



# **An Exploration of Daylight in Schools:**

**Putting Ecotect and Daysim into practice**

***By: John McCreery***

***Omar Rabie***

***Siân Kleindienst***

***Kemaporn Jayanetra***

# Fort Recovery, Ohio



# Fort Recovery, Ohio



New Elementary / Middle School

## Fort Recovery Local School District

Fort Recovery, Ohio

 Fanning/Howey  
Associates, Inc.  
Architects Engineers Consultants  
P.O. Box 71, 540 East Market Street  
Lima, Ohio 45822

***By Fanning/Howey Associates, Inc.***  
***[www.fhai.com](http://www.fhai.com)***

# Fort Recovery, Ohio



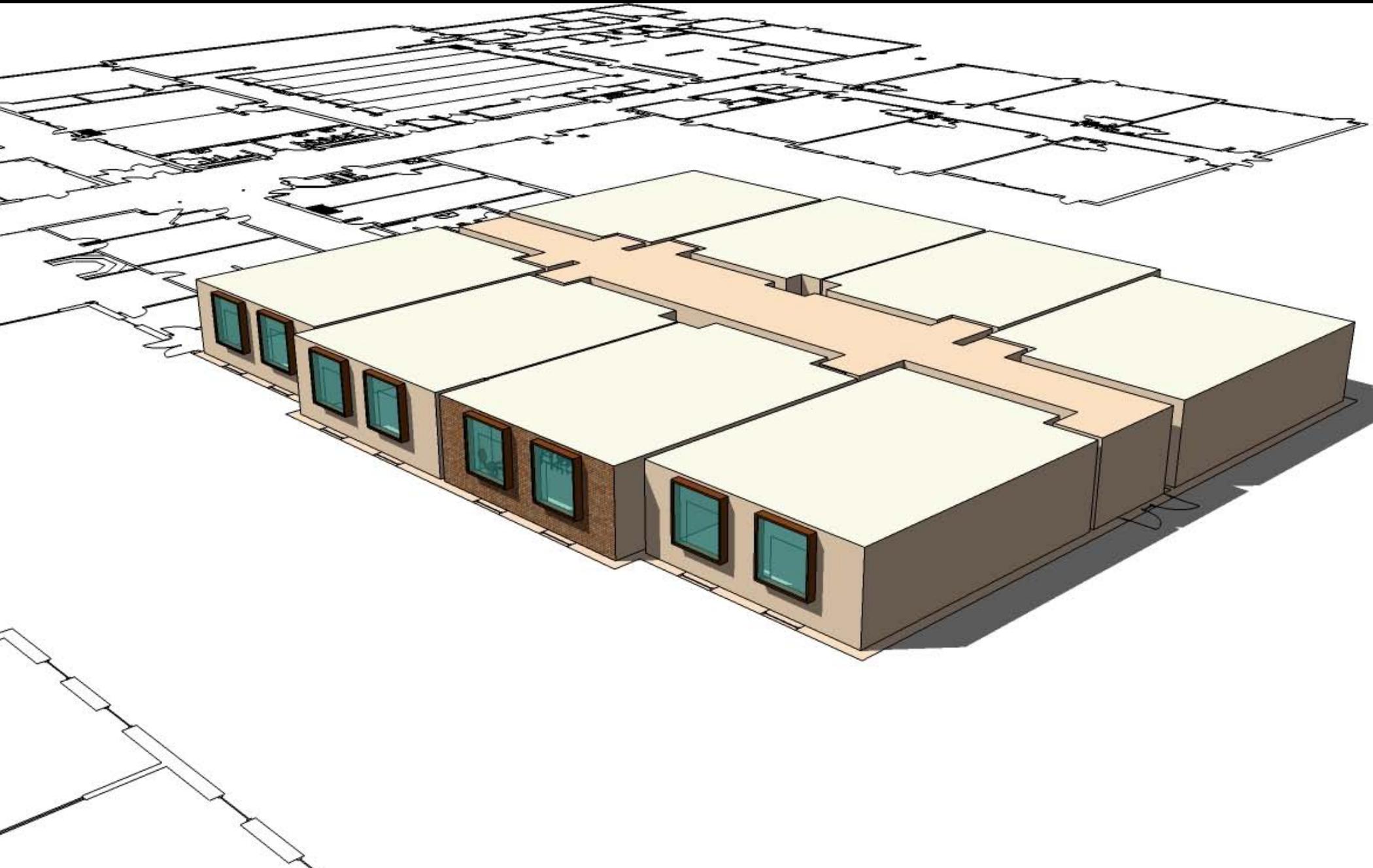
*Halls*

# Fort Recovery, Ohio



**Classrooms**

# The Original Model





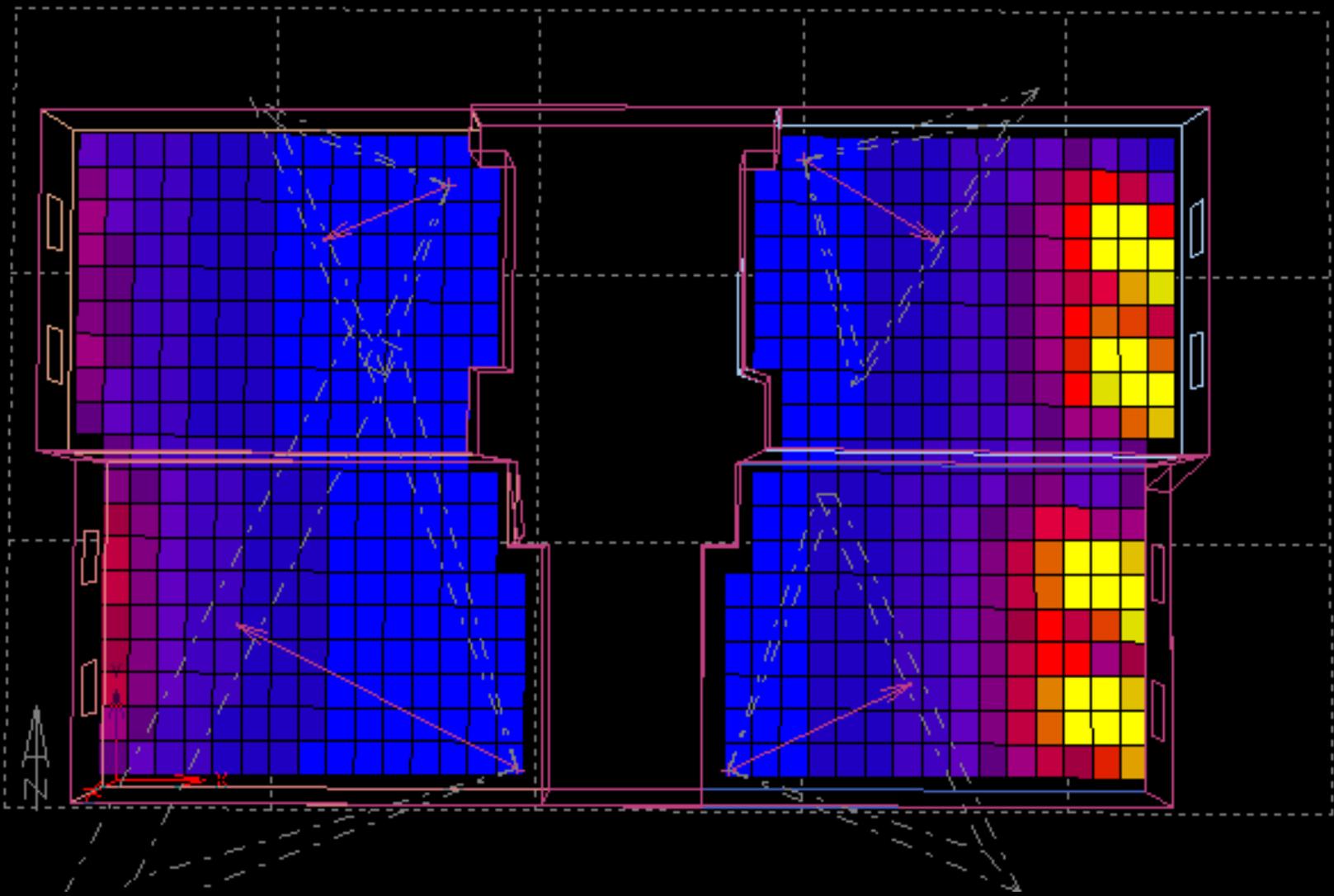
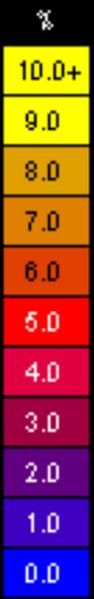
# The Original Model: Daylight Factor in DAYSIM

## Analysis Grid

Annual illuminance

Value Range: 0.0 - 10.0 %

© ECOTECT US



# The Original Model: Daylight Autonomy in DAYSIM

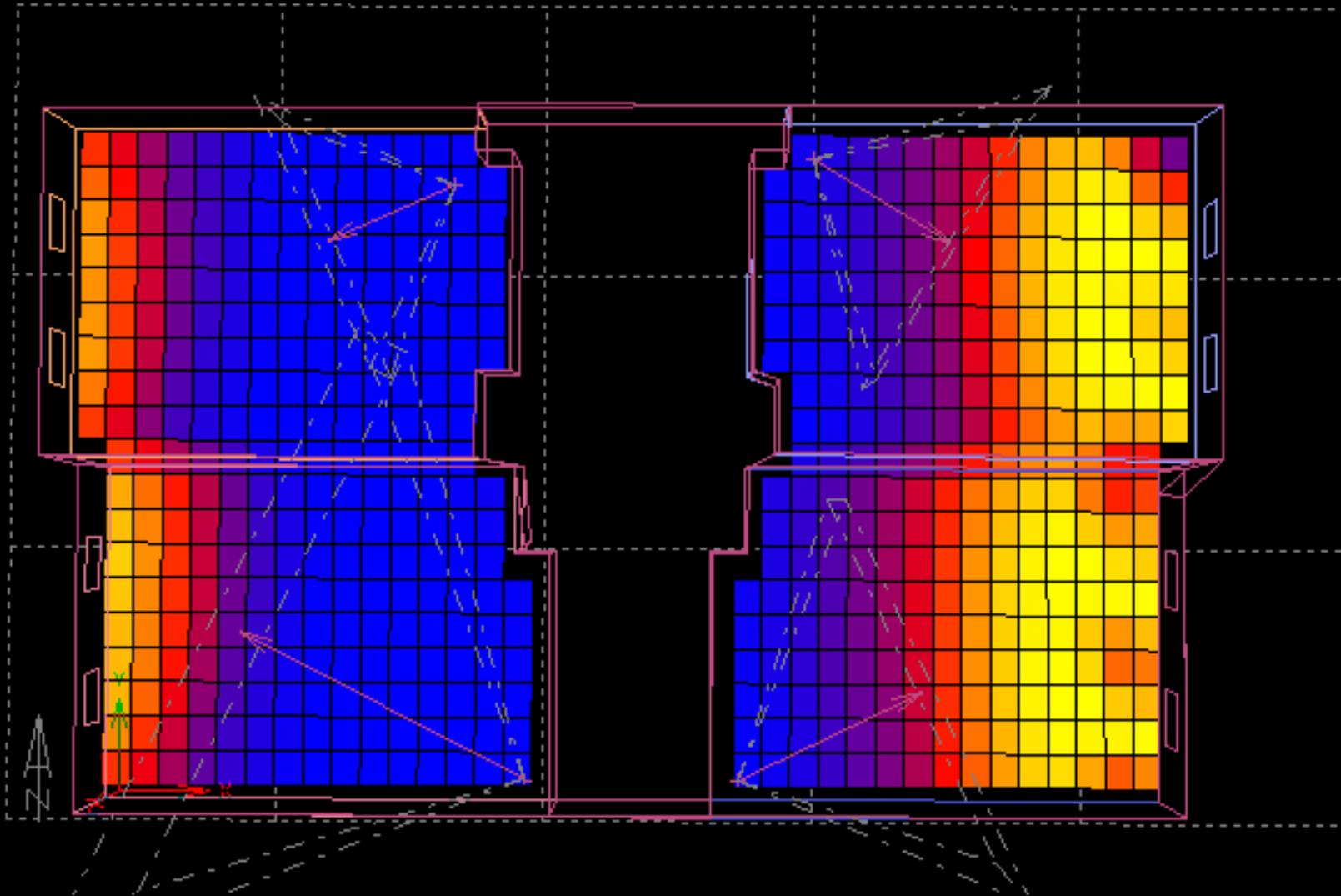
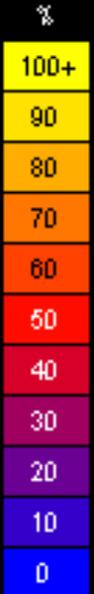
## Analysis Grid

Annual illuminance

Value Range: 0 - 100 %

© ECOTECT US

# 1/3 of room at 0%!



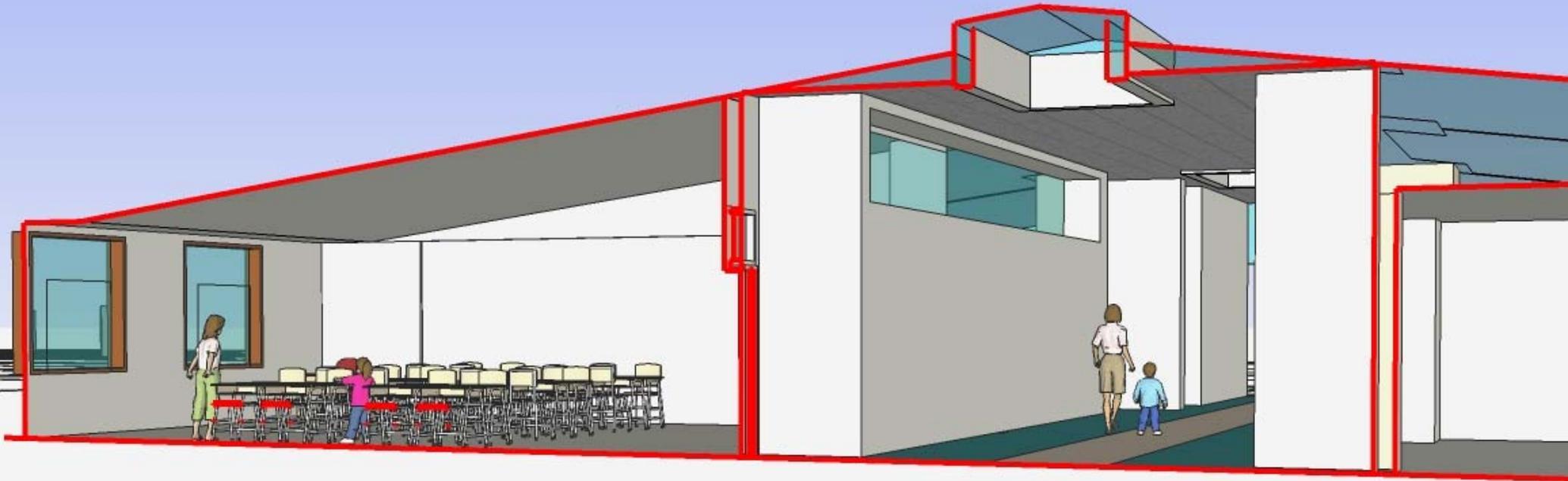
# The Original Model



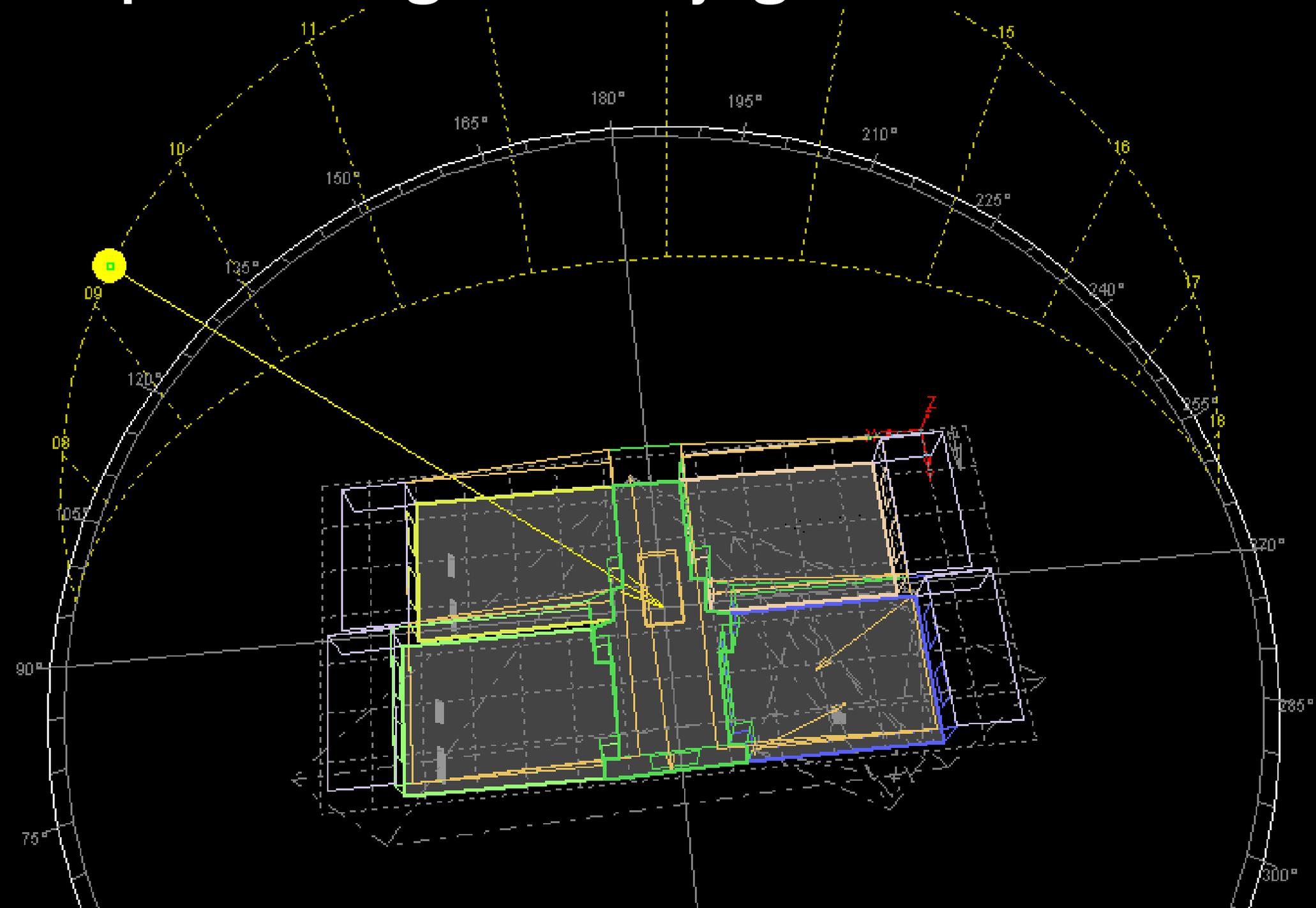
# Sloped Ceilings and Skylights



# Sloped Ceilings and Skylights



# Sloped Ceilings and Skylights



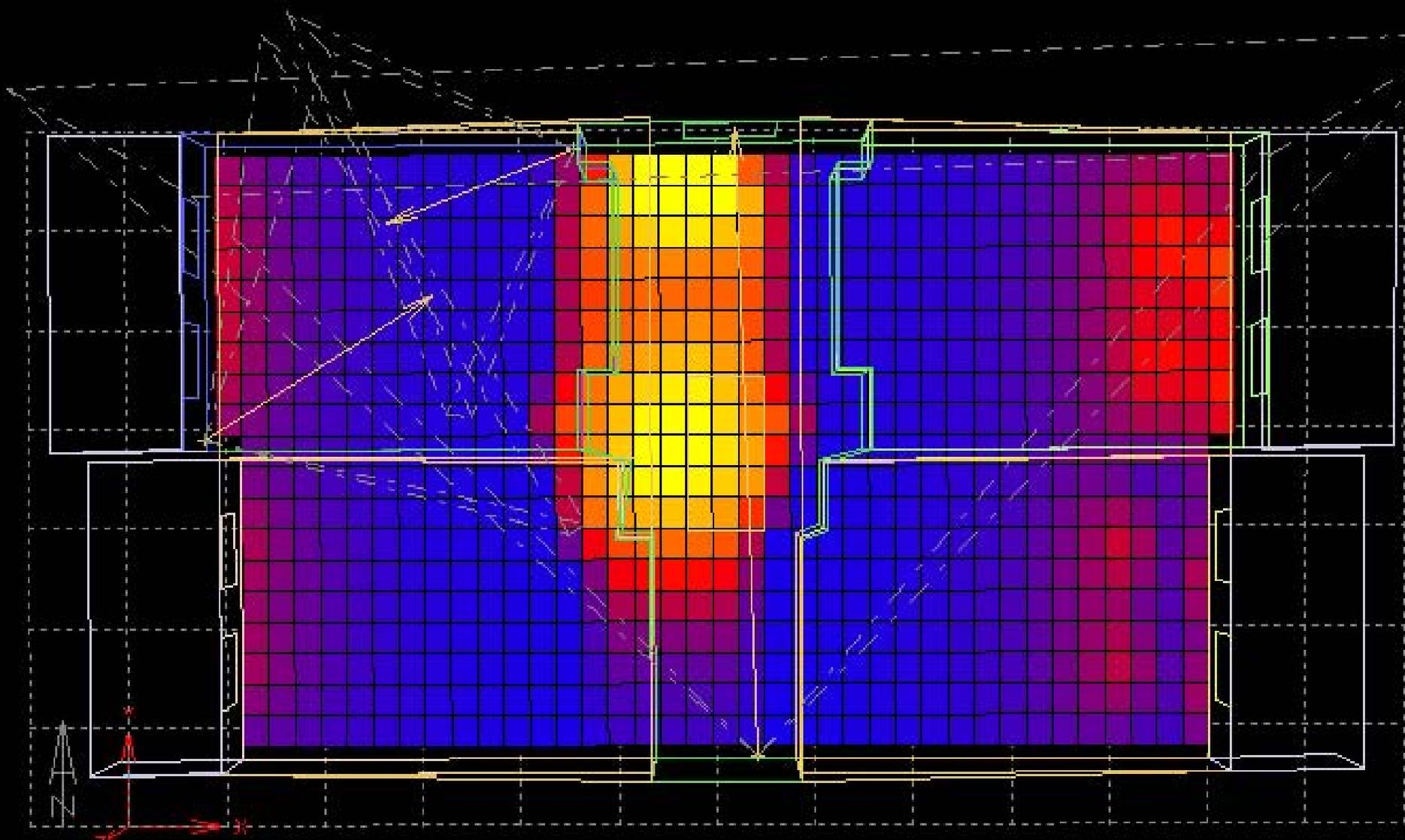
# Sloped Ceilings and Skylights: DF (DAYSIM)

## Daylight Analysis

Annual illuminance

Value Range: 0.0 - 10.0 %

© ECOTECT 16



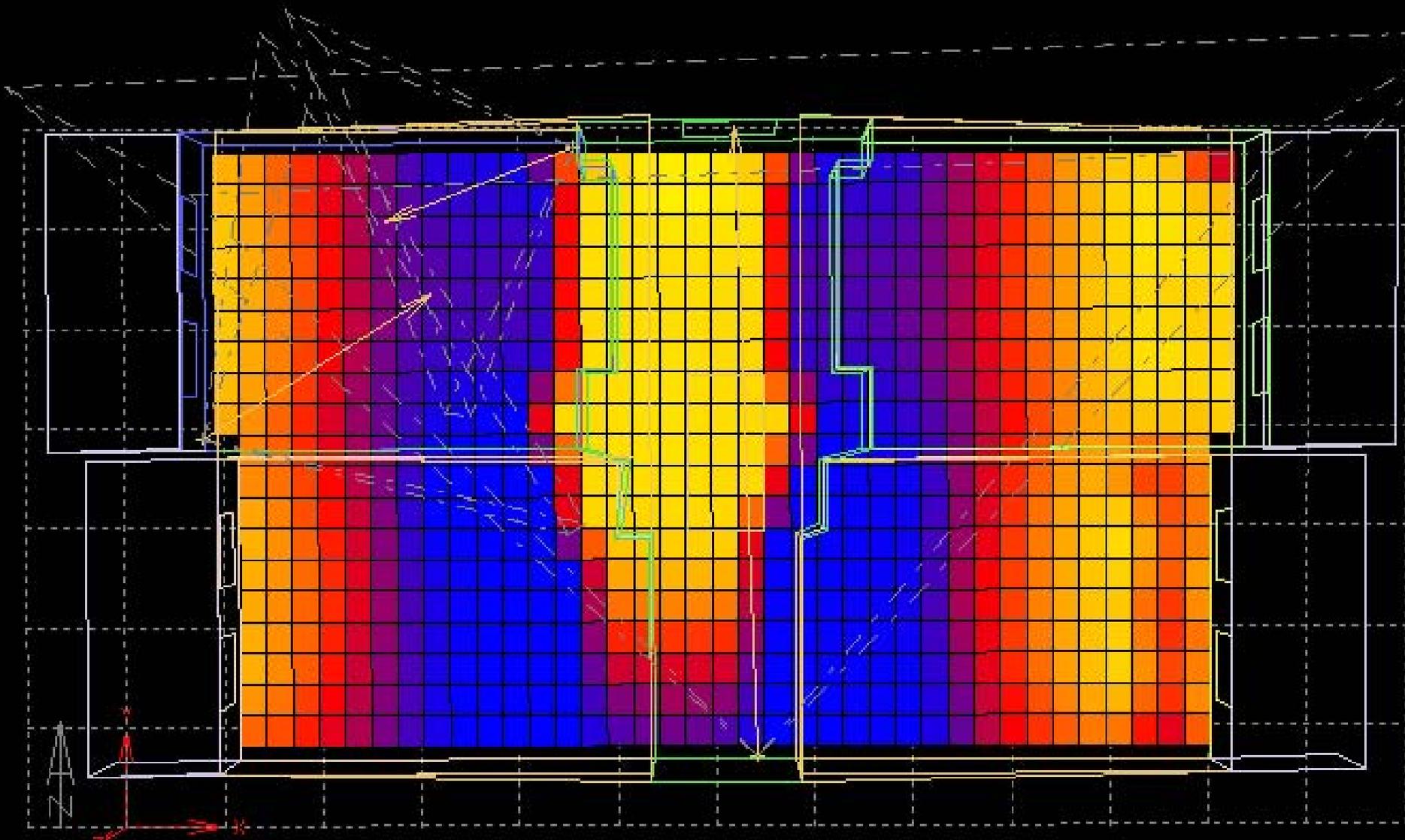
# Sloped Ceilings and Skylights: DA (DAYSIM)

## Daylight Analysis

Annual illuminance

Value Range: 0 - 100 %

© ECOTECT US



# Sloped Ceilings and Skylights



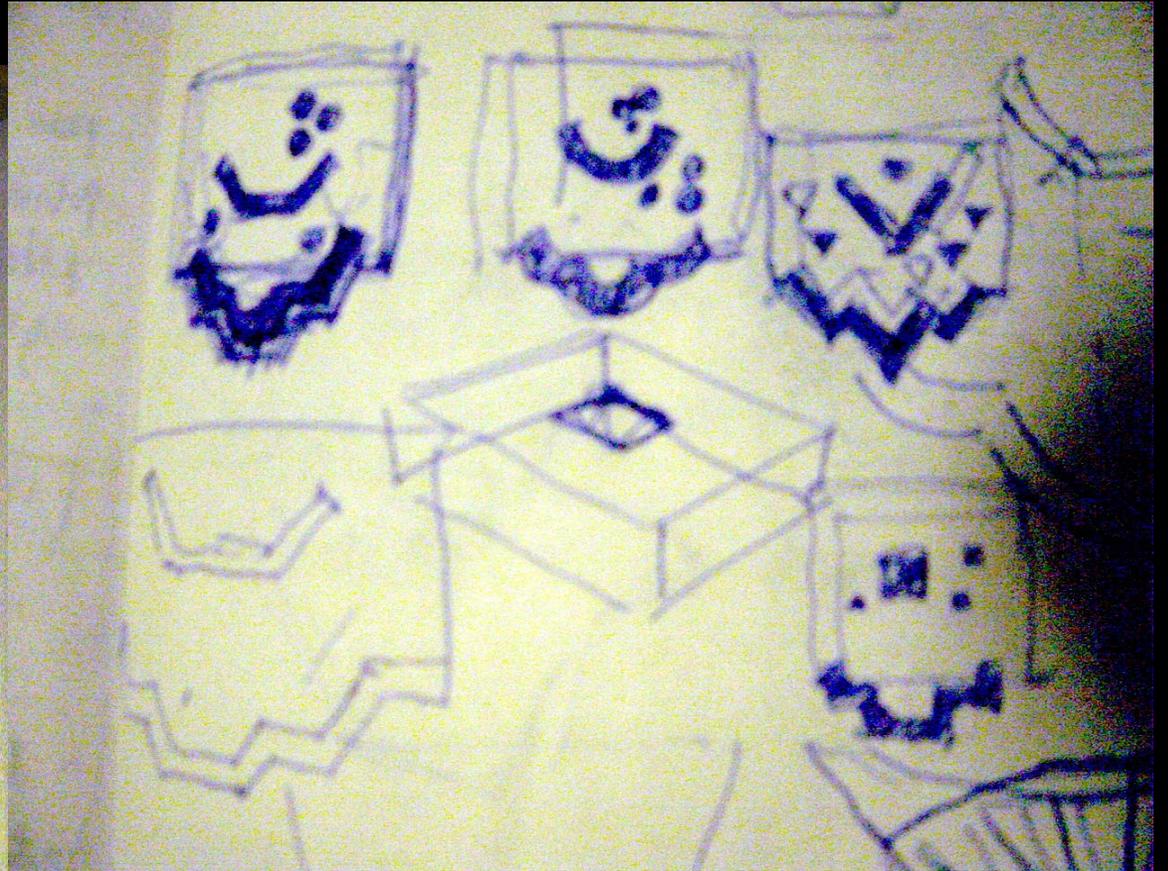
# Sloped Ceilings and Skylights



# Sloped Ceilings and Skylights

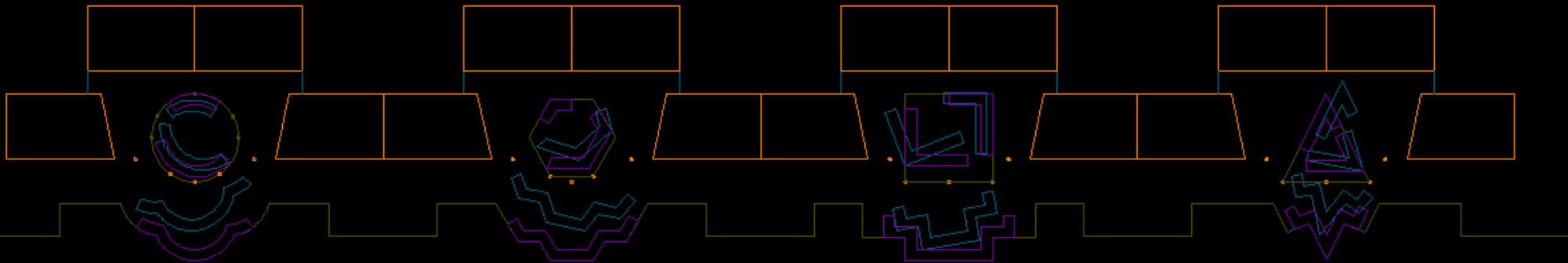
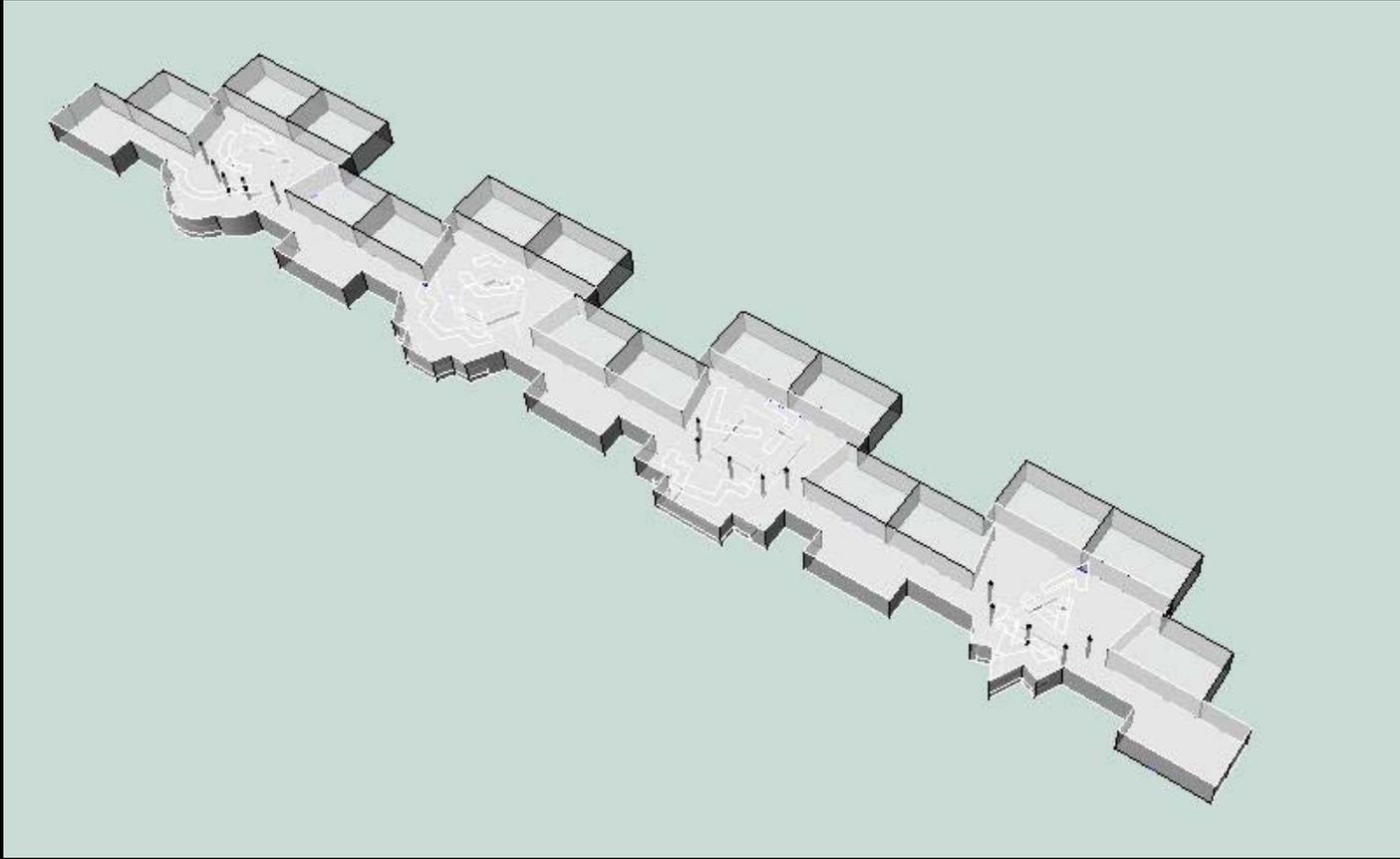


# Clustered Classrooms: a different plan



**Geometric  
Concepts**

# Clustered Classrooms: a different plan



# Clustered Classrooms



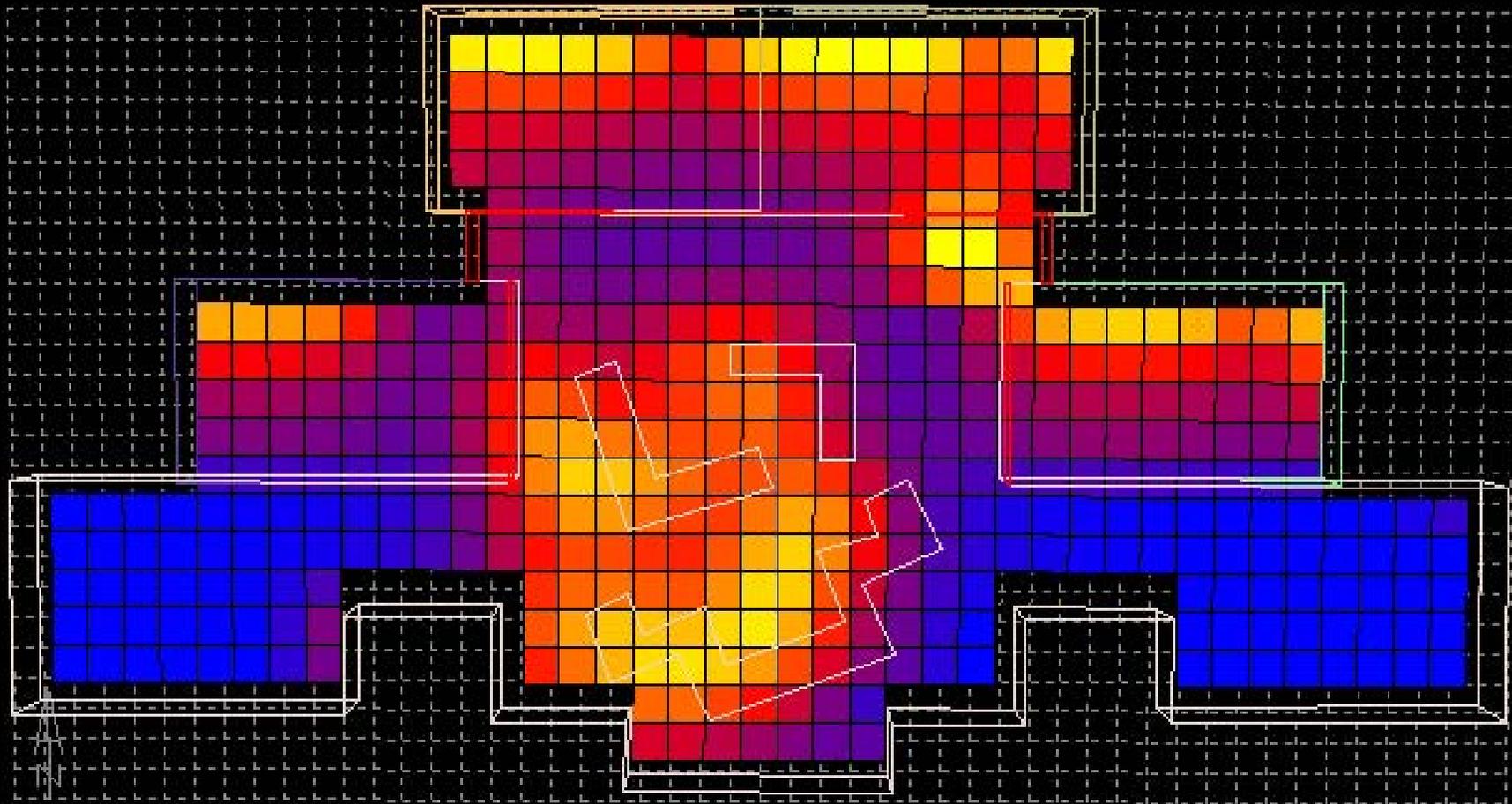
# Clustered Classrooms: Daylight Factor (DAYSIM)

## Daylight Analysis

Annual illuminance

Value Range: 0.0 - 20.0 %

© ECOTECTUS



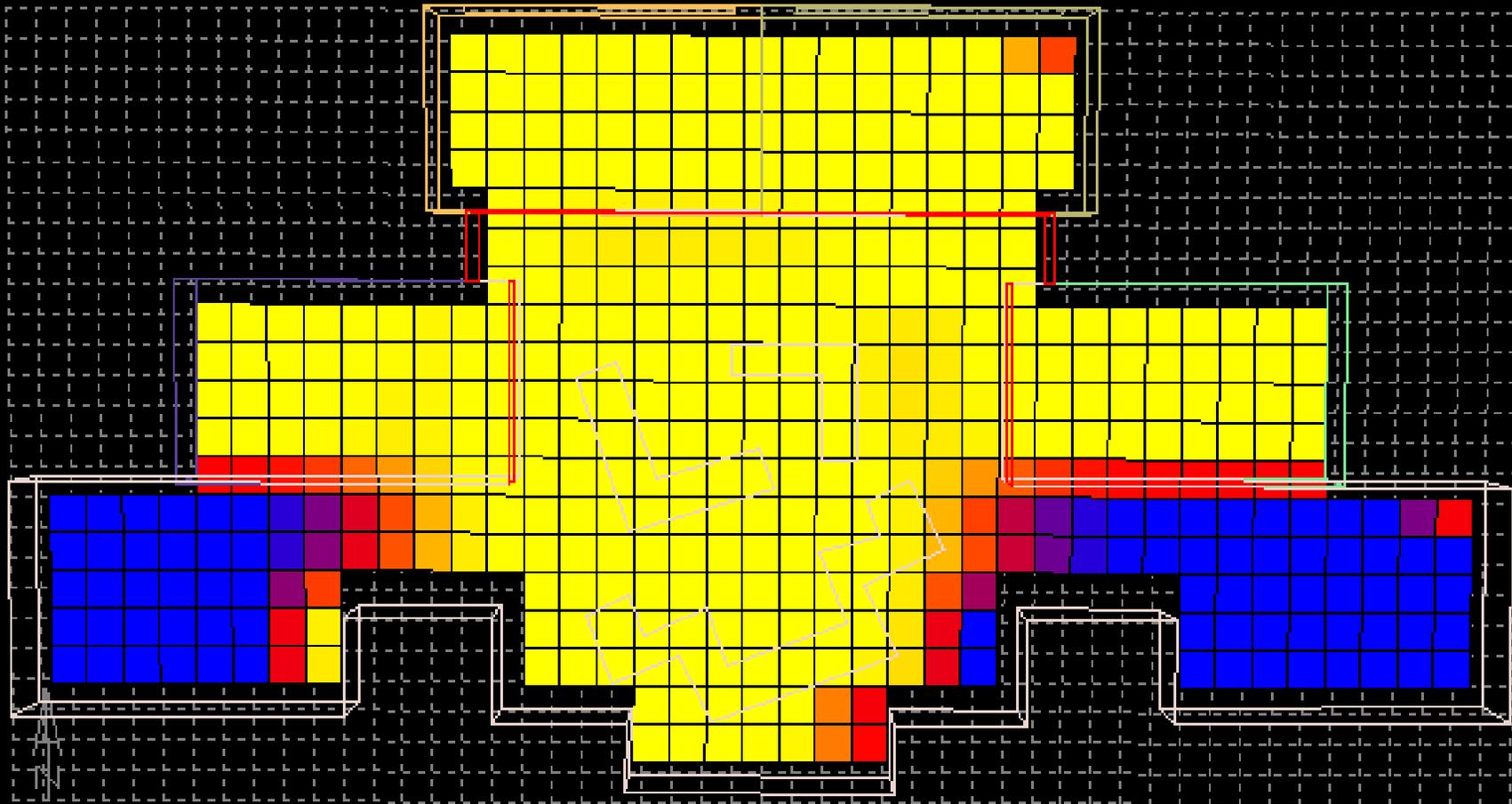
# Clustered Classrooms: Daylight Autonomy (DAYSIM)

## Daylight Analysis

Annual illuminance

Value Range: 0 - 100 %

© ECOTECTUS

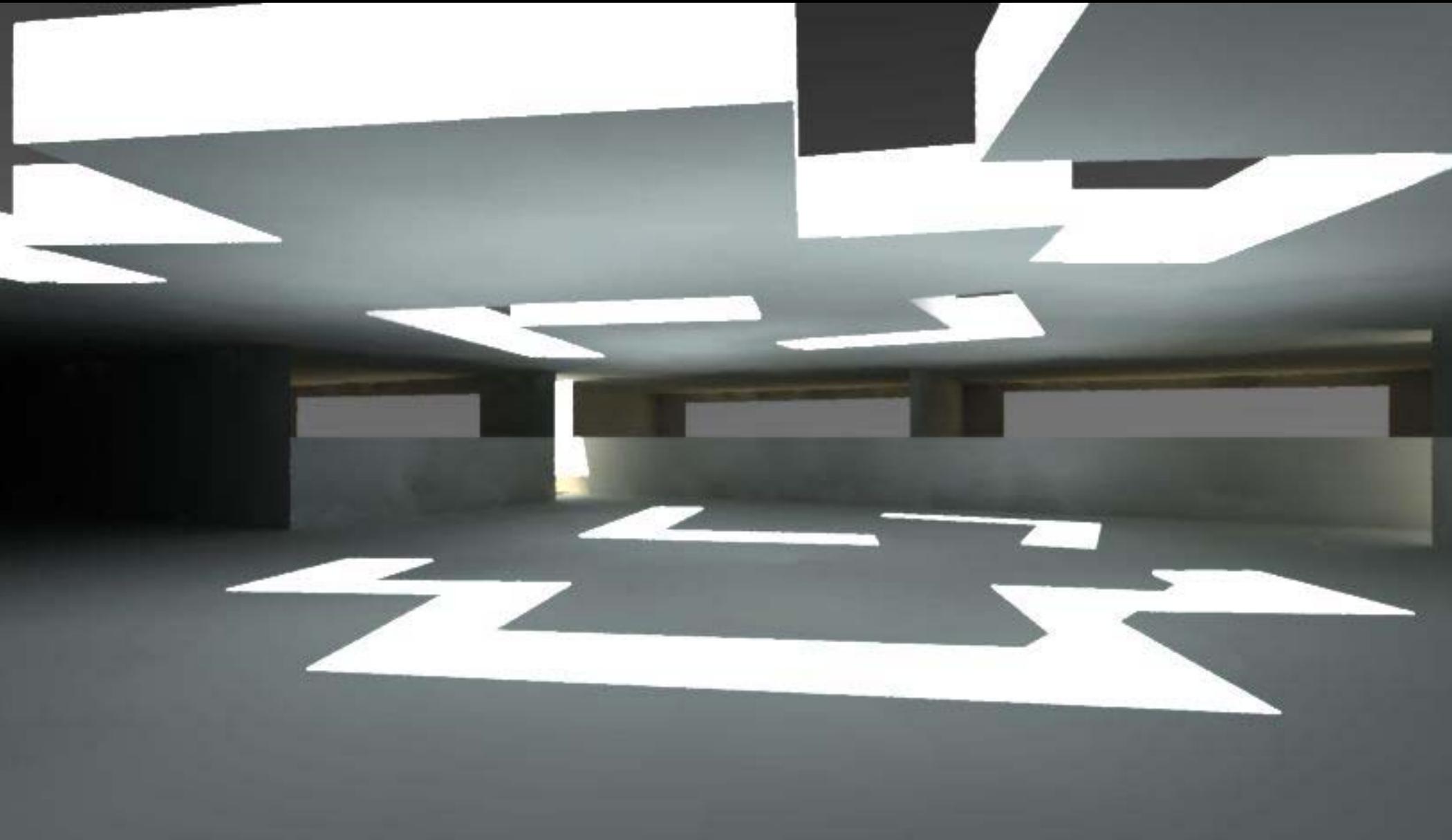


# Clustered Classrooms



*Classrooms*

# Clustered Classrooms



# Clustered Classrooms



**Images of light...**











