Forest Hill School

FOOTBALL LED - 200lux

Date: 23-01-2025

Designer: Andy Poplett

Description:

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.

Signify
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1. Project Description

1.1 Description

Maintenance Factor:- 0.90

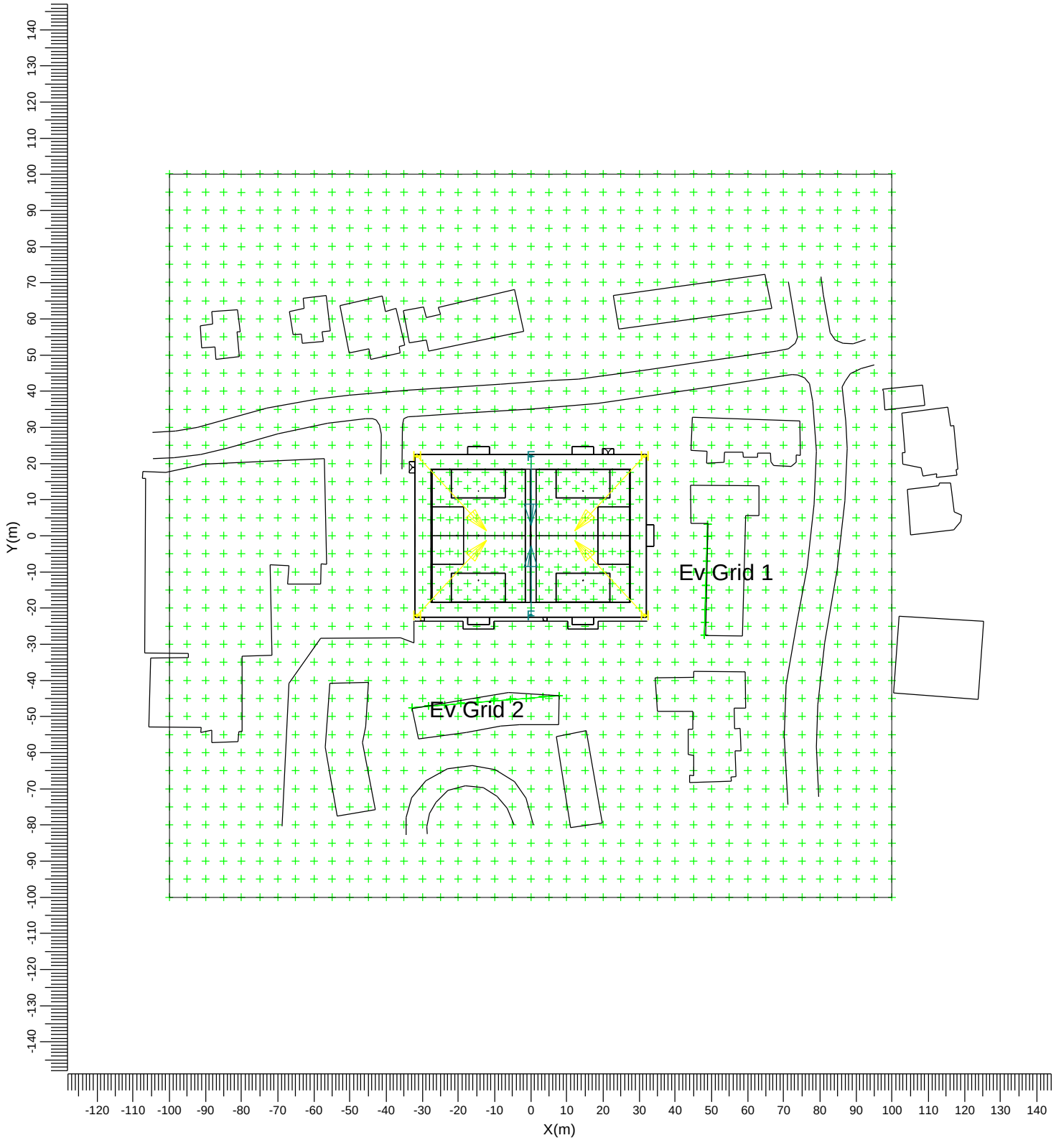
Pitch 55 m x 37 m (fence area 64 m x 45 m)

The design has been completed using the Philips
Asymmetric OptiVision LED GEN 3.5 Floodlights.
A total of 6no have been used to achieve an
average of 200lux.

All Floodlights fitted with integral louvres to reduce spill and glare.

Floodlights are mounted on 6 x 12 metre columns - Column positions moved
to inside the pitch.

1.2 Top Project Overview



Scale
1:1500

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
F	2	BVP518 OUT T35 A35-WB LO	1 * LED1720-4S/740	1006.0	1 * 172000
H	4	BVP528 OUT T45 A35-MNB LO	1 * LED2300-4S/740	1303.1	1 * 230000

The total installed power: 7.22 (kWatt)

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	F	H	
Centre 1	2	0	2.01
Centre 2	0	0	0.00
Corner 1	0	2	2.61
Corner 2	0	2	2.61

2.2 Calculation Results

(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Max	Min/Ave	Min/Max
Pitch 55 m x 37 m	Surface Illuminance	lux	236		0.79	0.58
Spillage	Surface Illuminance	lux	17.2		0.00	0.00
Ev Houses Grid 1	Surface Illuminance	lux		1.19		
Ev Houses Grid 2	Surface Illuminance	lux		0.82		

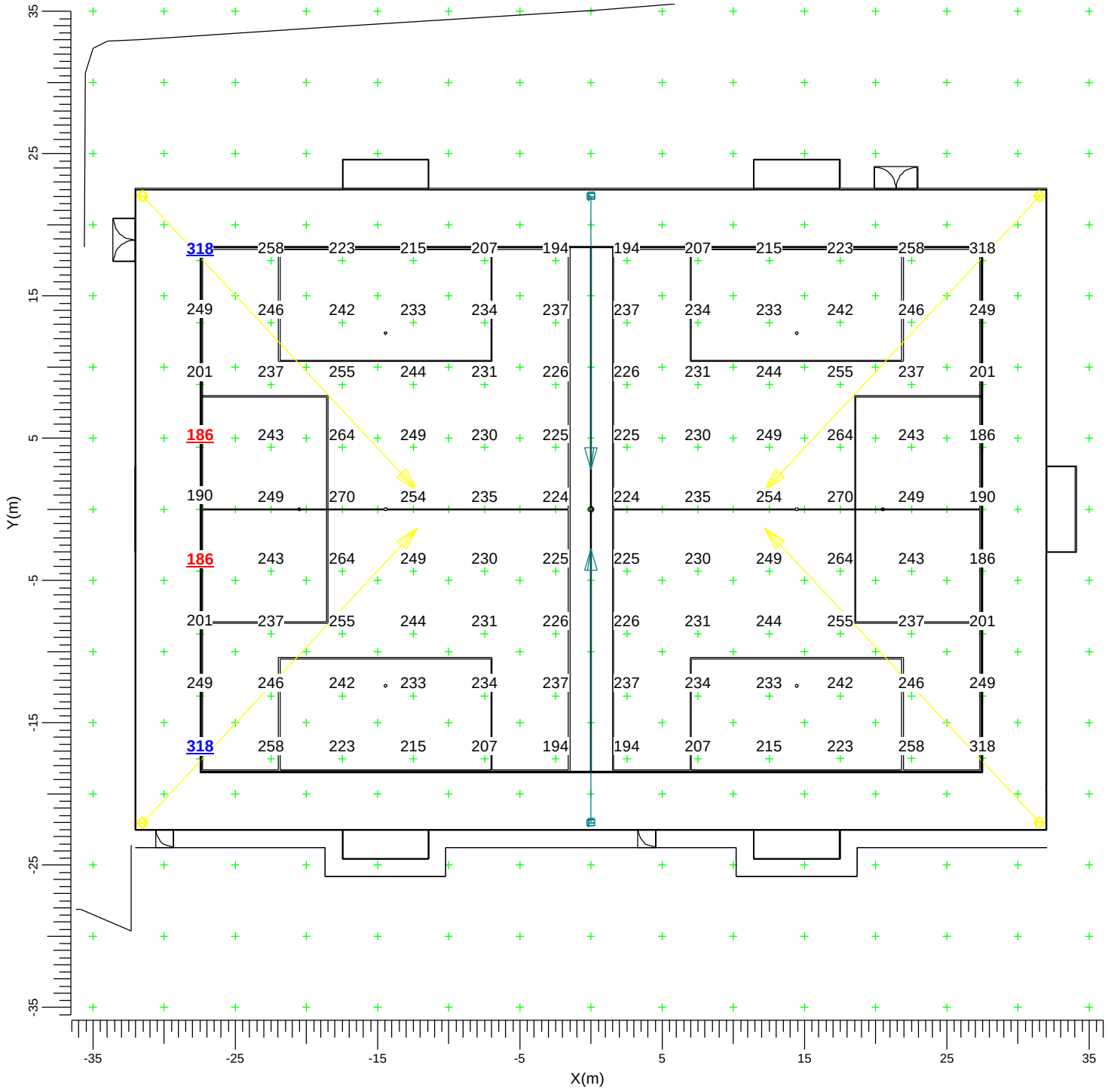
Obtrusive Light Calculations:

The upward light ratio (ULR) is 0.00.

3. Calculation Results

3.1 Pitch 55 m x 37 m: Graphical Table

Grid : Pitch 55 m x 37 m at Z = -0.00 m
Calculation : Surface Illuminance (lux)

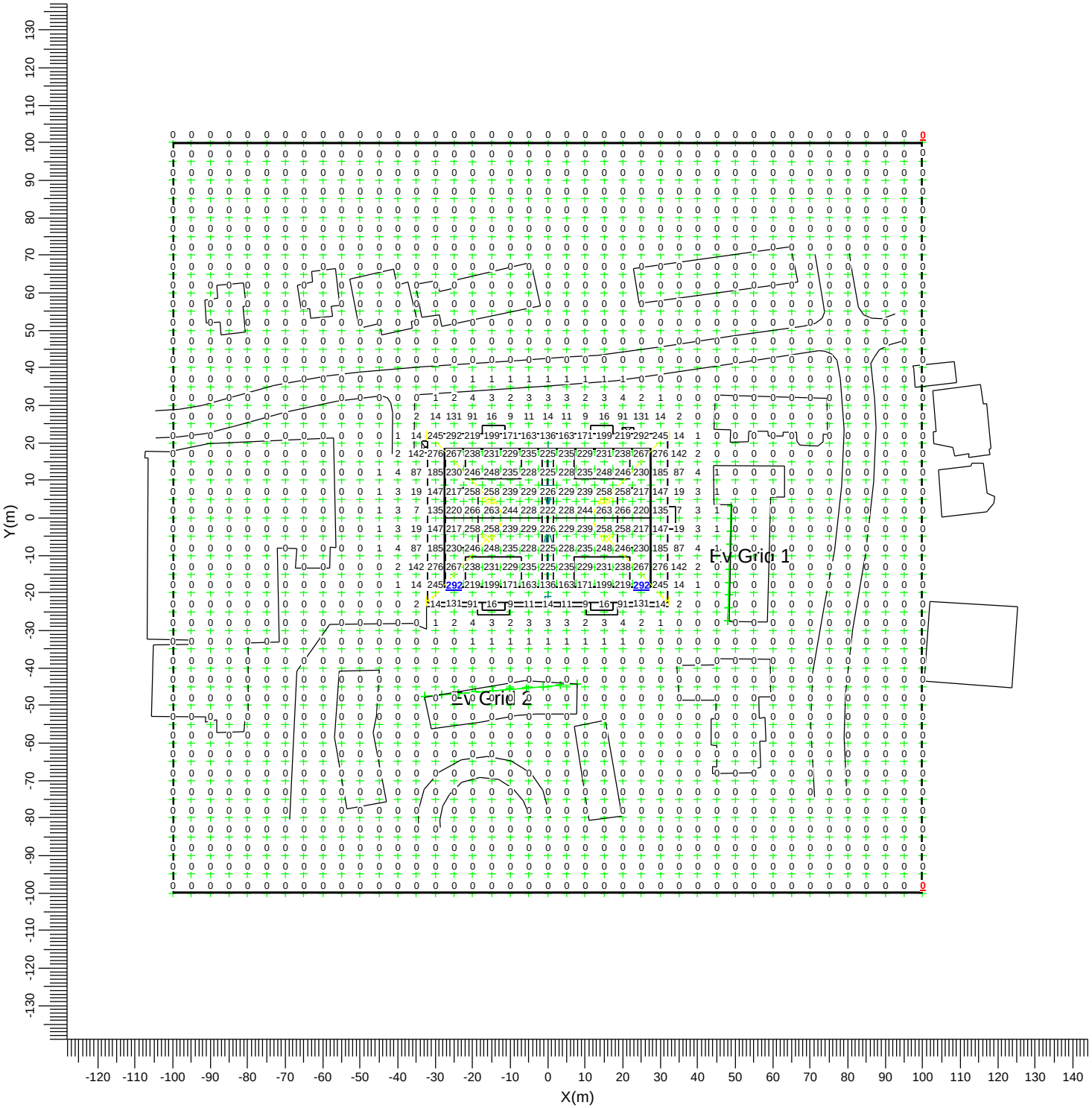


B BVP518 OUT T35 A35-MNB LO F BVP518 OUT T35 A35-WB LO
H BVP528 OUT T45 A35-MNB L

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
236	0.79	0.58	0.95	1:400

3.2 Spillage: Graphical Table

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

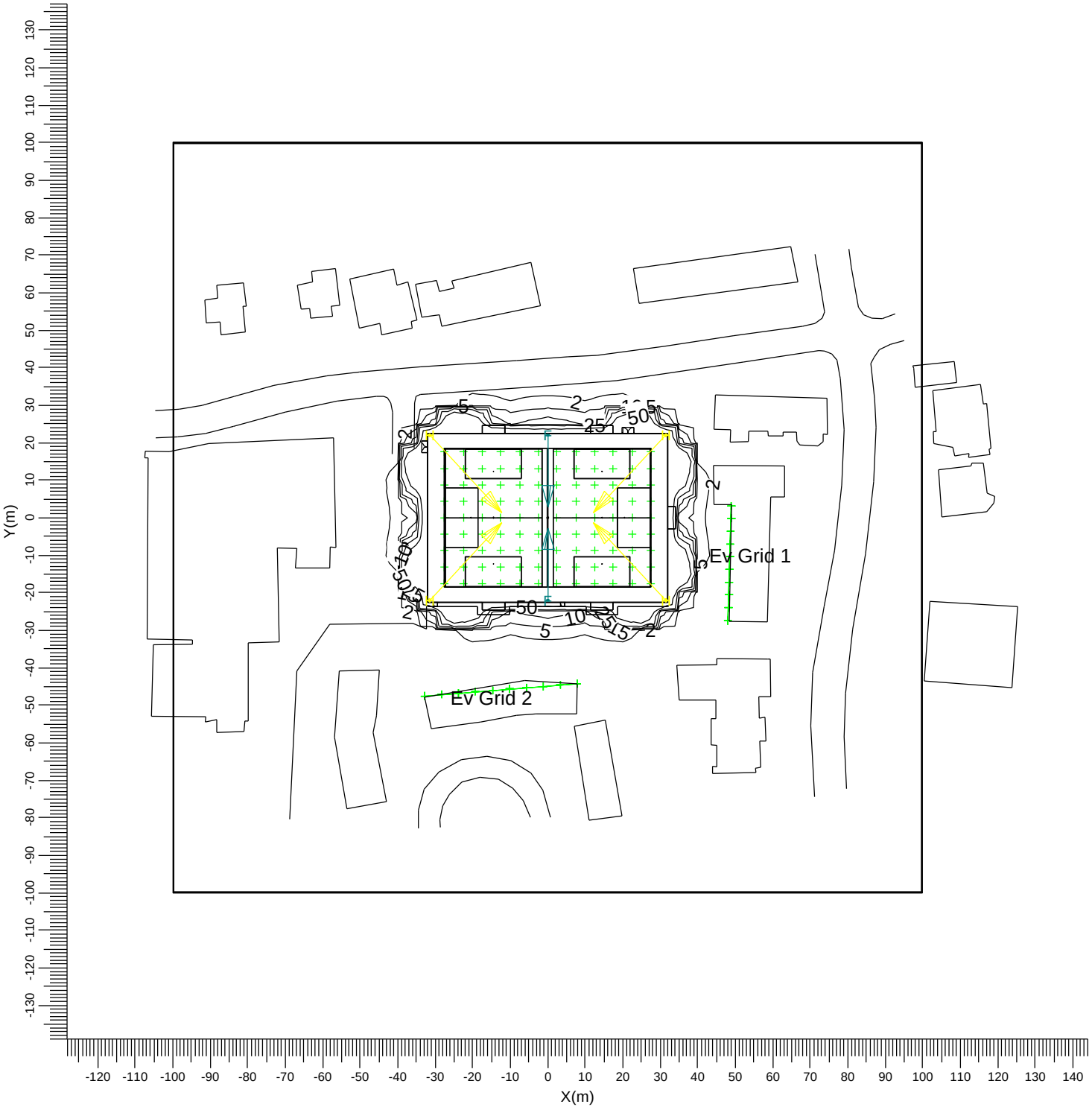


B BVP518 OUT T35 A35-MNB LO F BVP518 OUT T35 A35-WB LO
H BVP528 OUT T45 A35-MNB L

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
17.2	0.00	0.00	0.95	1:1500

3.3 Spillage: Iso Contour

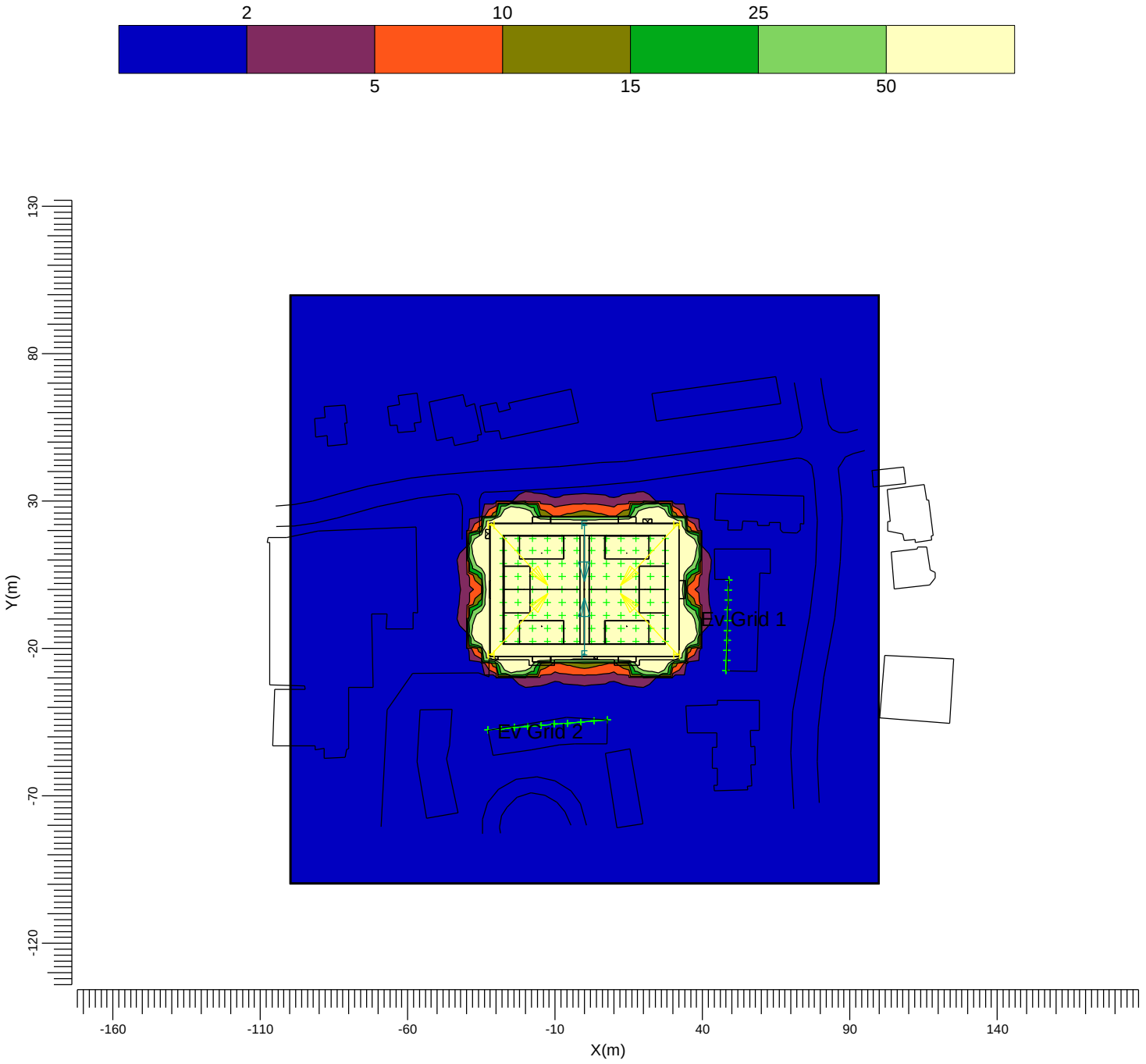
Grid : Spillage at Z = -0.00 m
Calculation : Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
17.2	0.00	0.00	0.95	1:1500

3.4 Spillage: Filled Iso Contour

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

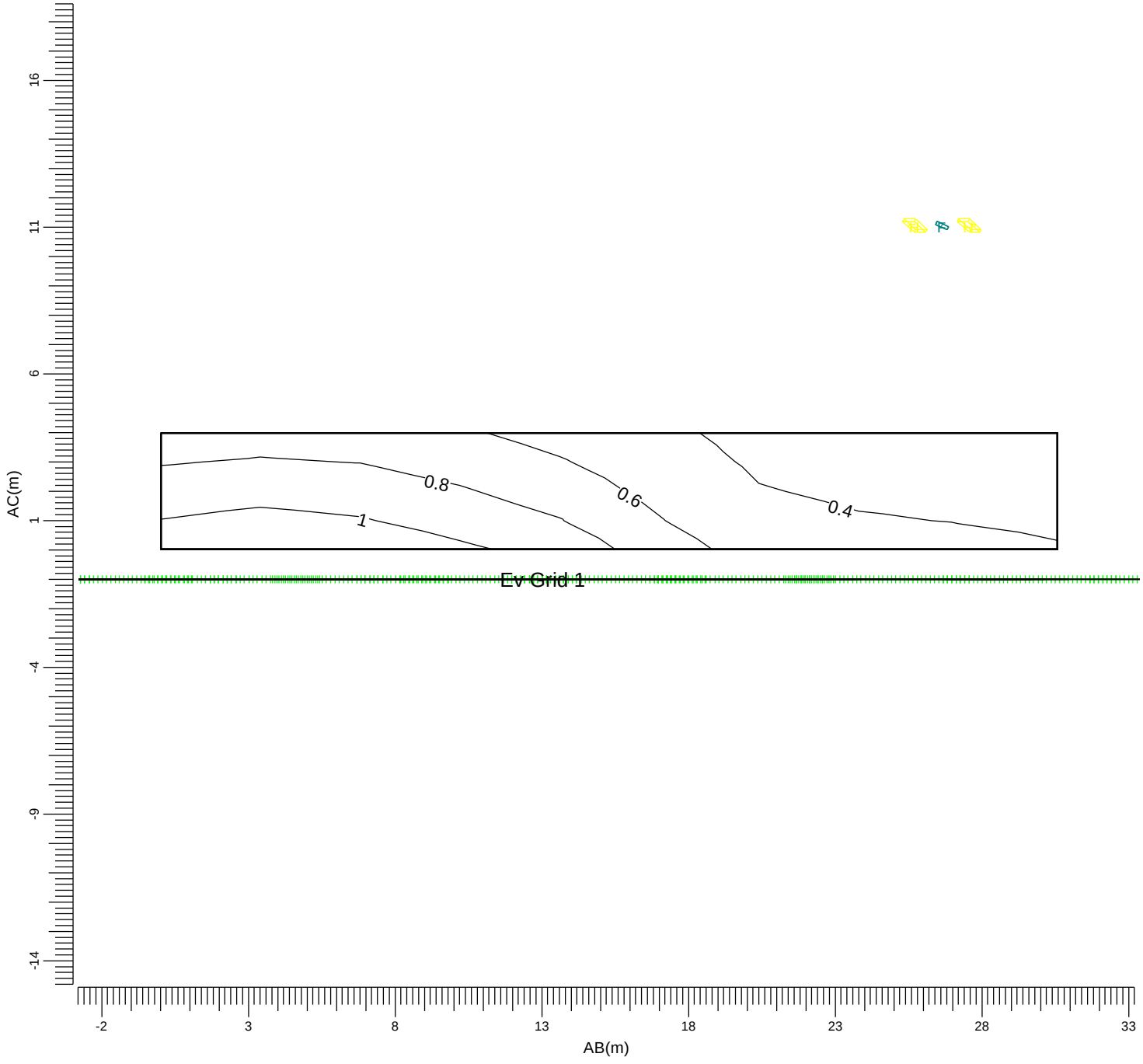


B BVP518 OUT T35 A35-MNB LO F BVP518 OUT T35 A35-WB LO
H BVP528 OUT T45 A35-MNB L

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
17.2	0.00	0.00	0.95	1:2000

3.5 Ev Houses Grid 1: Iso Contour

Grid : Ev Houses Grid 1
Calculation : Surface Illuminance (lux)



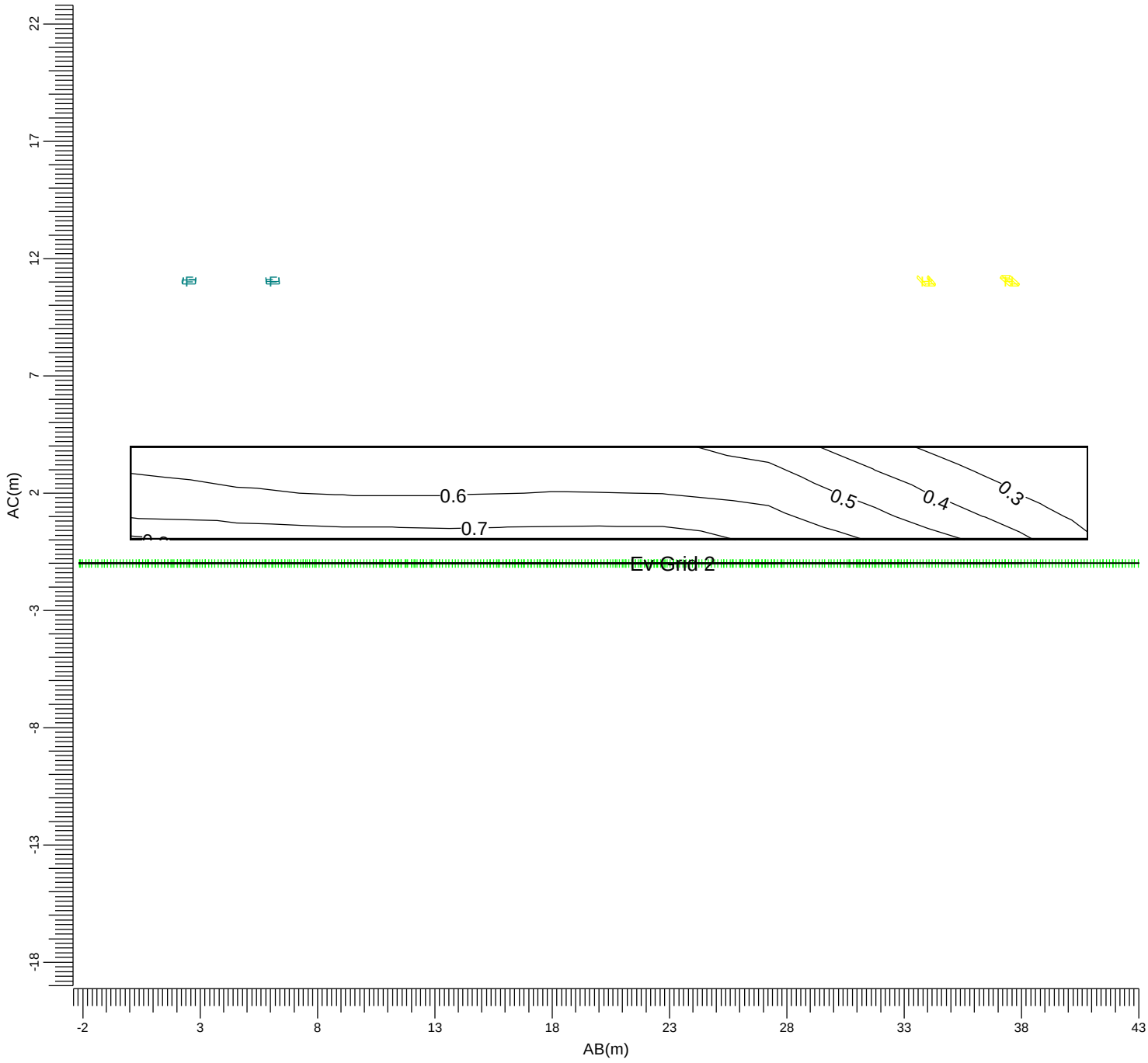
(49.00, 3.20, 5.00) C-----D (48.10, -27.40, 5.00)
| |
(49.00, 3.20, 1.00) A-----B (48.10, -27.40, 1.00)

B : BVP518 OUT T35 A35-MNB LO
F : BVP518 OUT T35 A35-WB LO
H : BVP528 OUT T45 A35-MNB LO

Maximum	Project maintenance factor	Scale
119	0.95	1:200

3.6 Ev Houses Grid 2: Iso Contour

Grid : Ev Houses Grid 2
Calculation : Surface Illuminance (lux)



(7.90, -44.20, 5.00) C-----D(-32.80, -47.50, 5.00)
| |
(7.90, -44.20, 1.00) A-----B(-32.80, -47.50, 1.00)

B : BVP518 OUT T35 A35-MNB LO
F : BVP518 OUT T35 A35-WB LO
H : BVP528 OUT T45 A35-MNB LO

Maximum	Project maintenance factor	Scale
0.82	0.95	1:250

4. Luminaire Details

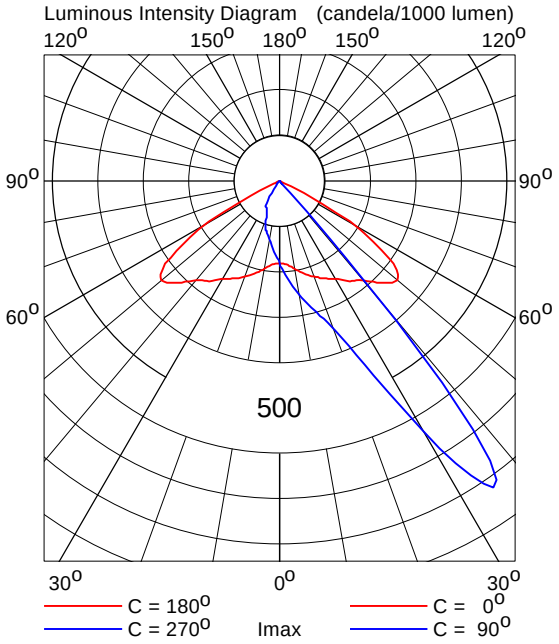
4.1 Project Luminaires

OptiVision LED gen3.5 2022
BVP518 OUT T35 1xLED1720-4S/740/740 E3/D4I A35-WB LO

Light output ratios
- DLOR : 0.70
- ULOR : 0.00
- TLOR : 0.70

Ballast : E3/D4I
Lamp flux : 172000 lm
Luminaire wattage : 1006.0 W
Measurement code : LVM2049200

Note: Luminaire data not from database.



OptiVision LED gen3.5 2022
BVP528 OUT T45 1xLED2300-4S/740/740 E3/D4I A35-MNB LO

Light output ratios
- DLOR : 0.56
- ULOR : 0.00
- TLOR : 0.56

Ballast : E3/D4I
Lamp flux : 230000 lm
Luminaire wattage : 1303.1 W
Measurement code : LVM2L46900

Note: Luminaire data not from database.