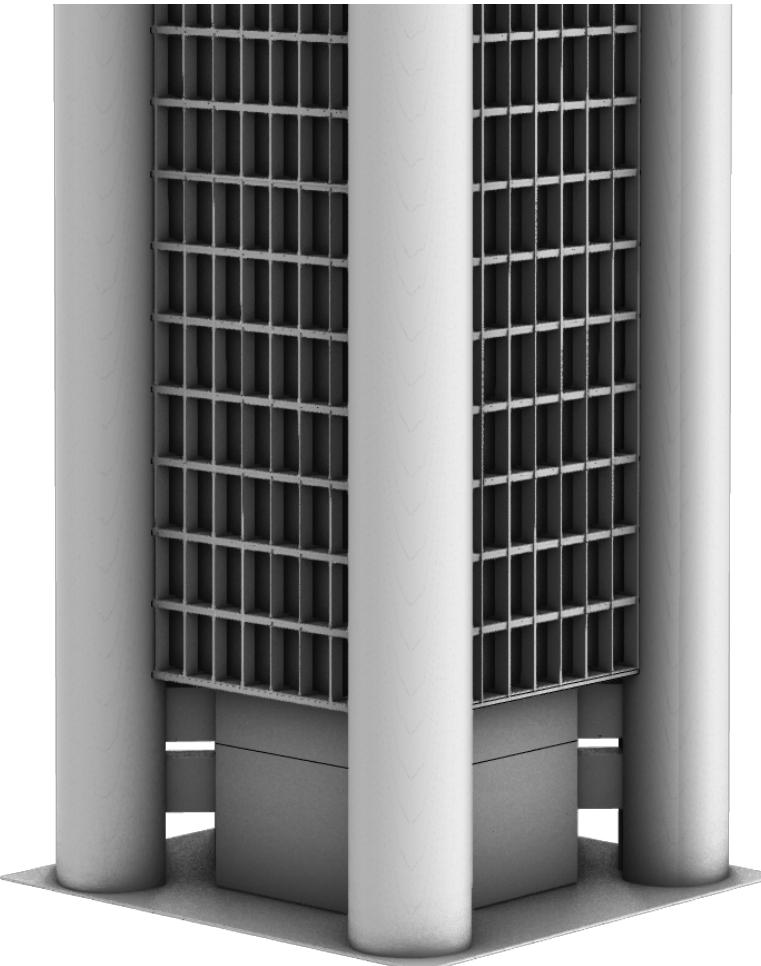


THE KNIGHT OF COLUMBUS

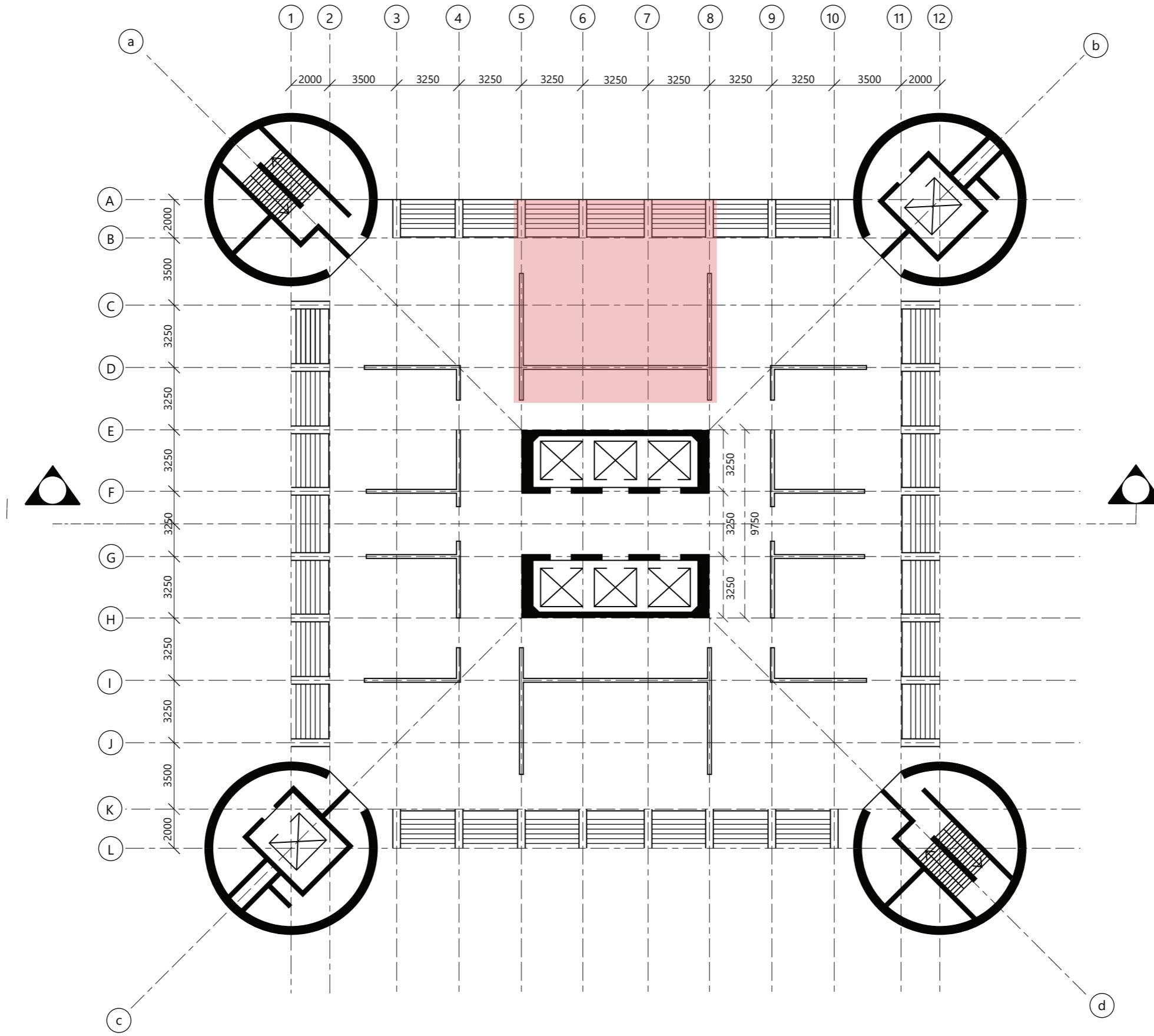


Designed by architect : Kevin Roche

Location : New Haven, Connecticut

Construction : 1969

The building serves as an iconic architectural example of modernist design. Moreover, exemplifies functionality, efficiency, and innovative use of materials, making it a fascinating subject for architects and designers.



SELECTED AREA
PLAN
SCALE 1:200

TIME : 9 AM

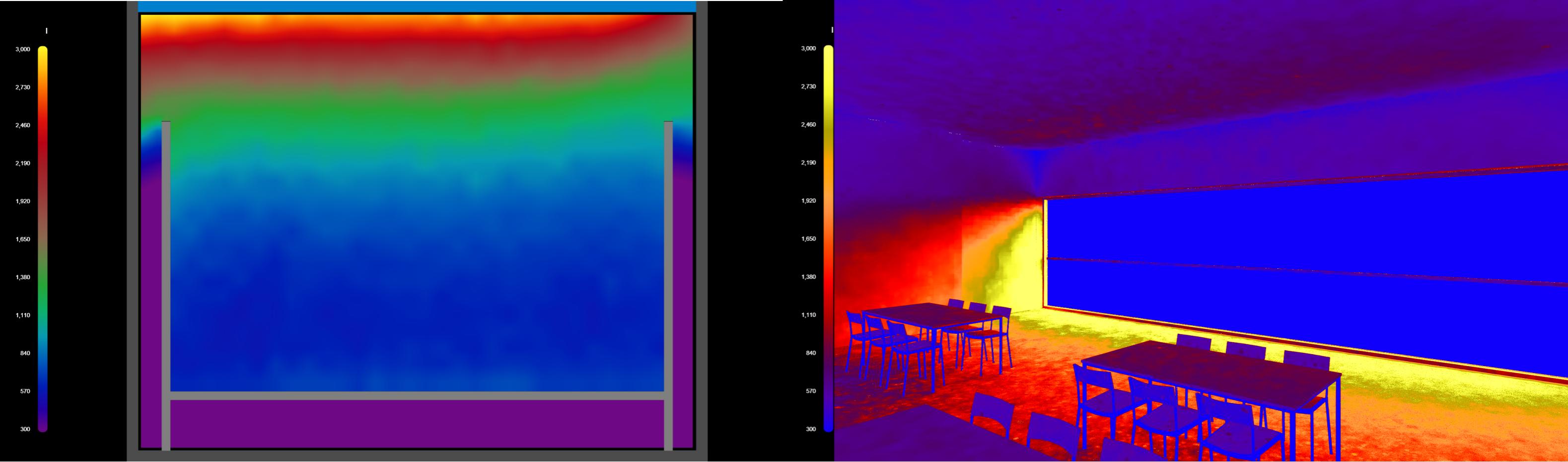
day light access area = 56.99 sq.m

total percentage : 80/56.99 = 71.24 %

DAYLIGHT ACCESS STUDY

21 MARCH

total selected area = 80 sq.m



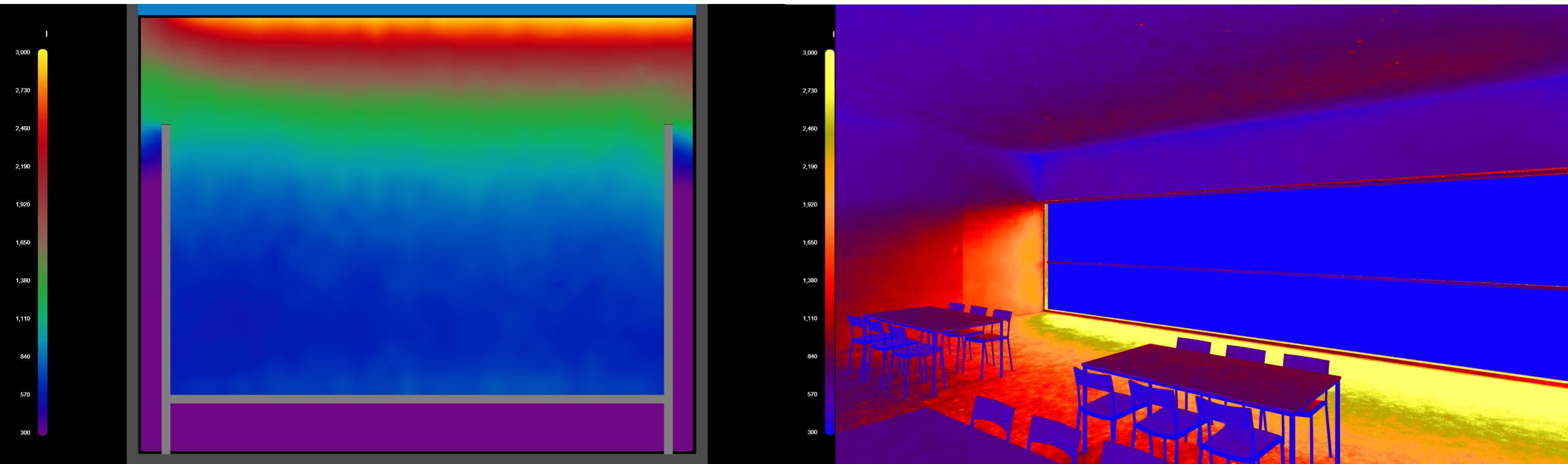
TIME : 3 PM

day light access area = 56.85 sq.m

total percentage : 80/56.85 = 71.06 %

21 MARCH

total selected area = 80 sq.m



TIME : 9 AM

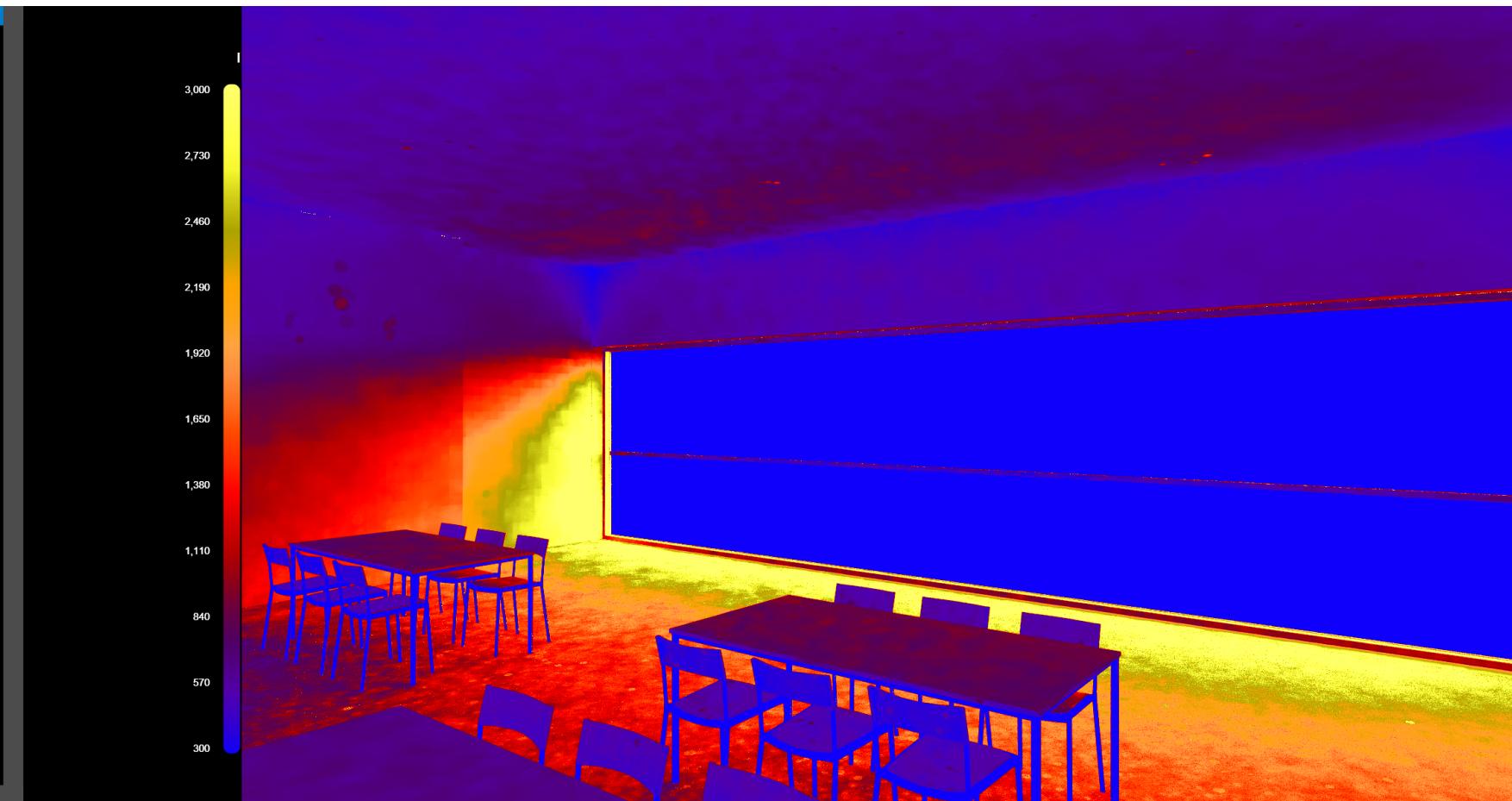
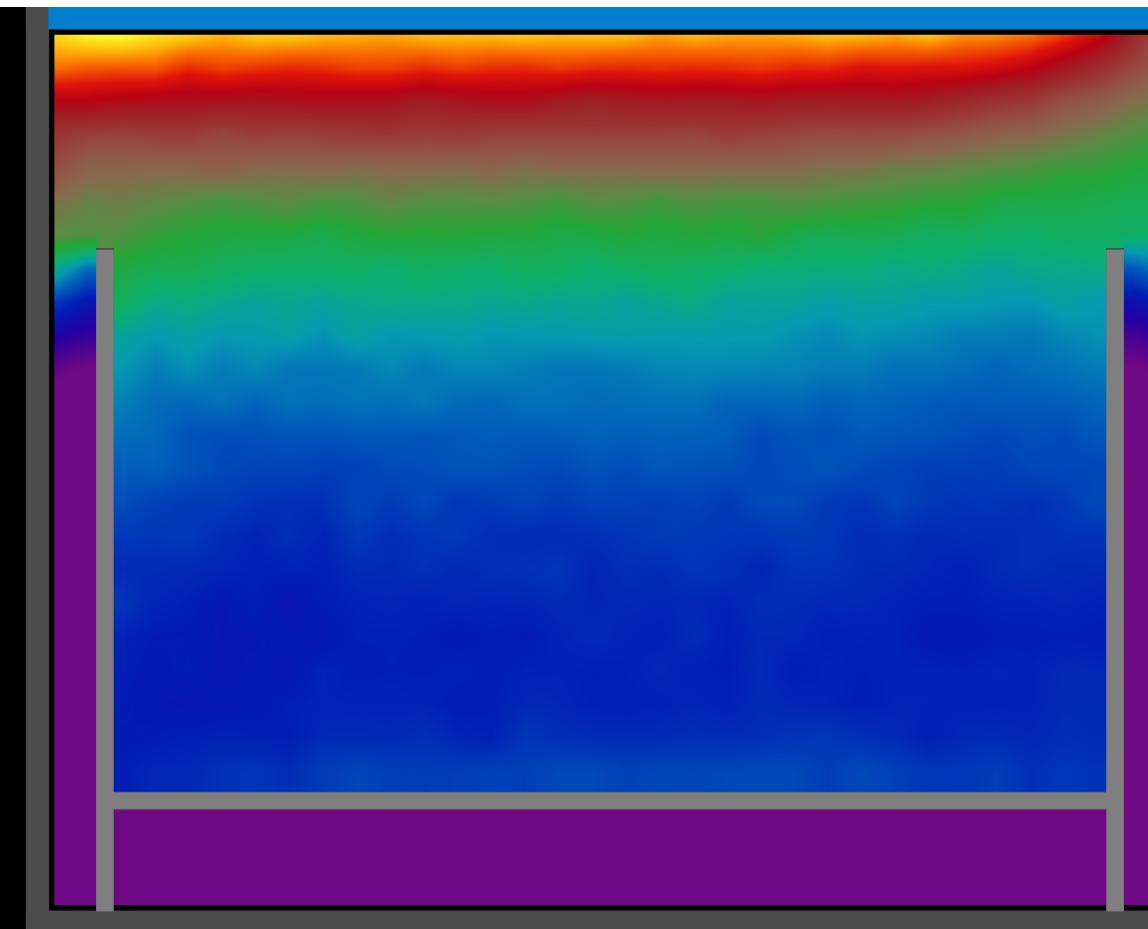
day light access area = 55.88 sq.m

total percentage : $80/55.88 = 69.85 \%$

DAYLIGHT ACCESS STUDY

21 SEPTEMBER

total selected area = 80 sq.m



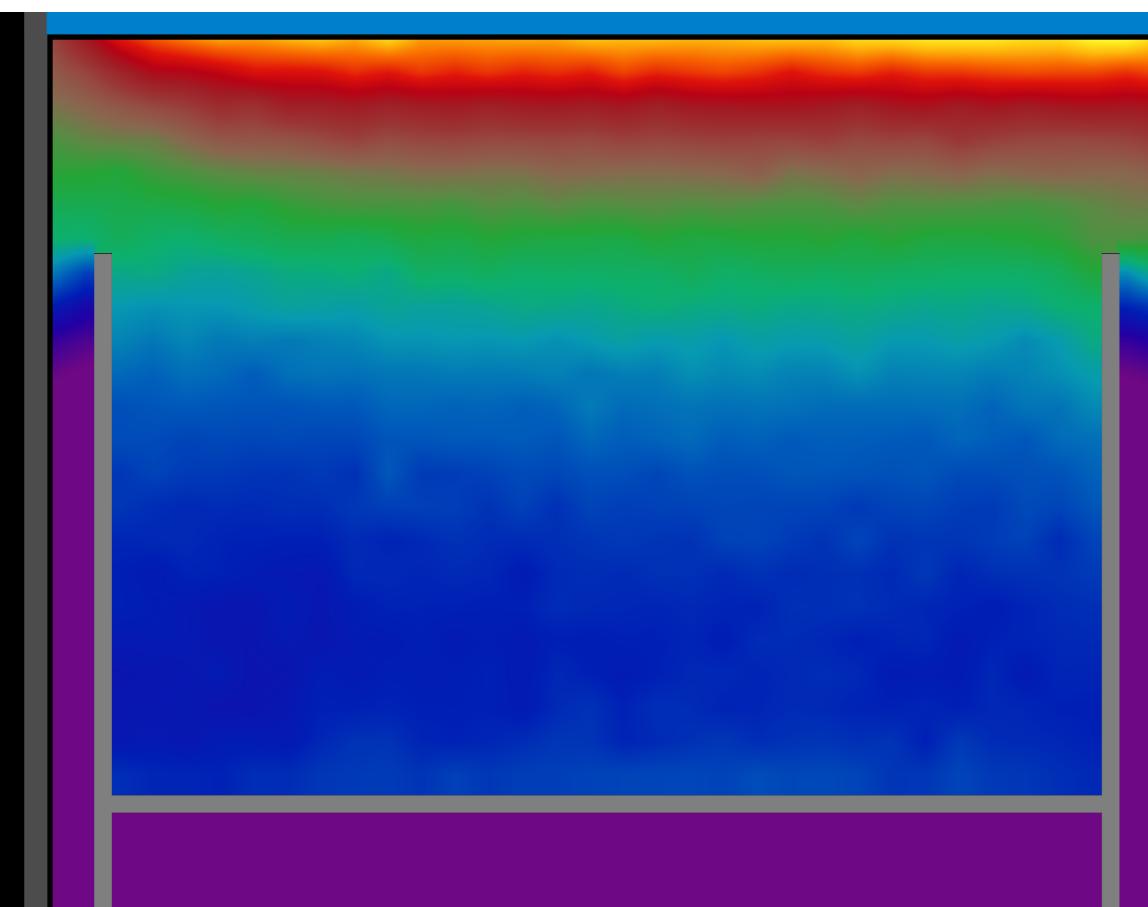
TIME : 3 PM

day light access area = 57 sq.m

total percentage : $80/57 = 71.09 \%$

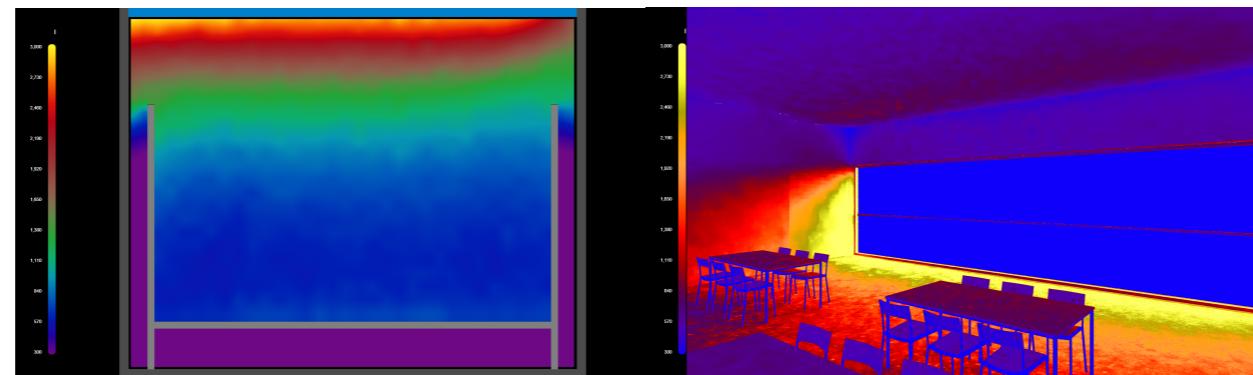
21 SEPTEMBER

total selected area = 80 sq.m

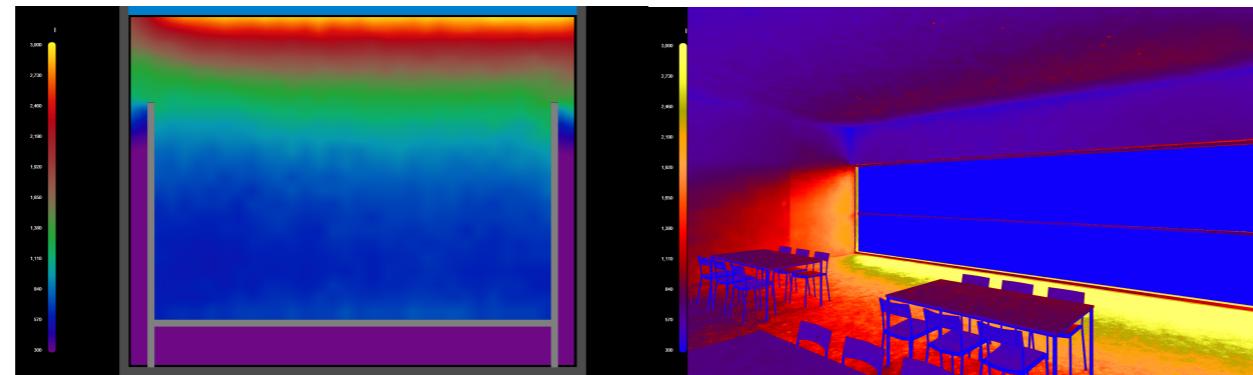


DAYLIGHT ACCESS STUDY
21 MARCH
total selected area = 80 sq.m

TIME : 9 AM
day light access area = 56.99 sq.m
total percentage : $80/56.99 = 71.24 \%$

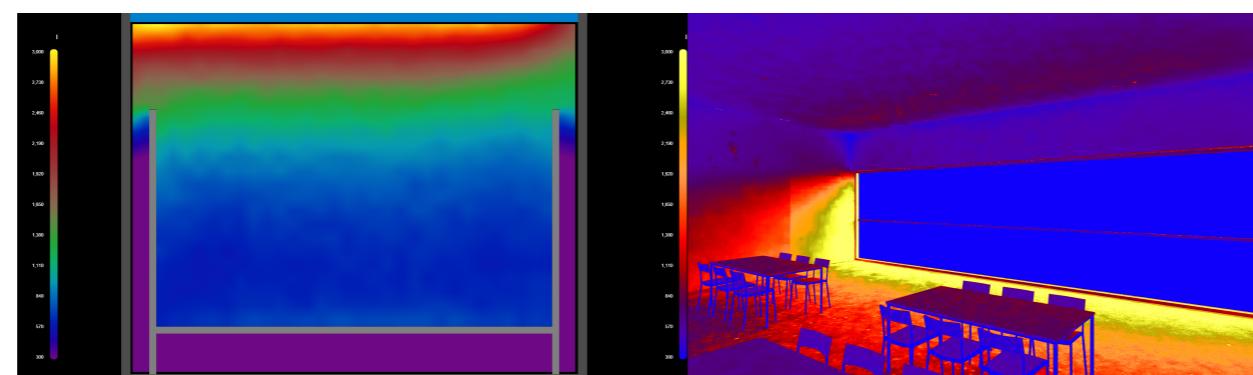


TIME : 3 PM
day light access area = 56.85 sq.m
total percentage : $80/56.85 = 71.06 \%$

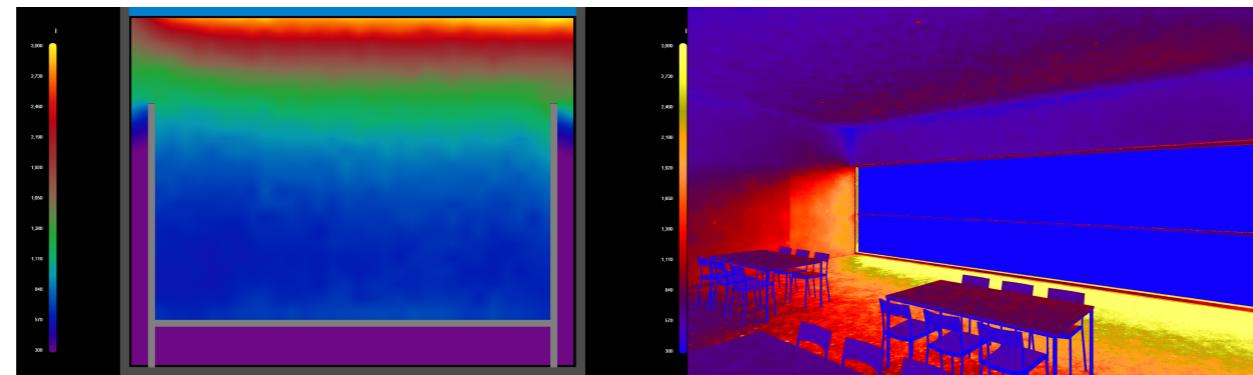


DAYLIGHT ACCESS STUDY
21 SEPTEMBER
total selected area = 80 sq.m

TIME : 9 AM
day light access area = 55.88 sq.m
total percentage : $80/55.88 = 69.85 \%$



TIME : 3 PM
day light access area = 57 sq.m
total percentage : $80/57 = 71.09 \%$



The daylight access analysis of the selected area reveals that perimeter zones receive sufficient natural light during the day, especially around 9 AM and 3 PM during both equinox periods (March and September). These areas, shown in red and orange on the diagrams, benefit from high daylight levels, reducing the need for artificial lighting during daytime hours. In contrast, the central zones exhibit lower daylight access, as indicated by the blue and purple areas, and may require additional artificial lighting for functional use during the day.

However, once the sun sets, all areas, including the perimeter, lose access to natural light and require artificial illumination. Therefore, while daylight can be efficiently utilized during the day to save energy in perimeter zones, proper lighting design must be implemented to ensure adequate visibility throughout the space at night.

REFLECTED CEILING PLAN

SCALE 1:200

LEGENDS

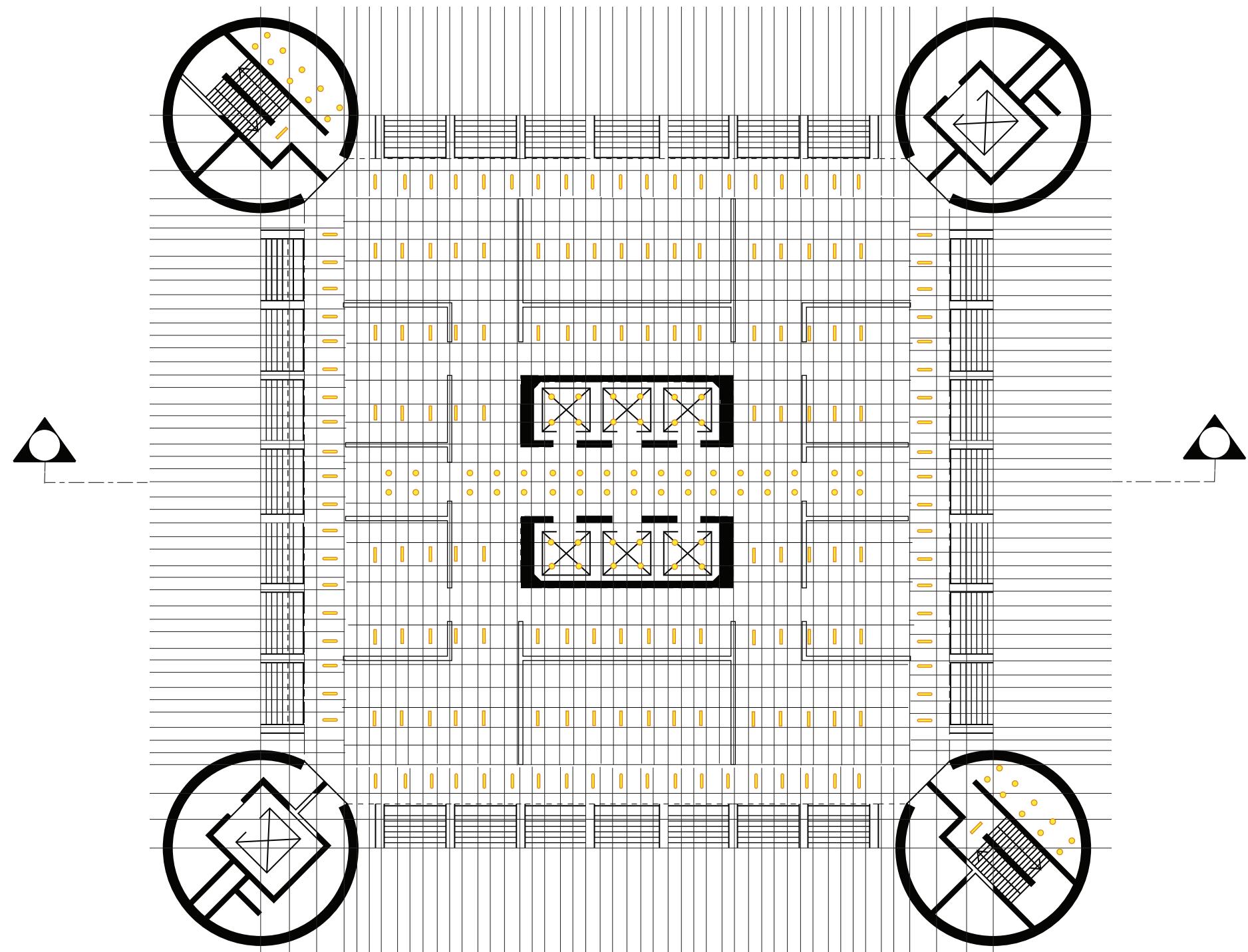
— MARK ARCHITECTURAL LIGHTING
SL6L 4 FLP 80CRI 40K 1200LMF

— MARK ARCHITECTURAL LIGHTING
SL6L 2 FLP 80CRI 35K 1200LMF

— MARK ARCHITECTURAL LIGHTING
S4SD 4 FT 80CRI 27K 1200LMF DRP05

● GOTHAM ARCHITECTURAL LIGHTING
EVO2 30/05 AR LSS WD

● GOTHAM ARCHITECTURAL LIGHTING
EVO2 30/10 AR LD MWD

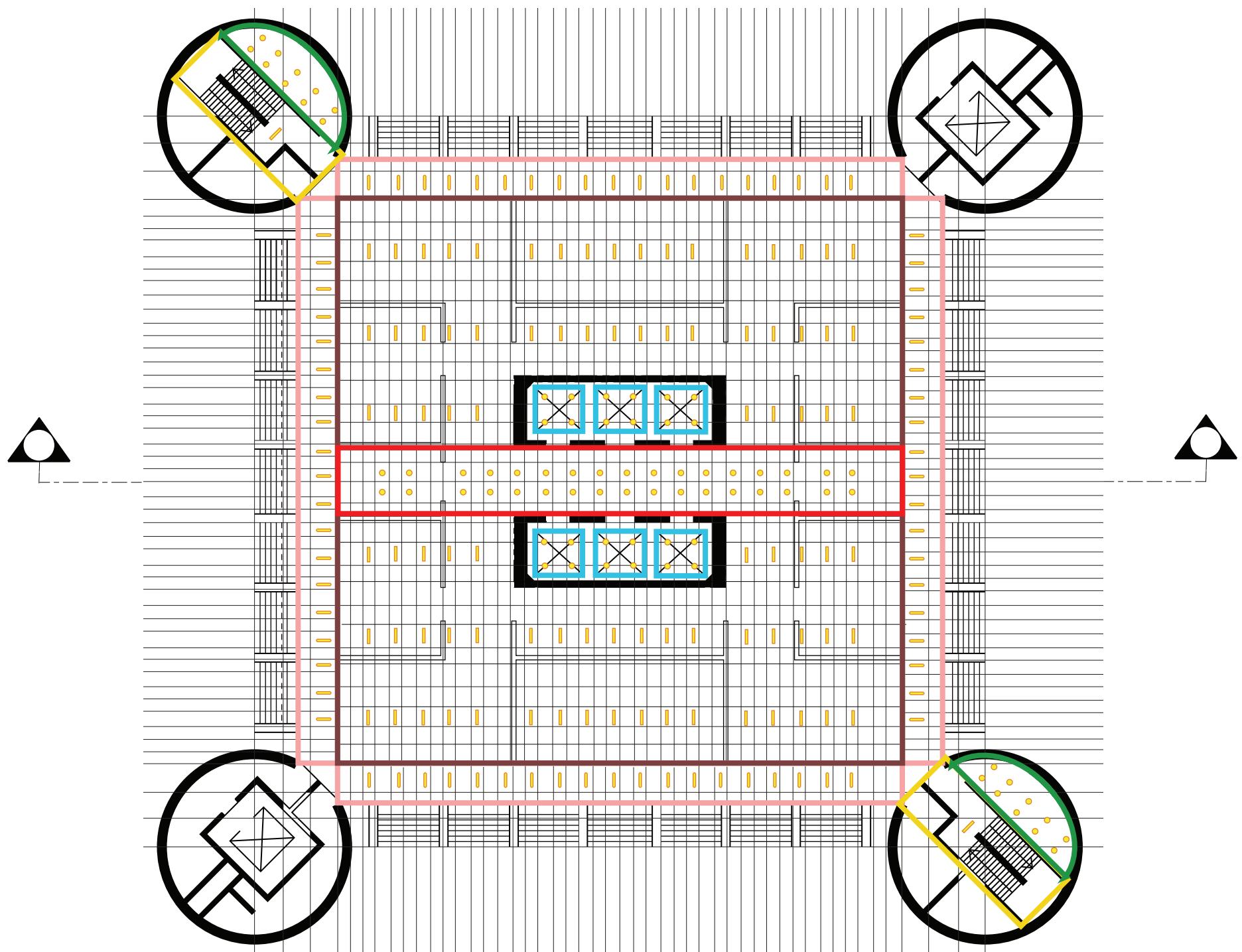


ZONING

DISTRIBUTED AREA
PLAN
SCALE 1:200

LEGENDS

- OFFICE
- CORRIDOR
- PERIMETER ZONE
- STAIRCASE
- LIFT
- WC



OFFICE

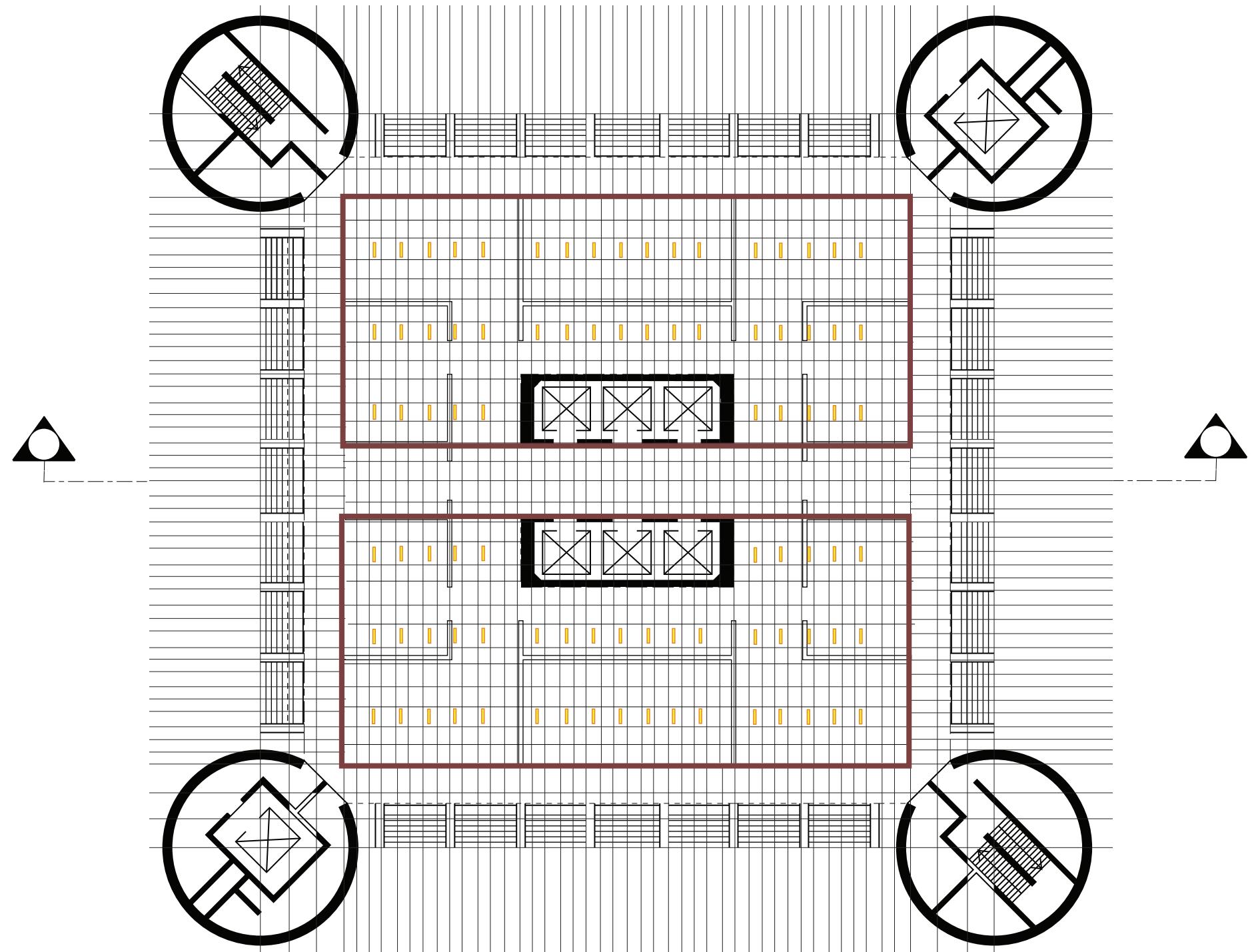
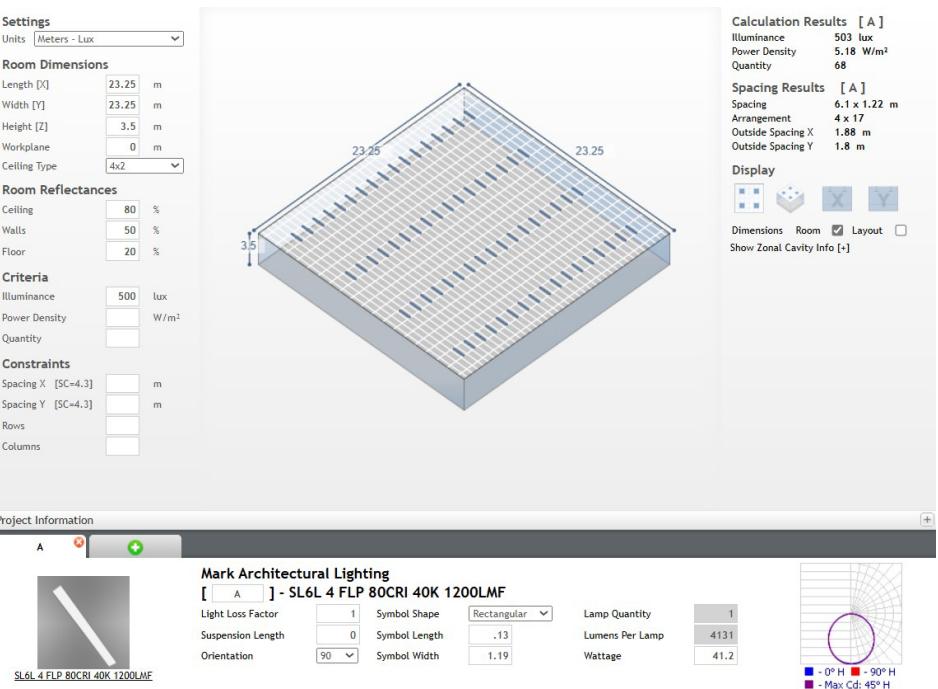
PRODUCT USED :
MARK ARCHITECTURAL LIGHTING
SL6L 4 FLP 80CRI 40K 1200LMF

REQUIREMENT :
500 LUX

ILLUMINANCE :
503 LUX

POWER DENSITY :
5.18 W/SQ.M.

QUANTITY :
68 PCS.



OFFICE
PLAN
SCALE 1:200

PERIMETER

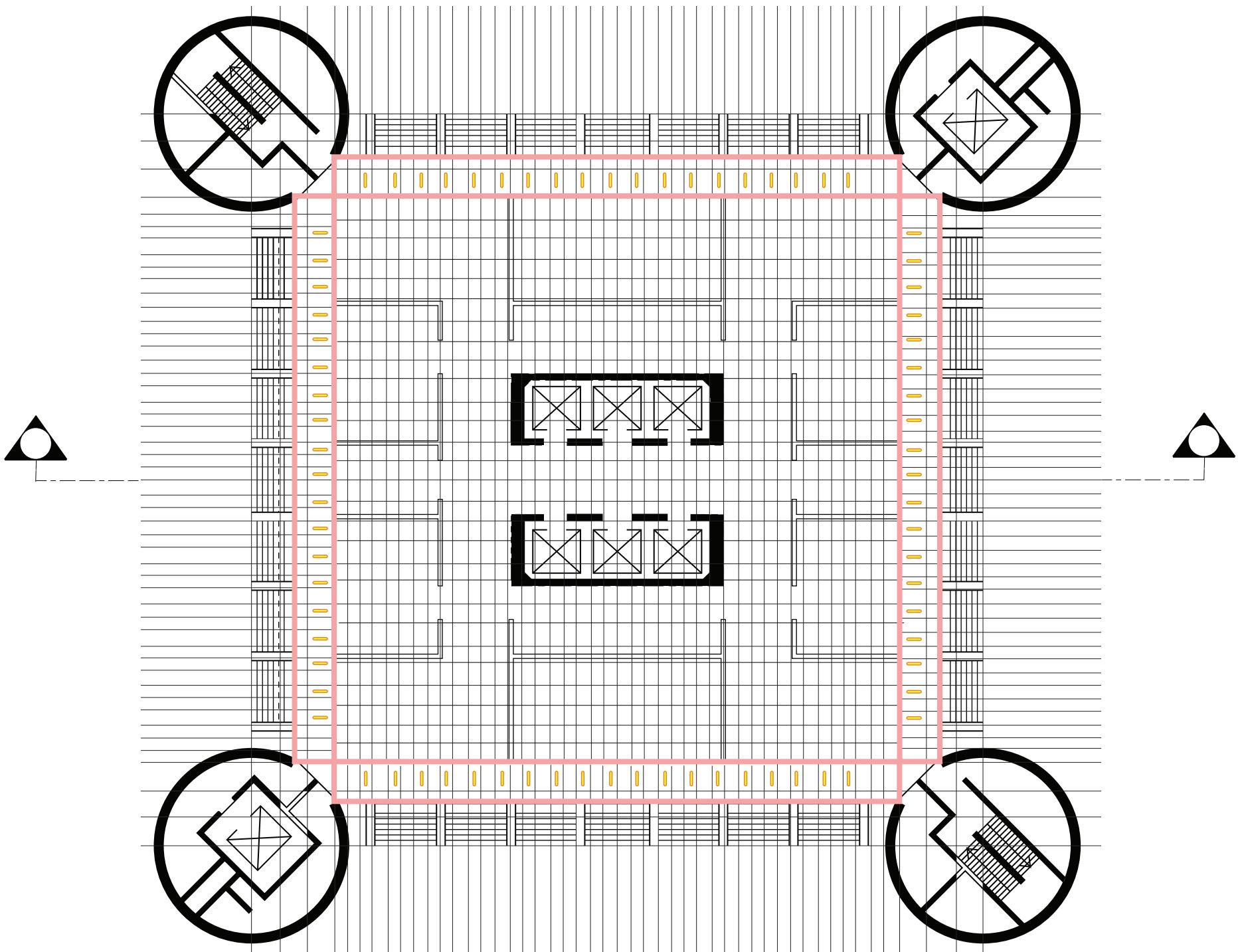
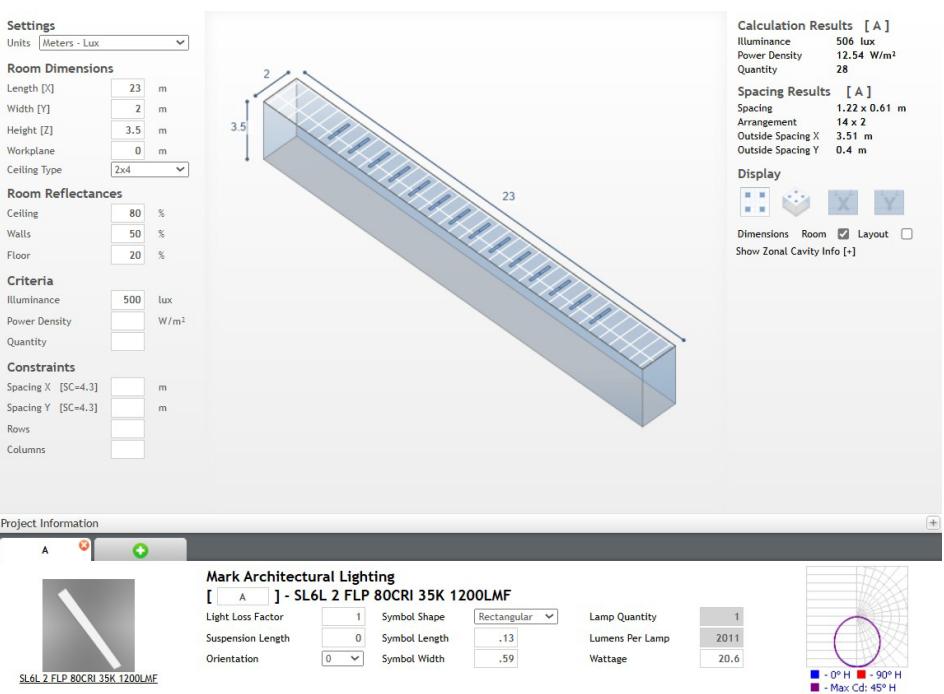
PRODUCT USED :
MARK ARCHITECTURAL LIGHTING
SL6L 2 FLP 80CRI 35K 1200LMF

REQUIREMENT :
500 LUX

ILLUMINANCE :
506 LUX

POWER DENSITY :
12.54 W/SQM.

QUANTITY :
28 PCS.



PERIMETER ZONE
PLAN
SCALE 1:200

CORRIDOR

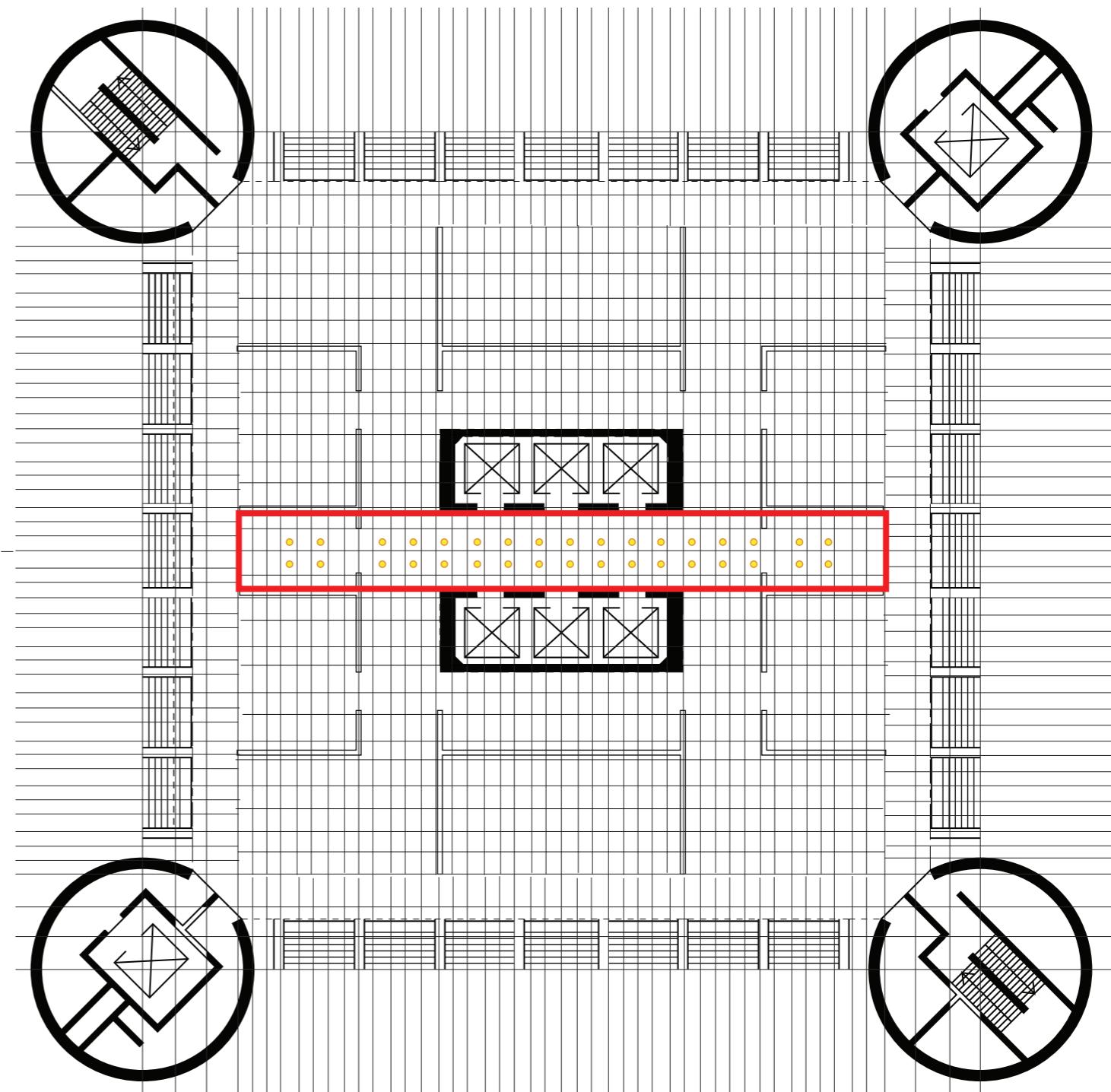
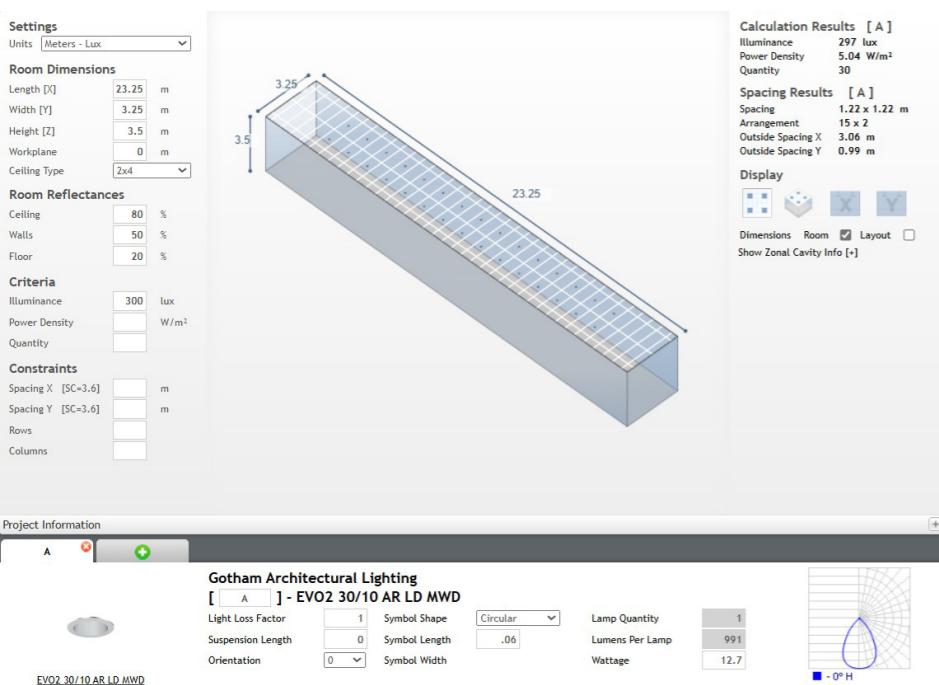
PRODUCT USED :
GOTHAM ARCHITECTURAL LIGHTING
EVO2 30/10 AR LD MWD

REQUIREMENT :
300 LUX

ILLUMINANCE :
297 LUX

POWER DENSITY :
5.04 W/SQ.M.

QUANTITY :
30 PCS.



CORRIDOR
PLAN
SCALE 1:200

STAIRCASE

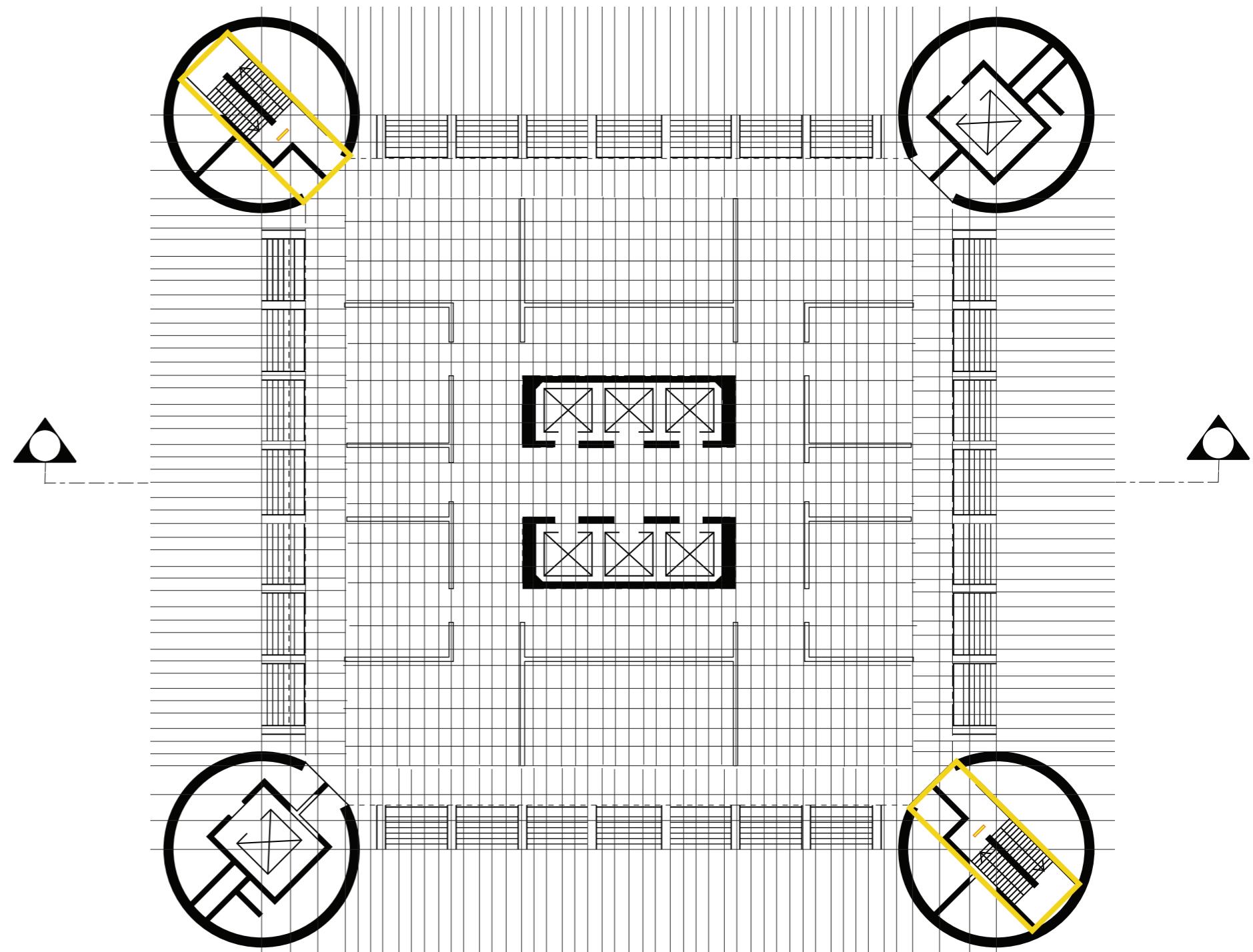
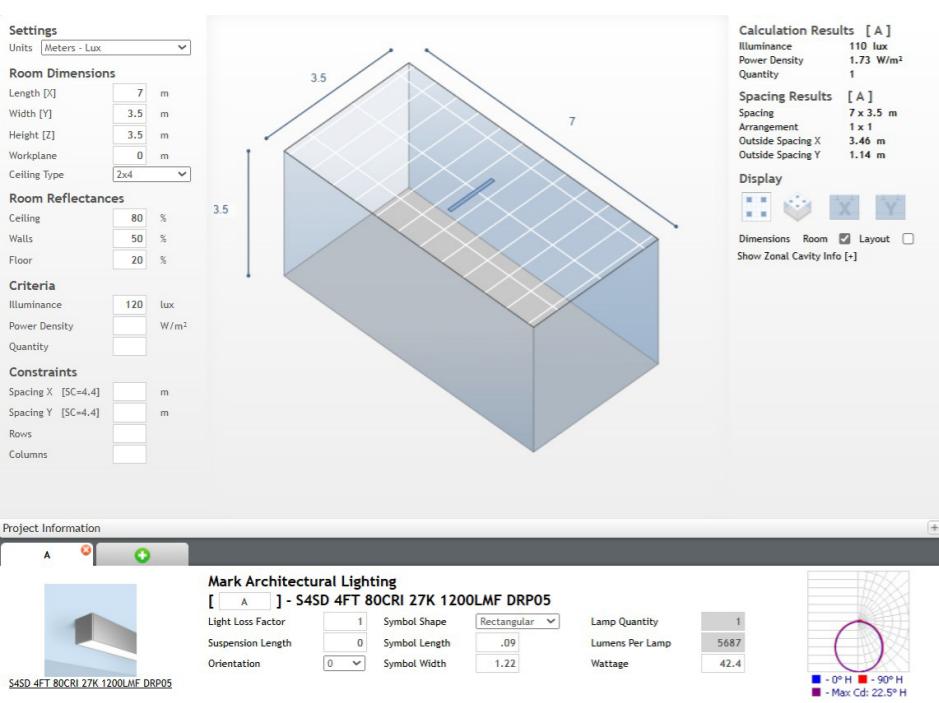
PRODUCT USED :
MARK ARCHITECTURAL LIGHTING
S4SD 4 FT 80CRI 27K 1200LMF DRP05

REQUIREMENT :
120 LUX

ILLUMINANCE :
110 LUX

POWER DENSITY :
1.73 W/SQ.M.

QUANTITY :
1 PCS.



STAIRCASE
PLAN
SCALE 1:200

LIFT

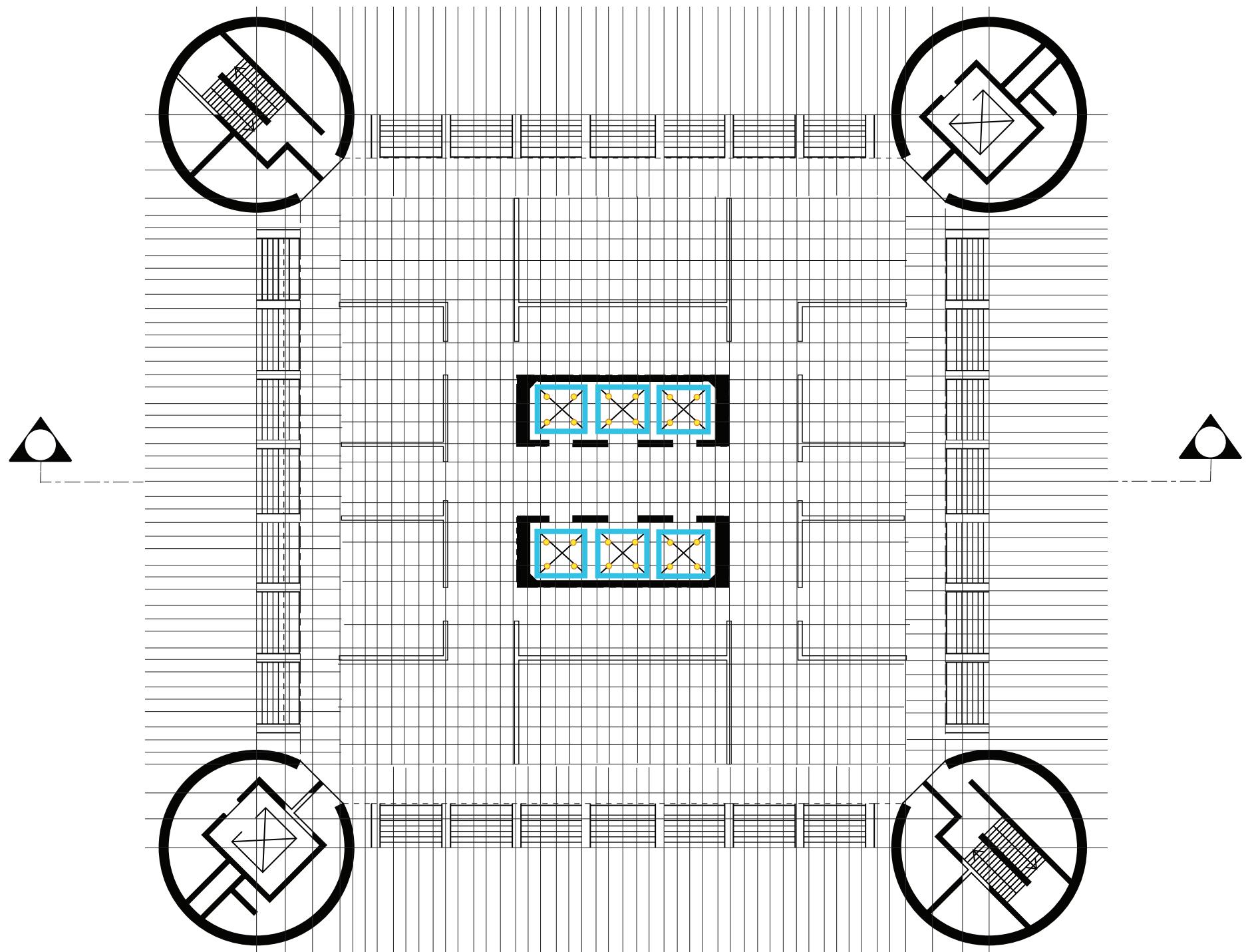
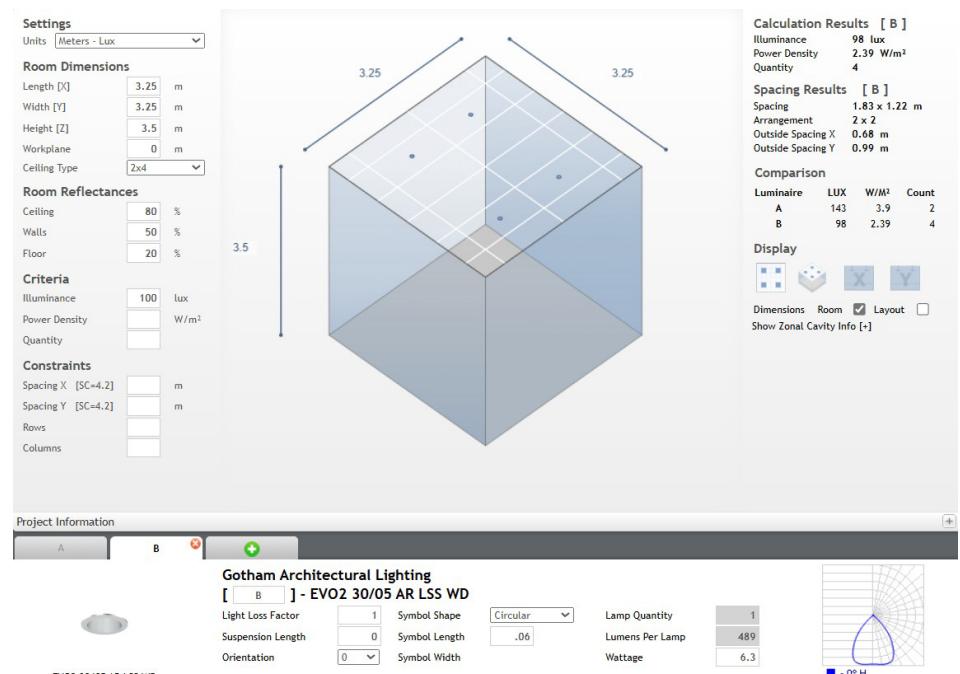
PRODUCT USED :
GOTHAM ARCHITECTURAL LIGHTING
EVO2 30/05 AR LSS WD

REQUIREMENT :
100 LUX

ILLUMINANCE :
98 LUX

POWER DENSITY :
2.39 W/SQ.M.

QUANTITY :
4 PCS.



LIFT
PLAN
SCALE 1:200

WC

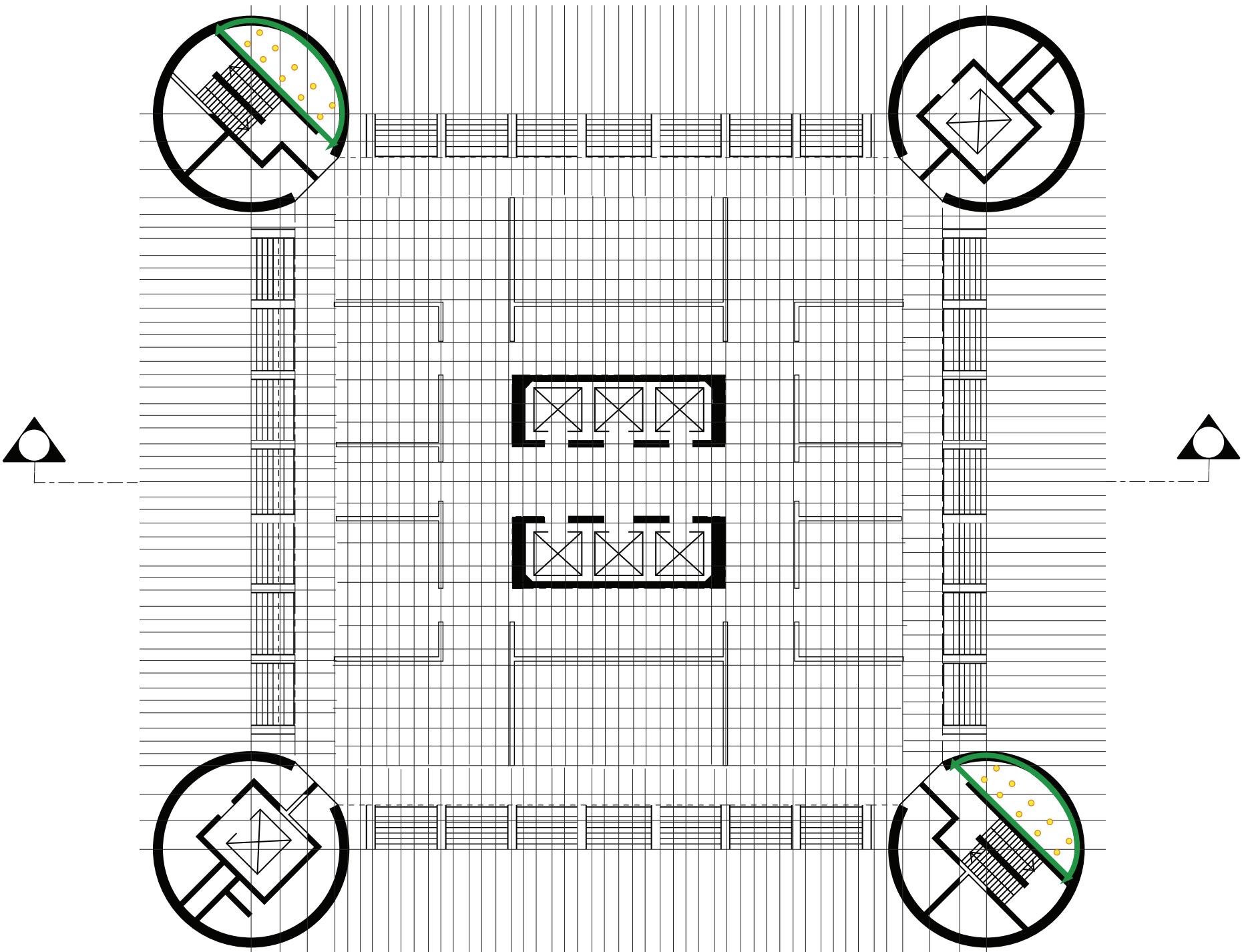
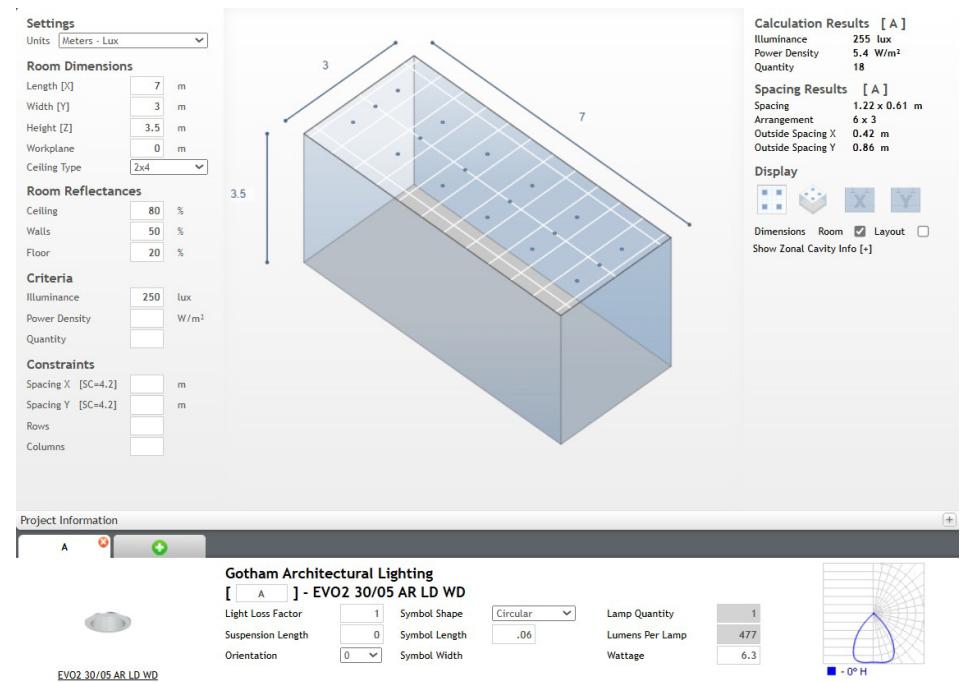
PRODUCT USED :
GOTHAM ARCHITECTURAL LIGHTING
EVO2 30/05 AR LSS WD

REQUIREMENT :
250 LUX

ILLUMINANCE :
255 LUX

POWER DENSITY :
5.4 W/SQ.M.

QUANTITY :
10 PCS.



WC
PLAN
SCALE 1:200

ELECTRIC LIGHTING SWITCHES AND CABLES

SCALE 1:200

LEGENDS



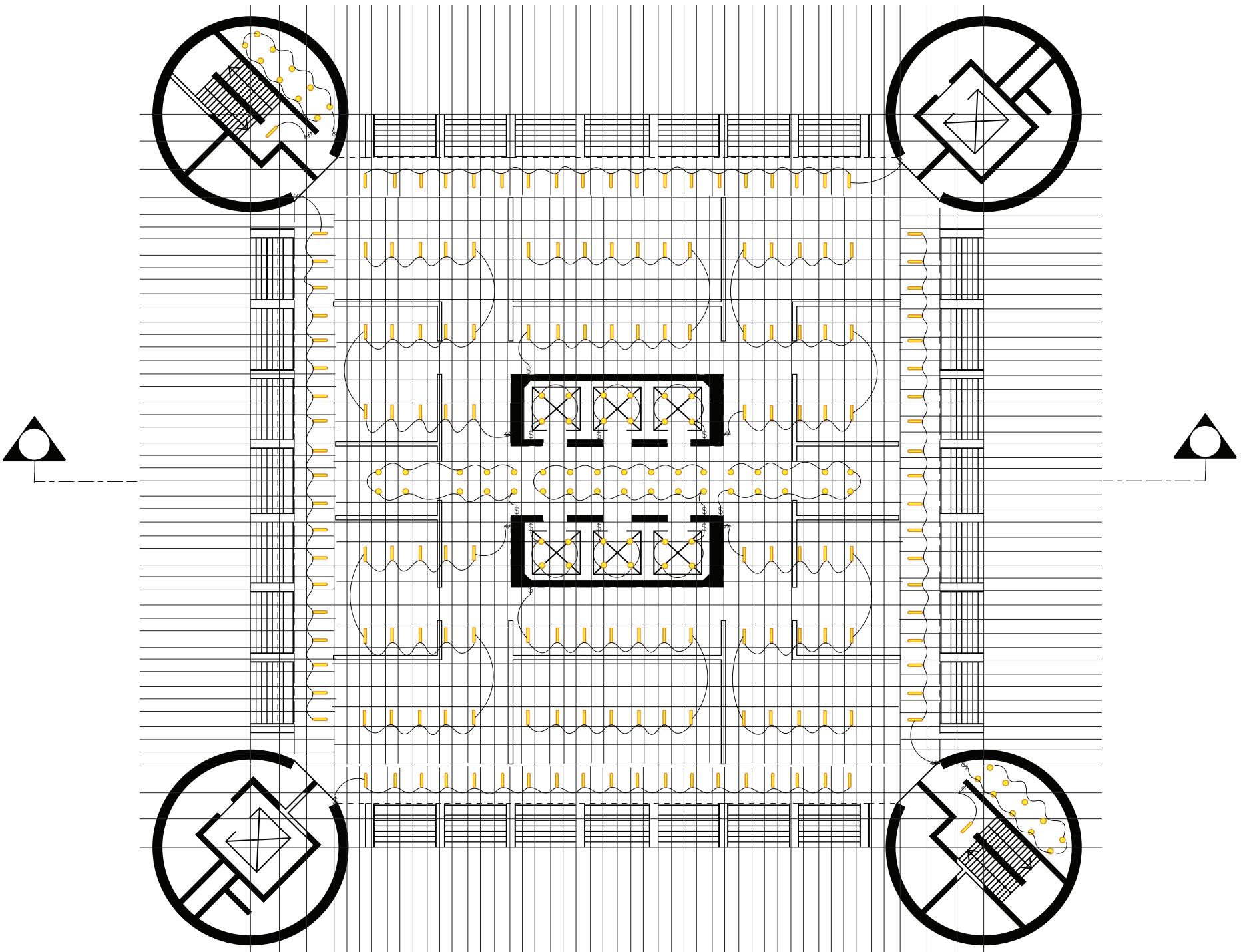
MARK ARCHITECTURAL LIGHTING
SL6L 4 FLP 80CRI 40K 1200LMF



GOTHAM ARCHITECTURAL LIGHTING
EVO2 30/05 AR LSS WD



SINGLE SWITCH



ELECTRIC LIGHTING SWITCHES AND CABLES (ZONING) SCALE 1:200

LEGENDS

-  MARK ARCHITECTURAL LIGHTING SL6L 4 FLP 80CRI 40K 1200LMF
-  MARK ARCHITECTURAL LIGHTING SL6L 2 FLP 80CRI 35K 1200LMF
-  MARK ARCHITECTURAL LIGHTING S4SD 4 FT 80CRI 27K 1200LMF DRP05
-  GOTHAM ARCHITECTURAL LIGHTING EVO2 30/05 AR LSS WD
-  GOTHAM ARCHITECTURAL LIGHTING EVO2 30/10 AR LD MWD
-  SINGLE SWITCH
-  OFFICE - O1 O2 O3 O4 O5 O6
-  CORRIDOR - C1 C2 C3
-  PERIMETER ZONE - P1 P2 P3 P4
-  STAIRCASE - S1 S2
-  LIFT - L1 L2 L3 L4 L5 L6
-  WC - W1 W2

