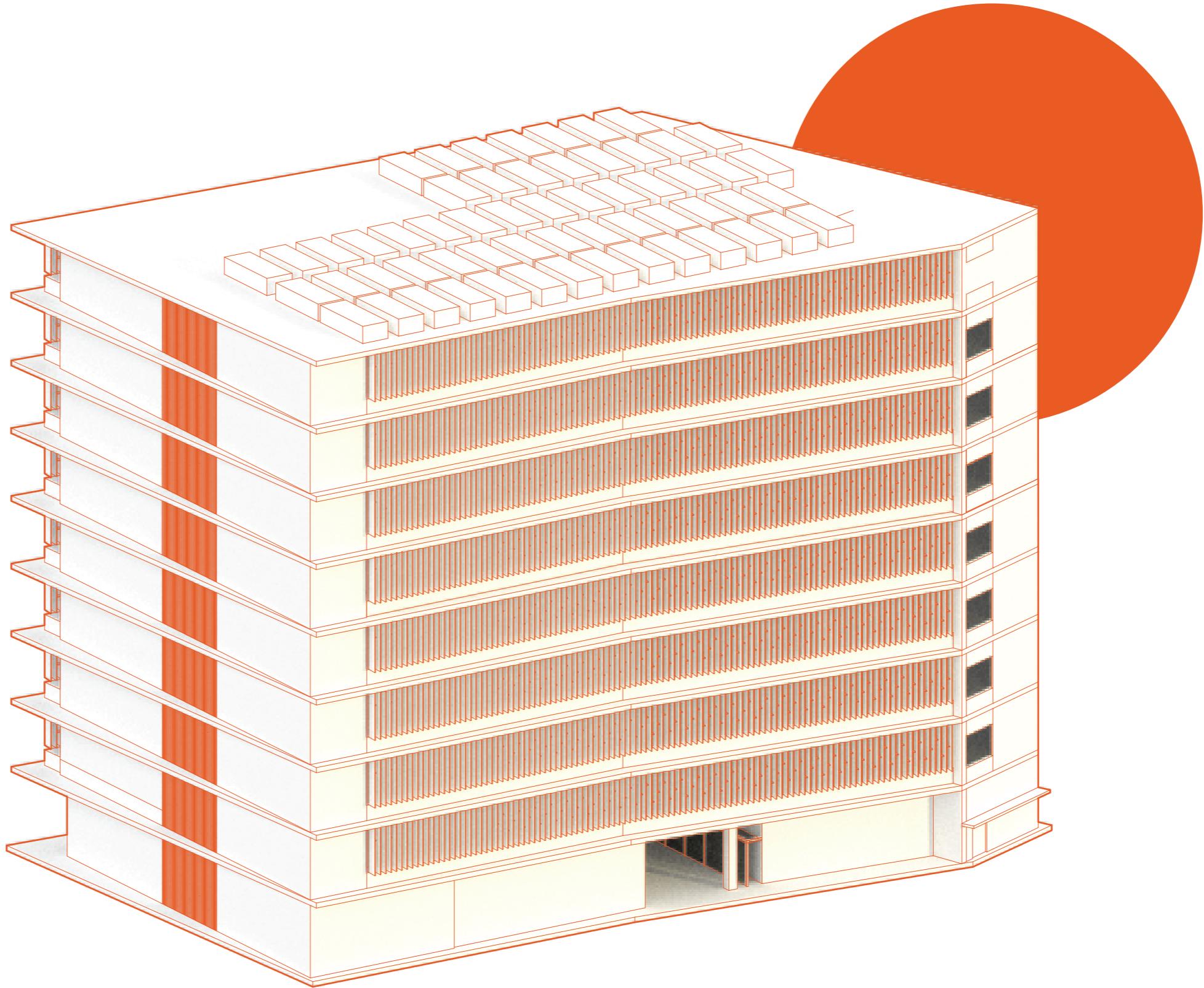


CO-OP KYOSAI PLAZA

DAYLIGHTING & ELECTRIC LIGHTING

PLOY CATALINA PLOYSONGSANG



BUILDING INFORMATION



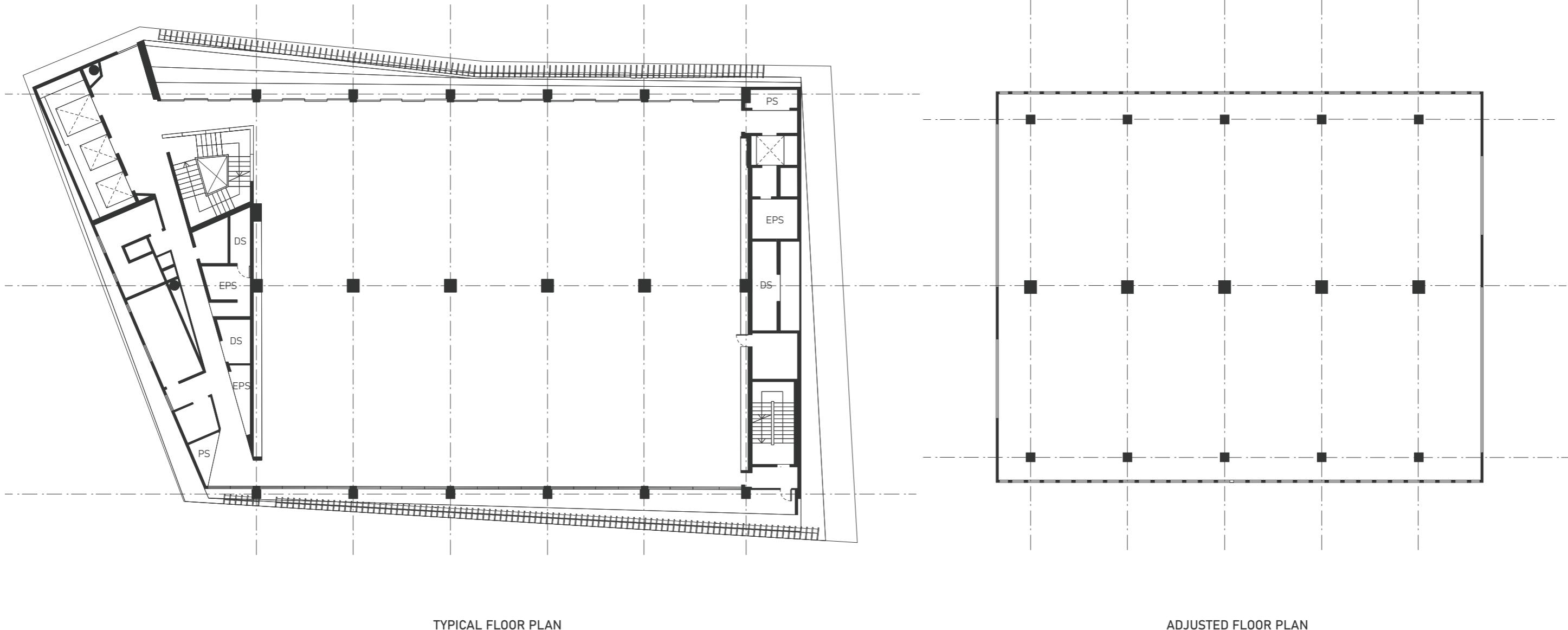
The building reflects Kengo Kuma's signature approach of blending natural materials with modern design, while also incorporating lessons learned from past earthquake disasters. It prioritizes sustainability, safety, and comfort, integrating traditional Japanese elements with contemporary technology to create an environmentally responsible and resilient office space.



COOP Kyosai Plaza in Tokyo, Japan, was designed by Nikken Sekkei LTD and completed in 2009 as the headquarters for the Japanese Consumers' Cooperative Union (COOP).

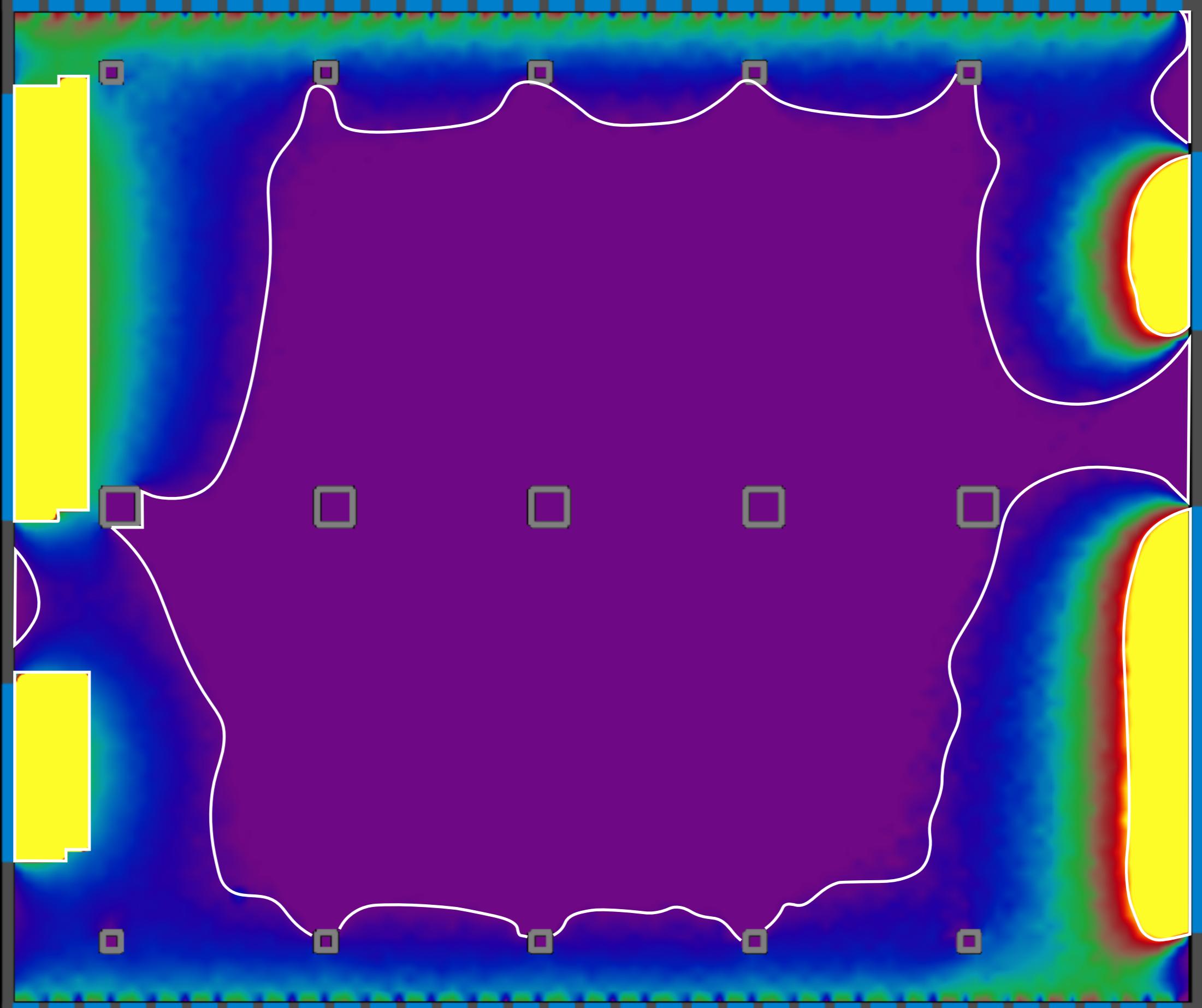


COMPARISON



The typical design lacks proper openings for natural lighting on the east and west sides of the building. Additionally, the complex positioning of the facade and the irregular form of the exterior walls make it difficult to conduct an effective lighting access analysis, highlighting the need to simplify or adjust the floor plan.

The adjusted version concentrates solely on the office zone and simplifies the facade's surface area by including only the side facing inward, as this is the only portion relevant to the interior lighting simulation. Additionally, windows have been added to the east and west sides of the building to enhance natural lighting in accordance with the required levels of illumination.



DAYLIGHT ACCESS STUDY

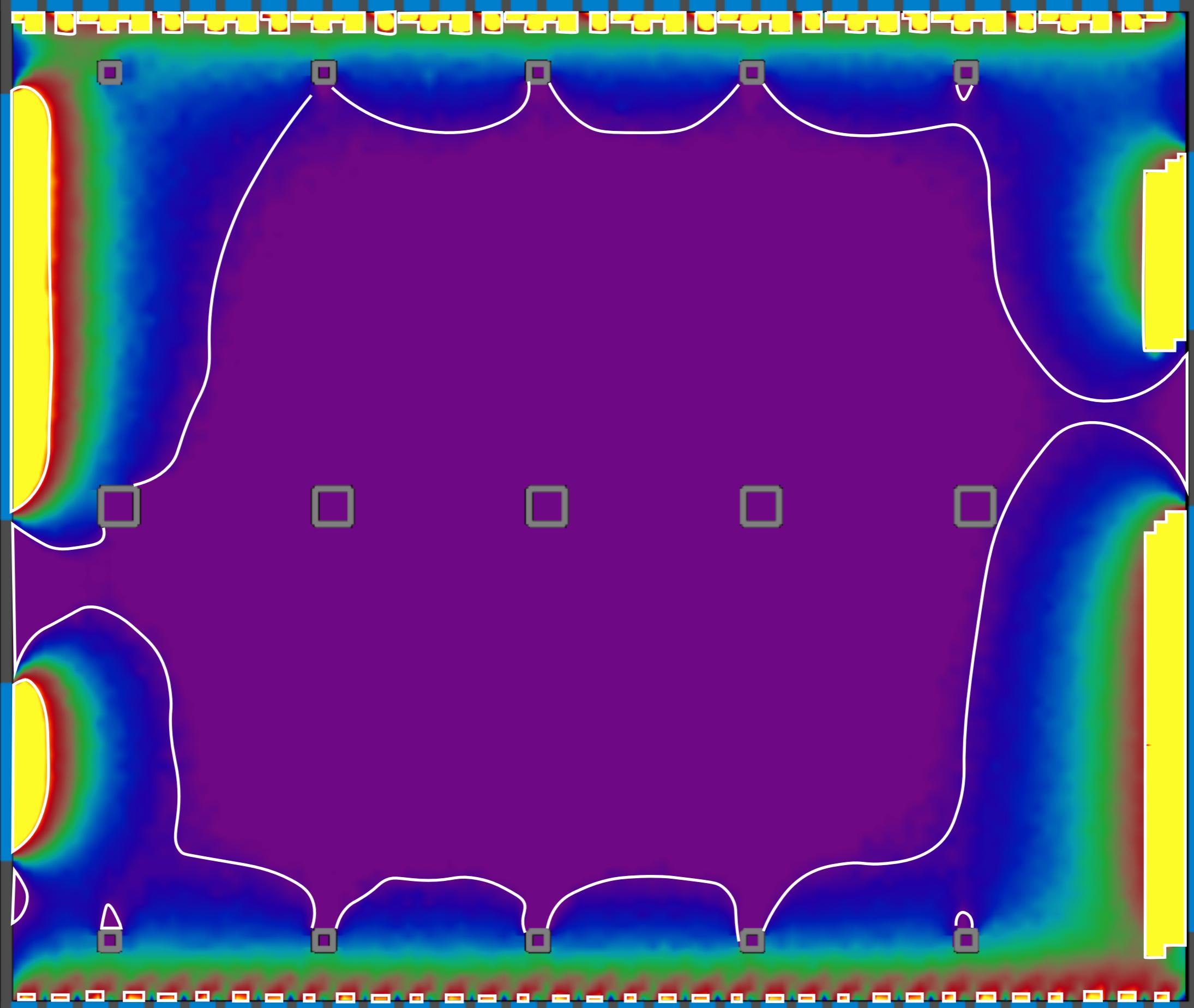
21 MARCH (09:00 AM)

Total Floor Area : 924 m²

Daylight Access Area : 553 m²

Total Percentage : 924/553 = 67%

Pass.



DAYLIGHT ACCESS STUDY

21 MARCH (09:00 AM)

Total Floor Area : 924 m²

Daylight Access Area : 519 m²

Total Percentage : 924/519 = 78%

Pass.

LIGHTING SIMULATION

FIXTURES

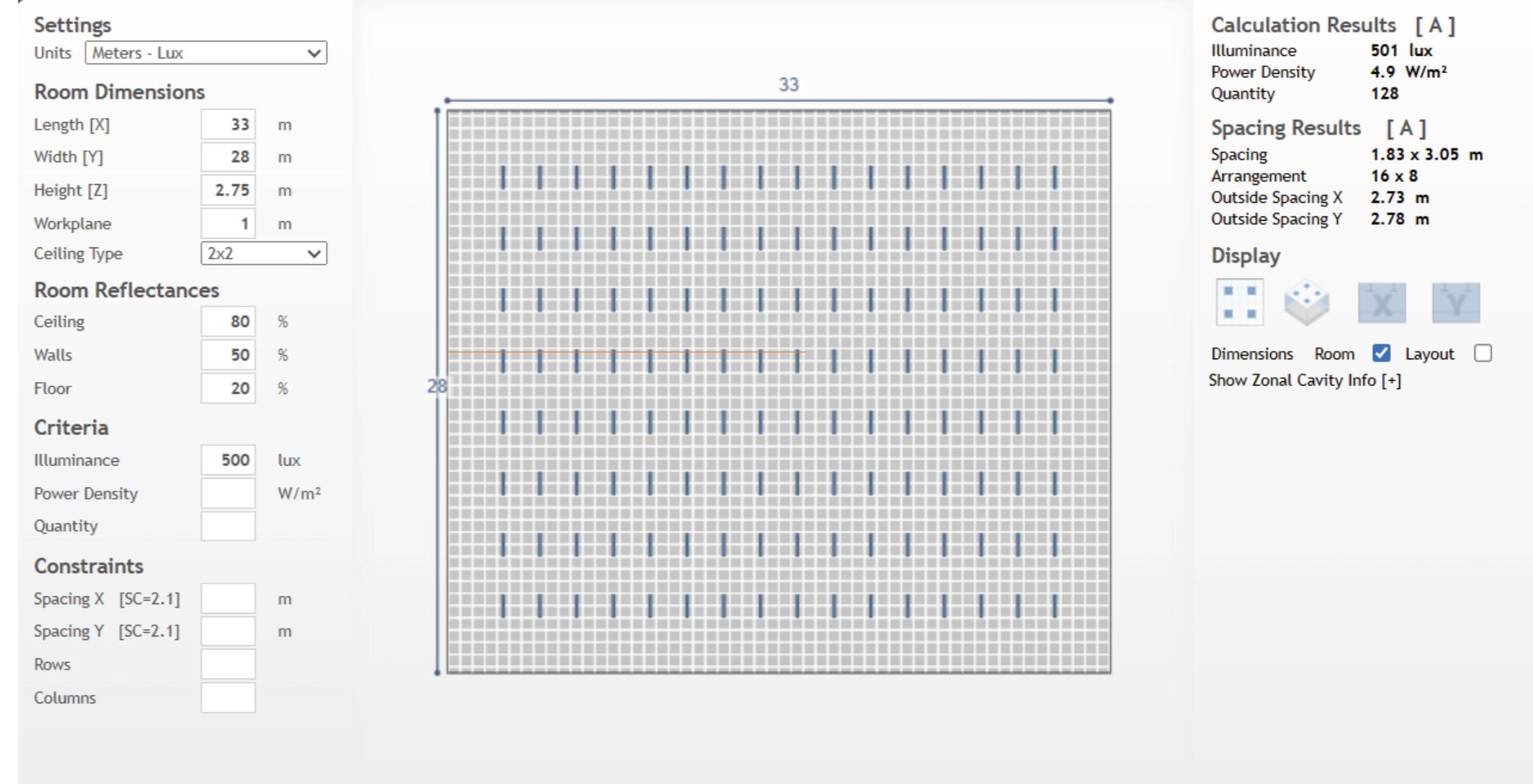
MARK ARCHITECTURAL LIGHTING - LINEAR
S2WD 2FT 80CRI 30K 300LMF STD FLL (CORRIDOR AMBIENT)



HYDREL - LINEAR
HLC502 4FT 90CRI 50K 300LMF 120X120 (TASK LIGHT)



HYDREL - ACCENT LIGHT
JENSON PM60B 3LED16 30K 120 S12 (FLOOR LAMP)



LIGHTING REQUIREMENT FOR OFFICE SPACE
: 500 LUX

LEGENDS

■ MARK ARCHITECTURAL LIGHTING - LINEAR
S2WD 2FT 80CRI 30K 300LMF STD FLL (CORRIDOR AMBIENT)

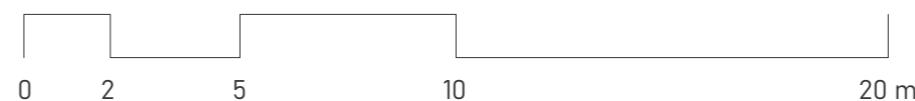
■ HYDREL - LINEAR
HLC502 4FT 90CRI 50K 300LMF 120X120 (TASK LIGHT)

● HYDREL - ACCENT LIGHT
JENSON PM60B 3LED16 30K 120 S12 (FLOOR LAMP)

S LIGHT SWITCH

TYPICAL FLOOR PLAN

1:175



To prevent damage from an earthquake, the lights are installed on walls, tables, and floors, avoiding the installation of ceiling lights.

DAYLIGHTING & ELECTRIC LIGHTING

