

Wythenshawe Park

Multi-Sports Hub

Project code: G-208872
Date: 21-07-2025

Designer: ME

Description: Existing Lighting Scheme

Club Athletics lighting requirements:
Maintained average illuminance >200 lux
Uniformity Ratio (Ev.min/Ev.ave) >0.60

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.

Surfacing Standards LTD

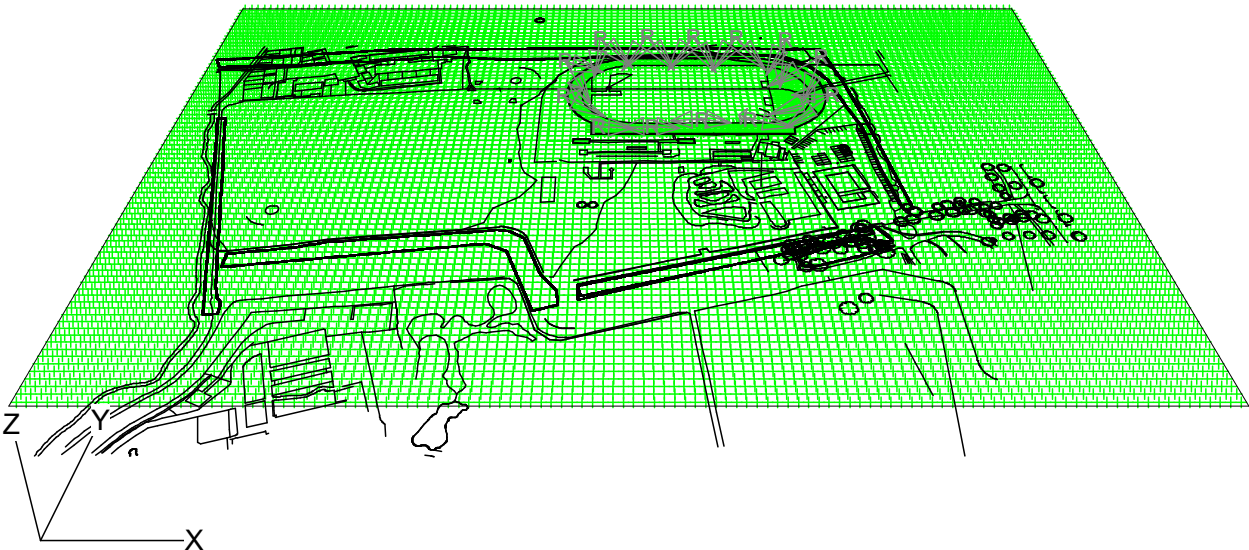
Office 2
Empingham House
Ayston Road
Uppingham
LE15 9NY

Table of Contents

1.	Project Description	3
1.1	3-D Project Overview	3
1.2	Top Project Overview	4
2.	Summary	5
2.1	Project Luminaires	5
2.2	Calculation Results	5
3.	Calculation Results	7
3.1	Atheltics Track Only: Graphical Table	7
3.2	Atheltics Track Only: Filled Iso Contour	8
3.3	Atheltics: Graphical Table	9
3.4	Atheltics: Filled Iso Contour	10
3.5	Ground Spillage: Filled Iso Contour	11
3.6	Horizontal Spill @ 3.0m: Filled Iso Contour	12
4.	Luminaire Details	13
4.1	Project Luminaires	13
5.	Installation Data	14
5.1	Legends	14
5.2	Luminaire Positioning and Orientation	14

1. Project Description

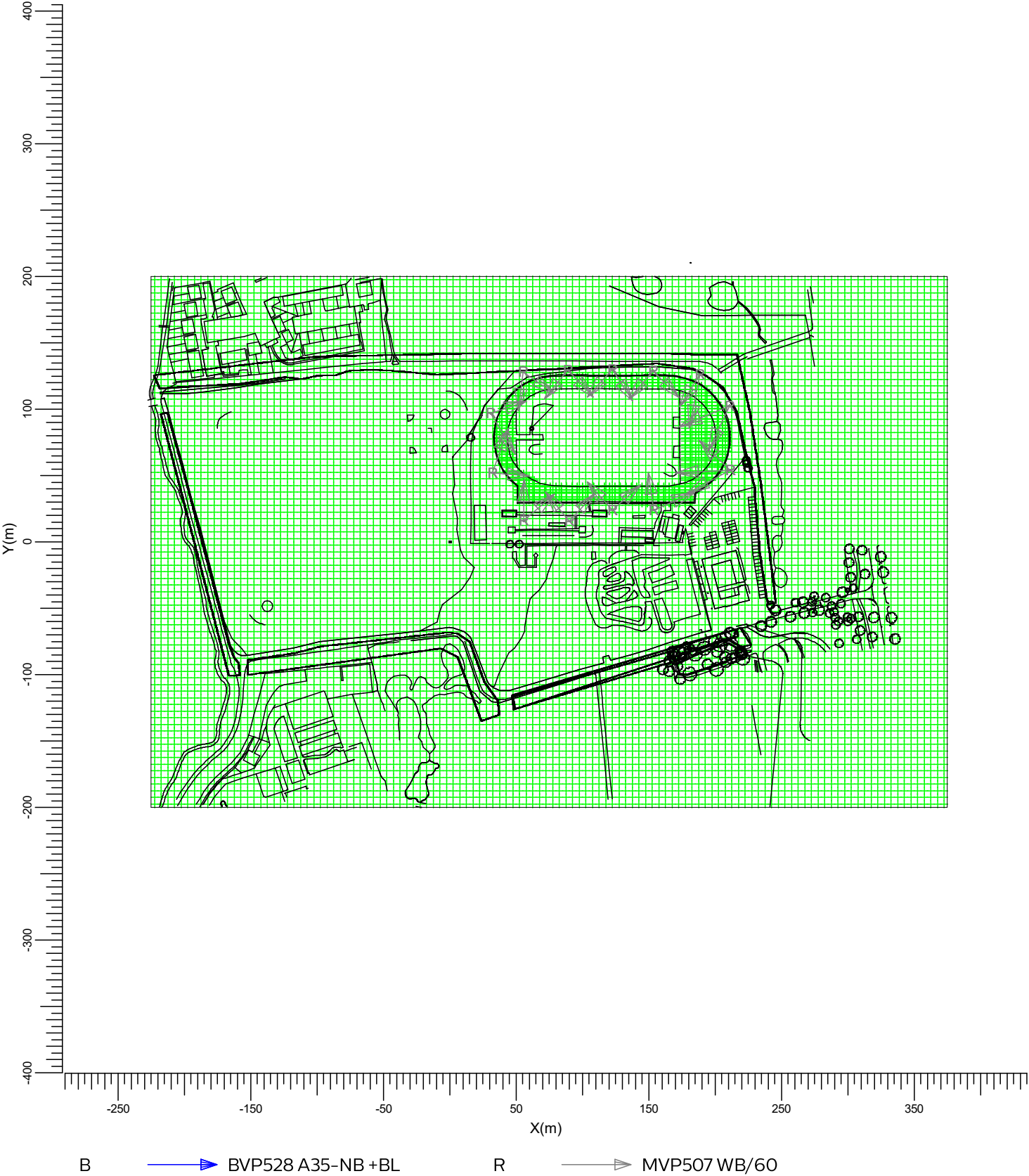
1.1 3-D Project Overview



B→ BVP528 A35-NB +BL

R→ MVP507 WB/60

1.2 Top Project Overview



Scale
1:4000

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
R	27	MVP507 WB/60	1 * MHN-FC2000W/400V/740	2119.0	1 * 210000

The total installed power: 57.21 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code	Power (kWatt)
	R	
North Football 200lux	0	0.00
North Football 120lux	0	0.00
South Football 200lux	0	0.00
South Football 120lux	0	0.00
MUGA 120lux	0	0.00
Athletics	27	57.21
Spillage Switching	27	57.21

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	North Football 200lux	0.95
2	North Football 120lux	0.60
3	South Football 200lux	0.95
4	South Football 120lux	0.60
5	MUGA 120lux	0.95
6	Athletics	0.95
7	Spillage Switching	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave Min/AveMin/Max		
Atheltics Track Only	6	Surface Illuminance	lux	248	0.63	0.43
Atheltics	6	Surface Illuminance	lux	246	0.63	0.43
Ground Spillage	7	Surface Illuminance	lux	19.8	0.00	0.00
Horizontal Spill @ 3.0m	7	Horizontal Illuminance	lux			

Obtrusive Light Calculations:

Switching Mode	ULR
1	0.00
2	0.00
3	0.00
4	0.00

Switching Mode	ULR
5	0.00
6	0.00
7	0.00

3. Calculation Results

3.1 Athletics Track Only: Graphical Table

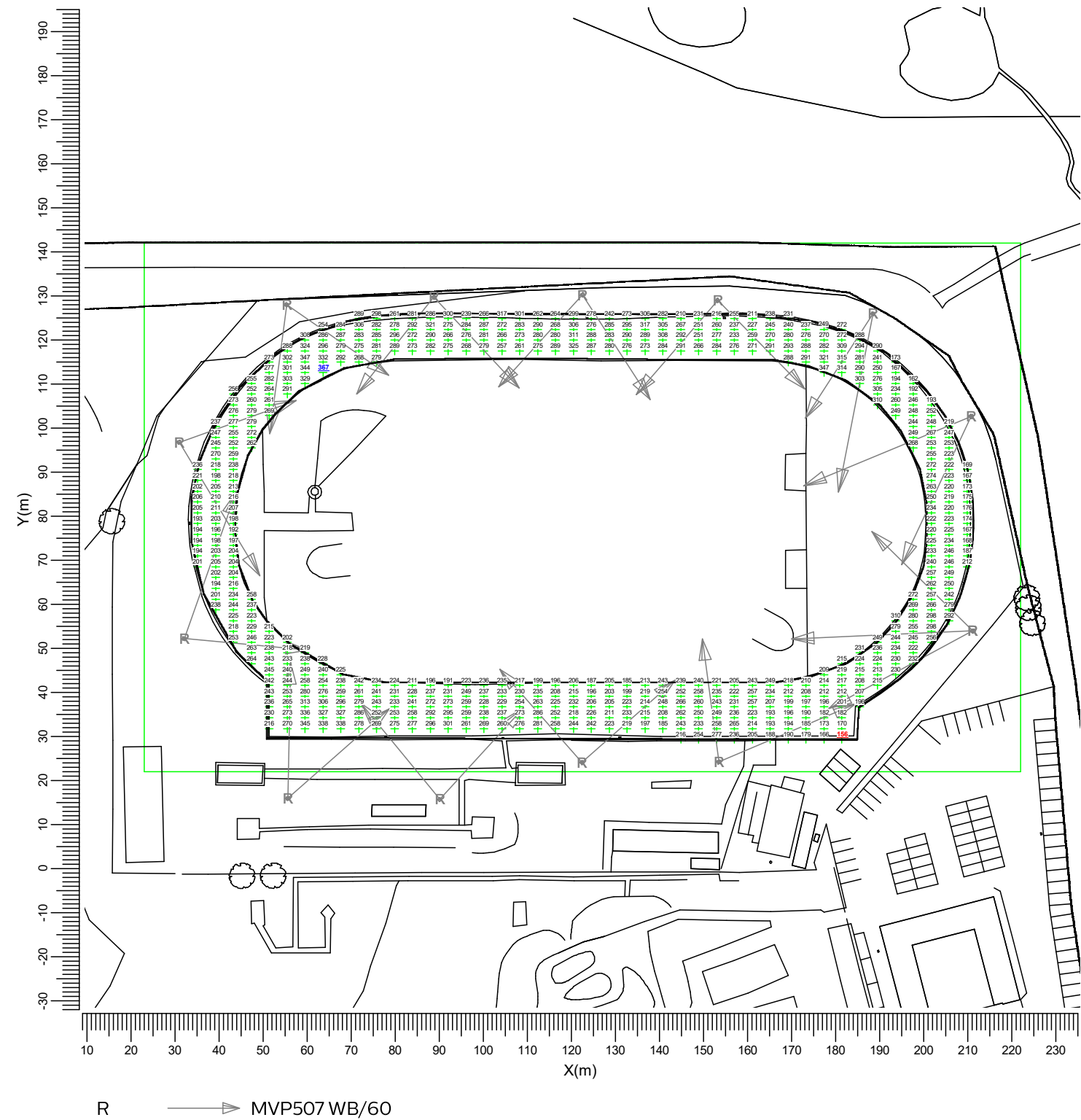
Athletics

Grid

: Athletics Track Only at Z = -0.00 m

Calculation

: Surface Illuminance (lux)



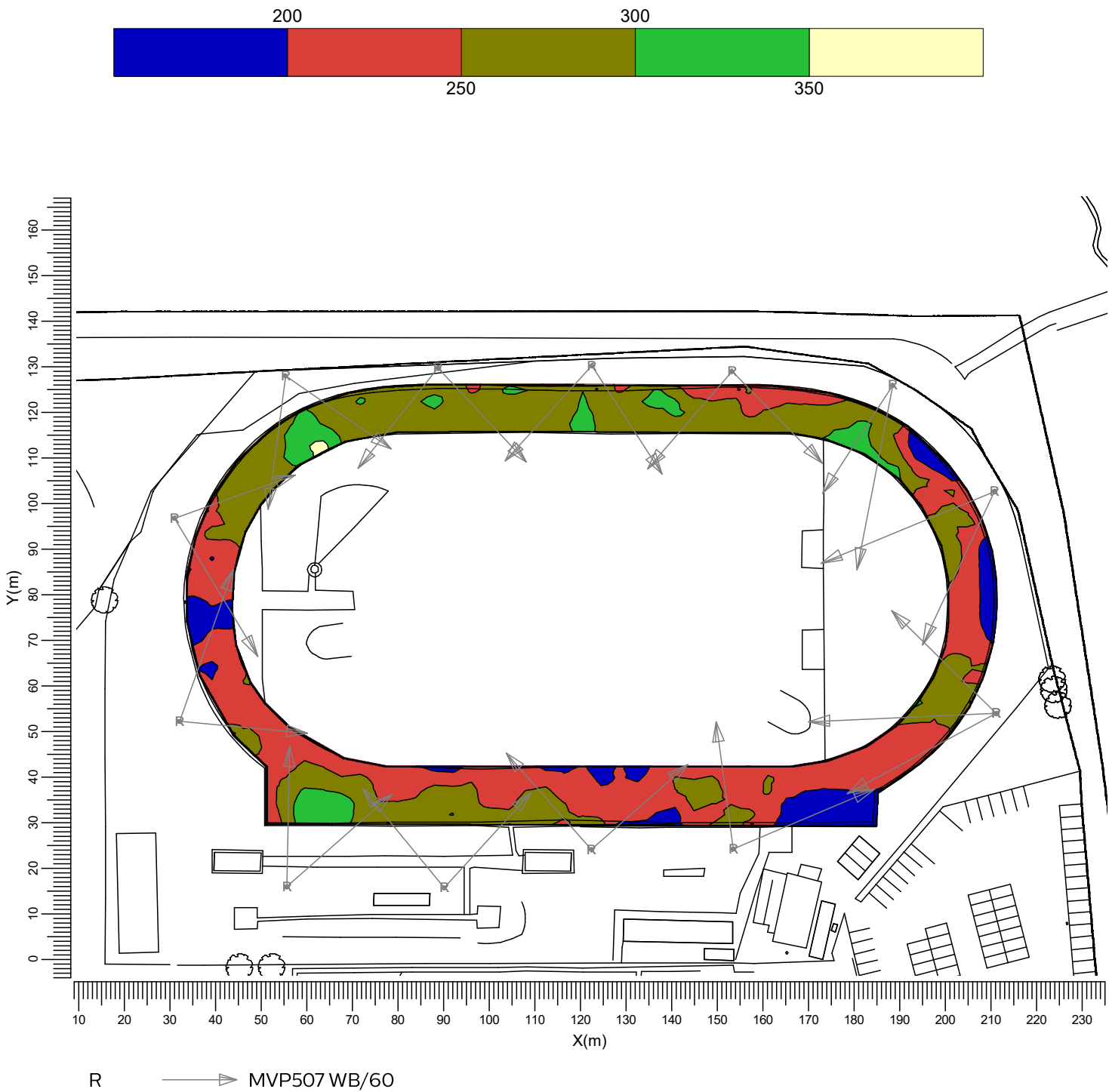
Average	Min/Ave	Min/Max	Project maintenance factor	Scale
248	0.63	0.43	0.95	1:1250

3.2 Athletics Track Only: Filled Iso Contour

Athletics

Grid : Athletics Track Only at Z = -0.00 m

Calculation : Surface Illuminance (lux)

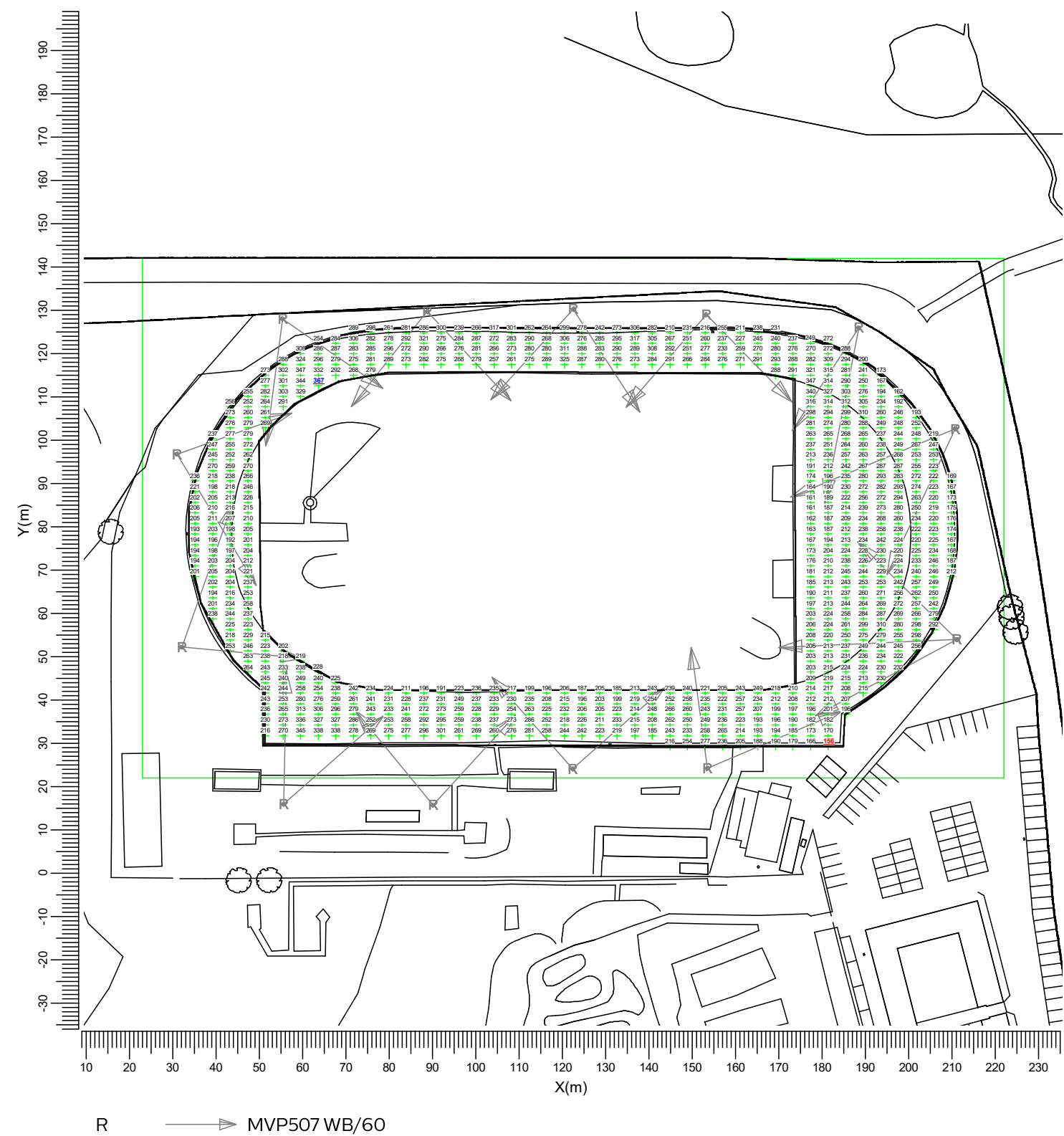


Average	Min/Ave	Min/Max	Project maintenance factor	Scale
248	0.63	0.43	0.95	1:1250

3.3 Athletics: Graphical Table

Athletics

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



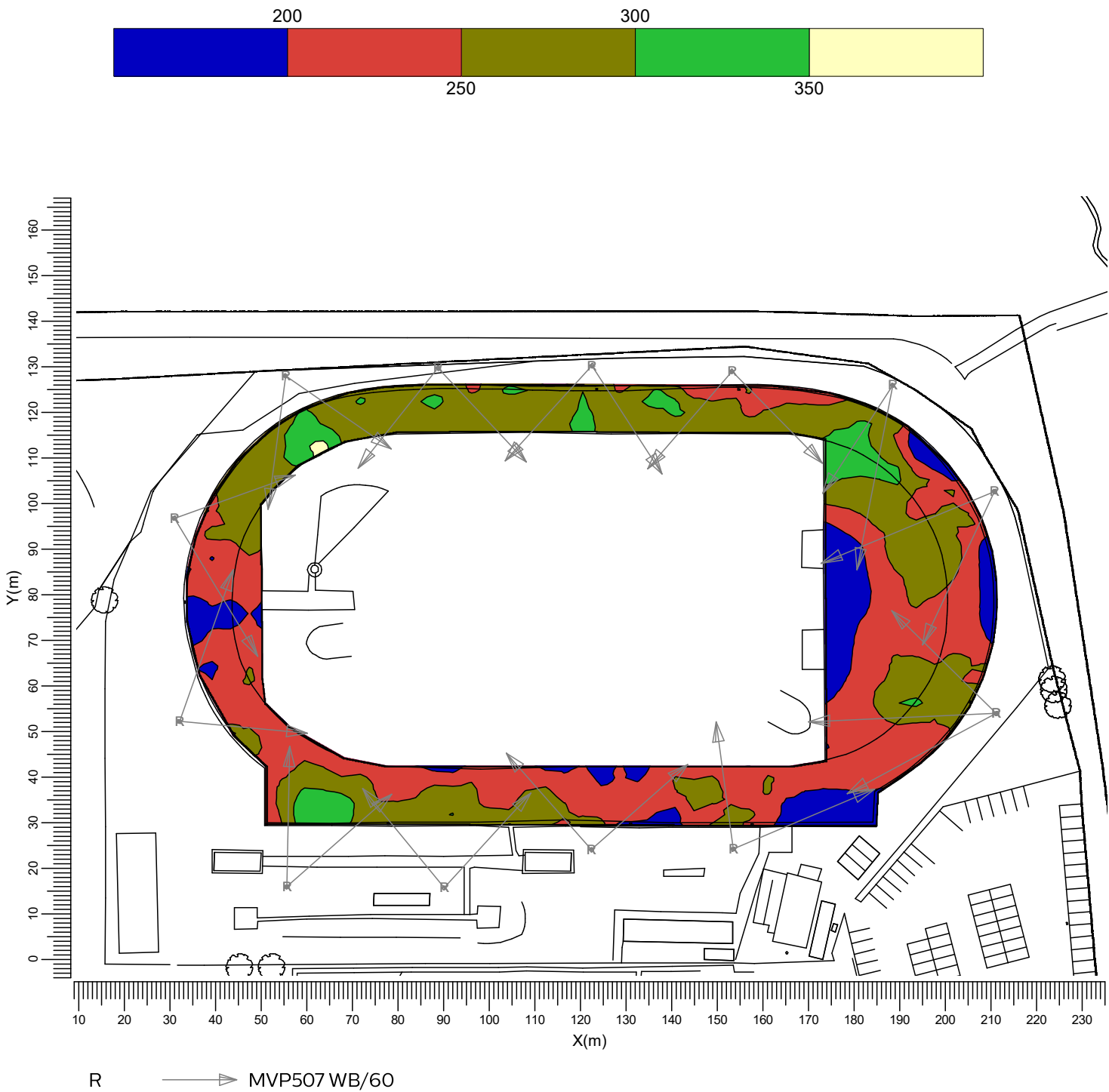
Average	Min/Ave	Min/Max	Project maintenance factor	Scale
246	0.63	0.43	0.95	1:1250

3.4 Athletics: Filled Iso Contour

Athletics

Grid : Athletics at Z = -0.00 m

Calculation : Surface Illuminance (lux)



Average246

Min/Ave0.63

Min/Max0.43

Project maintenance factor0.95

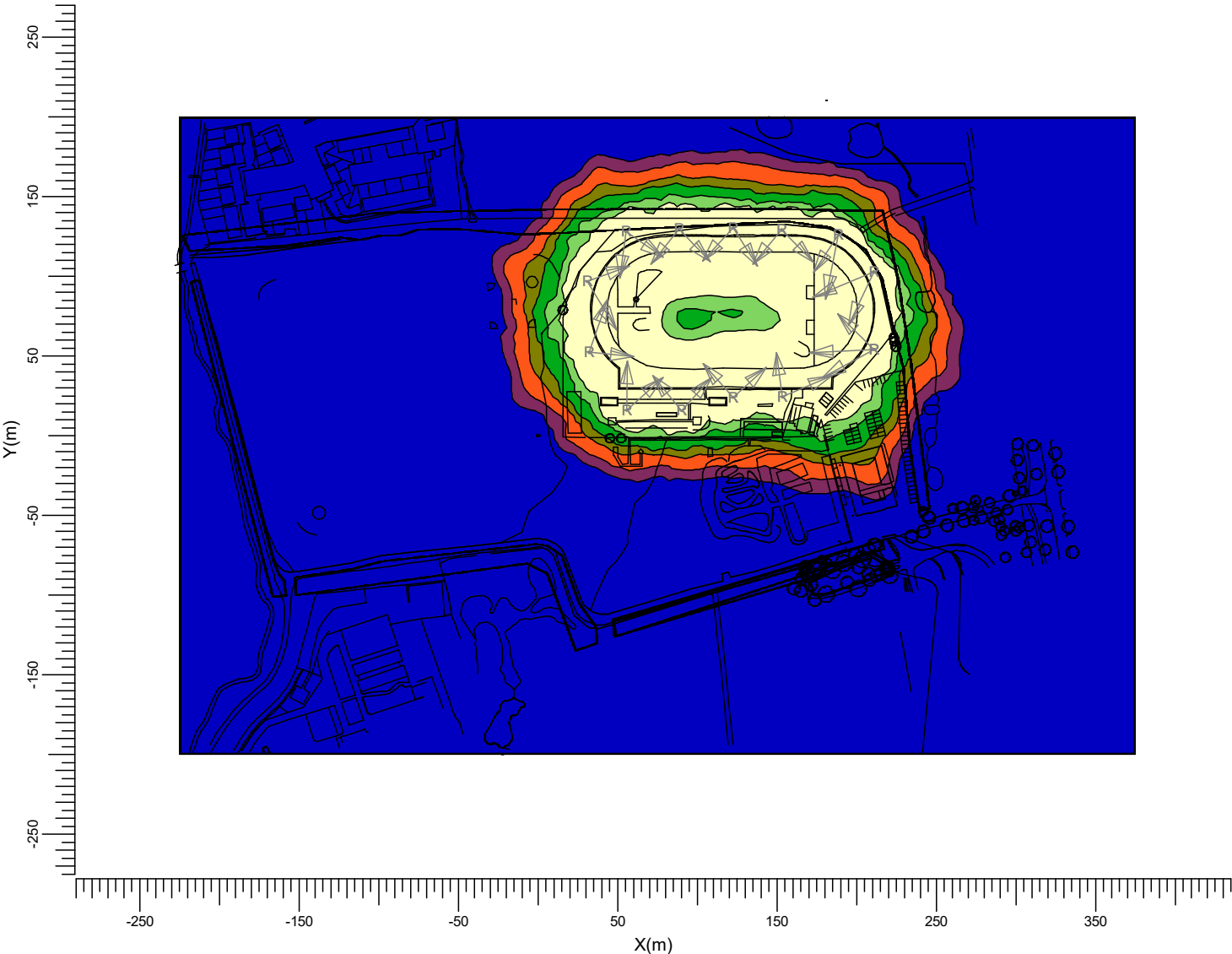
Scale1:1250

3.5 Ground Spillage: Filled Iso Contour

Spillage Switching

Grid : Spillage Grid at Z = -0.00 m

Calculation : Surface Illuminance (lux)



B▶ BVP528 A35-NB +BL

R▶ MVP507 WB/60

Average19.8

Min/Ave0.00

Min/Max0.00

Project maintenance factor1.00

Scale1:4000

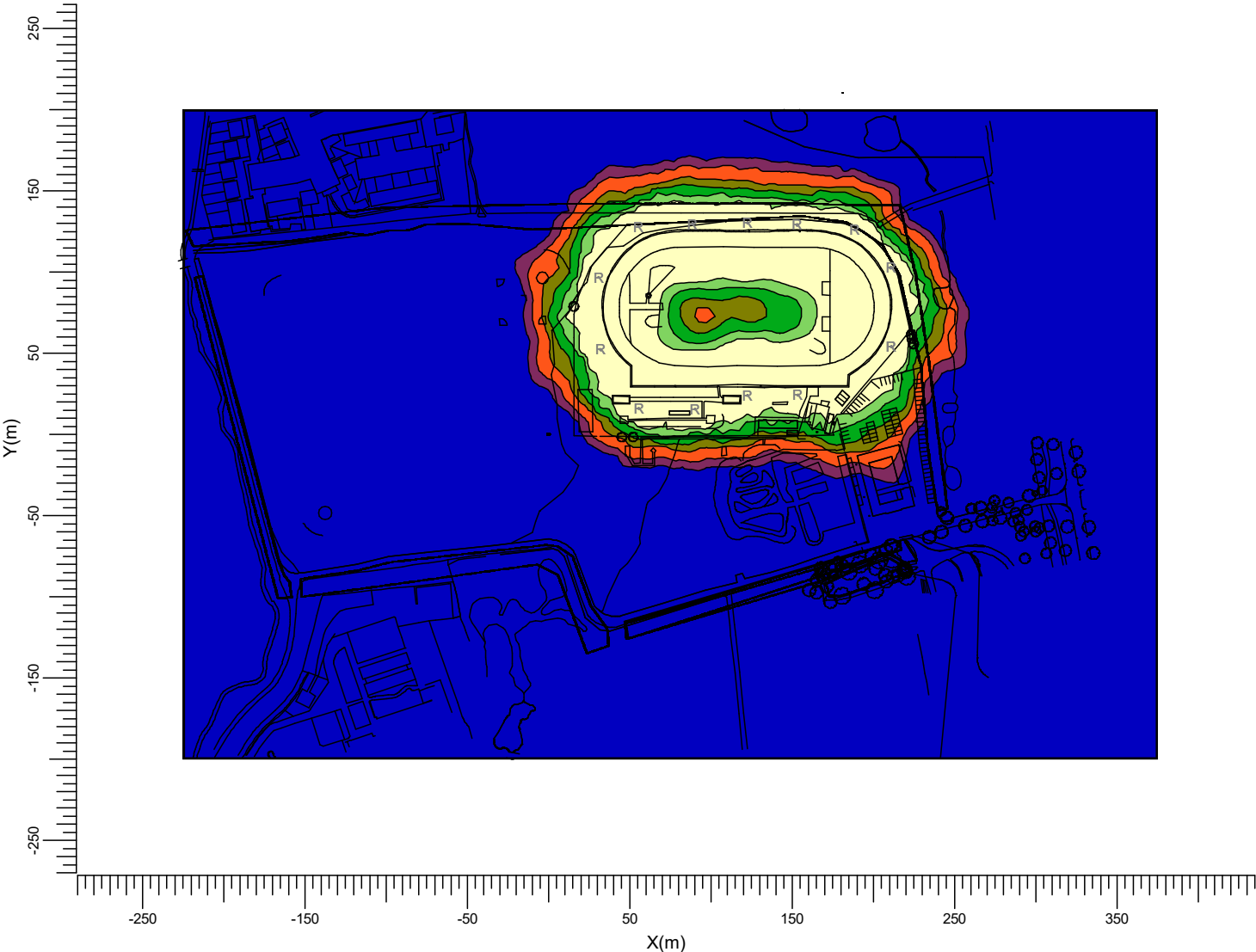
3.6 Horizontal Spill @ 3.0m: Filled Iso Contour

Spillage Switching

Grid : Spillage Grid at Z = -0.00 m

Calculation : Horizontal Illuminance (lux)

Height above grid : 3.00 m



B : BVP528 A35-NB +BL

R : MVP507 WB/60

Project maintenance factor
1.00

Scale
1:4000

4. Luminaire Details

4.1 Project Luminaires

OptiVision MVP507
MVP507 1xMHN-FC2000W/400V/740 WB/60

Light output ratios

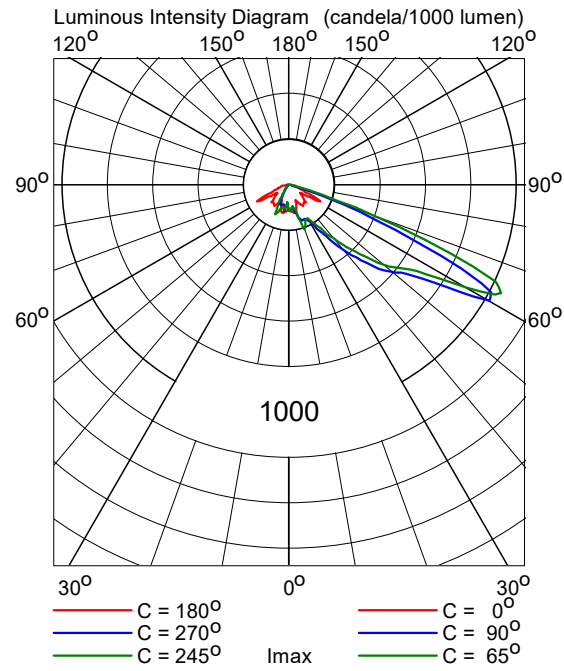
DLOR	: 0.84
ULOR	: 0.00
TLOR	: 0.84

Ballast : Conventional

Lamp flux : 210000 lm

Luminaire wattage : 2119.0 W

Measurement code : LVMA744001



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
R	27	MVP507 WB/60	1 * MHN-FC2000W/400V/740	1 * 210000

Switching Modes:

Code	Switching Mode
1	North Football 200lux
2	North Football 120lux
3	South Football 200lux
4	South Football 120lux
5	MUGA 120lux
6	Athletics
7	Spillage Switching

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	6	7
1 * R	30.95	96.77	15.00	19.7	62.0	0.0	-	-	-	-	-	+	+
1 * R	30.95	96.77	15.00	-58.9	67.0	0.0	-	-	-	-	-	+	+
1 * R	32.07	52.21	15.00	-5.4	62.0	0.0	-	-	-	-	-	+	+
1 * R	32.07	52.21	15.00	70.5	67.0	0.0	-	-	-	-	-	+	+
1 * R	55.33	128.00	15.00	-34.6	62.0	0.0	-	-	-	-	-	+	+
1 * R	55.33	128.00	15.00	-97.4	63.0	0.0	-	-	-	-	-	+	+
1 * R	55.60	15.95	15.00	88.8	64.0	0.0	-	-	-	-	-	+	+
1 * R	55.60	15.95	15.00	41.4	64.0	0.0	-	-	-	-	-	+	+
1 * R	88.79	129.76	15.00	-46.9	62.0	0.0	-	-	-	-	-	+	+
1 * R	88.79	129.76	15.00	-128.6	62.0	0.0	-	-	-	-	-	+	+
1 * R	90.08	15.69	15.00	129.3	62.0	0.0	-	-	-	-	-	+	+
1 * R	90.08	15.69	15.00	47.4	62.0	0.0	-	-	-	-	-	+	+
1 * R	122.40	24.09	15.00	131.4	62.0	0.0	-	-	-	-	-	+	+
1 * R	122.40	24.09	15.00	41.5	62.0	0.0	-	-	-	-	-	+	+
1 * R	122.55	130.26	15.00	-57.2	62.0	0.0	-	-	-	-	-	+	+
1 * R	122.55	130.26	15.00	-132.3	62.0	0.0	-	-	-	-	-	+	+
1 * R	153.19	129.01	15.00	-45.4	62.0	0.0	-	-	-	-	-	+	+
1 * R	153.19	129.01	15.00	-130.7	62.0	0.0	-	-	-	-	-	+	+
1 * R	153.51	24.23	15.00	97.7	62.0	0.0	-	-	-	-	-	+	+
1 * R	153.51	24.23	15.00	23.1	66.0	0.0	-	-	-	-	-	+	+
1 * R	188.47	125.96	15.00	-101.0	70.0	0.0	-	-	-	-	-	+	+
1 * R	188.47	125.96	15.00	-122.9	62.0	0.0	-	-	-	-	-	+	+
1 * R	210.80	102.62	15.00	-157.6	70.0	0.0	-	-	-	-	-	+	+
1 * R	210.80	102.62	15.00	-115.1	68.0	0.0	-	-	-	-	-	+	+
1 * R	211.18	53.96	15.00	-177.5	70.0	0.0	-	-	-	-	-	+	+

Qty and Code	Position			Aiming Angles			Switching Modes						
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	1	2	3	4	5	6	7
1 * R	211.18	53.96	15.00	135.5	65.0	0.0	-	-	-	-	-	+	+
1 * R	211.18	53.96	15.00	-151.7	68.0	0.0	-	-	-	-	-	+	+