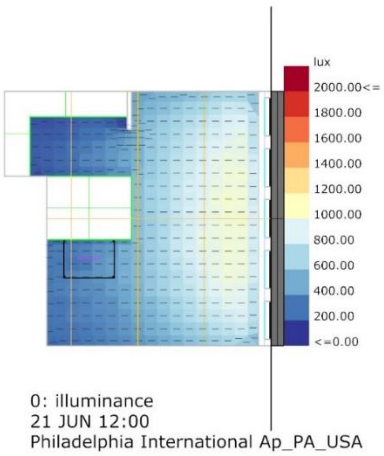
ARCH 753 – Energy Simulation

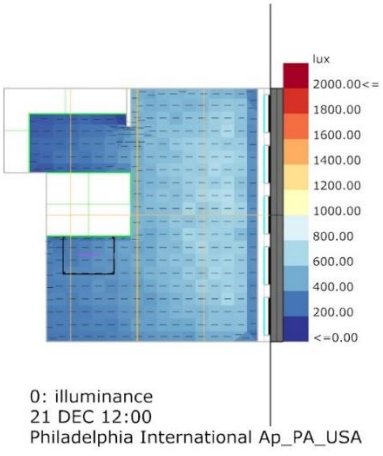
- Insetting the glass by 150 mm (as much as the width of the ledge) shades the glazing to a certain degree, especially at the top-most portion of the glass.
- Horizontal louvers of 40 X 900 mm spaced at 40 mm distance shades the glass while permitting indirect light.
- But this approach does not provide enough daylight for the deep interior portion of the space. So the glazing at the top as wide as the original glazing that helps the light penetrate to the deeper boundaries of the space within.

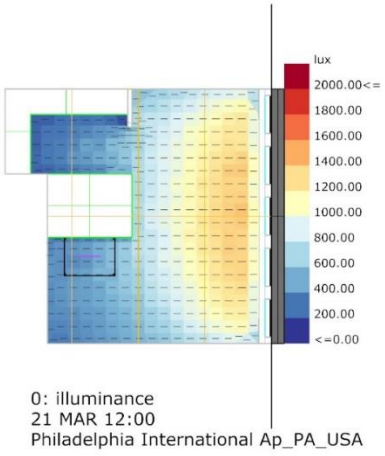




Daylighting simulation results:





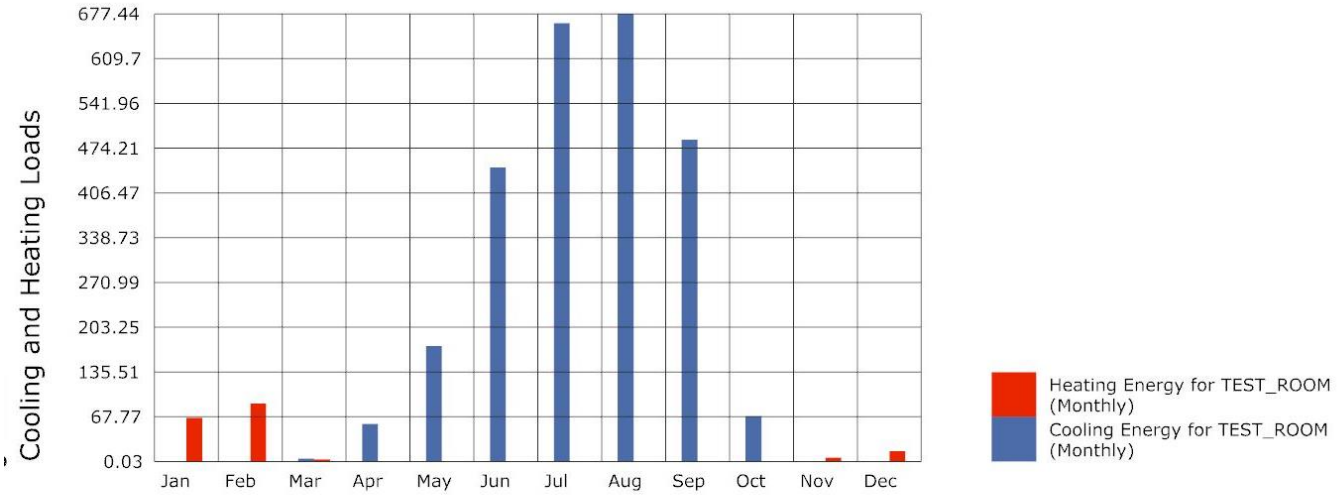


- The daylighting results varies from 108 lux to 1350 lux from the darker corners to the most lit up areas respectively.

ARCH 753 – Energy Simulation

Energy simulation results:

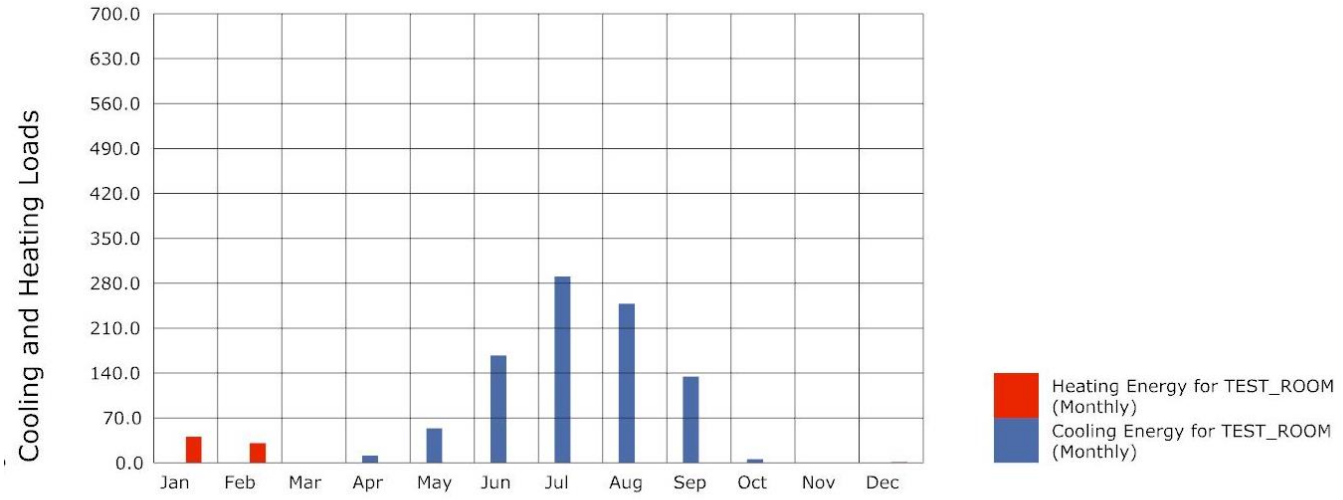
Base simulation



Philadelphia International Ap PA USA TMY3

Cooling maximum – 2579
Heating maximum – 180

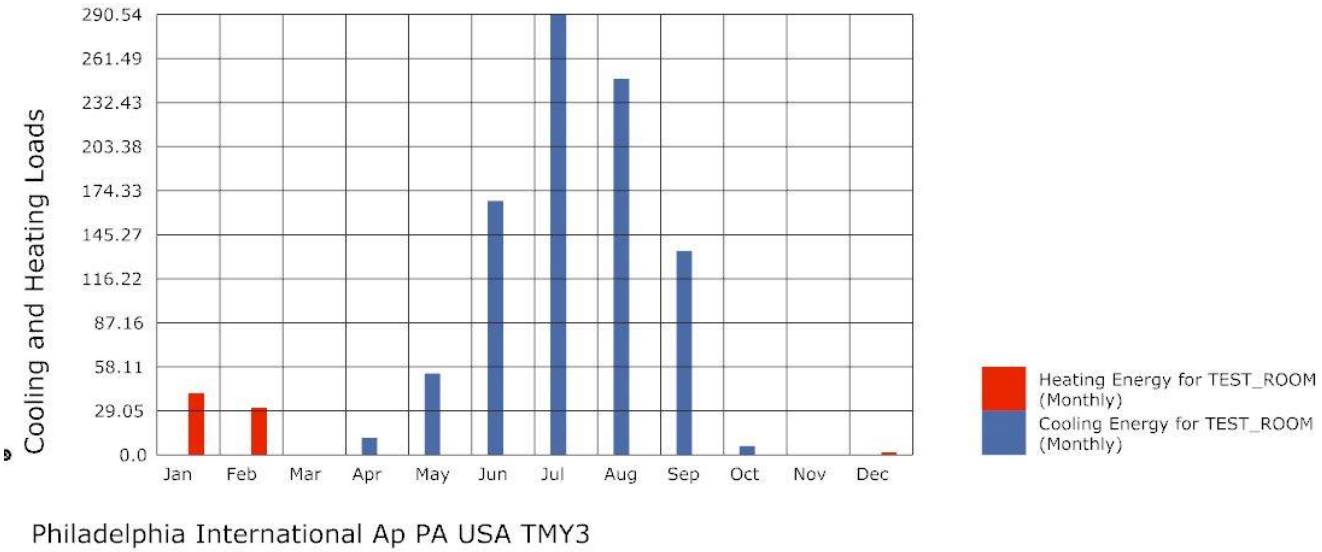
Final simulation

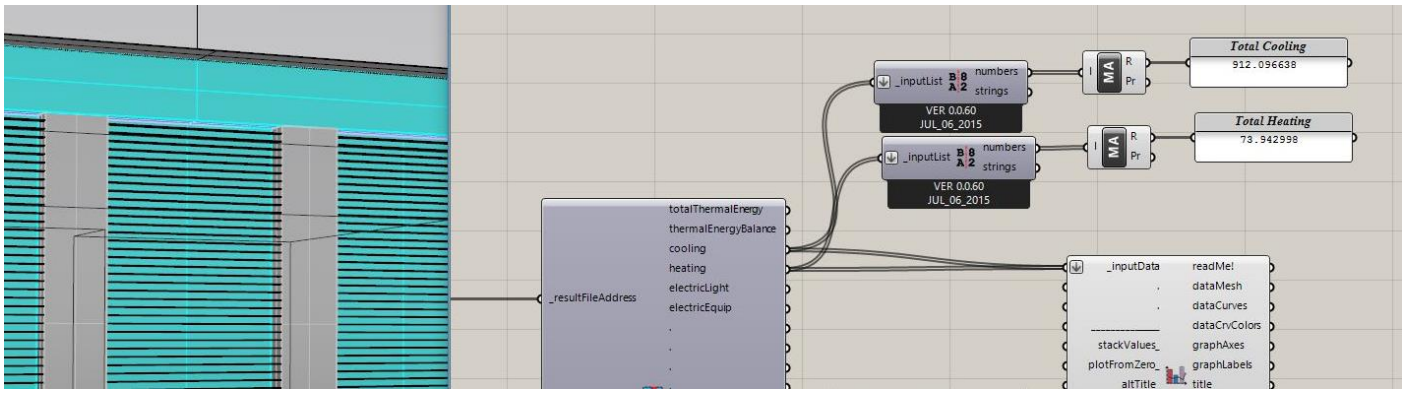


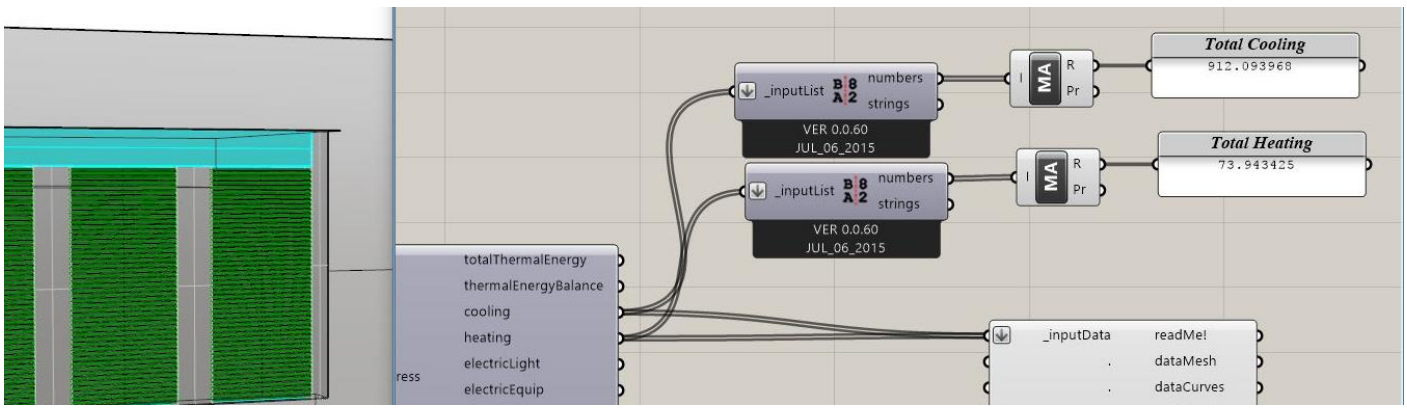
Philadelphia International Ap PA USA TMY3

Cooling maximum – 912
Heating maximum – 74

ARCH 753 – Energy Simulation







Simulation with open louvers and simulation with closed louvers. No difference.