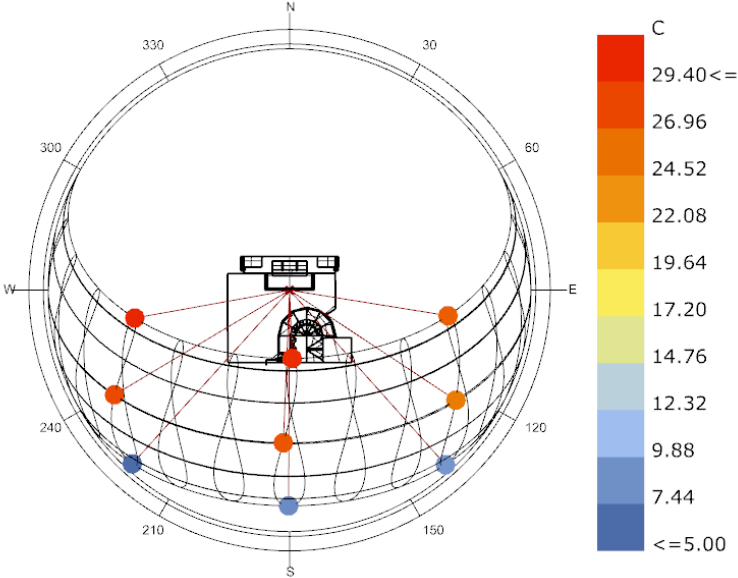
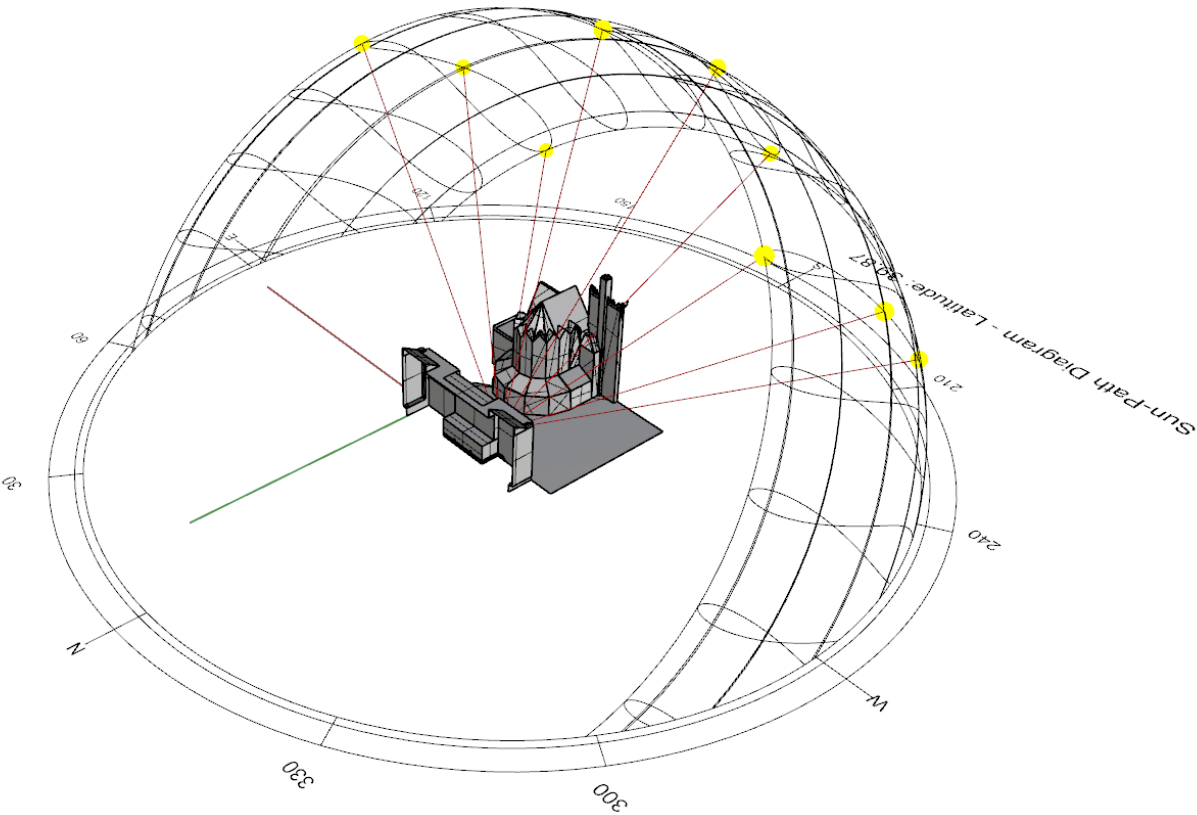


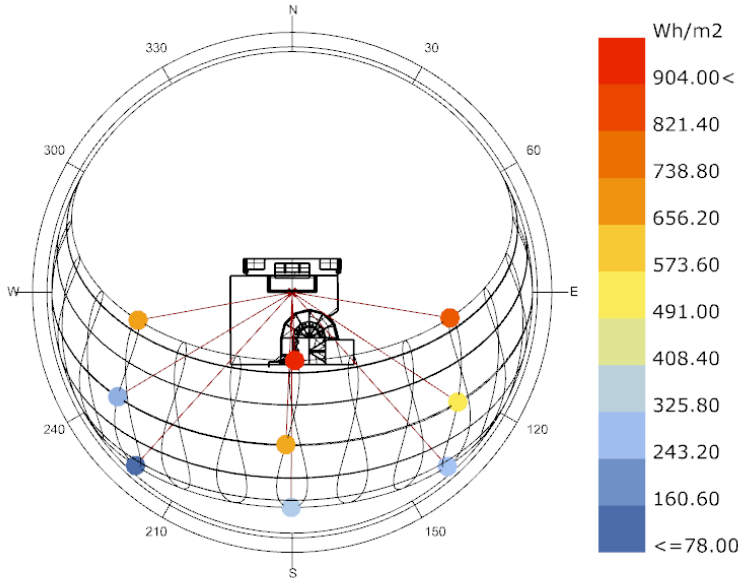
Meyerson hall

Shade benefit analysis

Philadelphia Sun-path

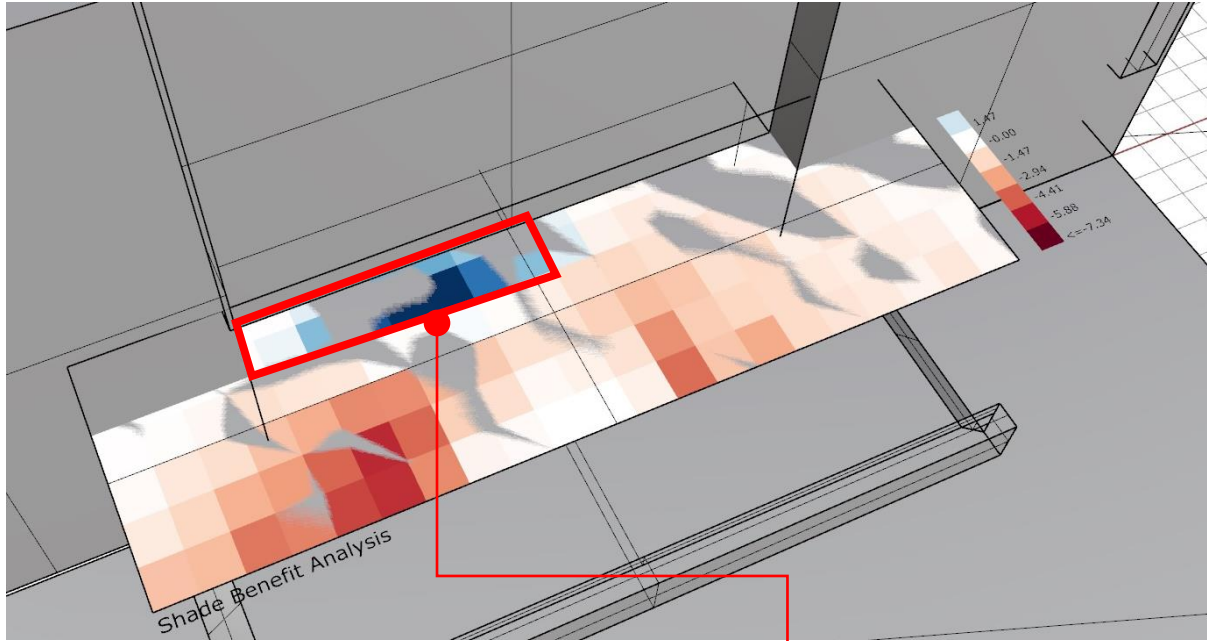


Sun-Path Diagram - Latitude: 39.87
Hourly Data: Dry Bulb Temperature (C)
Philadelphia International Ap_PA_USA

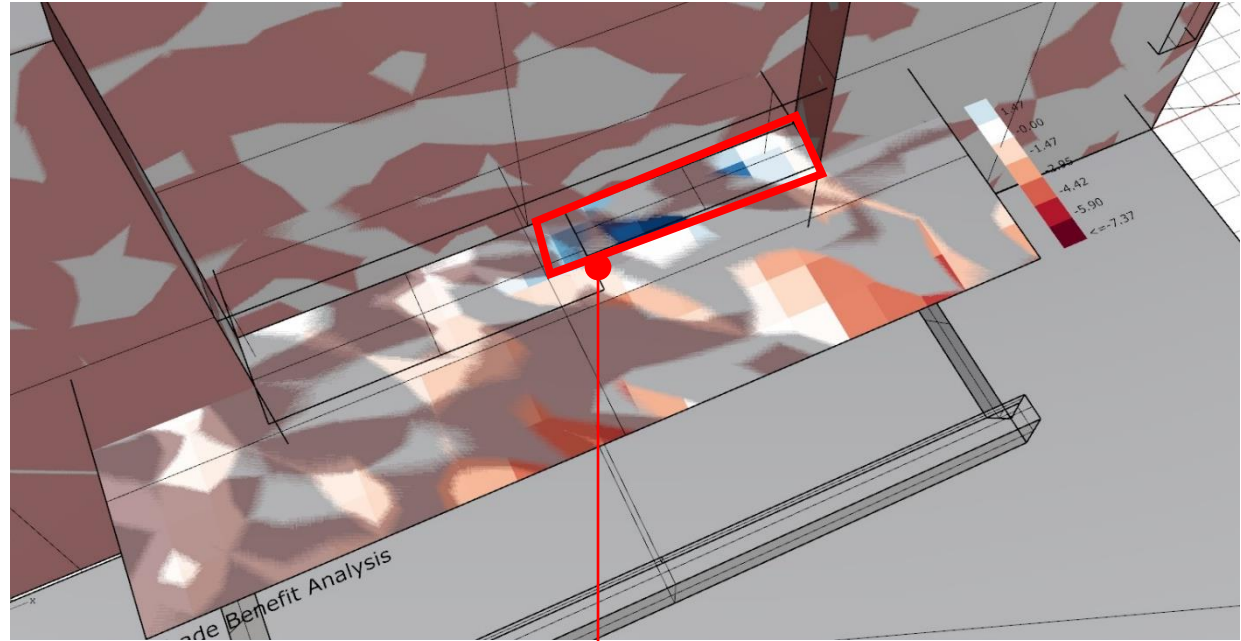


Sun-Path Diagram - Latitude: 39.87
Hourly Data: Global Horizontal Radiation (Wh/m2)
Philadelphia International Ap_PA_USA

Global horizontal radiation and dry bulb temperature

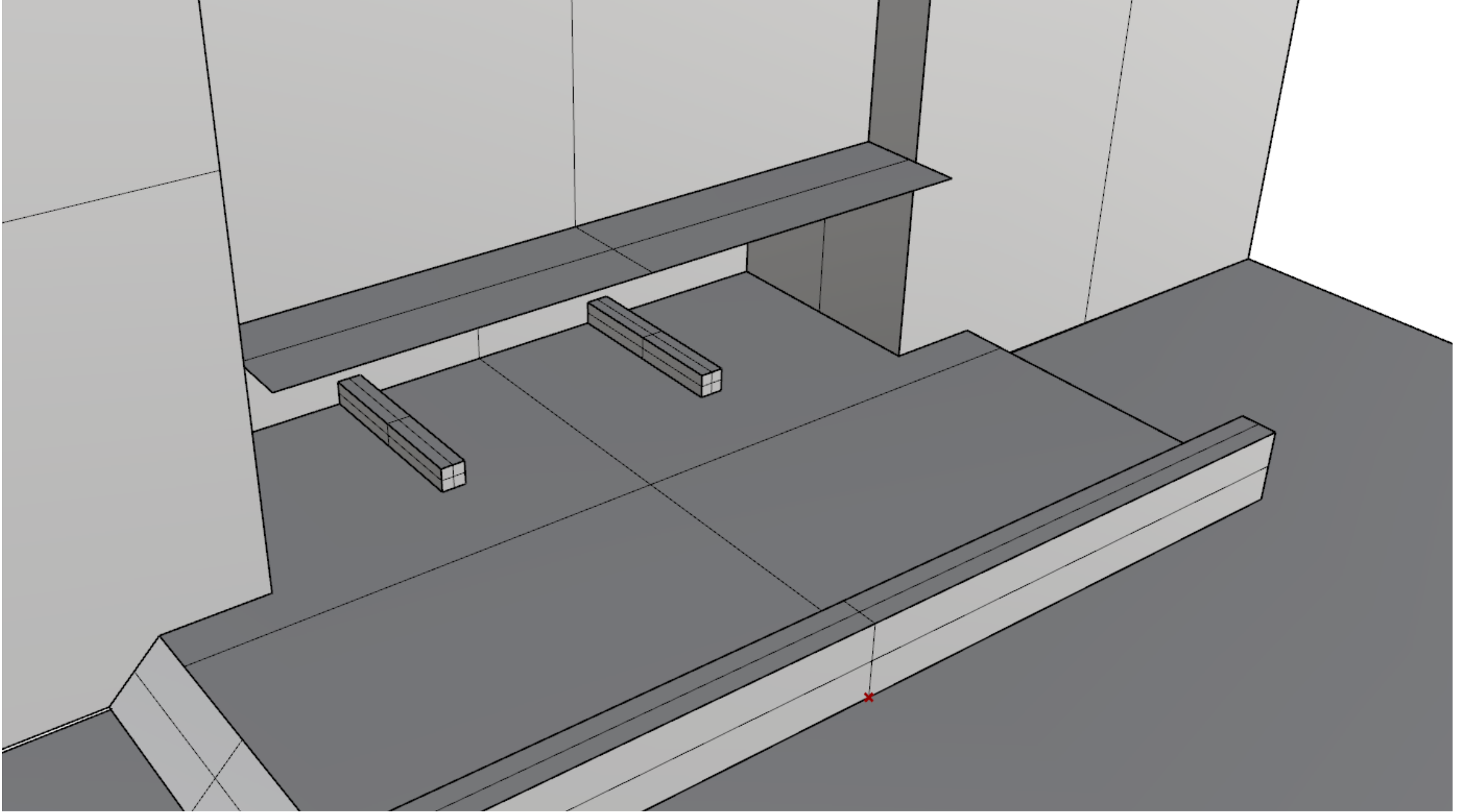


Bench-1

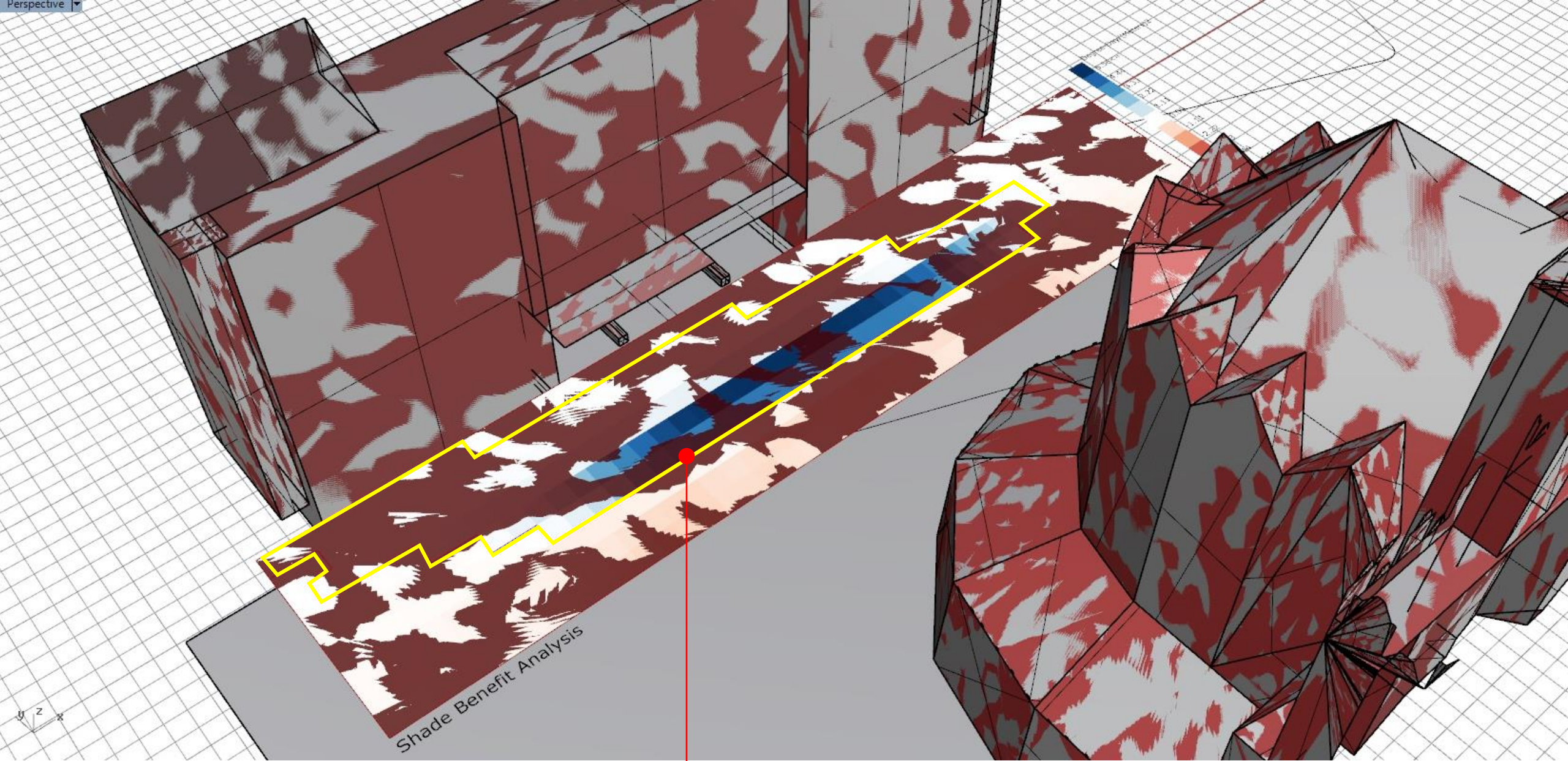


Bench-2

Optimum region for shading
(at 80% of the total area)

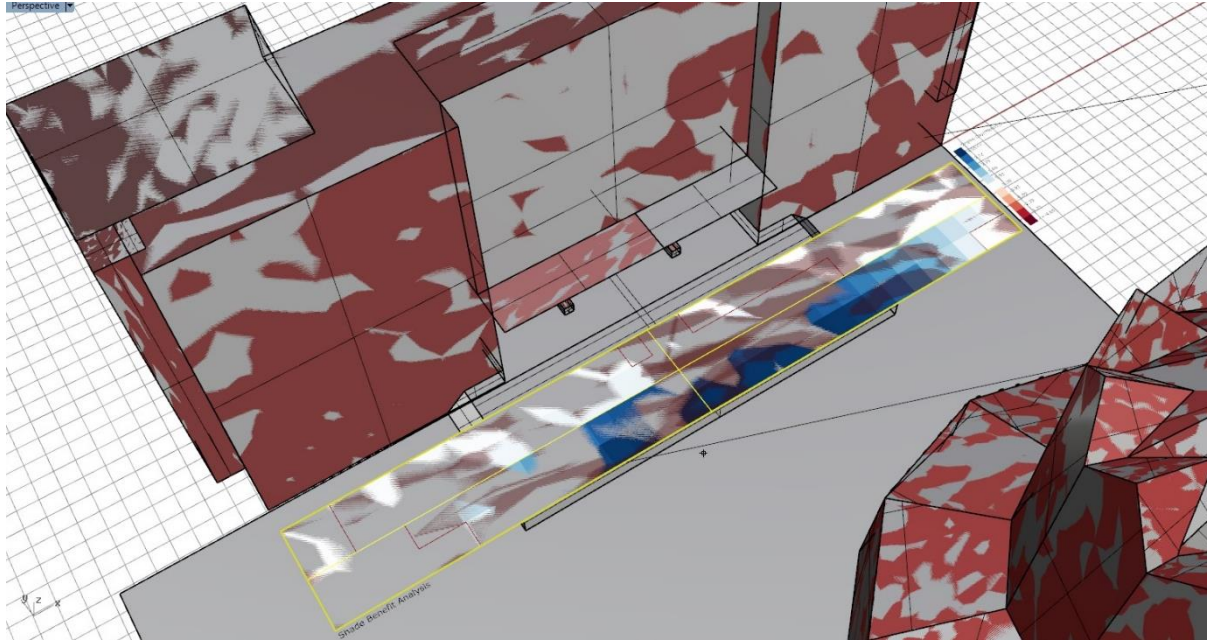


Shading for bench-1 and bench-2:
Final shade

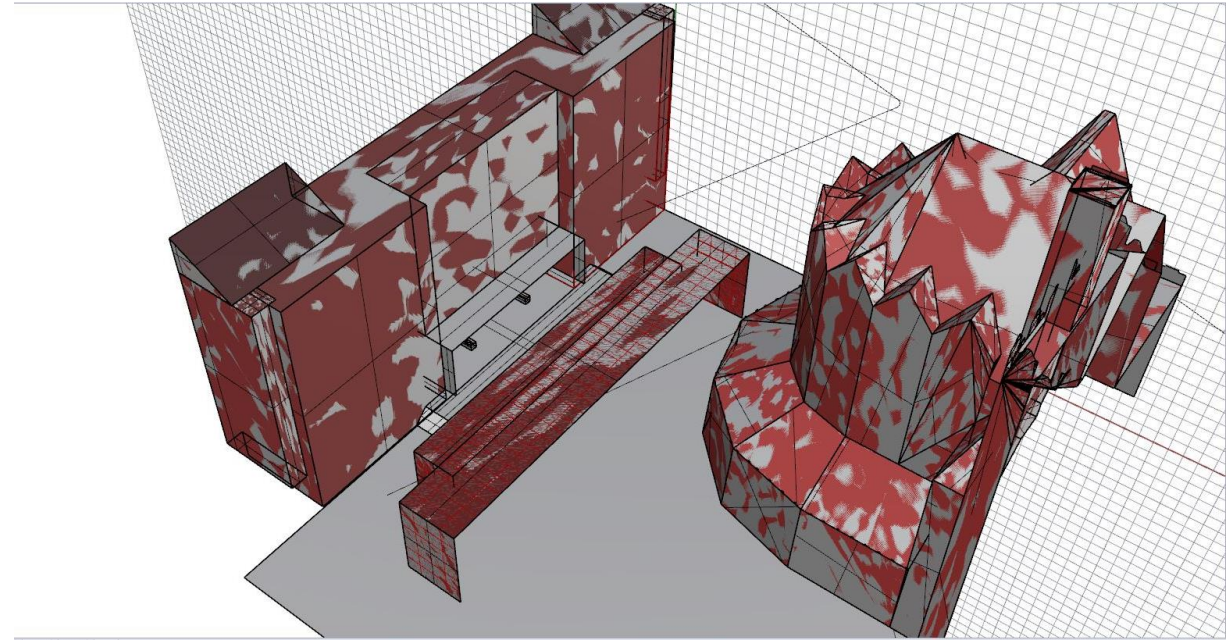


Optimum shade (at 80% of total) for bench 3

Shading for bench-3

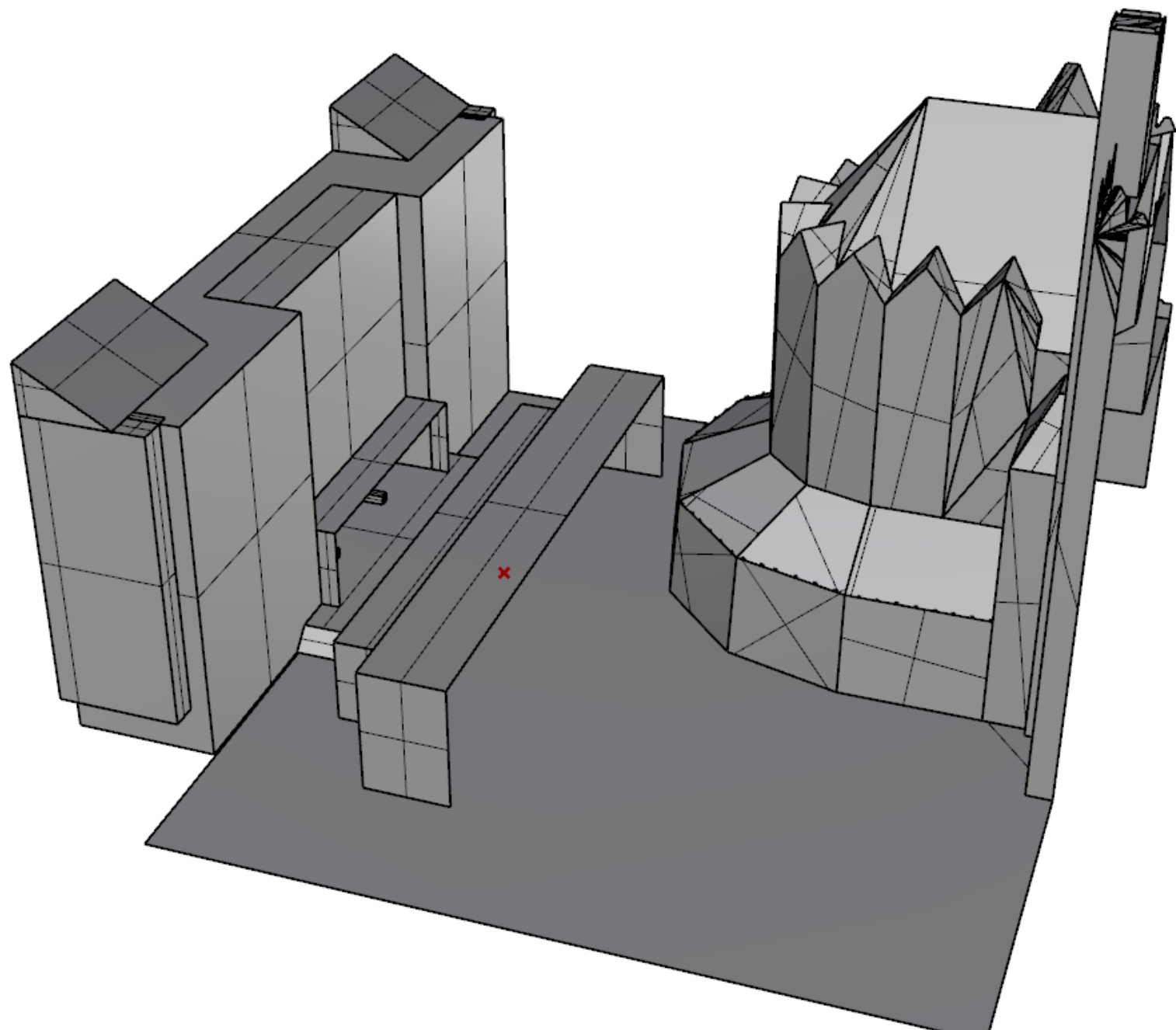


Total comfort achieved: 39%

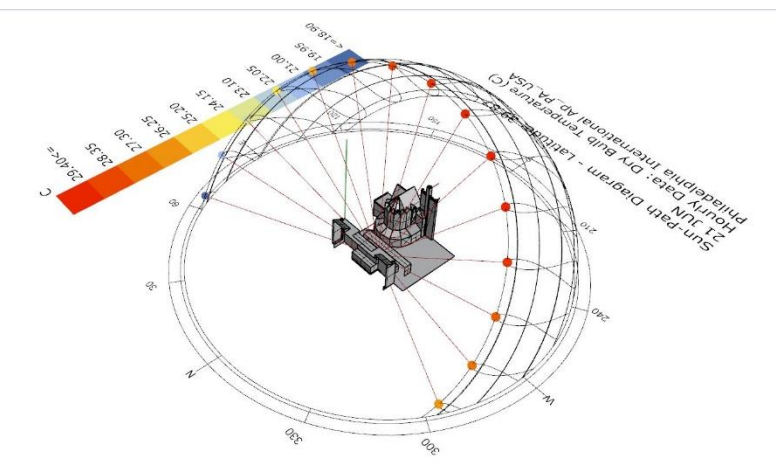
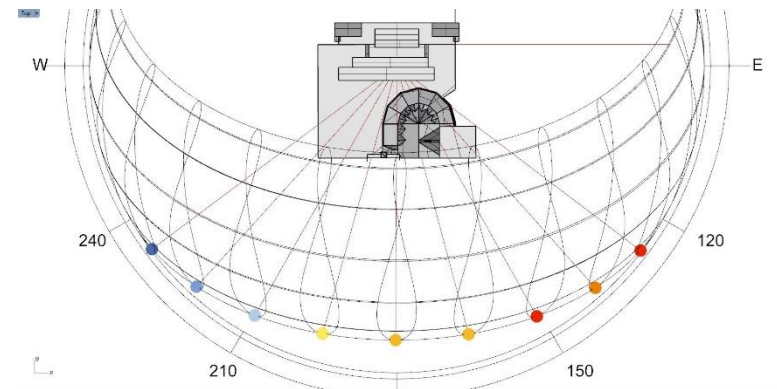
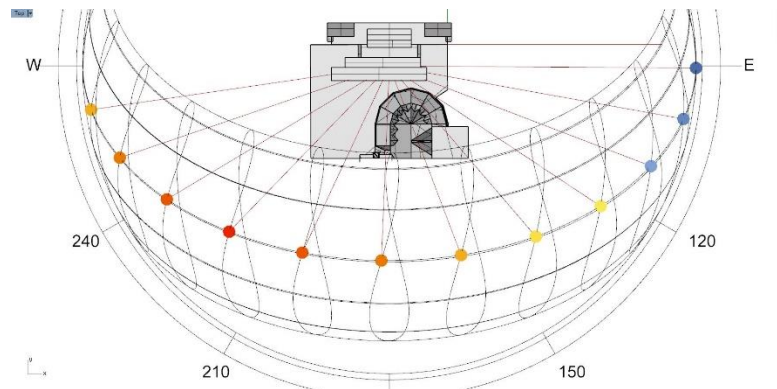
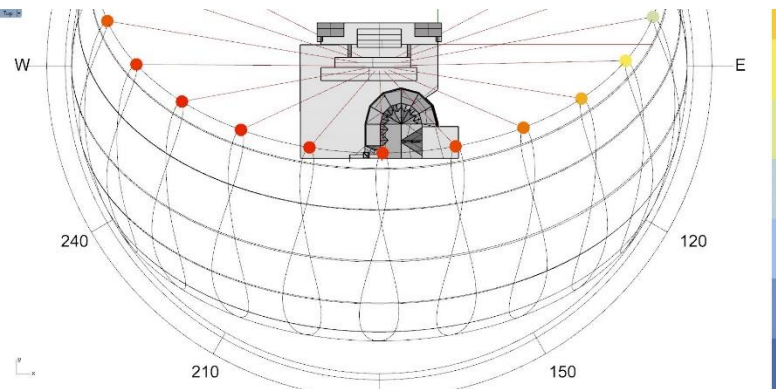


Total comfort achieved: 42.3%

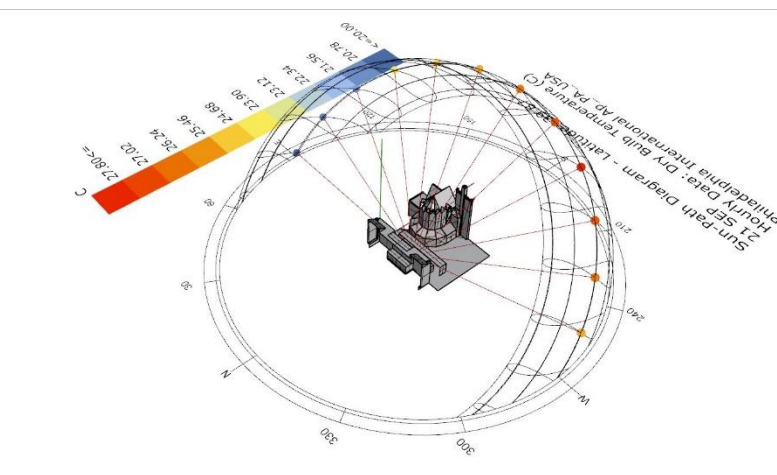
Shading for bench-3



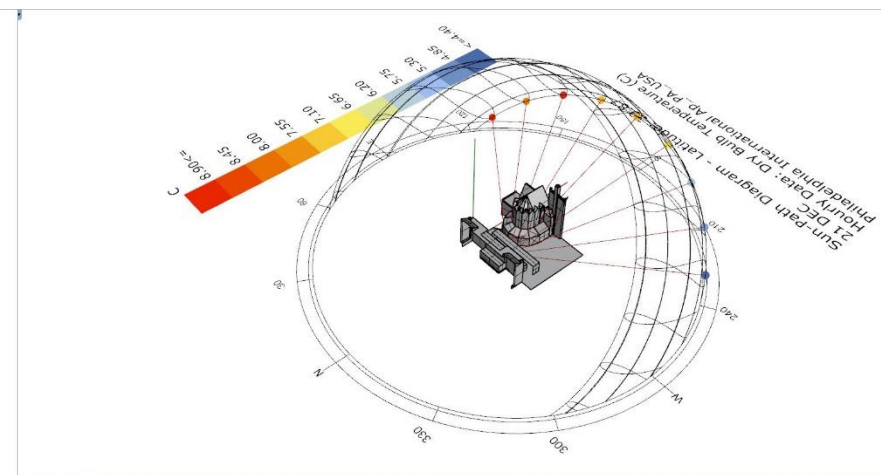
Final Shade. Comfort achieved: 42.3%



June



September



December

Sun-path with shade