

Holbeach United Community Sports Academy

Date: 30-09-2021

Designer: Dan Shah

Description: 200Lux Philips LED System

6 x 15m masts
12 x Philips BVP528 NB/A35 + LO
2 x Philips BVP518 NB/A35 + LO

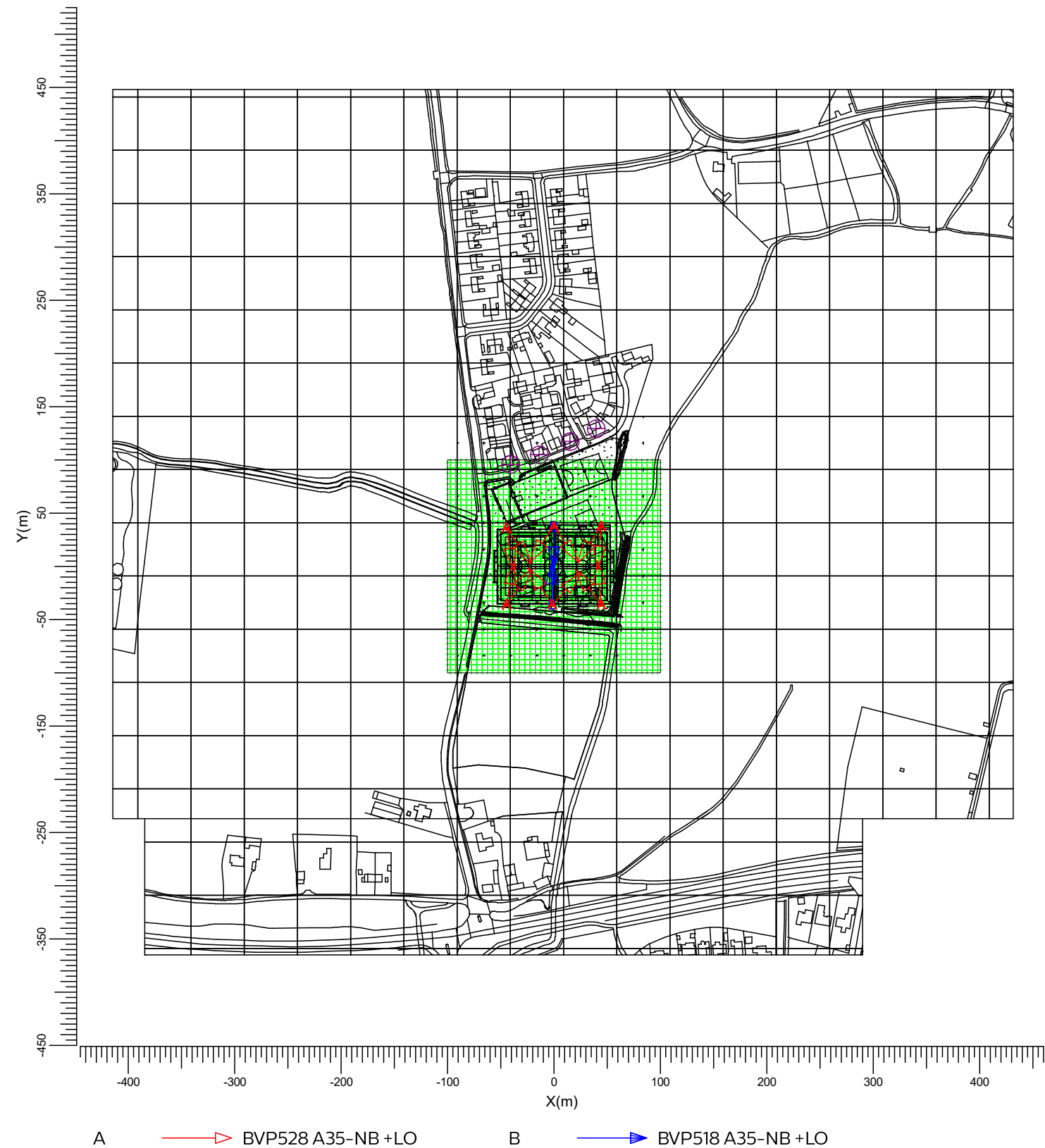
The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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1. Project Description

1.1 Top Project Overview



Scale
1:5000

2. Summary

2.1 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	10 Hatfield House	-40.77	95.93	3.00
Bb	3 Highbury Drive	-13.87	105.23	3.00
Cc	9 Highbury Drive	14.96	117.55	3.00
Dd	11 Ashburton Close	39.54	129.88	3.00

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	12	BVP528 A35-NB +LO	1 * LED2220/757 OUT T15 50K	1500.0	1 * 222600
B	2	BVP518 A35-NB +LO	1 * LED1480/757 OUT T15 50K	1000.0	1 * 148400

The total installed power: 20.00 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	A	B	
Full pitch 200Lux	12	2	20.00
Full Pitch 120Lux	12	2	20.00
Half1	6	2	11.00
Half2	6	2	11.00
Spill	12	2	20.00

2.3 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Full pitch 200Lux	1.00
2	Full Pitch 120Lux	0.60
3	Half1	1.00
4	Half2	1.00
5	Spill	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave Min/AveMin/Max		
Football 200Lux	1	Surface Illuminance	lux	236	0.61	0.41
Football 120Lux	2	Surface Illuminance	lux	141	0.61	0.41
Half1	3	Surface Illuminance	lux	234	0.61	0.46
Half2	4	Surface Illuminance	lux	222	0.64	0.47
Spill	1	Surface Illuminance	lux	44.3	0.00	0.00

Obtrusive Light Calculations:

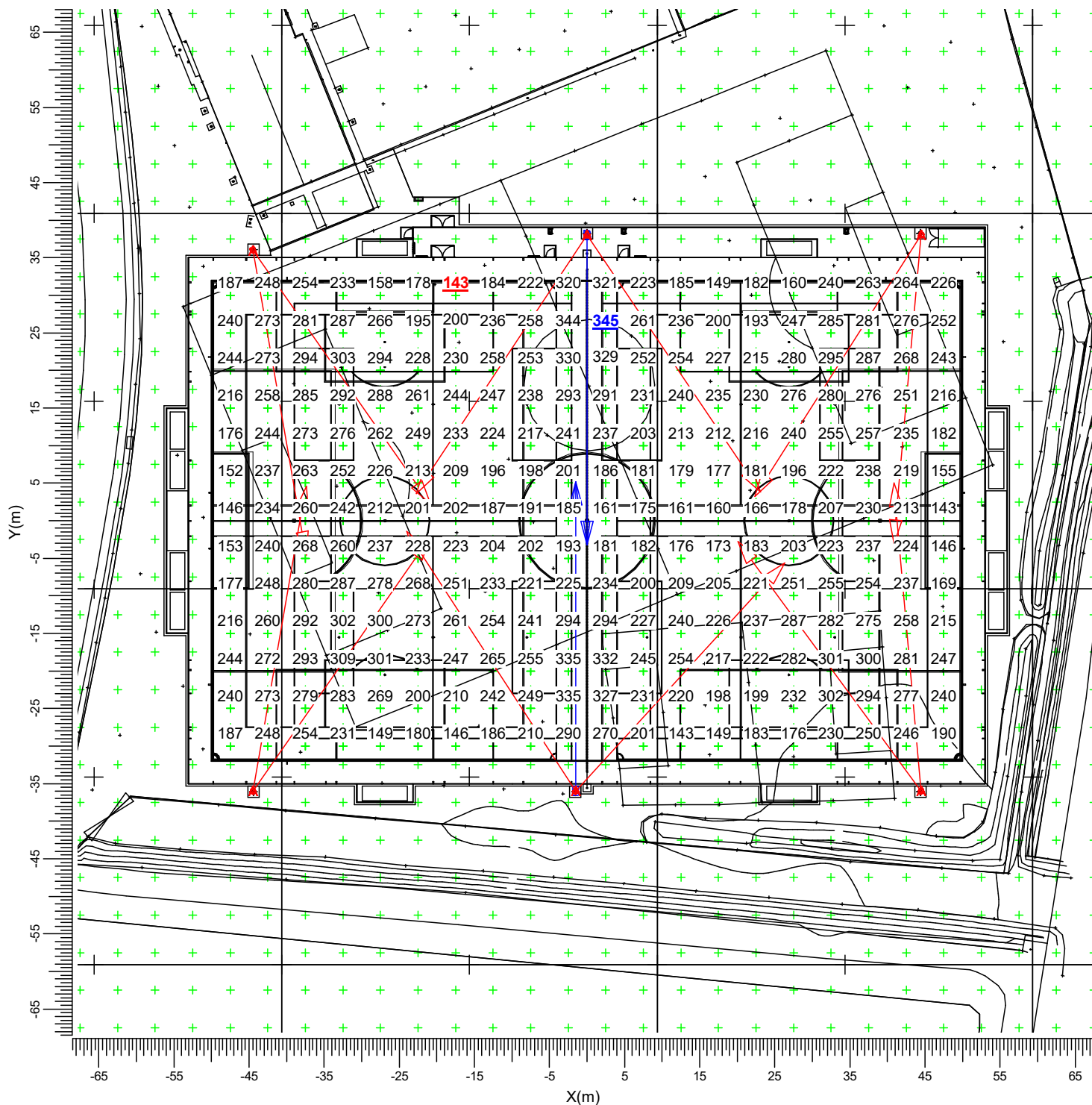
Switching Mode	Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
			X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
1	Aa	A	44.50	-36.00	15.00	126.25	70.00	0.00	713
1	Bb	A	-44.50	-36.00	15.00	80.00	70.00	-0.00	732
1	Cc	A	-44.50	-36.00	15.00	80.00	70.00	-0.00	694
1	Dd	A	44.50	-36.00	15.00	95.00	70.00	0.00	703

3. Calculation Results

3.1 Football 200Lux: Graphical Table

Full pitch 200Lux

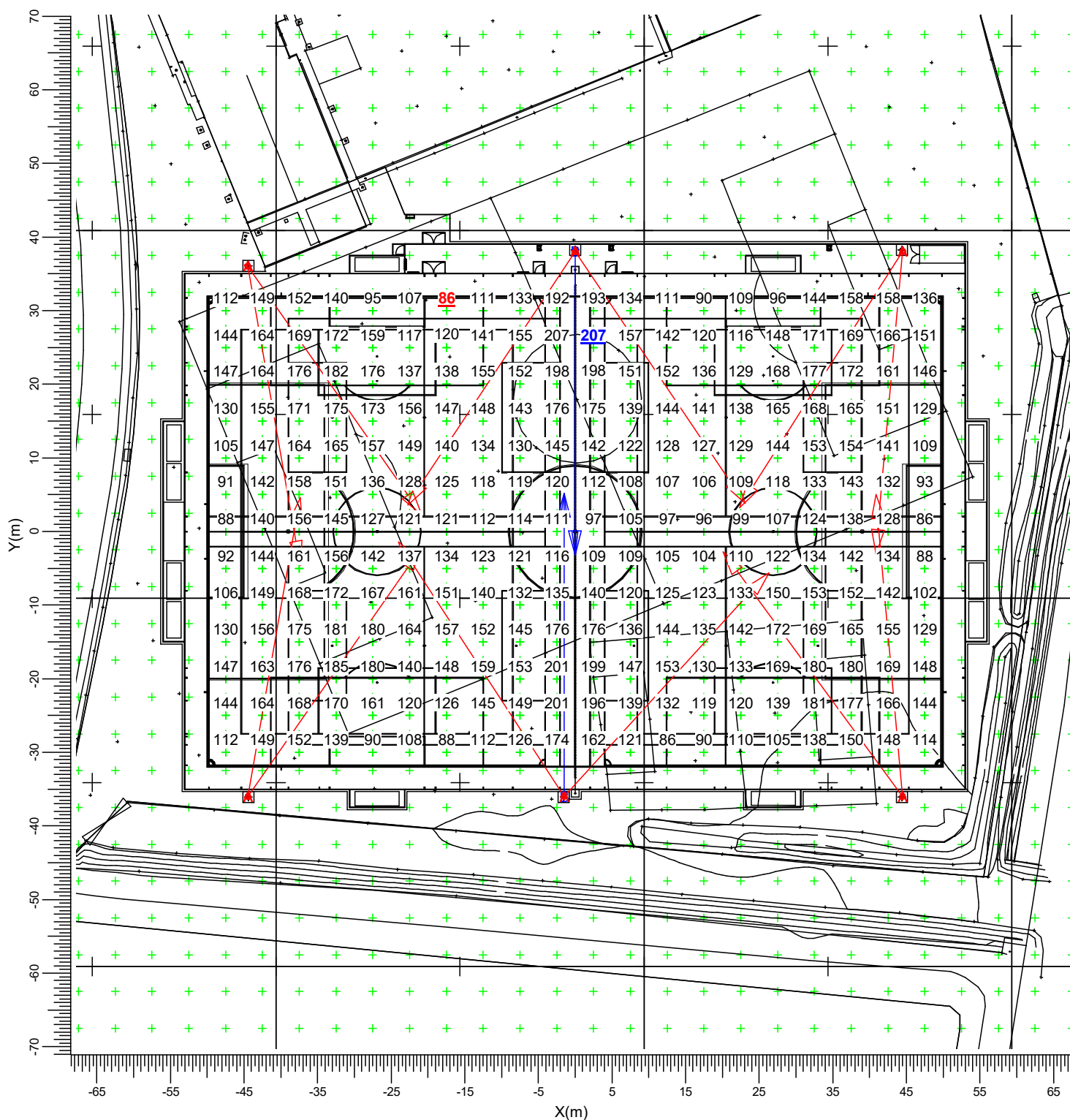
Grid : Full Pitch 200Lux at Z = -0.00 m
 Calculation : Surface Illuminance (lux)

A  BVP528 A35-NB +LOB  BVP518 A35-NB +LOAverage
236Min/Ave
0.61Min/Max
0.41Project maintenance factor
1.00Scale
1:750

3.2 Football 120Lux: Graphical Table

Full Pitch 120Lux

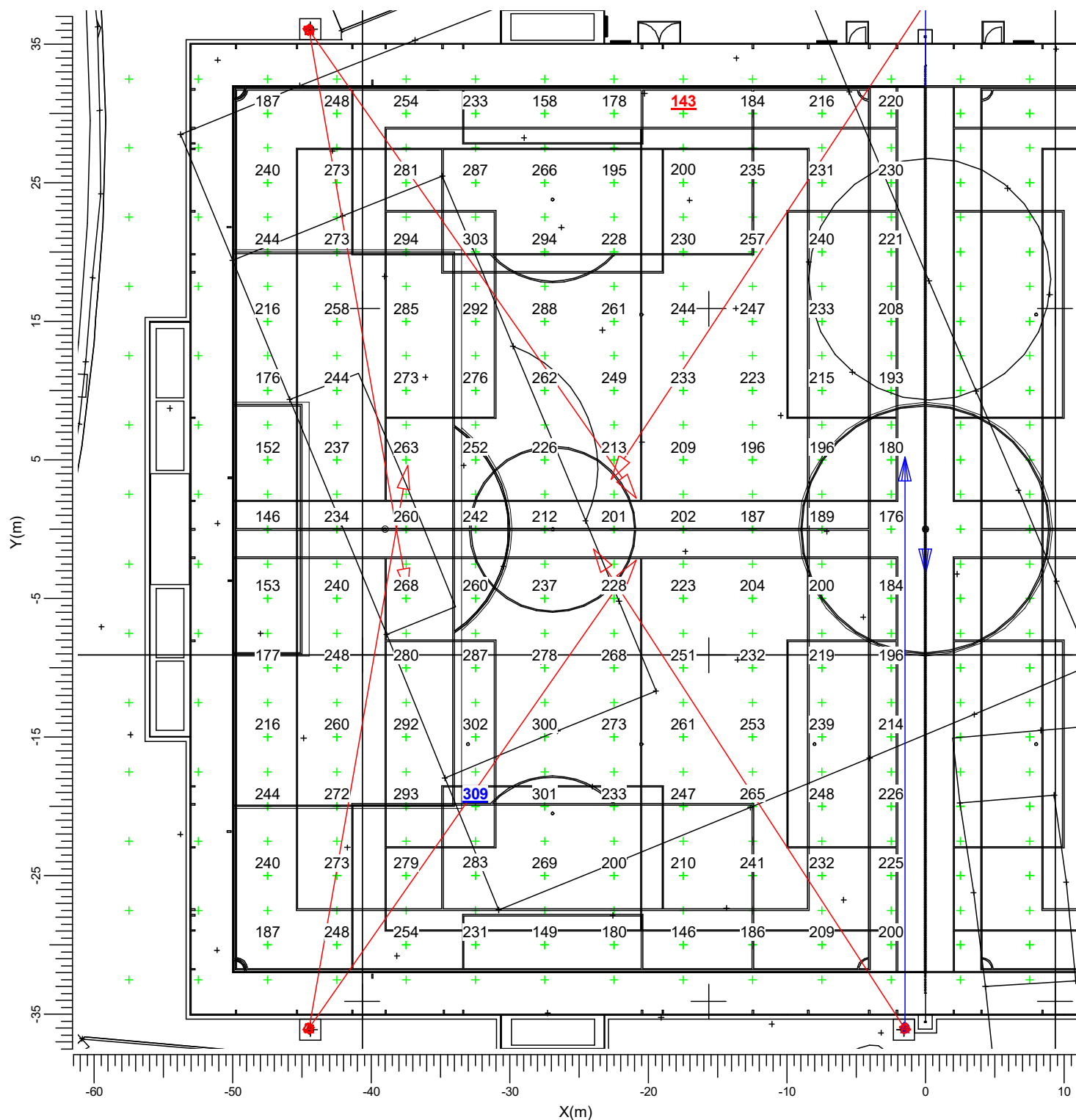
Grid : Full Pitch 120Lux at Z = -0.00 m
 Calculation : Surface Illuminance (lux)

A  BVP528 A35-NB +LOB  BVP518 A35-NB +LOAverage
141Min/Ave
0.61Min/Max
0.41Project maintenance factor
0.60Scale
1:750

3.3 Half1: Graphical Table

Half1

Grid : Half1 at Z = -0.00 m
 Calculation : Surface Illuminance (lux)



Average
234

Min/Ave
0.61

Min/Max
0.46

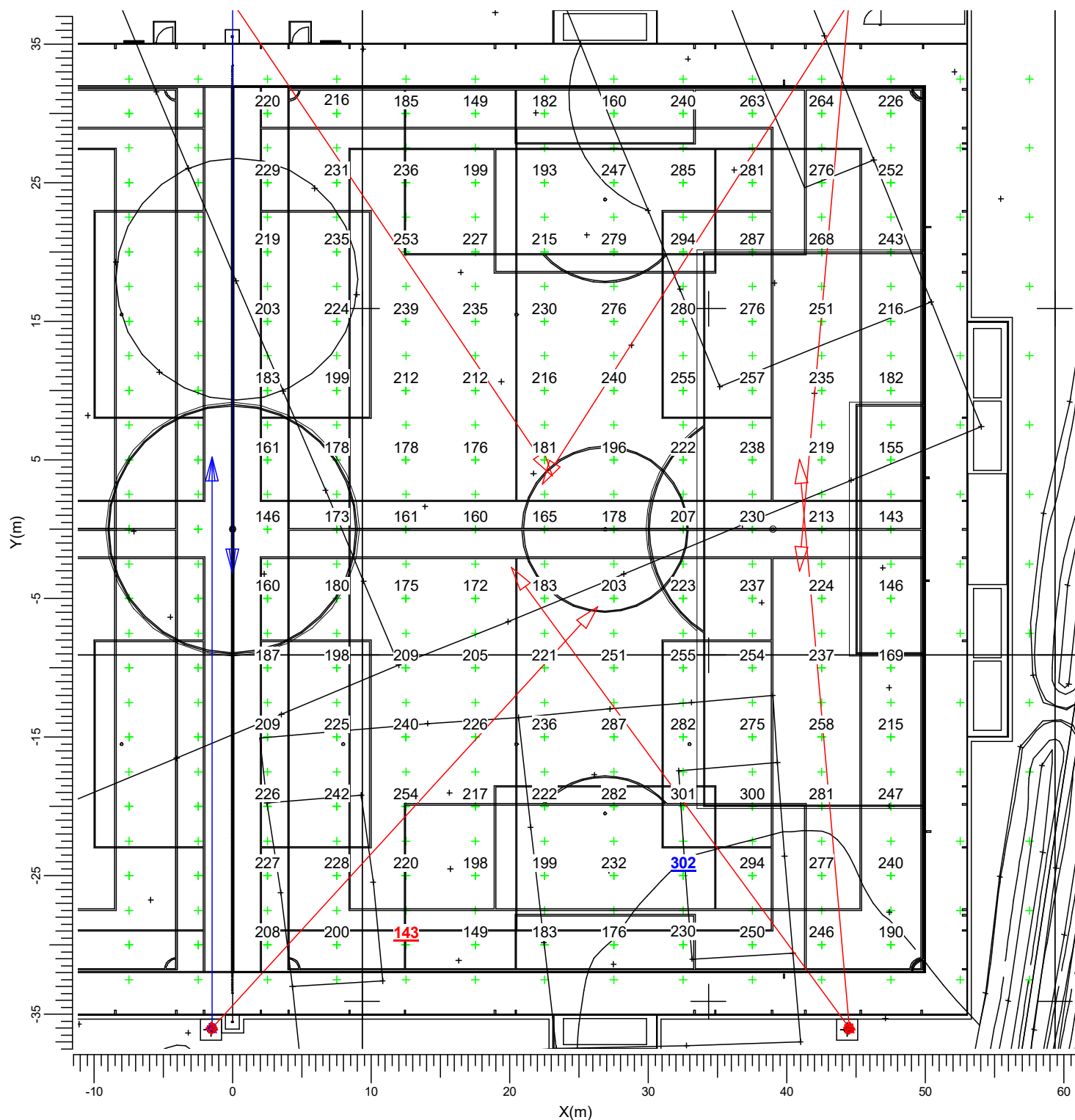
Project maintenance factor
1.00

Scale
1:400

3.4 Half2: Graphical Table

Half2

Grid : Half2 at Z = -0.00 m
 Calculation : Surface Illuminance (lux)



A → BVP528 A35-NB +LO

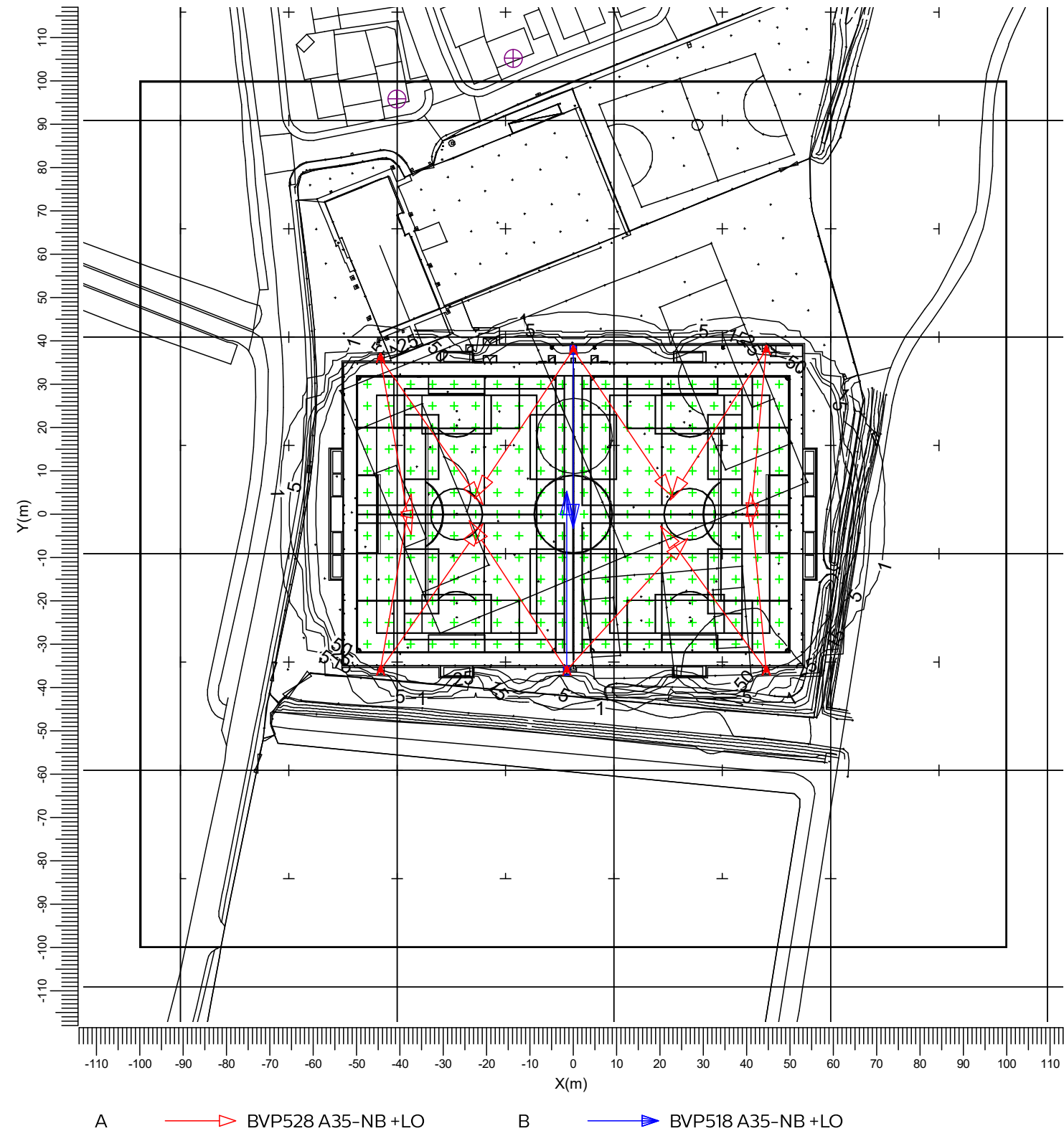
B → BVP518 A35-NB +LO

Average
222Min/Ave
0.64Min/Max
0.47Project maintenance factor
1.00Scale
1:400

3.5 Spill: Iso Contour

Full pitch 200Lux

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



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
44.3	0.00	0.00	1.00	1:1250

4. Luminaire Details

4.1 Project Luminaires

OptiVision LED

BVP528 1xLED2220/757 OUT T15 50K A35-NB +LO

Light output ratios

DLOR : 0.60

ULOR : 0.00

TLOR : 0.60

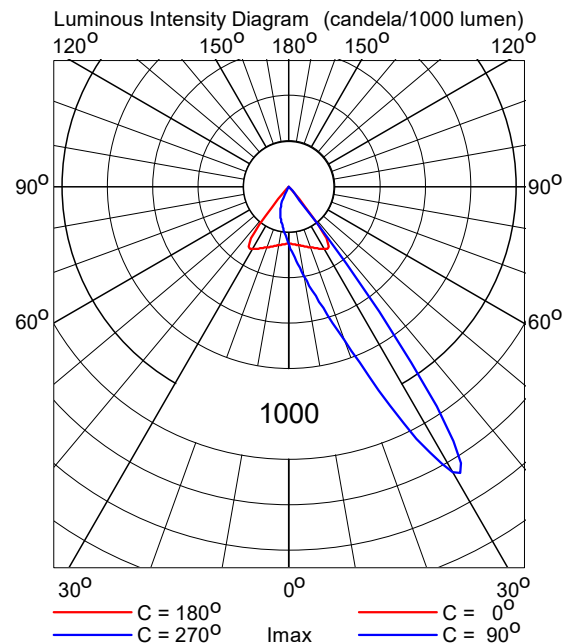
Ballast : N/A

Lamp flux : 222600 lm

Luminaire wattage : 1500.0 W

Measurement code : LVM2047300

Note: Luminaire data not from database.



OptiVision LED

BVP518 1xLED1480/757 OUT T15 50K A35-NB +LO

Light output ratios

DLOR : 0.60

ULOR : 0.00

TLOR : 0.60

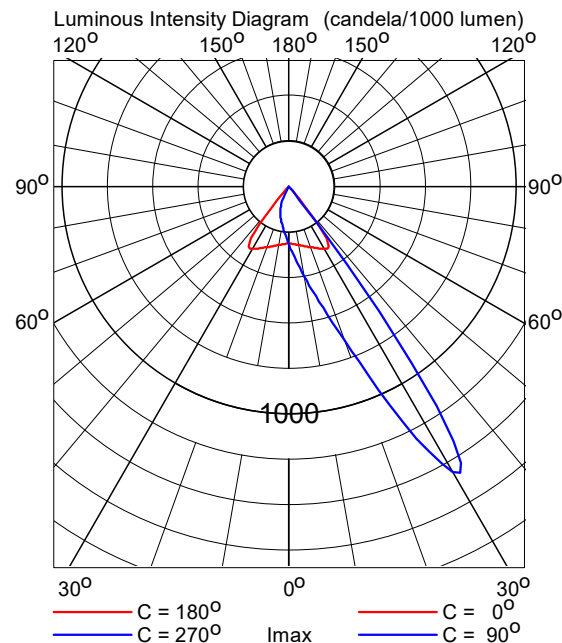
Ballast : N/A

Lamp flux : 148400 lm

Luminaire wattage : 1000.0 W

Measurement code : LVM2047300

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	12	BVP528 A35-NB +LO	1 * LED2220/757 OUT T15 50K	1 * 222600
B	2	BVP518 A35-NB +LO	1 * LED1480/757 OUT T15 50K	1 * 148400

Switching Modes:

Code	Switching Mode
1	Full pitch 200Lux
2	Full Pitch 120Lux
3	Half1
4	Half2
5	Spill

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles			Switching Modes				
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	1	2	3	4	5
1 * A	-44.50	-36.00	15.00	55.0	70.0	-0.0	+	+	+	-	+
1 * A	-44.50	-36.00	15.00	80.0	70.0	-0.0	+	+	+	-	+
1 * A	-44.50	36.00	15.00	-55.0	70.0	0.0	+	+	+	-	+
1 * A	-44.50	36.00	15.00	-80.0	70.0	0.0	+	+	+	-	+
1 * B	-1.50	-36.00	15.00	90.0	70.0	0.0	+	+	+	+	+
1 * A	-1.50	-36.00	15.00	47.5	70.0	0.0	+	+	-	+	+
1 * A	-1.50	-36.00	15.00	123.0	70.0	0.0	+	+	+	-	+
1 * B	-0.00	38.00	15.00	-90.0	70.0	0.0	+	+	+	+	+
1 * A	-0.00	38.00	15.00	-55.9	70.0	0.0	+	+	-	+	+
1 * A	-0.00	38.00	15.00	-123.4	70.0	0.0	+	+	+	-	+
1 * A	44.50	-36.00	15.00	95.0	70.0	0.0	+	+	-	+	+
1 * A	44.50	-36.00	15.00	126.2	70.0	0.0	+	+	-	+	+
1 * A	44.50	38.00	15.00	-95.0	70.0	0.0	+	+	-	+	+
1 * A	44.50	38.00	15.00	-122.5	70.0	0.0	+	+	-	+	+