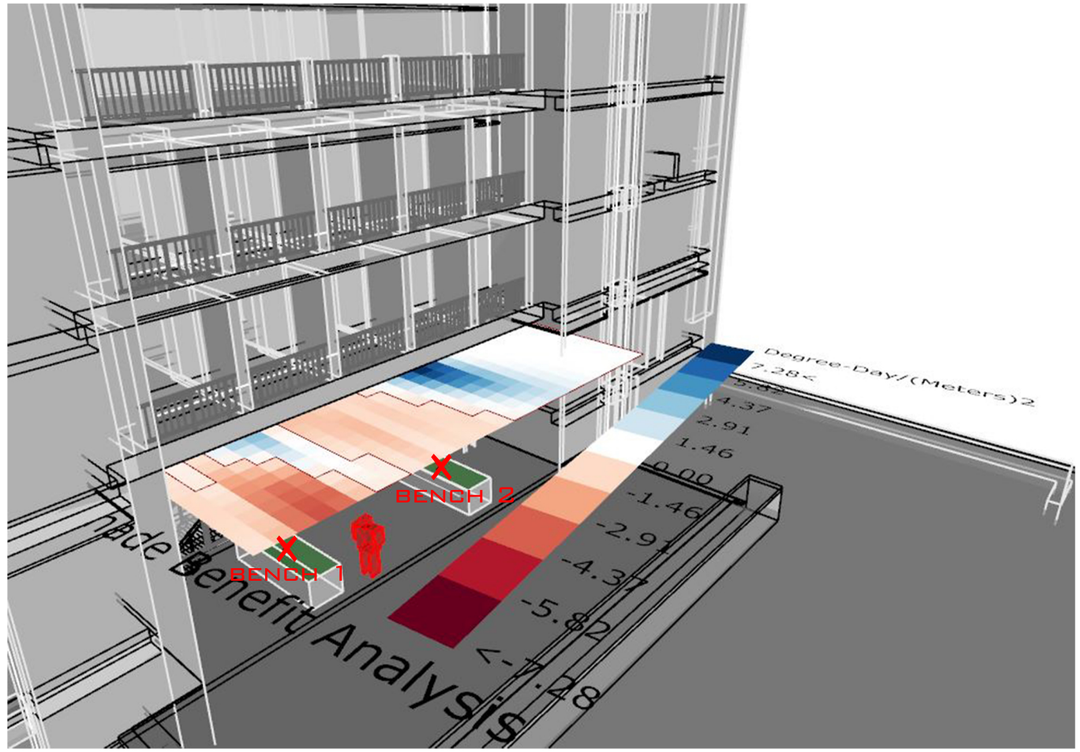
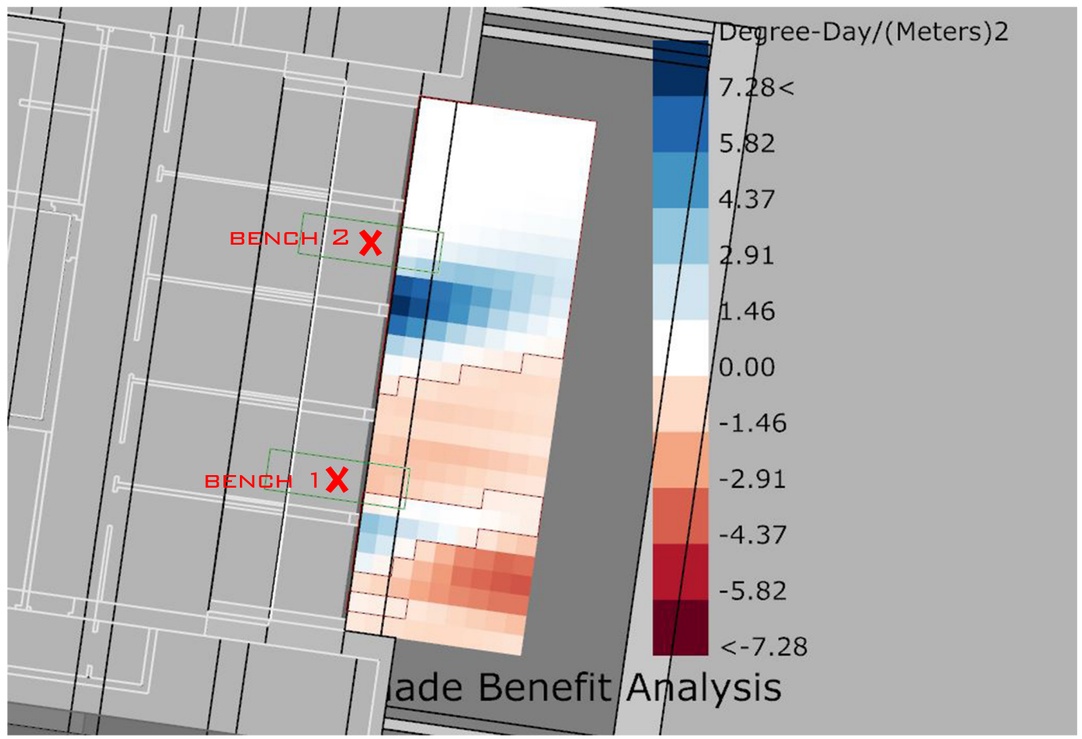
MEYERSON HALL SHADING SYSTEM

JUAN D. GUARIN

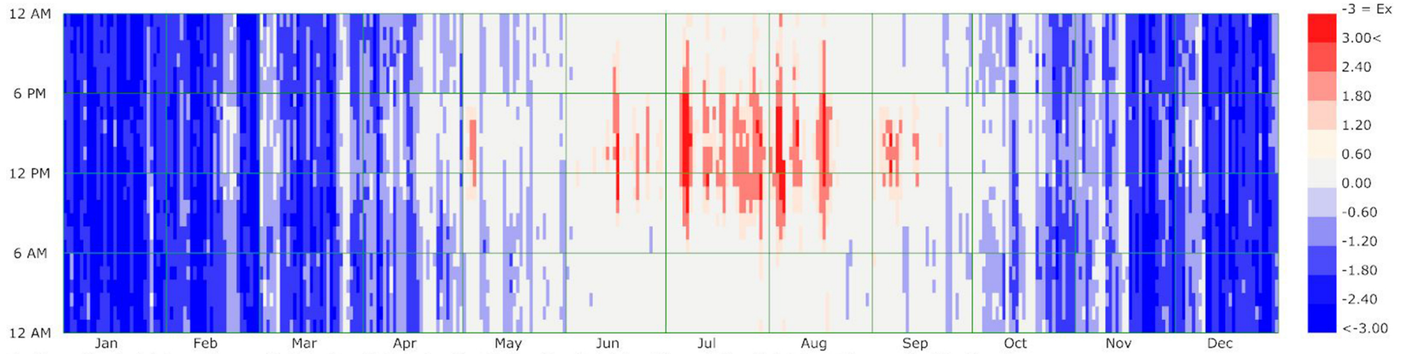
SHADING CALCULATION WITHOUT CONTEXT

SHADING PERCENT TO KEEP: 60% / BASE COMFORT TEMPERATURE: 20°



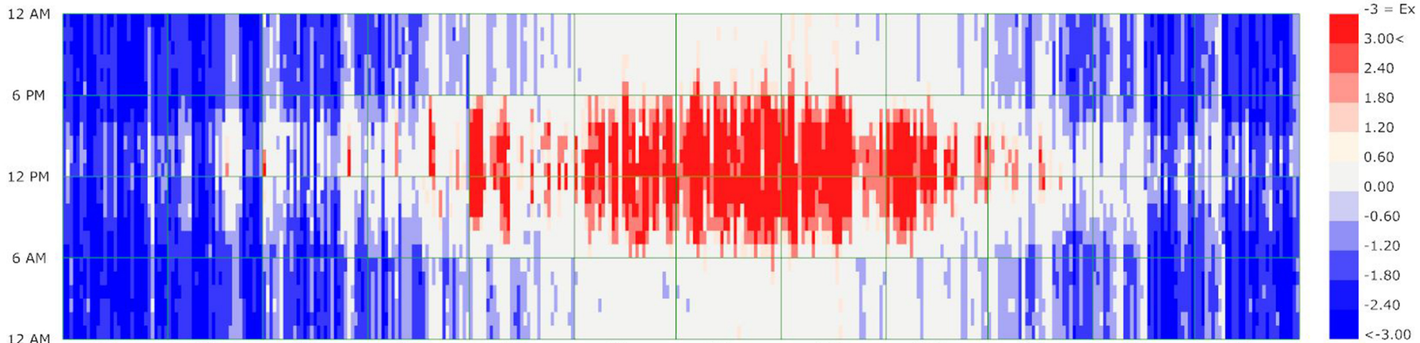


FULLY SHADED - COMFORT: 41.27%



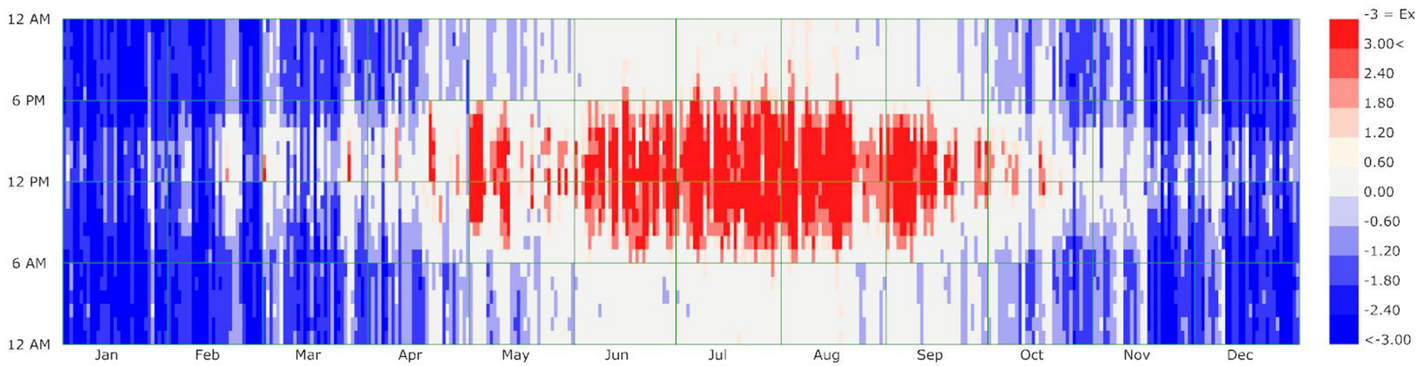
Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

BENCH 1 WITH RADIATION - COMFORT: 37.34%



Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

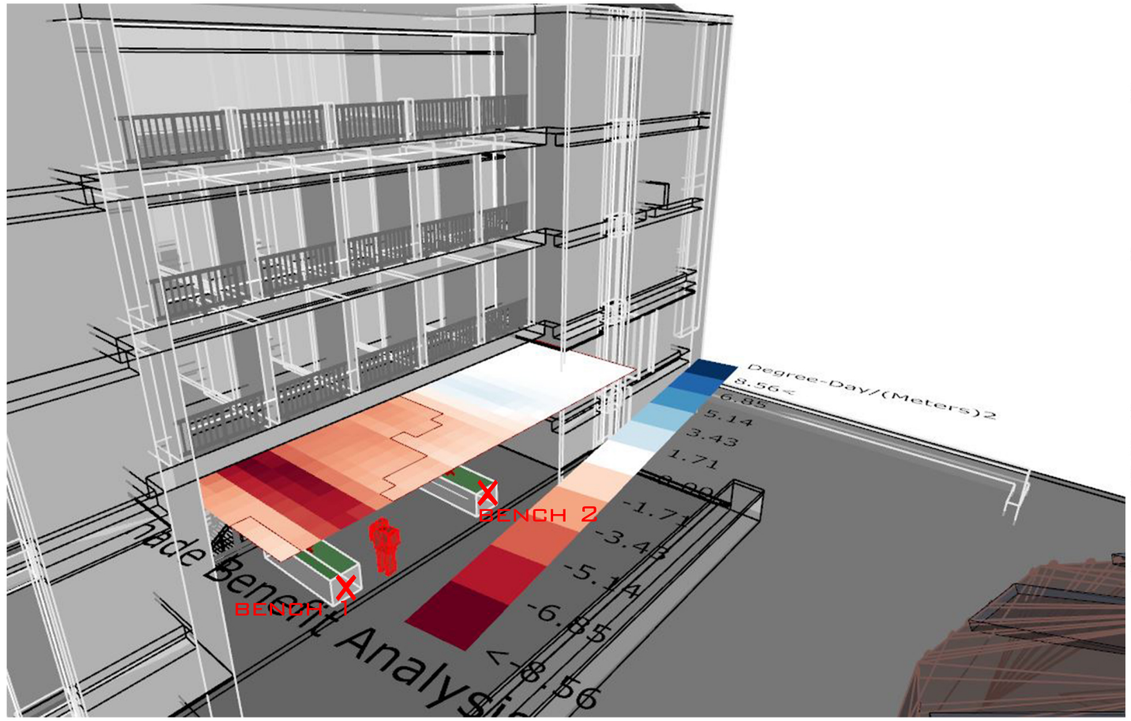
BENCH 2 WITH RADIATION - COMFORT: 37.34%

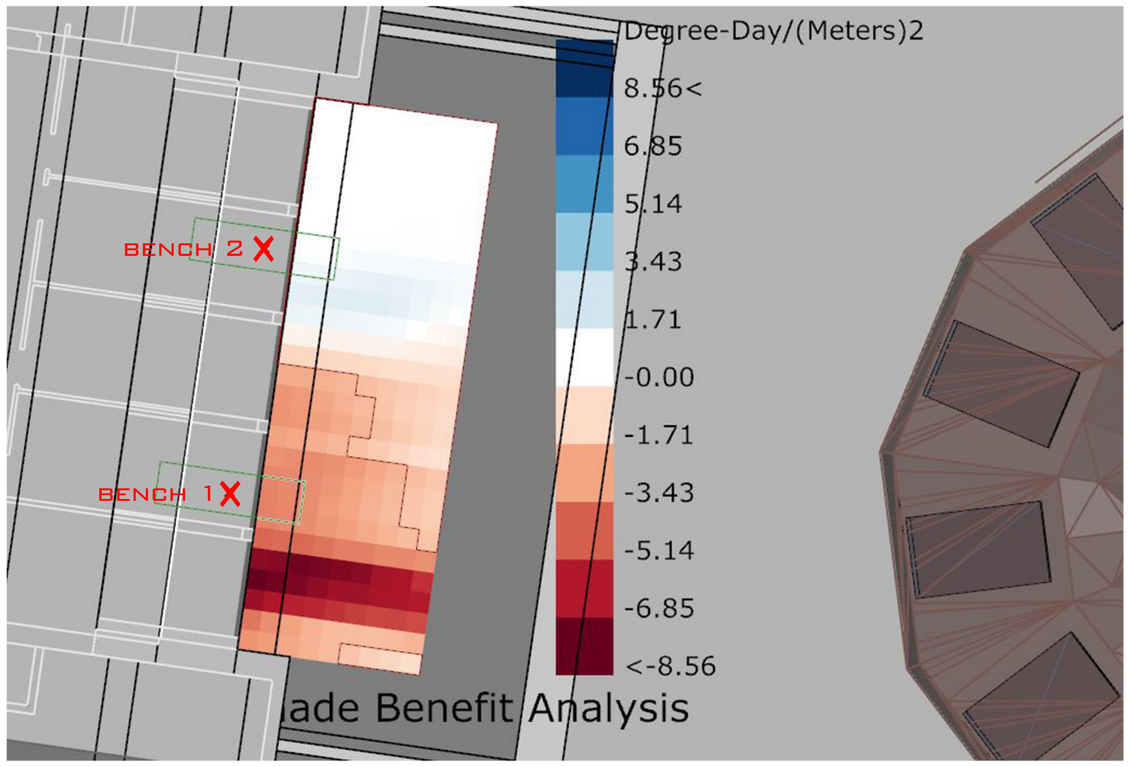


Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

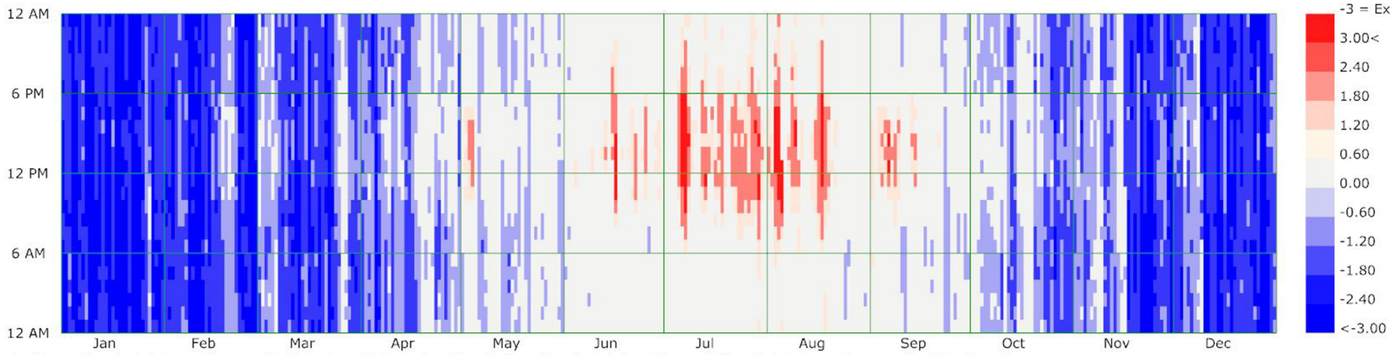
SHADING CALCULATION WITH MAYERSON HALL+FISHER ARTS LIBRARY

SHADING PERCENT TO KEEP: 60% / BASE COMFORT TEMPERATURE: 20°



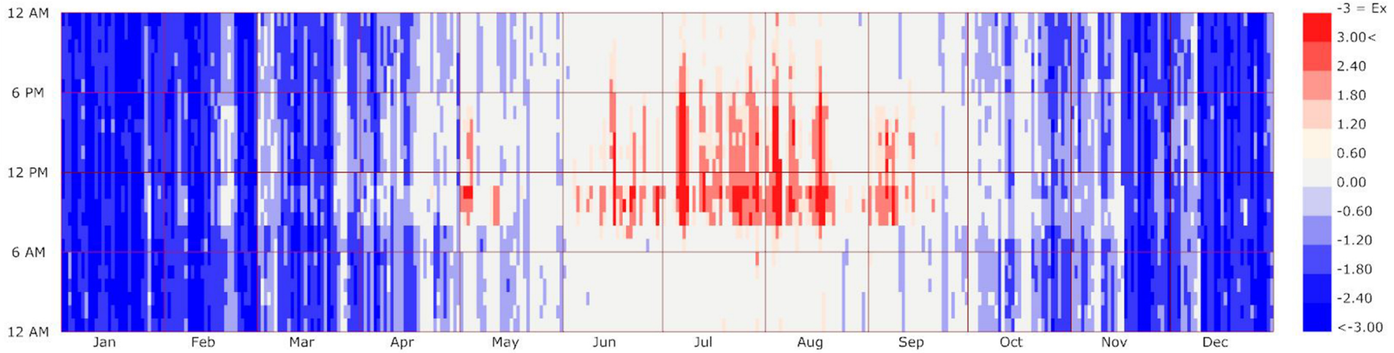


FULLY SHADED - COMFORT: 41.27%



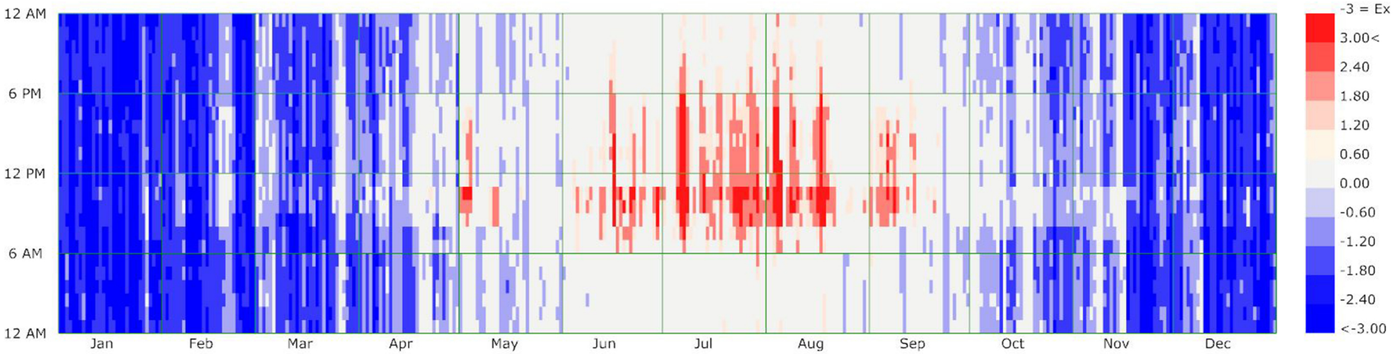
Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

BENCH 1 WITH SOLAR RADIATION - COMFORT: 39.85%



Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

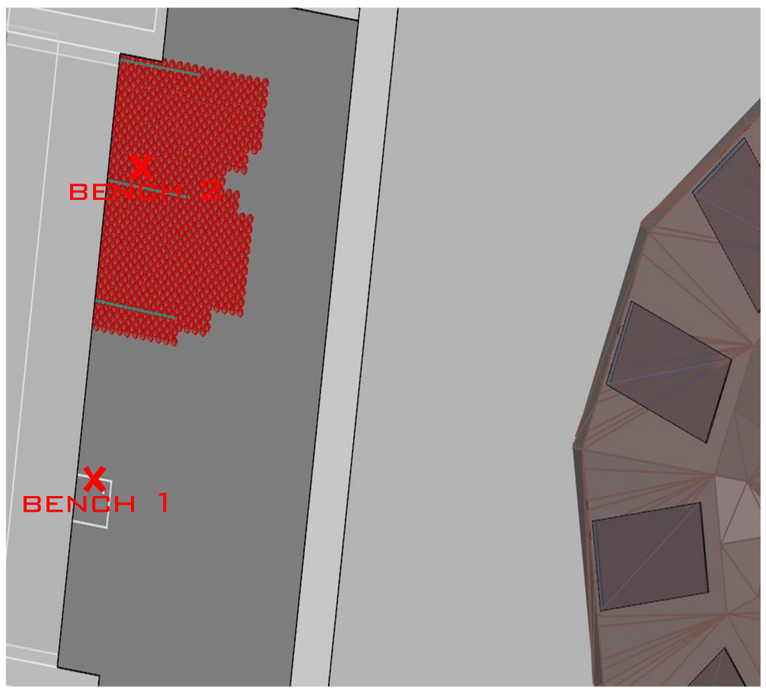
BENCH 2 WITH SOLAR RADIATION - COMFORT: 39.66%

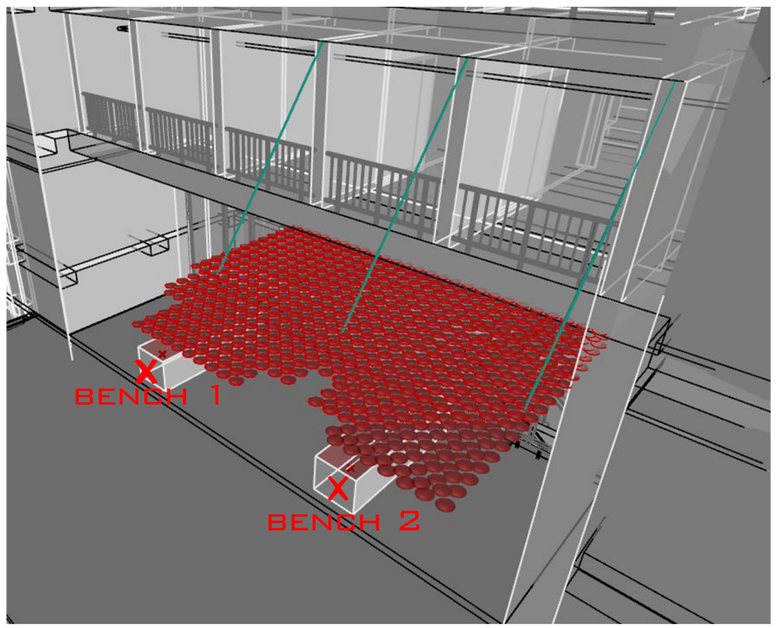


Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

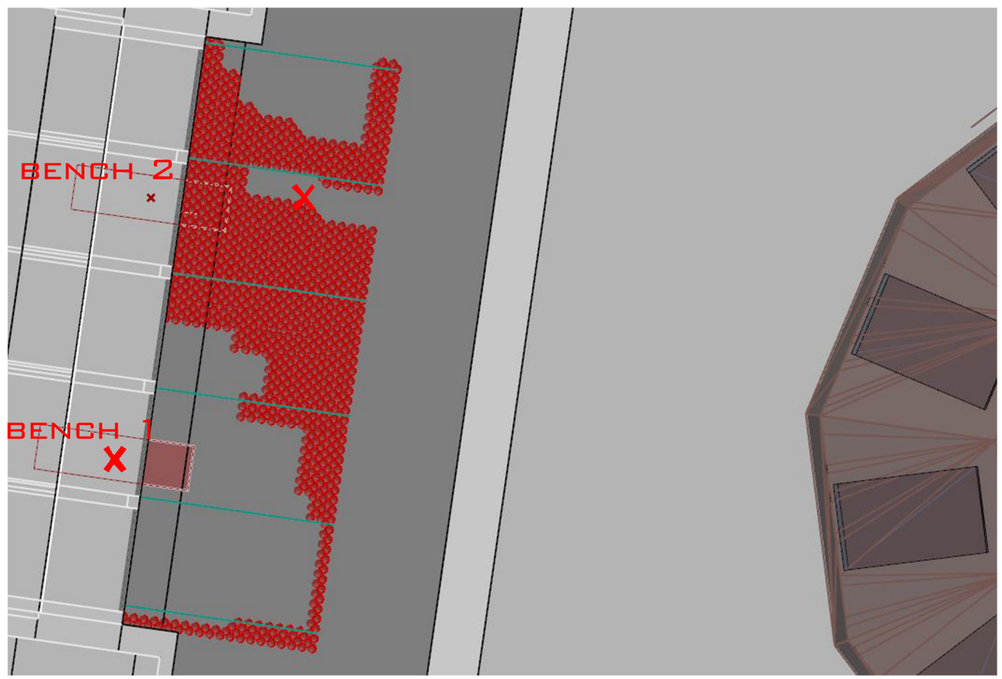
SHADING SYSTEM DESIGN

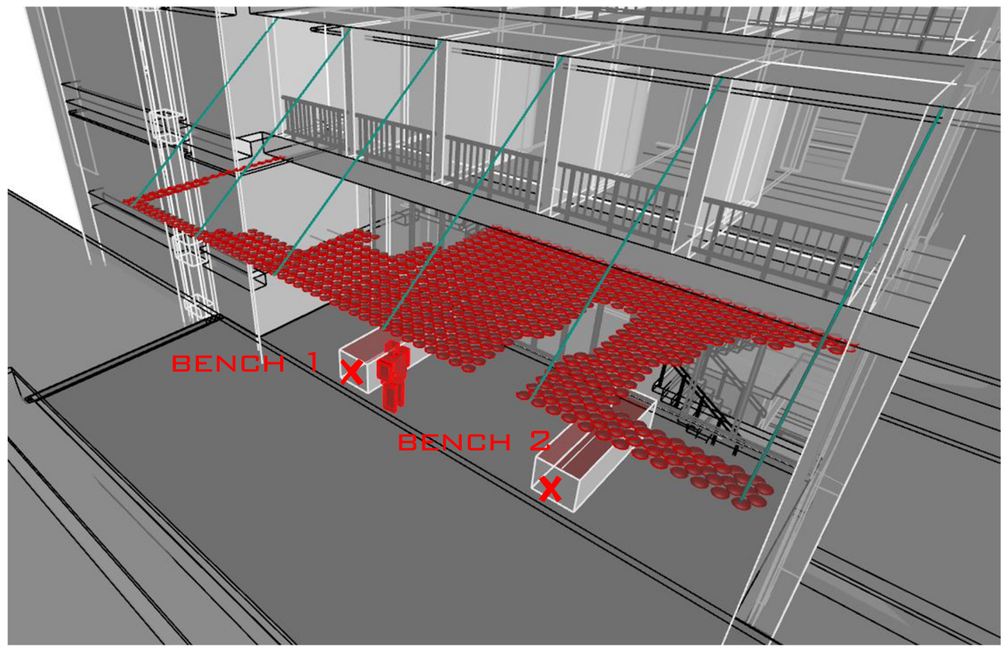
SHADING PERCENT TO KEEP: 40%





SHADING PERCENT TO KEEP: 60%

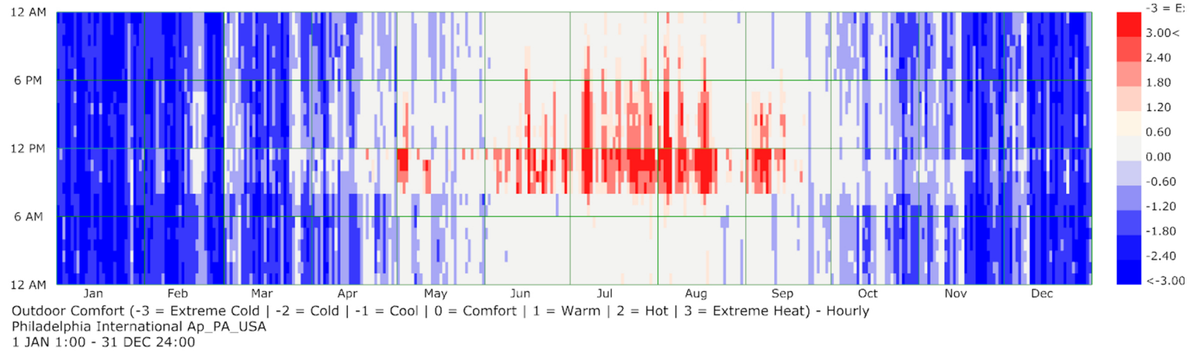




SHADING SYSTEM DESIGN CONCLUSIONS

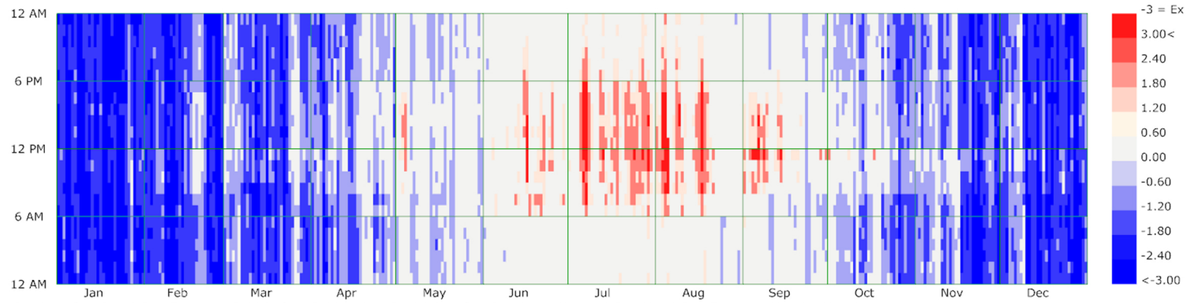
SHADING PERCENT TO KEEP: 40%

BENCH 1 - COMFORT: 39.86%



Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

BENCH 2 - COMFORT: 41.11%



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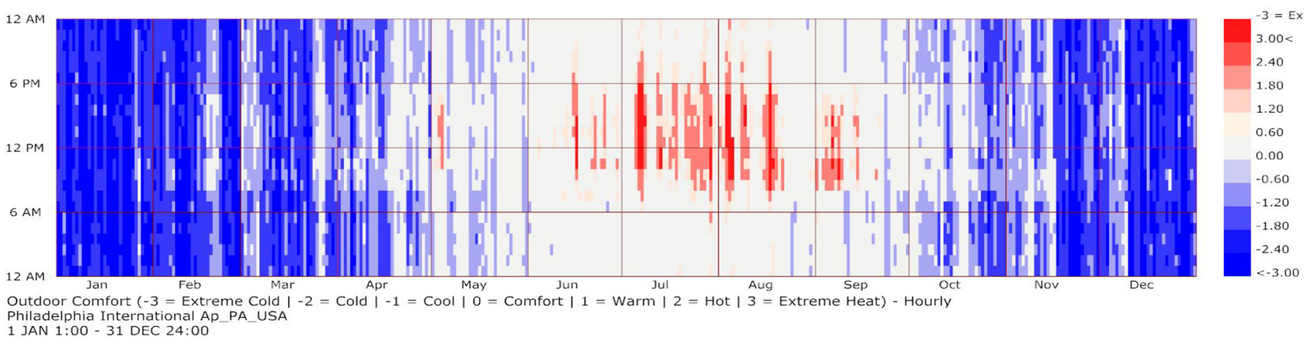
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

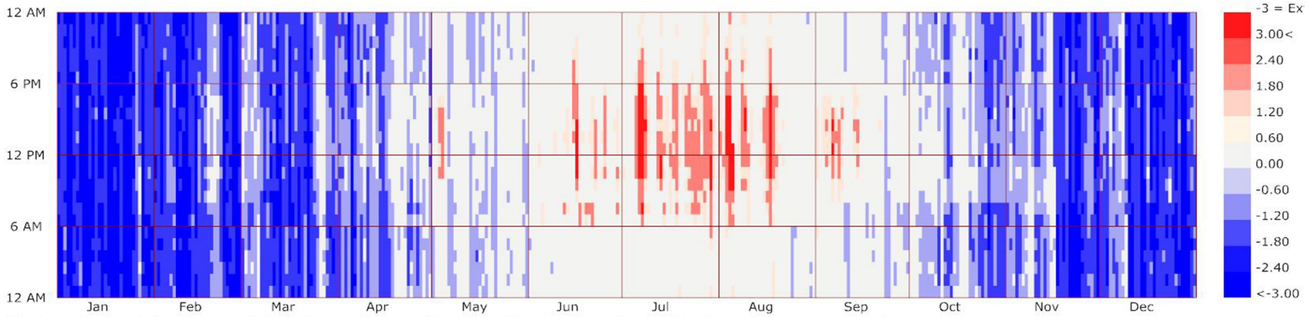
SHADING PERCENT TO KEEP: 60%

BENCH 1 - COMFORT: 41.17%



Outdoor Comfort (-3 = Extreme Cold | -2 = Cold | -1 = Cool | 0 = Comfort | 1 = Warm | 2 = Hot | 3 = Extreme Heat) - Hourly
Philadelphia International Ap_PA_USA
1 JAN 1:00 - 31 DEC 24:00

BENCH 2 - COMFORT: 41.21%



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Keeping 60% of the shading system will generate more comfort in Mayerson Hall's plaza especially in bench #1. Comfort results when keeping shading percent to 40% in bench #1 are considerably low making it an unefficient solution for achieving a proper shading system