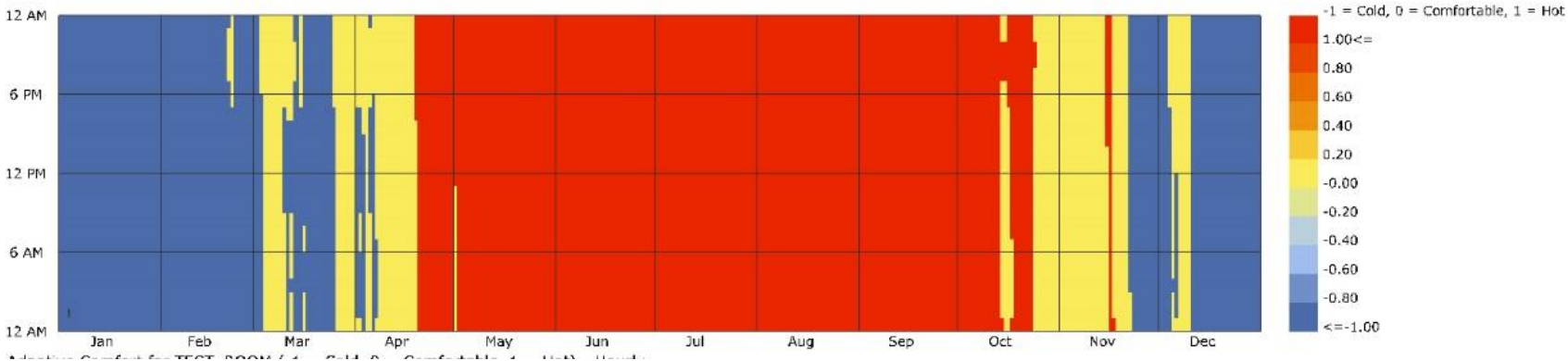
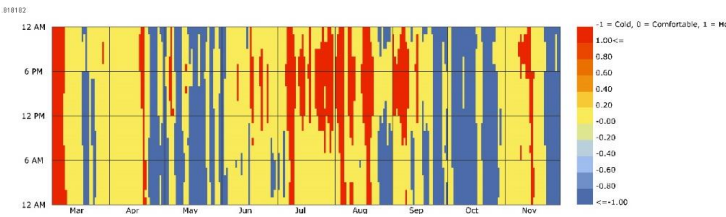


# Analysis of comfort hours without ventilation Louvres-Summer mode

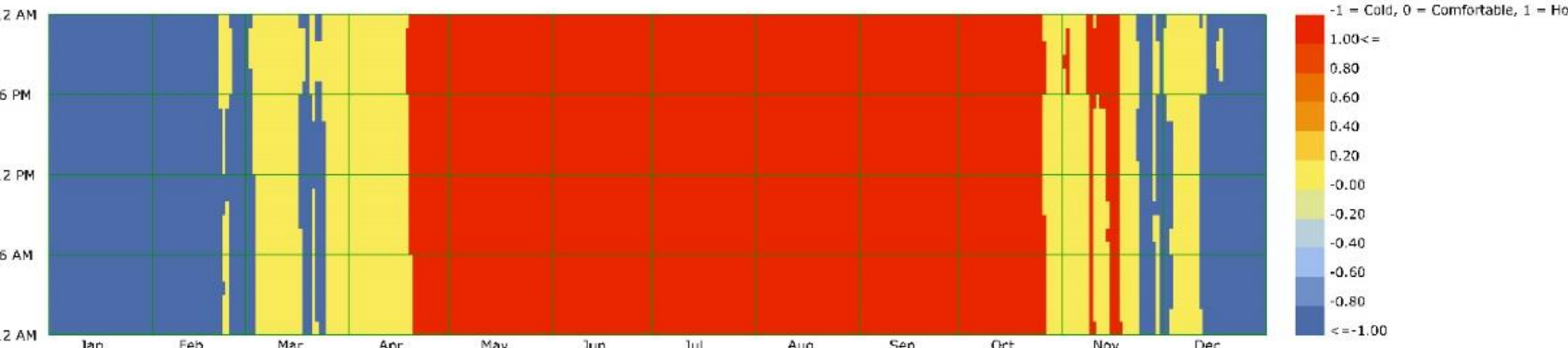


Choosing the time boundaries  
for winter/summer periods

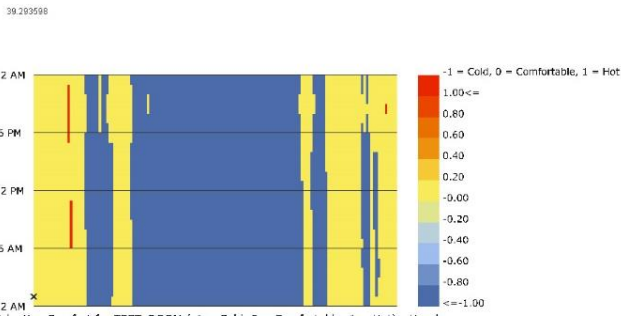
**Summer** – March – October  
Louvres are tilted for 43°



# Analysis of comfort hours without ventilation Louvres-Winter mode mode



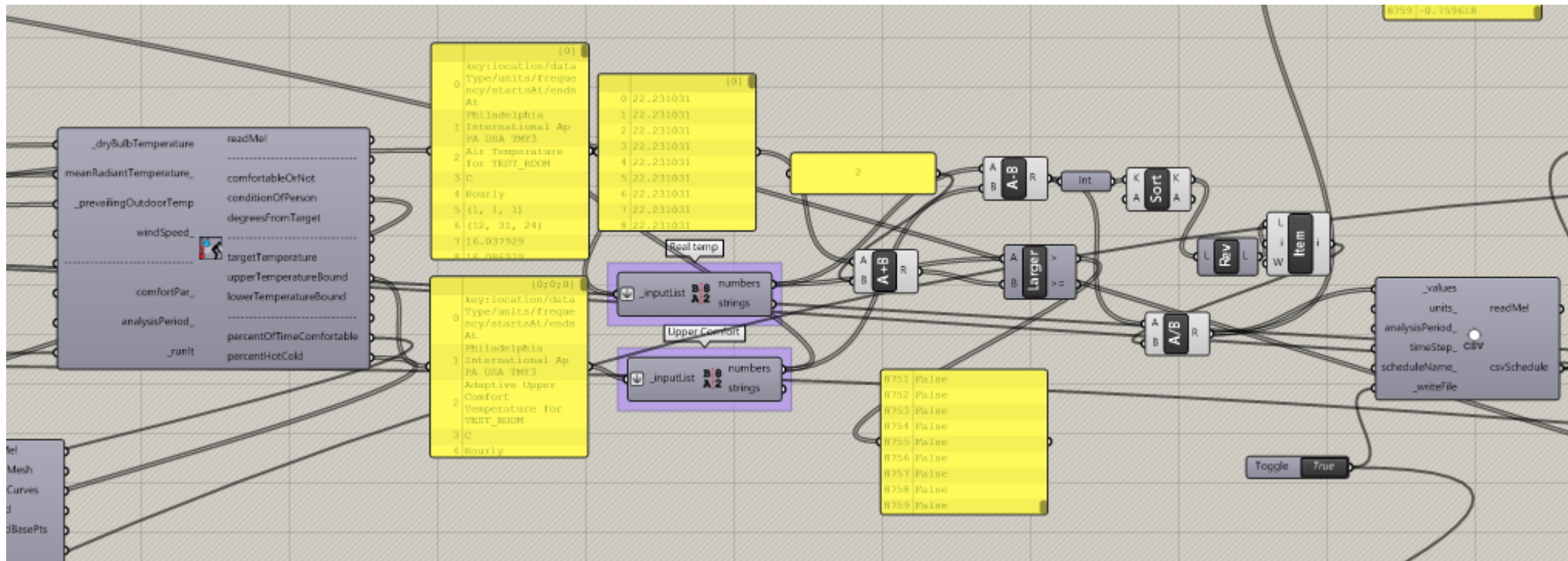
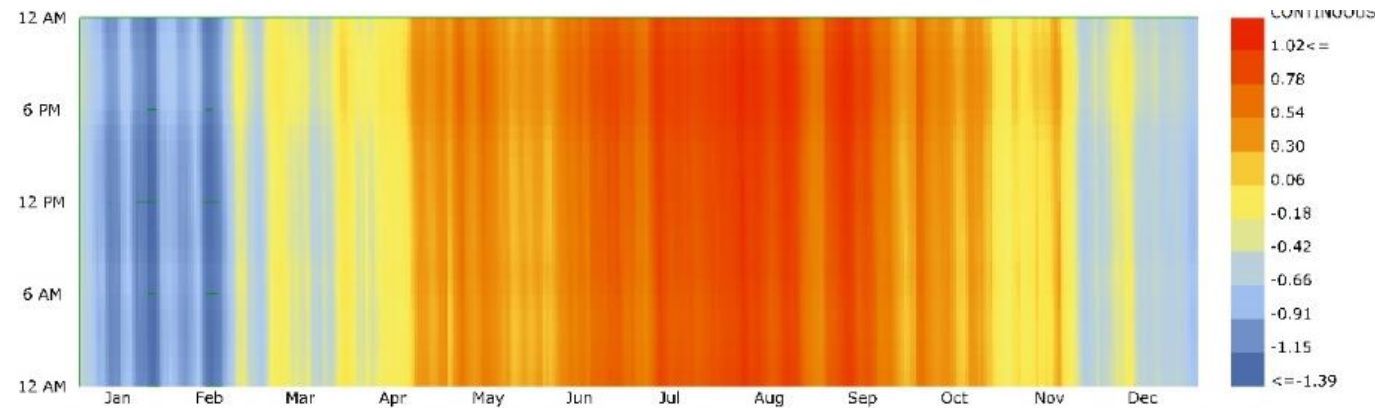
**Winter** – November – February  
Louvres are horizontal



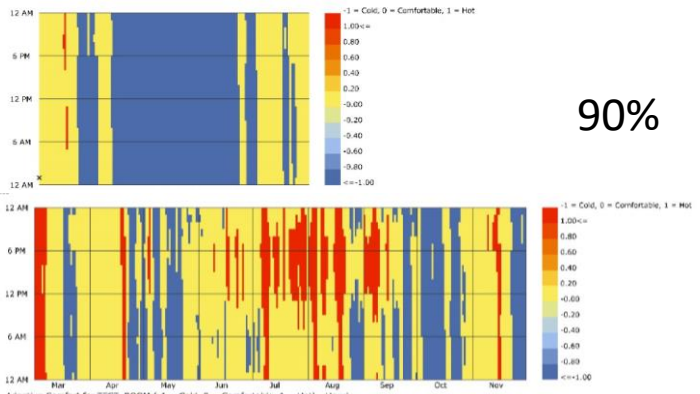
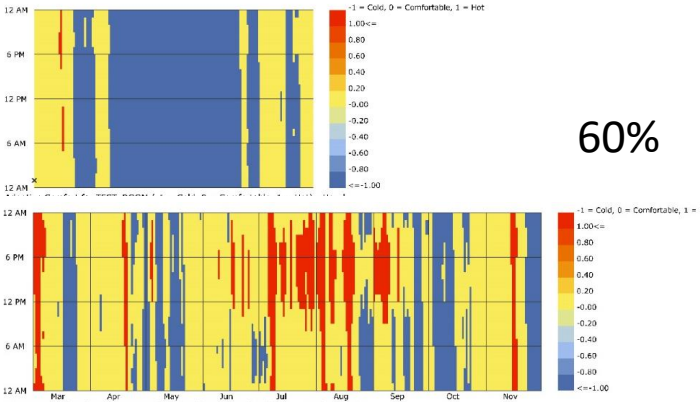
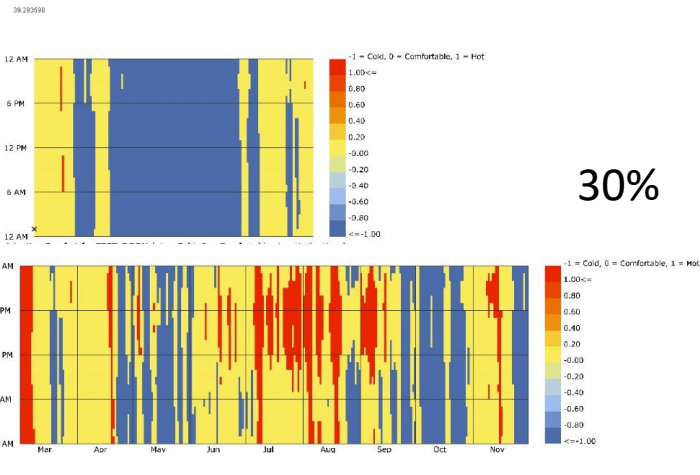
Adaptive Comfort for TEST\_ROOM (-1 = Cold, 0 = Comfortable, 1 = Hot) - Hourly  
Philadelphia International Ap PA USA TMY3  
1 JAN 1:00 - 31 DEC 24:00

Adjusting the ventilation schedule.

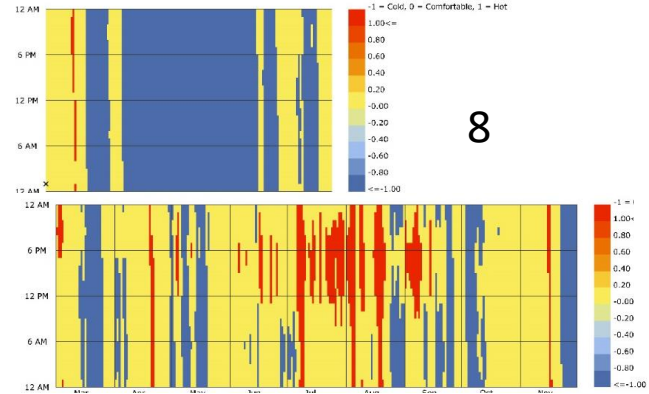
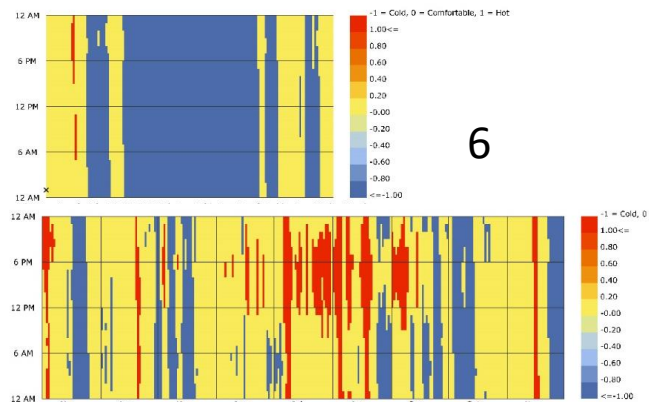
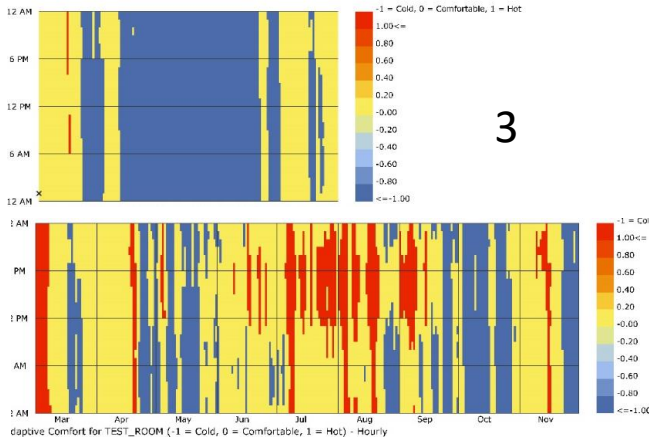
Creating the schedule for each hour of a year with different ratio of window openings according to the interior temperature



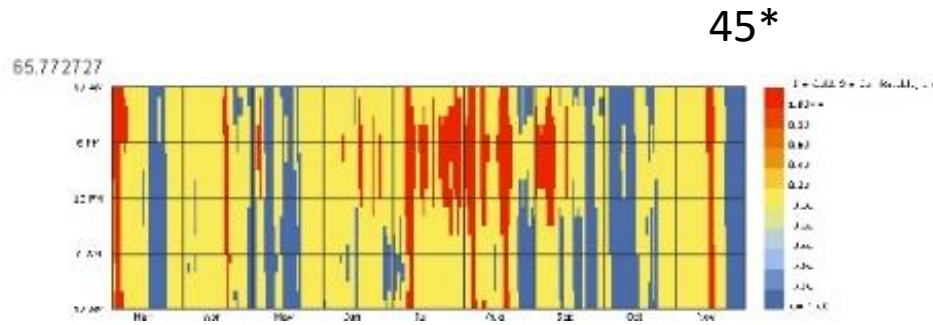
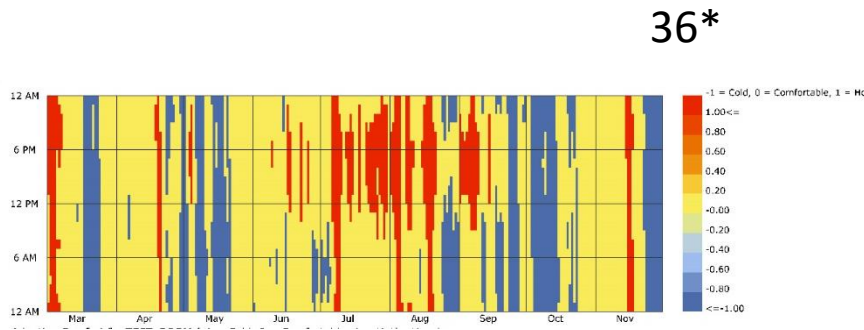
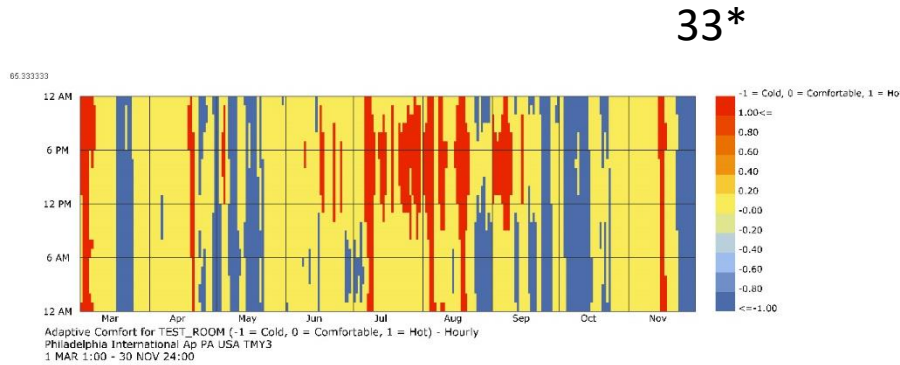
Analysis of different glazing percentages



Analysis of different number of louvres

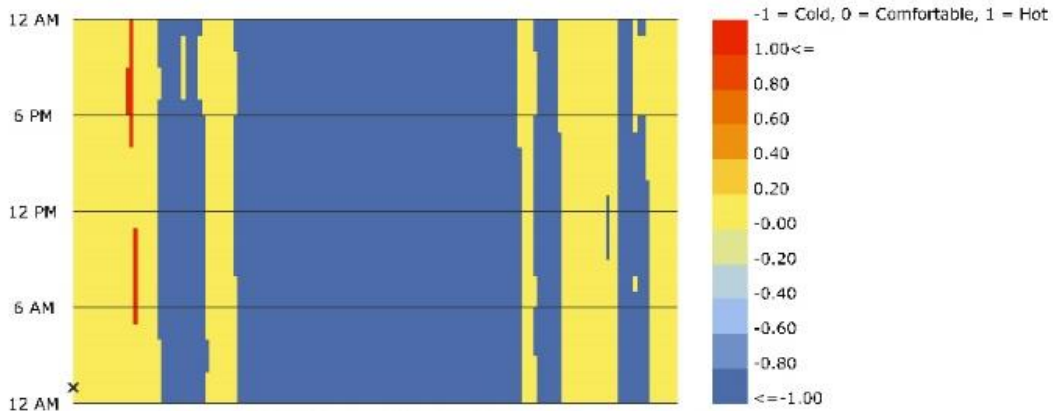


Analysis of different louvres angle

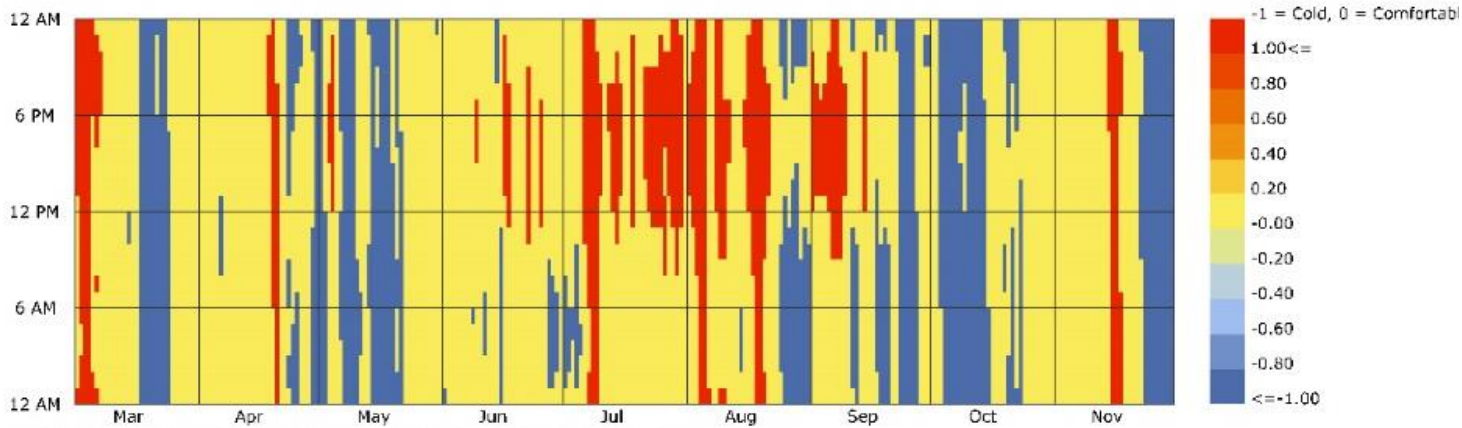




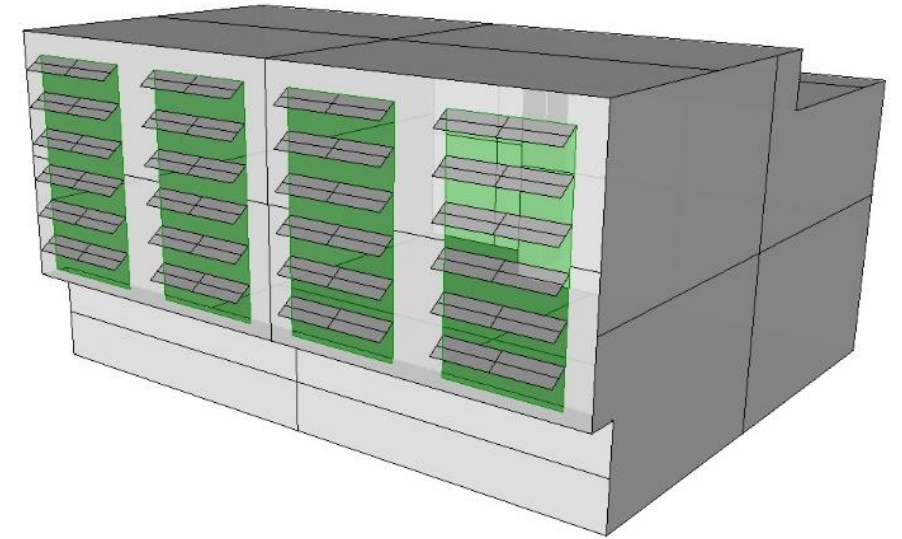
## Final Result



WINTER



SUMMER



To increase percentage of comfort hours it is required to increase solar gains in winter (especially in February). Higher thermal mass will help to mitigate thermal swings during the cloudy periods.