

# Thorneyholme Hall

Date: 30-05-2021  
Customer: PWA Planning Ltd  
Designer: Neil Martin

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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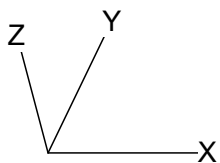
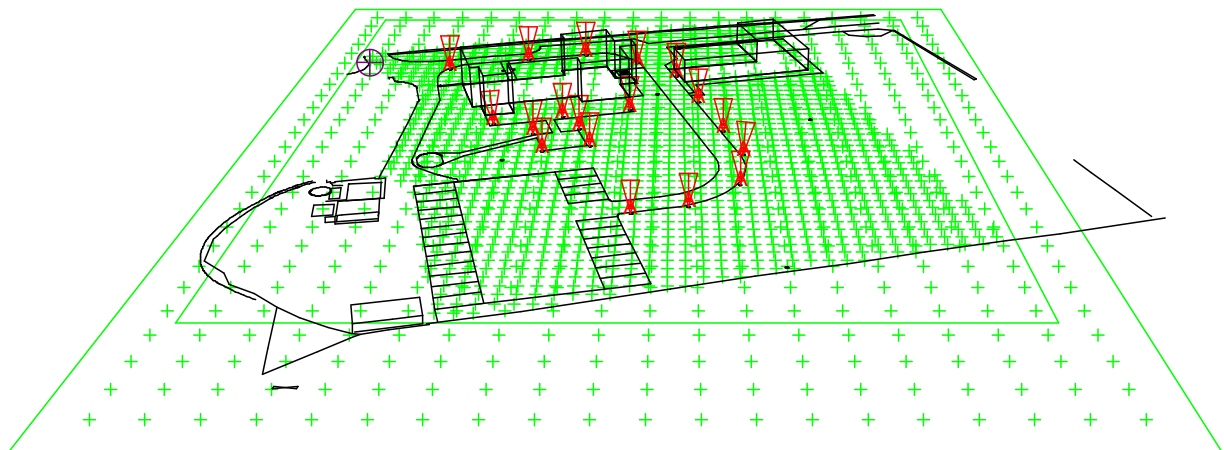
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# 1. Project Description

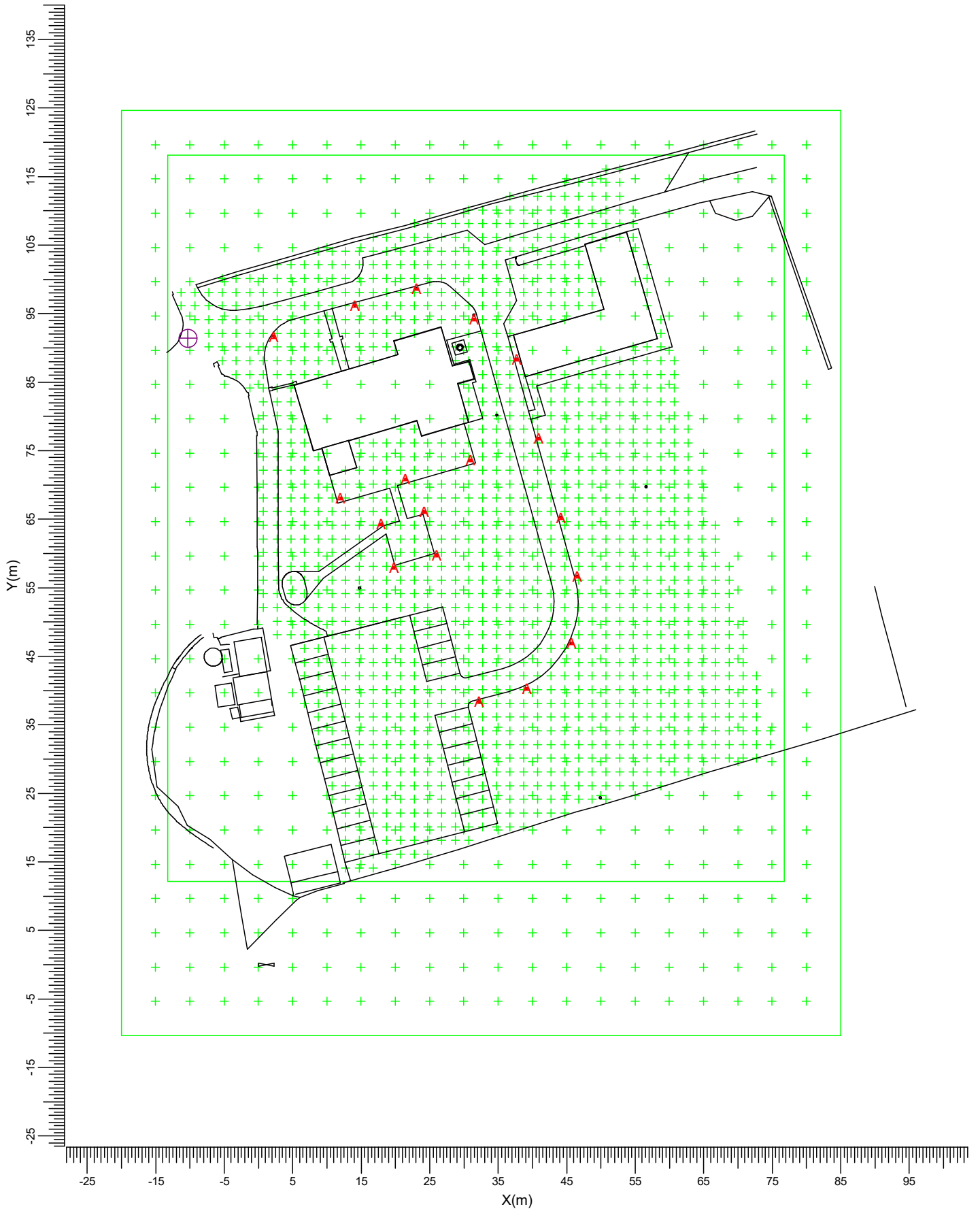
## 1.1 3-D Project Overview

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A       AMENITY - Taurus LED

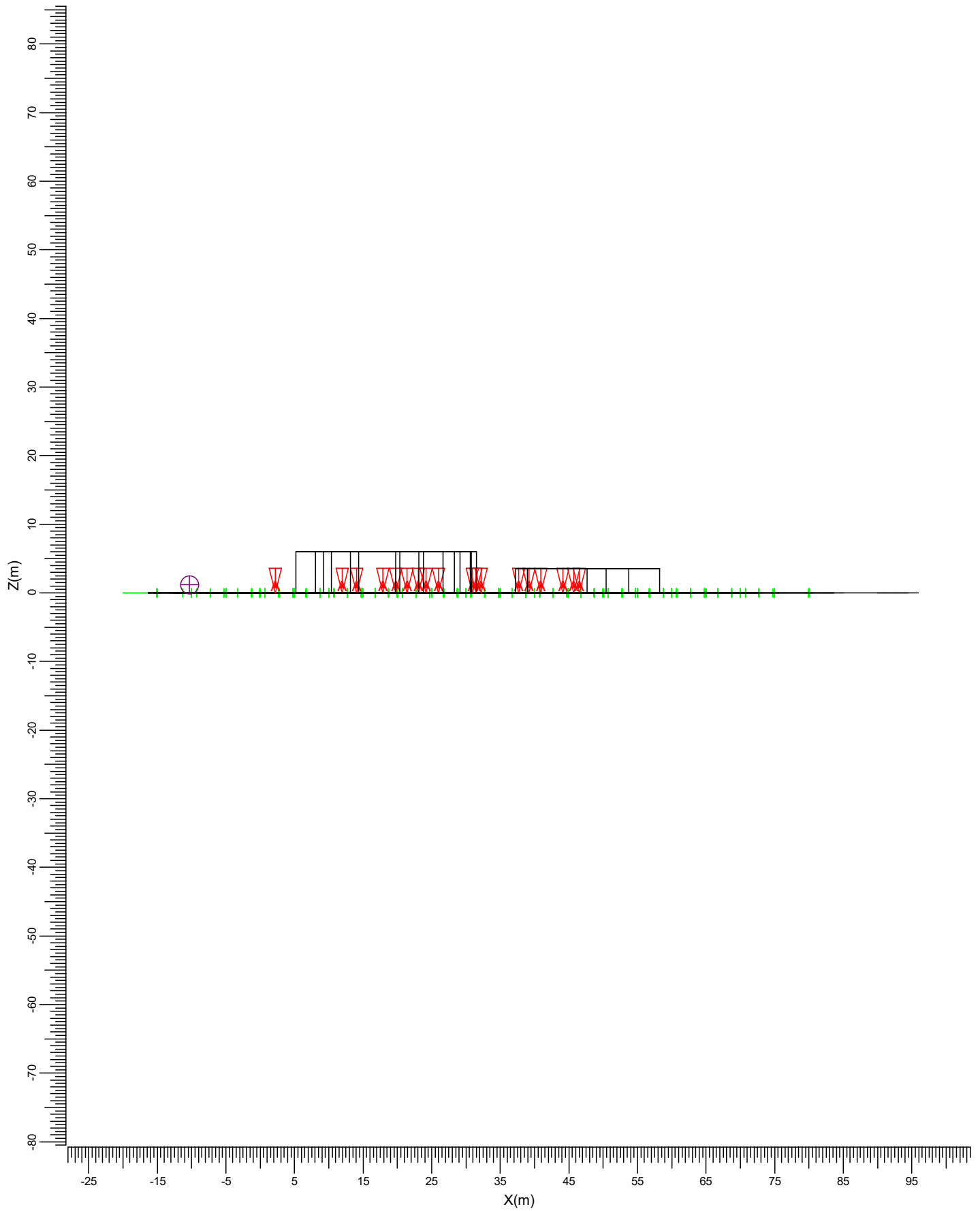
### 1.2 Top Project Overview



A  AMENITY - Taurus LED

Scale  
1:750

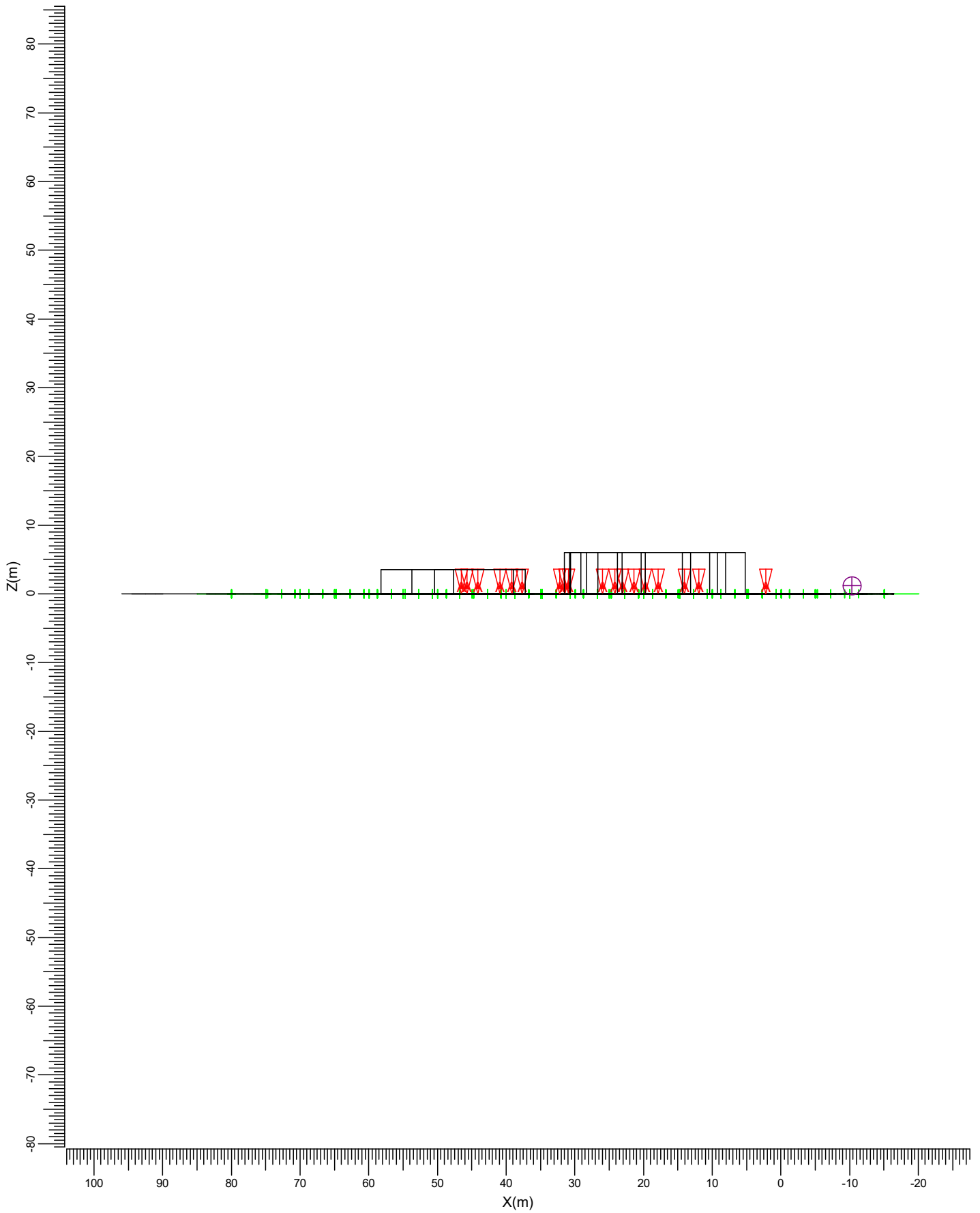
### 1.3 Front Project Overview



A  AMENITY - Taurus LED

Scale  
1:750

### 1.4 Back Project Overview



A       AMENITY - Taurus LED

Scale  
1:750

## 2. Summary

### 2.1 General Information

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The overall maintenance factor used for this project is 0.90.

### 2.2 Observer Information

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Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	driveway entrance	-10.30	91.46	1.20

### 2.3 Obstacle Information

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Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
House	0	0.00	0.00	0.00
School	0	0.00	0.00	0.00

### 2.4 Project Luminaires

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Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	18	AMENITY - Taurus LED	1 * LED 0	24.0	1 * 2416

The total installed power: 0.43 (kWatt)

### 2.5 Calculation Results

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(II)luminance Calculations:

Calculation	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max
Free Grid	Surface Illuminance	lux	6.08	0.00	253.65	0.00	0.00
Overspill1	Surface Illuminance	lux	2.15	0.00	148.07	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	A	39.14	40.31	1.00	0.00	0.00	0.00	84

The upward light ratio (ULR) is 0.17.

### 3. Calculation Results

#### 3.1 Free Grid: Textual Table

Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	-13.28	-11.28	-9.28	-7.28	-5.28	-3.28	-1.28	0.72	2.72	4.72	6.72	8.72	10.72
Y (m)													
118.12													
116.12													
114.12													
112.12													
110.12													
108.12													
106.12													
104.12												0.2	0.2
102.12									0.1	0.2	0.2	0.3	0.4
100.12					0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.5	1.1
98.12		0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.5	0.5	0.9	2.9
96.12		0.0	0.1	0.1	0.2	0.3	0.7	1.3	1.6	1.1	0.8	1.1	4.9
94.12			0.1	0.1	0.2	0.6	1.9	7.8	13.0	4.0	1.2	1.0	2.7
92.12				0.1	0.3	0.8	3.8	71.7	204.6	13.3	1.8	0.8	1.1
90.12				0.1	0.2	0.7	2.9	25.5	67.7	8.1	1.5	0.6	0.5
88.12					0.2	0.4	1.1	2.9	4.0	2.0	0.8	0.4	0.3
86.12						0.2	0.4	0.7	0.8	0.6	0.4	0.3	
84.12							0.2	0.3	0.3	0.3			
82.12								0.1	0.2	0.1			
80.12								0.1	0.1	0.1			
78.12								0.1	0.1	0.1	0.0		
76.12								0.1	0.1	0.1	0.1		
74.12								0.1	0.1	0.2	0.3	0.3	
72.12								0.1	0.1	0.2	0.5	1.0	
70.12								0.1	0.2	0.3	0.8	2.8	15.4
68.12								0.1	0.2	0.4	1.0	5.2	112.8
66.12								0.1	0.2	0.3	0.8	3.1	19.0
64.12								0.1	0.2	0.3	0.6	1.2	2.6
62.12								0.1	0.1	0.2	0.4	0.6	1.0
60.12								0.1	0.1	0.2	0.3	0.4	0.6
58.12								0.1	0.1	0.1	0.2	0.3	0.4
56.12								0.1	0.1	0.1	0.2	0.2	0.3
54.12								0.1	0.1	0.1	0.1	0.2	0.2
52.12								0.1	0.1	0.1	0.1	0.1	0.2
50.12									0.1	0.1	0.1	0.1	0.1
48.12									0.0	0.1	0.1	0.1	0.1

Continue >

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
6.08	0.00	253.65	0.00	0.00	0.90



< Continue

Continue >

Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	-13.28	-11.28	-9.28	-7.28	-5.28	-3.28	-1.28	0.72	2.72	4.72	6.72	8.72	10.72
Y (m)													
46.12											0.1	0.1	0.1
44.12											0.0	0.1	0.1
42.12											0.0	0.0	0.1
40.12											0.0	0.0	0.0
38.12											0.0	0.0	0.0
36.12												0.0	0.0
34.12												0.0	0.0
32.12												0.0	0.0
30.12												0.0	0.0
28.12													0.0
26.12													0.0
24.12													0.0
22.12													0.0
20.12													
18.12													
16.12													
14.12													
12.12													

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
6.08	0.00	253.65	0.00	0.00	0.90

&lt; Continue

Continue &gt;

Grid : Site at Z = -0.00 m  
 Calculation : Surface Illuminance (lux)

X (m)	12.72	14.72	16.72	18.72	20.72	22.72	24.72	26.72	28.72	30.72	32.72	34.72	36.72
Y (m)													
118.12													
116.12													
114.12													
112.12													0.0
110.12										0.1	0.1	0.1	0.0
108.12						0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
106.12			0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1
104.12	0.3	0.3	0.4	0.5	0.7	0.9	0.8	0.5	0.3	0.3	0.2	0.2	0.1
102.12	0.6	0.8	0.8	1.0	2.2	4.2	2.8	1.2	0.6	0.4	0.3	0.3	0.2
100.12	2.3	2.7	1.8	2.1	9.7	77.0	21.3	2.9	1.1	0.9	0.7	0.5	0.3
98.12	18.8	32.8	5.6	2.9	17.3	213.6	51.5	3.8	2.0	2.7	2.3	1.2	0.5
96.12	107.9	212.2	11.3	2.6	4.8	13.8	7.4	2.8	5.2	28.8	18.5	3.2	1.0
94.12	14.2	22.8	4.8	1.6	1.5	1.9	1.8	2.1	10.0	216.7	104.5	5.8	1.6
92.12	2.0	2.3	1.4	0.8	0.7	0.7			4.5	23.5	17.2	4.2	3.5
90.12	0.6	0.7	0.5	0.4					1.4	2.6	3.0	5.2	31.6
88.12	0.3	0.3	0.3						0.5	0.9	1.7	7.6	158.9
86.12											1.1	3.5	16.1
84.12										0.3	0.7	1.3	2.2
82.12										0.4	0.6	0.8	1.0
80.12										0.6	0.8	0.8	1.3
78.12					0.5	0.4			1.3	1.9	1.6	1.3	2.2
76.12		0.3	0.6	0.9	1.2	1.2	1.1	1.6	4.9	14.2	7.0	2.2	2.6
74.12		0.5	1.1	2.3	5.2	4.4	2.3	2.7	19.2	253.7>	46.3	3.6	2.0
72.12	0.0<	1.8	2.1	7.5	84.5	49.4	5.3	3.0	11.1	77.6	19.8	2.9	1.3
70.12	22.3	5.2	3.1	10.0	133.4	81.0	7.8	3.2	3.2	4.6	3.2	1.5	0.9
68.12	203.8	11.8	4.9	6.4	12.9	22.1	30.3	6.7	2.3	1.6	1.2	0.9	0.7
66.12	31.8	8.6	23.6	32.9	10.5	91.2	242.2	14.6	2.6	1.2	0.8	0.6	0.7
64.12	3.8	7.3	126.4	181.3	12.9	17.6	32.7	7.9	2.6	1.2	0.7	0.6	0.6
62.12	1.7	3.9	16.8	23.3	7.7	6.5	13.9	16.7	4.7	1.5	0.8	0.5	0.5
60.12	1.0	2.0	5.3	18.8	19.9	9.4	104.1	189.9	11.0	1.9	0.8	0.5	0.5
58.12	0.7	1.6	7.0	140.5	156.5	11.5	28.2	51.2	6.5	1.5	0.7	0.5	0.4
56.12	0.5	1.1	3.9	25.3	31.1	5.7	4.0	3.9	2.0	1.0	0.5	0.4	0.4
54.12	0.4	0.7	1.4	2.8	3.1	1.9	1.4	1.1	0.8	0.6	0.4	0.4	0.4
52.12	0.2	0.4	0.6	0.8	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.4
50.12	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4
48.12	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5

Average  
6.08

Minimum  
0.00

Maximum  
253.65

Min/Ave  
0.00

Min/Max  
0.00

Project maintenance factor  
0.90

< Continue

Continue >

Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	12.72	14.72	16.72	18.72	20.72	22.72	24.72	26.72	28.72	30.72	32.72	34.72	36.72
Y (m)													
46.12	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8
44.12	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.8	1.0	1.2	2.0
42.12	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	1.1	2.6	3.4	2.9	7.2
40.12	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.7	2.7	18.5	47.9	8.5	16.0
38.12	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.8	3.9	76.4	238.2	15.6	6.7
36.12	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.6	2.1	10.2	19.7	5.4	2.4
34.12	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.8	1.7	2.2	1.5	1.0
32.12	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.6	0.5
30.12	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2
28.12	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26.12	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
24.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
22.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
16.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14.12	0.0	0.0	0.0										
12.12													

Average 6.08      Minimum 0.00      Maximum 253.65      Min/Ave 0.00      Min/Max 0.00      Project maintenance factor 0.90

&lt; Continue

Continue &gt;

Grid : Site at Z = -0.00 m  
 Calculation : Surface Illuminance (lux)

X (m)	38.72	40.72	42.72	44.72	46.72	48.72	50.72	52.72	54.72	56.72	58.72	60.72	62.72
Y (m)													
118.12													
116.12							0.0	0.0					
114.12				0.0	0.0	0.0	0.0	0.0					
112.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
110.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
108.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
106.12	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0<	0.0<				
104.12	0.1	0.1	0.0	0.0	0.0				0.0<				
102.12	0.1	0.1	0.0	0.0	0.0					0.0<			
100.12	0.2	0.1	0.1	0.0	0.0	0.0				0.0<			
98.12	0.2	0.1	0.1	0.0	0.0	0.0				0.0<			
96.12	0.3	0.1	0.1	0.1	0.0	0.0				0.0<			
94.12	0.3	0.2	0.1	0.1							0.0<		
92.12											0.0		
90.12									0.0	0.0	0.0		
88.12					0.0<	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
86.12	16.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
84.12	2.2	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
82.12	1.3	1.0	0.8	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0
80.12	2.8	5.1	3.0	1.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0
78.12	12.9	105.0	21.6	2.6	0.7	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0
76.12	19.6	197.8	37.8	3.0	0.8	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0
74.12	4.5	11.1	5.8	1.7	0.7	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0
72.12	1.5	1.9	1.6	1.1	0.7	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0
70.12	0.9	1.2	1.5	1.5	1.0	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.0
68.12	0.9	1.9	5.4	7.4	2.9	1.0	0.5	0.3	0.2	0.1	0.1	0.1	0.0
66.12	1.1	4.0	61.3	131.1	10.5	1.7	0.6	0.3	0.2	0.1	0.1	0.1	0.1
64.12	1.0	3.8	49.7	113.4	9.8	1.7	0.7	0.3	0.2	0.1	0.1	0.1	0.1
62.12	0.8	1.8	4.9	6.9	3.4	1.5	0.7	0.4	0.2	0.2	0.1	0.1	0.1
60.12	0.6	1.0	2.0	3.7	4.8	2.6	1.1	0.5	0.3	0.2	0.1	0.1	0.1
58.12	0.5	0.9	2.6	17.1	74.9	11.7	1.9	0.6	0.3	0.2	0.1	0.1	0.1
56.12	0.5	0.9	3.0	41.3	225.3	22.6	2.3	0.7	0.3	0.2	0.1	0.1	0.1
54.12	0.5	0.8	1.8	6.6	14.8	5.3	1.5	0.6	0.3	0.2	0.1	0.1	0.1
52.12	0.5	0.7	1.3	2.2	2.7	1.8	1.0	0.5	0.3	0.2	0.1	0.1	0.1
50.12	0.5	0.9	2.1	5.1	5.2	2.2	0.9	0.5	0.3	0.2	0.1	0.1	0.1
48.12	0.7	1.3	5.4	69.4	70.1	6.0	1.3	0.5	0.3	0.2	0.1	0.1	0.1

Average  
6.08

Minimum  
0.00

Maximum  
253.65

Min/Ave  
0.00

Min/Max  
0.00

Project maintenance factor  
0.90

< Continue

Continue >

Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	38.72	40.72	42.72	44.72	46.72	48.72	50.72	52.72	54.72	56.72	58.72	60.72	62.72
Y (m)													
46.12	1.1	1.7	6.3	105.0	107.0	6.9	1.3	0.5	0.2	0.1	0.1	0.1	0.1
44.12	3.3	2.9	3.2	7.6	7.9	2.6	0.9	0.4	0.2	0.1	0.1	0.1	0.0
42.12	44.3	17.2	3.3	1.9	1.5	1.0	0.5	0.3	0.2	0.1	0.1	0.1	0.0
40.12	224.5	68.4	4.2	1.2	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.0
38.12	21.6	11.1	2.5	0.9	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0
36.12	2.5	1.9	1.0	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
34.12	0.8	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
32.12	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
30.12	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
28.12	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
26.12	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0			
24.12	0.1	0.1	0.1	0.0	0.0	0.0	0.0						
22.12	0.0	0.0	0.0	0.0									
20.12	0.0												
18.12													
16.12													
14.12													
12.12													

Average 6.08      Minimum 0.00      Maximum 253.65      Min/Ave 0.00      Min/Max 0.00      Project maintenance factor 0.90

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Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	64.72	66.72	68.72	70.72	72.72	74.72	76.72
Y (m)							
	118.12						
	116.12						
	114.12						
	112.12						
	110.12						
	108.12						
	106.12						
	104.12						
	102.12						
	100.12						
	98.12						
	96.12						
	94.12						
	92.12						
	90.12						
	88.12						
	86.12						
	84.12						
	82.12						
	80.12						
	78.12						
	76.12						
	74.12						
	72.12	0.0					
	70.12	0.0					
	68.12	0.0					
	66.12	0.0					
	64.12	0.0	0.0				
	62.12	0.0	0.0				
	60.12	0.0	0.0				
	58.12	0.0	0.0	0.0			
	56.12	0.0	0.0	0.0			
	54.12	0.0	0.0	0.0			
	52.12	0.0	0.0	0.0			
	50.12	0.0	0.0	0.0	0.0		
	48.12	0.0	0.0	0.0	0.0		

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
6.08	0.00	253.65	0.00	0.00	0.90

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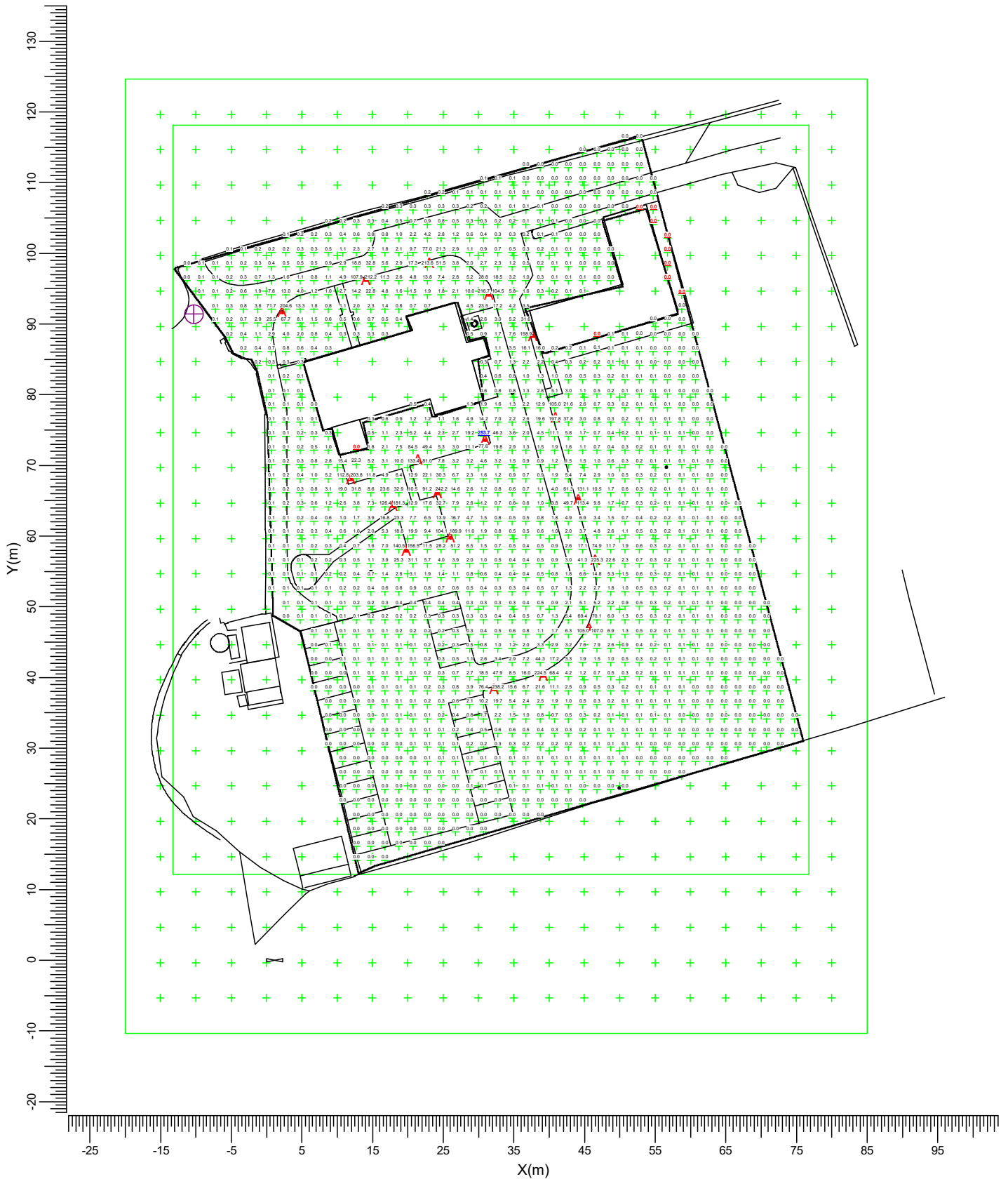
Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	64.72	66.72	68.72	70.72	72.72	74.72	76.72
Y (m)							
46.12	0.0	0.0	0.0	0.0			
44.12	0.0	0.0	0.0	0.0			
42.12	0.0	0.0	0.0	0.0	0.0		
40.12	0.0	0.0	0.0	0.0	0.0		
38.12	0.0	0.0	0.0	0.0	0.0		
36.12	0.0	0.0	0.0	0.0	0.0		
34.12	0.0	0.0	0.0	0.0	0.0	0.0	
32.12	0.0	0.0	0.0	0.0	0.0	0.0	
30.12	0.0	0.0	0.0	0.0	0.0		
28.12	0.0						
26.12							
24.12							
22.12							
20.12							
18.12							
16.12							
14.12							
12.12							

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
6.08	0.00	253.65	0.00	0.00	0.90

3.2 Free Grid: Graphical Table

Grid : Site at Z = -0.00 m  
 Calculation : Surface Illuminance (lux)



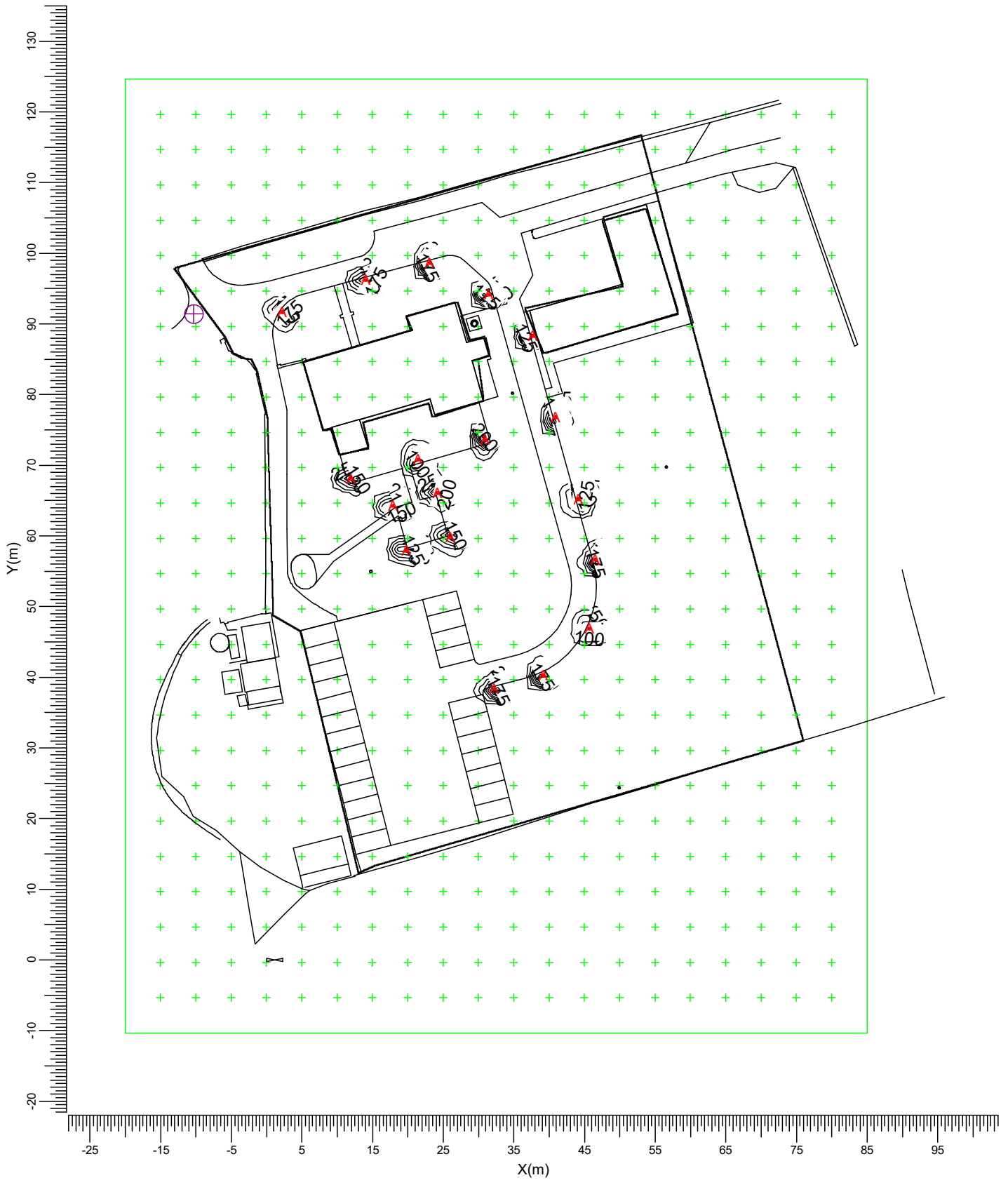
A → AMENITY - Taurus LED

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
6.08	0.00	253.65	0.00	0.00	0.90	1:750



### 3.3 Free Grid: Iso Contour

Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

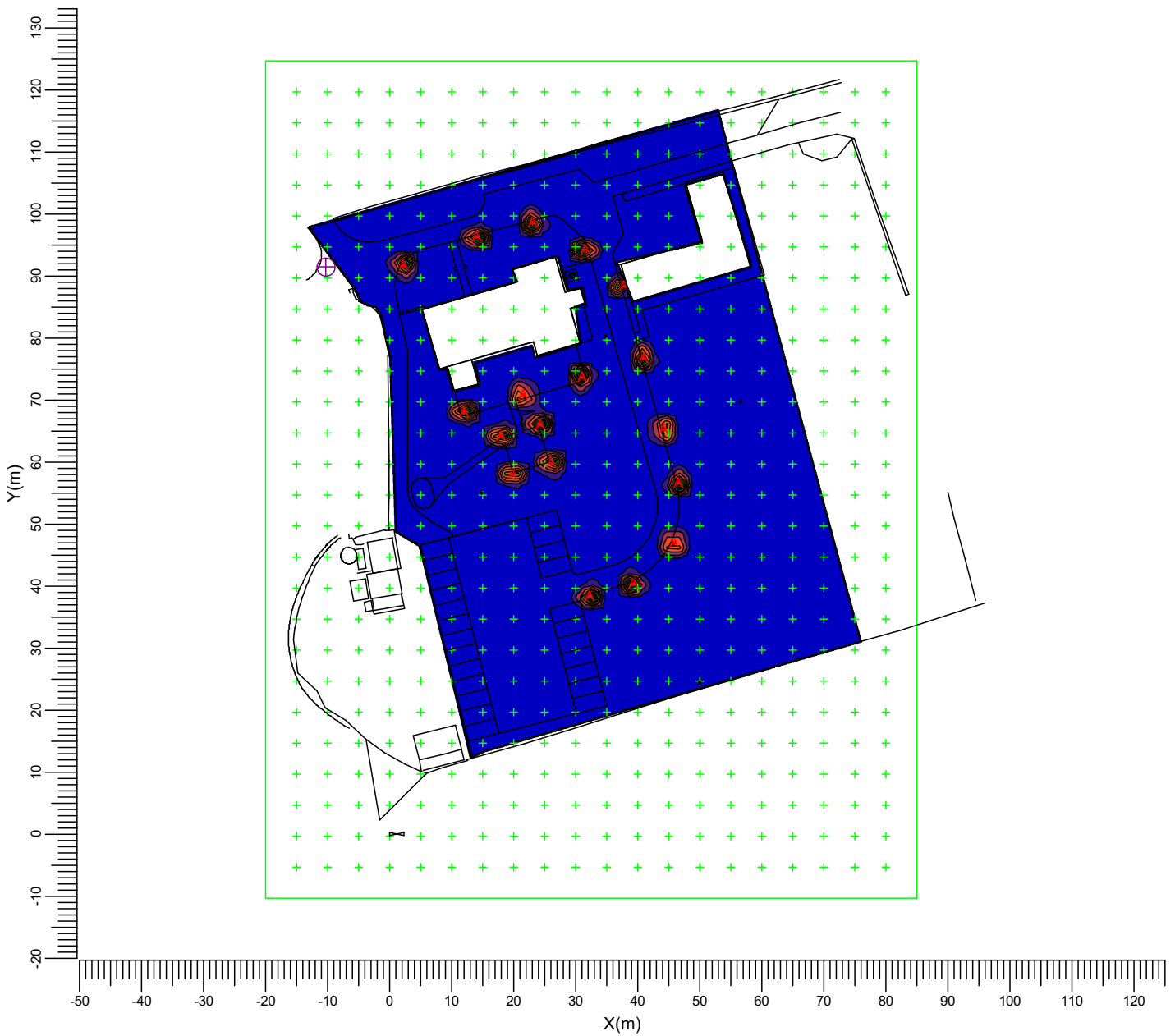
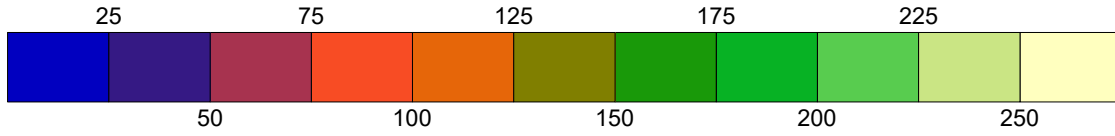


A AMENITY - Taurus LED

Average 6.08	Minimum 0.00	Maximum 253.65	Min/Ave 0.00	Min/Max 0.00	Project maintenance factor 0.90	Scale 1:750
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### 3.4 Free Grid: Filled Iso Contour

Grid : Site at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

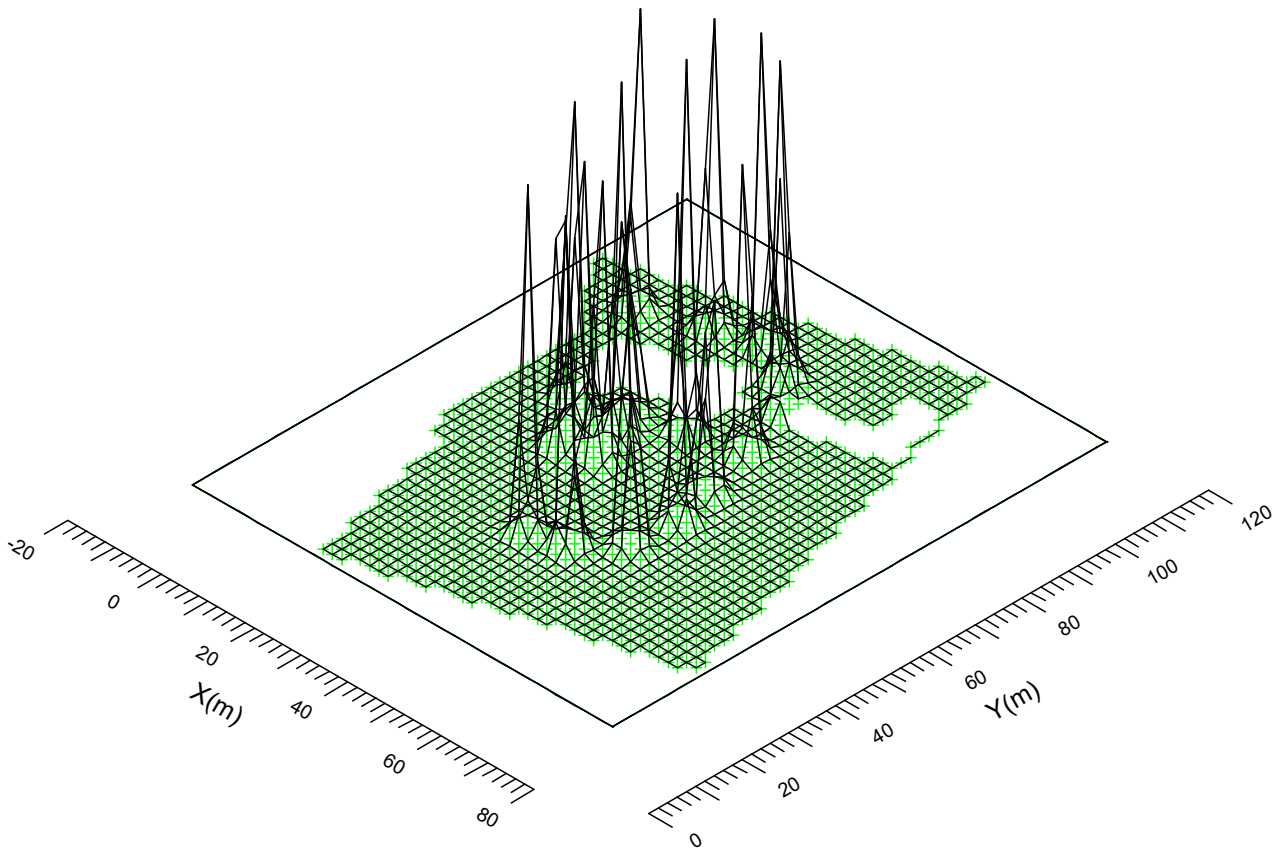


A AMENITY - Taurus LED

Average 6.08	Minimum 0.00	Maximum 253.65	Min/Ave 0.00	Min/Max 0.00	Project maintenance factor 0.90	Scale 1:1000
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### 3.5 Free Grid: Mountain Plot

Grid : Site at Z = -0.00 m  
 Calculation : Surface Illuminance (lux)



Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
6.08	0.00	253.65	0.00	0.00	0.90

3.6 Overspill1: Textual Table

Grid : Overspill1 at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	-20.02	-15.02	-10.02	-5.02	-0.02	4.98	9.98	14.98	19.98	24.98	29.98	34.98	39.98
Y (m)													
124.65													
119.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109.65		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0
104.65		0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.2	0.1	0.1
99.65		0.0	0.0	0.1	0.2	0.3	1.0	4.0	5.7	23.7	1.1	0.6	0.1
94.65		0.0	0.1	0.2	3.0	2.3	2.0	46.9	1.7	2.3	74.1	4.2	0.2
89.65		0.0	0.1	0.3	7.1	4.6	0.5	0.5	0.2	0.0<	1.6	7.6	0.0<
84.65		0.0	0.0	0.1	0.3	0.3	0.0<	0.0<	0.0<	0.0<	0.2	1.8	0.3
79.65		0.0	0.0	0.1	0.1	0.1	0.0<	0.0<	0.0<	0.0<	0.0<	0.9	7.3
74.65		0.0	0.0	0.0	0.1	0.2	0.0<	0.4	2.7	1.8	91.0	2.8	18.1
69.65		0.0	0.0	0.0	0.1	0.4	12.4	5.6	42.0	7.4	3.0	1.2	1.1
64.65		0.0	0.0	0.0	0.1	0.3	2.9	9.4	30.3	63.5	1.5	0.6	2.3
59.65		0.0	0.0	0.0	0.1	0.2	0.5	2.1	59.7	148.1>	3.1	0.5	0.8
54.65		0.0	0.0	0.0	0.1	0.1	0.2	0.8	5.4	1.7	0.8	0.4	0.6
49.65		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.8
44.65		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.6	1.0	2.3
39.65		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	12.1	9.0	135.1
34.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.9	1.9	0.9
29.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2
24.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
19.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-0.35		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-5.35		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-10.35													

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Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
2.15	0.00	148.07	0.00	0.00	0.90

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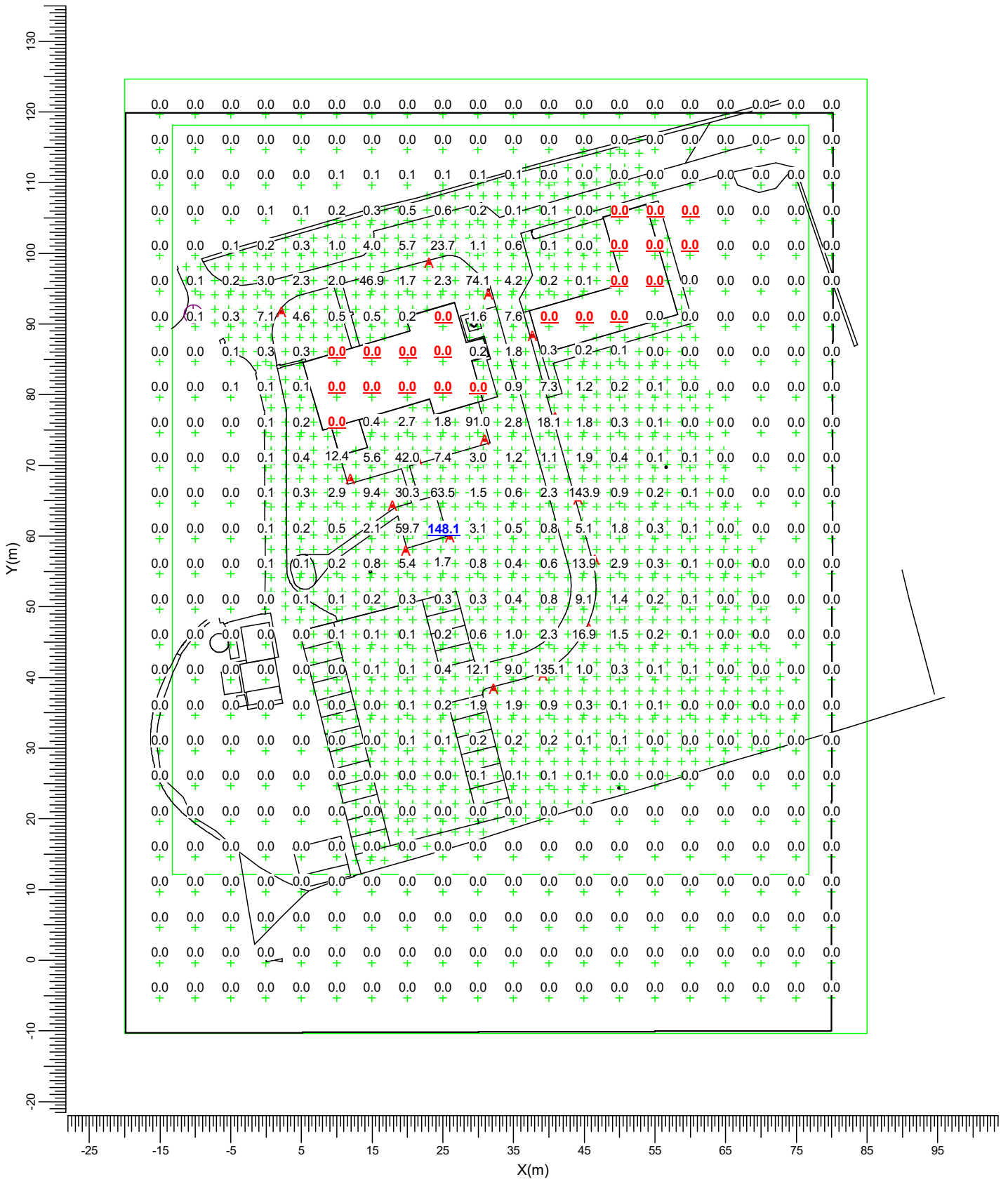
Grid : Overspill1 at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

X (m)	44.98	49.98	54.98	59.98	64.98	69.98	74.98	79.98	84.98
Y (m)									
124.65									
119.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104.65	0.0	0.0<	0.0<	0.0<	0.0	0.0	0.0	0.0	0.0
99.65	0.0	0.0<	0.0<	0.0<	0.0	0.0	0.0	0.0	0.0
94.65	0.1	0.0<	0.0<	0.0	0.0	0.0	0.0	0.0	0.0
89.65	0.0<	0.0<	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.65	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.65	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
74.65	1.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
69.65	1.9	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0
64.65	143.9	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0
59.65	5.1	1.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0
54.65	13.9	2.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0
49.65	9.1	1.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
44.65	16.9	1.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0
39.65	1.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0
34.65	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
29.65	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24.65	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-5.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-10.35									

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
2.15	0.00	148.07	0.00	0.00	0.90

### 3.7 Overspill1: Graphical Table

Grid : Overspill1 at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

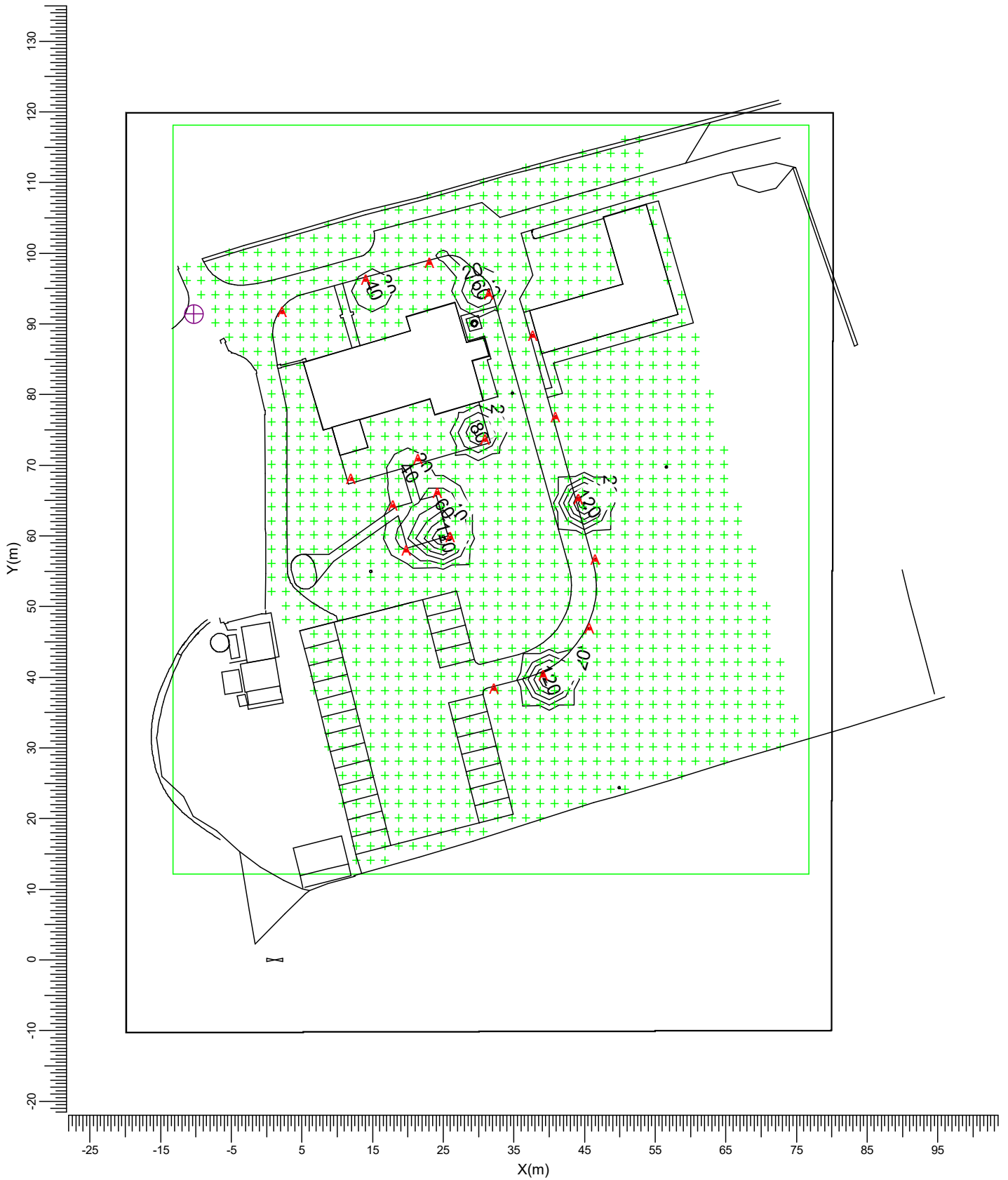


A AMENITY - Taurus LED

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
2.15	0.00	148.07	0.00	0.00	0.90	1:750

### 3.8 Overspill1: Iso Contour

Grid : Overspill1 at Z = -0.00 m  
Calculation : Surface Illuminance (lux)

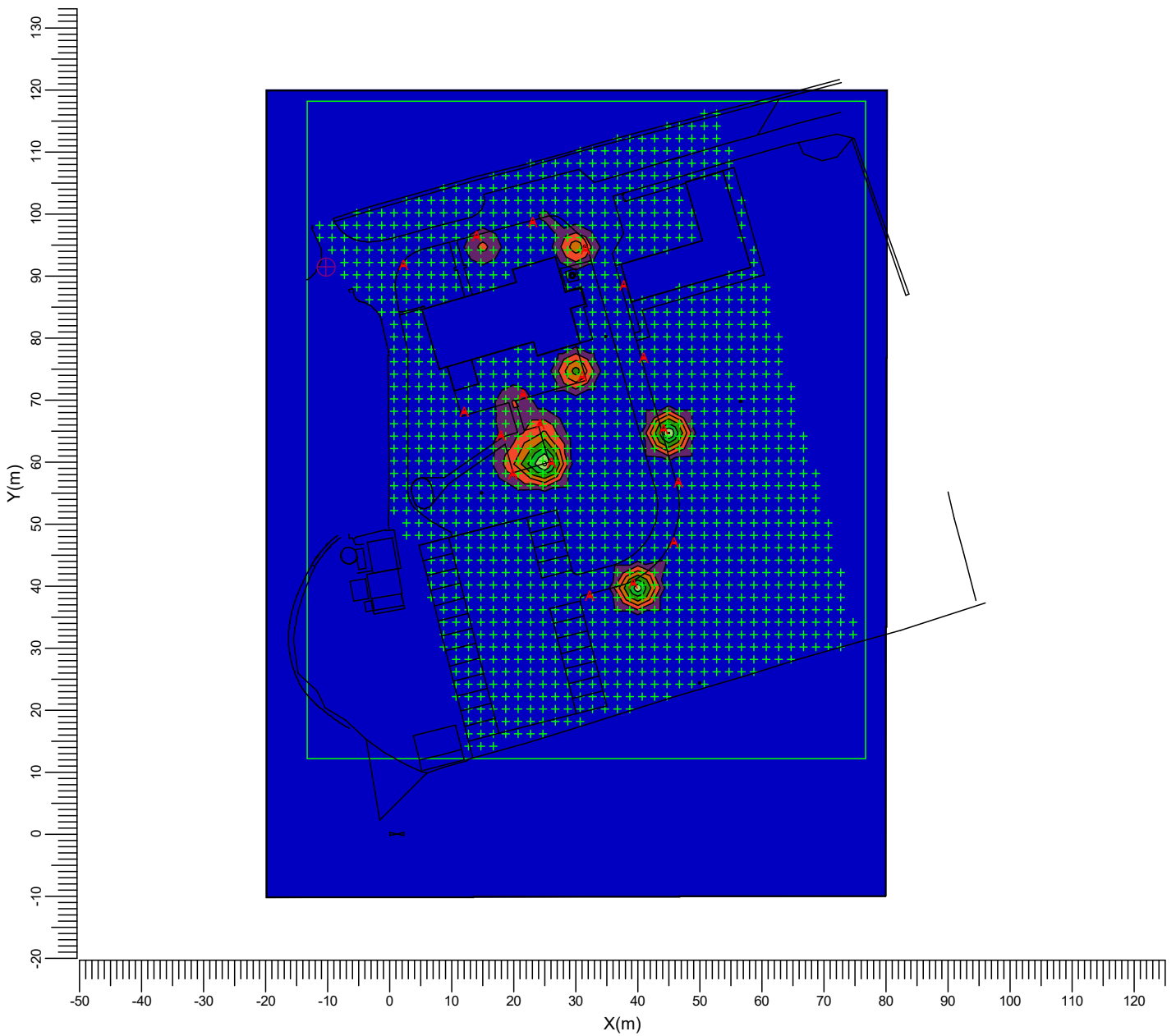
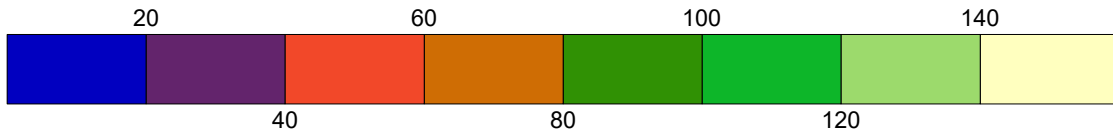


A AMENITY - Taurus LED

Average 2.15	Minimum 0.00	Maximum 148.07	Min/Ave 0.00	Min/Max 0.00	Project maintenance factor 0.90	Scale 1:750
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### 3.9 Overspill1: Filled Iso Contour

Grid : Overspill1 at Z = -0.00 m  
Calculation : Surface Illuminance (lux)



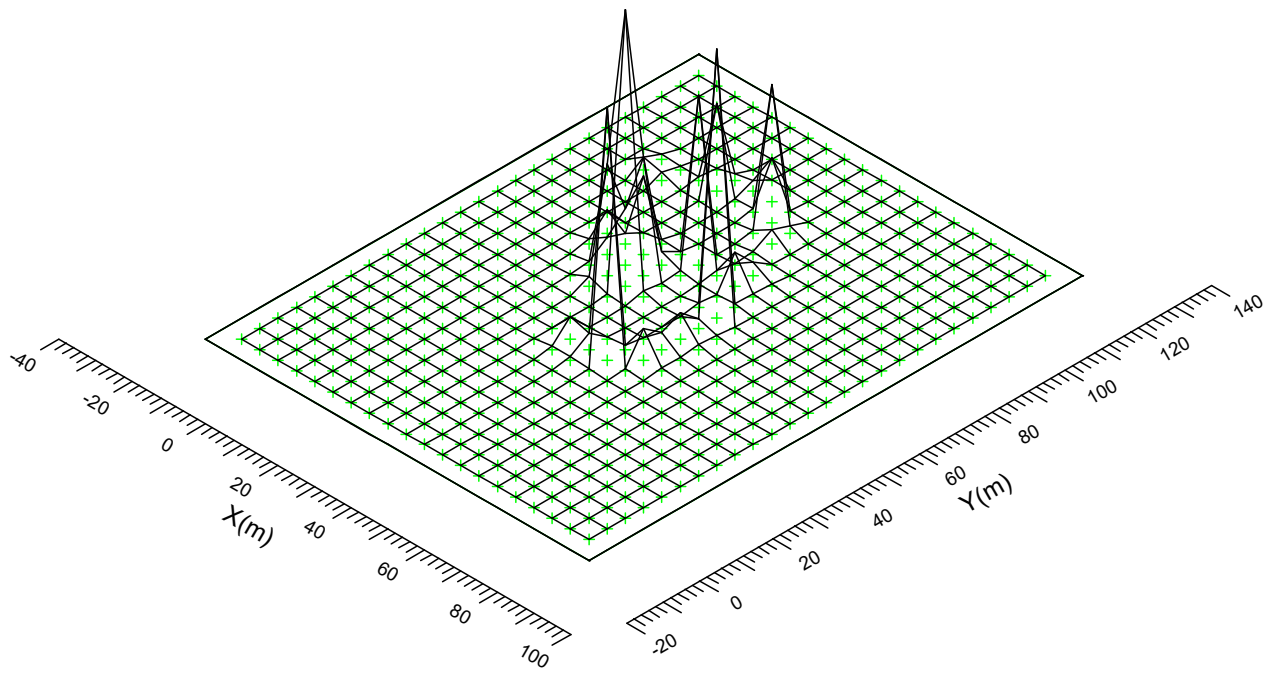
A AMENITY - Taurus LED

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
2.15	0.00	148.07	0.00	0.00	0.90	1:1000



### 3.10 Overspill1: Mountain Plot

Grid : Overspill1 at Z = -0.00 m  
 Calculation : Surface Illuminance (lux)



Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor
2.15	0.00	148.07	0.00	0.00	0.90

## 4. Luminaire Details

### 4.1 Project Luminaires

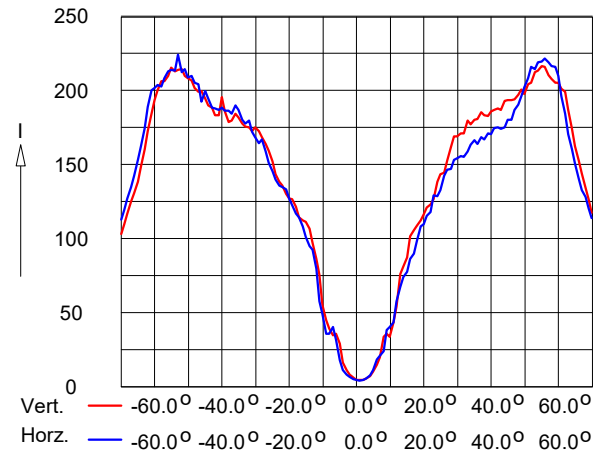
AMENITY - Taurus LED 1xLED 0/840/4000K

Light output ratios

DLOR	: 0.83
ULOR	: 0.17
TLOR	: 1.00
Lamp flux	: 2416 lm
Luminaire wattage	: 24.0 W
Measurement code	: ATALEDB/10

Note: Luminaire data not from database.

Luminous Intensity Diagram (candela/1000 lumen)



## 5. Installation Data

### 5.1 Legends

Project Luminaires:

Code	Qty Luminaire Type	Lamp Type	Flux (lm)
A	18 AMENITY - Taurus LED	1 * LED 0	1 * 2416

### 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	2.19	91.63	1.00	2.19	91.63	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	11.97	68.04	1.00	11.97	68.04	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	14.01	96.23	1.00	14.01	96.23	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	17.88	64.25	1.00	17.88	64.25	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	19.77	57.97	1.00	19.77	57.97	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	21.43	70.85	1.00	21.43	70.85	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	23.01	98.63	1.00	23.01	98.63	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	24.15	66.10	1.00	24.15	66.10	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	26.00	59.77	1.00	26.00	59.77	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	30.94	73.62	1.00	30.94	73.62	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	31.43	94.17	1.00	31.43	94.17	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	32.21	38.37	1.00	32.21	38.37	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	37.66	88.34	1.00	37.66	88.34	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	39.14	40.31	1.00	39.14	40.31	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	40.89	76.80	1.00	40.89	76.80	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	44.12	65.20	1.00	44.12	65.20	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	45.73	46.92	1.00	45.73	46.92	0.00	0.0	0.0	0.0	0.17	0.17
1 * A	46.52	56.61	1.00	46.52	56.61	0.00	0.0	0.0	0.0	0.17	0.17

## 6. Financial Information

### 6.1 Installation Data

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

### 6.2 Luminaire Information

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Project Luminaires	Qty	Prices (€)				Relamping period (yr)
		Lamp	Luminaire	Installation	Maintenance	
AMENITY - Taurus LED	18	0.00	0.00	0.00	0.00	1.00

### 6.3 Total cost

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Costs per year		
Energy	€	0.00
Investment		0.00
Lamps		0.00
Maintenance		0.00
		-----
Total	€	0.00
Total investment	€	0.00