

RAHEENS GAA KILDARE

140m x 87m

Project code: 502511615, 6898678
Date: 27-04-2026
Customer: National Electrical Wholesalers Ltd.
Customer Representative: Mr Larry Malone

Designer: LiAS UK & I - Steve Johnston

Description: Request to illuminate both the existing pitch, which is currently illuminated with 24 No OptiVision HID fittings mounted on 8 No 18m columns.

Also to provide new lighting installation to the adjacent pitch, not currently lit using same 8 No 18m columns with 24 No fittings (3 No per column)

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 Commercial Ireland Ltd

Suite 12, 2nd Floor
Plaza 256
Blanchardstown Corporate Pk,
Dublin, D15 TR96
Ireland
Telephone: +353 87 188 0370
Mobile Phone: +353 87 188 0370
E-Mail: david.mulqueen@signify.com

Table of Contents

1.	Project Description	3
1.1	Description	3
1.2	3-D Project Overview	4
1.3	Top Project Overview	5
1.4	Left Project Overview	6
2.	Summary	7
2.1	Obstacle Information	7
2.2	Project Luminaires	7
2.3	Calculation Results	8
3.	Calculation Results	9
3.1	New GAA Pitch: Graphical Table	9
3.2	New GAA Pitch: Iso Contour	10
3.3	New Pitch Free Grid: Graphical Table	11
3.4	New Pitch Free Grid: Iso Contour	12
3.5	Eh Spill: Graphical Table	13
3.6	Eh Spill: Iso Contour	14
3.7	Eh Spill: Filled Iso Contour	15
4.	Luminaire Details	16
4.1	Project Luminaires	16
5.	Installation Data	17
5.1	Legends	17
5.2	Luminaire Positioning and Orientation	17

1. Project Description

1.1 Description

No CAd drawing proded so dimenstion taken from Google Earth

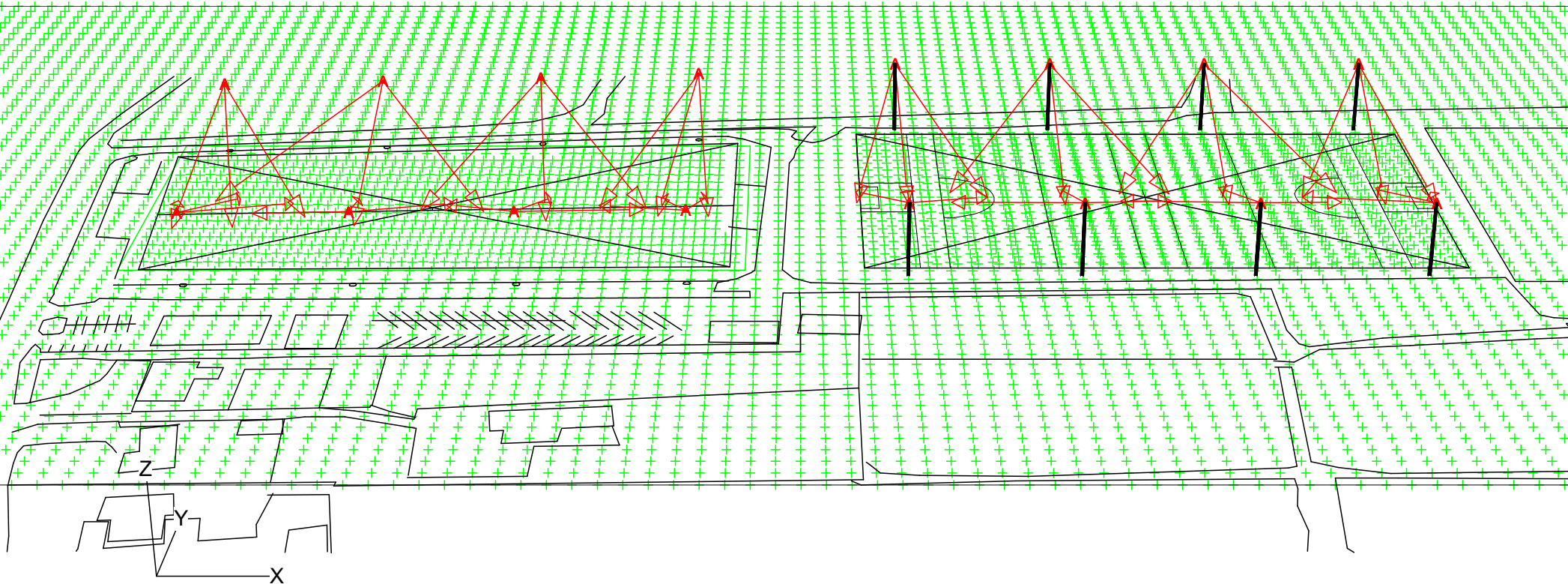
Existing Pitch - Pitch measures 139.6m Goal to Goal, 79.6m wider end, & 72m narrower end.

Replacement of existing HID fittings (3 No per Columm) with 24 No new LED OptiVision LED fittings, to provide Eh 350 lux, 0.7 Uo

Please note this pitch is not rectangular, as it is narrower at the left end. To provide calculation a rectangular grid is added, but grid points deleted where they fall outside of the narrower end oitch boundary.

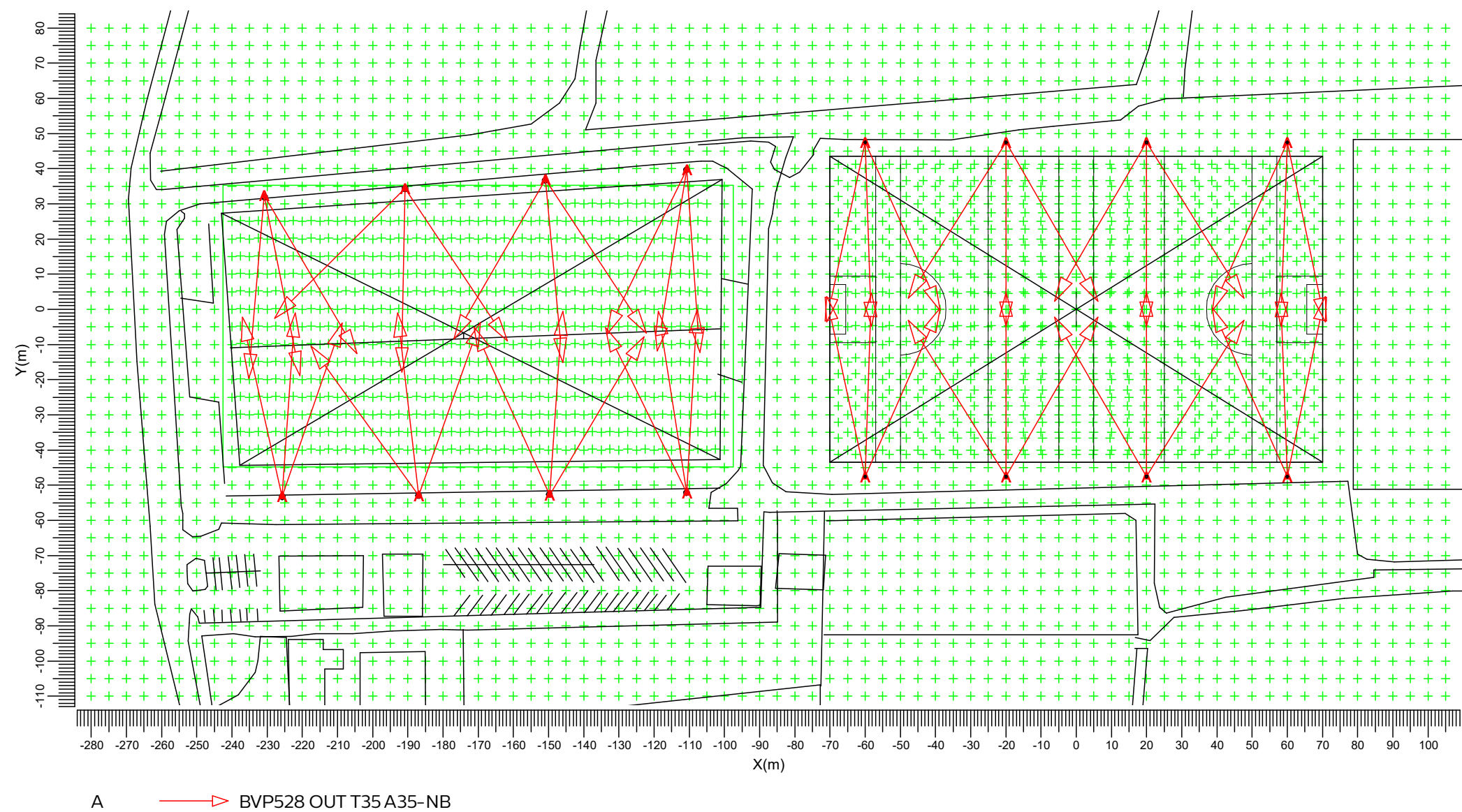
New Pitch - 140m x 87m.
Original calc was for 140mx82.5m, but markings in Google earth show 87m width
This pitch is rectangular and uses 8 No new 18m columns, setback 4m from pitch
same No of fittings requested as existing pitch (24 No) to illuminated to 300 average, 0.7 Uo

1.2 3-D Project Overview



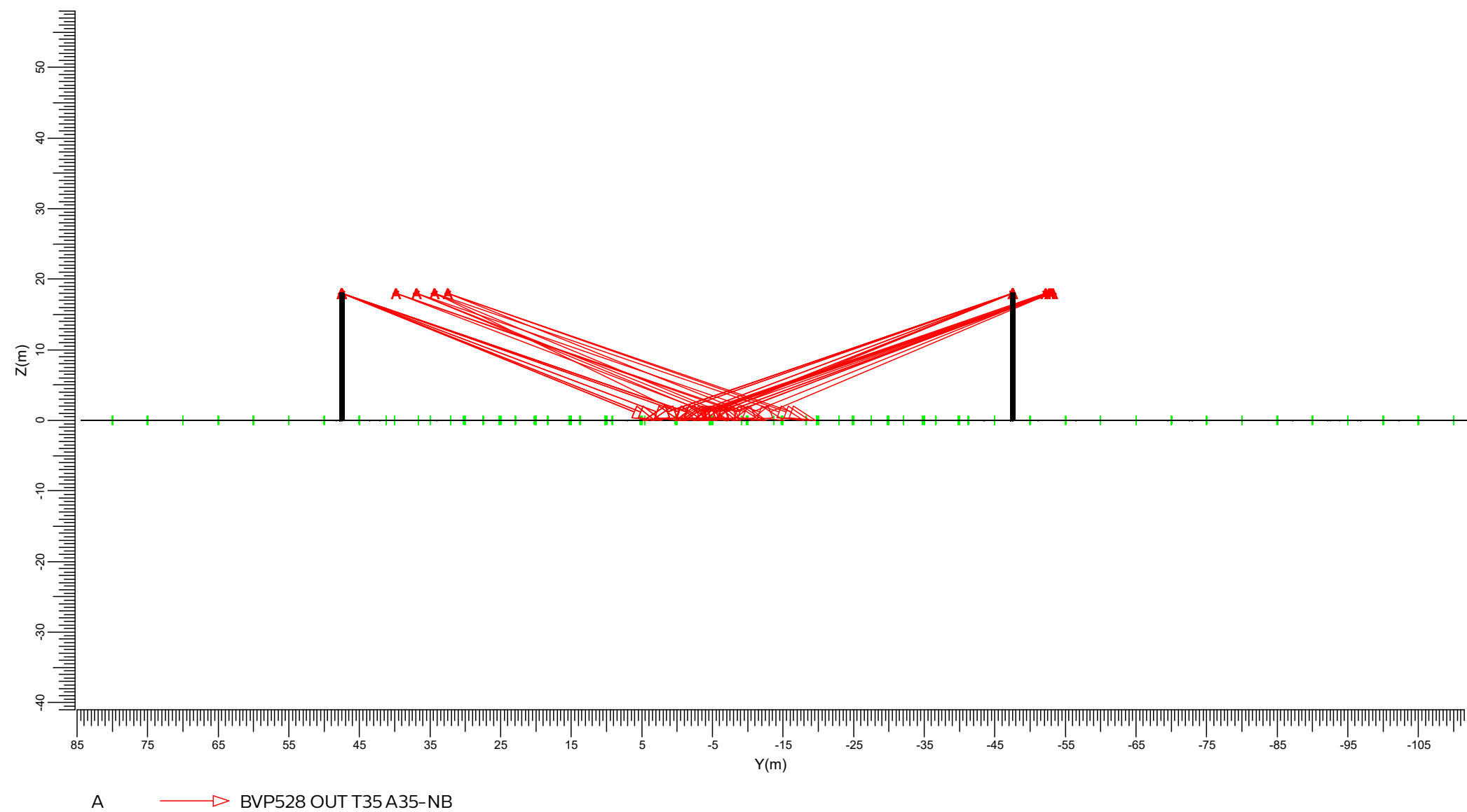
A  BVP528 OUT T35 A35-NB

1.3 Top Project Overview



Scale
1:1500

1.4 Left Project Overview



Scale
1:750

2. Summary

2.1 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Inner Masts	0	-20.00	-47.50	0.00
		20.00	-47.50	0.00
		-20.00	47.50	0.00
		20.00	47.50	0.00
Outer Masts	0	-60.00	-47.50	0.00
		60.00	-47.50	0.00
		-60.00	47.50	0.00
		60.00	47.50	0.00

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	48	BVP528 OUT T35 A35-NB	1 * LED2590-4S/757	1505.9	1 * 259000

The total installed power: 72.28 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code	Power (kWatt)
	A	
New GAA	24	36.14
Existing Pitch	24	36.14
Spill Lighting	48	72.28

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code	Power (kWatt)
	A	
Inner Mast Exist Pitch1	3	4.52
Inner Mast Exist Pitch2	3	4.52

Arrangement	Luminaire Code	Power (kWatt)
	A	
Inner Mast Exist Pitch3	3	4.52
Inner Mast Exist Pitch4	3	4.52
Inner Mast New Pitch	12	18.07
Outer Masts Exist Pitch1	3	4.52
Outer Masts Exist Pitch2	3	4.52
Outer Masts Exist Pitch3	3	4.52
Outer Masts Exist Pitch4	3	4.52
Outer Masts New Pitch	12	18.07

2.3 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	New GAA	0.90
2	Existing Pitch	0.90
3	Spill Lighting	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max
New GAA Pitch	1	Surface Illuminance	lux	308	234	393	0.76	0.60
New Pitch Free Grid	2	Surface Illuminance	lux	350	269	413	0.77	0.65
Eh Spill	3	Surface Illuminance	lux					

Obtrusive Light Calculations:

Switching Mode	ULR
1	0.01
2	0.01
3	0.01

3. Calculation Results

3.1 New GAA Pitch: Graphical Table

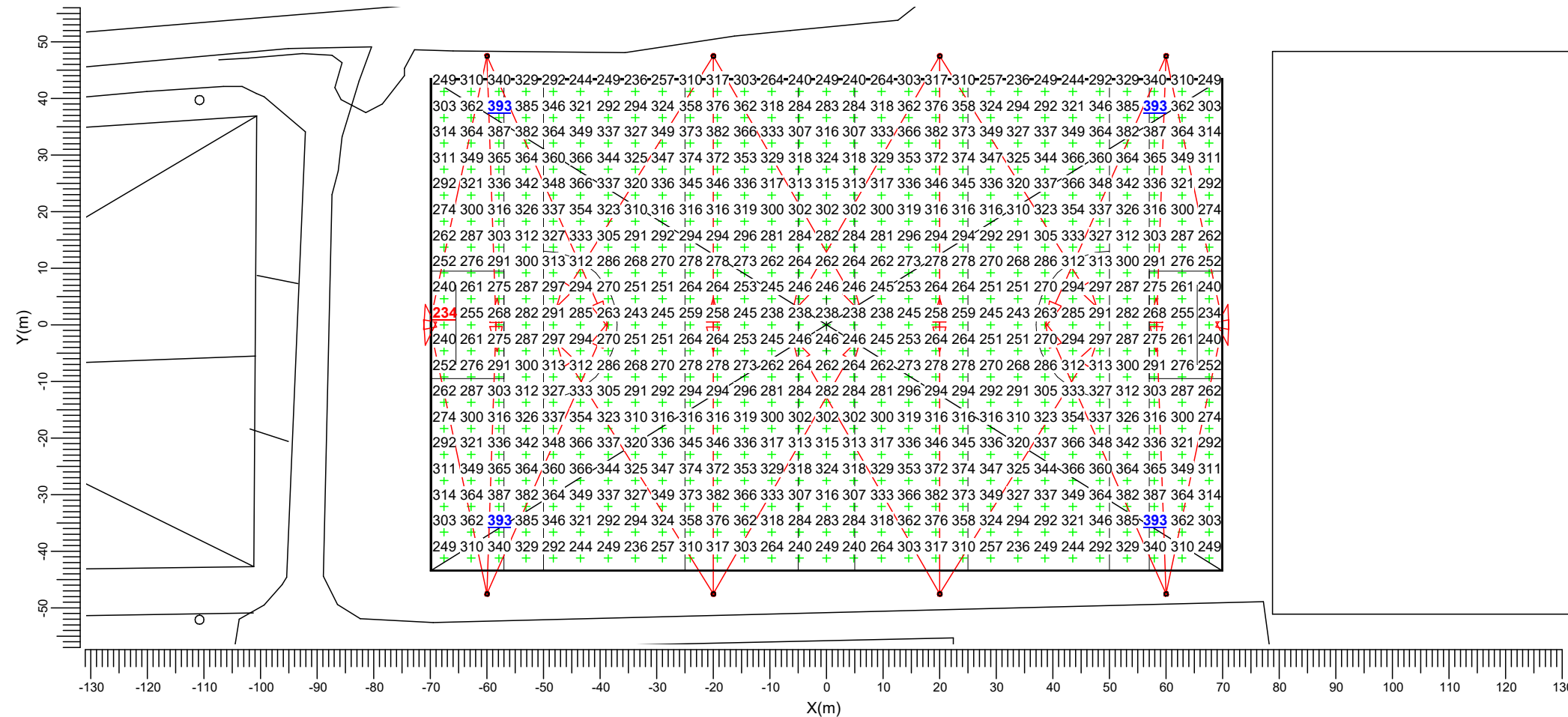
New GAA

Grid

: New GAA Pitch at Z = -0.00 m

Calculation

: Surface Illuminance (lux)



➤ BVP528 OUT T35 A35-NB

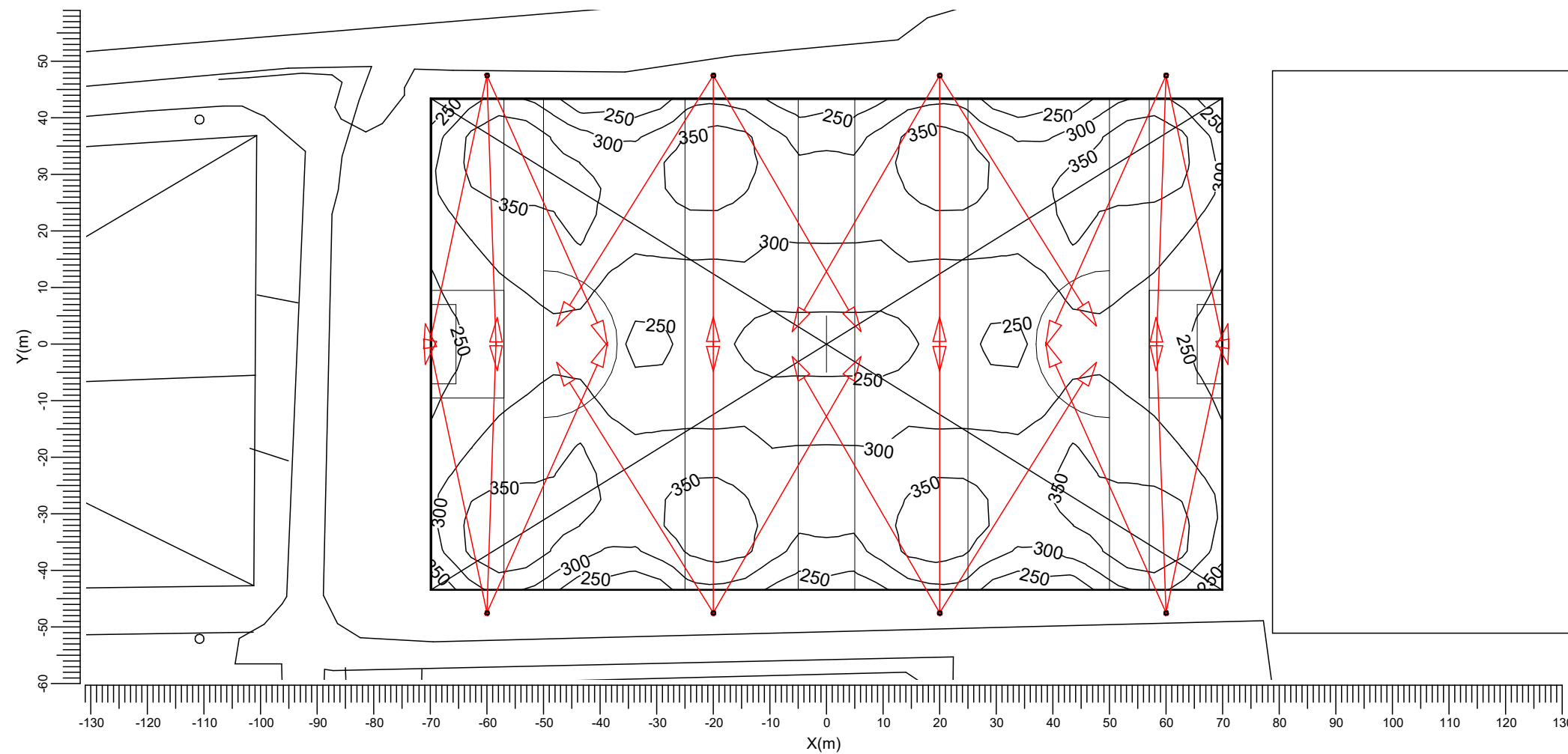
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
308	234	393	0.76	0.60	0.90	1:1000

3.2 New GAA Pitch: Iso Contour

New GAA

Grid : New GAA Pitch at Z = -0.00 m

Calculation : Surface Illuminance (lux)



—▶ BVP528 OUT T35 A35-NB

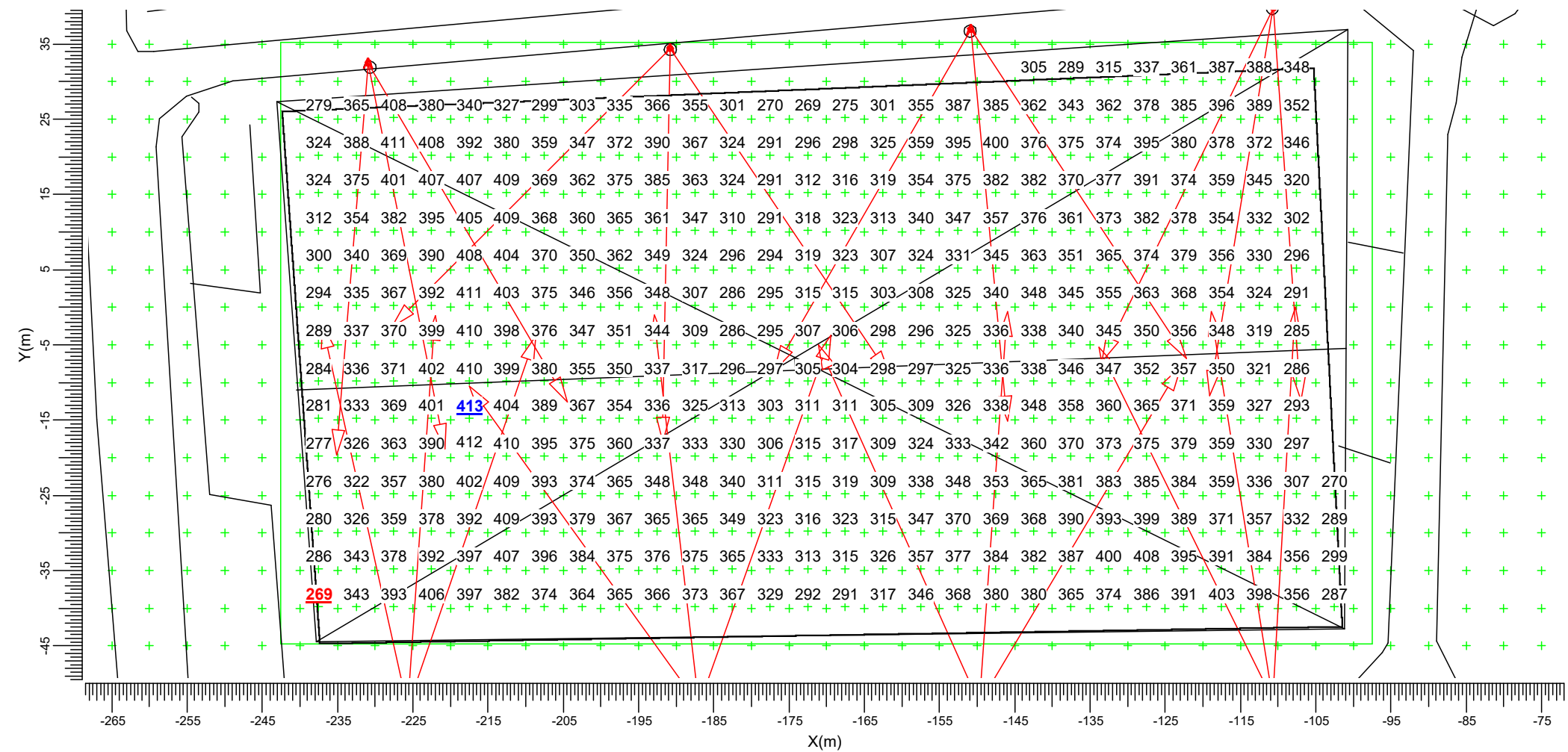
Average 308	Minimum 234	Maximum 393	Min/Ave 0.76	Min/Max 0.60	Project maintenance factor 0.90	Scale 1:1000
----------------	----------------	----------------	-----------------	-----------------	------------------------------------	-----------------

3.3 New Pitch Free Grid: Graphical Table

Existing Pitch

Grid : Existing Pitch at Z = 0.00 m

Calculation : Surface Illuminance (lux)



A BVP528 OUT T35 A35-NB

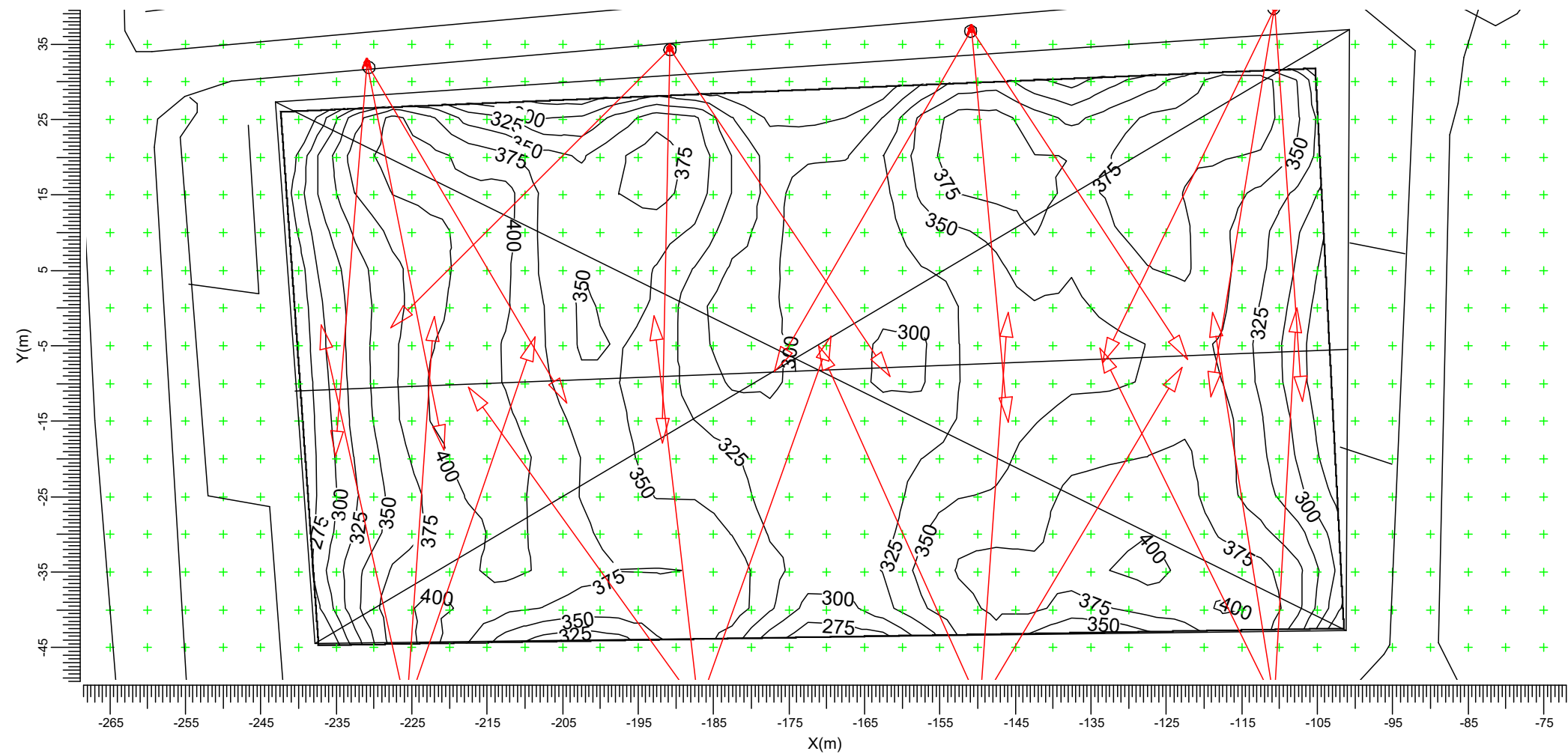
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
350	269	413	0.77	0.65	0.90	1:750

3.4 New Pitch Free Grid: Iso Contour

Existing Pitch

Grid : Existing Pitch at Z = 0.00 m

Calculation : Surface Illuminance (lux)



A BVP528 OUT T35 A35-NB

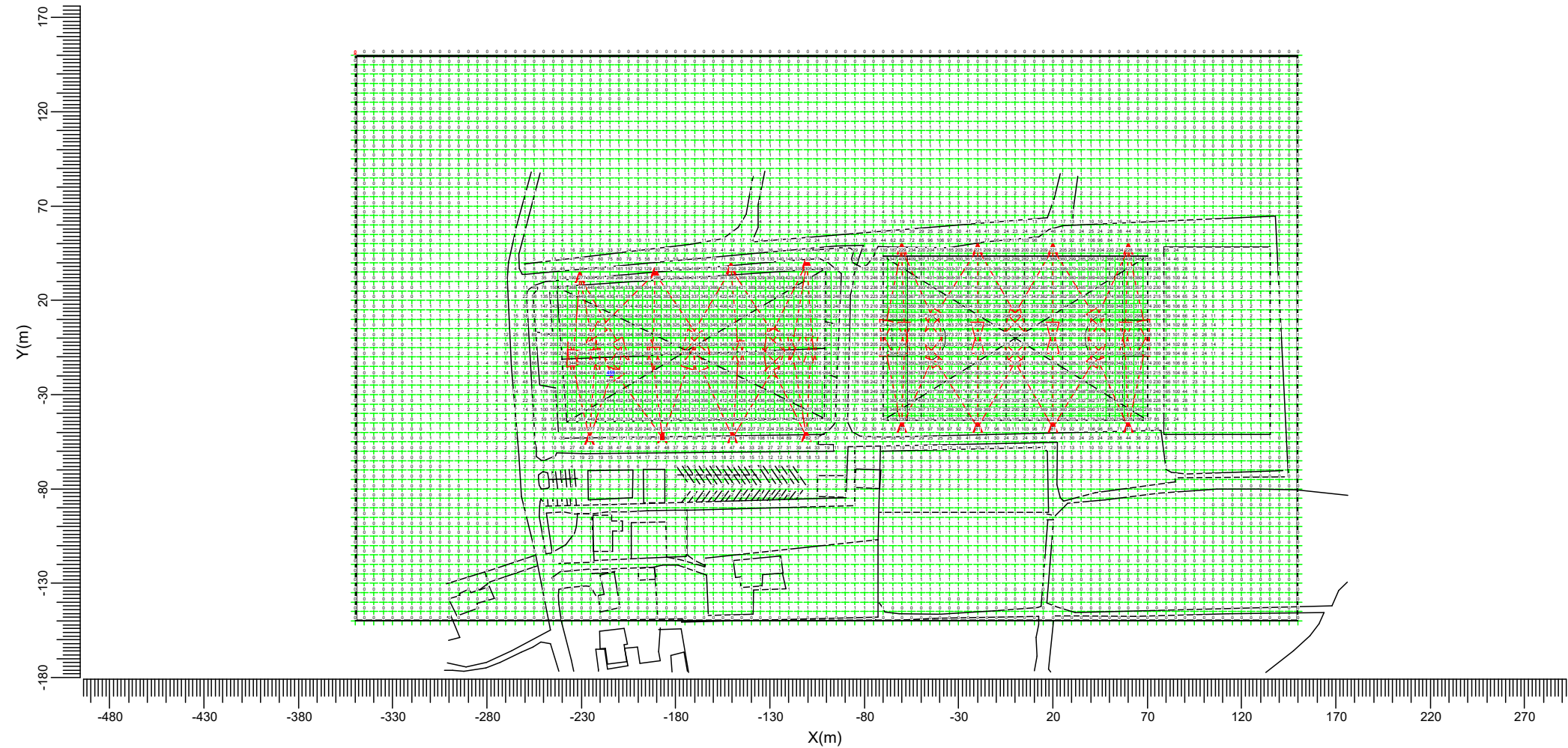
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
350	269	413	0.77	0.65	0.90	1:750

3.5 Eh Spill: Graphical Table

Spill Lighting

Grid
Calculation

: Eh Spill at Z = -0.00 m
: Surface Illuminance (lux)



Project maintenance factor
1.00

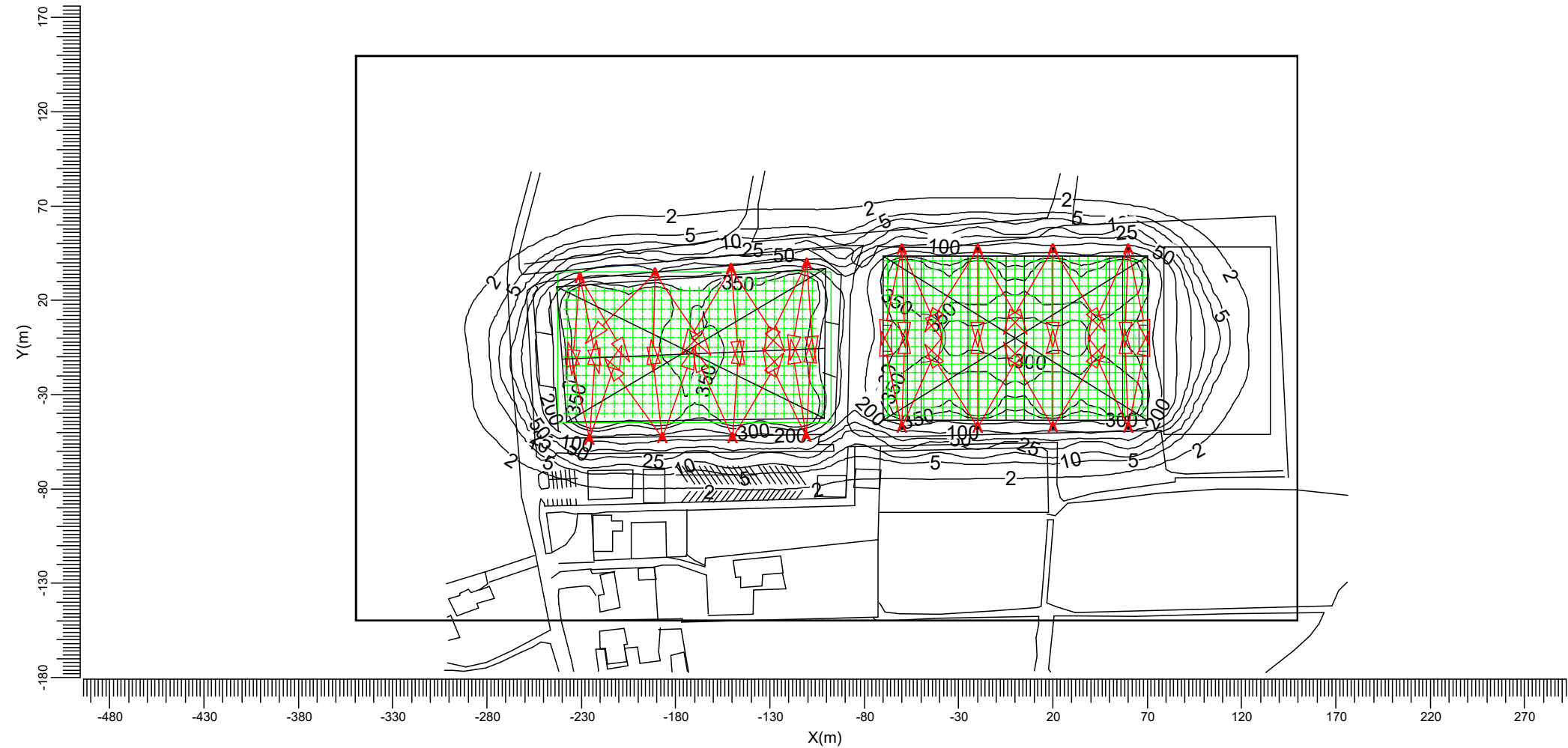
Scale
1:3000

3.6 Eh Spill: Iso Contour

Spill Lighting

Grid
Calculation

: Eh Spill at Z = -0.00 m
: Surface Illuminance (lux)



A  BVP528 OUT T35 A35-NB

Project maintenance factor
1.00

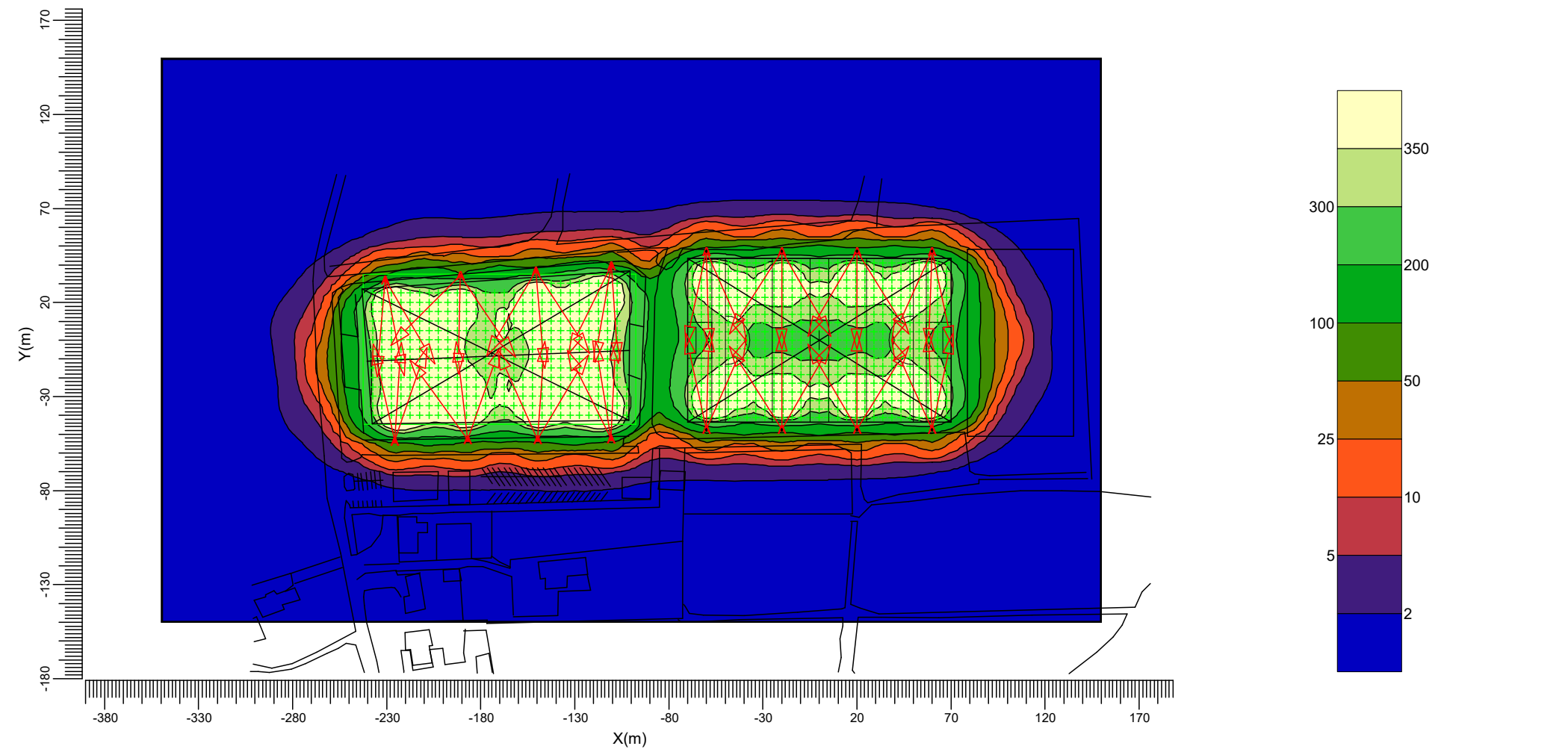
Scale
1:3000

3.7 Eh Spill: Filled Iso Contour

Spill Lighting

Grid
Calculation

: Eh Spill at Z = -0.00 m
: Surface Illuminance (lux)



A  BVP528 OUT T35 A35-NB

Project maintenance factor
1.00

Scale
1:3000

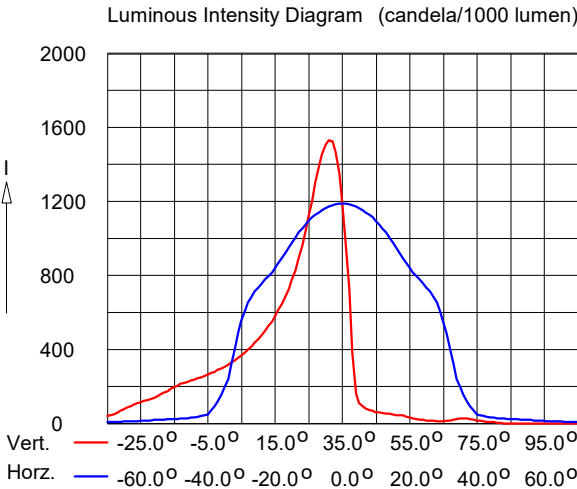
4. Luminaire Details

4.1 Project Luminaires

OptiVision LED gen3.5 2022
BVP528 OUT T35 1xLED2590-4S/757/757 E3/D4I A35-NB

Light output ratios	
DLOR	: 0.86
ULOR	: 0.00
TLOR	: 0.86
Ballast	: E3/D4I
Lamp flux	: 259000 lm
Luminaire wattage	: 1505.9 W
Measurement code	: LVM2044500

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	48	BVP528 OUT T35 A35-NB	1 * LED2590-4S/757	1 * 259000

Arrangements:

Code	Arrangement
1	Inner Mast New Pitch
2	Outer Masts New Pitch
3	Outer Masts Exist Pitch1
4	Inner Mast Exist Pitch1
5	Outer Masts Exist Pitch2
6	Outer Masts Exist Pitch3
7	Outer Masts Exist Pitch4
8	Inner Mast Exist Pitch2
9	Inner Mast Exist Pitch3
10	Inner Mast Exist Pitch4

Switching Modes:

Code	Switching Mode
1	New GAA
2	Existing Pitch
3	Spill Lighting

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Points			Aiming Angles			ULR	Arr.	Switching Modes		
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2	3
1 * A	-20.00	-47.50	18.00	-47.70	-3.17	0.00	122.0	71.0	0.0	0.01	1	+	-	+
1 * A	-20.00	-47.50	18.00	6.14	-2.23	0.00	60.0	71.0	0.0	0.01	1	+	-	+

Qty and Code	Position			Aiming Points			Aiming Angles			ULR	Arr.	Switching Modes		
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2	3
1 * A	-20.00	-47.50	18.00	-20.00	4.78	0.00	90.0	71.0	0.0	0.01	1	+	-	+
1 * A	-20.00	47.50	18.00	-47.70	3.17	0.00	-122.0	71.0	-0.0	0.01	1	+	-	+
1 * A	-20.00	47.50	18.00	6.14	2.23	0.00	-60.0	71.0	-0.0	0.01	1	+	-	+
1 * A	-20.00	47.50	18.00	-20.00	-4.78	0.00	-90.0	71.0	-0.0	0.01	1	+	-	+
1 * A	20.00	-47.50	18.00	47.70	-3.17	0.00	58.0	71.0	-0.0	0.01	1	+	-	+
1 * A	20.00	-47.50	18.00	-6.14	-2.23	0.00	120.0	71.0	-0.0	0.01	1	+	-	+
1 * A	20.00	-47.50	18.00	20.00	4.78	0.00	90.0	71.0	-0.0	0.01	1	+	-	+
1 * A	20.00	47.50	18.00	47.70	3.17	0.00	-58.0	71.0	0.0	0.01	1	+	-	+
1 * A	20.00	47.50	18.00	-6.14	2.23	0.00	-120.0	71.0	0.0	0.01	1	+	-	+
1 * A	20.00	47.50	18.00	20.00	-4.78	0.00	-90.0	71.0	0.0	0.01	1	+	-	+
1 * A	-60.00	-47.50	18.00	-70.87	3.63	0.00	102.0	71.0	0.0	0.01	2	+	-	+
1 * A	-60.00	-47.50	18.00	-38.74	0.26	0.00	66.0	71.0	0.0	0.01	2	+	-	+
1 * A	-60.00	-47.50	18.00	-58.18	4.74	0.00	88.0	71.0	0.0	0.01	2	+	-	+
1 * A	-60.00	47.50	18.00	-70.87	-3.63	0.00	-102.0	71.0	-0.0	0.01	2	+	-	+
1 * A	-60.00	47.50	18.00	-38.74	-0.26	0.00	-66.0	71.0	-0.0	0.01	2	+	-	+
1 * A	-60.00	47.50	18.00	-58.18	-4.74	0.00	-88.0	71.0	-0.0	0.01	2	+	-	+
1 * A	60.00	-47.50	18.00	70.87	3.63	0.00	78.0	71.0	-0.0	0.01	2	+	-	+
1 * A	60.00	-47.50	18.00	38.74	0.26	0.00	114.0	71.0	-0.0	0.01	2	+	-	+
1 * A	60.00	-47.50	18.00	58.18	4.74	0.00	92.0	71.0	-0.0	0.01	2	+	-	+
1 * A	60.00	47.50	18.00	70.87	-3.63	0.00	-78.0	71.0	0.0	0.01	2	+	-	+
1 * A	60.00	47.50	18.00	38.74	-0.26	0.00	-114.0	71.0	0.0	0.01	2	+	-	+
1 * A	60.00	47.50	18.00	58.18	-4.74	0.00	-92.0	71.0	0.0	0.01	2	+	-	+
1 * A	-225.68	-53.25	18.00	-236.98	-2.21	0.00	102.5	71.0	0.0	0.01	3	-	+	+
1 * A	-225.68	-53.25	18.00	-222.02	-1.10	0.00	86.0	71.0	0.0	0.01	3	-	+	+
1 * A	-225.68	-53.25	18.00	-208.65	-3.83	0.00	71.0	71.0	0.0	0.01	3	-	+	+
1 * A	-186.96	-52.93	18.00	-192.86	-0.99	0.00	96.5	71.0	0.0	0.01	4	-	+	+
1 * A	-186.96	-52.93	18.00	-169.39	-3.70	0.00	70.4	71.0	0.0	0.01	4	-	+	+
1 * A	-186.96	-52.93	18.00	-217.48	-10.49	0.00	125.7	71.0	0.0	0.01	4	-	+	+
1 * A	-110.72	-52.18	18.00	-107.68	0.01	0.00	86.7	71.0	0.0	0.01	5	-	+	+
1 * A	-110.72	-52.18	18.00	-118.86	-0.54	0.00	99.0	71.0	0.0	0.01	5	-	+	+
1 * A	-110.72	-52.18	18.00	-133.79	-5.27	0.00	116.2	71.0	0.0	0.01	5	-	+	+
1 * A	-230.90	32.46	18.00	-235.12	-19.65	0.00	-94.6	71.0	0.0	0.01	6	-	+	+
1 * A	-230.90	32.46	18.00	-220.71	-18.81	0.00	-78.8	71.0	0.0	0.01	6	-	+	+

Qty and Code	Position			Aiming Points			Aiming Angles			ULR	Arr.	Switching Modes		
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2	3
1 * A	-230.90	32.46	18.00	-204.41	-12.61	0.00	-59.6	71.0	0.0	0.01	6	-	+	+
1 * A	-110.63	39.81	18.00	-106.95	-12.34	0.00	-86.0	71.0	0.0	0.01	7	-	+	+
1 * A	-110.63	39.81	18.00	-119.12	-11.77	0.00	-99.3	71.0	0.0	0.01	7	-	+	+
1 * A	-110.63	39.81	18.00	-133.44	-7.23	0.00	-115.9	71.0	0.0	0.01	7	-	+	+
1 * A	-149.67	-52.71	18.00	-145.92	-0.57	0.00	85.9	71.0	0.0	0.01	8	-	+	+
1 * A	-149.67	-52.71	18.00	-171.10	-5.03	0.00	114.2	71.0	-0.0	0.01	8	-	+	+
1 * A	-149.67	-52.71	18.00	-122.89	-7.82	0.00	59.2	71.0	0.0	0.01	8	-	+	+
1 * A	-190.80	34.38	18.00	-191.75	-17.89	0.00	-91.0	71.0	0.0	0.01	9	-	+	+
1 * A	-190.80	34.38	18.00	-227.78	-2.57	0.00	-135.0	71.0	0.0	0.01	9	-	+	+
1 * A	-190.80	34.38	18.00	-161.64	-9.01	0.00	-56.1	71.0	0.0	0.01	9	-	+	+
1 * A	-150.82	36.95	18.00	-145.93	-15.10	0.00	-84.6	71.0	0.0	0.01	10	-	+	+
1 * A	-150.82	36.95	18.00	-176.89	-8.36	0.00	-119.9	71.0	0.0	0.01	10	-	+	+
1 * A	-150.82	36.95	18.00	-122.20	-6.79	0.00	-56.8	71.0	0.0	0.01	10	-	+	+