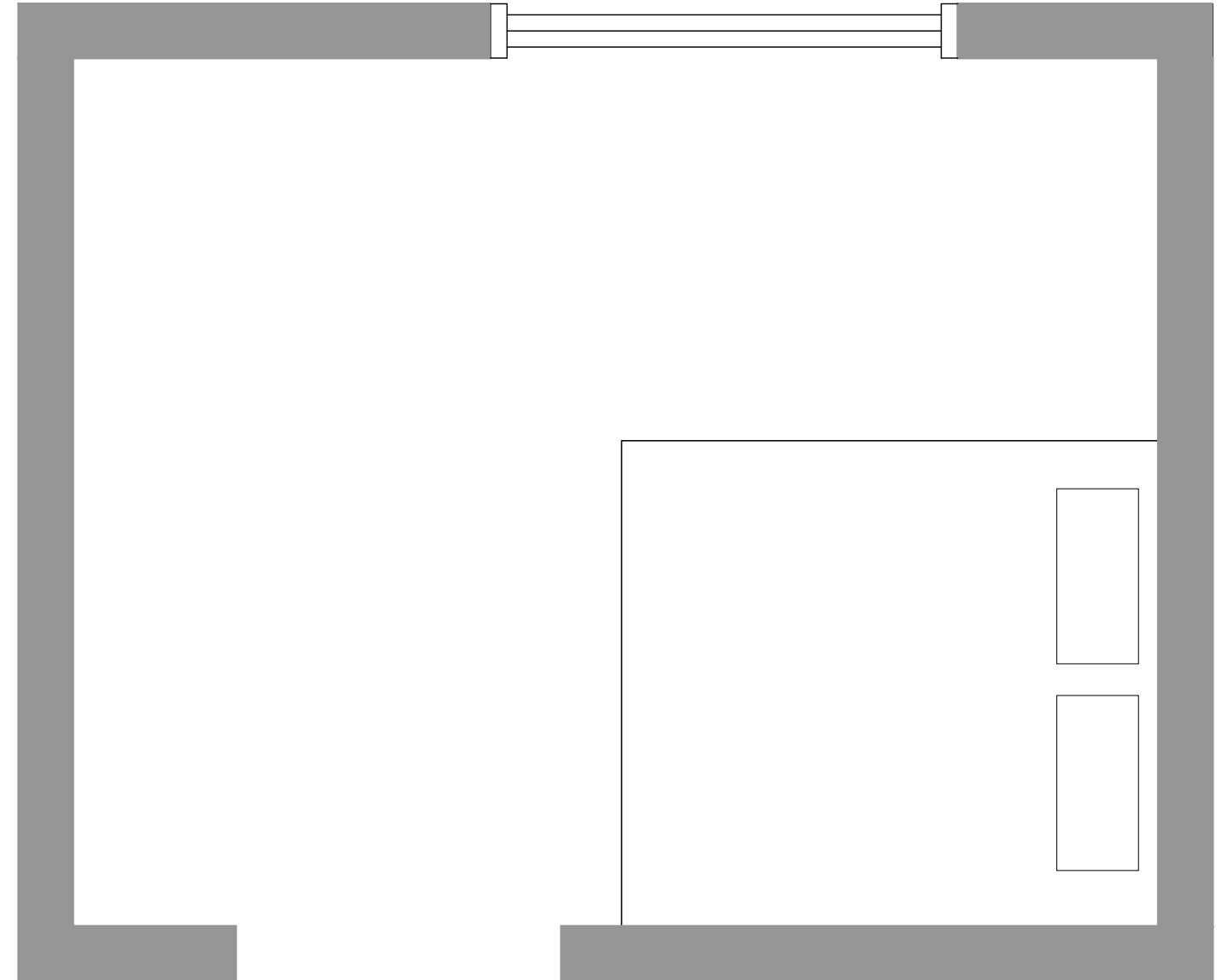


CASE STUDY

ARCH 753 MEBD
BUILDING
PERFORMANCE
SIMULATION

DREAM ROOM ANALYSIS

philadelphia, pa



**DAYLIGHT
ASSUMPTION**
PHILADELPHIA, PA

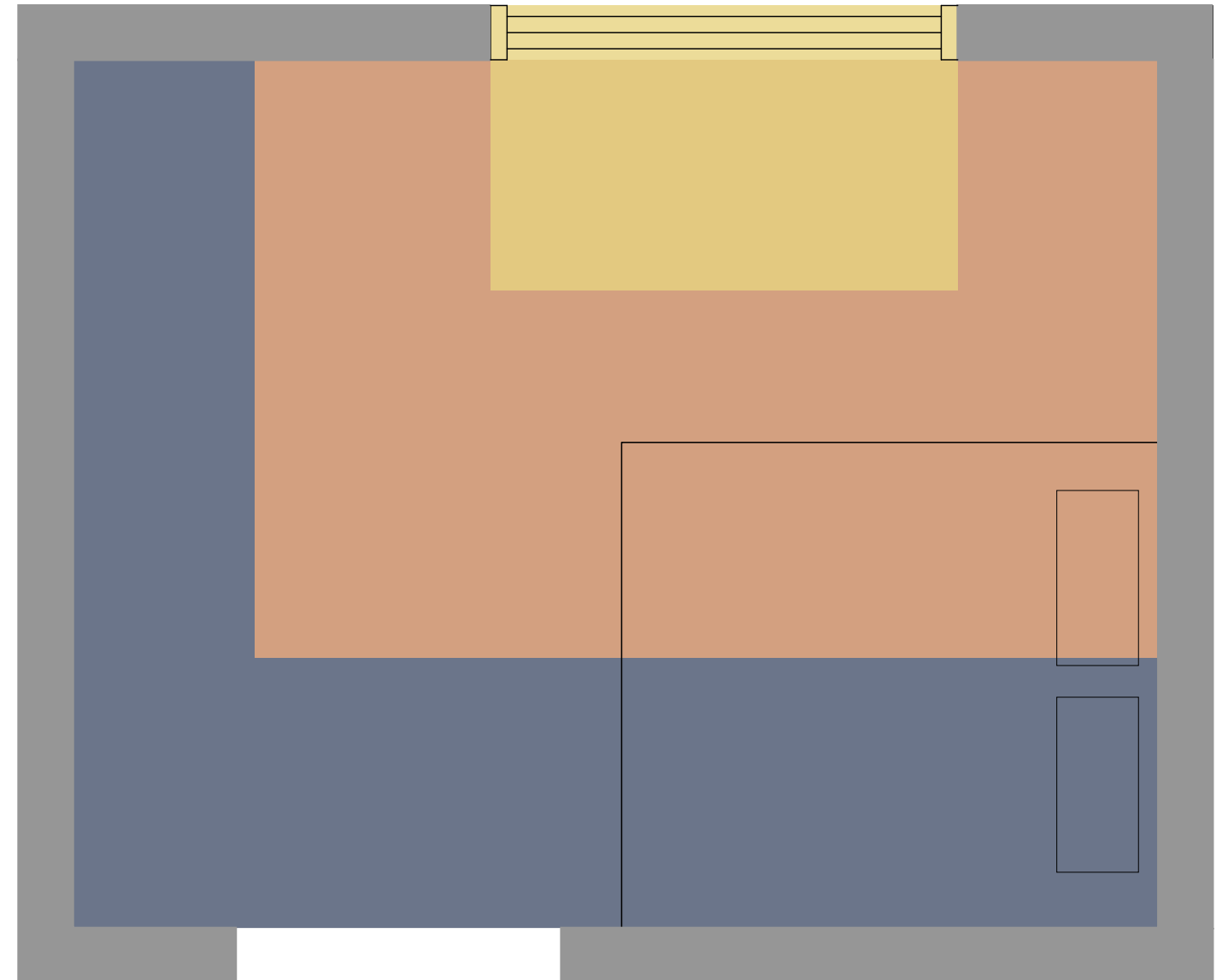
BEST ILLUMINANCE



GOOD ILLUMINANCE



POOR ILLUMINANCE

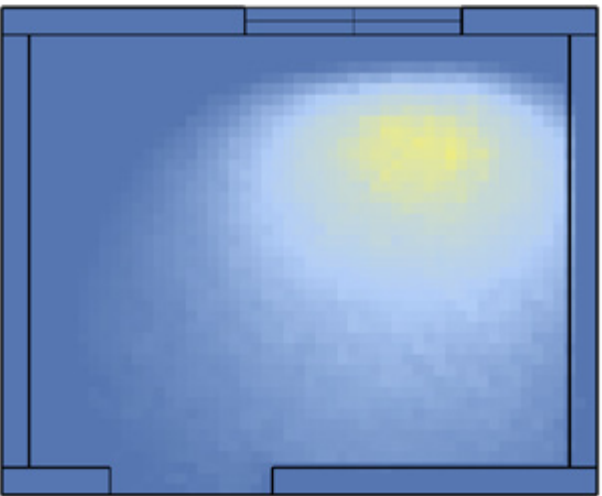
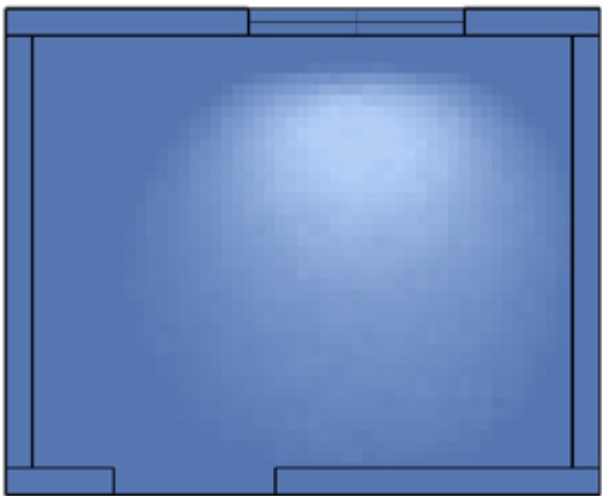
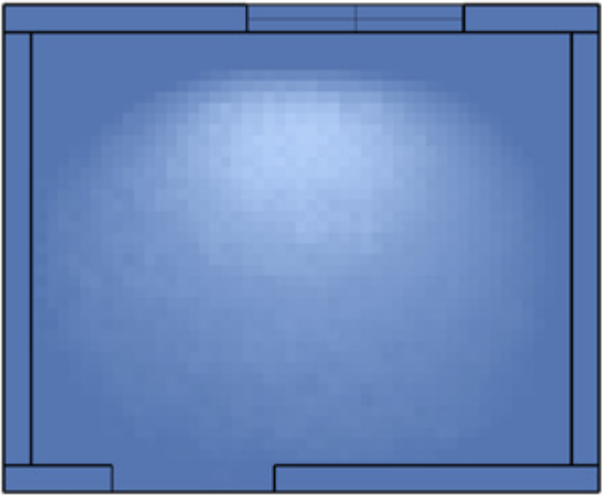
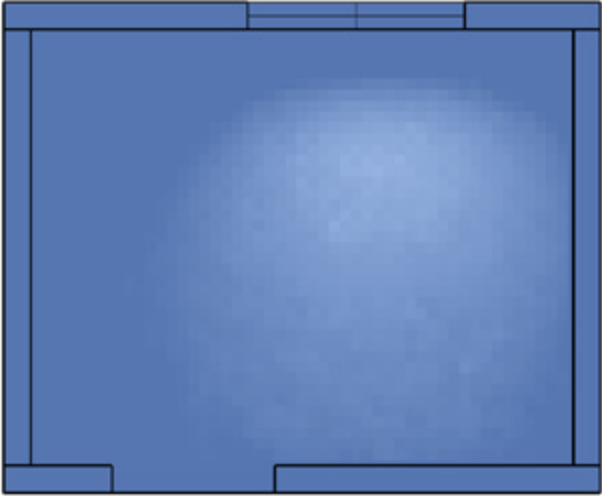
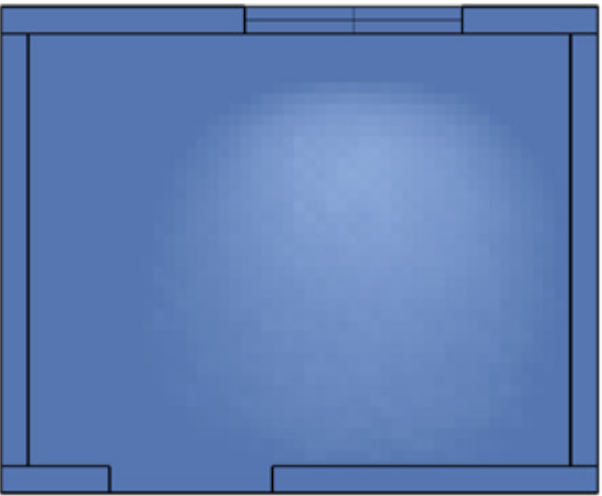
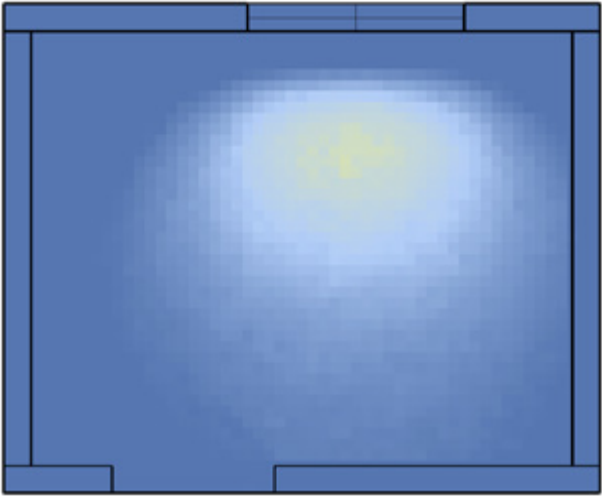


AM 9:00

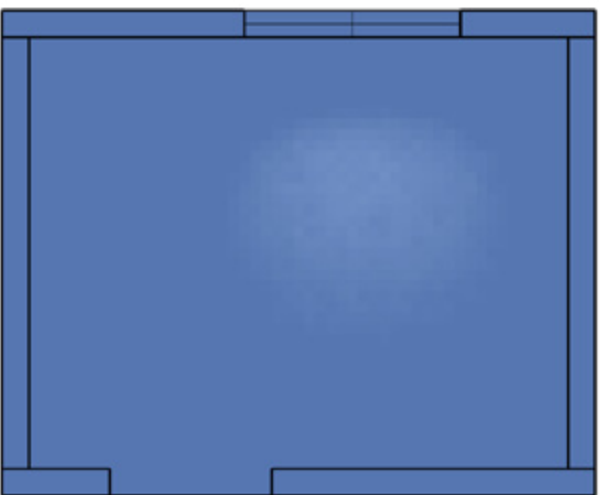
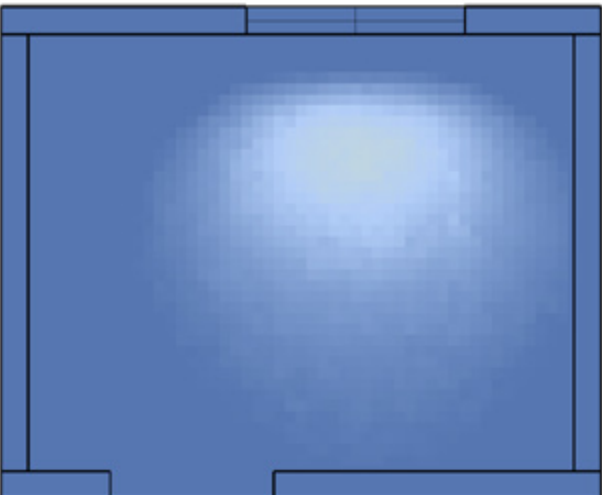
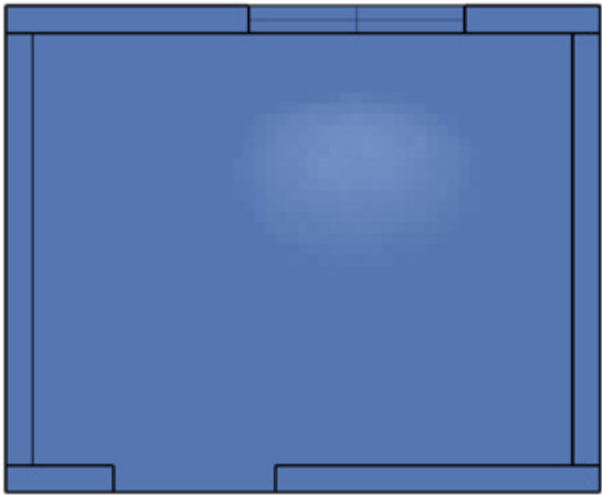
PM 12:00

PM 15:00

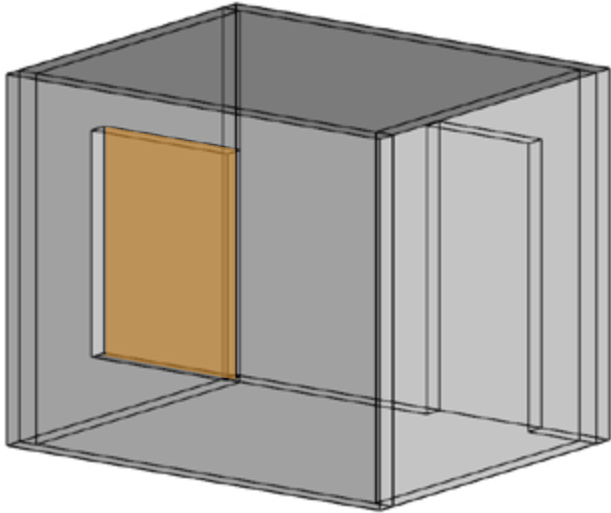
MARCH 21



JUN 21



DEC 21

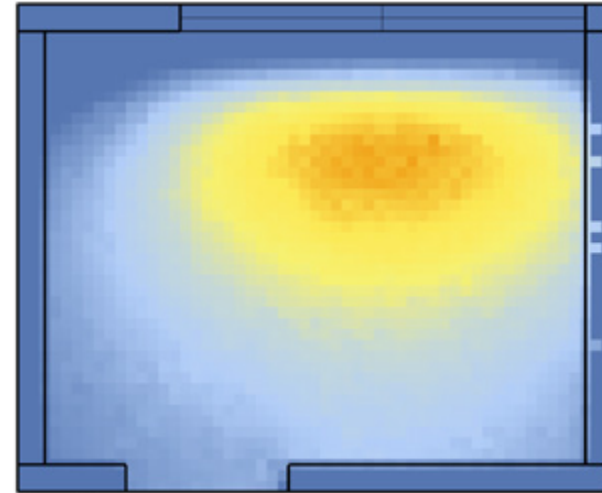


ANALYSIS CONCLUSION

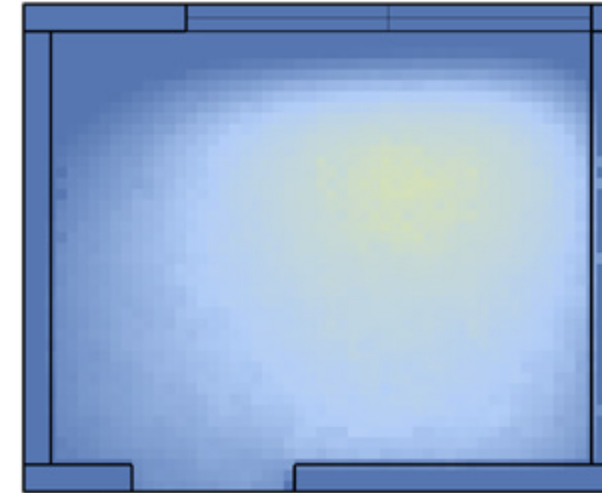
From the study, it is evident not enough daylight reaches the depth of the space.

MARCH 21

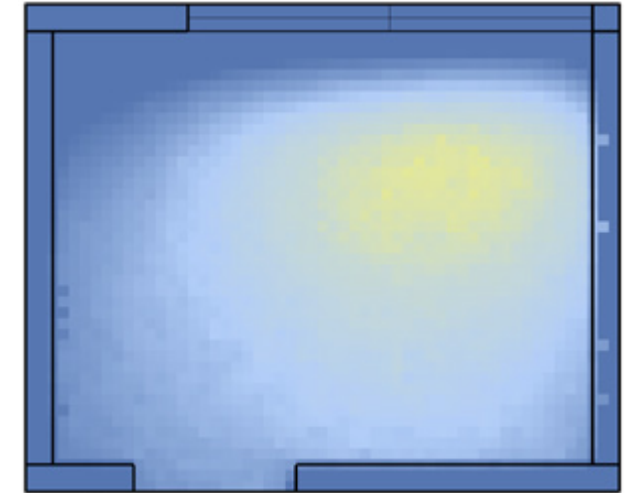
AM 9:00



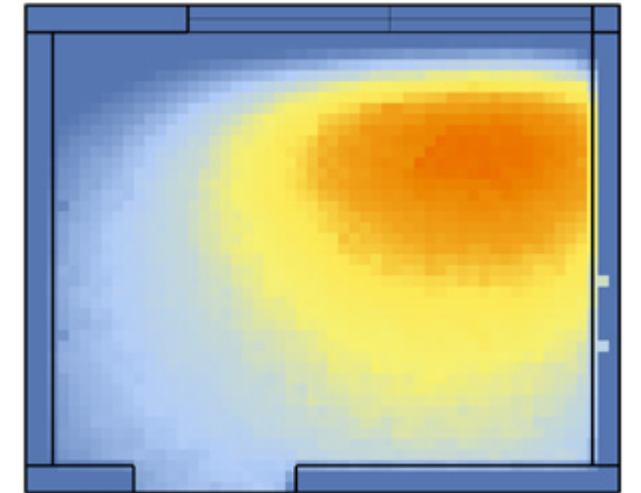
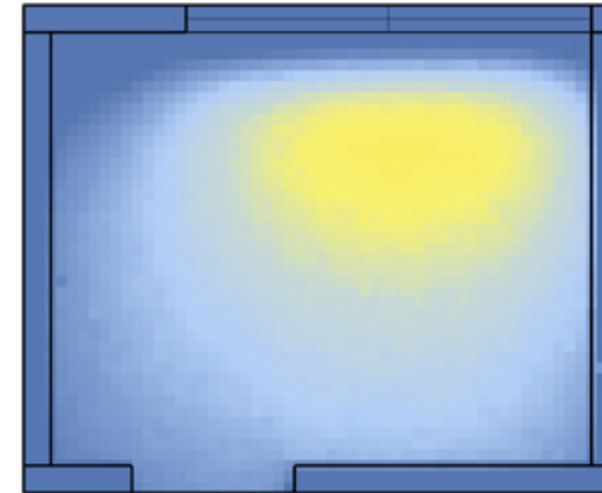
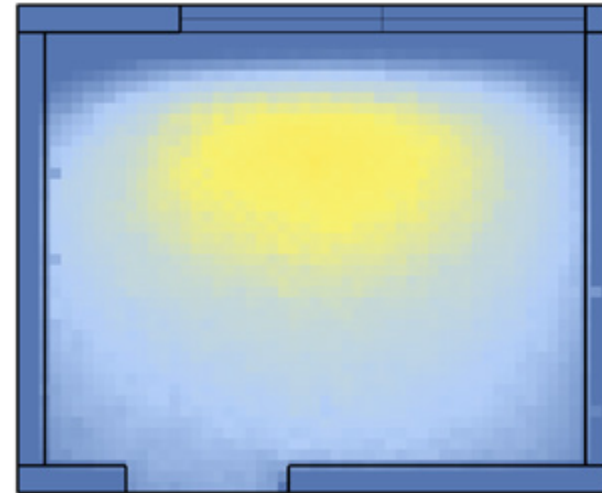
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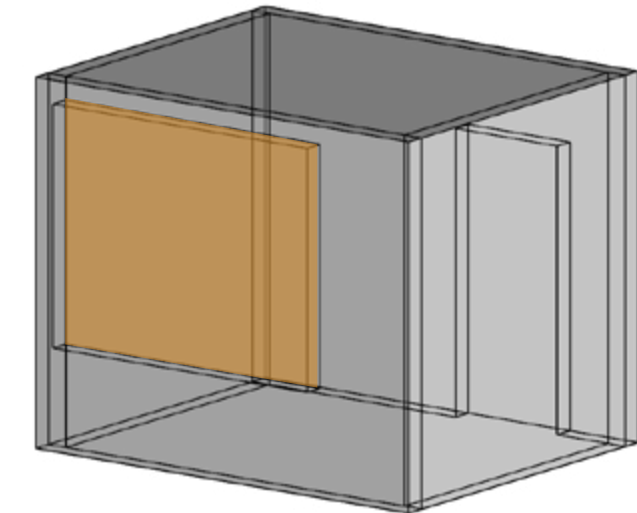
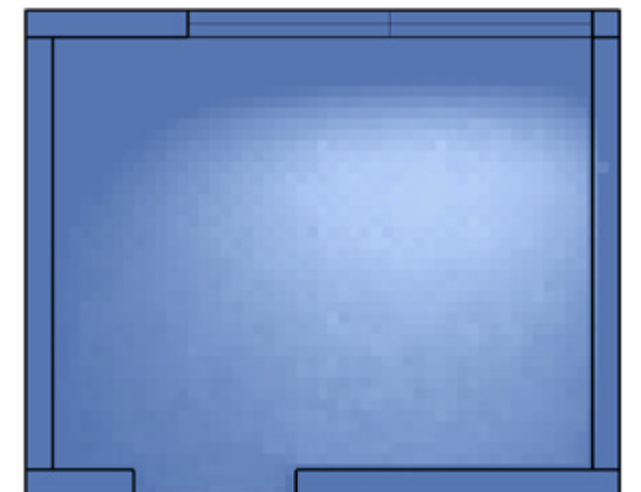
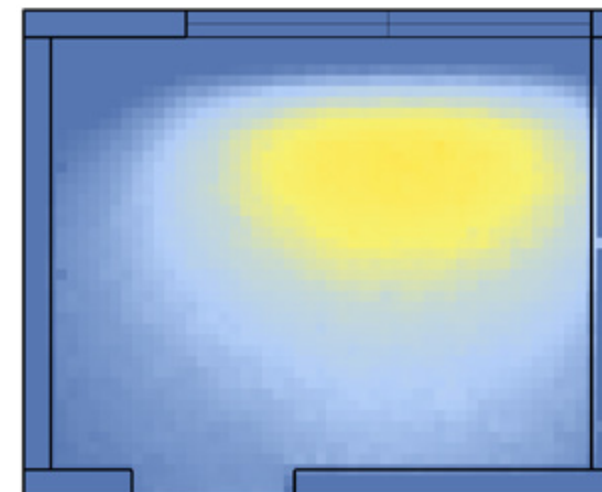
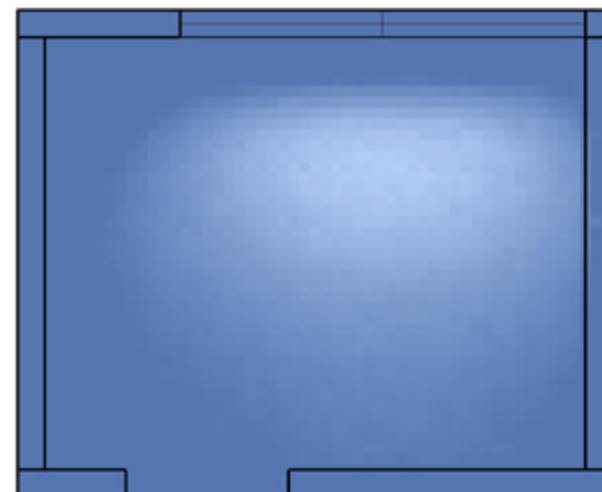
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JUN 21



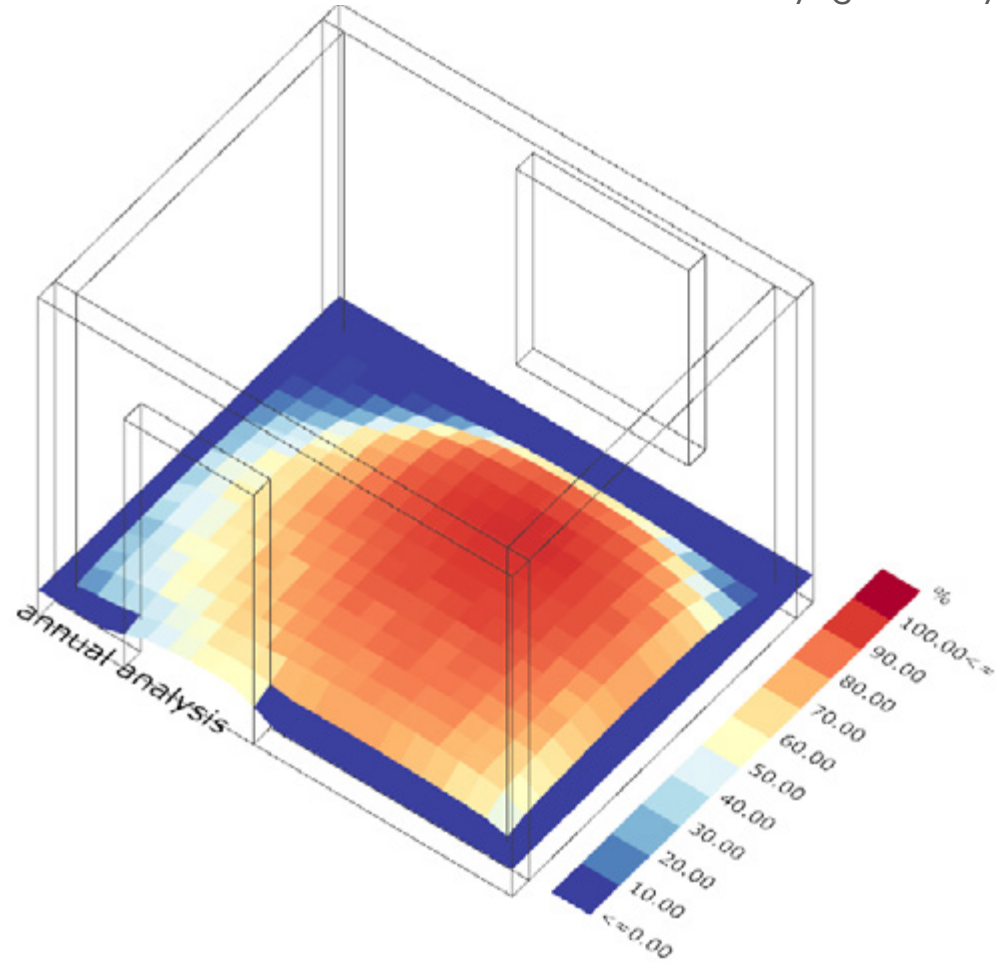
DEC 21



ANALYSIS CONCLUSION

By enlarging the window in height and width, daylight has exponentially increased into the depths of the space.

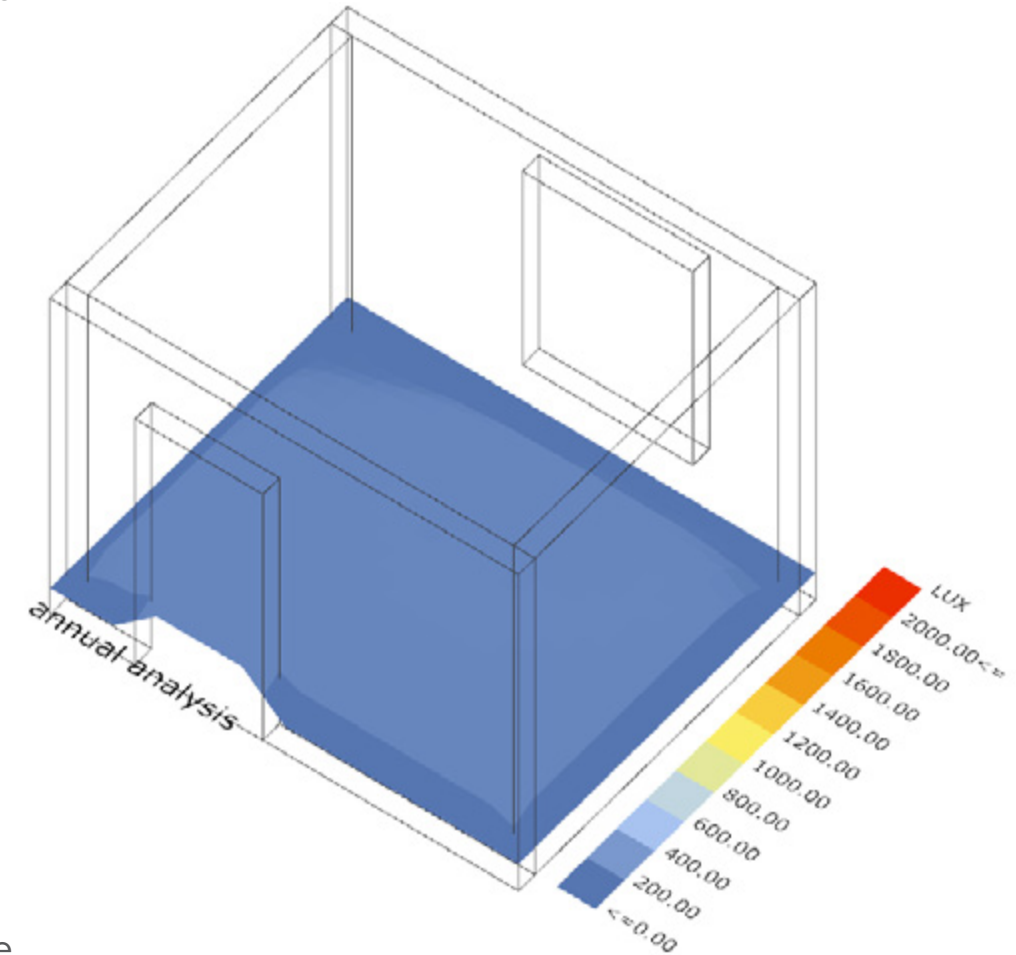
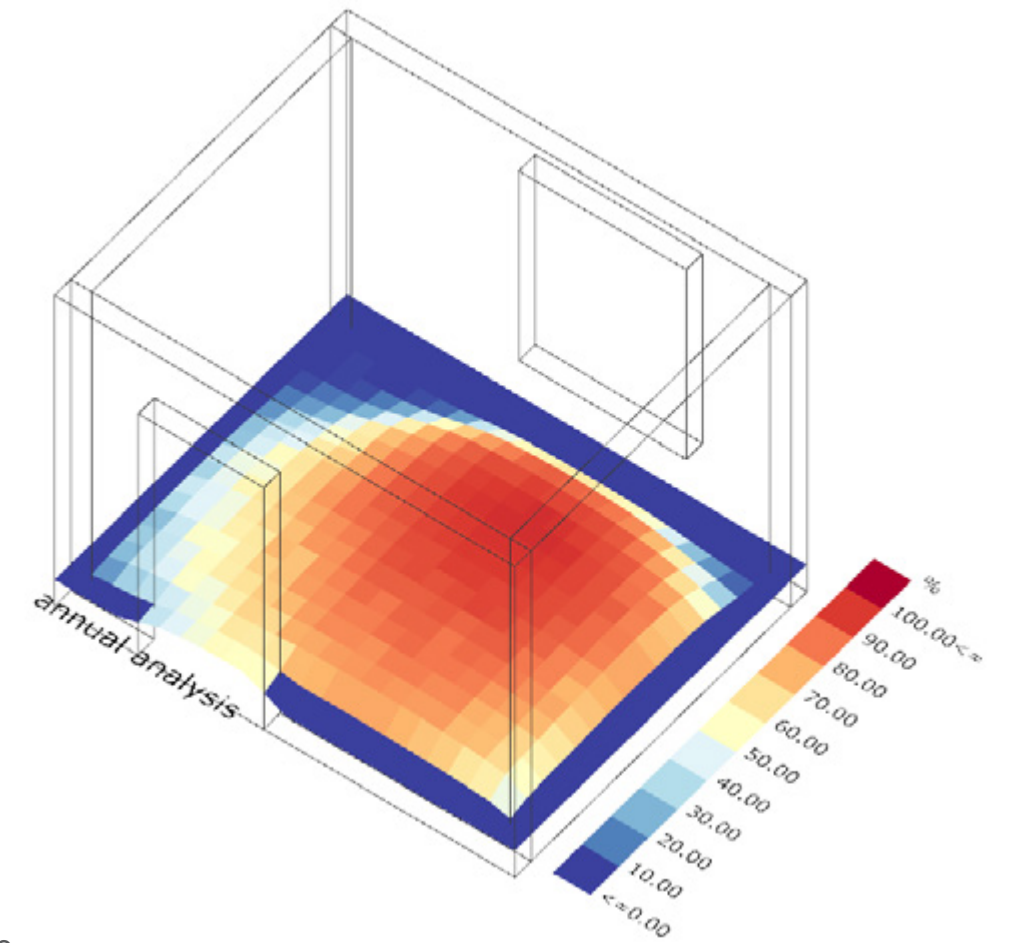
Annual Daylight Analysis



ANALYSIS CONCLUSION

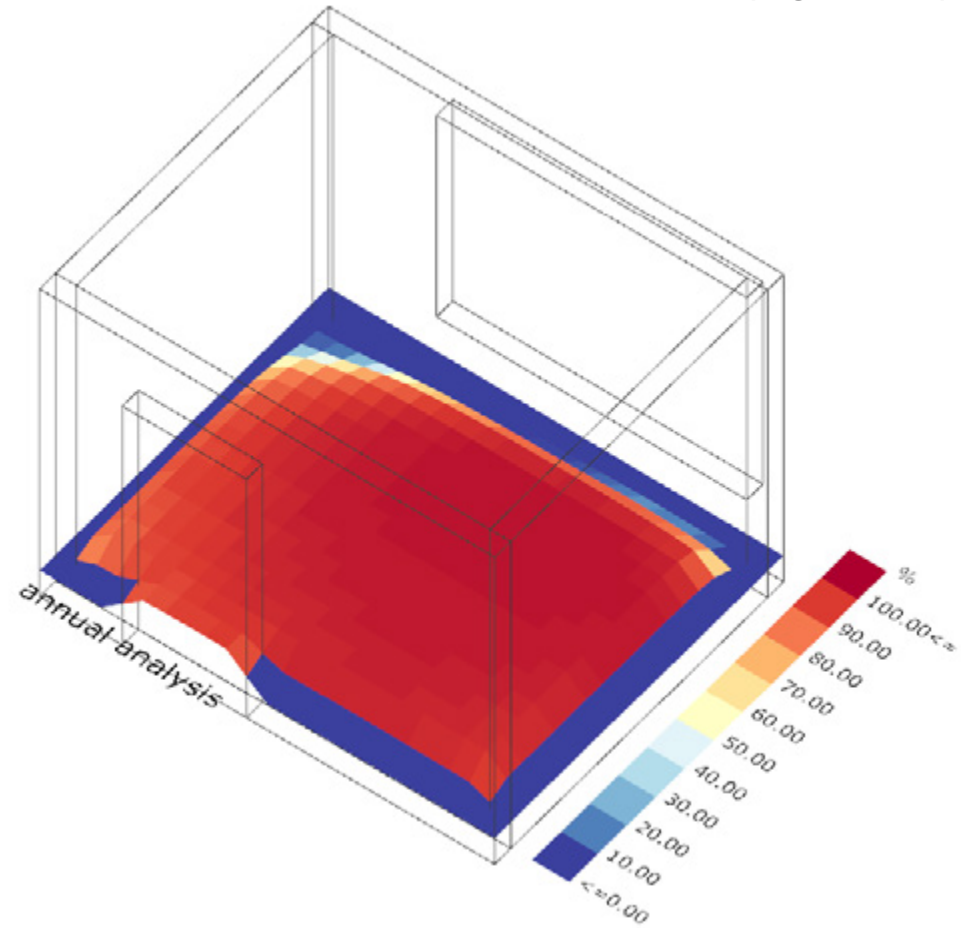
The original room layout provides a mid-range of daylight year-round.

Annual Daylight Analysis

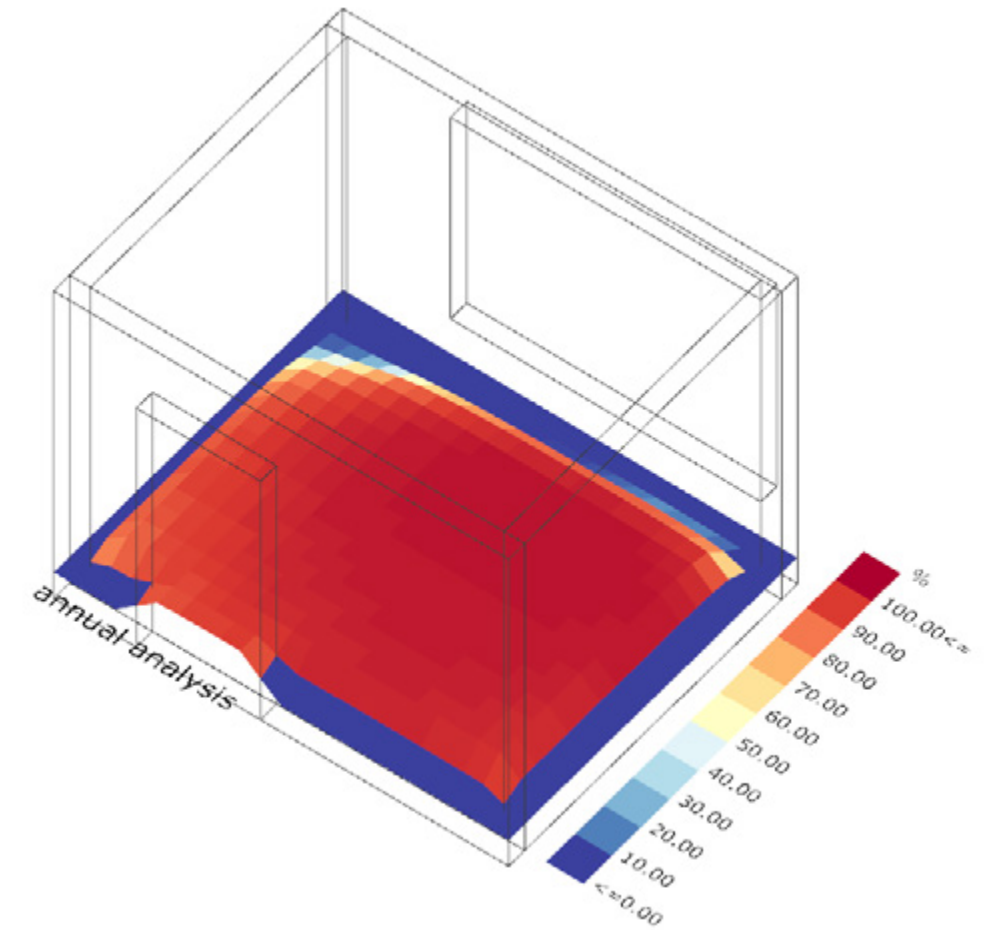


Useful Daylight Illuminance

Annual Daylight Analysis



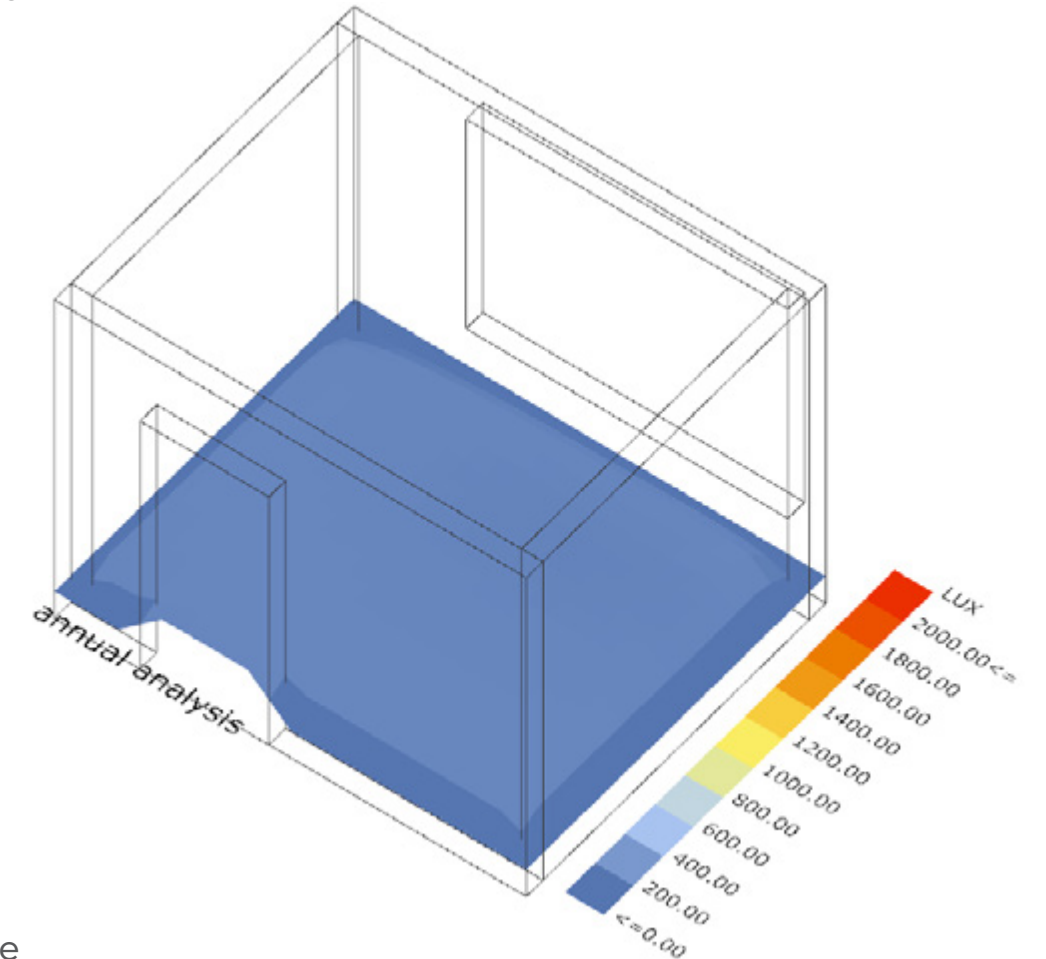
Annual Daylight Analysis



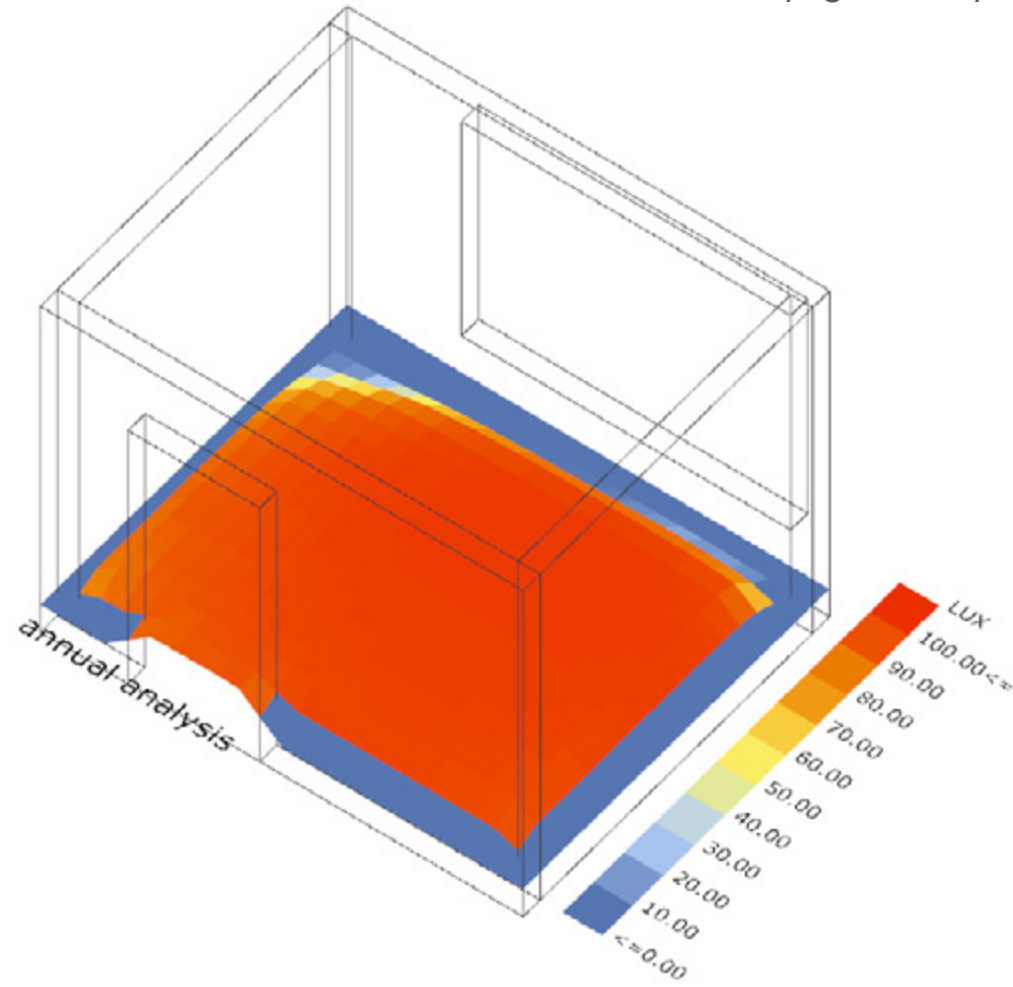
ANALYSIS CONCLUSION

According to the modified window room analysis, the amount of area receiving daylight in the space is quite high year-round. In order to reduce the harshness of daylight in the room, a shading device would probably be advantageous.

Useful Daylight Illuminance



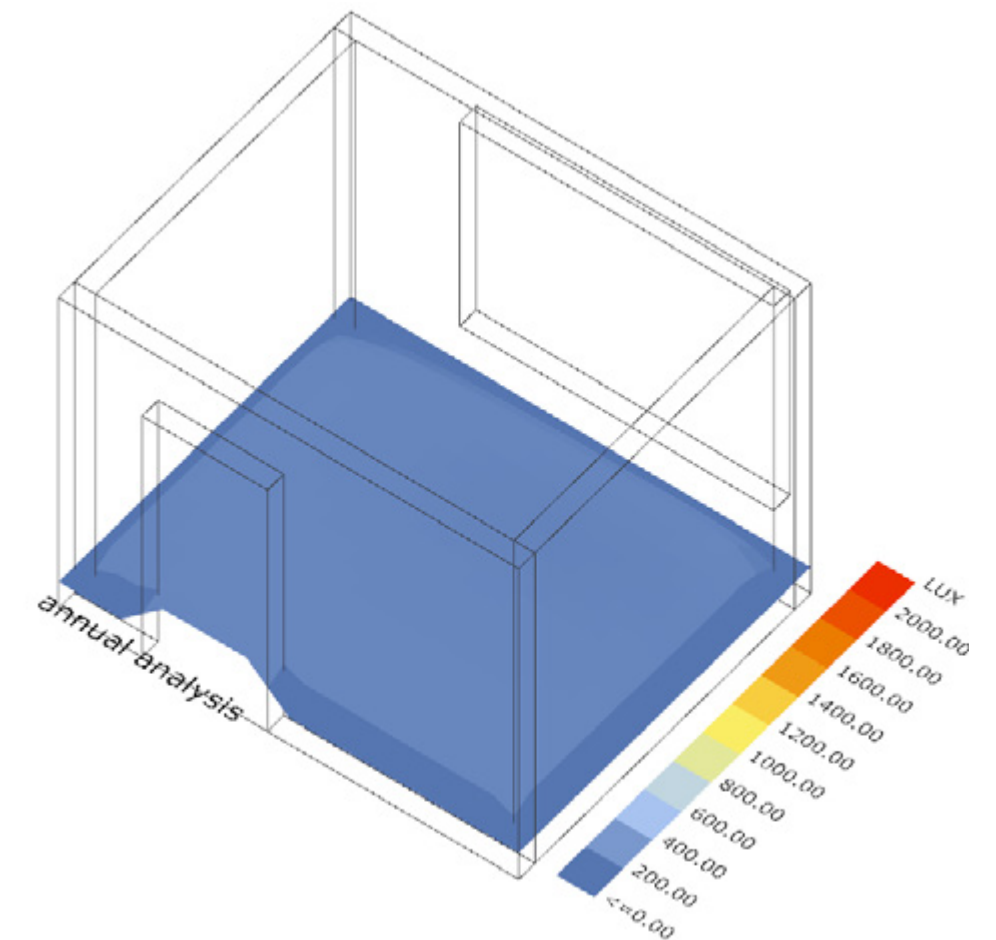
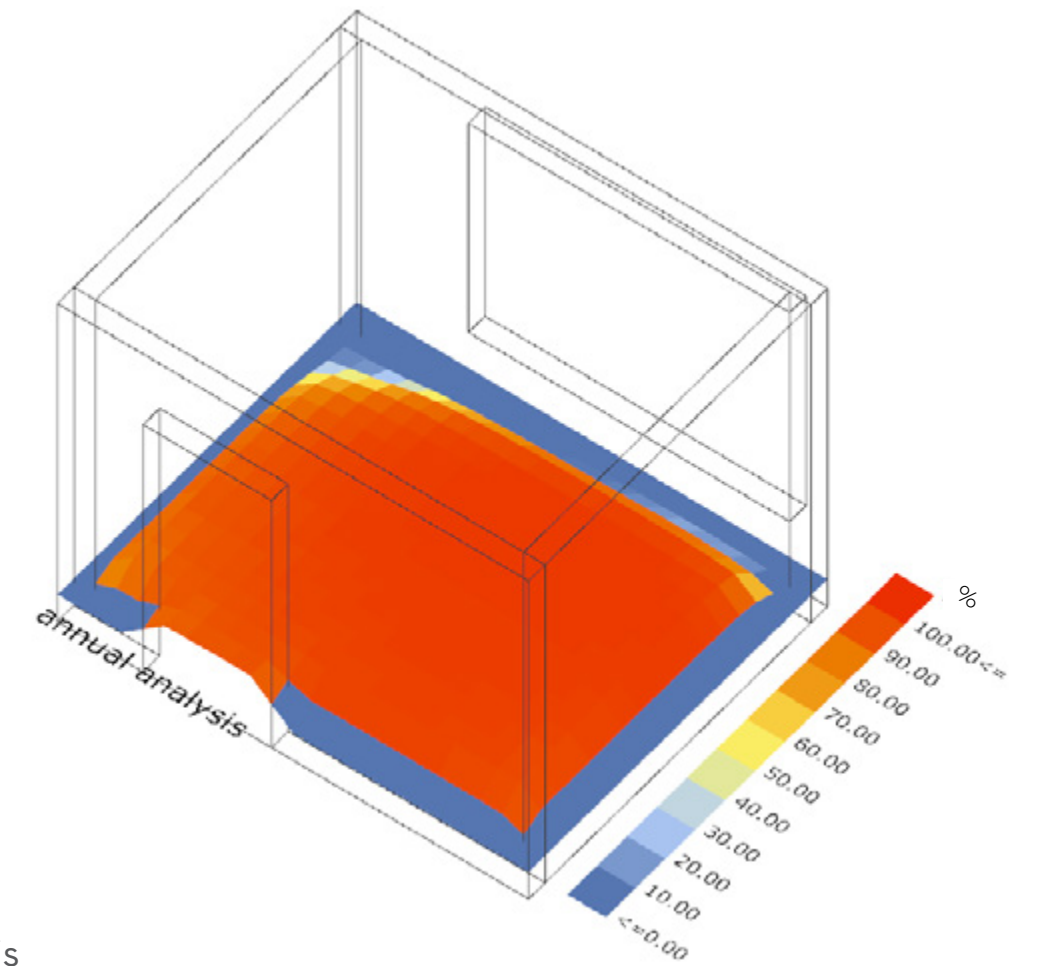
Annual Daylight Analysis



ANALYSIS CONCLUSION

The modified window with a shading device allows for the entire room to well lit year round. According to the analysis, a daylight illuminance of 200 lux is prominent, which proves to be adequate for the space.

Annual Daylight Analysis



Useful Daylight Illuminance