

Date: 04-10-2025

Designer: Adams

The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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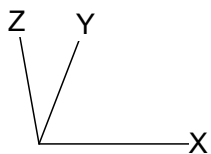
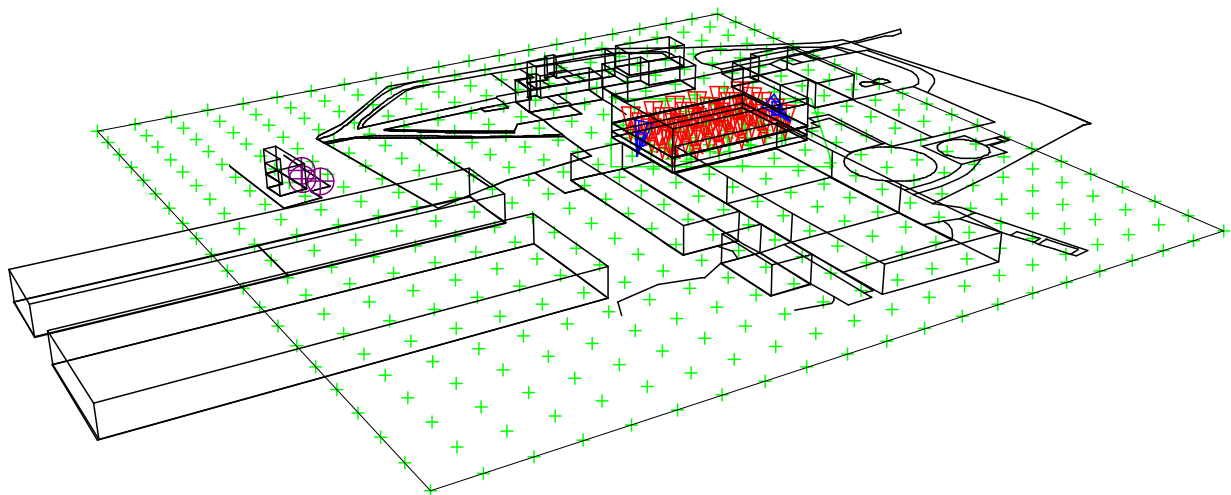
CalcuLuX Area 7.7.0.1

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1. Project Description

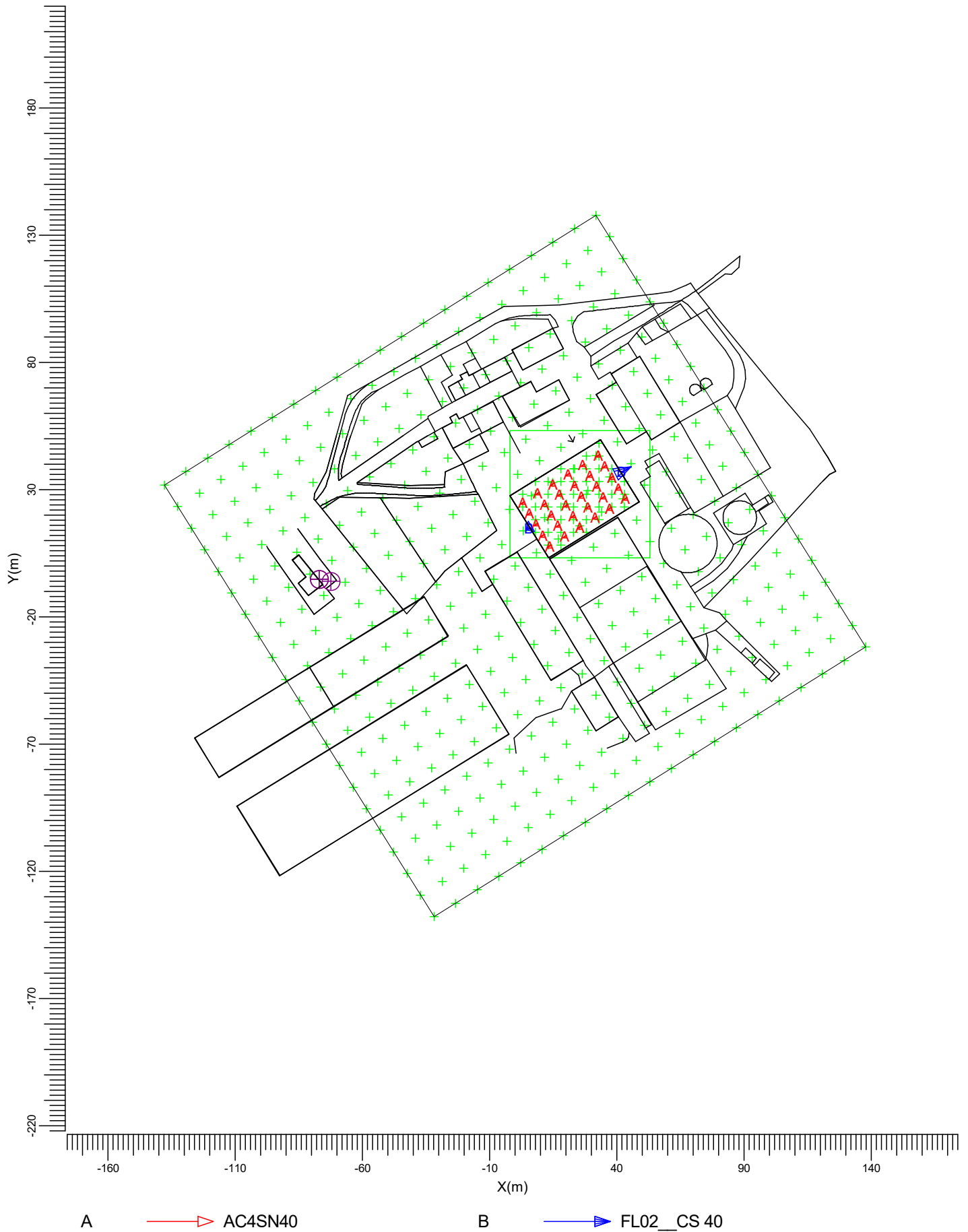
1.1 3-D Project Overview



A  AC4SN40

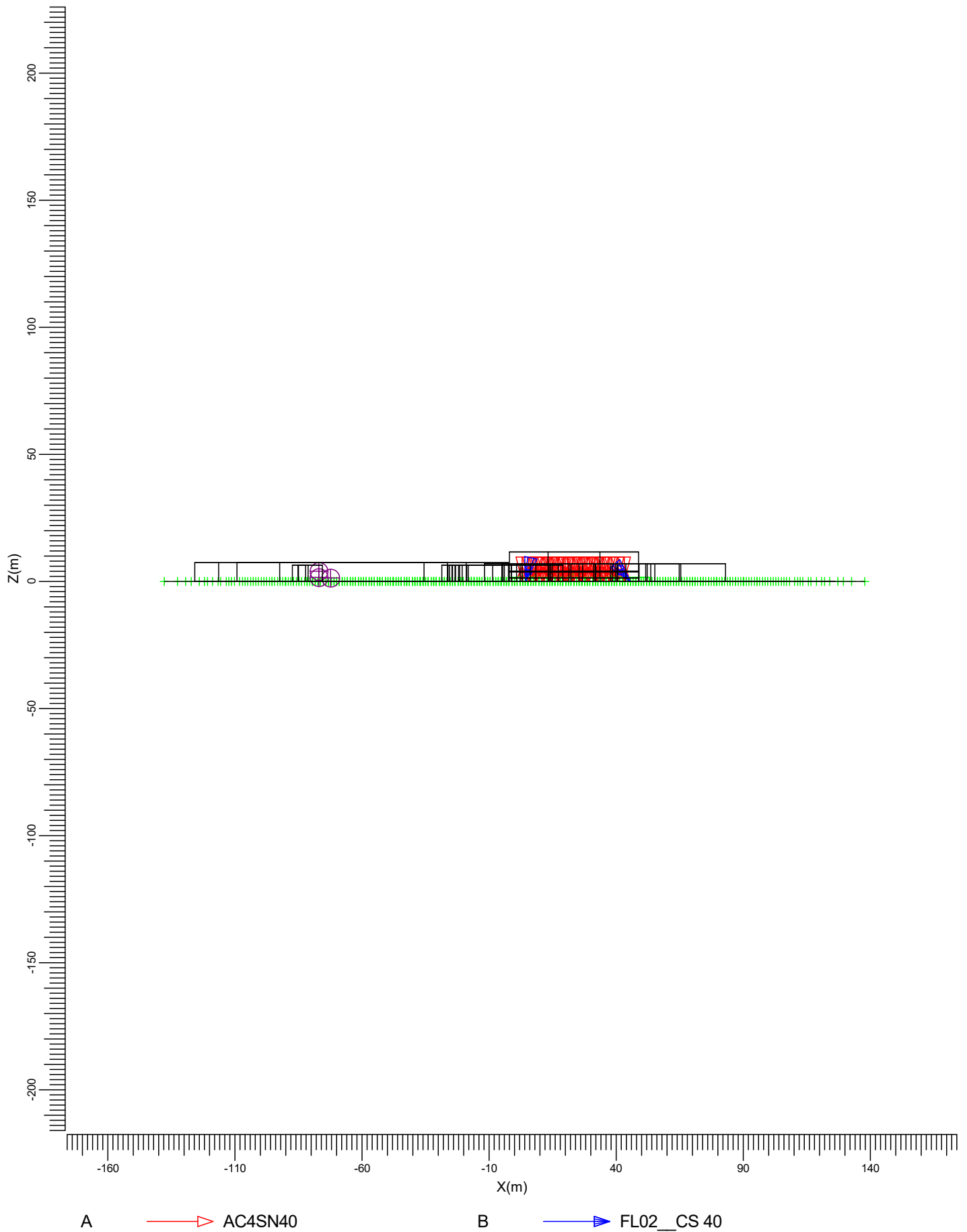
B  FL02__CS 40

1.2 Top Project Overview



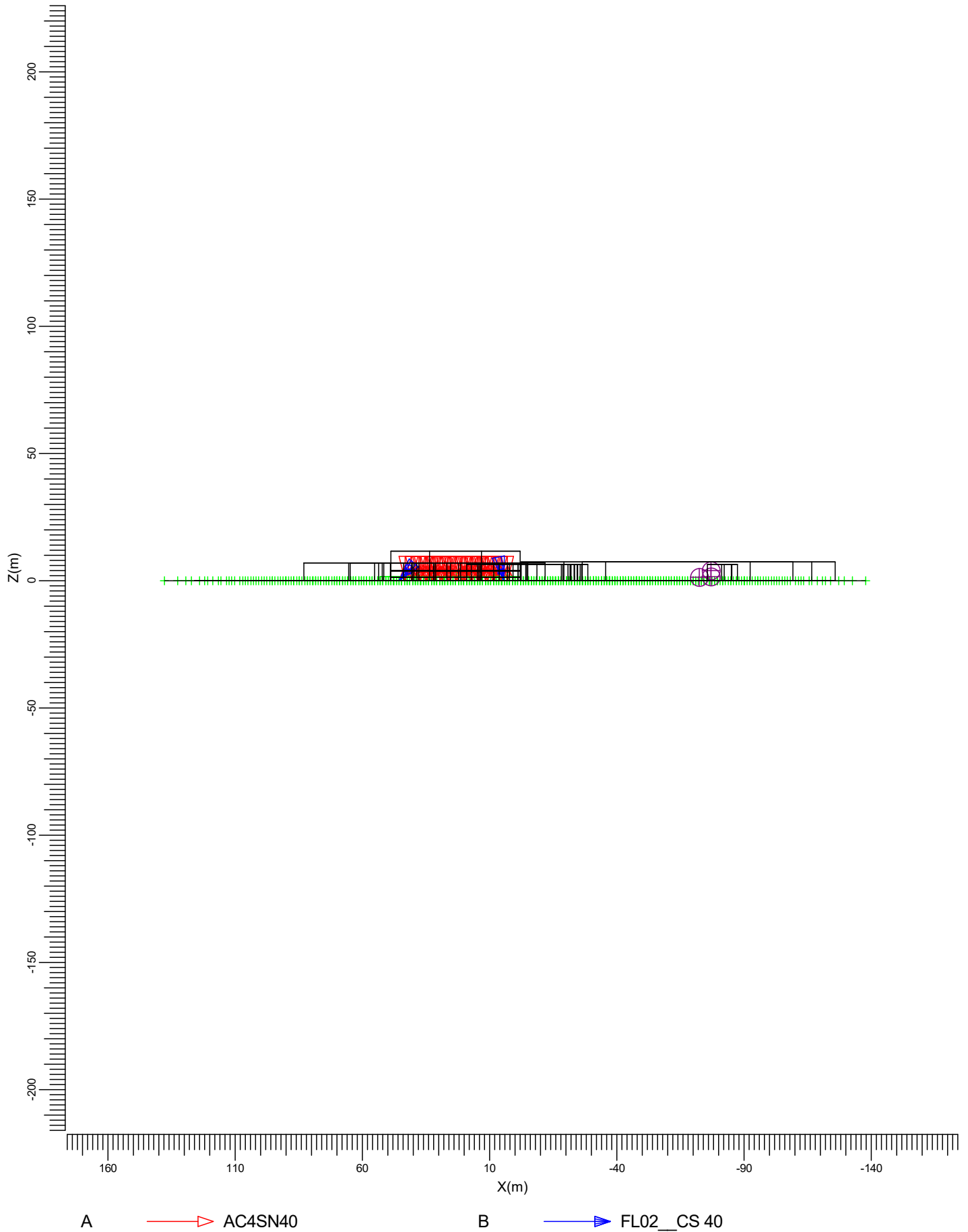
Scale
1:2000

1.3 Front Project Overview



Scale
1:2000

1.4 Back Project Overview



Scale
1:2000

2. Summary

2.1 General Information

The overall maintenance factor used for this project is 0.90.

2.2 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	Receptor ground	-76.96	-5.15	1.70
Bb	Receptor First	-76.96	-5.15	4.00
Cc	Receptor Garden	-72.49	-6.00	1.50

2.3 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Site	0	0.00	0.00	0.00
Site1	0	0.00	0.00	4.00
Barn	0	0.00	0.00	0.00
Barn 1	0	0.00	0.00	0.00
Barn 2	0	0.00	0.00	0.00
Barn 3	0	0.00	0.00	0.00
Barn 4	0	0.00	0.00	0.00
Receptor	0	0.00	0.00	0.00
House 1	0	0.00	0.00	0.00
House 2	0	0.00	0.00	0.00
House 3	0	0.00	0.00	0.00
Barn 5	0	0.00	0.00	0.00
Barn 9	0	0.00	0.00	0.00
Site2	0	0.00	0.00	1.50
Site 3	0	0.00	0.00	1.50
Site 4	0	0.00	0.00	3.80
Site 5	0	0.00	0.00	3.80

2.4 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	30	AC4SN40	1 * LED - 20.00 W	20.0	1 * 2600
B	2	FL02__CS 40	1 * LED - 20.00 W	20.0	1 * 2400

The total installed power: 0.64 (kWatt)

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	A	B	
Block	30	0	0.60
Individuals	0	2	0.04

2.5 Calculation Results

(II)luminance Calculations:

Calculation	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max
Site	Surface Illuminance	lux	47.8	7.3	101.3	0.15	0.07
General	Surface Illuminance	lux	0.16	0.00	28.48	0.00	0.00

Obtrusive Light Calculations:

Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
		X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
Aa	B	5.41	14.86	4.50	-147.89	14.98	0.00	98
Bb	B	5.41	14.86	4.50	-147.89	14.98	0.00	75
Cc	B	5.41	14.86	4.50	-147.89	14.98	0.00	103

The upward light ratio (ULR) is 0.08.

3. Calculation Results

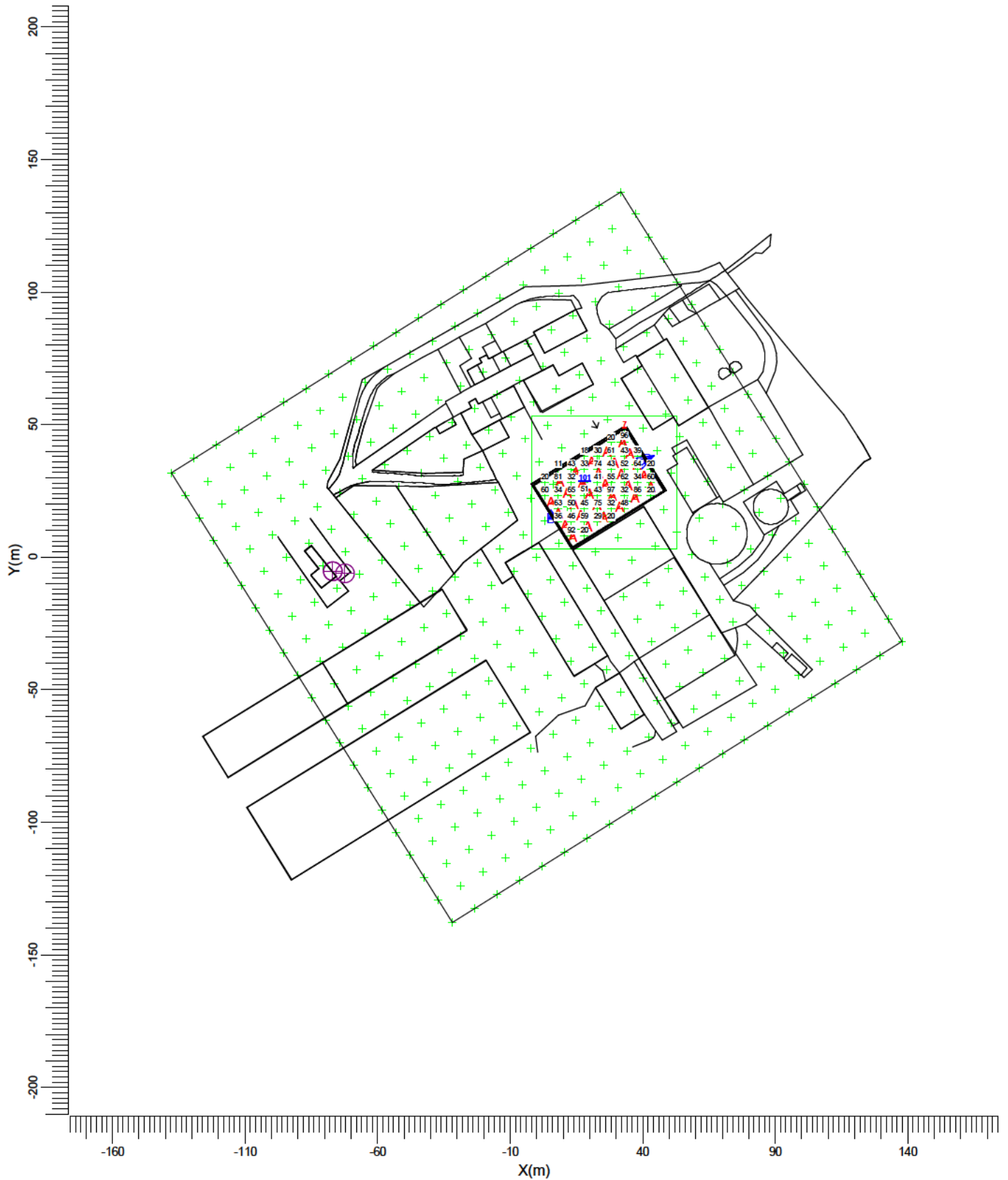
3.1 Site: Textual Table

Grid	: Site at Z = 1.51 m											
Calculation	: Surface Illuminance (lux)											
X (m)	-2.03	2.97	7.97	12.97	17.97	22.97	27.97	32.97	37.97	42.97	47.97	52.97
Y (m)												
53.12												
48.12								7<				
43.12							20	96				
38.12					18	30	61	43	39			
33.12			11	43	33	74	43	52	64	20		
28.12		20	81	32	101>	41	55	62	34	60		
23.12		60	34	65	51	43	97	32	86	20		
18.12			63	50	45	75	32	48				
13.12			36	46	59	29	20					
8.12				92	20							
3.12												

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
47.8	7.3	101.3	0.15	0.07	0.90

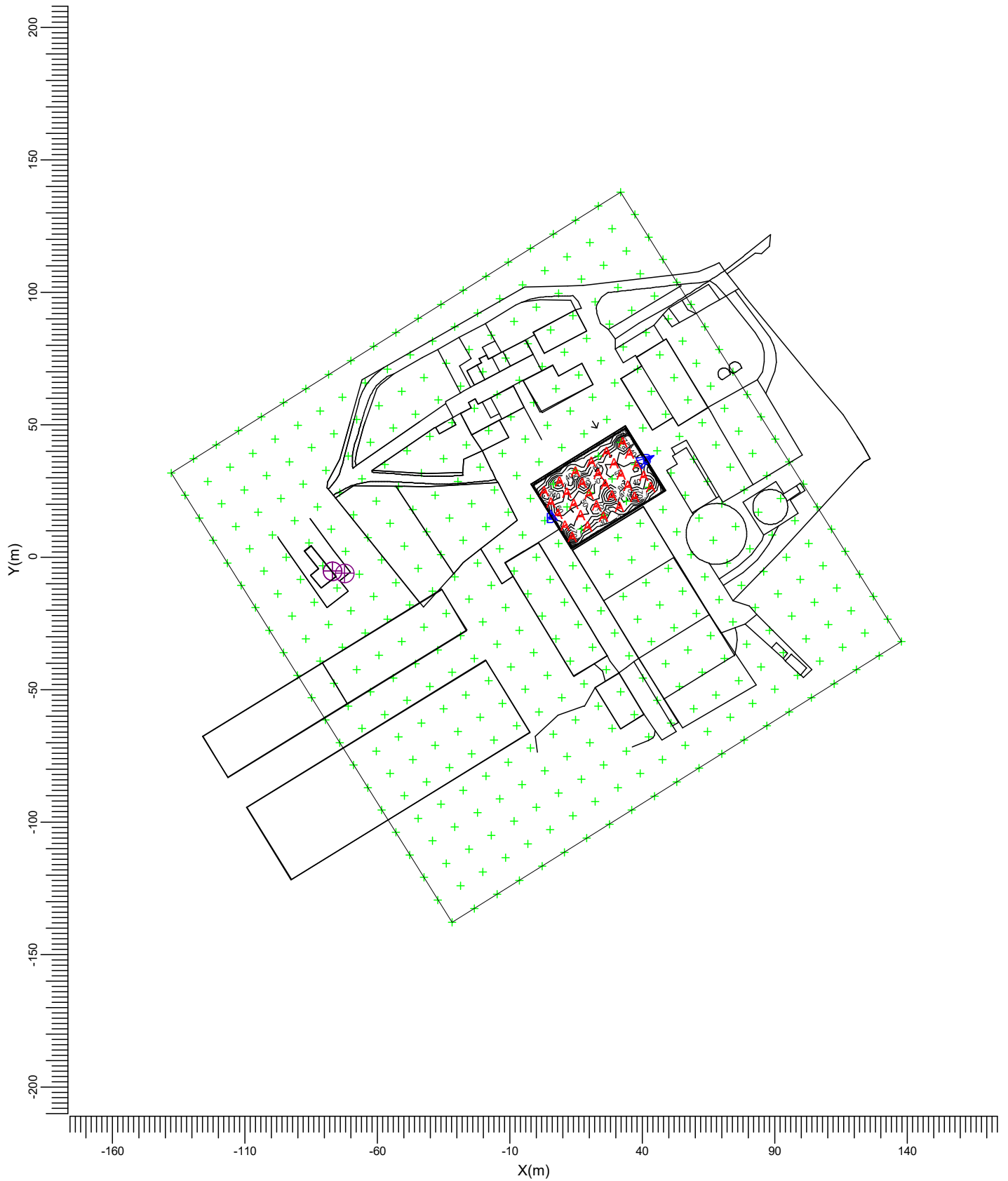
3.2 Site: Graphical Table

Grid : Site at Z = 1.51 m
Calculation : Surface Illuminance (lux)



3.3 Site: Iso Contour

Grid : Site at Z = 1.51 m
Calculation : Surface Illuminance (lux)



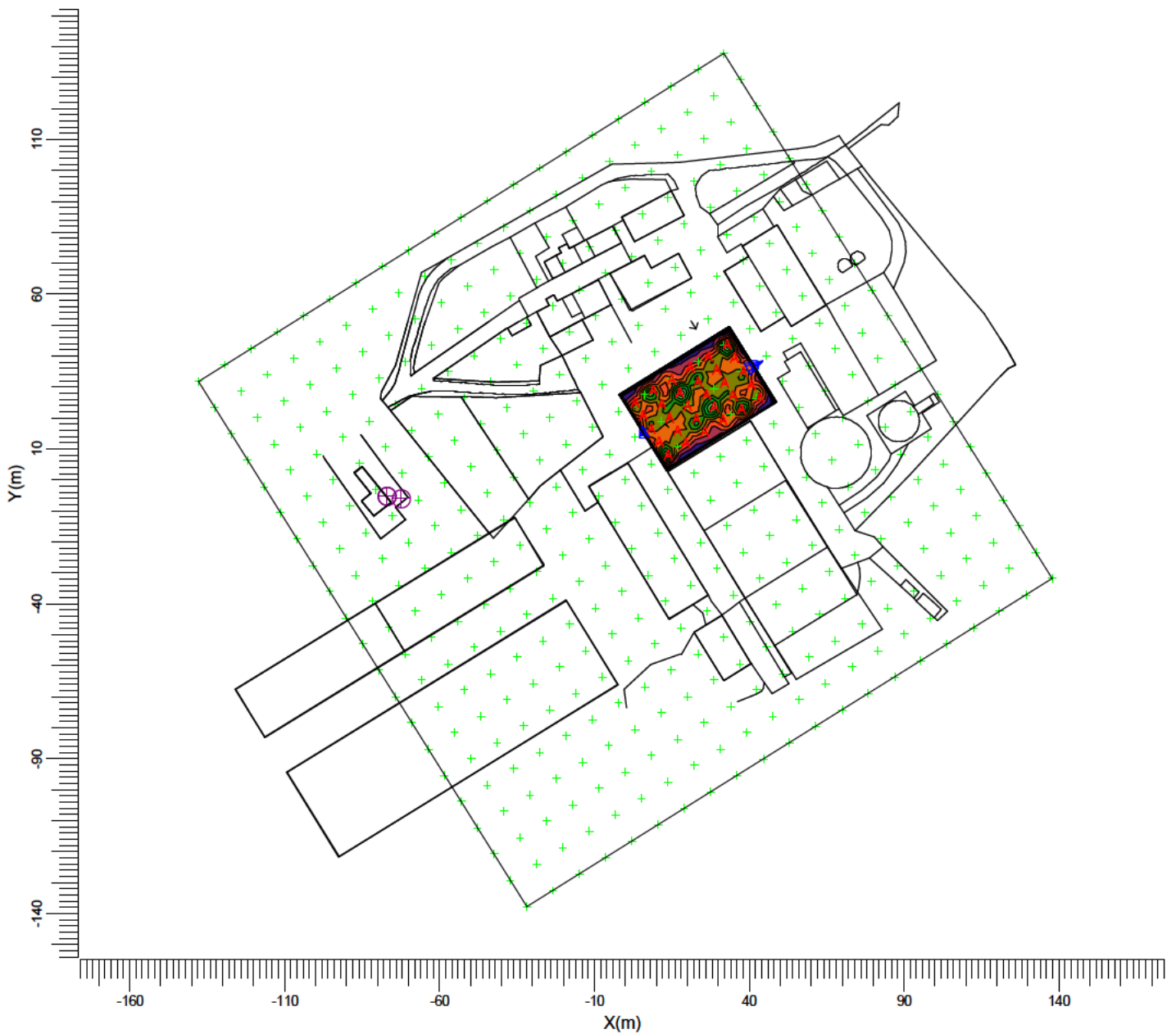
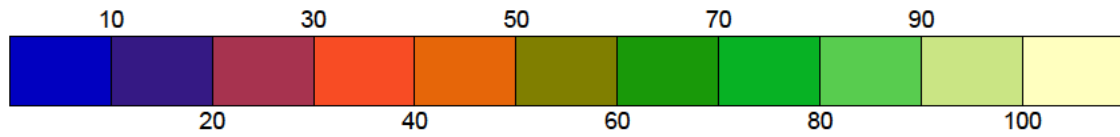
A  AC4SN40

B  FL02_CS 40

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
47.8	7.3	101.3	0.15	0.07	0.90	1:2000

3.4 Site: Filled Iso Contour

Grid : Site at Z = 1.51 m
Calculation : Surface Illuminance (lux)



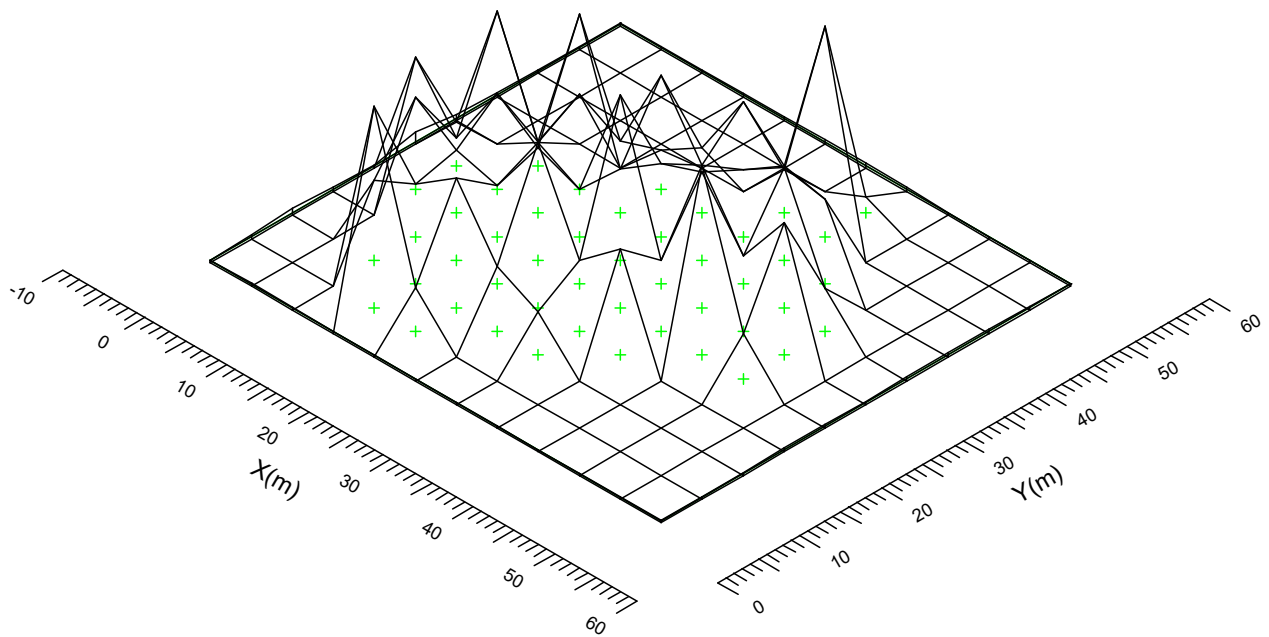
A  AC4SN40

B  FL02_CS 40

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
47.8	7.3	101.3	0.15	0.07	0.90	1:2000

3.5 Site: Mountain Plot

Grid : Site at Z = 1.51 m
Calculation : Surface Illuminance (lux)



Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
47.8	7.3	101.3	0.15	0.07	0.90

3.6 General: Textual Table

Grid : General
Calculation : Surface Illuminance (lux)

AB (m)	0.00	10.00	20.00	30.00	40.00	50.00	60.00	70.00	80.00	90.00	100.00	110.00	120.00
AC (m)													
200.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00<	0.00<	0.00<
190.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00<	0.00<	0.00<
180.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00<	0.00<	0.00<
170.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.00	0.00<	0.00<
160.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.05	0.02	0.00<	0.00<
150.00	0.00<	0.00<	0.00<	0.00	0.00	0.00	0.01	0.01	0.03	0.06	0.13	0.26	0.34
140.00	0.00<	0.00<	0.00<	0.00<	0.00	0.00	0.00	0.01	0.02	0.05	0.15	0.50	0.83
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.06	0.30	1.90
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.25	0.55	0.00<
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.10	0.77	28.48>	0.00<
100.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.70	0.00<
90.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.73	0.00<
80.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.03	0.00<
70.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.01	0.00<
60.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00<
50.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00<
40.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00<
30.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00<
20.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00<
10.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00<
0.00	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00<	0.00	0.00	0.00<

Continue >

(-137.80, 31.81, -0.00) C-----D (31.81, 137.80, 0.00)
| |
(-31.81, -137.80, -0.00) A-----B (137.80, -31.81, -0.00)

Average 0.16 Minimum 0.00 Maximum 28.48 Min/Ave 0.00 Min/Max 0.00 Project maintenance factor 0.90

< Continue

Grid : General
Calculation : Surface Illuminance (lux)

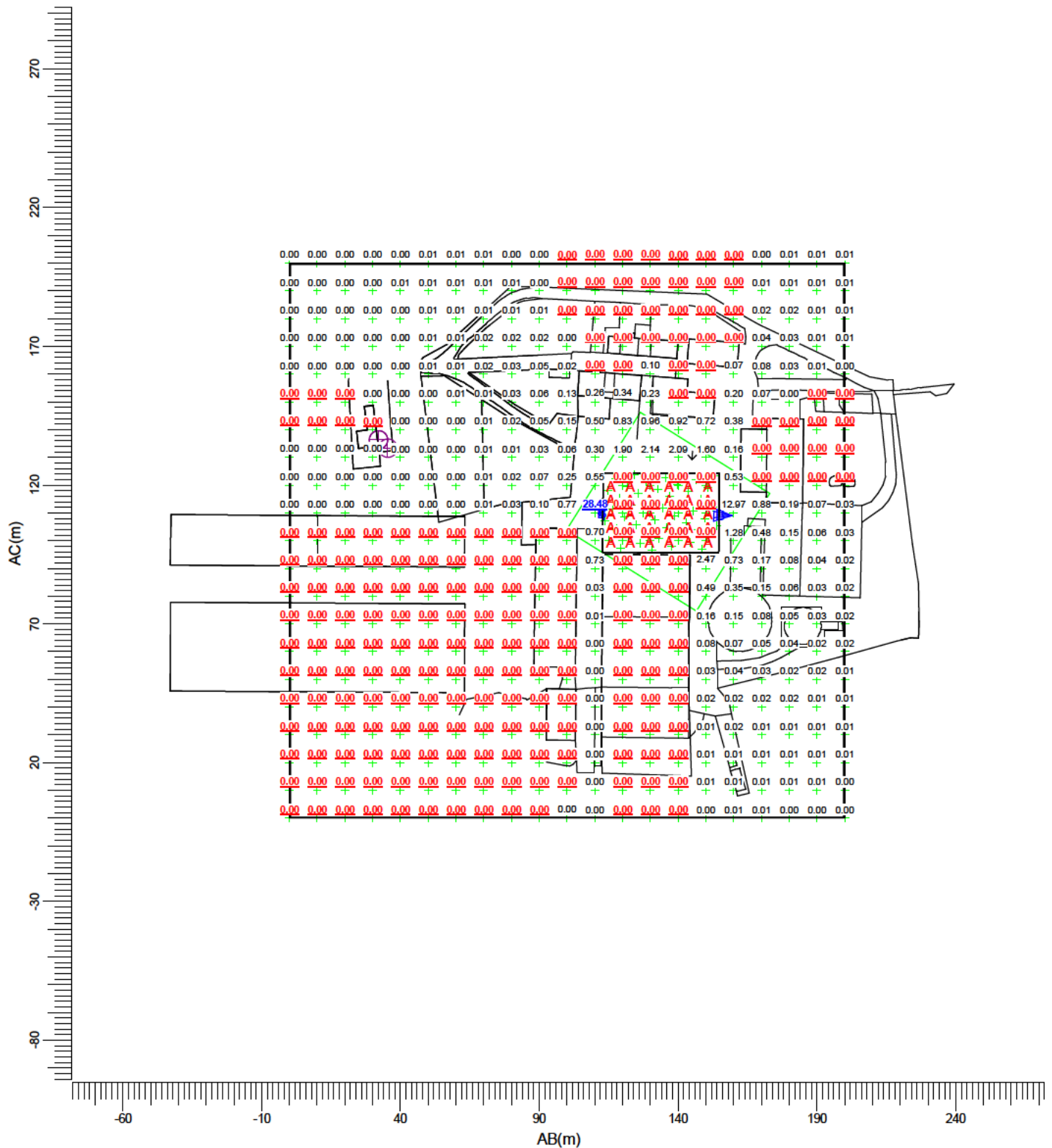
AB (m) AC (m)	130.00	140.00	150.00	160.00	170.00	180.00	190.00	200.00
200.00	0.00<	0.00<	0.00<	0.00<	0.00	0.01	0.01	0.01
190.00	0.00<	0.00<	0.00<	0.00<	0.01	0.01	0.01	0.01
180.00	0.00<	0.00<	0.00<	0.00<	0.02	0.02	0.01	0.01
170.00	0.00<	0.00<	0.00<	0.00<	0.04	0.03	0.01	0.01
160.00	0.10	0.00<	0.00<	0.07	0.08	0.03	0.01	0.00
150.00	0.23	0.00<	0.00<	0.20	0.07	0.00	0.00<	0.00<
140.00	0.96	0.92	0.72	0.38	0.00<	0.00<	0.00<	0.00<
130.00	2.14	2.09	1.60	0.16	0.00<	0.00<	0.00<	0.00<
120.00	0.00<	0.00<	0.00<	0.53	0.00<	0.00<	0.00<	0.00<
110.00	0.00<	0.00<	0.00<	12.97	0.88	0.19	0.07	0.03
100.00	0.00<	0.00<	0.00<	1.28	0.48	0.15	0.06	0.03
90.00	0.00<	0.00<	2.47	0.73	0.17	0.08	0.04	0.02
80.00	0.00<	0.00<	0.49	0.35	0.15	0.06	0.03	0.02
70.00	0.00<	0.00<	0.16	0.15	0.08	0.05	0.03	0.02
60.00	0.00<	0.00<	0.08	0.07	0.05	0.04	0.02	0.02
50.00	0.00<	0.00<	0.03	0.04	0.03	0.02	0.02	0.01
40.00	0.00<	0.00<	0.02	0.02	0.02	0.02	0.01	0.01
30.00	0.00<	0.00<	0.01	0.02	0.01	0.01	0.01	0.01
20.00	0.00<	0.00<	0.01	0.01	0.01	0.01	0.01	0.01
10.00	0.00<	0.00<	0.01	0.01	0.01	0.01	0.01	0.00
0.00	0.00<	0.00<	0.00	0.01	0.01	0.00	0.00	0.00

(-137.80, 31.81, -0.00) C-----D (31.81, 137.80, 0.00)
| |
A-----B (137.80, -31.81, -0.00)

Average 0.16	Minimum 0.00	Maximum 28.48	Min/Ave 0.00	Min/Max 0.00	Project maintenance factor 0.90
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3.7 General: Graphical Table

Grid : General
Calculation : Surface Illuminance (lux)

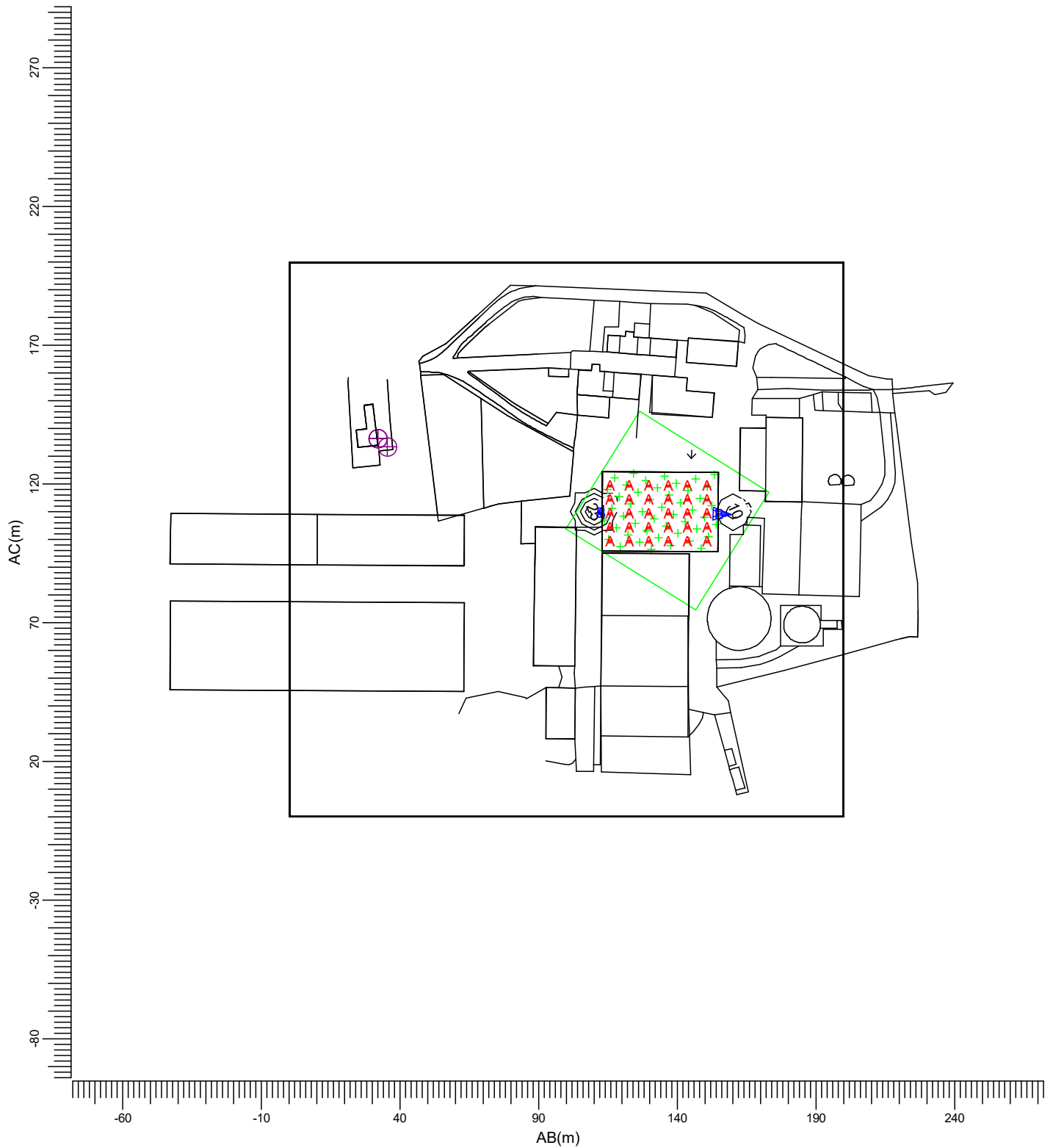


(-137.80, 31.81, -0.00) C—D (31.81, 137.80, 0.00)
(-31.81, -137.80, -0.00) A—B (137.80, -31.81, -0.00)

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.16	0.00	28.48	0.00	0.00	0.90	1:2000

3.8 General: Iso Contour

Grid : General
Calculation : Surface Illuminance (lux)

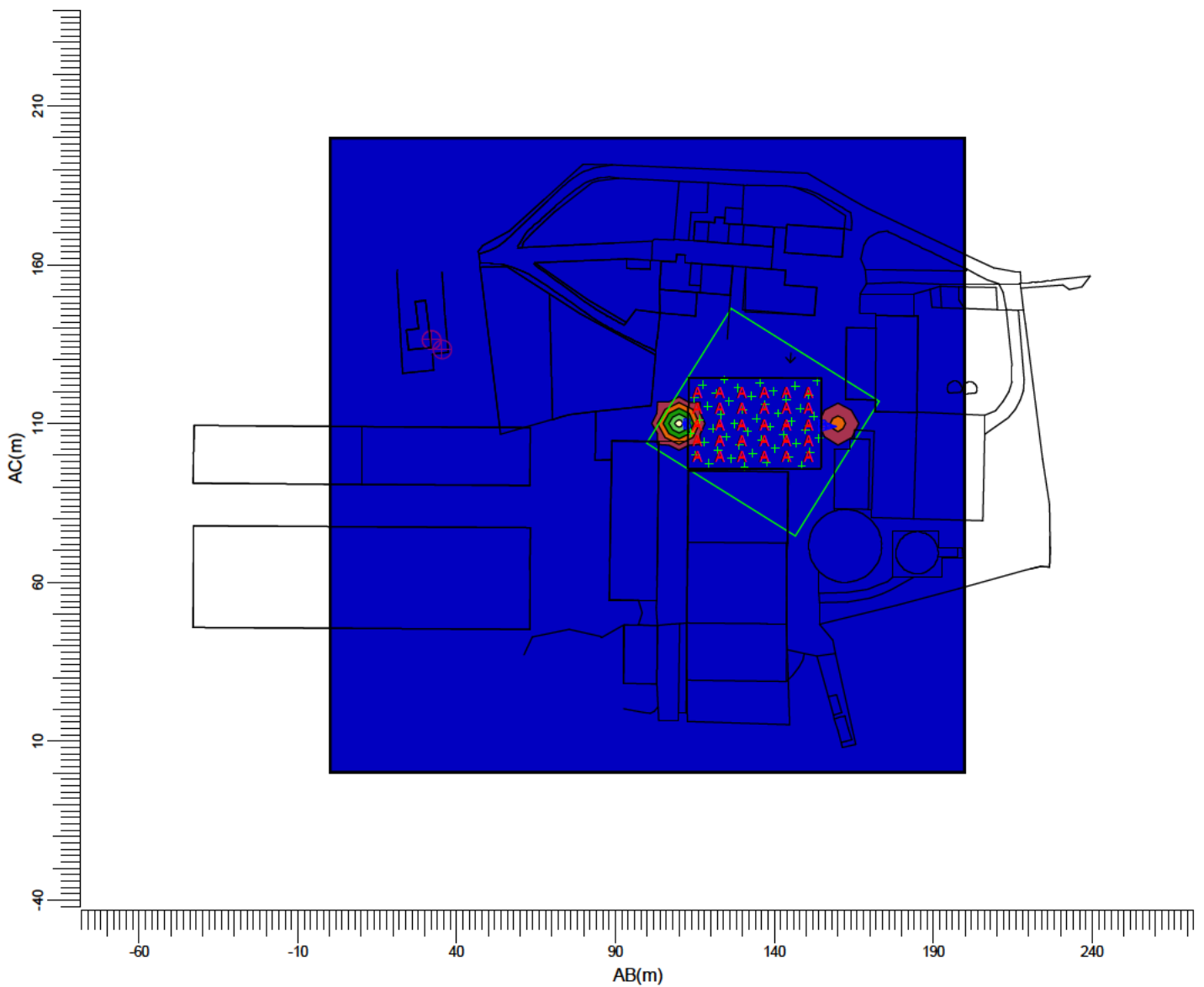
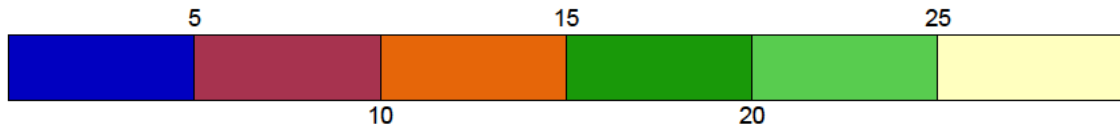


A → AC4SN40 B → FL02_CS 40

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.16	0.00	28.48	0.00	0.00	0.90	1:2000

3.9 General: Filled Iso Contour

Grid : General
Calculation : Surface Illuminance (lux)



(-137.80, 31.81, -0.00) C—D (31.81, 137.80, 0.00)
(-31.81, -137.80, -0.00) A—B (137.80, -31.81, -0.00)

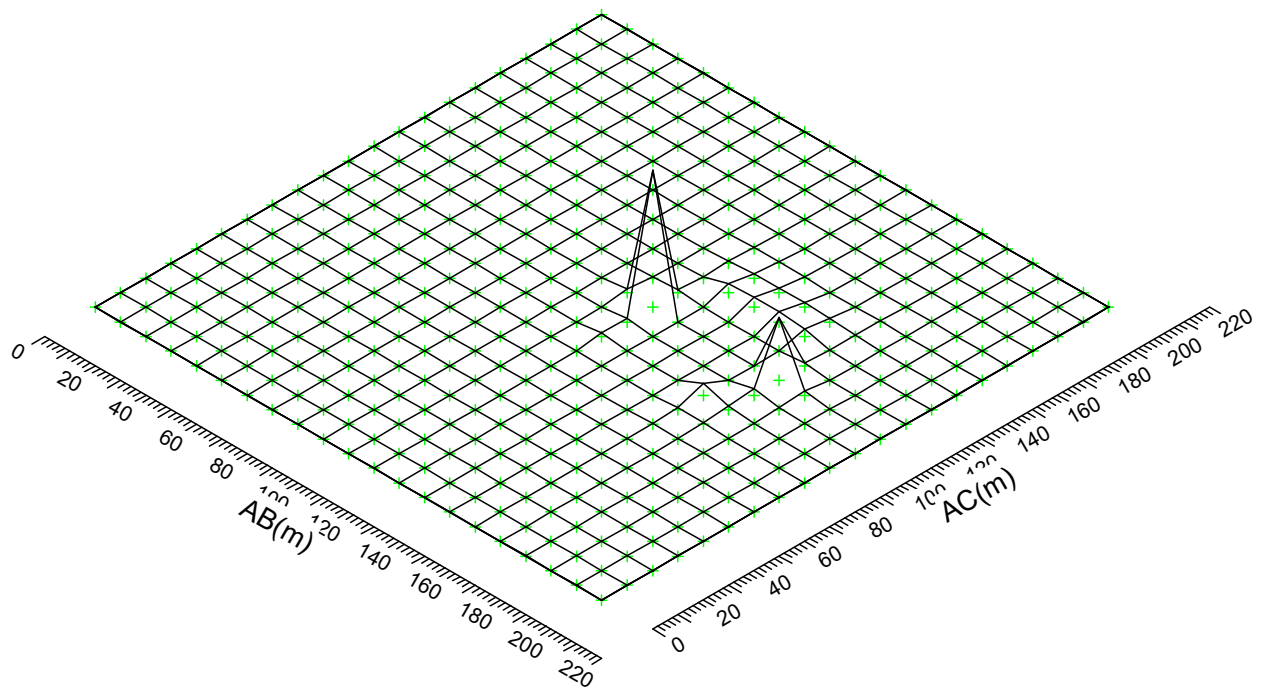
A —→ AC4SN40

B —→ FL02_CS 40

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.16	0.00	28.48	0.00	0.00	0.90	1:2000

3.10 General: Mountain Plot

Grid : General
Calculation : Surface Illuminance (lux)



(-137.80, 31.81, -0.00) C----D (31.81, 137.80, 0.00)
| |
(-31.81, -137.80, -0.00) A----B (137.80, -31.81, -0.00)

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
0.16	0.00	28.48	0.00	0.00	0.90

4. Luminaire Details

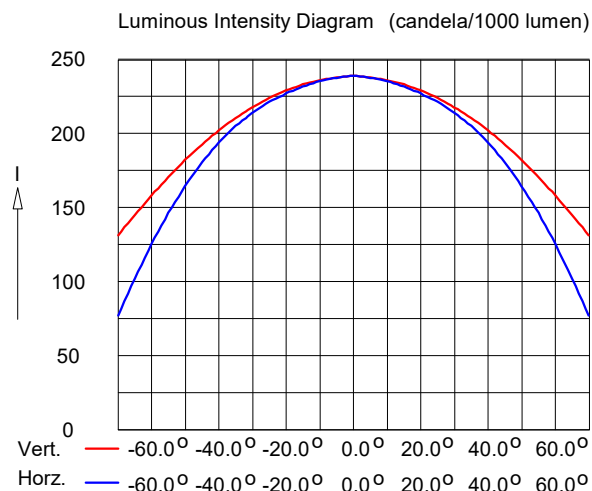
4.1 Project Luminaires

AC4SN40 1xLED - 20.00 W

Light output ratios

DLOR	: 0.92
ULOR	: 0.08
TLOR	: 1.00
Lamp flux	: 2600 lm
Luminaire wattage	: 20.0 W
Measurement code	: 4ft single

Note: Luminaire data not from database.

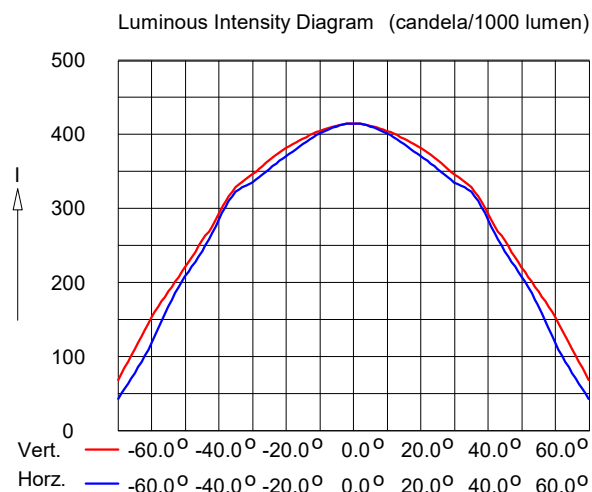


FL02__CS 40 1xLED - 20.00 W

Light output ratios

DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 2400 lm
Luminaire wattage	: 20.0 W
Measurement code	: 9910283

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	30	AC4SN40	1 * LED - 20.00 W	1 * 2600
B	2	FL02__CS 40	1 * LED - 20.00 W	1 * 2400

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Points			Aiming Angles			ULR	ULOR_i
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0		
1 * A	2.92	24.81	3.95	2.92	24.81	0.00	125.0	0.0	0.0	0.08	0.08
1 * B	5.41	14.86	4.50	4.39	14.22	0.00	-147.9	15.0	0.0	0.00	0.00
1 * A	5.57	20.57	3.95	5.57	20.57	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	8.22	16.33	3.95	8.22	16.33	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	8.86	28.52	3.95	8.86	28.52	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	10.87	12.09	3.95	10.87	12.09	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	11.51	24.28	3.95	11.51	24.28	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	13.52	7.85	3.95	13.52	7.85	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	14.16	20.04	3.95	14.16	20.04	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	14.79	32.23	3.95	14.79	32.23	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	16.81	15.80	3.95	16.81	15.80	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	17.44	27.99	3.95	17.44	27.99	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	19.45	11.56	3.95	19.45	11.56	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	20.09	23.75	3.95	20.09	23.75	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	20.73	35.94	3.95	20.73	35.94	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	22.74	19.51	3.95	22.74	19.51	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	23.38	31.70	3.95	23.38	31.70	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	25.39	15.27	3.95	25.39	15.27	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	26.03	27.46	3.95	26.03	27.46	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	26.67	39.65	3.95	26.67	39.65	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	28.68	23.22	3.95	28.68	23.22	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	29.31	35.41	3.95	29.31	35.41	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	31.33	18.98	3.95	31.33	18.98	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	31.96	31.17	3.95	31.96	31.17	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	32.60	43.36	3.95	32.60	43.36	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	34.61	26.93	3.95	34.61	26.93	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	35.25	39.12	3.95	35.25	39.12	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	37.26	22.69	3.95	37.26	22.69	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	37.90	34.88	3.95	37.90	34.88	0.00	125.0	0.0	0.0	0.08	0.08
1 * A	40.55	30.64	3.95	40.55	30.64	0.00	125.0	0.0	0.0	0.08	0.08
1 * B	41.82	37.02	4.50	45.70	39.08	0.00	28.0	44.3	0.0	0.10	0.10
1 * A	43.20	26.40	3.95	43.20	26.40	0.00	125.0	0.0	0.0	0.08	0.08

6. Financial Information

6.1 Installation Data

Burning hours/year	0 hr
Amortization period	1.0 yr
Interest rate	0.0 %
kWh price	0.00 €

6.2 Luminaire Information

Project Luminaires	Qty	Prices (€)				Relamping period (yr)
		Lamp	Luminaire	Installation	Maintenance	
AC4SN40	30	0.00	0.00	0.00	0.00	1.00
FL02__CS 40	2	0.00	0.00	0.00	0.00	1.00

6.3 Total cost

Costs per year		
Energy	€	0.00
Investment		0.00
Lamps		0.00
Maintenance		0.00

Total	€	0.00
Total investment	€	0.00