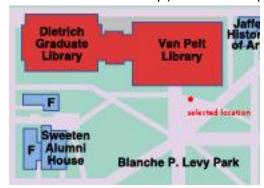
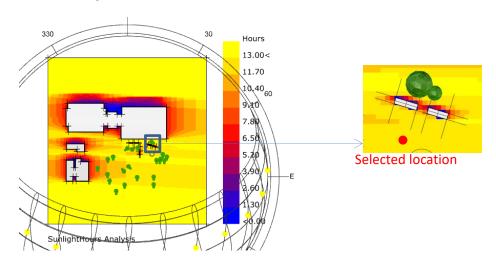
## 1. Location:

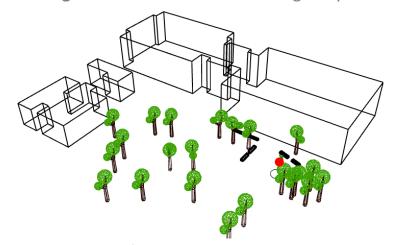
1.1 In front of Van Pelt library (marked in red point in the map)



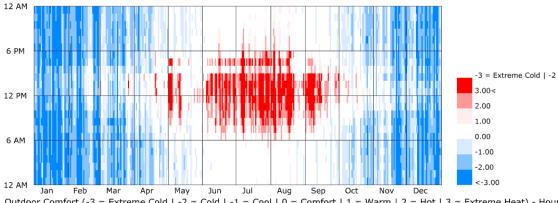
1.2 the sunlight hour of the selected location:



2 Percentage of comfortable hours during the year



Input the geometries of context and the point and the 3D chart shows as following. And from the data, it reads that the **percentage of comfortable hours** during the year is **38.72**%

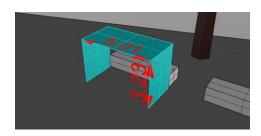


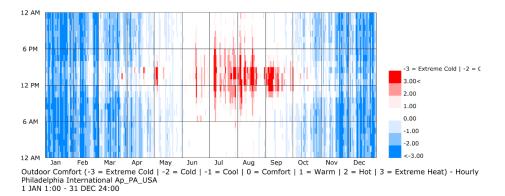
Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hour Philadelphia International Ap\_PA\_USA 1 JAN 1:00 - 31 DEC 24:00

Comfortable: 38.72%; Short period comf.: 19.42%; Heat stress: 9.35%; Cold stress: 32.51%

## 3 Three different design ideas

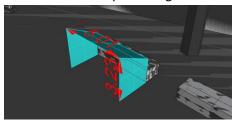
DESIGN 1:percentage of comfortable hours is 42.07%

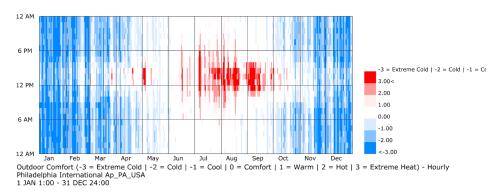




Comfortable: 42.07%; Short period comf.: 20.75%; Heat stress: 4.36%; Cold stress: 32.82%

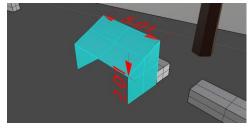
## DESIGN 2:percentage of comfortable hours is 42.39%

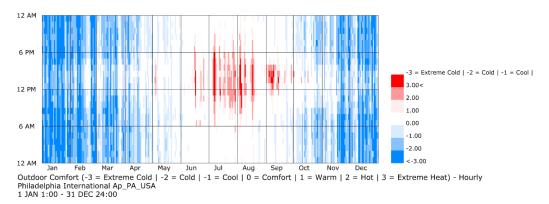




Comfortable: 42.39%; Short period comf.: 20.27%; Heat stress: 4.74%; Cold stress: 32.6%

## • DESIGN 3:percentage of comfortable hours is 42. 9%





Comfortable: 42.9%; Short period comf.: 20.82%; Heat stress: 3.23%; Cold stress: 33.05%

• maximize the annually outdoor comfort

I tried with the canopy with different angles and the percentage of comfortable hours is not significantly changed. And the maximum value is 42.9% which occurs when the slope of the canopy is lower in the south and higher in the north.

4. Can you achieve comfort for %100 of the time? If not what is the highest possible percentage of comfortable hours that you can achieve with passive design strategies?

I cannot achieve comfort for 100% of the time. And the highest possible percentage of comfortable hours that I can achieve with passive design strategies is 42.9%.