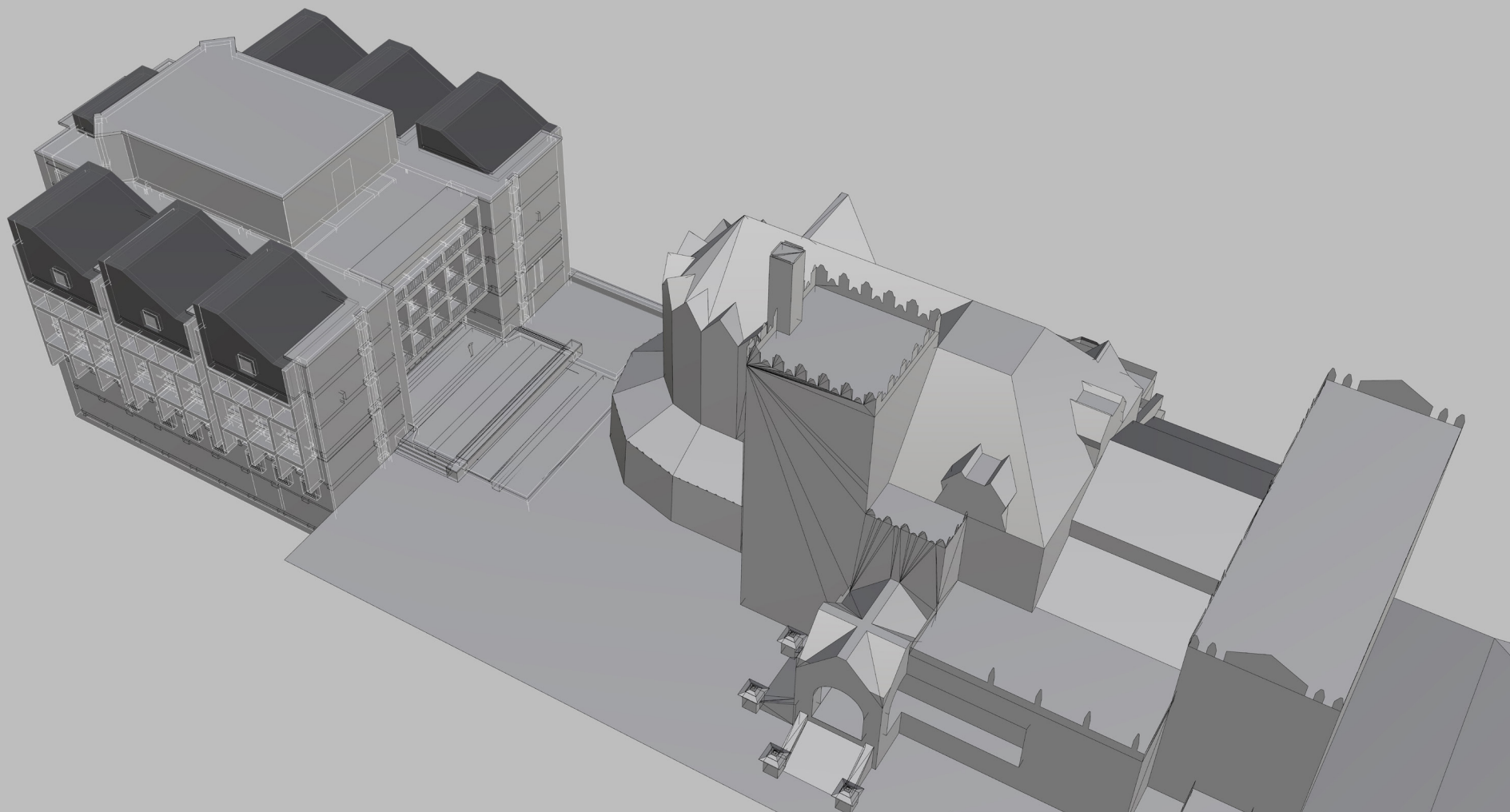




## Shading in front of Meyerson Hall





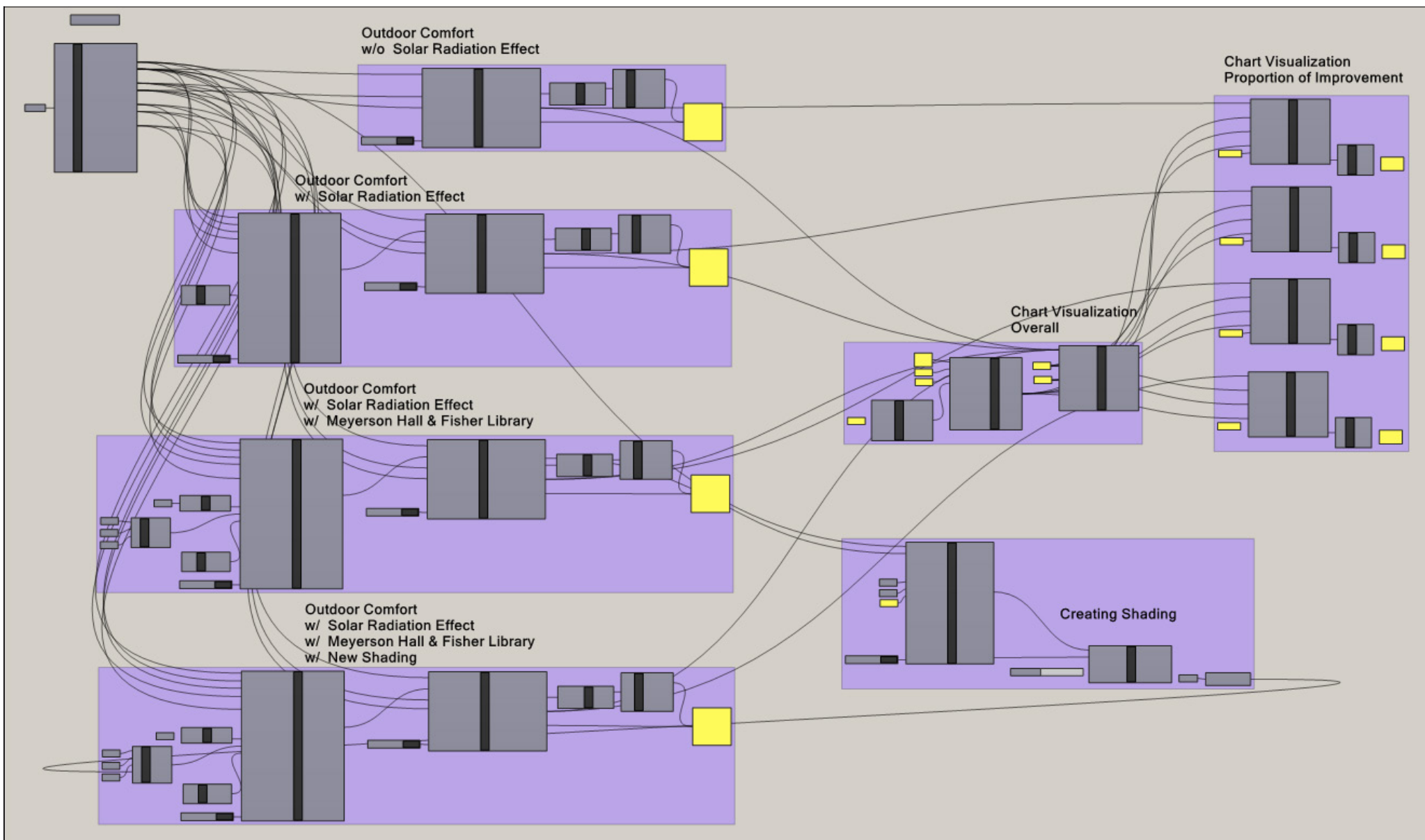
City: Philadelphia, PA

Latitude: 39.8683

Longitude: -75.2311

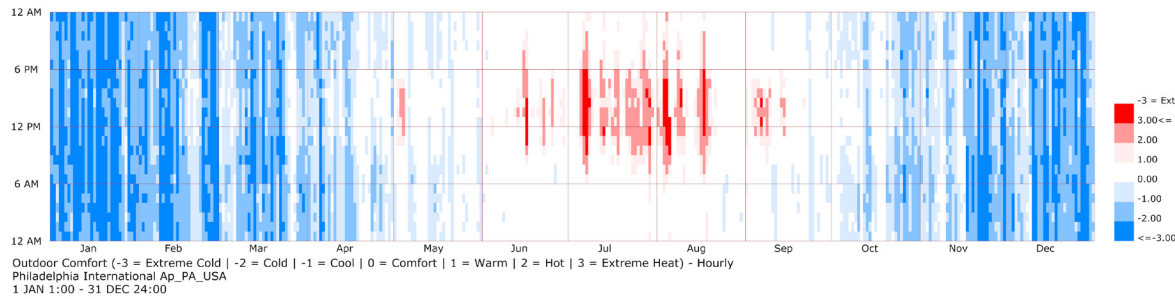
Purpose of the study:

Evaluating the outdoor comfort in front of Meyerson Hall and creating a shading component that can improve outdoor condition of the location.



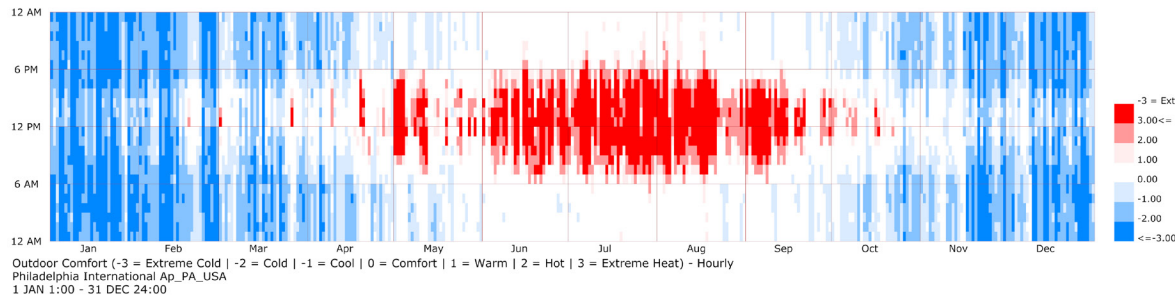
### Overall Grasshopper Workflow:

1. Experiment four different conditions according to the solar radiation and context shadings
2. Creating a shading visualizing
3. Evaluating improvement of outdoor condition of the space in front of Meyerson Hall



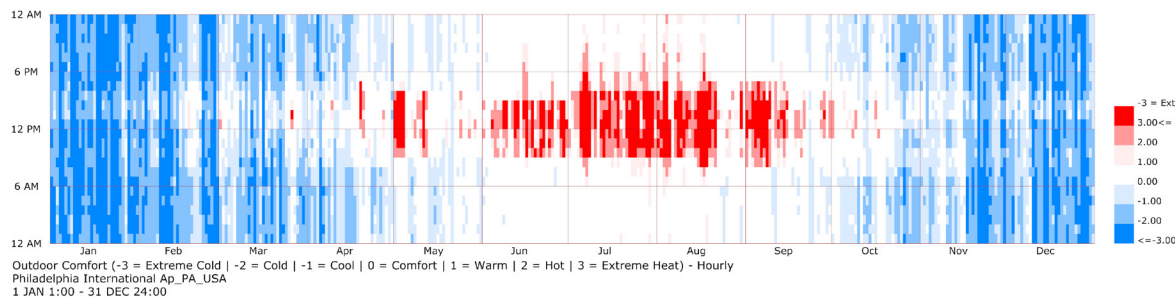
## Outdoor Comfort without Solar Radiation Effect

Comfortable Hours: 3616  
Percent of Comfortable Hours: 42.27%



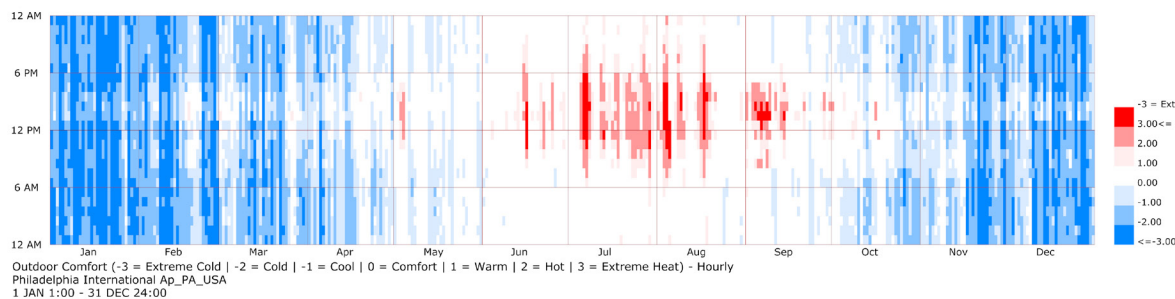
## Outdoor Comfort with Solar Radiation Effect

Comfortable Hours: 3271  
Percent of Comfortable Hours: 37.34%



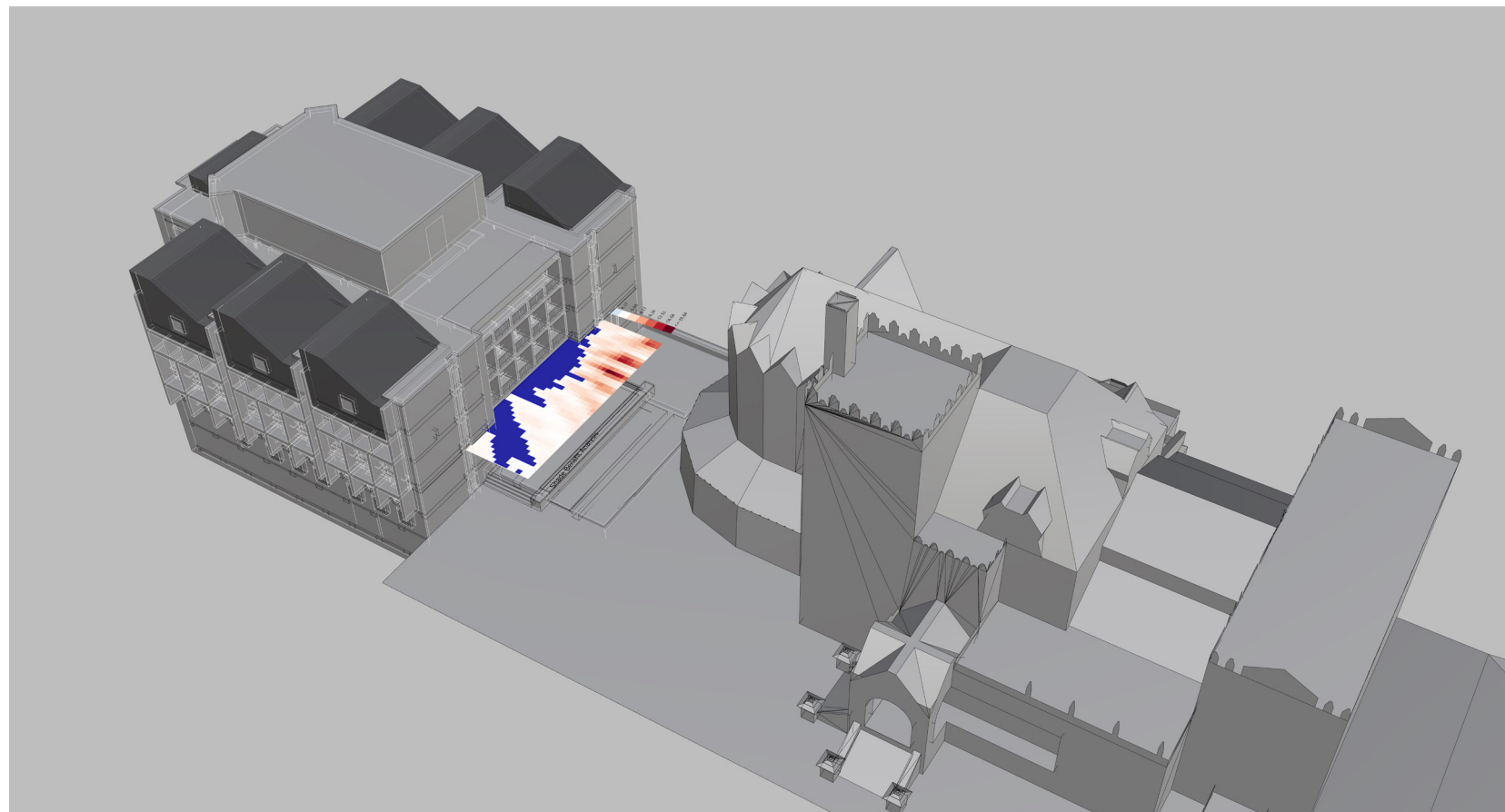
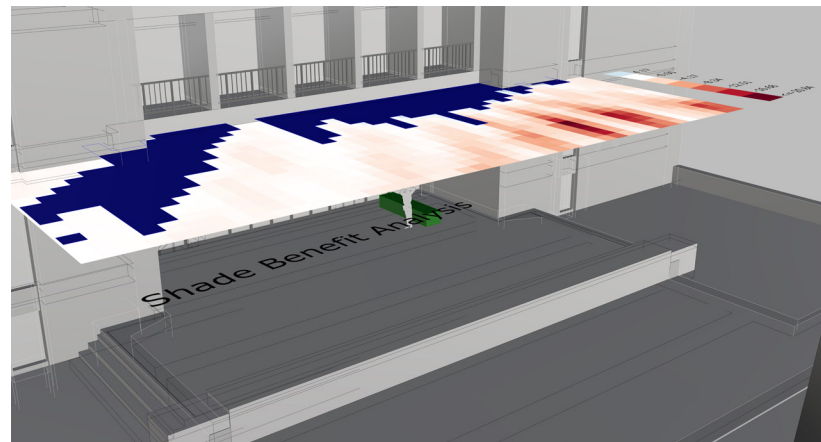
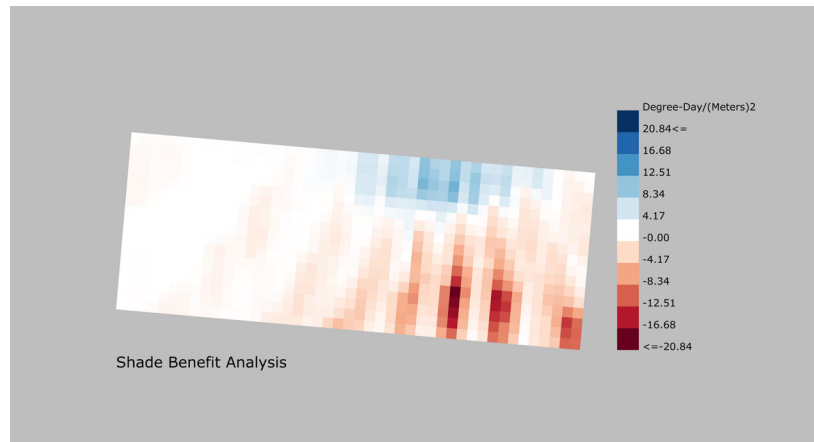
## Outdoor Comfort with Solar Radiation Effect & Meyerson Hall and Fisher Library

Comfortable Hours: 3473  
Percent of Comfortable Hours: 39.64%



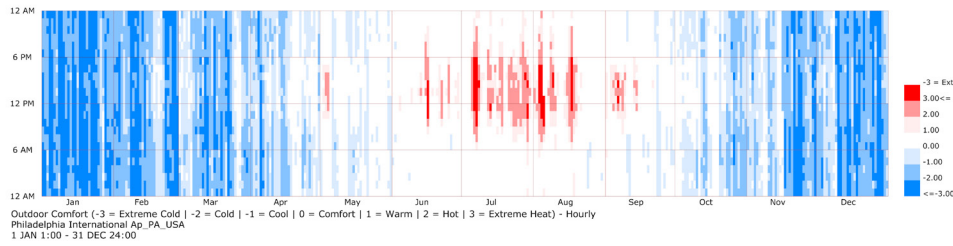
## Outdoor Comfort with Solar Radiation Effect & Meyerson Hall and Fisher Library & New Shading

Comfortable Hours: 3712  
Percent of Comfortable Hours: 42.37%



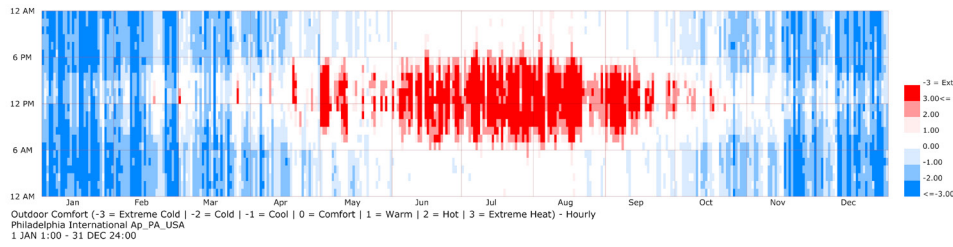
Shade Benefit Analysis & Creating Shading





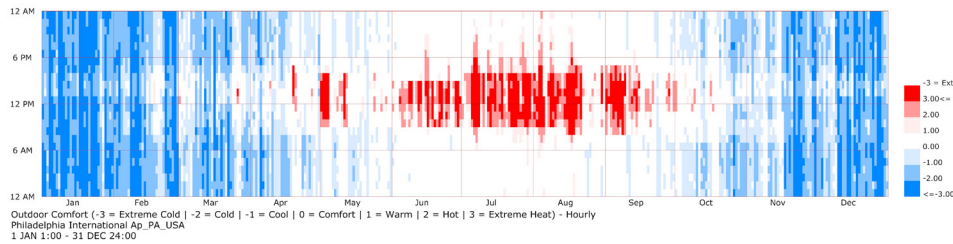
Outdoor Comfort  
without Solar Radiation Effect

Comfortable Hours: 3616  
Percent of Comfortable Hours: 42.27%



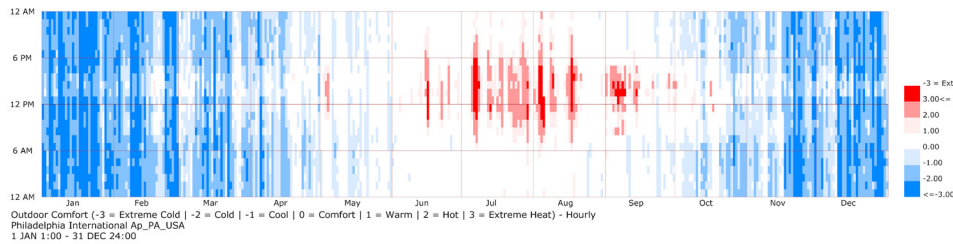
Outdoor Comfort  
with Solar Radiation Effect

Comfortable Hours: 3271  
Percent of Comfortable Hours: 37.34%



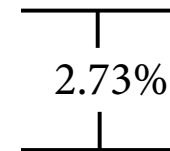
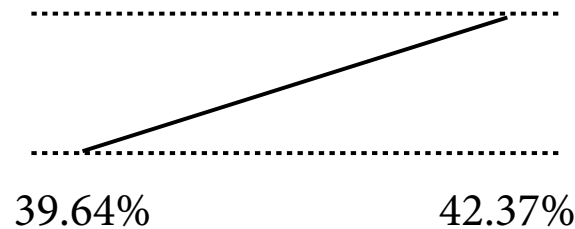
Outdoor Comfort  
with Solar Radiation Effect  
& Meyerson Hall and Fisher Library

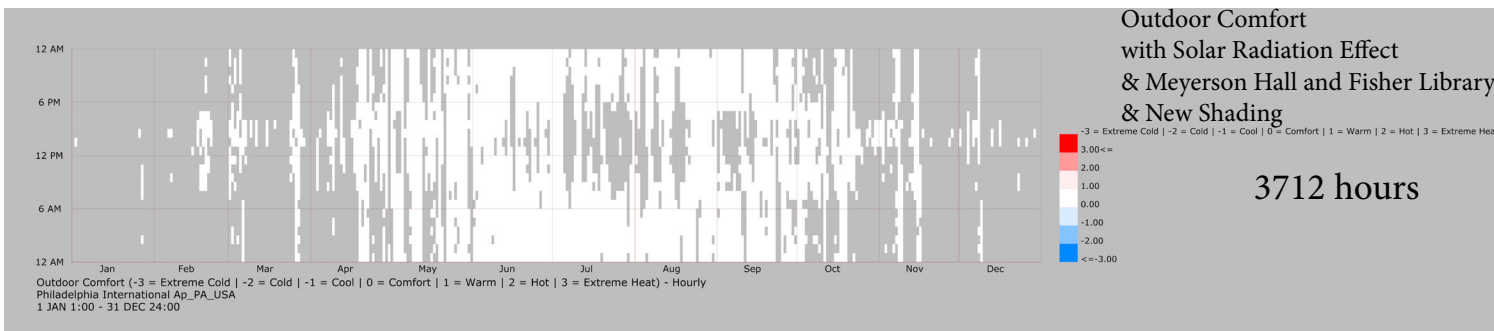
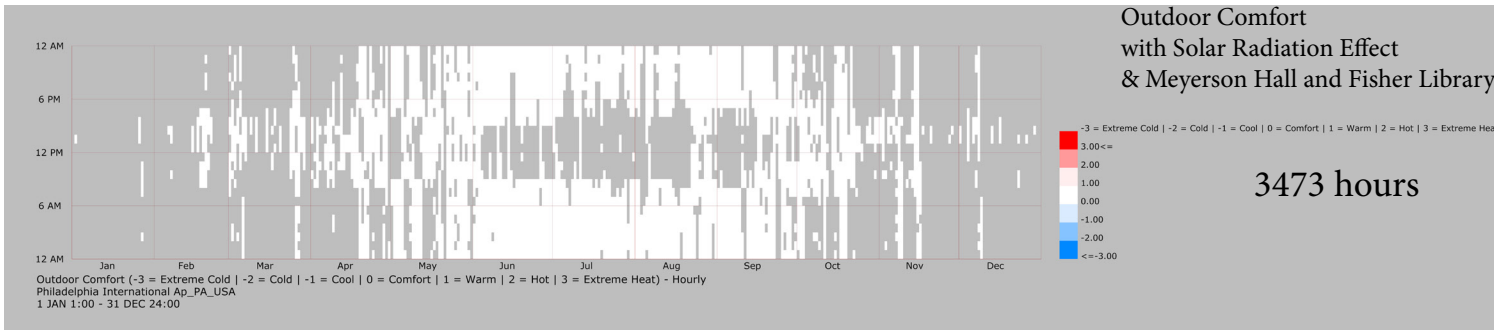
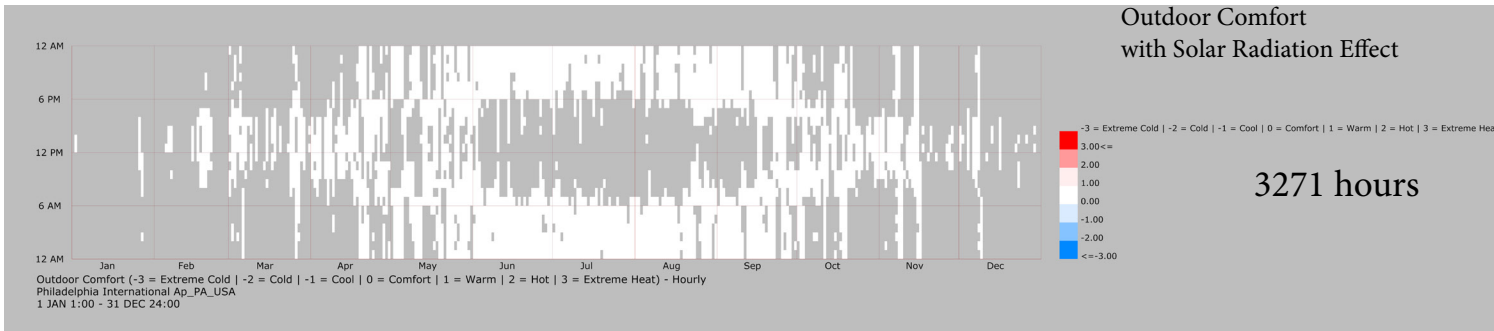
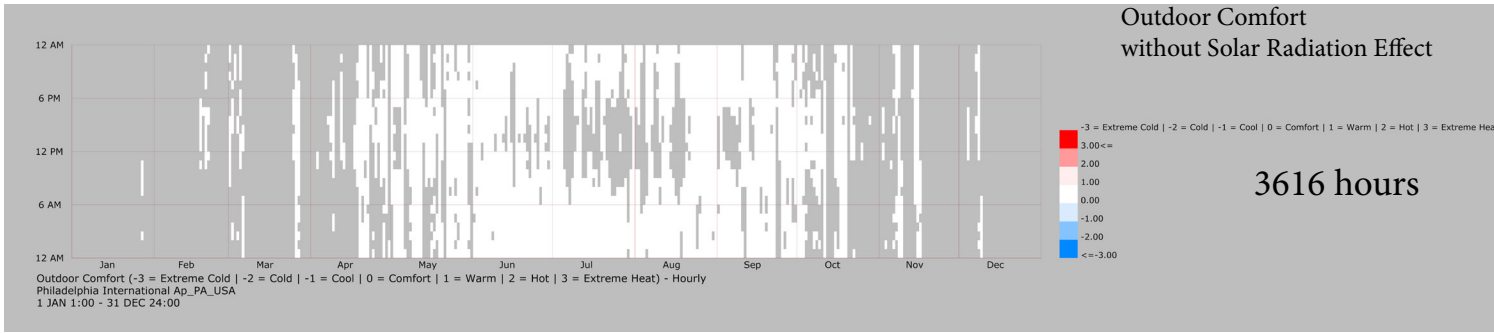
Comfortable Hours: 3473  
Percent of Comfortable Hours: 39.64%



Outdoor Comfort  
with Solar Radiation Effect  
& Meyerson Hall and Fisher Library  
& New Shading

Comfortable Hours: 3712  
Percent of Comfortable Hours: 42.37%





By only creating shadings, changing cold period into comfortable time is impossible.

Thus, it is proper to compare only-comfortable hours for evaluating of improvement.

