

Doughiska Pitches Galway

6201607 - Rev 1

Project code: 0401055386
Date: 07-05-2025

Designer: Signify

Description: 2qty 55m x 97m Football Pitches
6x 15m Columns (total of 9 columns on site)
250 Lux Average

For Designer Assumptions and Signify Terms & Conditions
please see "Signify 6201607 - Doughiska Pitches Galway -
Rev 1 Drawing.pdf"

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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1. Project Description

1.1 Description

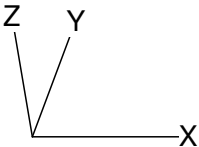
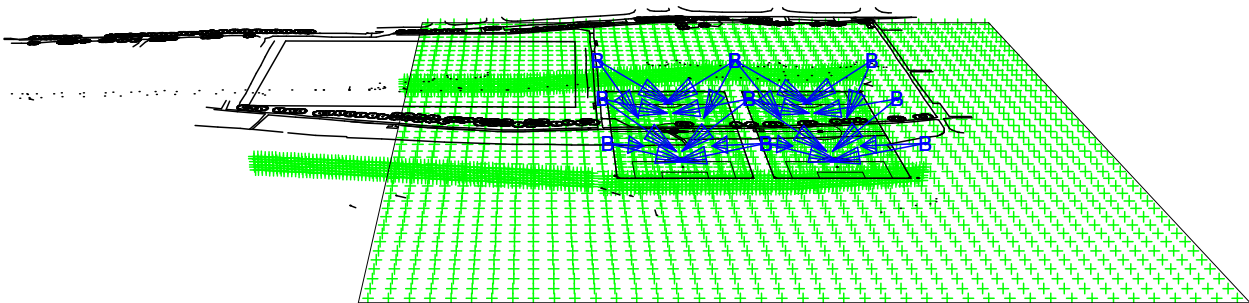
Proposal based on: Philips OptiVisionLED Gen3.5 Floodlight.
Maximum output 4000k

There are 6 No 15m columns per pitch with 2 No Floodlights on each
(12 No in total) to a maintained average of 250.0 lux 0.7 Uo, 0.51 Min/Max.
GR Max calculation is below 50 GR Max requirement (47.1).

Performance Floodlights use MF 0.95
Spill Light calculations use MF 1.0

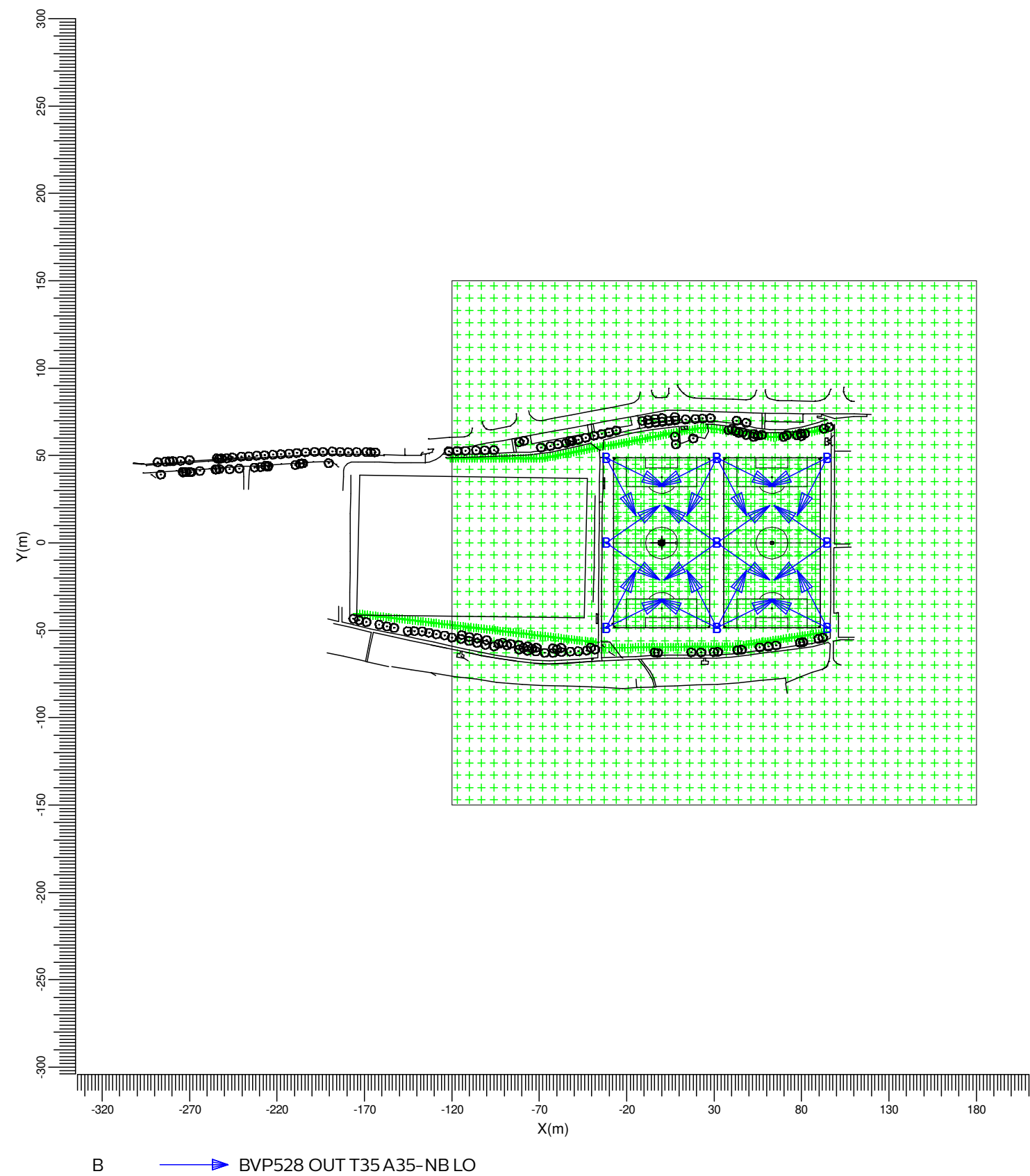
Products Used
24x BVP528 OUT T35 1xLED2590-4S/740 E3/D4I A35-NB LO
note: on site tilt equals Tilt90 value minus 35 degrees.

1.2 3-D Project Overview



B  BVP528 OUT T35 A35-NB LO

1.3 Top Project Overview



Scale
1:3000

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
B	24	BVP528 OUT T35 A35-NB LO	1 * LED2590-4S/740	1505.9	1 * 259000

The total installed power: 36.14 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code	Power (kWatt)
	B	
Pitch 1	12	18.07
Pitch 2	12	18.07
Spill Light	24	36.14

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code	Power (kWatt)
	B	
Pitch Middle	4	6.02
Pitch 1 Corners	8	12.05
Pitch 1 Middle	4	6.02
Pitch 2 Corners	8	12.05

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Pitch 1	0.95
2	Pitch 2	0.95
3	Spill Light	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave Min/AveMin/Max		
Pitch 1 10x10	1	Surface Illuminance	lux	250	0.70	0.51
Pitch 10x10	2	Surface Illuminance	lux	250	0.70	0.51
Spill Light	3	Surface Illuminance	lux	40.1	0.00	0.00
North West Grid	3	Surface Illuminance	lux	0.05	0.42	0.21
North Grid1	3	Surface Illuminance	lux	1.20	0.09	0.01
North Grid2	3	Surface Illuminance	lux	0.81	0.50	0.19
North Grid3	3	Surface Illuminance	lux	0.75	0.28	0.10
South West Grid	3	Surface Illuminance	lux	0.08	0.14	0.02
South Grid1	3	Surface Illuminance	lux	1.28	0.25	0.11
South Grid2	3	Surface Illuminance	lux	15.7	0.05	0.01

Glare Rating for Grid of Observers:

Calculation	Switching Mode	Observer Grid	Reference Grid	Reflectance	GR-Max
Pitch 1 10x10 Glare	1	Pitch 1 10x10	Pitch 1 10x10	0.25	47.1
Pitch 10x10 Glare	2	Pitch 2 10x10	Pitch 2 10x10	0.25	47.1

3. Calculation Results

3.1 Pitch 1 10x10: Graphical Table

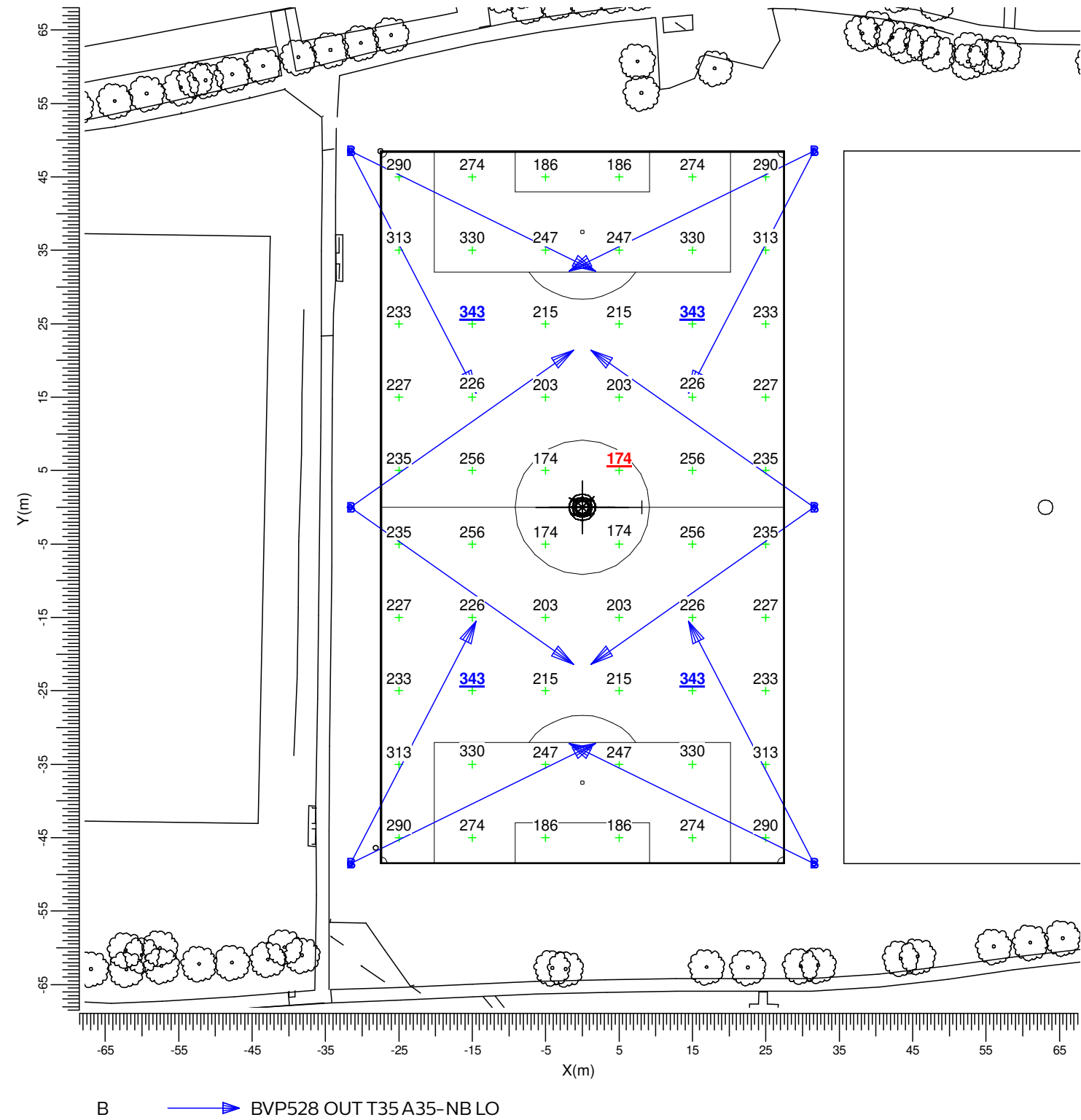
Pitch 1

Grid

: Pitch 1 10x10 at Z = -0.00 m

Calculation

: Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
250	0.70	0.51	0.95	1:750

3.2 Pitch 1 10x10: Iso Contour

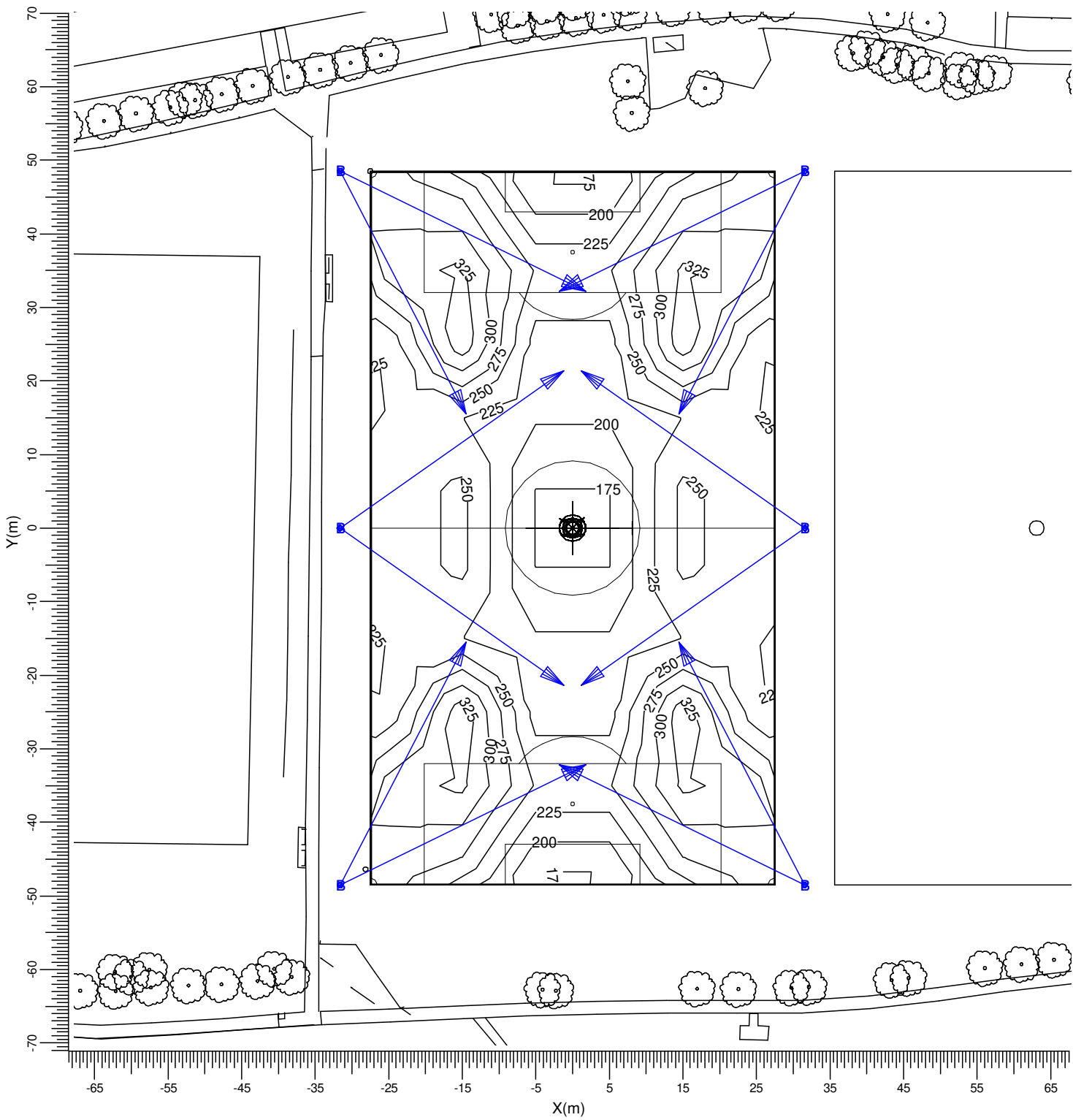
Pitch 1

Grid

Calculation

: Pitch 1 10x10 at Z = -0.00 m

: Surface Illuminance (lux)



B

→

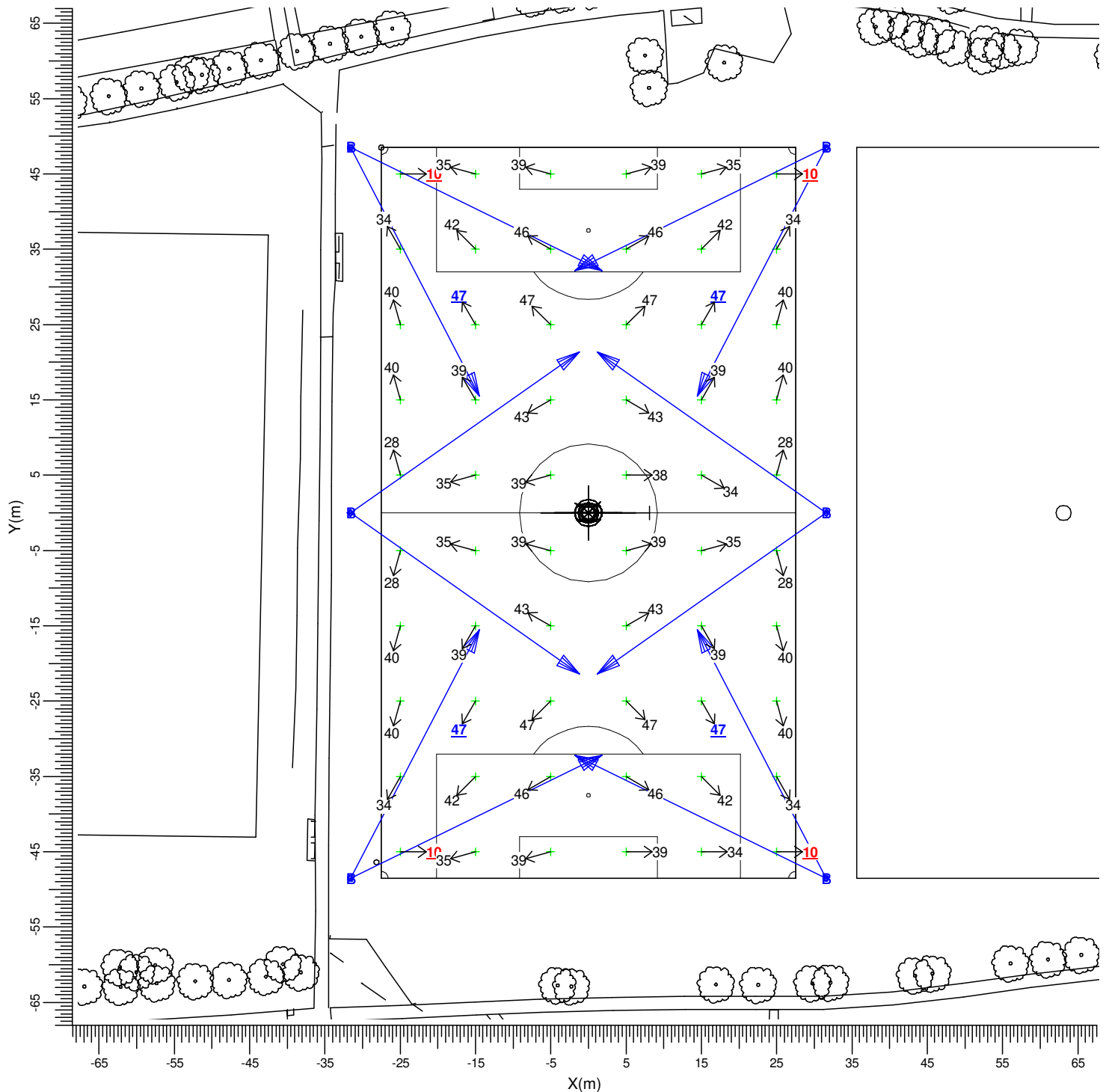
BVP528 OUT T35 A35-NB LO

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
250	0.70	0.51	0.95	1:750

3.3 Pitch 1 10x10 Glare: Graphical Table

Pitch 1

Grid of Observers : Pitch 1 10x10
Calculation : Glare Rating
Grid for Background Luminance: Pitch 1 10x10 (Reflectance: 0.25)
Vertical Viewing Angle : -2.0 deg



B ———▶ BVP528 OUT T35 A35-NB LO

Project maintenance factor
0.95

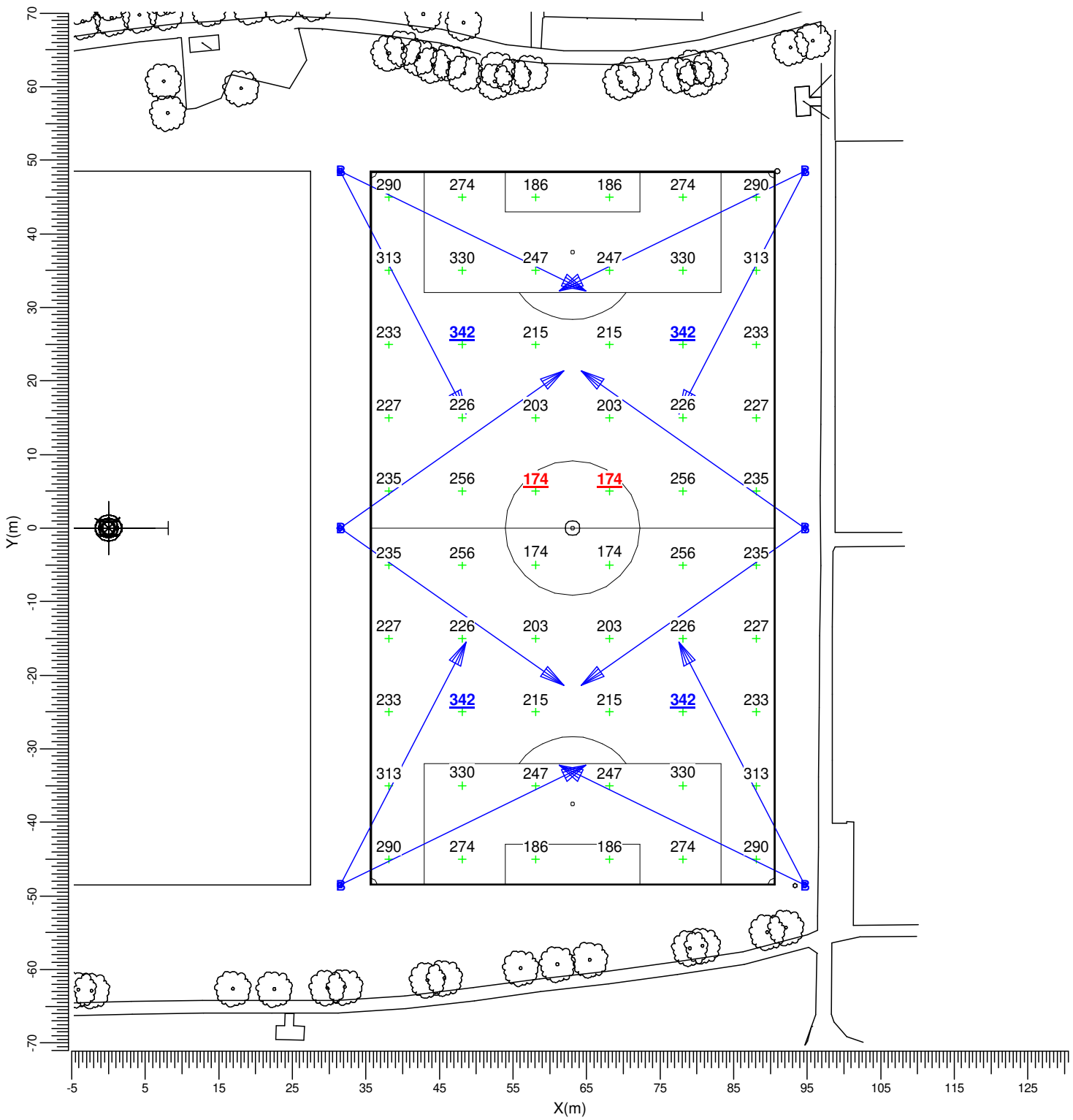
Scale
1:750

3.4 Pitch 10x10: Graphical Table

Pitch 2

Grid : Pitch 2 10x10 at Z = -0.00 m

Calculation : Surface Illuminance (lux)



B ———▶ BVP528 OUT T35 A35-NB LO

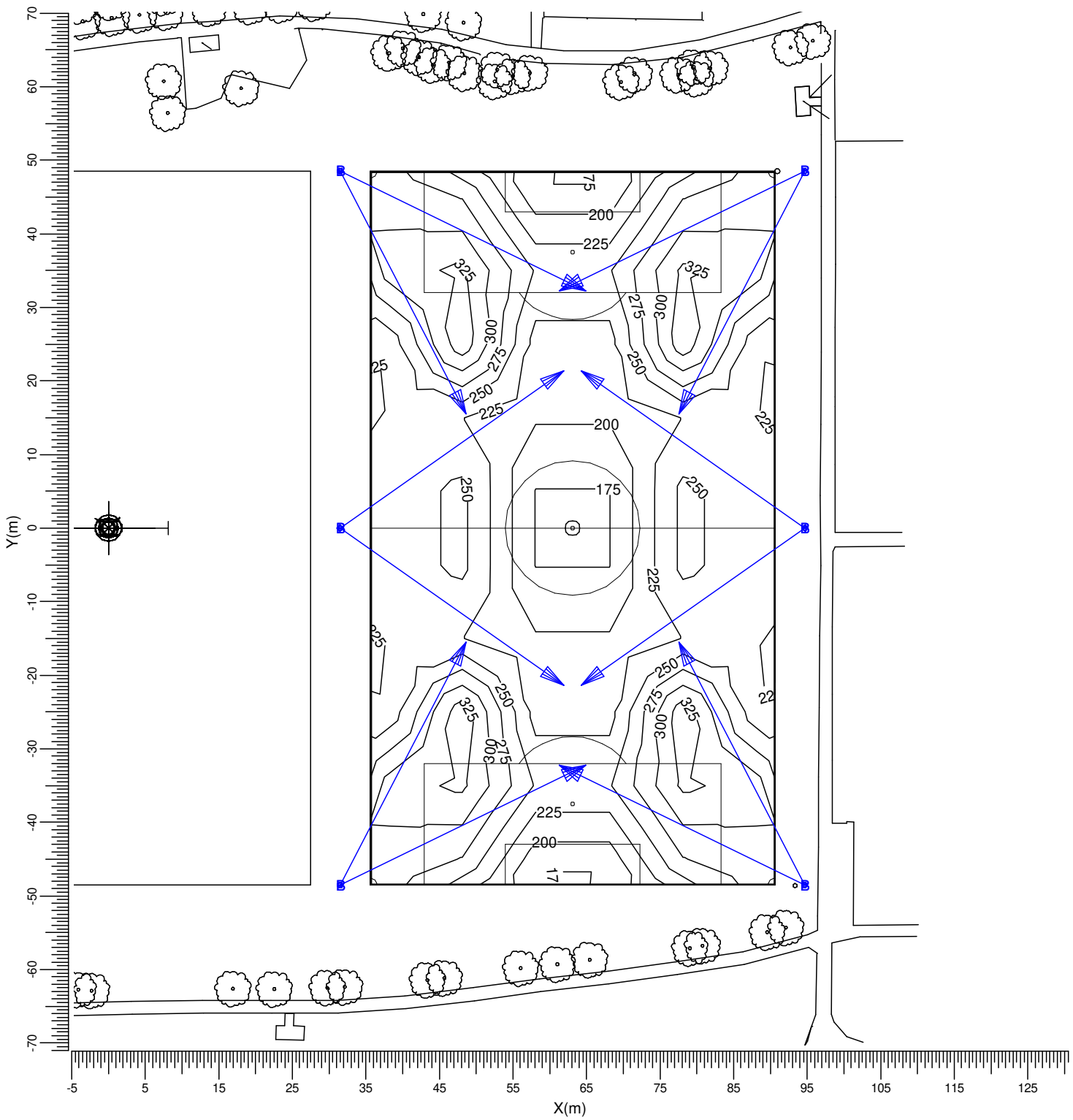
Average 250	Min/Ave 0.70	Min/Max 0.51	Project maintenance factor 0.95	Scale 1:750
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3.5 Pitch 10x10: Iso Contour

Pitch 2

Grid : Pitch 2 10x10 at Z = -0.00 m

Calculation : Surface Illuminance (lux)



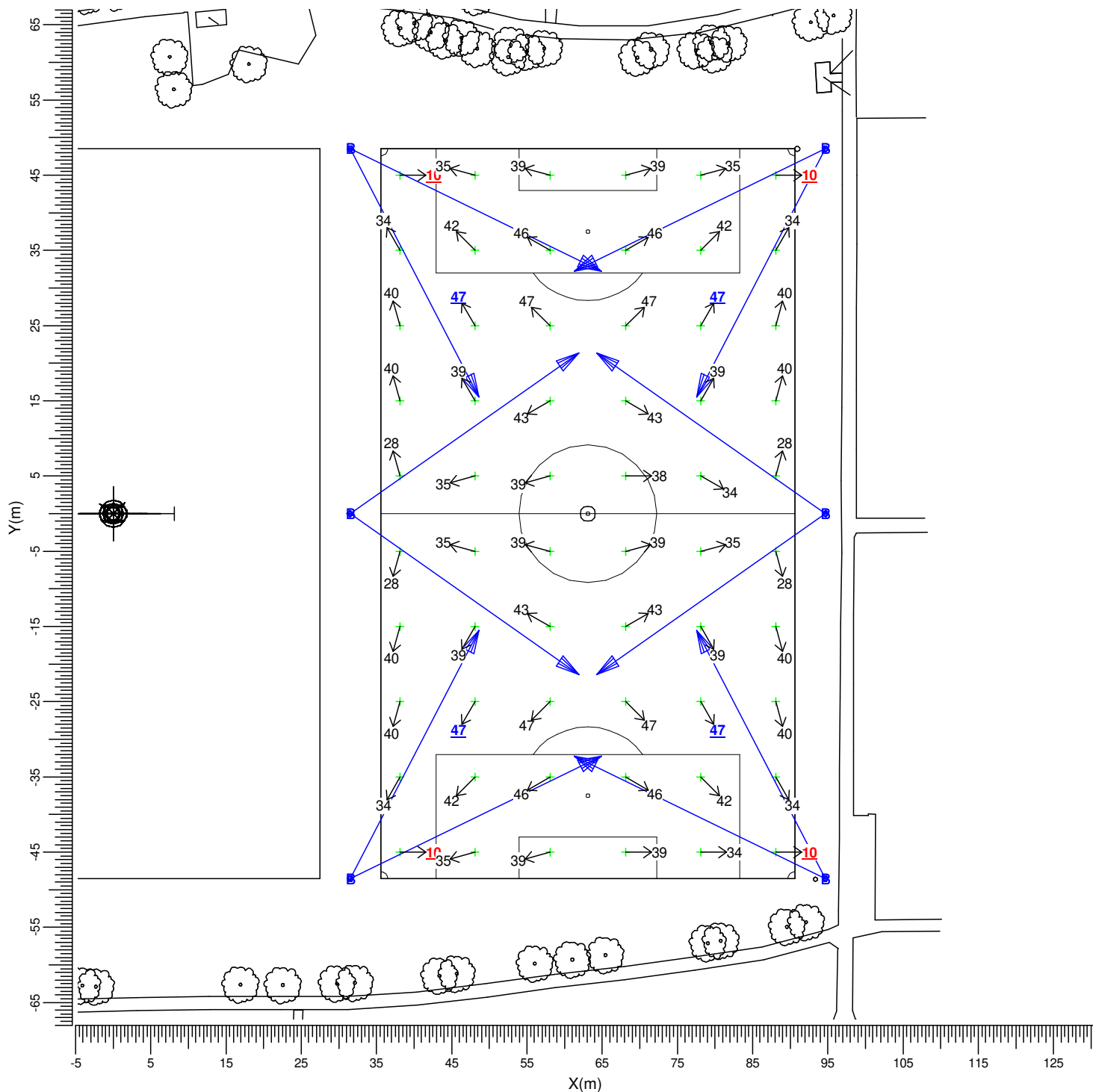
B ———▶ BVP528 OUT T35 A35-NB LO

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
250	0.70	0.51	0.95	1:750

3.6 Pitch 10x10 Glare: Graphical Table

Pitch 2

Grid of Observers : Pitch 2 10x10
Calculation : Glare Rating
Grid for Background Luminance: Pitch 2 10x10 (Reflectance: 0.25)
Vertical Viewing Angle : -2.0 deg



B ———▶ BVP528 OUT T35 A35-NB LO

Project maintenance factor
0.95

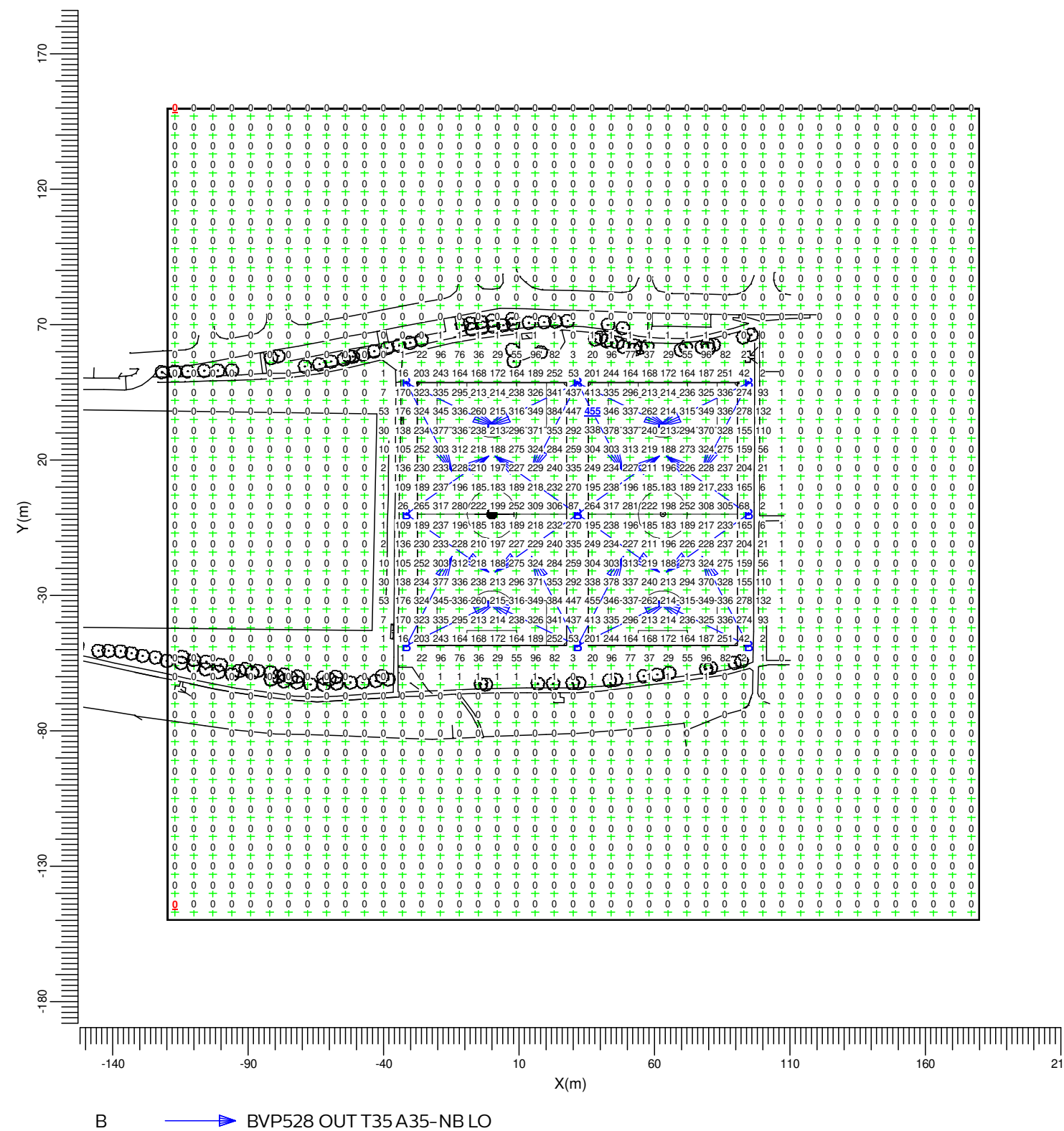
Scale
1:750

3.7 Spill Light: Graphical Table

Spill Light

Grid : Spill Light at Z = -0.00 m

Calculation : Surface Illuminance (lux)



3.8 Spill Light: Iso Contour

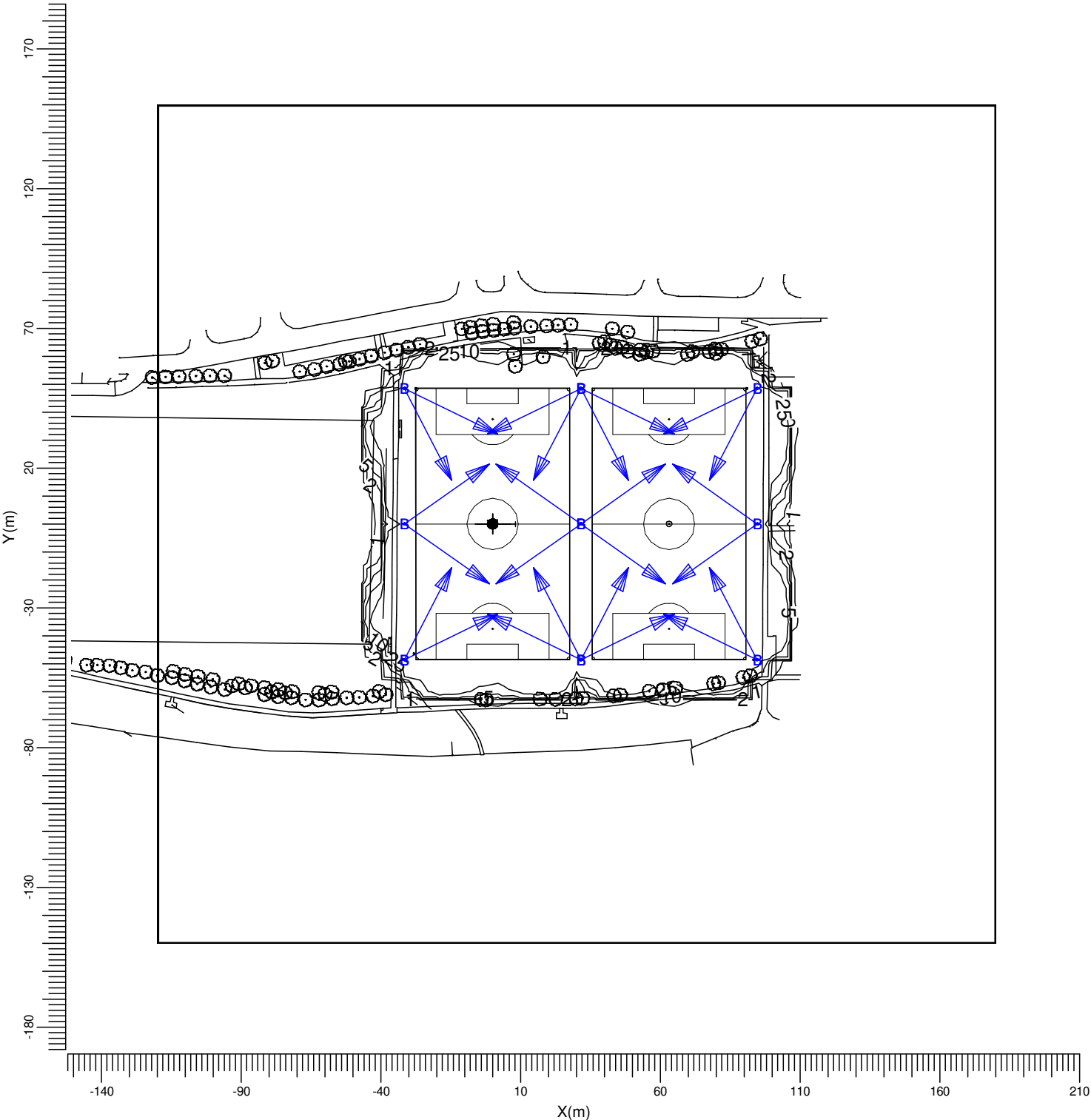
Spill Light

Grid

Calculation

: Spill Light at Z = -0.00 m

: Surface Illuminance (lux)



B  BVP528 OUT T35 A35-NB LO

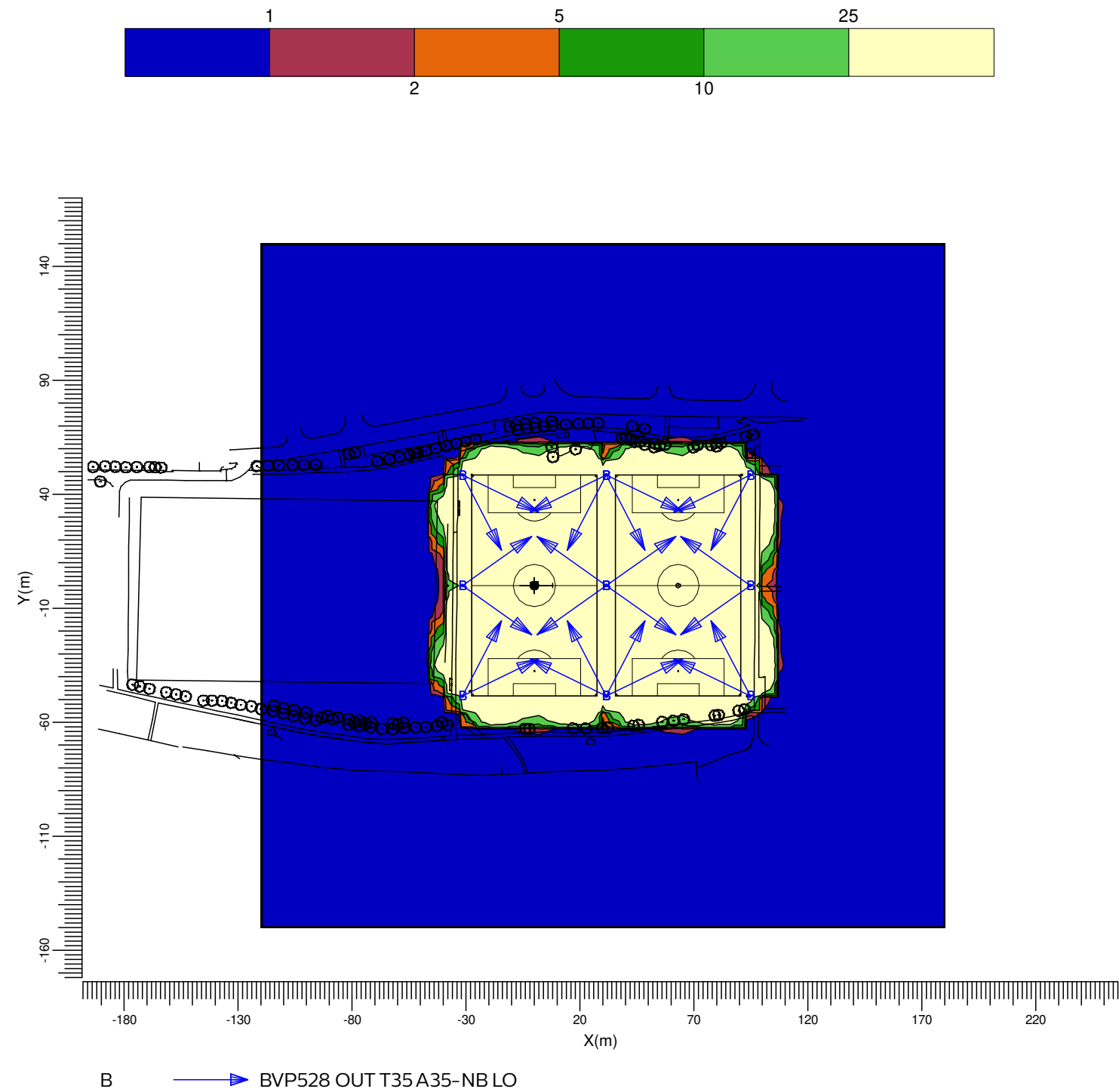
Average	Min/Ave	Min/Max	Project maintenance factor	Scale
40.1	0.00	0.00	1.00	1:2000

3.9 Spill Light: Filled Iso Contour

Spill Light

Grid : Spill Light at Z = -0.00 m

Calculation : Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
40.1	0.00	0.00	1.00	1:2500

Spill Light

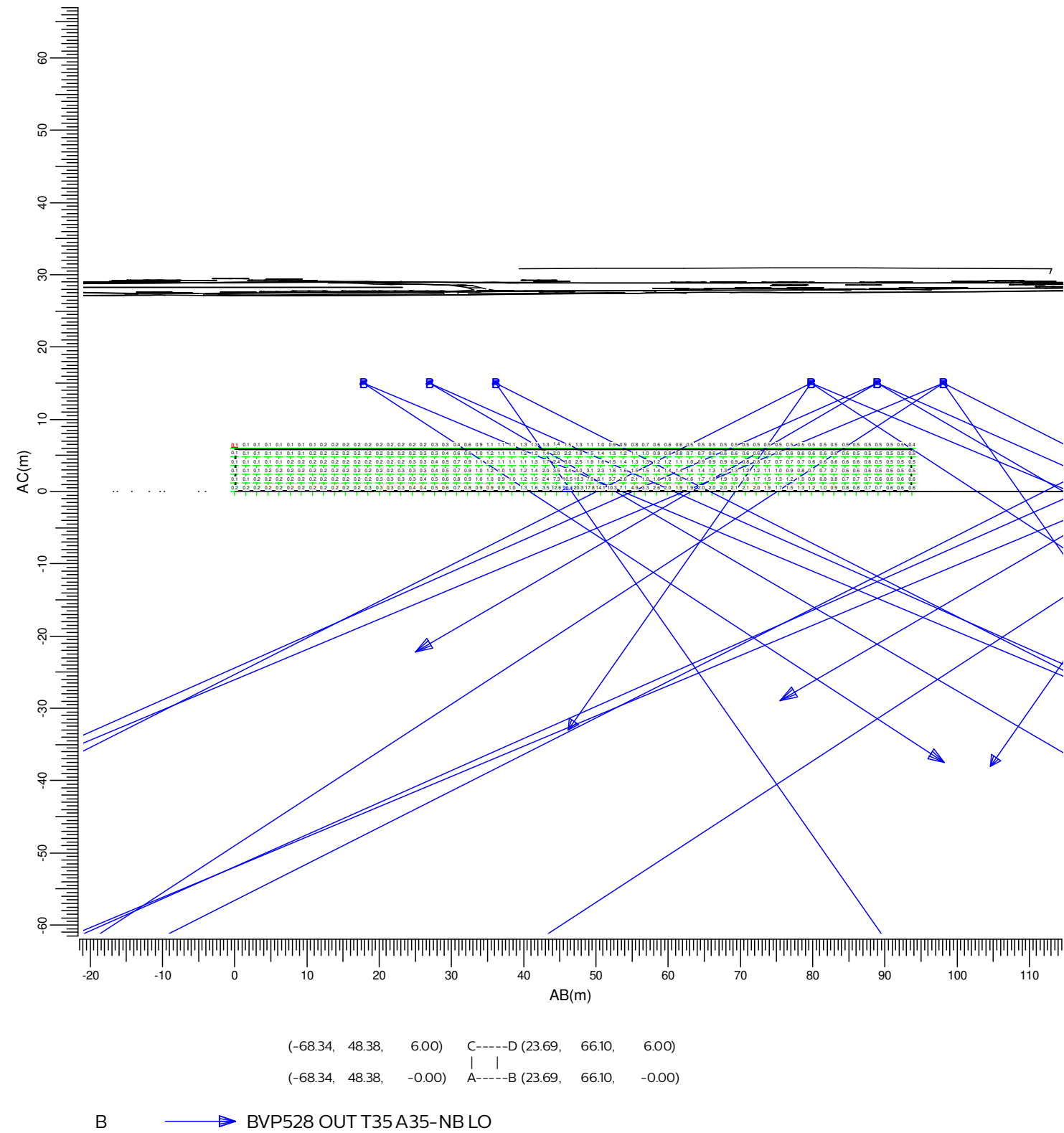
Average	Min/Ave	Min/Max	Project maintenance factor	Scale
0.05	0.42	0.21	1.00	1:400

3.11 North Grid1: Graphical Table

Spill Light

Grid : North Grid1

Calculation : Surface Illuminance (lux)



Average 1.20

Min/Ave 0.09

Min/Max 0.01

Project maintenance factor 1.00

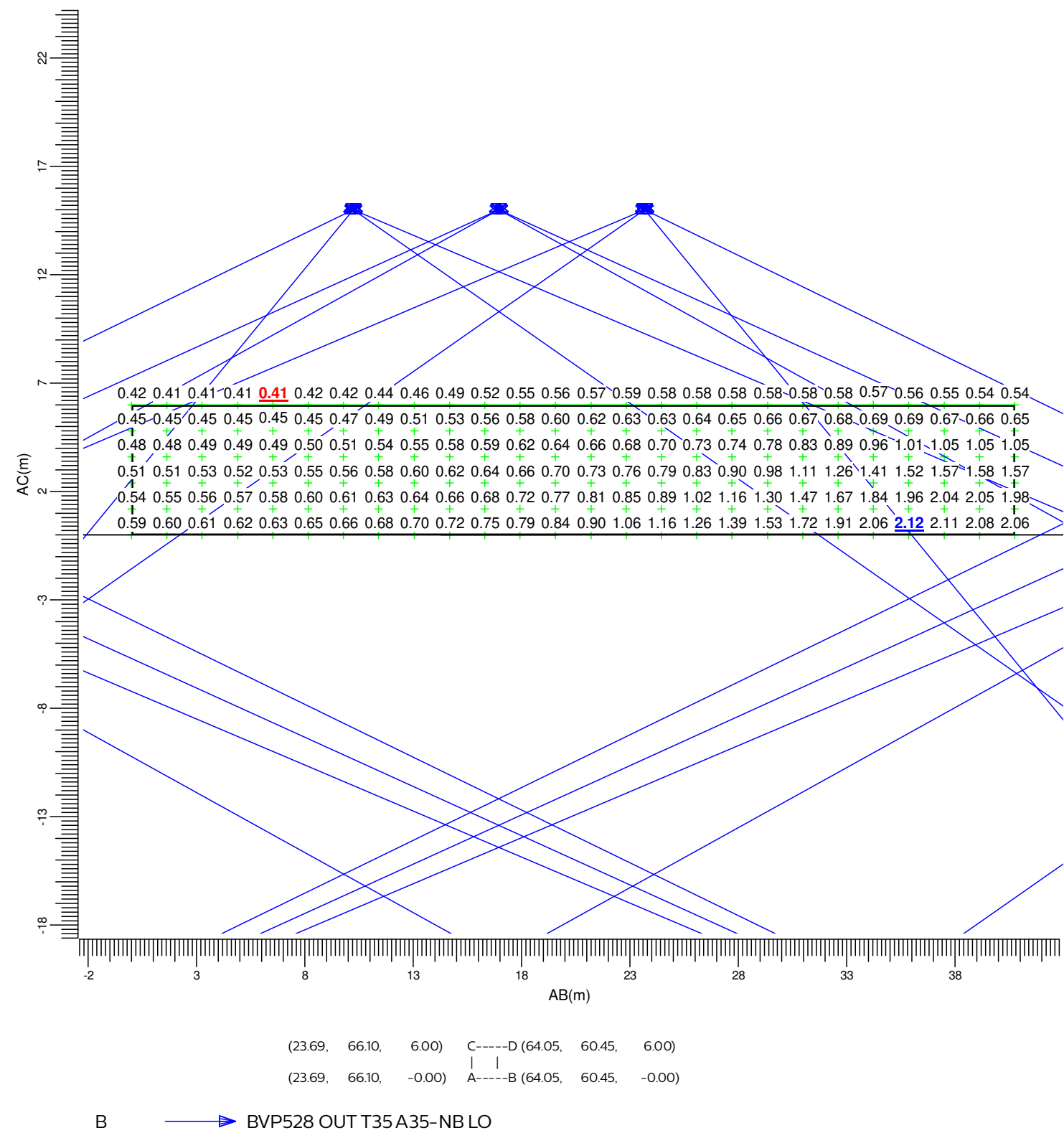
Scale 1:750

3.12 North Grid2: Graphical Table

Spill Light

Grid : North Grid2

Calculation : Surface Illuminance (lux)



3.13 North Grid3: Graphical Table

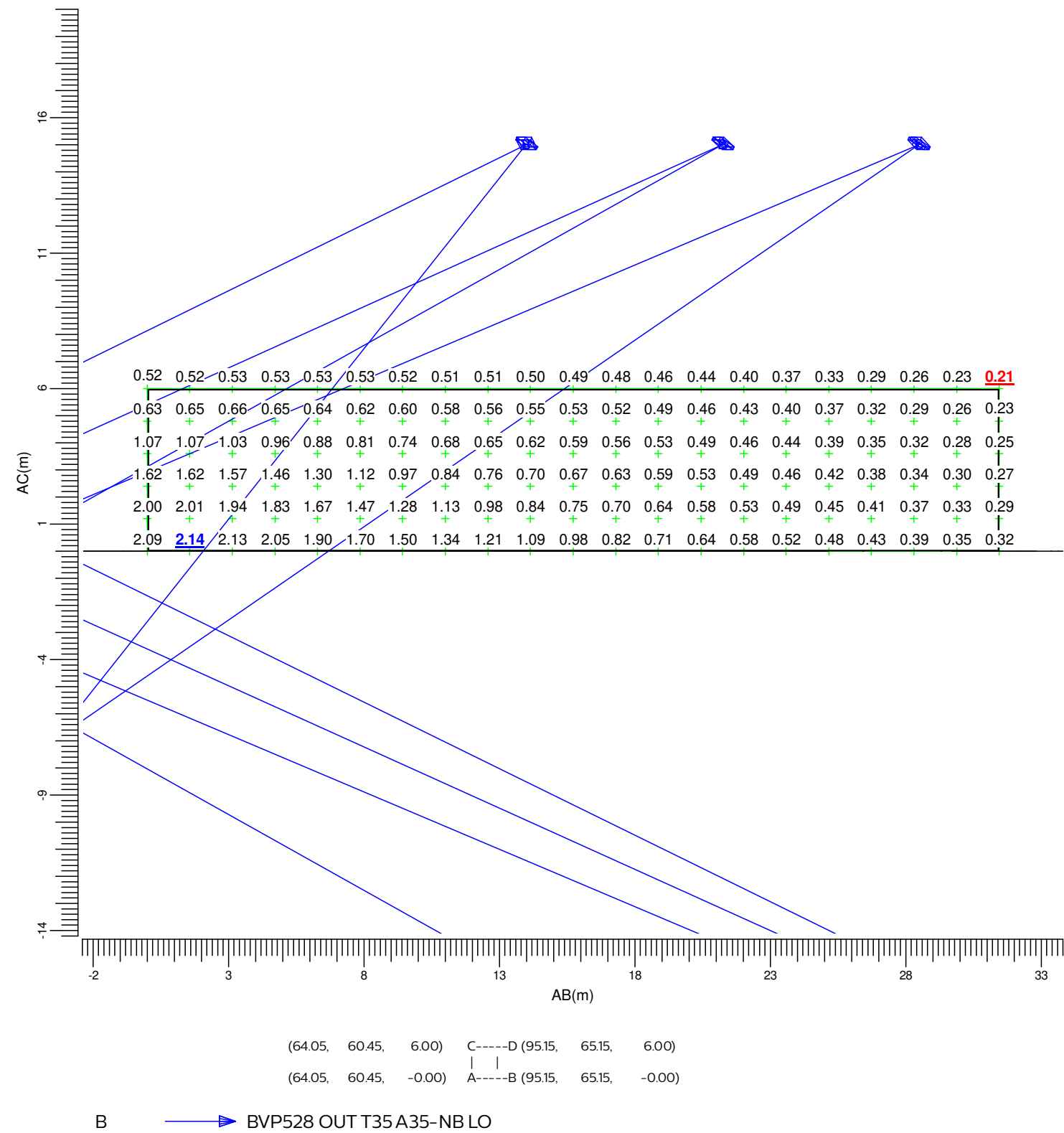
Spill Light

Grid

: North Grid3

Calculation

: Surface Illuminance (lux)



3.14 South West Grid: Graphical Table

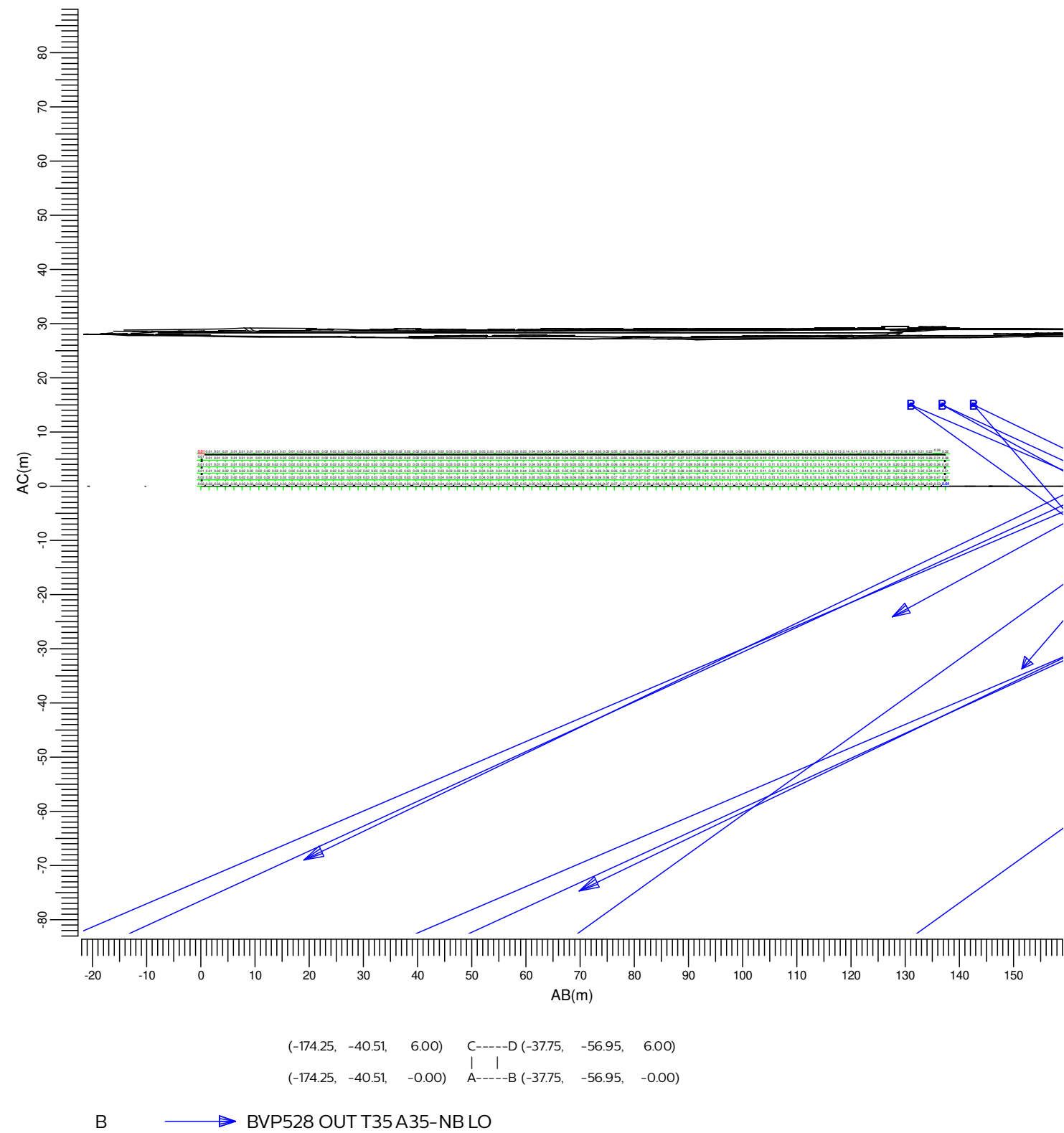
Spill Light

Grid

Calculation

: South West Grid

: Surface Illuminance (lux)

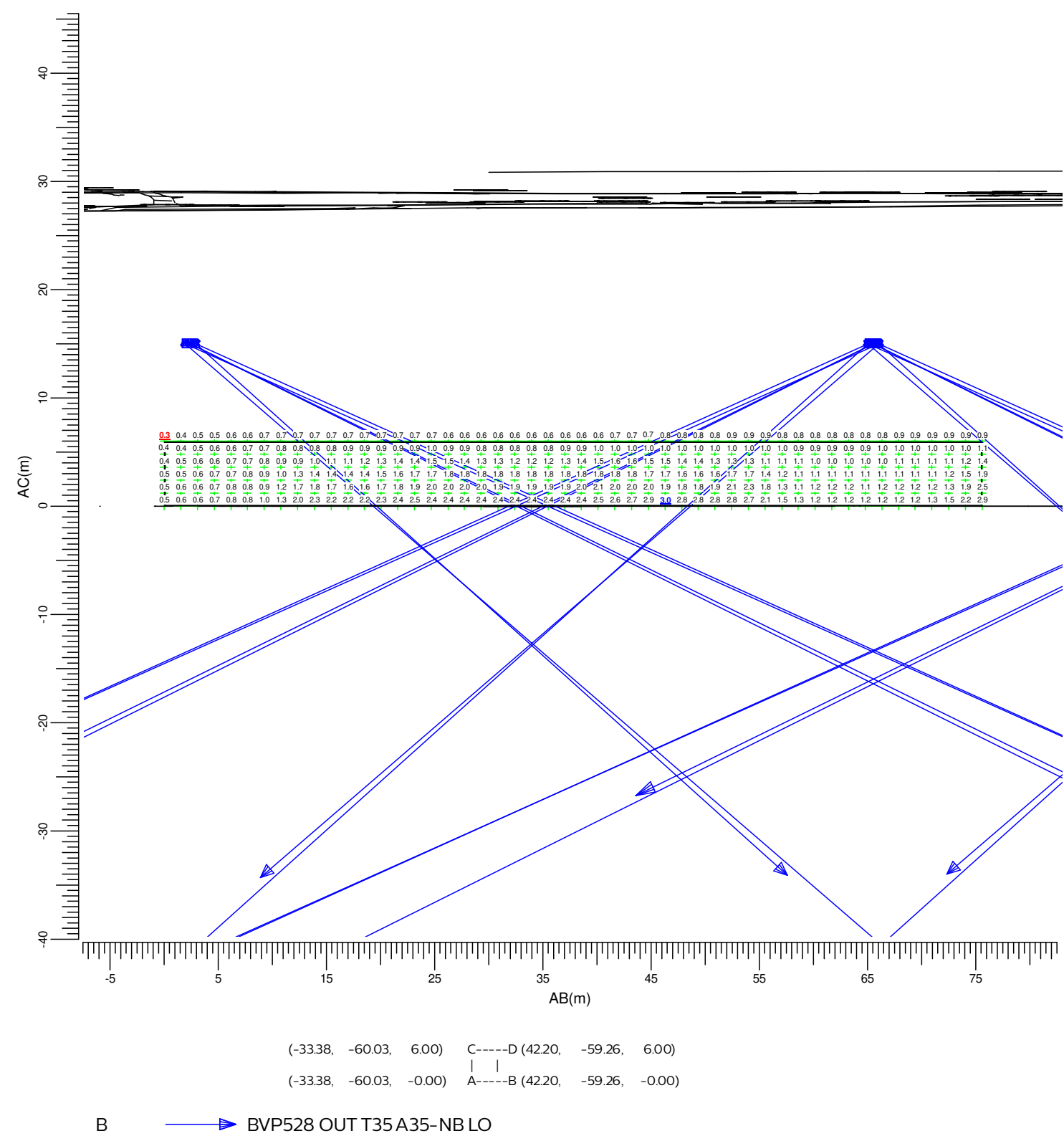


3.15 South Grid1: Graphical Table

Spill Light

Grid : South Grid1

Calculation : Surface Illuminance (lux)

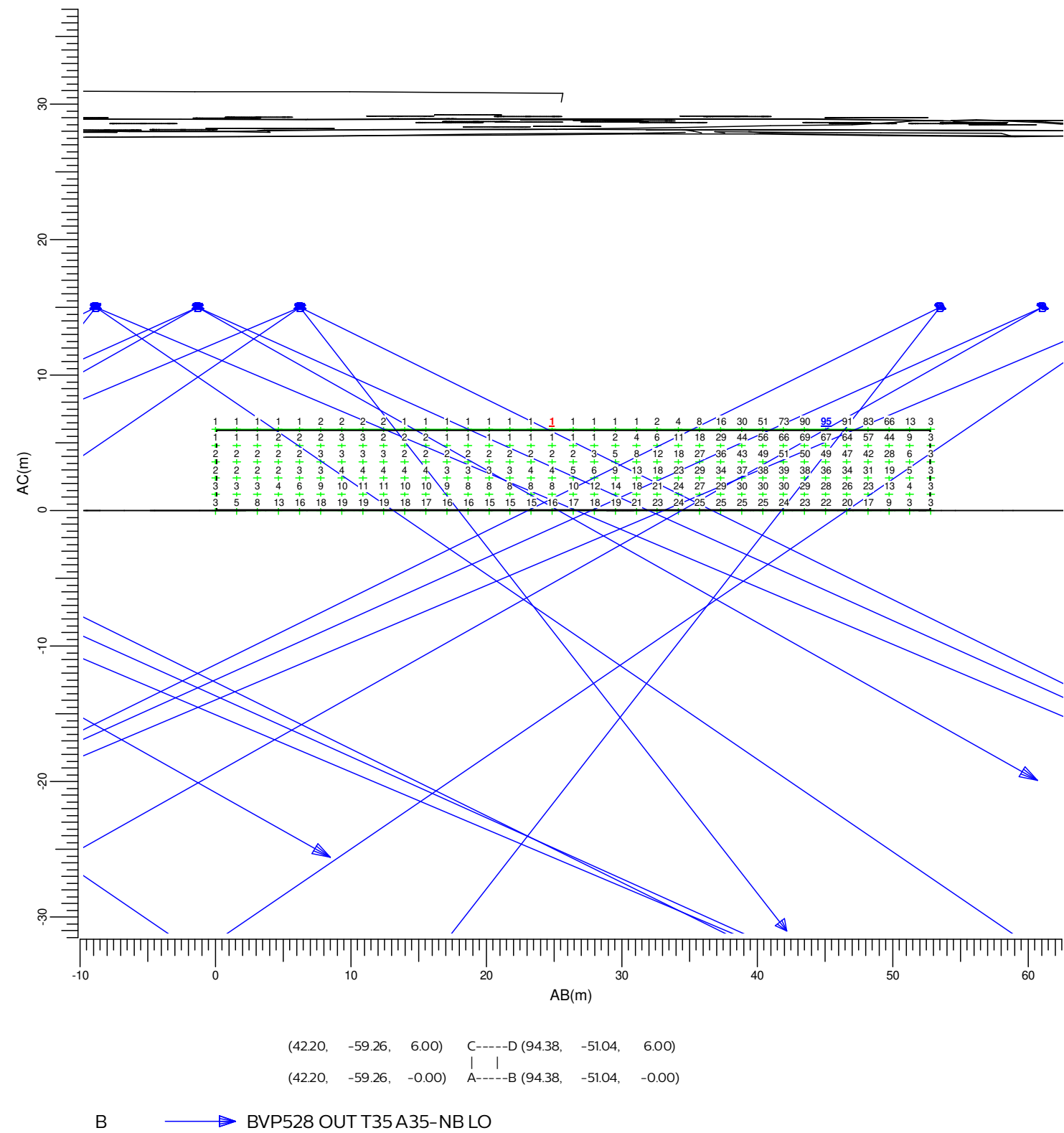


3.16 South Grid2: Graphical Table

Spill Light

Grid : South Grid2

Calculation : Surface Illuminance (lux)



Average
15.7

Min/Ave
0.05

Min/Max
0.01

Project maintenance factor
1.00

Scale
1:400

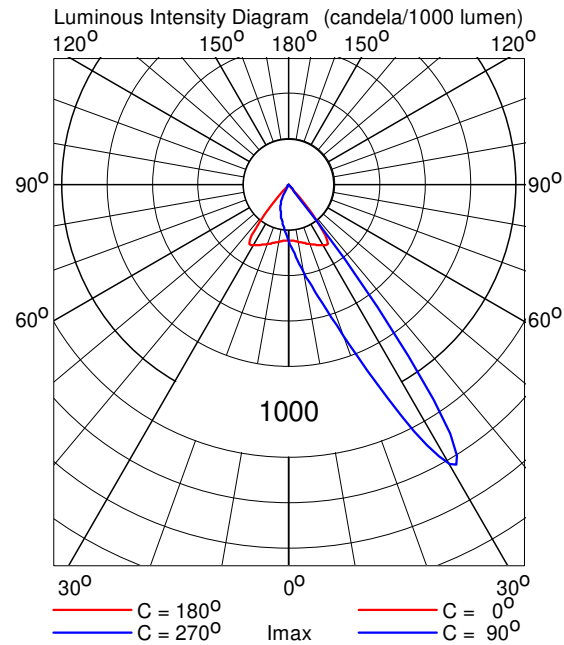
4. Luminaire Details

4.1 Project Luminaires

OptiVision LED gen3.5 2022
BVP528 OUT T35 1xLED2590-4S/740/740 E3/D4I A35-NB LO

Light output ratios	
DLOR	: 0.59
ULOR	: 0.00
TLOR	: 0.59
ULR	: 0.000
Ballast	: E3/D4I
Lamp flux	: 259000 lm
Luminaire wattage	: 1505.9 W
Measurement code	: LVM2047300
CIE Code	: 96 100 100 100 59

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:				
Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
B	24	BVP528 OUT T35 A35-NB LO	1 * LED2590-4S/740	1 * 259000

Switching Modes:	
Code	Switching Mode
1	Pitch 1
2	Pitch 2
3	Spill Light

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Points			Aiming Angles			Switching Modes		
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	1	2	3
1 * B	-31.55	-48.50	15.00	-14.51	-15.52	0.00	62.7	68.0	0.0	+	-	+
1 * B	-31.55	-48.50	15.00	1.81	-32.21	0.00	26.0	68.0	0.0	+	-	+
1 * B	-31.55	-0.00	15.00	-1.21	21.40	0.00	35.2	68.0	-0.0	+	-	+
1 * B	-31.55	-0.00	15.00	-1.21	-21.40	0.00	-35.2	68.0	0.0	+	-	+
1 * B	-31.55	48.50	15.00	-14.51	15.52	0.00	-62.7	68.0	-0.0	+	-	+
1 * B	-31.55	48.50	15.00	1.81	32.21	0.00	-26.0	68.0	-0.0	+	-	+
1 * B	31.55	-48.50	15.00	14.51	-15.52	0.00	117.3	68.0	-0.0	+	-	+
1 * B	31.55	-48.50	15.00	-1.81	-32.21	0.00	154.0	68.0	-0.0	+	-	+
1 * B	31.55	-0.00	15.00	1.21	21.40	0.00	144.8	68.0	0.0	+	-	+
1 * B	31.55	-0.00	15.00	1.21	-21.40	0.00	-144.8	68.0	-0.0	+	-	+
1 * B	31.55	48.50	15.00	14.51	15.52	0.00	-117.3	68.0	0.0	+	-	+
1 * B	31.55	48.50	15.00	-1.81	32.21	0.00	-154.0	68.0	0.0	+	-	+
1 * B	31.56	-48.50	15.00	48.60	-15.52	0.00	62.7	68.0	0.0	-	+	+
1 * B	31.56	-48.50	15.00	64.93	-32.22	0.00	26.0	68.0	0.0	-	+	+
1 * B	31.56	-0.00	15.00	61.90	21.40	0.00	35.2	68.0	-0.0	-	+	+
1 * B	31.56	-0.00	15.00	61.90	-21.40	0.00	-35.2	68.0	0.0	-	+	+
1 * B	31.56	48.50	15.00	48.60	15.52	0.00	-62.7	68.0	-0.0	-	+	+
1 * B	31.56	48.50	15.00	64.93	32.22	0.00	-26.0	68.0	-0.0	-	+	+
1 * B	94.66	-48.50	15.00	77.62	-15.52	0.00	117.3	68.0	-0.0	-	+	+
1 * B	94.66	-48.50	15.00	61.29	-32.22	0.00	154.0	68.0	-0.0	-	+	+
1 * B	94.66	-0.00	15.00	64.32	21.40	0.00	144.8	68.0	0.0	-	+	+
1 * B	94.66	-0.00	15.00	64.32	-21.40	0.00	-144.8	68.0	-0.0	-	+	+
1 * B	94.66	48.50	15.00	77.62	15.52	0.00	-117.3	68.0	0.0	-	+	+
1 * B	94.66	48.50	15.00	61.29	32.22	0.00	-154.0	68.0	0.0	-	+	+