

King George V Playing Fields

Date: 20-12-2024
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.

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CalcuLuX Area 7.9.0.0

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1. Project Description

1.1 Description

Maintenance Factor:- 0.90

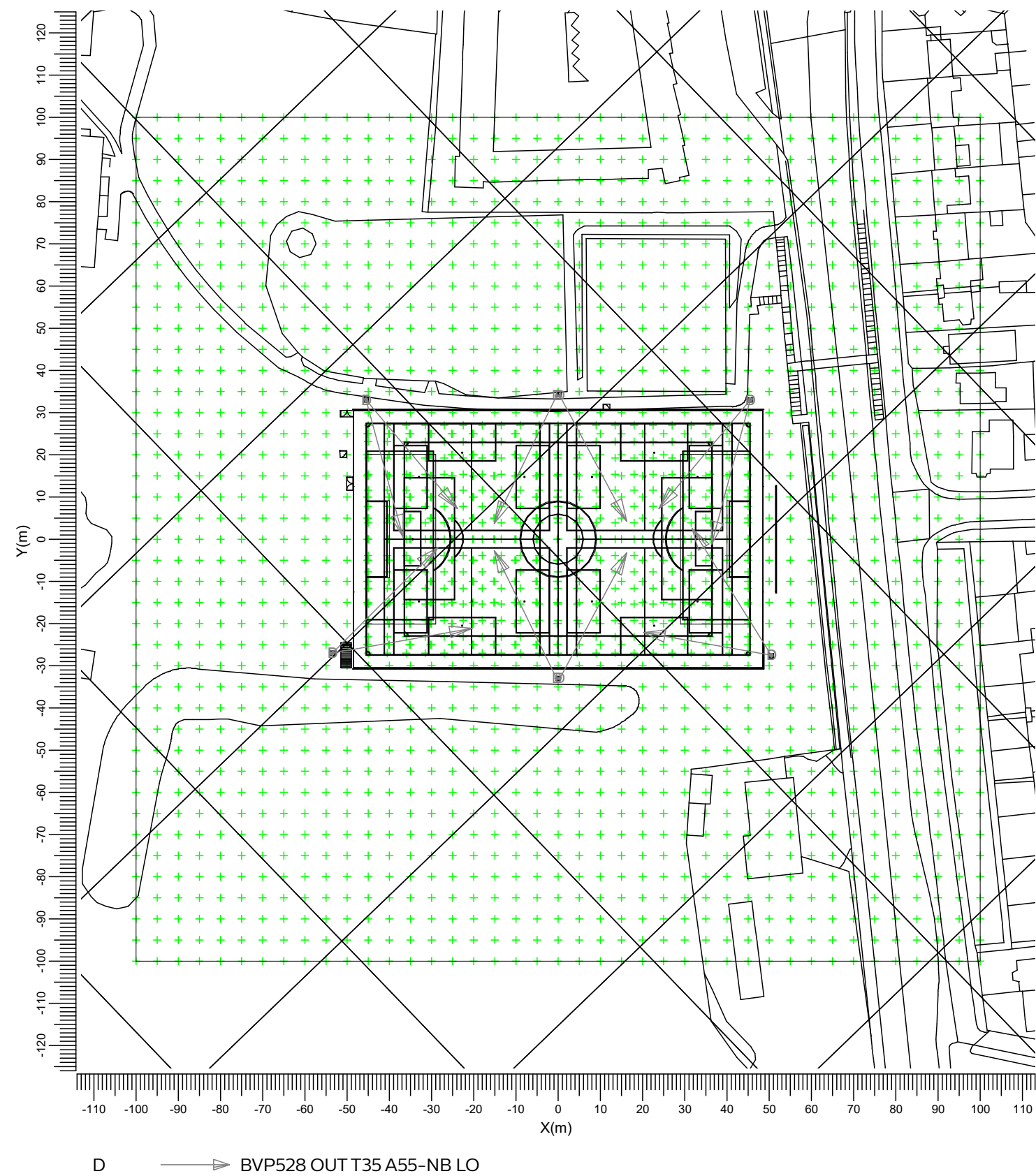
Pitch 91m x 55m (Fenced Area 97m x 61m)

The design has been completed using the Philips Asymmetric OptiVision LED GEN 3.5 Floodlights. A total of 12 no have been used to achieve an average of 200lux.

Floodlights are mounted on 6 x 15 metre columns

All Floodlights have been fitted with integral louvres (LO) to reduce the overspill and glare.

1.2 Top Project Overview



2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
D	12	BVP528 OUT T35 A55-NB LO	1 * LED2590-4S/757	1505.9	1 * 259000

The total installed power: 18.07 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code	Power (kWatt)
	D	
Main Pitch	12	18.07
Half Pitch	4	6.02
All ON	12	18.07

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code	Power (kWatt)
	D	
Centre 1	2	3.01
Centre 2	2	3.01
Corner 1	2	3.01
Corner 2	2	3.01
Corner 3	2	3.01
Corner 4	2	3.01

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Main Pitch	0.90
2	Half Pitch	0.90
3	All ON	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave Min/AveMin/Max		
Football	1	Surface Illuminance	lux	223	0.67	0.45
Half Pitch	2	Surface Illuminance	lux	135	0.62	0.51
Spillage	3	Surface Illuminance	lux	42.5	0.00	0.00

Obtrusive Light Calculations:

Switching Mode	ULR
1	0.00
2	0.00
3	0.00

3. Calculation Results

3.1 Football: Graphical Table

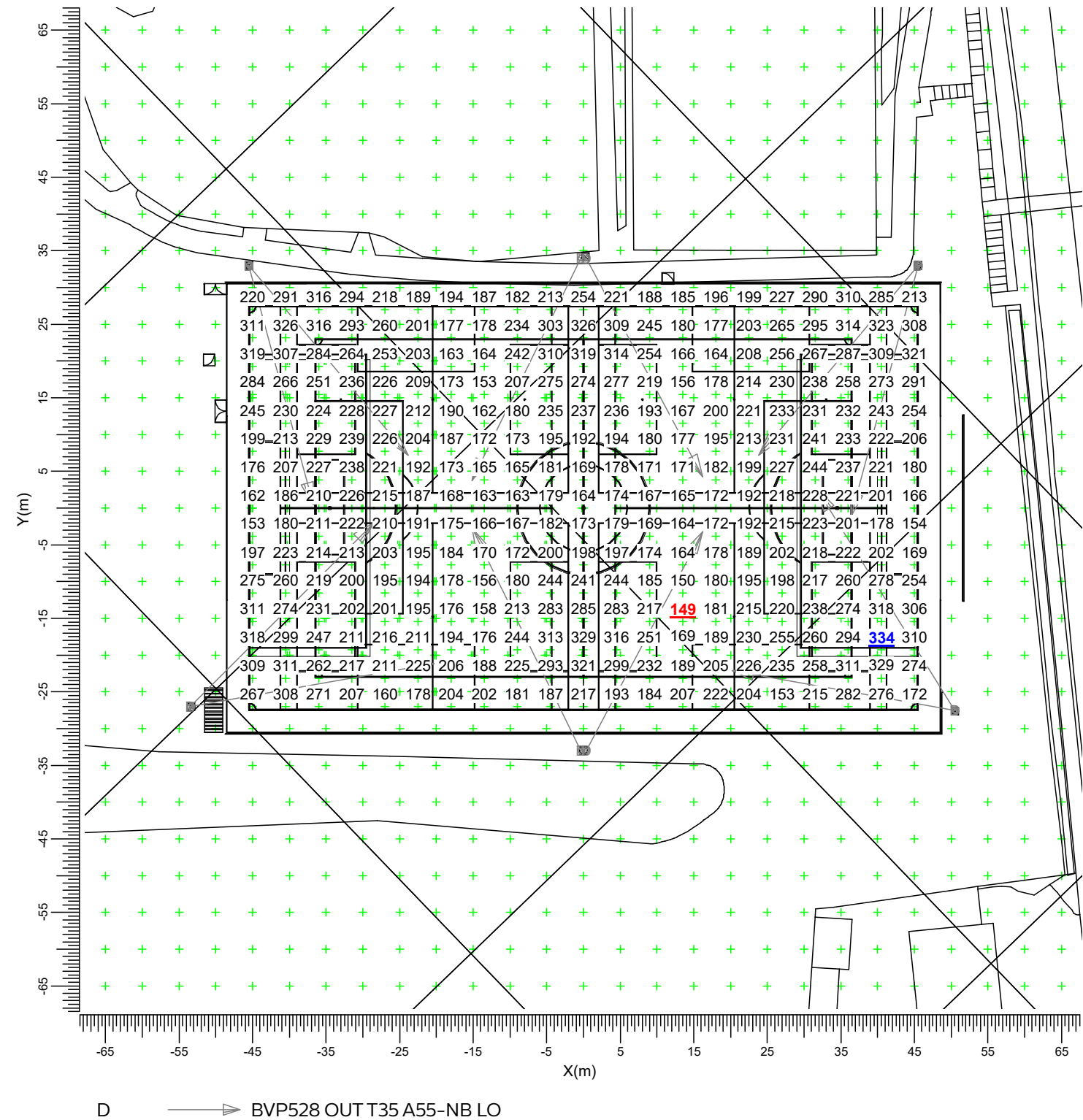
Main Pitch

Grid

Calculation

: Football at Z = -0.00 m

: Surface Illuminance (lux)



Average
223

Min/Ave
0.67

Min/Max
0.45

Project maintenance factor
0.90

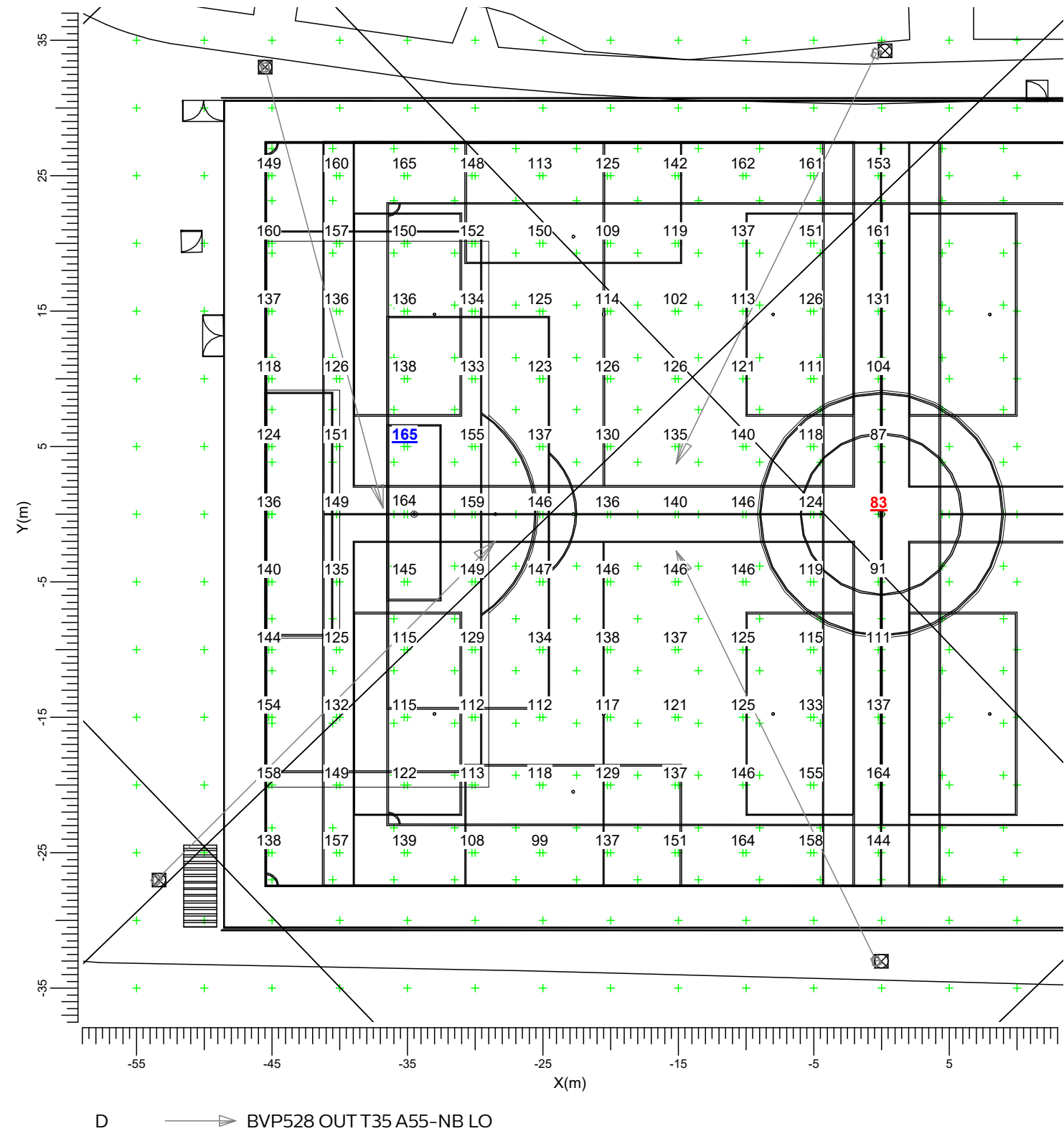
Scale
1:750

3.2 Half Pitch: Graphical Table

Half Pitch

Grid : Half Pitch at Z = -0.00 m

Calculation : Surface Illuminance (lux)



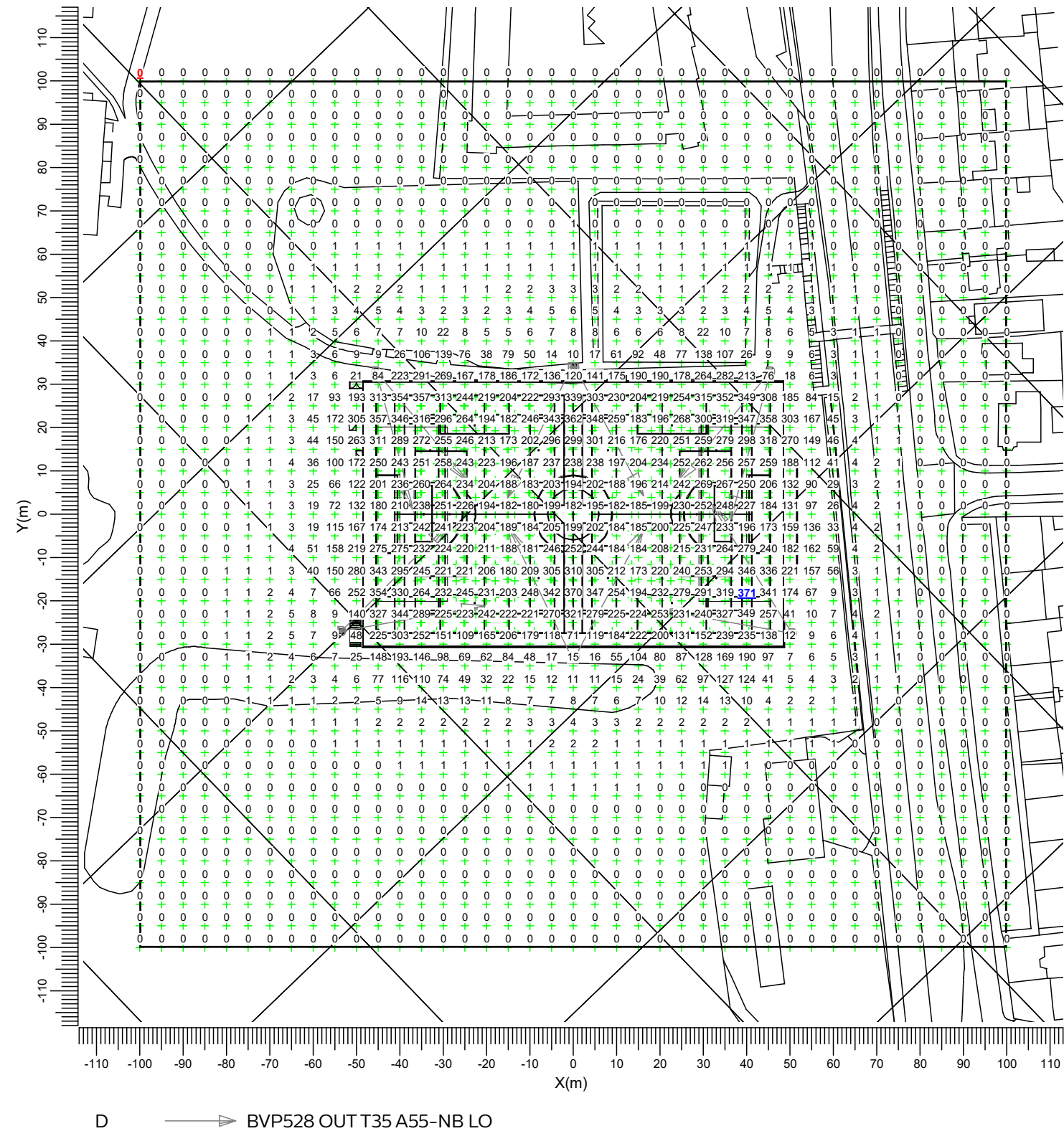
Average	Min/Ave	Min/Max	Project maintenance factor	Scale
135	0.62	0.51	0.90	1:400

3.3 Spillage: Graphical Table

All ON

Grid : Spillage at Z = -0.00 m

Calculation : Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
42.5	0.00	0.00	1.00	1:1250

3.4 Spillage: Iso Contour

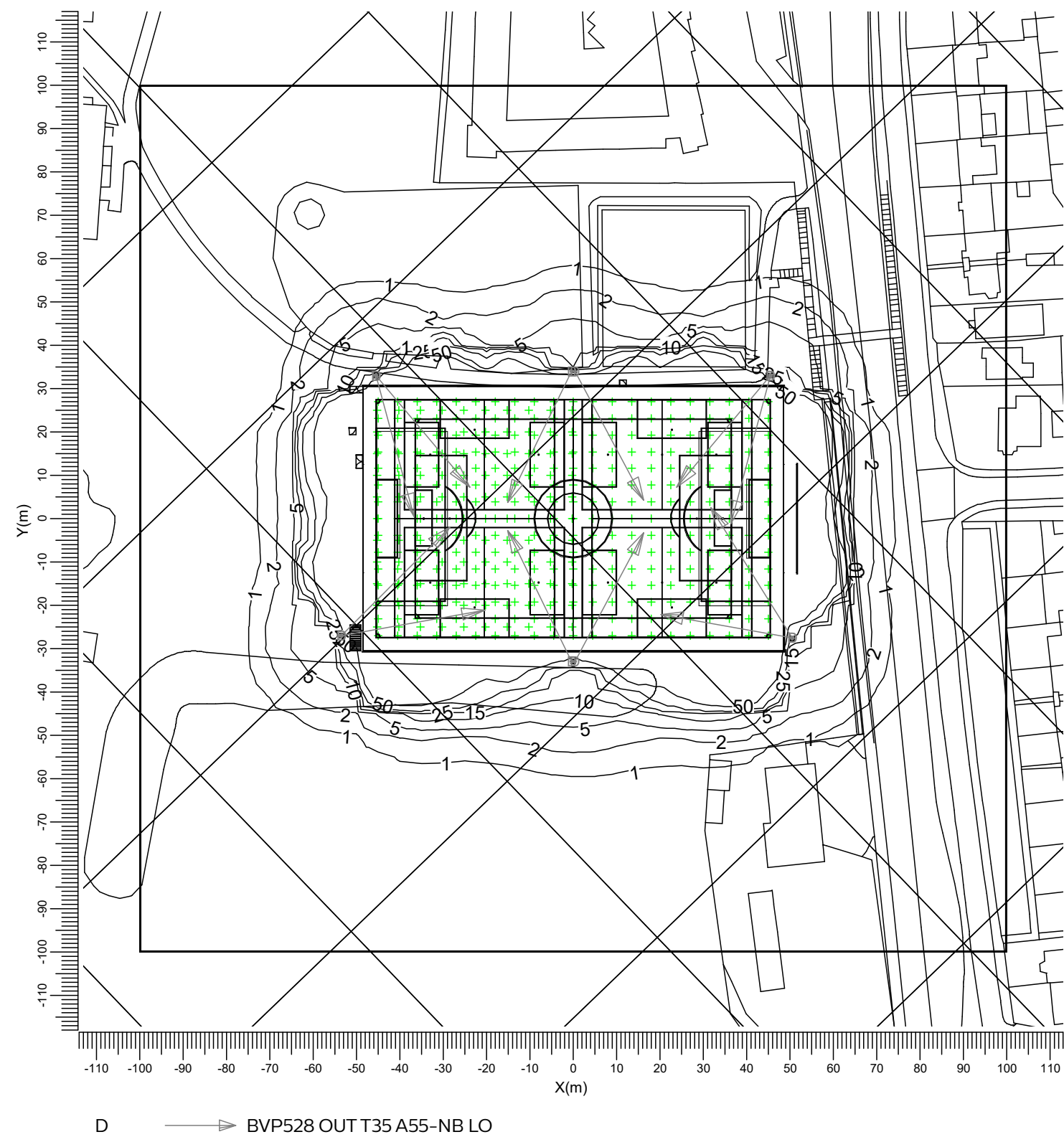
All ON

Grid

Calculation

: Spillage at Z = -0.00 m

: Surface Illuminance (lux)



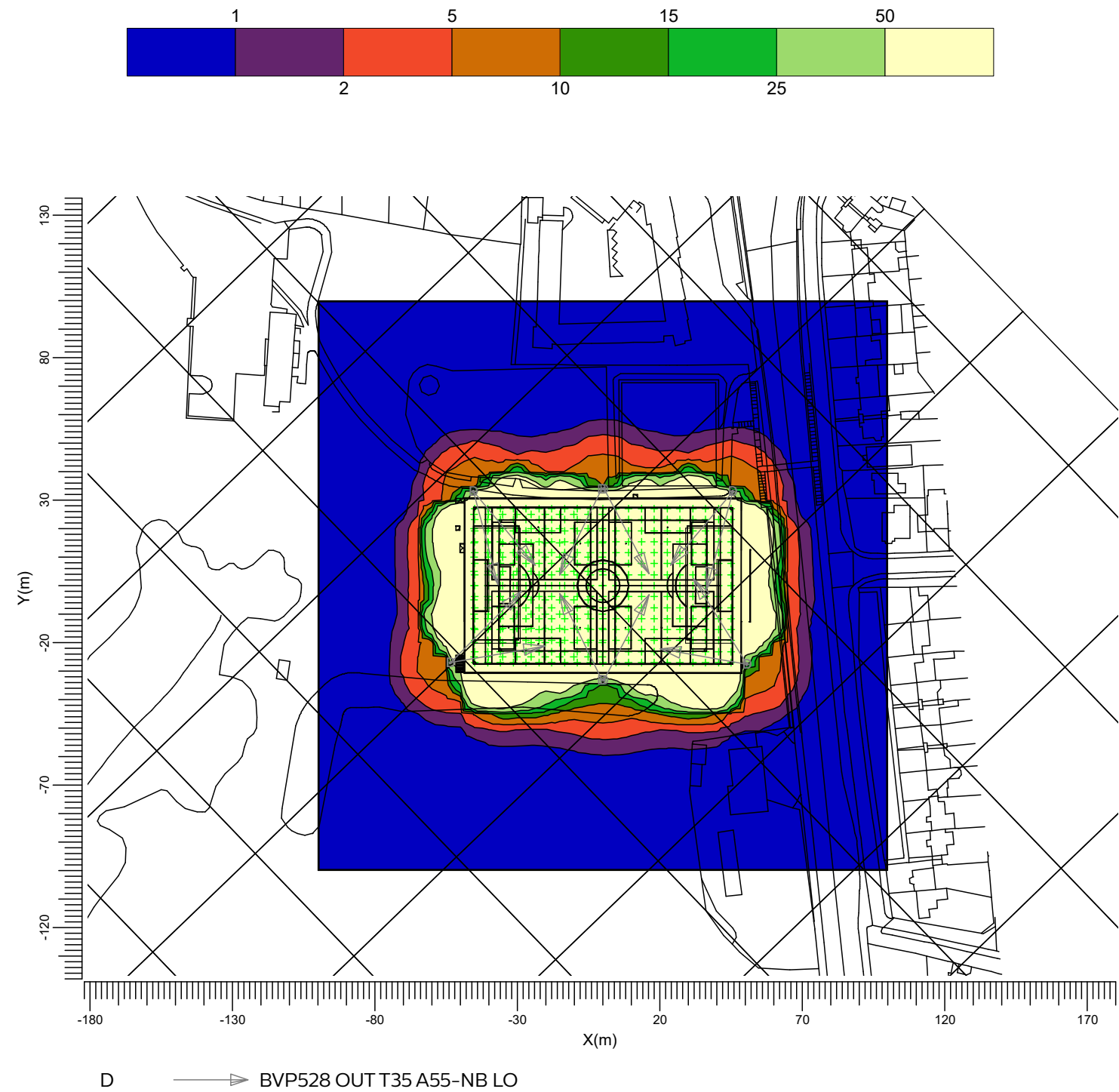
Average	Min/Ave	Min/Max	Project maintenance factor	Scale
42.5	0.00	0.00	1.00	1:1250

3.5 Spillage: Filled Iso Contour

All ON

Grid : Spillage at Z = -0.00 m

Calculation : Surface Illuminance (lux)



4. Luminaire Details

4.1 Project Luminaires

OptiVision LED gen3.5 2022
BVP528 OUT T35 1xLED2590-4S/757/757 E3/D4I A55-NB LO

Light output ratios	
DLOR	: 0.58
ULOR	: 0.00
TLOR	: 0.58
Ballast	: E3/D4I
Lamp flux	: 259000 lm
Luminaire wattage	: 1505.9 W
Measurement code	: LVM20482U1

Note: Luminaire data not from database.

