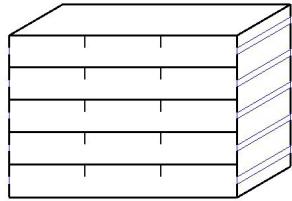
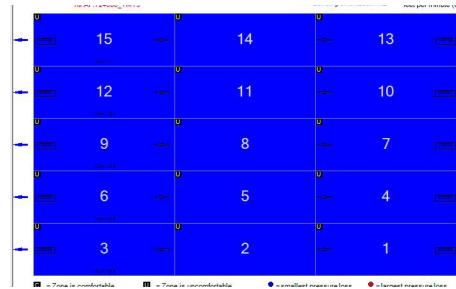


Meyerson Hall



March



In march, Meyerson Hall is overall 79.5% cold and 2.3% comfort. June is the hottest month during summer. Therefore, cold is 0% and comfort is 100%. The average of cold is 2.3% and comfort is 97.9% in september. Moreover, december is the coldest month in winter, cold is 70.5% and comfort is 29.5%.

June



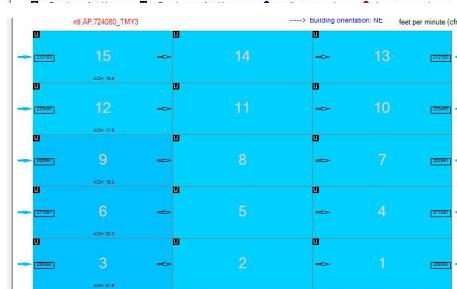
September



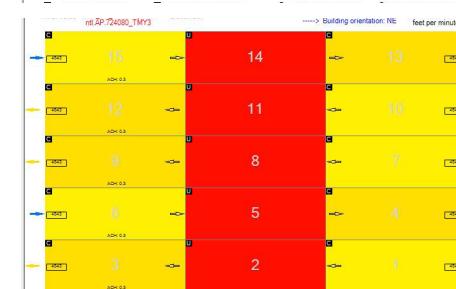
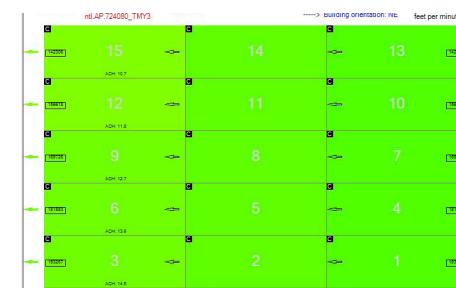
December



6 :30



12 :30

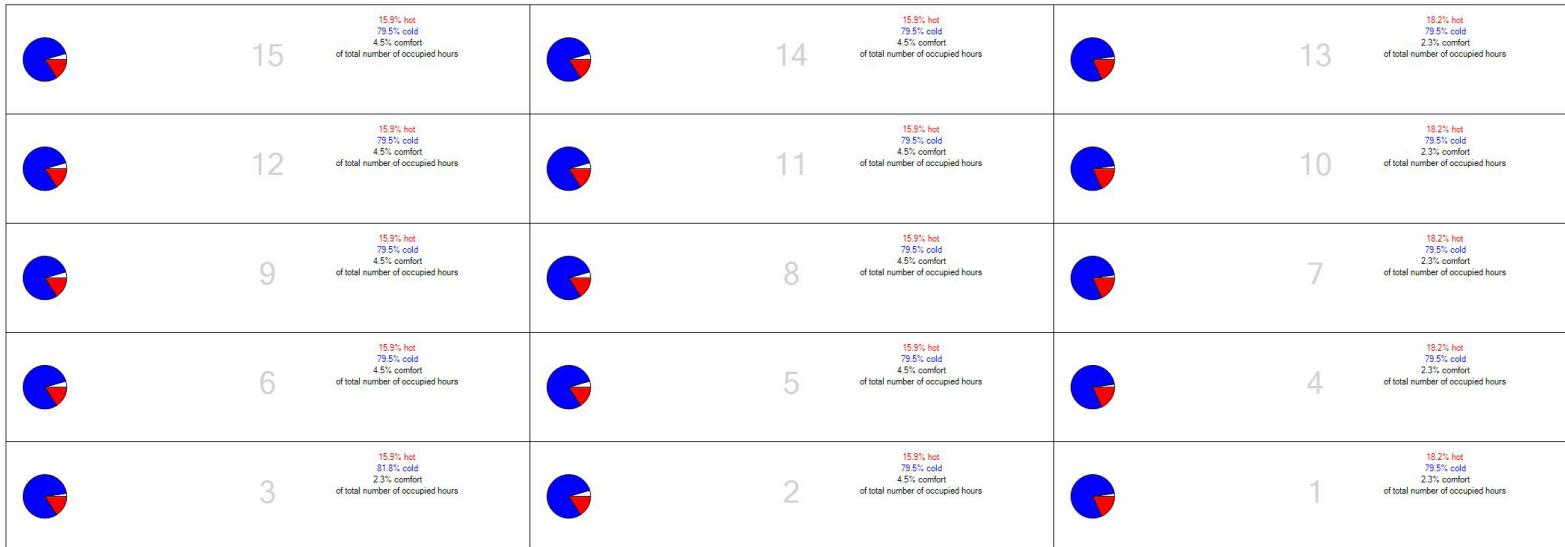


18 :30

March

CoolVent Thermal Comfort Results USA_PA_Philadelphia.Intl.AP.724080_TMY3

Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.

Blue represents the percent of total occupied hours that a given zone is too cold.

Humidity concerns are not addressed in the pie charts.

June

CoolVent Thermal Comfort Results USA_PA_Philadelphia.Intl.AP.724080_TMY3

Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.

Blue represents the percent of total occupied hours that a given zone is too cold.

Humidity concerns are not addressed in the pie charts.

September

CoolVent Thermal Comfort Results

USA_PA_Philadelphia.Intl.AP.724080_TMY3

Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.
Blue represents the percent of total occupied hours that a given zone is too cold.
Humidity concerns are not addressed in the pie charts.

December

CoolVent Thermal Comfort Results

USA_PA_Philadelphia.Intl.AP.724080_TMY3

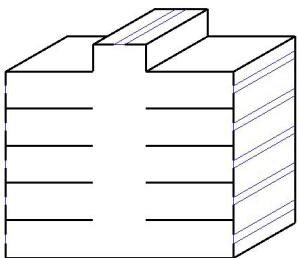
Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.
Blue represents the percent of total occupied hours that a given zone is too cold.
Humidity concerns are not addressed in the pie charts.

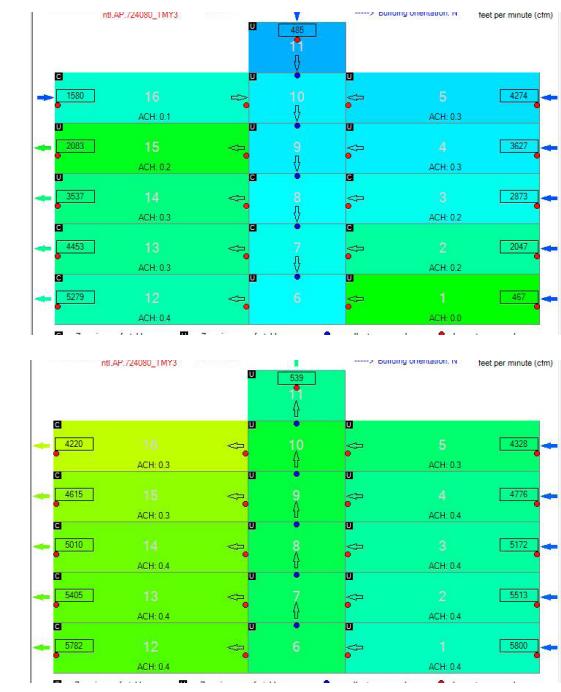
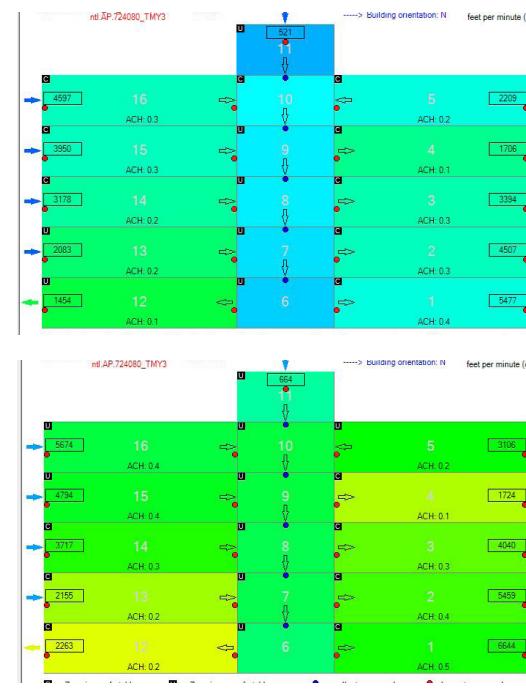
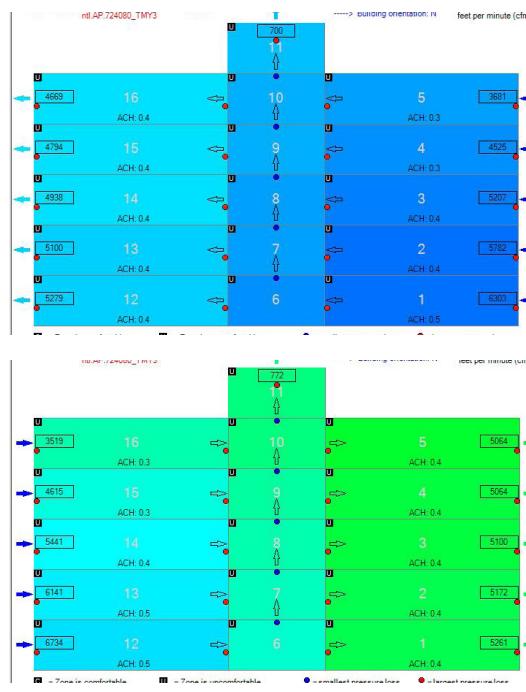
Design Proposal 1



Central Atrium

March and december is probably the most coldest months during winter and spring. Therefore, I picked up two months to compare with Meyerson Hall design. By using Central Atrium design, the cold decreases from 79.5% to 20.5%, and comfort increases from 2.3% comfort to 72.7% comfort during march. In december, the cold was 75% and the comfort is 29.5% with Meyerson Hall design. However, this new central atrium design's % of cold decreases to 25%, and comfort ups to 75%. Therefore this design proposal allows more radiation into the building.

March



6 :30

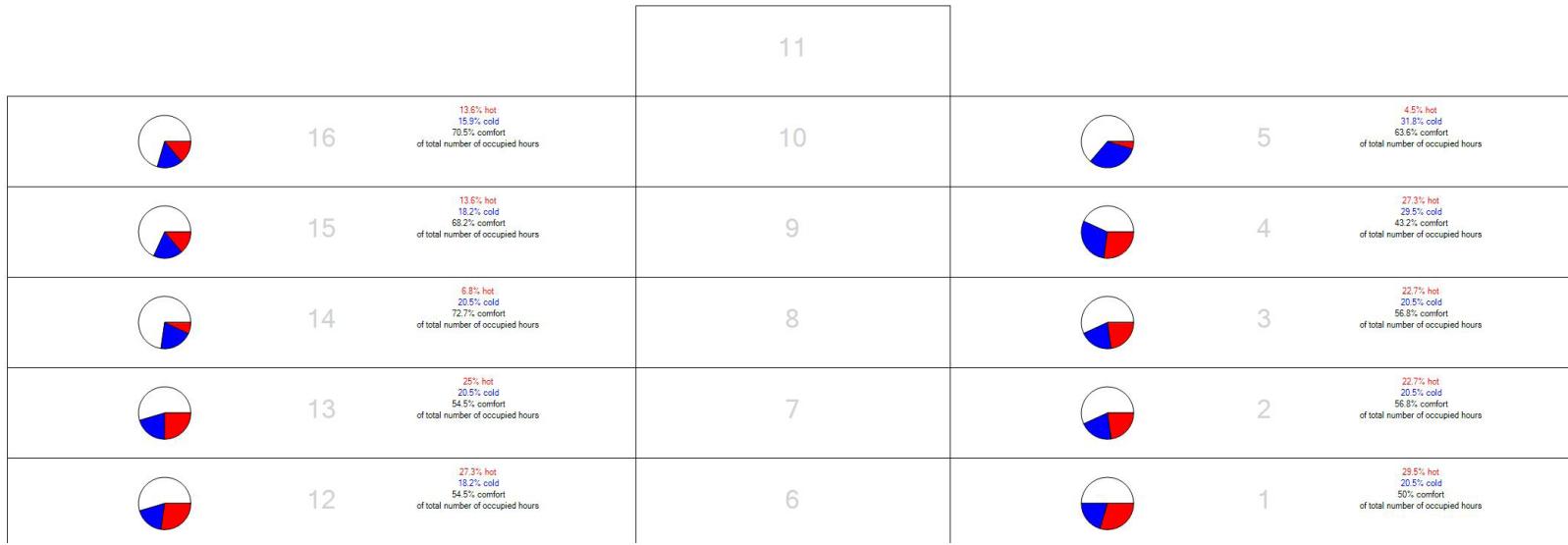
12 :30

18 :30

March

CoolVent Thermal Comfort Results USA_PA_Philadelphia.Intl.AP.724080_TMY3

Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hour that a given zone is too hot.
Blue represents the percent of total occupied hour that a given zone is too cold.
Humidity concerns are not addressed in the pie charts.

December

CoolVent Thermal Comfort Results USA_PA_Philadelphia.Intl.AP.724080_TMY3

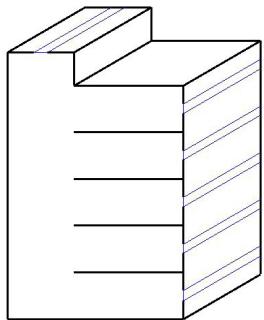
Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.
Blue represents the percent of total occupied hours that a given zone is too cold.
Humidity concerns are not addressed in the pie charts.

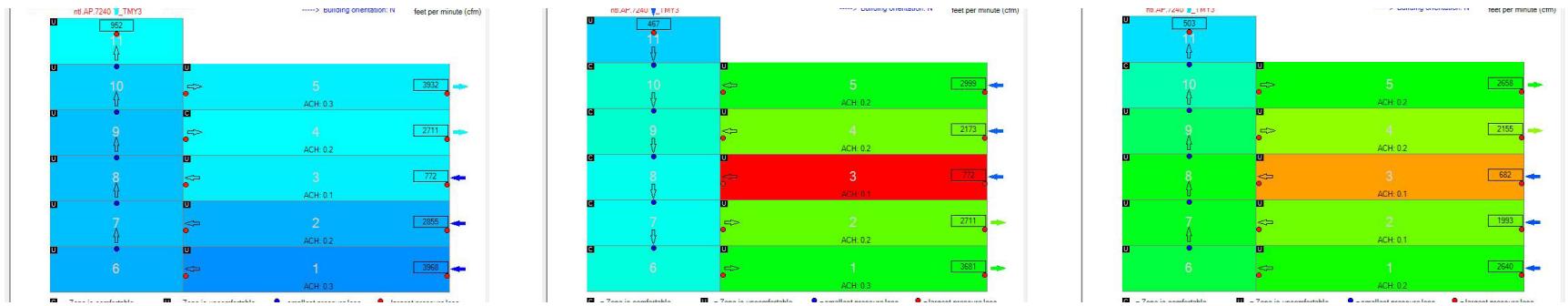
Design Proposal 2



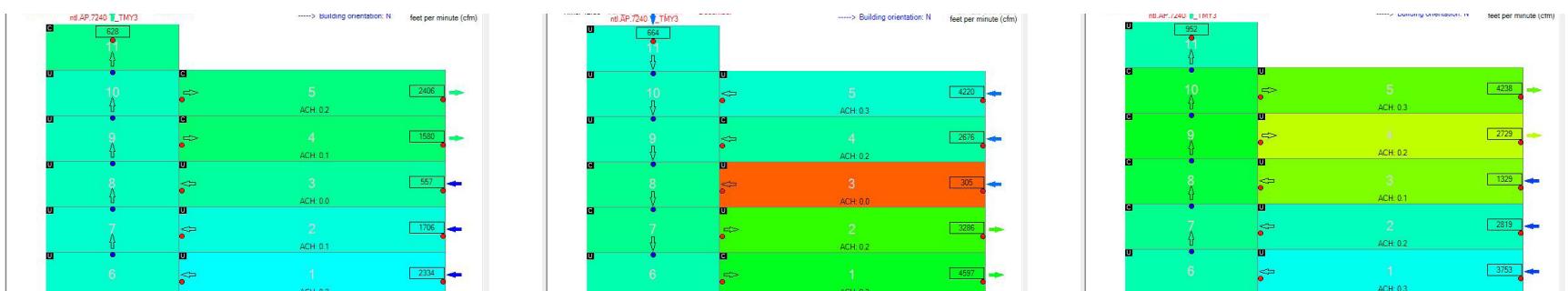
Chimney

This second new design proposal has chimney form. The original design of Meyerson Hall's % of cold is 79.5%, and comfort is 2.3% in March. However, this second proposal results 52.3% of hot and 25% of comfort. Moreover, the average % of cold decreases from 70.5% to 25%, and comfort increases from 29.5% to 59.1% during december with this new design compare to Meyerson Hall. Therefore, this second building design proposal with chimeney allows also more radiation into the building.

March



December



6 :30

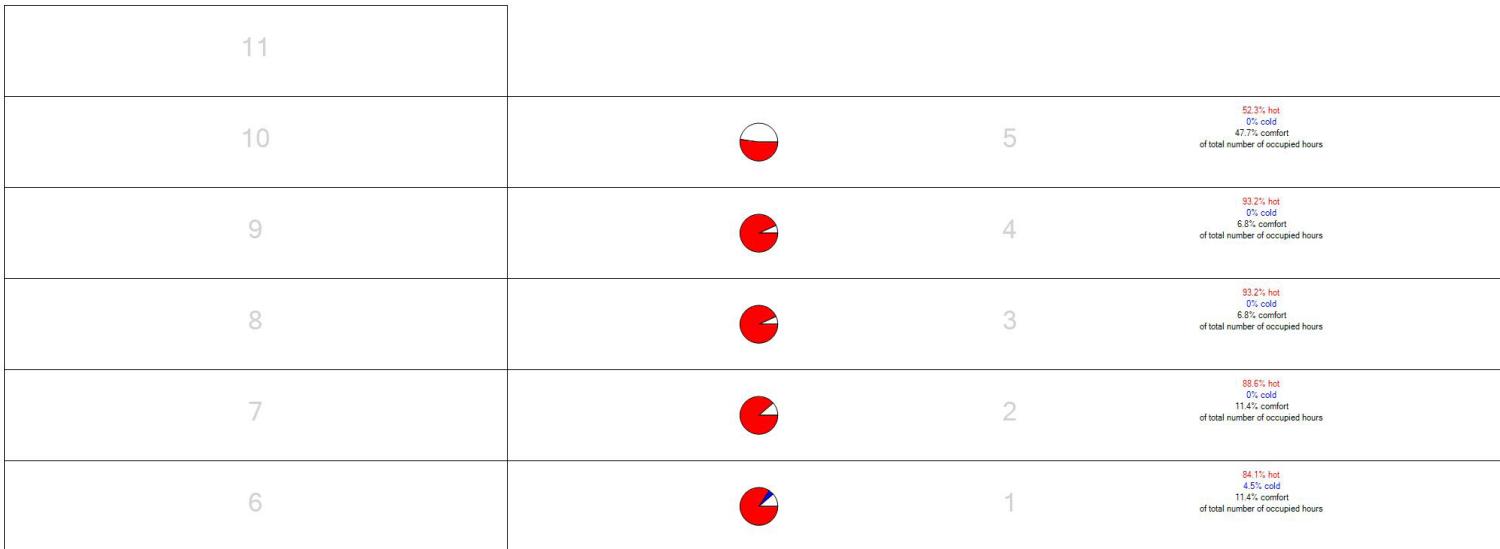
12 :30

18 :30

March

CoolVent Thermal Comfort Results USA_PA_Philadelphia.Intl.AP.724080_TMY3

Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.

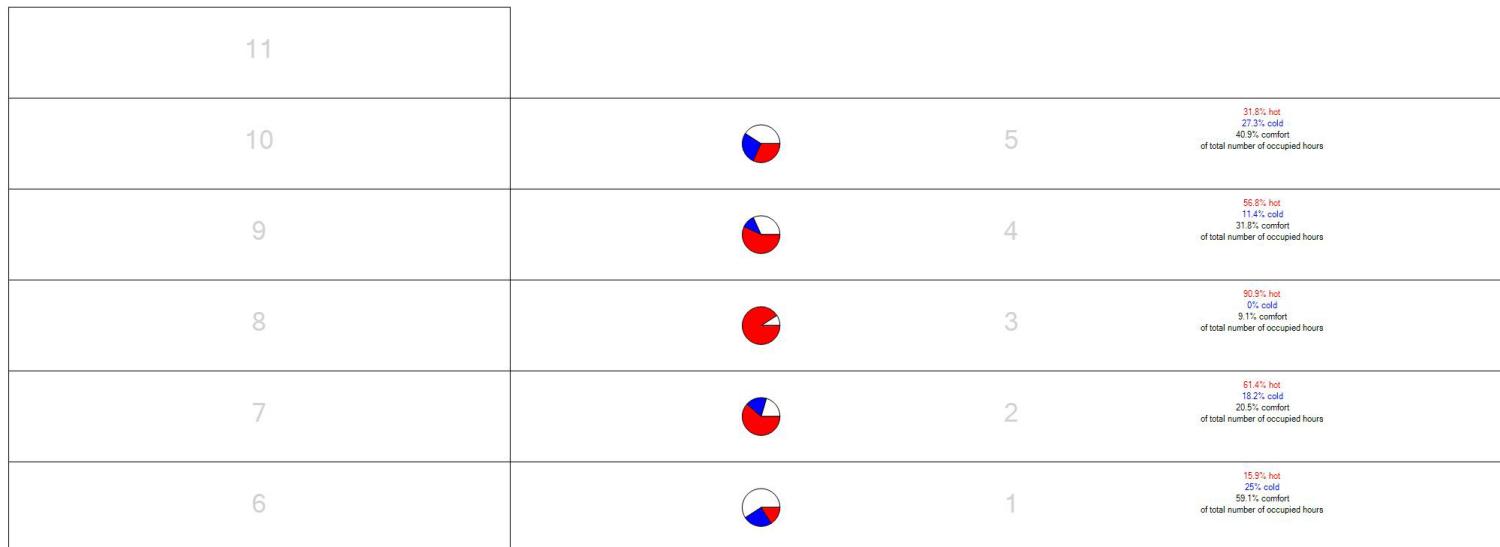
Blue represents the percent of total occupied hours that a given zone is too cold.

Humidity concerns are not addressed in the pie charts.

December

CoolVent Thermal Comfort Results USA_PA_Philadelphia.Intl.AP.724080_TMY3

Temperature Pie Charts



The pie charts represent temperature concerns for comfort in non-atrium zones of the building.

Red represents the percent of total occupied hours that a given zone is too hot.

Blue represents the percent of total occupied hours that a given zone is too cold.

Humidity concerns are not addressed in the pie charts.