

Tonmawr RFC

LED Floodlighting - 100lux

Date: 03-06-2026

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

Philips Centre
Guildford Business Park
Guildford
Surrey
GU2 8XG
Mobile Phone: 0044 7810 832266
E-Mail: andrew.poplett@signify.com

Table of Contents

1.	Project Description	3
1.1	Description	3
1.2	Top Project Overview	4
2.	Summary	5
2.1	Project Luminaires	5
2.2	Calculation Results	5
3.	Calculation Results	6
3.1	Rugby Pitch 1: Graphical Table	6
3.2	Rugby Pitch 1: Iso Contour	7
3.3	Rugby Pitch 2: Graphical Table	8
3.4	Rugby Pitch 2: Iso Contour	9
3.5	Spillage: Graphical Table	10
3.6	Spillage: Iso Contour	11
3.7	Spillage: Filled Iso Contour	12
4.	Luminaire Details	13
4.1	Project Luminaires	13

1. Project Description

1.1 Description

Maintenance Factor:- 0.90

The design has been completed using the Philips Asymmetric OptiVision LED GEN 3 Floodlights.

Pitch 1:-

A total of 12no BVP518 OUT T35 1xLED1720-4S/757 A55-NB have been used to achieve an average of 100lux.

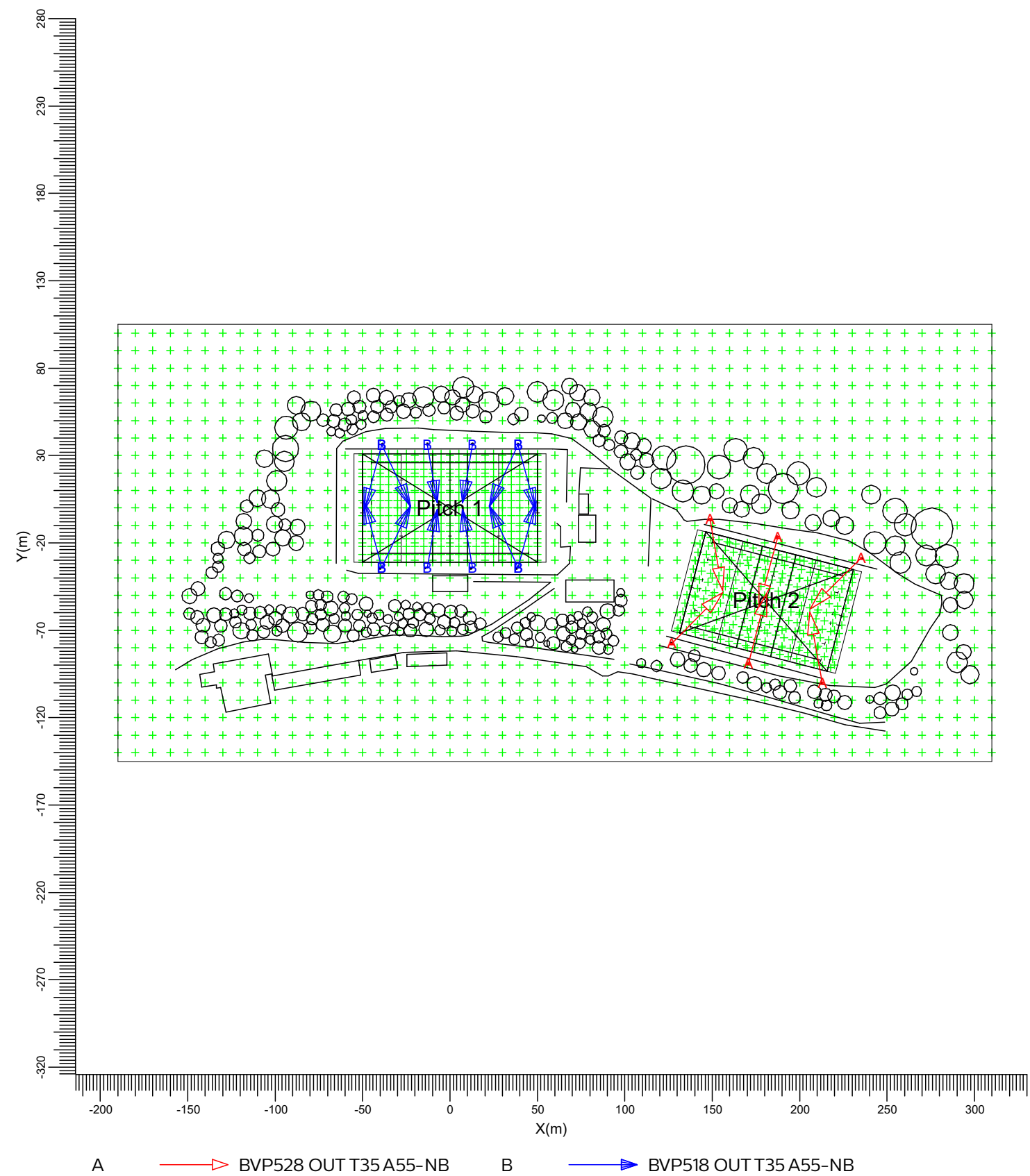
Floodlights are mounted on 8 x 15 metre columns

Pitch 2:-

A total of 6no BVP528 OUT T35 1xLED2590-4S/757 A55-NB have been used to achieve an average of 100lux.

Floodlights are mounted on 6 x 15 metre columns

1.2 Top Project Overview



Scale
1:3000

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	6	BVP528 OUT T35 A55-NB	1 * LED2590-4S/757	1505.9	1 * 259000
B	12	BVP518 OUT T35 A55-NB	1 * LED1720-4S/757	1006.0	1 * 172000

The total installed power: 21.11 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	A	B	
Rugby Pitch 1	0	12	12.07
Rugby Pitch 2	6	0	9.04
Spillage	6	12	21.11

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	A	B	
Point1	0	8	8.05
Point2	0	4	4.02
Individuals	6	0	9.04

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Rugby Pitch 1	0.90
2	Rugby Pitch 2	0.90
3	Spillage	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave Min/AveMin/Max		
Rugby Pitch 1	1	Surface Illuminance	lux	165	0.61	0.41
Rugby Pitch 2	2	Surface Illuminance	lux	126	0.52	0.35
Spillage	3	Surface Illuminance	lux	23.0	0.00	0.00

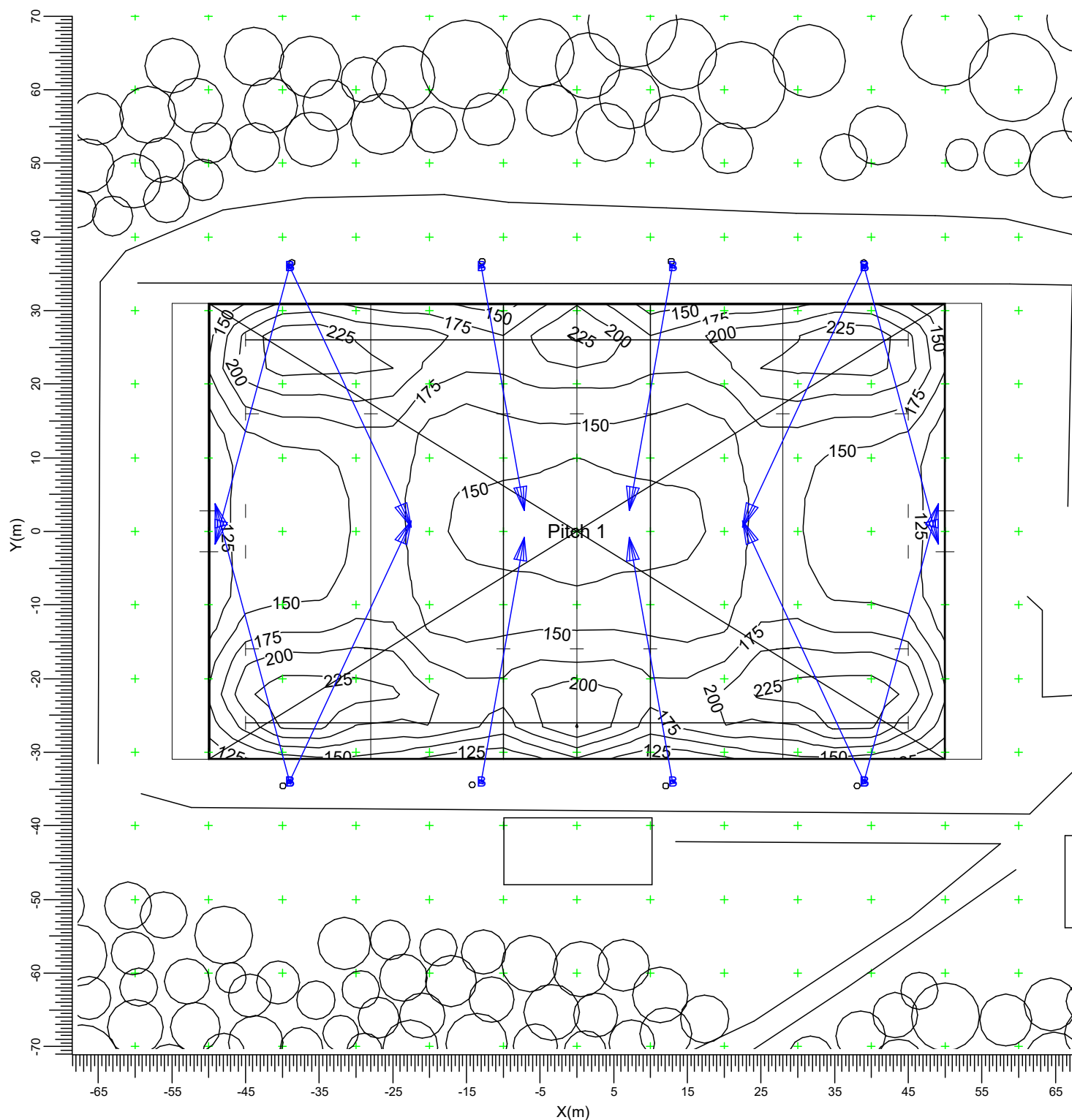
Obtrusive Light Calculations:

Switching Mode	ULR
1	0.00
2	0.00
3	0.00

3.2 Rugby Pitch 1: Iso Contour

Rugby Pitch 1

Grid : Rugby Pitch 1 at Z = -0.00 m
 Calculation : Surface Illuminance (lux)



B  BVP518 OUT T35 A55-NB

Average
165

Min/Ave
0.61

Min/Max
0.41

Project maintenance factor
0.90

Scale
1:750

3.3 Rugby Pitch 2: Graphical Table

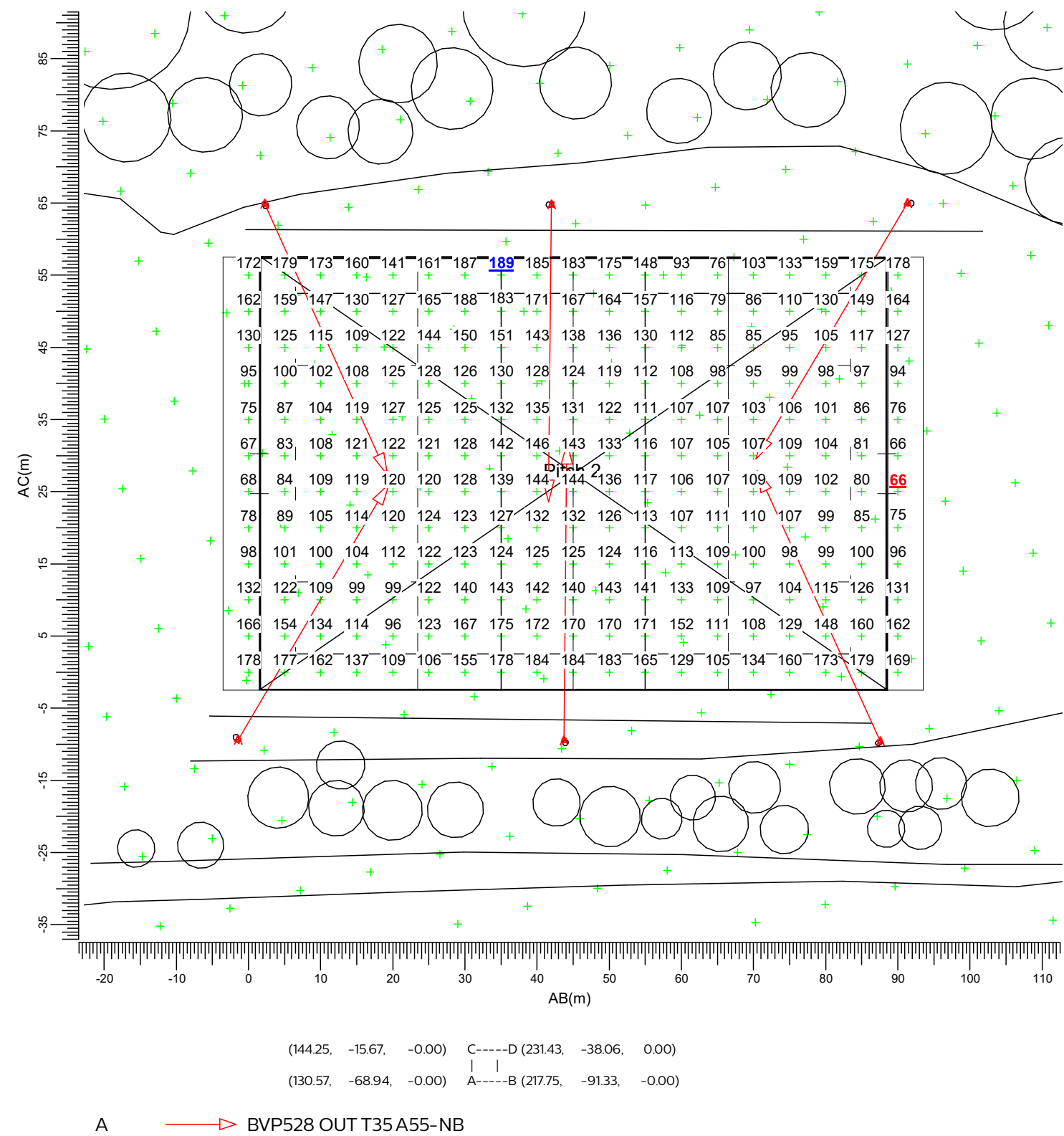
Rugby Pitch 2

Grid

: Rugby Pitch 2

Calculation

: Surface Illuminance (lux)



3.4 Rugby Pitch 2: Iso Contour

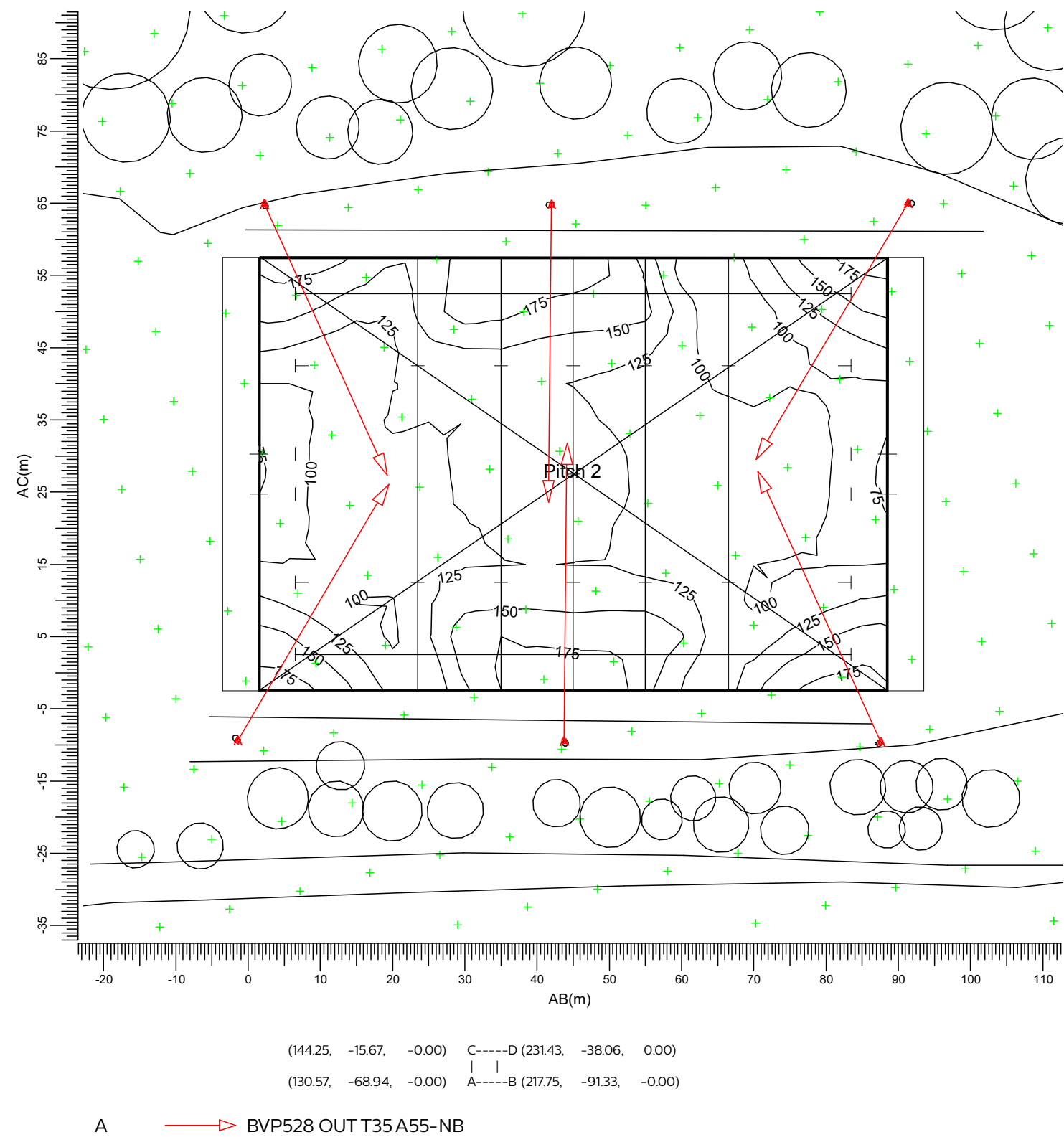
Rugby Pitch 2

Grid

Calculation

: Rugby Pitch 2

: Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
126	0.52	0.35	0.90	1:750

3.5 Spillage: Graphical Table

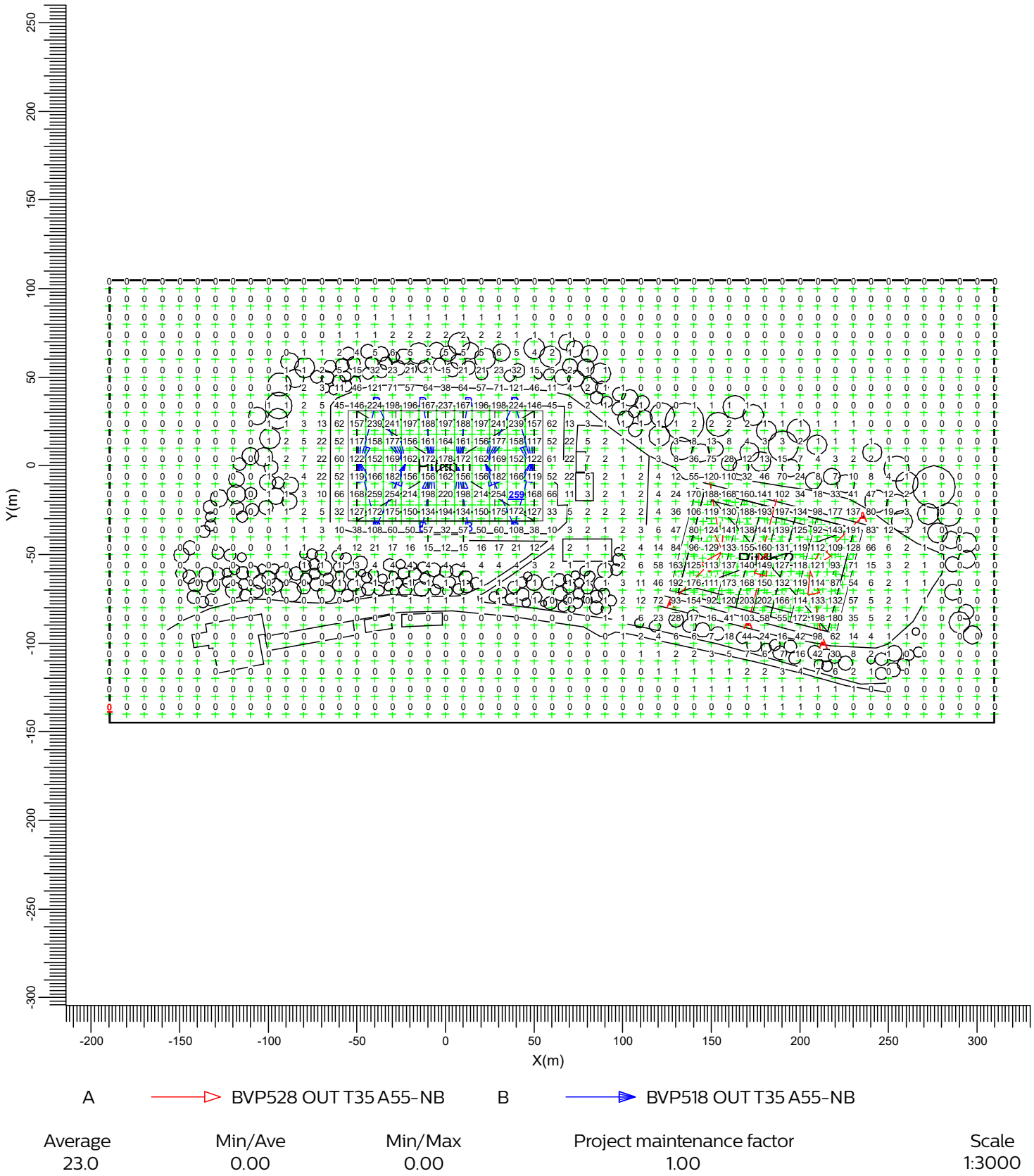
Spillage

Grid

Calculation

: Spillage at Z = -0.00 m

: Surface Illuminance (lux)



3.6 Spillage: Iso Contour

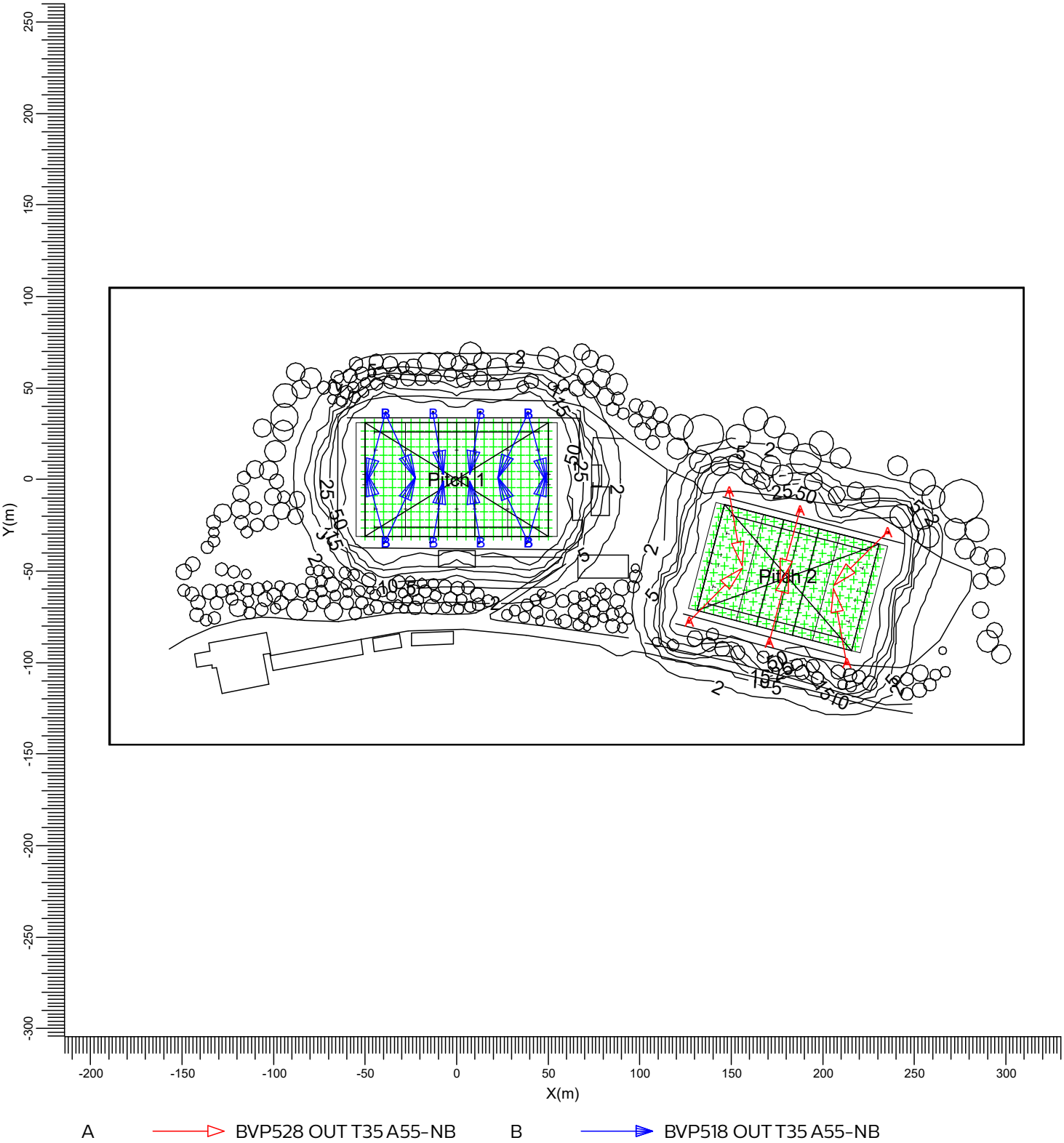
Spillage

Grid

Calculation

: Spillage at Z = -0.00 m

: Surface Illuminance (lux)



3.7 Spillage: Filled Iso Contour

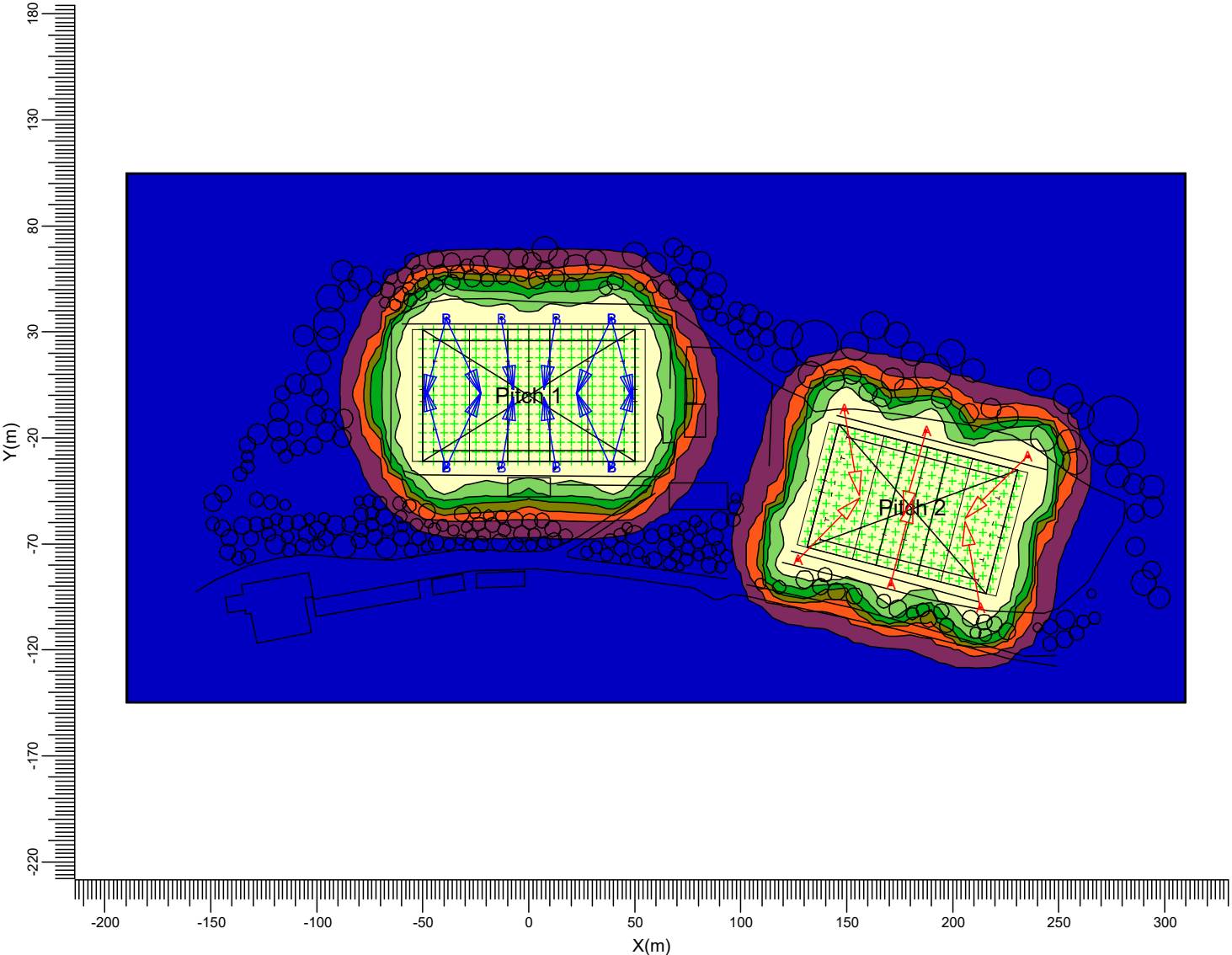
Spillage

Grid

Calculation

: Spillage at Z = -0.00 m

: Surface Illuminance (lux)



A

→ BVP528 OUT T35 A55-NB

B

→ BVP518 OUT T35 A55-NB

Average
23.0

Min/Ave
0.00

Min/Max
0.00

Project maintenance factor
1.00

Scale
1:3000

4. Luminaire Details

4.1 Project Luminaires

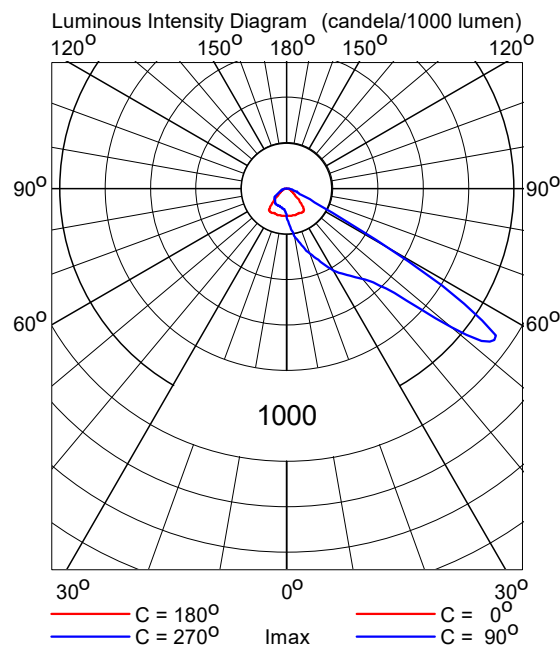
OptiVision LED gen3.5 2022

BVP528 OUT T35 1xLED2590-4S/757/757 E3/D4I A55-NB

Light output ratios

DLOR	: 0.82
ULOR	: 0.00
TLOR	: 0.82
Ballast	: E3/D4I
Lamp flux	: 259000 lm
Luminaire wattage	: 1505.9 W
Measurement code	: LVA2111038

Note: Luminaire data not from database.



OptiVision LED gen3.5 2022

BVP518 OUT T35 1xLED1720-4S/757/757 E3/D4I A55-NB

Light output ratios

DLOR	: 0.82
ULOR	: 0.00
TLOR	: 0.82
Ballast	: E3/D4I
Lamp flux	: 172000 lm
Luminaire wattage	: 1006.0 W
Measurement code	: LVA2111038

Note: Luminaire data not from database.

