Clondalkin RFC

120m x 70m

Project code:	0400695151/D439507
Date:	19-01-2022
Designer:	Signify
Description:	Proposal based on: Philips BVP528 OptiVisionGen3 LED Floodlight. 32 no. Floodlights used in total. The column positions are fixed and are 18m in height. Column setback from side line is 4m Rugby: 500Lux Maintained Avg achieved with Uniformity; Min/Ave=>0.74 Min/Max=>0.50 With the Maintenance Factor of 0.90. Spill light calculated with Maintenance Factor of 1.00

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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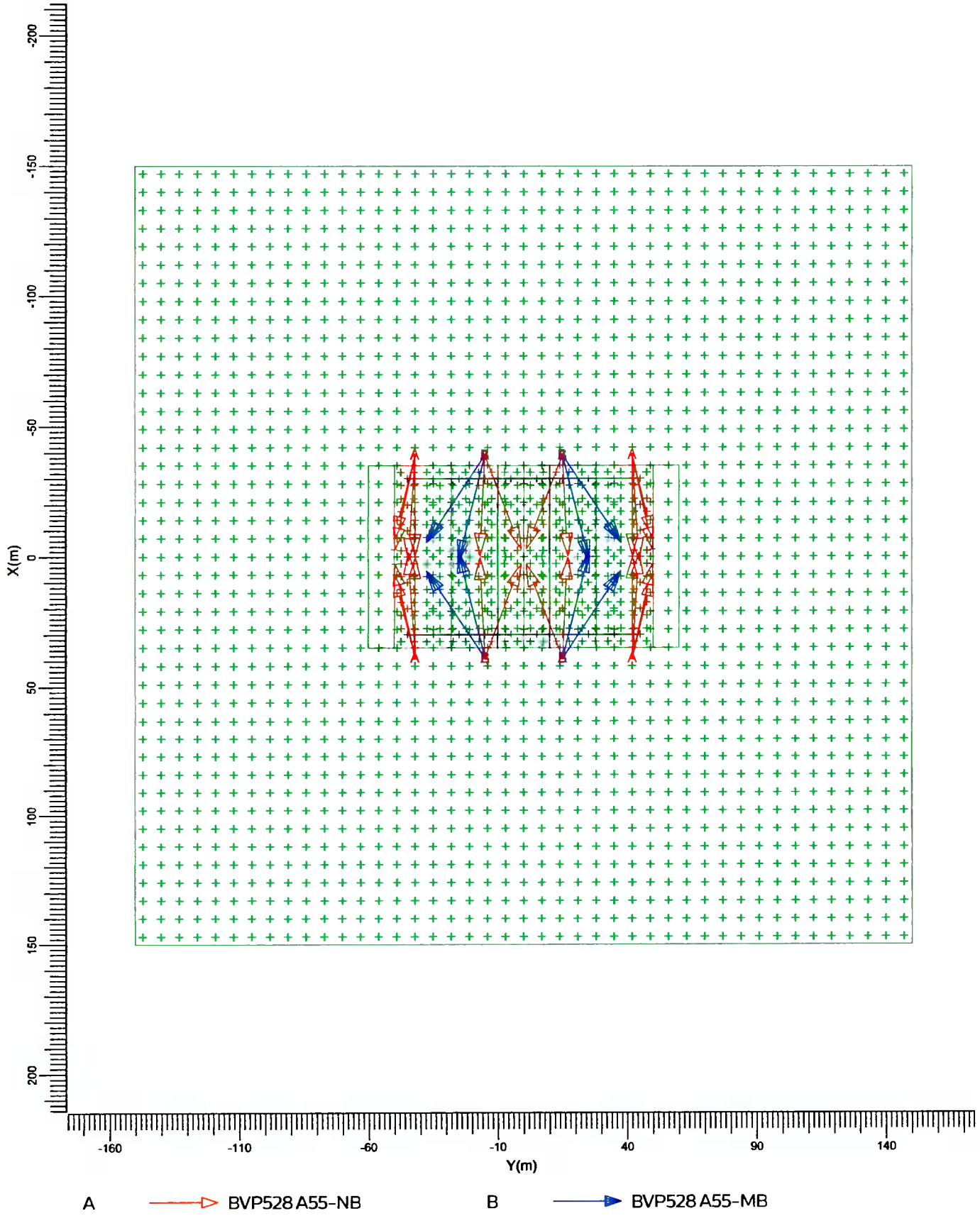
1. Project Description

1.1 Top Project Overview



Scale
1:2000

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	24	BVP528 A55-NB	1 * LED2220/757 OUT T15 50K	1500.0	1 * 222600
B	8	BVP528 A55-MB	1 * LED2220/757 OUT T15 50K	1500.0	1 * 222600

The total installed power: 48.00 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	A	B	
Pitch	24	8	48.00
Spill Light	24	8	48.00

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	A	B	
Corners	16	0	24.00
Middle	8	8	24.00

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Pitch	0.90
2	Spill Light	1.00

(Il)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Max	Min/Ave	Min/Max
Rugby Pitch 5x5	1	Surface Illuminance	lux	501		0.74	0.50
Spill Light	2	Surface Illuminance	lux		811.2		

Glare Rating for Grid of Observers:

Calculation	Switching Mode	Observer Grid	Reference Grid	Reflectance	GR-Max
Rugby Pitch 10x10 Glare	1	Rugby Pitch 10x10	Rugby Pitch 10x10	0.25	42.7

Obtrusive Light Calculations:

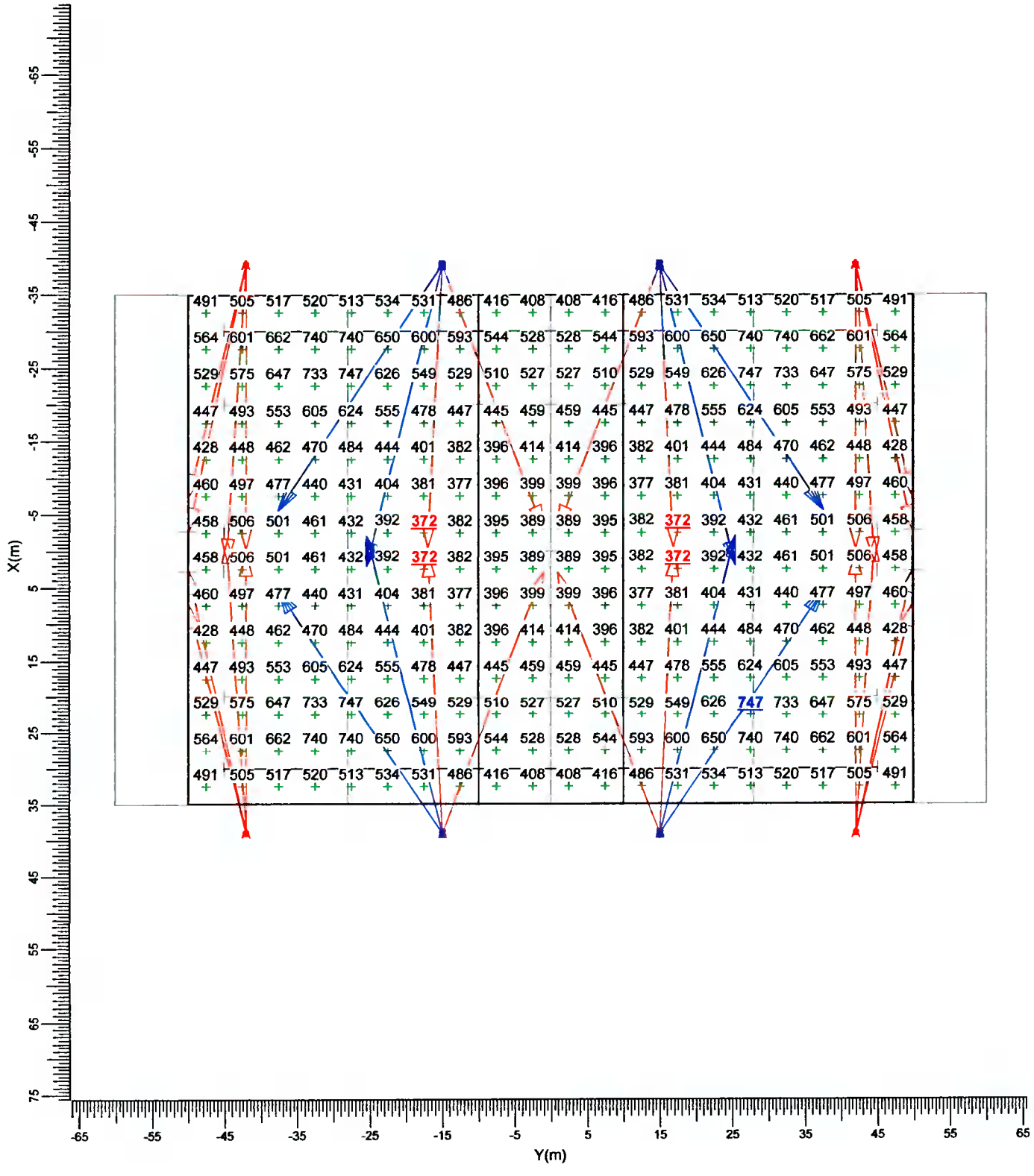
Switching Mode	ULR
1	0.00
2	0.00

3. Calculation Results

3.1 Rugby Pitch 5x5: Graphical Table

Pitch

Grid : Rugby Pitch 5x5 at Z = -0.00 m
Calculation : Surface Illuminance (lux)



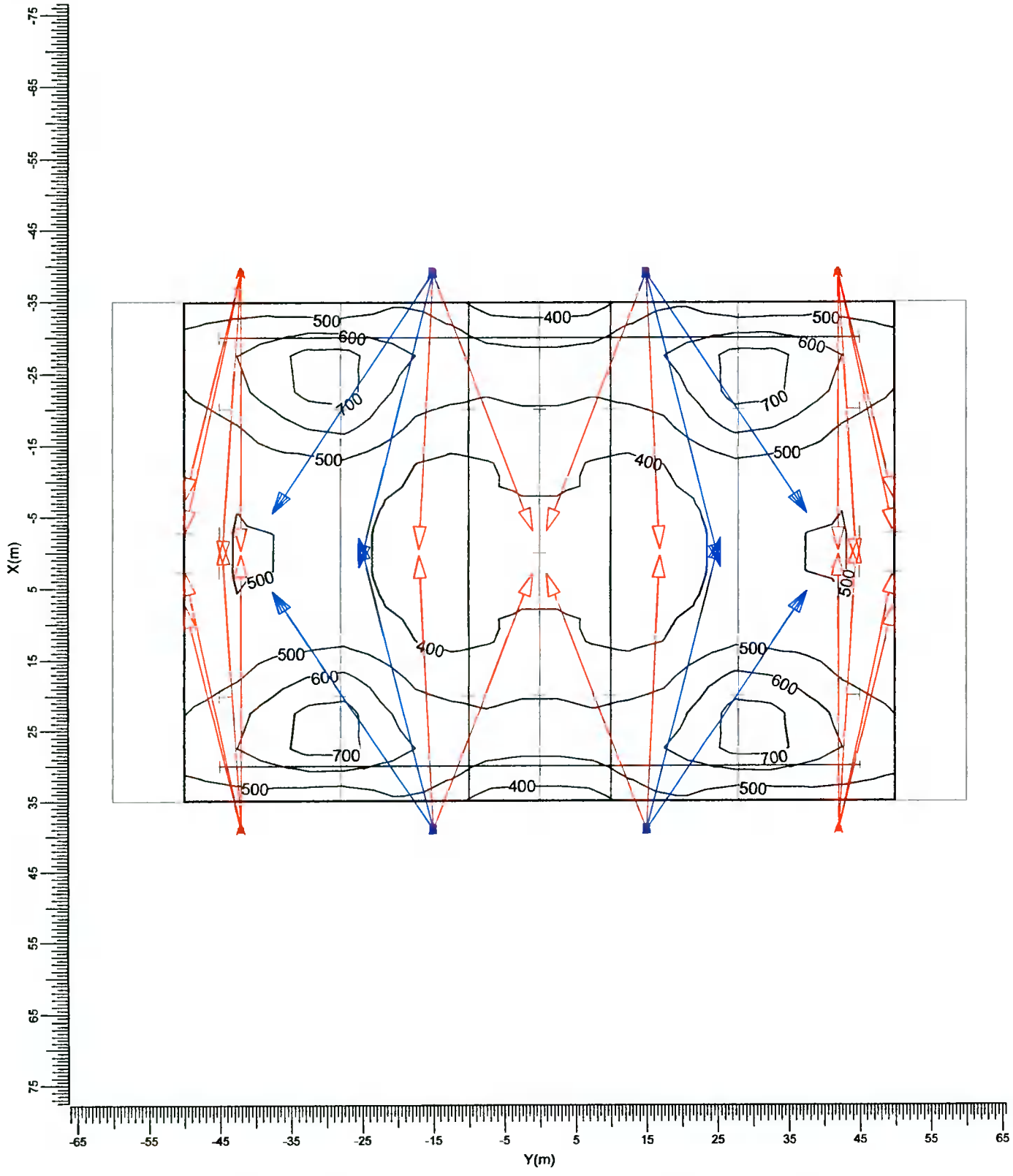
A BVP528 A55-NB B BVP528 A55-MB

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
501	0.74	0.50	0.90	1:750

3.2 Rugby Pitch 5x5: Iso Contour

Pitch

Grid : Rugby Pitch 5x5 at Z = -0.00 m
Calculation : Surface Illuminance (lux)



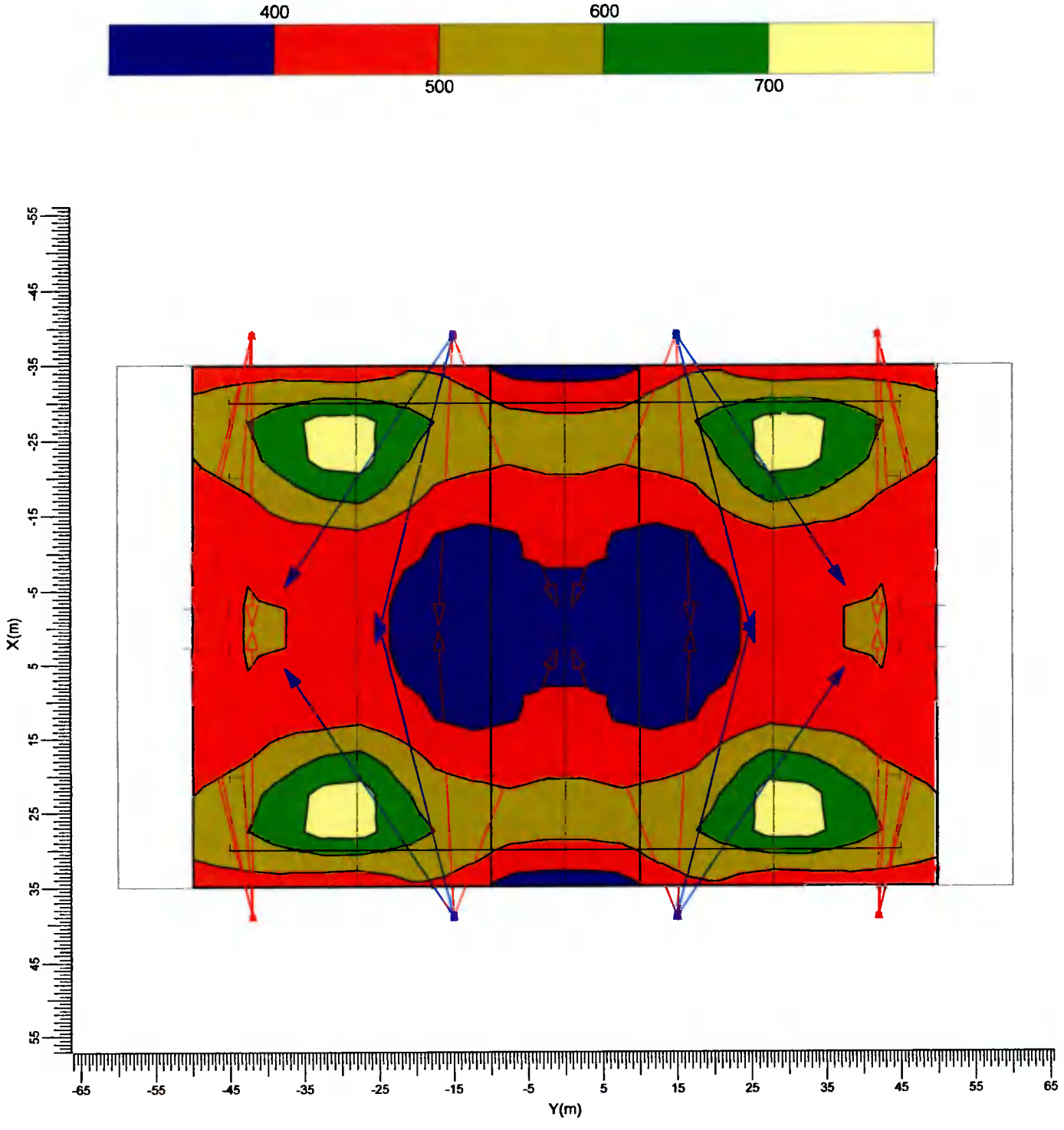
A BVP528 A55-NB B BVP528 A55-MB

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
501	0.74	0.50	0.90	1:750

3.3 Rugby Pitch 5x5: Filled Iso Contour

Pitch

Grid : Rugby Pitch 5x5 at Z = -0.00 m
Calculation : Surface Illuminance (lux)



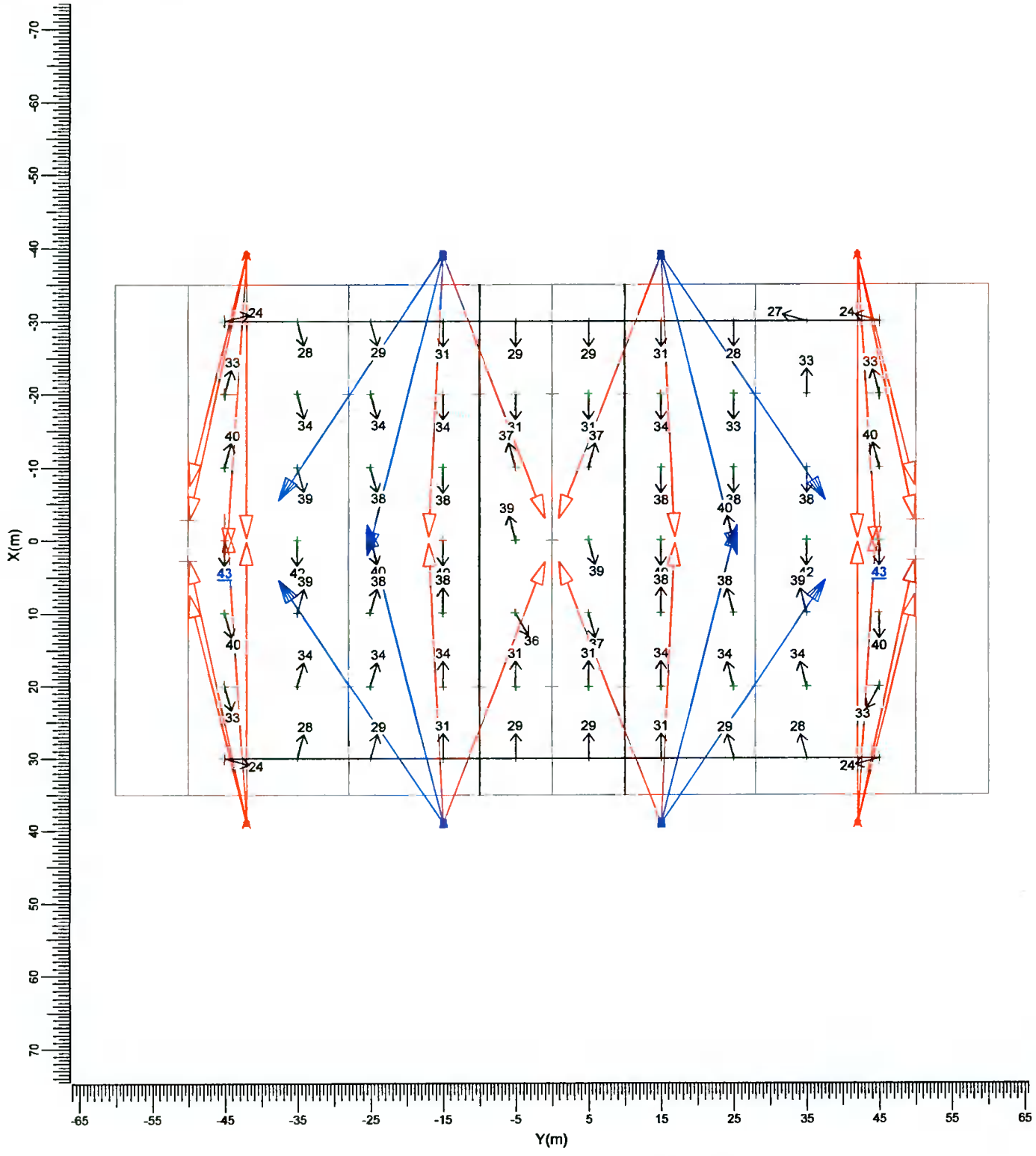
A → BVP528 A55-NB B → BVP528 A55-MB

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
501	0.74	0.50	0.90	1:750

3.4 Rugby Pitch 10x10 Glare: Graphical Table

Pitch

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



A BVP528 A55-NB B BVP528 A55-MB

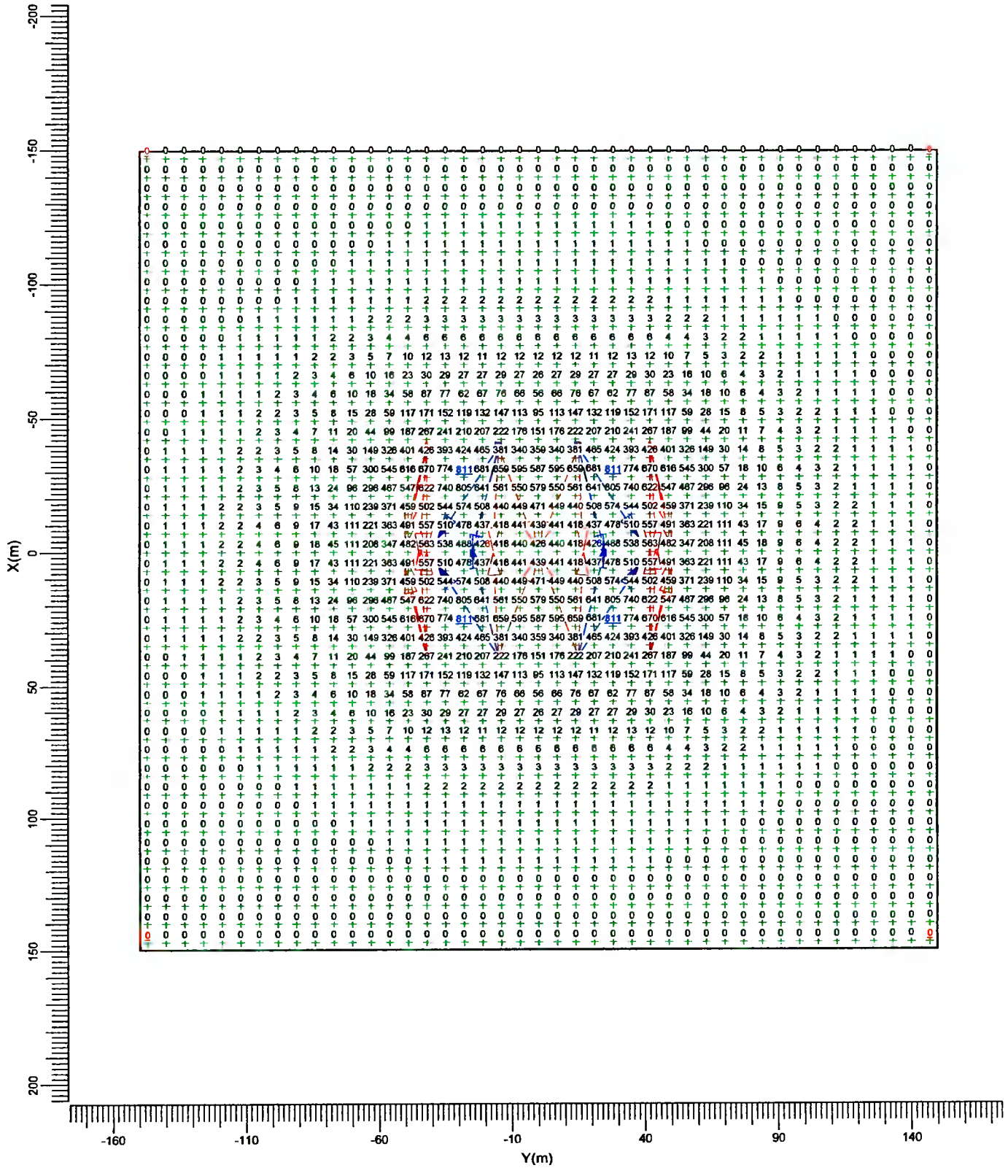
Project maintenance factor
0.90

Scale
1:750

3.5 Spill Light: Graphical Table

Spill Light

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



A → BVP528 A55-NB B → BVP528 A55-MB

Maximum
811.2

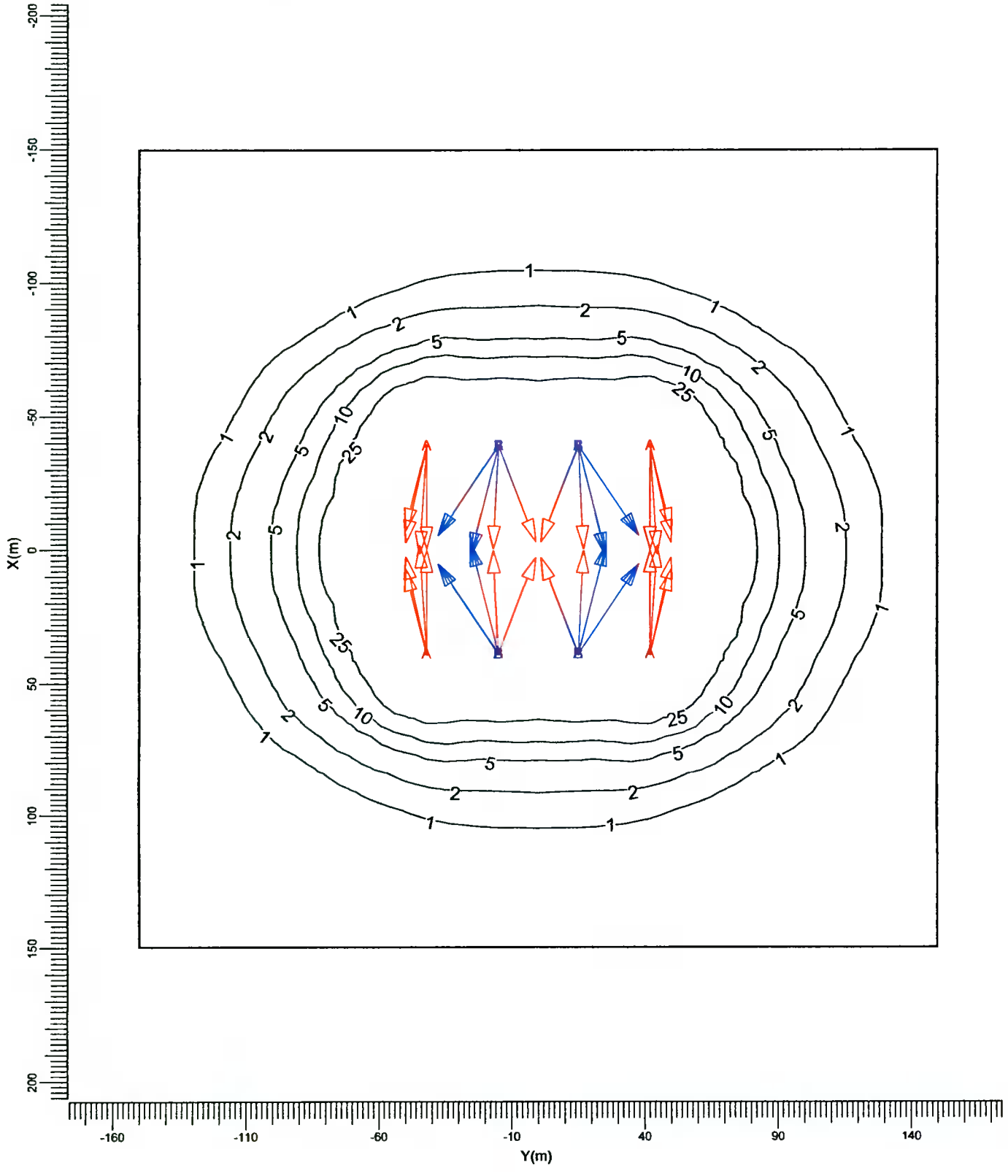
Project maintenance factor
1.00

Scale
1:2000

3.6 Spill Light: Iso Contour

Spill Light

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



A BVP528 A55-NB B BVP528 A55-MB

Maximum
811.2

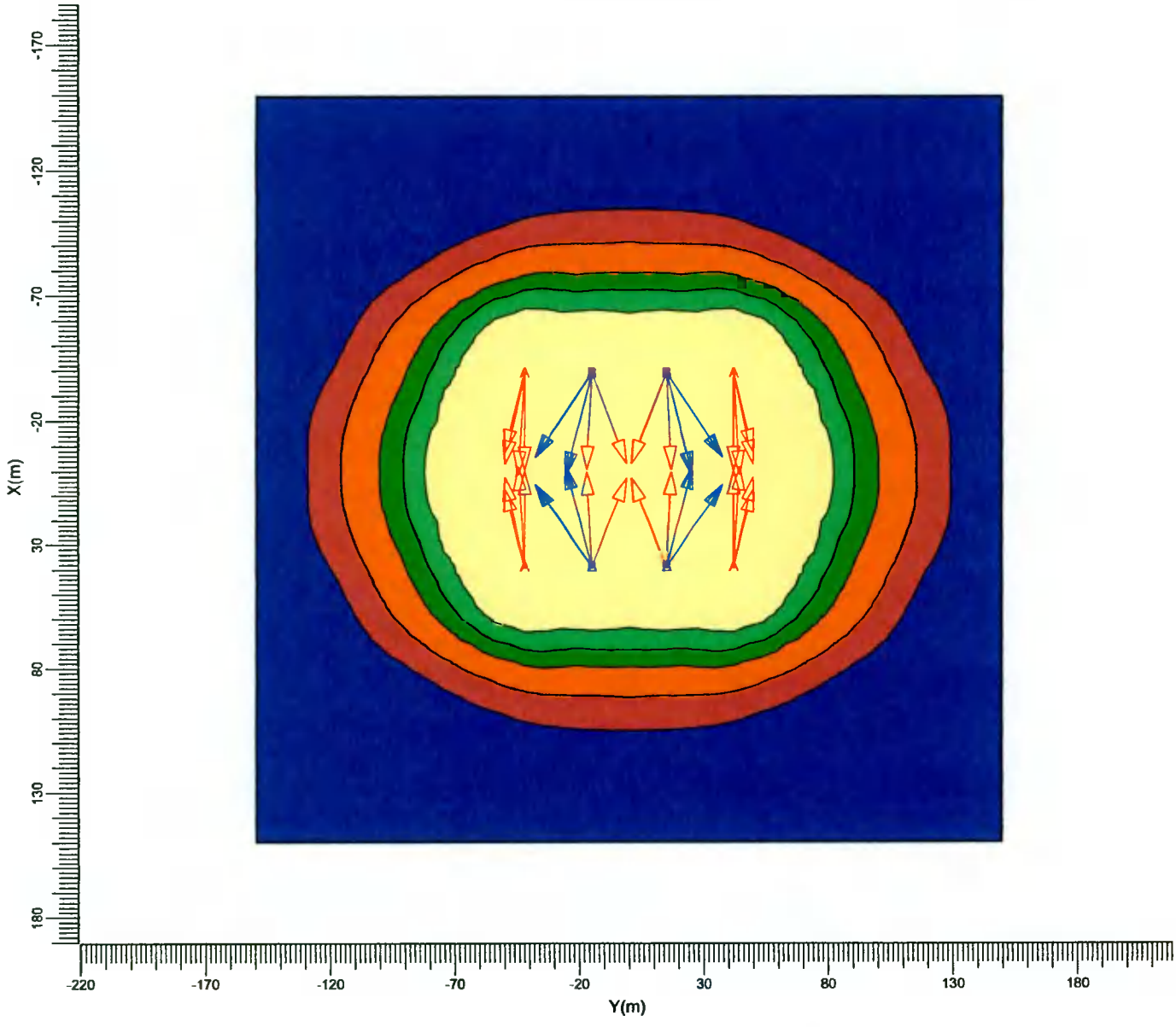
Project maintenance factor
1.00

Scale
1:2000

3.7 Spill Light: Filled Iso Contour

Spill Light

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



A → BVP528 A55-NB B → BVP528 A55-MB

Maximum
811.2

Project maintenance factor
1.00

Scale
1:2500

4. Luminaire Details

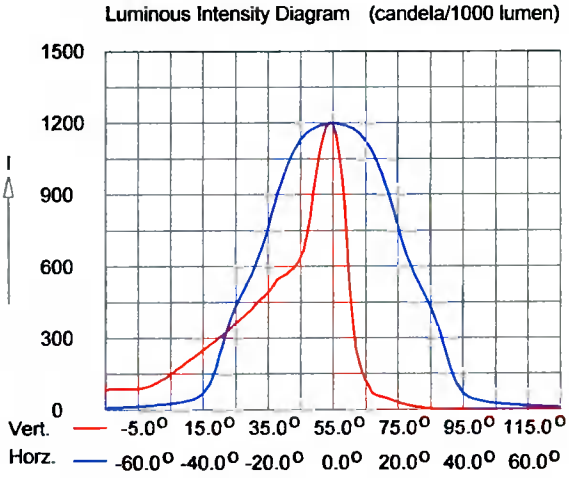
4.1 Project Luminaires

OptiVision LED
BVP528 1xLED2220/757 OUT T15 50K A55-NB

Light output ratios
- DLOR : 0.84
- ULOR : 0.00
- TLOR : 0.84

Ballast : N/A
Lamp flux : 222600 lm
Luminaire wattage : 1500.0 W
Measurement code : LVM2043600

Note: Luminaire data not from database.

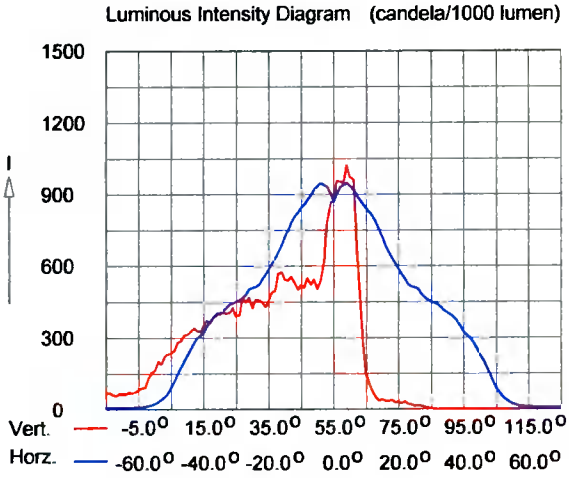


OptiVision LED
BVP528 1xLED2220/757 OUT T15 50K A55-MB

Light output ratios
- DLOR : 0.83
- ULOR : 0.00
- TLOR : 0.83

Lamp flux : 222600 lm
Luminaire wattage : 1500.0 W
Measurement code : PRELIMA55M

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	24	BVP528 A55-NB	1 * LED2220/757 OUT T15 50K	1 * 222600
B	8	BVP528 A55-MB	1 * LED2220/757 OUT T15 50K	1 * 222600

Arrangements:

Code	Arrangement
1	Middle
2	Corners

Switching Modes:

Code	Switching Mode
1	Pitch
2	Spill Light

5.2 Luminaire Positioning and Orientation

Including Aiming Points:

Qty and Code	Position			Aiming Points			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)			1	2
1 * B	-39.00	-15.00	18.00	-5.47	-37.59	0.00	0.00	1	+	+
1 * A	-39.00	-15.00	18.00	-3.03	-1.00	0.00	0.00	1	+	+
1 * B	-39.00	-15.00	18.00	2.11	-25.41	0.00	0.00	1	+	+
1 * A	-39.00	-15.00	18.00	-0.43	-16.97	0.00	0.00	1	+	+
1 * B	-39.00	15.00	18.00	-5.47	37.59	0.00	0.00	1	+	+
1 * A	-39.00	15.00	18.00	-3.03	1.00	0.00	0.00	1	+	+
1 * B	-39.00	15.00	18.00	2.11	25.41	0.00	0.00	1	+	+
1 * A	-39.00	15.00	18.00	-0.43	16.97	0.00	0.00	1	+	+
1 * B	39.00	-15.00	18.00	5.47	-37.59	0.00	0.00	1	+	+
1 * A	39.00	-15.00	18.00	3.03	-1.00	0.00	0.00	1	+	+
1 * B	39.00	-15.00	18.00	-2.11	-25.41	0.00	0.00	1	+	+
1 * A	39.00	-15.00	18.00	0.43	-16.97	0.00	0.00	1	+	+
1 * B	39.00	15.00	18.00	5.47	37.59	0.00	0.00	1	+	+
1 * A	39.00	15.00	18.00	3.03	1.00	0.00	0.00	1	+	+
1 * B	39.00	15.00	18.00	-2.11	25.41	0.00	0.00	1	+	+
1 * A	39.00	15.00	18.00	0.43	16.97	0.00	0.00	1	+	+
1 * A	-39.00	-42.00	18.00	-2.87	-49.79	0.00	0.00	2	+	+
1 * A	-39.00	-42.00	18.00	-7.49	-49.84	0.00	0.00	2	+	+
1 * A	-39.00	-42.00	18.00	1.52	-44.60	0.00	0.00	2	+	+
1 * A	-39.00	-42.00	18.00	-0.28	-42.01	0.00	0.00	2	+	+
1 * A	-39.00	42.00	18.00	-2.87	49.79	0.00	0.00	2	+	+
1 * A	-39.00	42.00	18.00	-7.49	49.84	0.00	0.00	2	+	+
1 * A	-39.00	42.00	18.00	1.52	44.60	0.00	0.00	2	+	+
1 * A	-39.00	42.00	18.00	-0.28	42.01	0.00	0.00	2	+	+
1 * A	39.00	-42.00	18.00	2.87	-49.79	0.00	0.00	2	+	+

Qty and Code	Position			Aiming Points			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)			1	2
1 * A	39.00	-42.00	18.00	7.49	-49.84	0.00	0.00	2	+	+
1 * A	39.00	-42.00	18.00	-1.52	-44.60	0.00	0.00	2	+	+
1 * A	39.00	-42.00	18.00	0.28	-42.01	0.00	0.00	2	+	+
1 * A	39.00	42.00	18.00	2.87	49.79	0.00	0.00	2	+	+
1 * A	39.00	42.00	18.00	7.49	49.84	0.00	0.00	2	+	+
1 * A	39.00	42.00	18.00	-1.52	44.60	0.00	0.00	2	+	+
1 * A	39.00	42.00	18.00	0.28	42.01	0.00	0.00	2	+	+

Including Aiming Angles:

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * B	-39.00	-15.00	18.00	-34.0	66.0	0.0	0.00	1	+	+
1 * A	-39.00	-15.00	18.00	21.3	65.0	0.0	0.00	1	+	+
1 * B	-39.00	-15.00	18.00	-14.2	67.0	0.0	0.00	1	+	+
1 * A	-39.00	-15.00	18.00	-2.9	65.0	0.0	0.00	1	+	+
1 * B	-39.00	15.00	18.00	34.0	66.0	-0.0	0.00	1	+	+
1 * A	-39.00	15.00	18.00	-21.3	65.0	-0.0	0.00	1	+	+
1 * B	-39.00	15.00	18.00	14.2	67.0	-0.0	0.00	1	+	+
1 * A	-39.00	15.00	18.00	2.9	65.0	-0.0	0.00	1	+	+
1 * B	39.00	-15.00	18.00	-146.0	66.0	-0.0	0.00	1	+	+
1 * A	39.00	-15.00	18.00	158.7	65.0	-0.0	0.00	1	+	+
1 * B	39.00	-15.00	18.00	-165.8	67.0	-0.0	0.00	1	+	+
1 * A	39.00	-15.00	18.00	-177.1	65.0	-0.0	0.00	1	+	+
1 * B	39.00	15.00	18.00	146.0	66.0	0.0	0.00	1	+	+
1 * A	39.00	15.00	18.00	-158.7	65.0	0.0	0.00	1	+	+
1 * B	39.00	15.00	18.00	165.8	67.0	0.0	0.00	1	+	+
1 * A	39.00	15.00	18.00	177.1	65.0	0.0	0.00	1	+	+
1 * A	-39.00	-42.00	18.00	-12.2	64.0	0.0	0.00	2	+	+
1 * A	-39.00	-42.00	18.00	-14.0	61.0	0.0	0.00	2	+	+
1 * A	-39.00	-42.00	18.00	-3.7	66.1	0.0	0.00	2	+	+
1 * A	-39.00	-42.00	18.00	-0.0	65.1	0.0	0.00	2	+	+
1 * A	-39.00	42.00	18.00	12.2	64.0	0.0	0.00	2	+	+
1 * A	-39.00	42.00	18.00	14.0	61.0	-0.0	0.00	2	+	+
1 * A	-39.00	42.00	18.00	3.7	66.1	0.0	0.00	2	+	+
1 * A	-39.00	42.00	18.00	0.0	65.1	0.0	0.00	2	+	+
1 * A	39.00	-42.00	18.00	-167.8	64.0	0.0	0.00	2	+	+
1 * A	39.00	-42.00	18.00	-166.0	61.0	-0.0	0.00	2	+	+
1 * A	39.00	-42.00	18.00	-176.3	66.1	0.0	0.00	2	+	+
1 * A	39.00	-42.00	18.00	-180.0	65.1	0.0	0.00	2	+	+
1 * A	39.00	42.00	18.00	167.8	64.0	0.0	0.00	2	+	+
1 * A	39.00	42.00	18.00	166.0	61.0	0.0	0.00	2	+	+
1 * A	39.00	42.00	18.00	176.3	66.1	0.0	0.00	2	+	+
1 * A	39.00	42.00	18.00	180.0	65.1	0.0	0.00	2	+	+

LiAS Design Notes

This preliminary design is produced by the Lighting Application Specialist (LiAS) team of Signify UK based on information supplied by the Customer for the purpose of identifying suitable products and costing the proposal. This design cannot be used for Construction, as this design does not purport to eliminate health and safety risks as a CDM Regulation risk assessment has not been undertaken.

Depending on the level of information received, a number of assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting industry guidelines and incorporating industry best practice methods. These assumptions are documented below and will require confirmation by the Principle Designer (which is not Signify UK) during the detailed design phase.

Project Specific Assumptions

-

Generic Assumptions (unless specifically informed differently)

- Preliminary Design proposals produced by the Signify LiAS Team are not to be used for installation purposes. It is the responsibility of the Principle Designer and/or Principle Contractor to ensure all Installation and Maintenance can be done in a safe manner, carried out by competent persons, based on their agreed Risk Assessments and Method Statements.
- The Luminaire Maintenance Factors have been based on 6-year cleaning intervals within an E3/E4 Environmental Zone and it is assumed that lamp/luminaire failures will be replaced on a 'spot replacement'.
- Energy consumptions have been based on the luminaire/s having Constant Light Output (CLO) enabled and the quoted wattage/s are the average over 100,000 hours (without dimming).
- The design calculations produced by Signify do not account for the effect obstructions, such as trees, will cause.
- Signify has not been provided with utility plans showing Buried, Above Ground or Overhead utilities. Therefore, all column/luminaire locations are indicative and are subject to review/verification by the Principle Designer.
- Unless stated otherwise, Signify has not visited site. Therefore, all column/luminaire locations are indicative and are subject to an onsite verification arranged/performed by the Principle Designer.
- Signify has not produced any Private Cable Network electrical calculations or reviewed the DNO network to confirm power supplies to the proposed lighting.
- Signify has not performed any asset condition testing and therefore assumes that any existing lighting columns/wall mounted brackets are structurally capable of supporting the weight & windage of the proposed luminaire/s. This must be verified by the Principle Designer before installation works commence.
- Unless stated otherwise, Signify is not supplying the new lighting columns (including brackets etc) and therefore it is the responsibility of the Principle Designers to confirm that all proposed equipment is suitable for the intended locations (e.g. raise & lower, ground condition, foundation type, saline environment, etc).
- Unless stated otherwise, luminaires will be supplied in their standard colour.

Luminaire Schedule

Legend

BVP528 1xLED2220/757 OUT T15 50K A55-NB

BVP528 1xLED2220/757 OUT T15 50K A55-MB

PROPOSAL
(NOT FOR CONSTRUCTION)

Rev	DSR no.	Comment	Date	LIAS	KAM
0	D-439507	INITIAL PROPOSAL	20.01.22	CBJ	DM

Signify

PHILIPS interact PHILIPS hue

MODULAR LIGHTING INSTRUMENTS COLORKINETICS

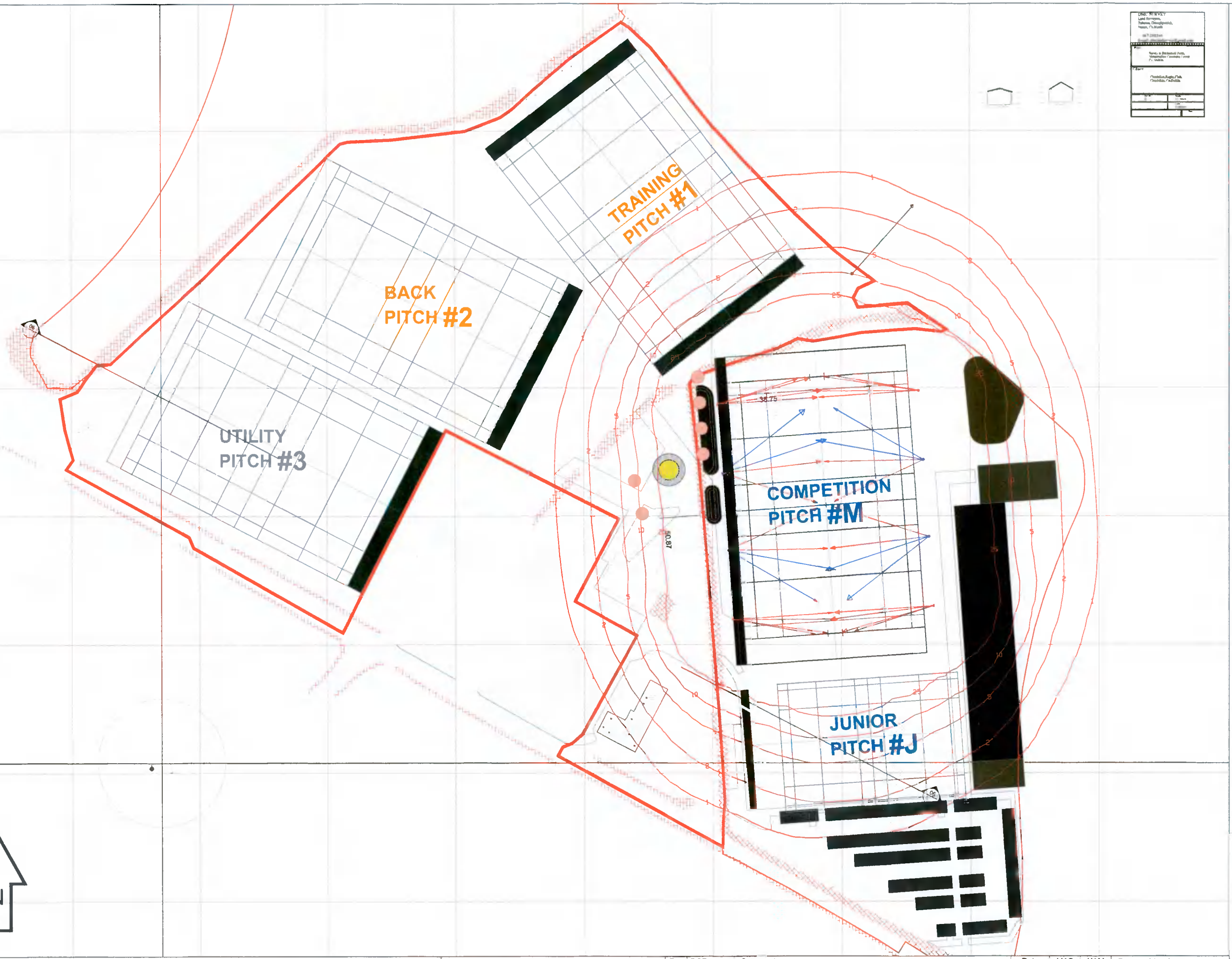
Project Number: 0400695151

Scale & Sheet Size: NTS @ A3

Sheet No: DWG 00

Project Name: Clondalkin RFC

Drawing Name: LiAS DESIGN NOTES & LUMINAIRE SCHEDULE



Key:

Legend
BVP528 1xLED2220/757 OUT T15 50K A55-NB
BVP528 1xLED2220/757 OUT T15 50K A55-MB

Notes:

1) Unless agreed otherwise, the lighting proposal produced by the Lighting Application Specialist (LiAS) team of Philips Lighting UK&I is not intended for construction purposes, as it does not take into account the elimination of health and safety risks at this stage. For further details please refer to sheet number **DWG 00**

2) Do not scale for this drawing

PROPOSAL
(NOT FOR CONSTRUCTION)

Rev	DSR no.	Comment	Date	LIAS	KAM
0	D-439507	INITIAL PROPOSAL	20.01.22	CBJ	DM

Project Number: 0400695151
Scale & Sheet Size: 1:500 @ A0
Sheet No: DWG 01

signify
PHILIPS interact PHILIPS hue
MODULAR LIGHTING INSTRUMENTS COLORKINETICS

Project Name: Clondalkin RFC
Drawing Name: PROPOSED LIGHTING LAYOUT