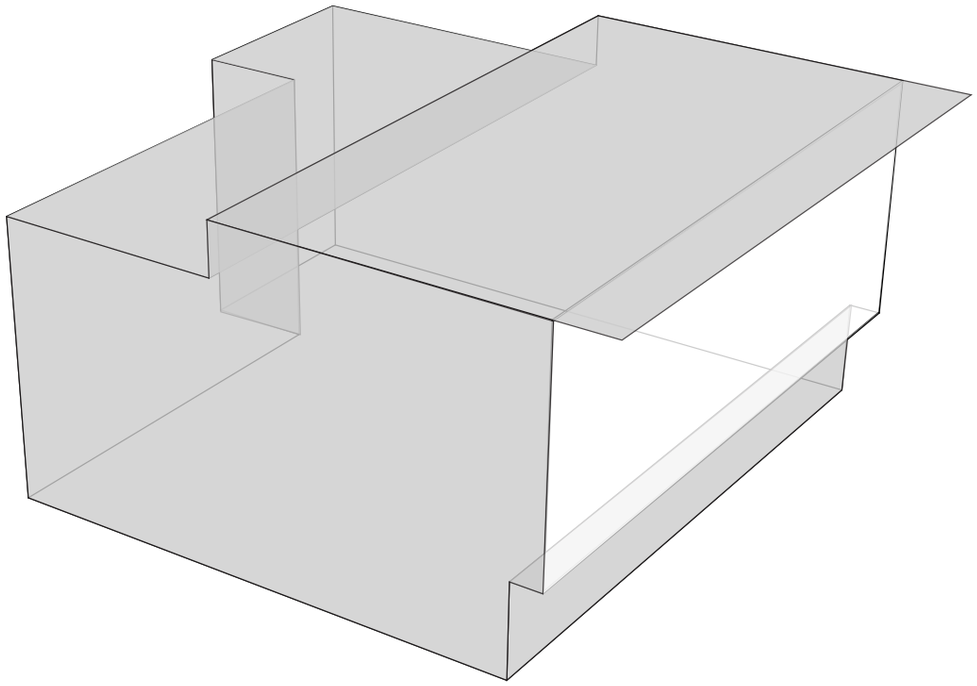
ENERGY SIMULATION

BASE CASE

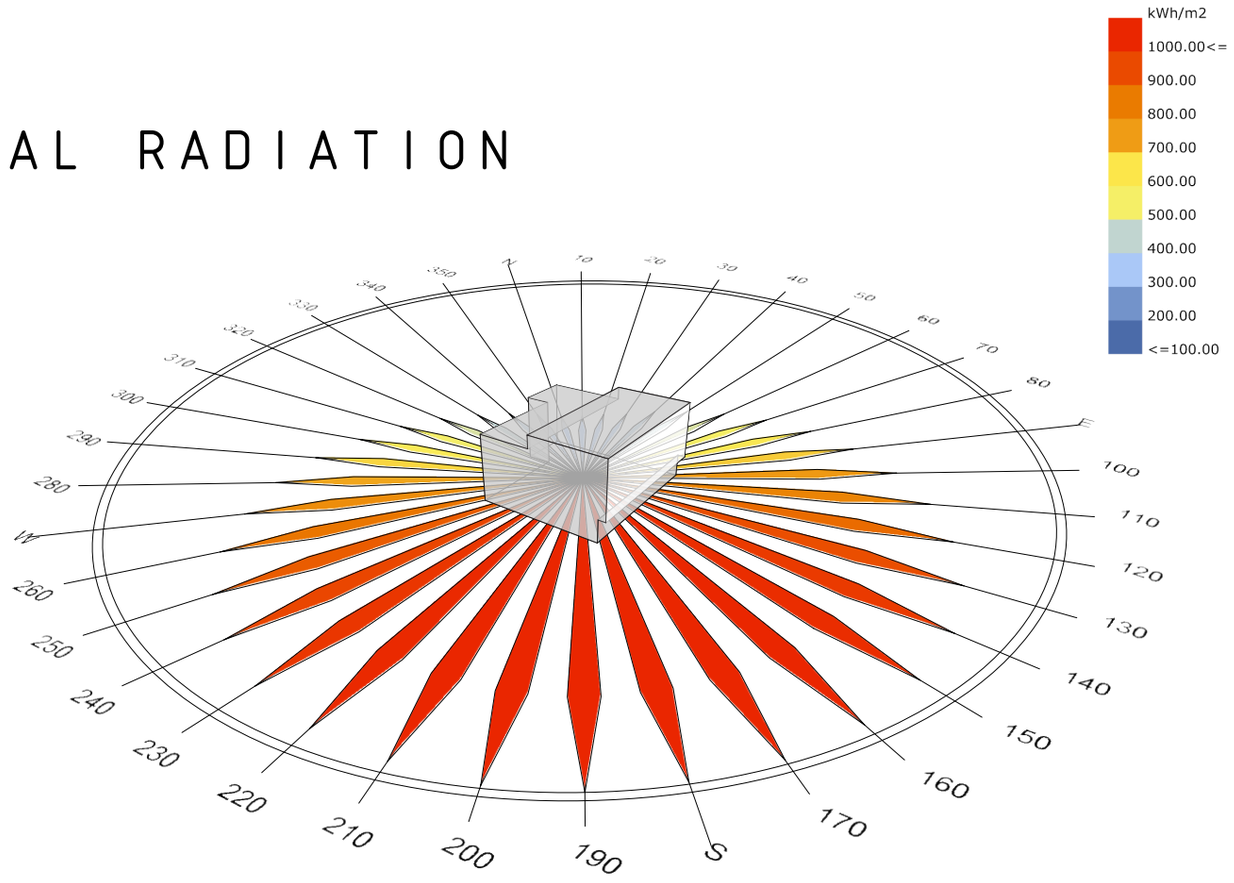


TOTAL HEATING : 180
TOTAL COOLING : 2579
TOTAL LOAD : 2758

MAJORITY OF RADIATION IS COMING FROM SW SIDE OF THE FACADE

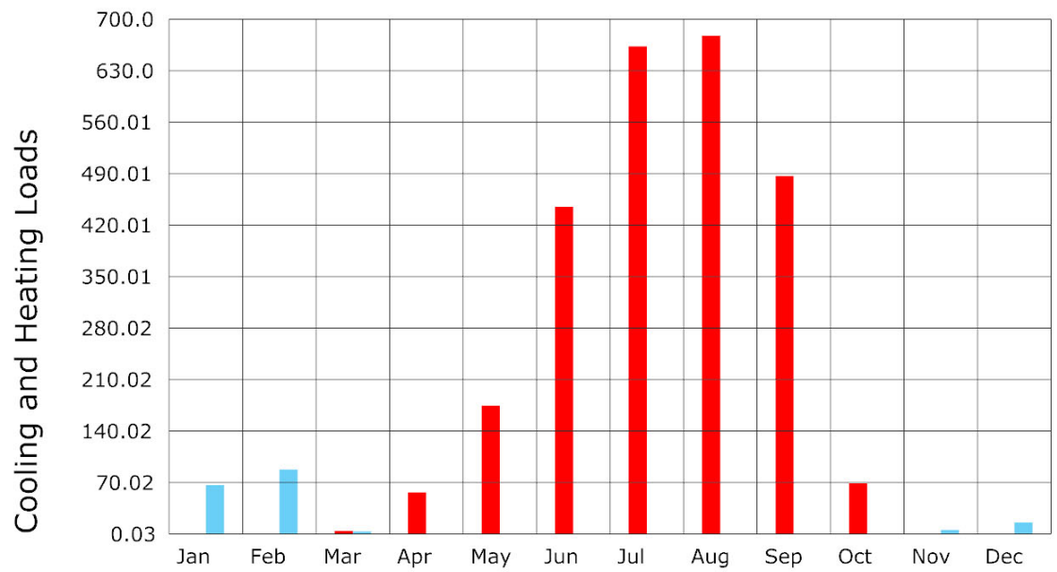
SHADING DESIGN NEEDS TO BE ABLE TO MINIMIZE SUNLIGHT IN SUMMER TO LOWER COOLING ENERGY USE, AND MAXIMIZE SUNLIGHT IN WINTER TO LOWER HEATING ENERGY USE

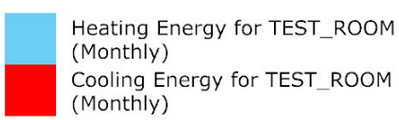
TOTAL RADIATION



PHILADELPHIA, PA

MONTHLY ENERGY LOADS

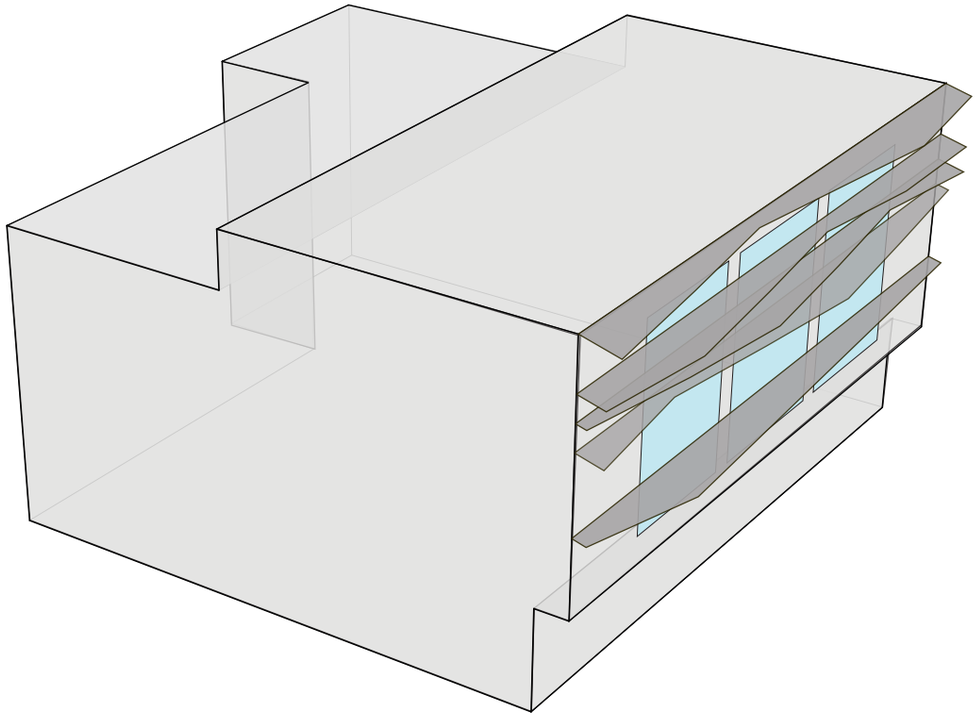




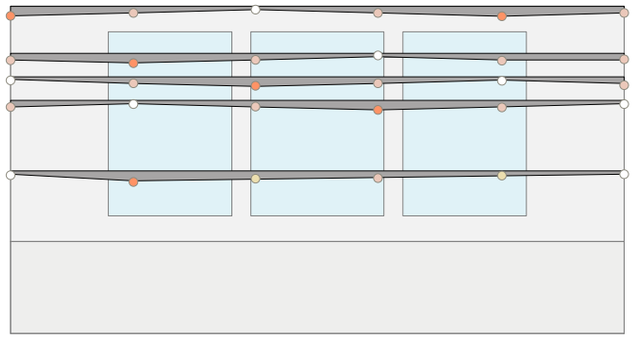
MUNAZZA BHATTI

ENERGY SIMULATION

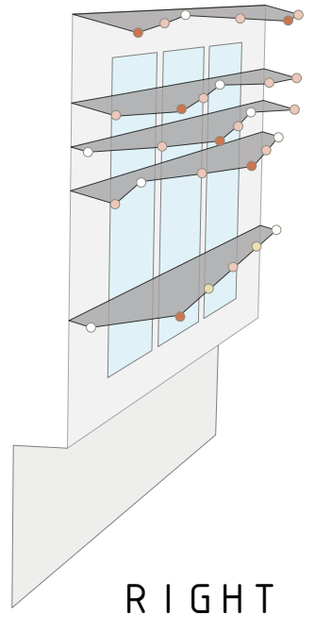
SHADING CASE



EXTRUSION DISTANCE



FRONT VIEW



RIGHT VIEW

TOTAL HEATING : 130
TOTAL COOLING : 1363
TOTAL LOAD : 1494

GLAZING REDUCED FROM ENTIRE WALL TO THREE SMALLER WINDOWS TO REDUCE SOLAR GAIN

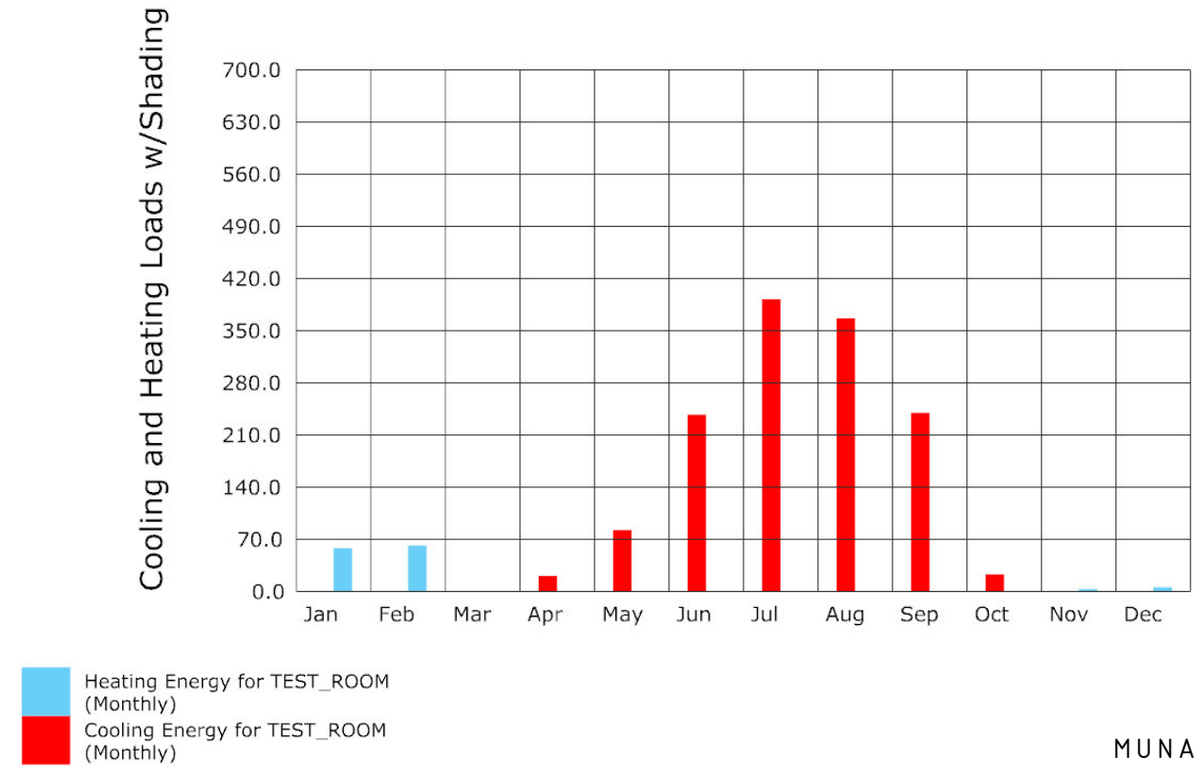
LOUVERS BROKEN INTO FIVE PARTS TO PUSH AND PULL SHAPE TO FOLLOW THE DECLINING AFTEROON SUN

MAXIMUM EXTRUSION OF LOUVER SHIFTS OVER WITH EACH LOUVER

ADDING MANY LOUVERS PROVES TO BE BENEFICIAL IN SUMMER BUT COSTLY IN WINTER

TOTAL LOAD REDUCED BY 46%

MONTHLY ENERGY LOADS



MUNAZZA BHATTI