

North Manchester RFC

2 x 15 meter columns c/w 1200watt NB Asymmetric LED units.

Partner for Contact:
Order No.:
Company:
Customer No.:

Date: 16.08.2021
Operator: Michael Butterill

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill
 Telephone 0845 643 0722
 Fax
 e-Mail sales@directsportslighting.co.uk

Table of contents

North Manchester RFC

Project Cover	1
Table of contents	2
Luminaire parts list	3

LED

Luminaire Data Sheet	4
----------------------	---

Exterior Scene 1

Planning data	5
Luminaire parts list	6
Luminaires (layout plan)	7
Luminaires (coordinates list)	8
Sport Luminaires (Coordinates List)	9
Calculation Grid (Coordinates List)	10
3D Rendering	11
False Colour Rendering	12

Exterior Surfaces

General Sport Area 1 Calculation Grid (PA)

Summary	13
Greyscale (E, Perpendicular)	14
Value Chart (E, Perpendicular)	15

Direct Sports Lighting

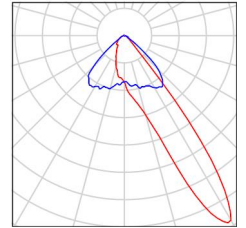
Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill
Telephone 0845 643 0722
Fax
e-Mail sales@directsportslighting.co.uk

North Manchester RFC / Luminaire parts list

4 Pieces LED
Article No.:
Luminous flux (Luminaire): 152470 lm
Luminous flux (Lamps): 152456 lm
Luminaire Wattage: 1194.8 W
Luminaire classification according to CIE: 100
CIE flux code: 75 95 99 100 100
Fitting: 1 x User defined (Correction Factor 1.000).

See our luminaire
catalog for an image of
the luminaire.



Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill

Telephone 0845 643 0722

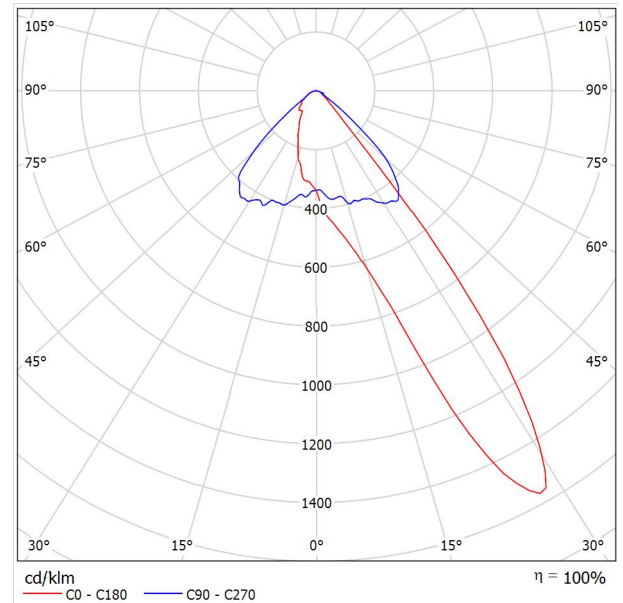
Fax

e-Mail sales@directsportslighting.co.uk

LED / Luminaire Data Sheet

Luminous emittance 1:

See our luminaire catalog for an image of the luminaire.



Luminaire classification according to CIE: 100
CIE flux code: 75 95 99 100 100

Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

Direct Sports Lighting

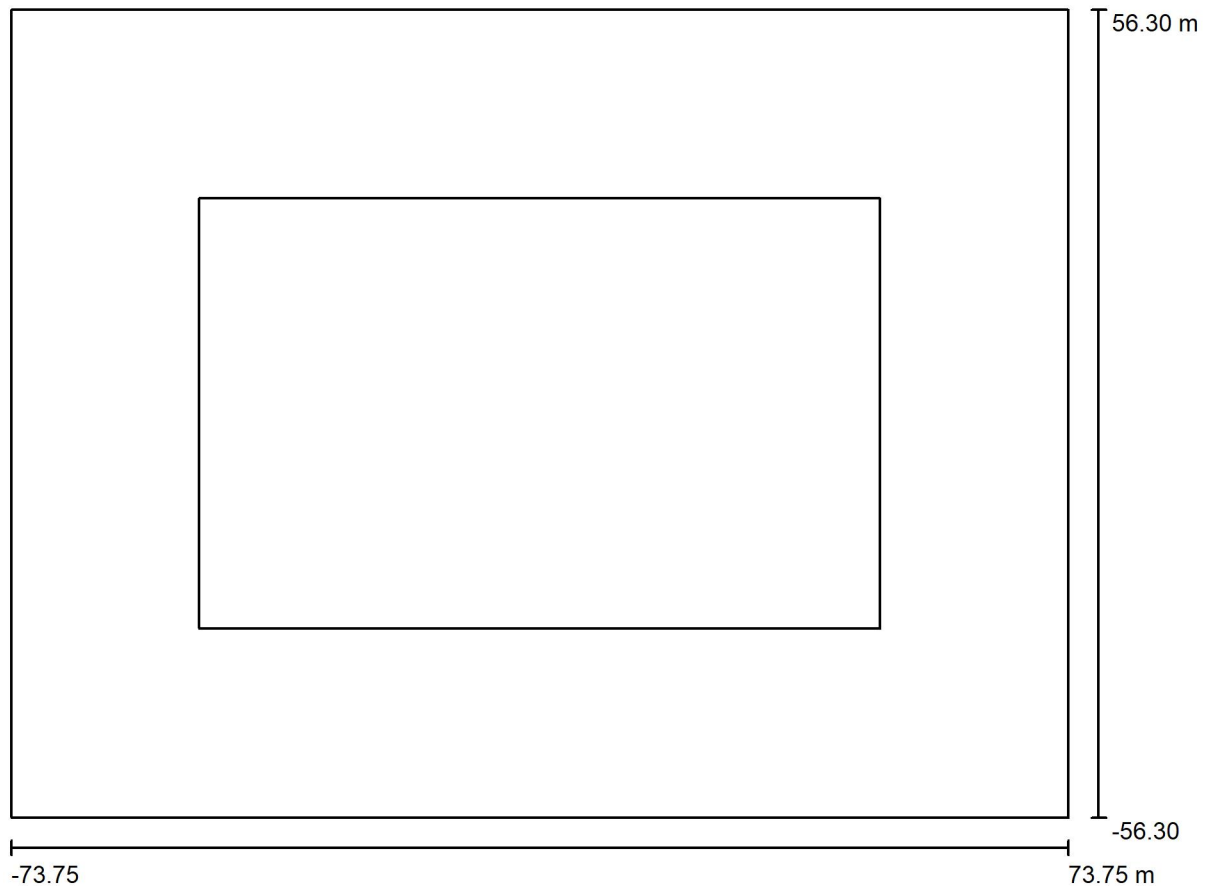
Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill

Telephone 0845 643 0722

Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / Planning data

Maintenance factor: 0.90, ULR (Upward Light Ratio): 2.0%

Scale 1:1055

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	4	LED (1.000)	152470	152456	1194.8
Total:			609879	609824	4779.2

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill

Telephone 0845 643 0722

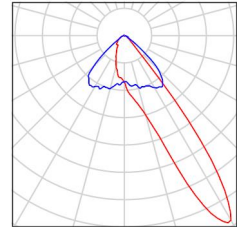
Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / Luminaire parts list

4 Pieces LED
Article No.:
Luminous flux (Luminaire): 152470 lm
Luminous flux (Lamps): 152456 lm
Luminaire Wattage: 1194.8 W
Luminaire classification according to CIE: 100
CIE flux code: 75 95 99 100 100
Fitting: 1 x User defined (Correction Factor 1.000).

See our luminaire
catalog for an image of
the luminaire.



Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

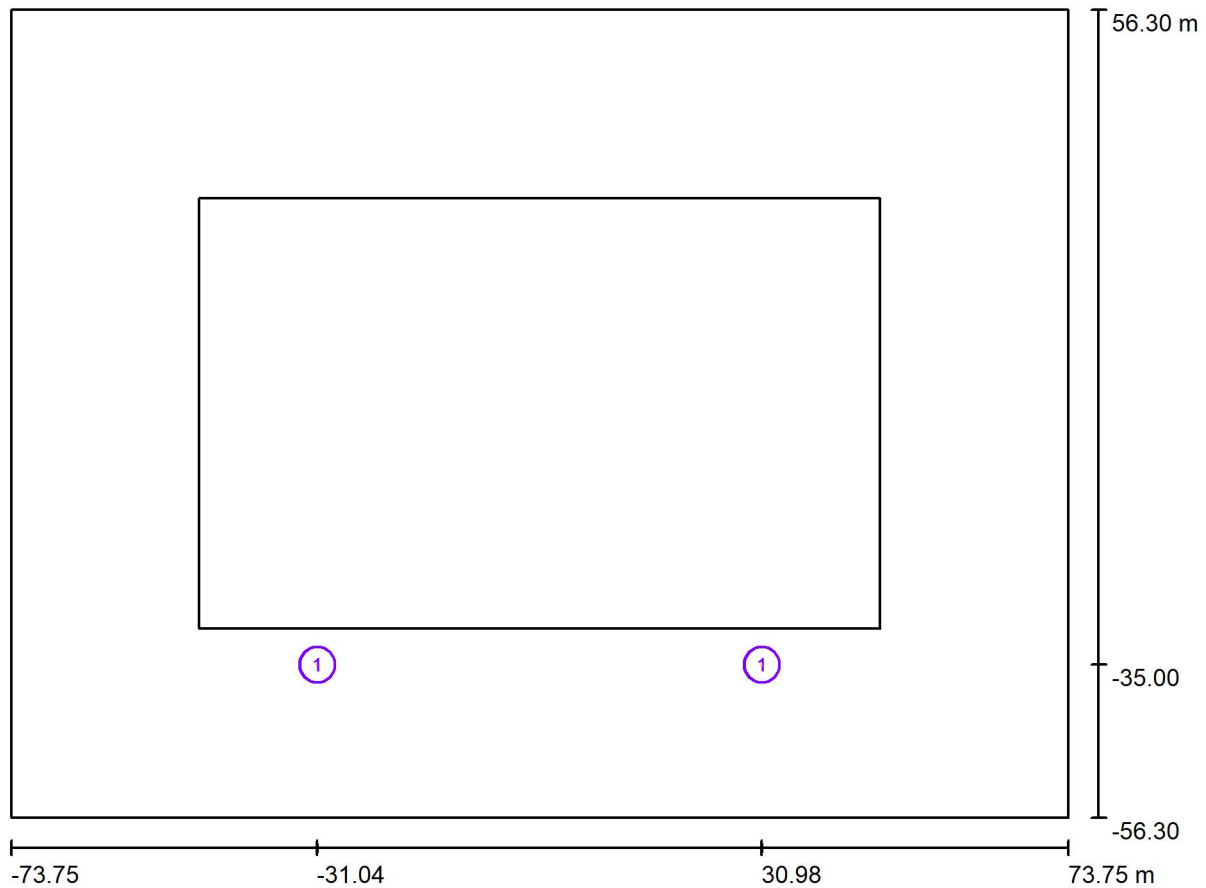
Operator Michael Butterill

Telephone 0845 643 0722

Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / Luminaires (layout plan)



Scale 1 : 1055

Luminaire Parts List

No.	Pieces	Designation
1	4	LED

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill

Telephone 0845 643 0722

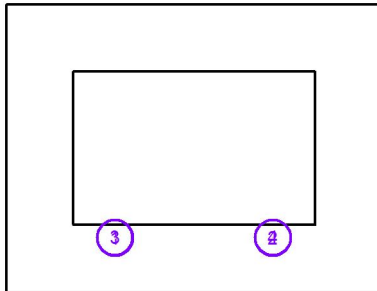
Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / Luminaires (coordinates list)

LED

152470 lm, 1194.8 W, 1 x 1 x User defined (Correction Factor 1.000).



No.	Position [m]			Rotation [°]		
	X	Y	Z	X	Y	Z
1	-30.981	-35.000	15.000	0.0	-42.8	31.2
2	30.981	-35.000	15.000	0.0	-42.8	148.8
3	-31.038	-34.976	15.000	0.0	-40.6	97.3
4	31.038	-34.976	15.000	0.0	-40.6	82.7

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

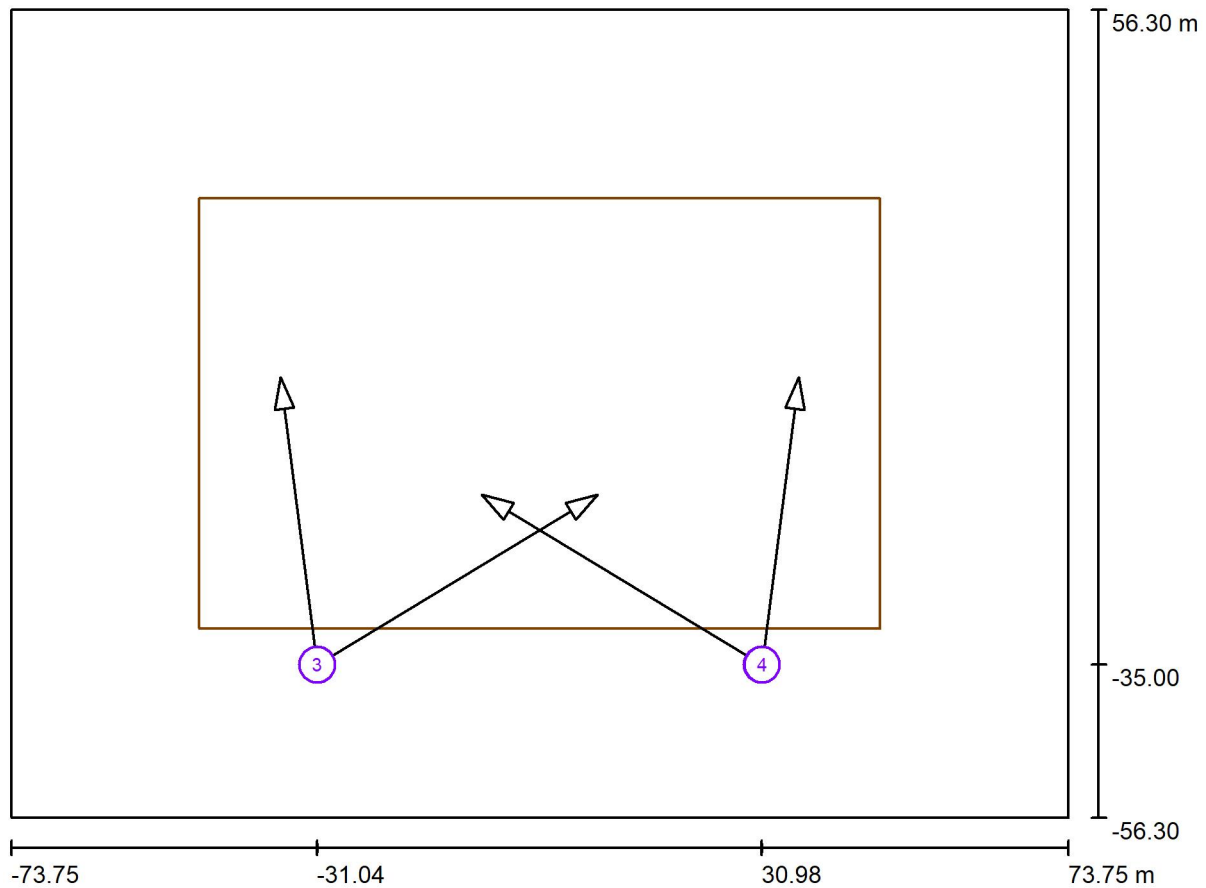
Operator Michael Butterill

Telephone 0845 643 0722

Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / Sport Luminaires (Coordinates List)



Scale 1 : 1055

List of the Sport Luminaires

Luminaire	Index	Position [m]			Aiming Point [m]			Angle [°]	Alignment	Pole
		X	Y	Z	X	Y	Z			
LED	1	-30.981	-35.000	15.000	8.100	-11.300	0.000	18.2	(C 0, G IMax)	/
LED	2	30.981	-35.000	15.000	-8.100	-11.300	0.000	18.2	(C 0, G IMax)	/
LED	3	-31.038	-34.976	15.000	-36.162	5.100	0.000	20.4	(C 0, G IMax)	/
LED	4	31.038	-34.976	15.000	36.162	5.100	0.000	20.4	(C 0, G IMax)	/

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

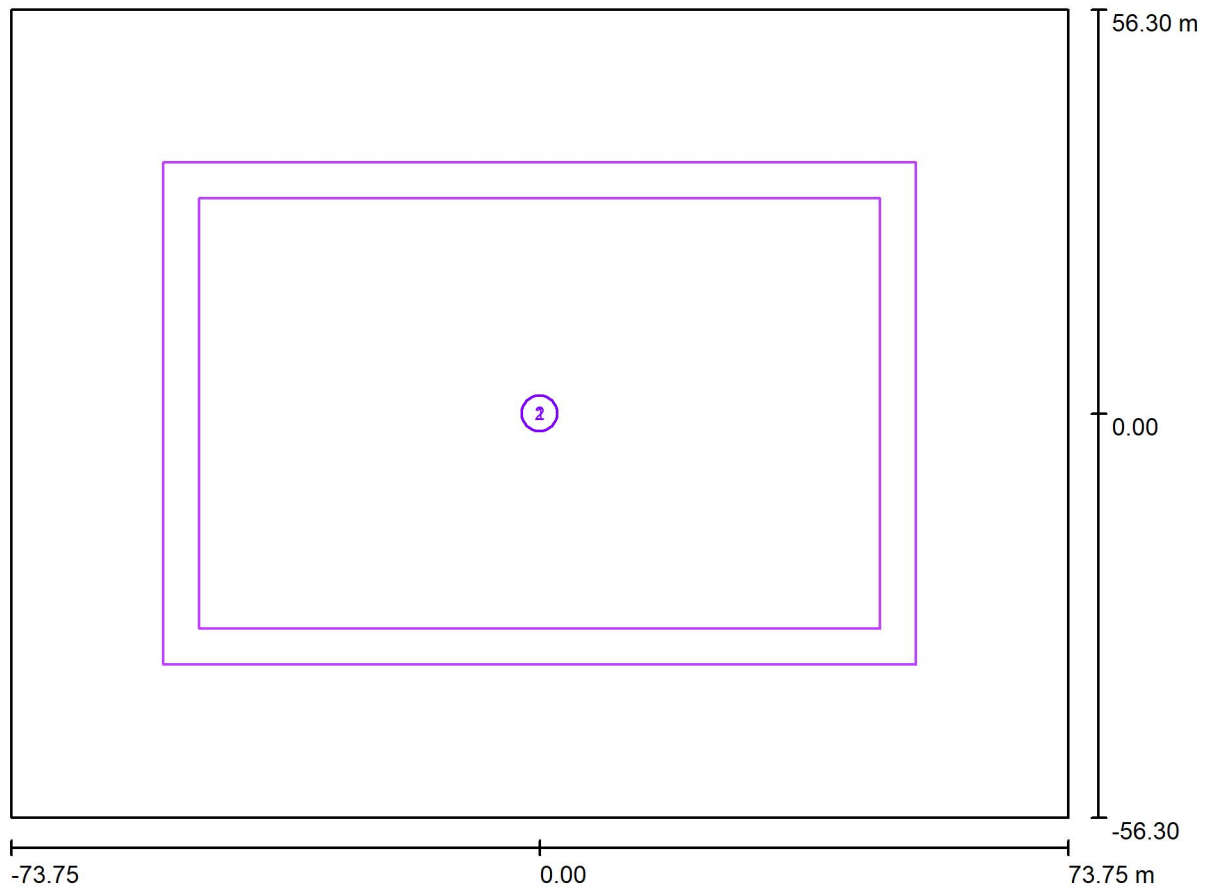
Operator Michael Butterill

Telephone 0845 643 0722

Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / Calculation Grid (Coordinates List)



Scale 1 : 1055

List of the Calculation Grids

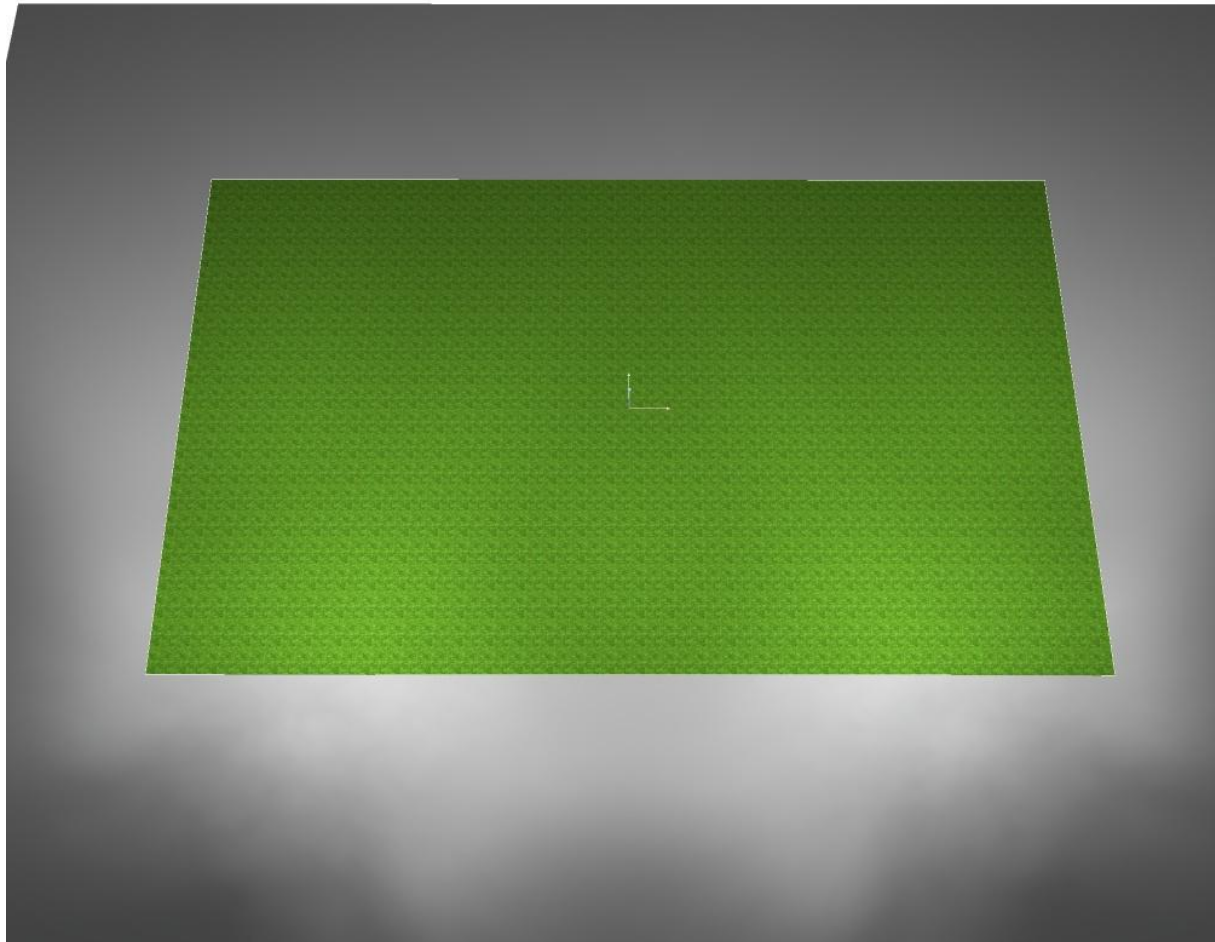
No.	Designation	Position [m]			Size [m]		Rotation [°]		
		X	Y	Z	L	W	X	Y	Z
1	General Sport Area 1 Calculation Grid (PA)	0.000	0.000	0.000	95.000	60.000	0.0	0.0	0.0
2	General Sport Area 1 Calculation Grid (TA)	0.000	0.000	0.000	105.000	70.000	0.0	0.0	0.0

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill
Telephone 0845 643 0722
Fax
e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / 3D Rendering



Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

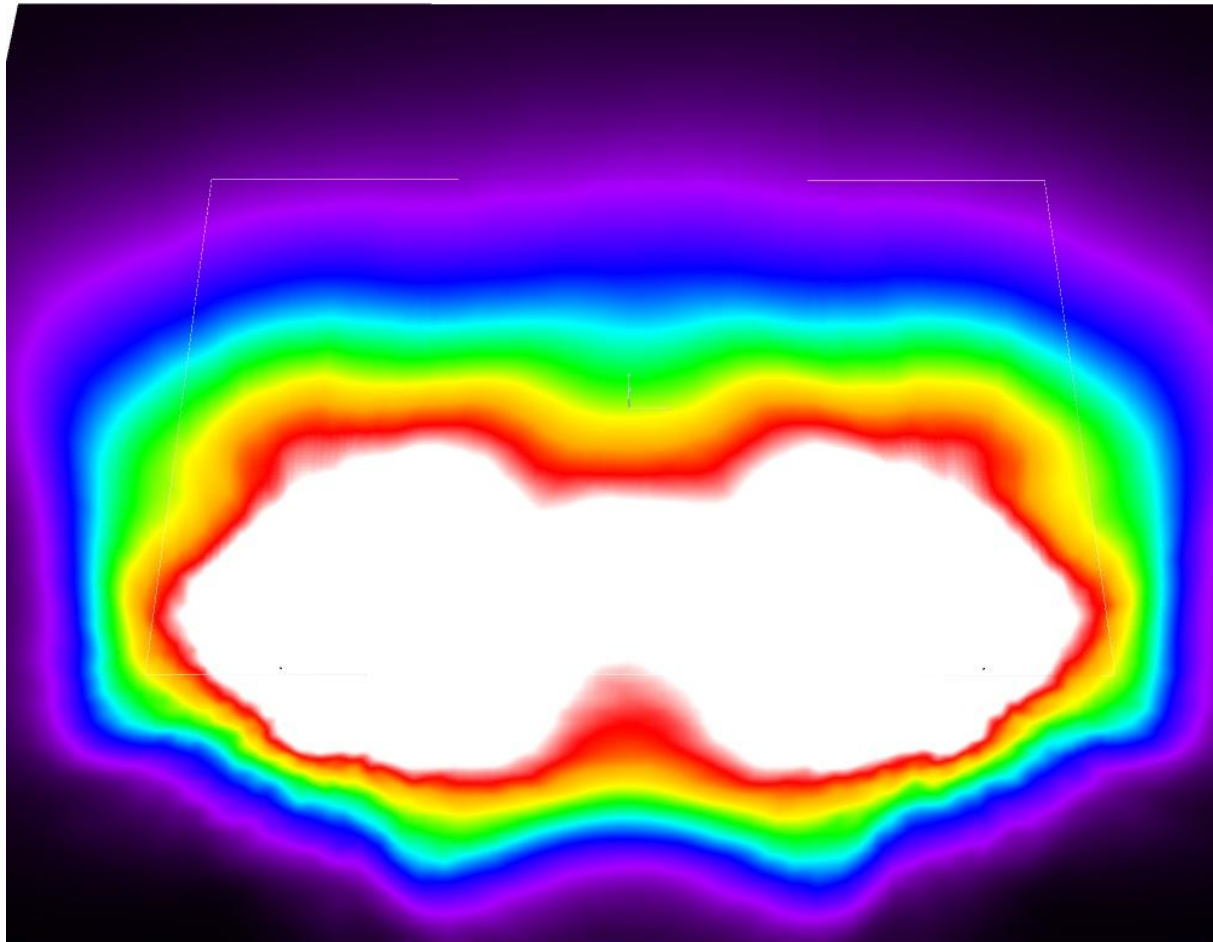
Operator Michael Butterill

Telephone 0845 643 0722

Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / False Colour Rendering



lx

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

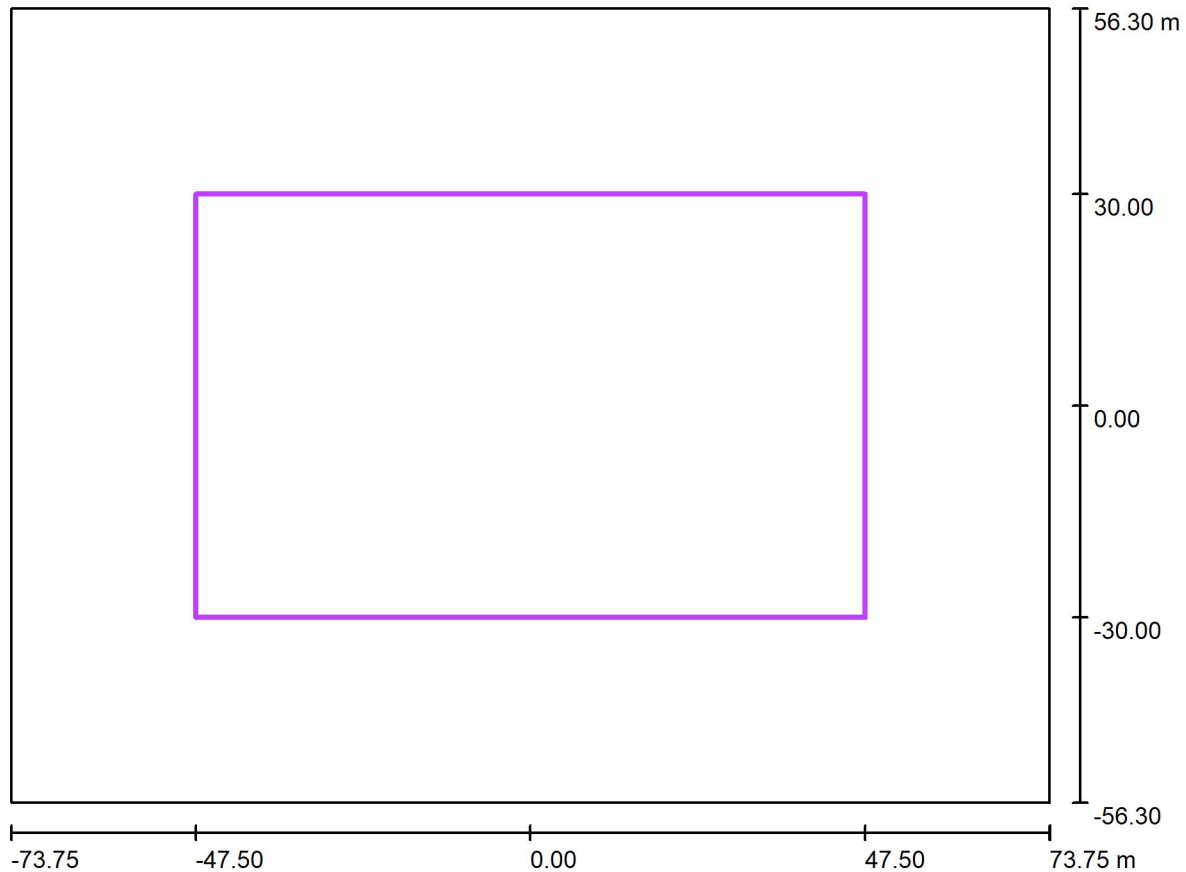
Operator Michael Butterill

Telephone 0845 643 0722

Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / General Sport Area 1 Calculation Grid (PA) / Summary



Scale 1 : 1074

Position: (0.000 m, 0.000 m, 0.000 m)

Size: (95.000 m, 60.000 m)

Rotation: (0.0°, 0.0°, 0.0°)

Type: Normal, Grid: 19 x 11 Points

Belongs to the following sport arena: General Sport Area 1

Results overview

No.	Type	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	$u0$	E_{min} / E_{max}	$E_{h\ m} / E_m$	H [m]	Camera
1	perpendicular	62	7.83	191	0.13	0.04	/	0.000	/

$E_{h\ m} / E_m$ = Relationship between middle horizontal and vertical illuminance, H = Measuring Height

Direct Sports Lighting

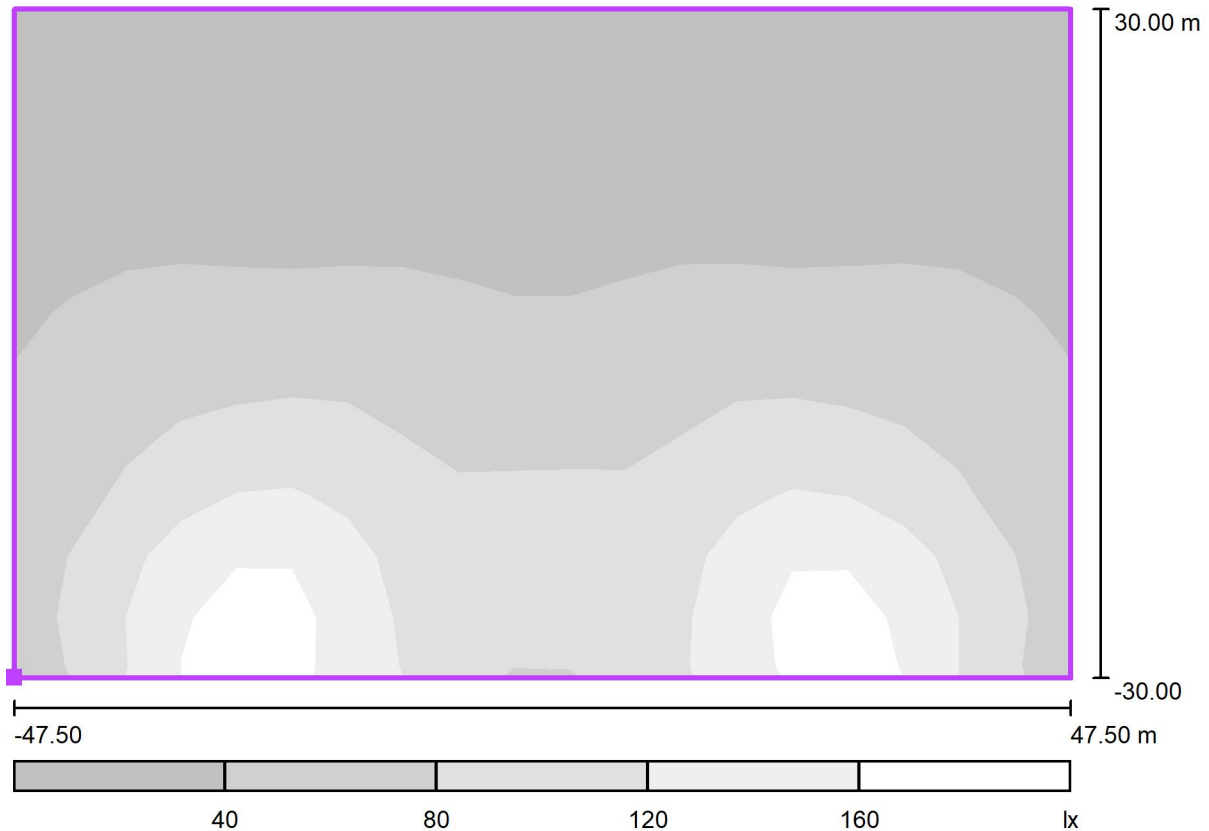
Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

Operator Michael Butterill

Telephone 0845 643 0722

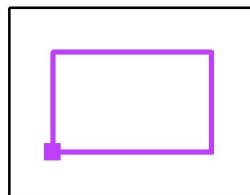
Fax

e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / General Sport Area 1 Calculation Grid (PA) / Greyscale (E, Perpendicular)

Scale 1 : 680

Position of surface in external scene:
Marked point: (-47.500 m, -30.000 m,
0.000 m)



Grid: 19 x 11 Points

 E_{av} [lx]
62 E_{min} [lx]
7.83 E_{max} [lx]
191 u_0
0.13 E_{min} / E_{max}
0.04

Direct Sports Lighting

Unit 3 Ure Bank Maltigns, Ripon, HG4 1AE.

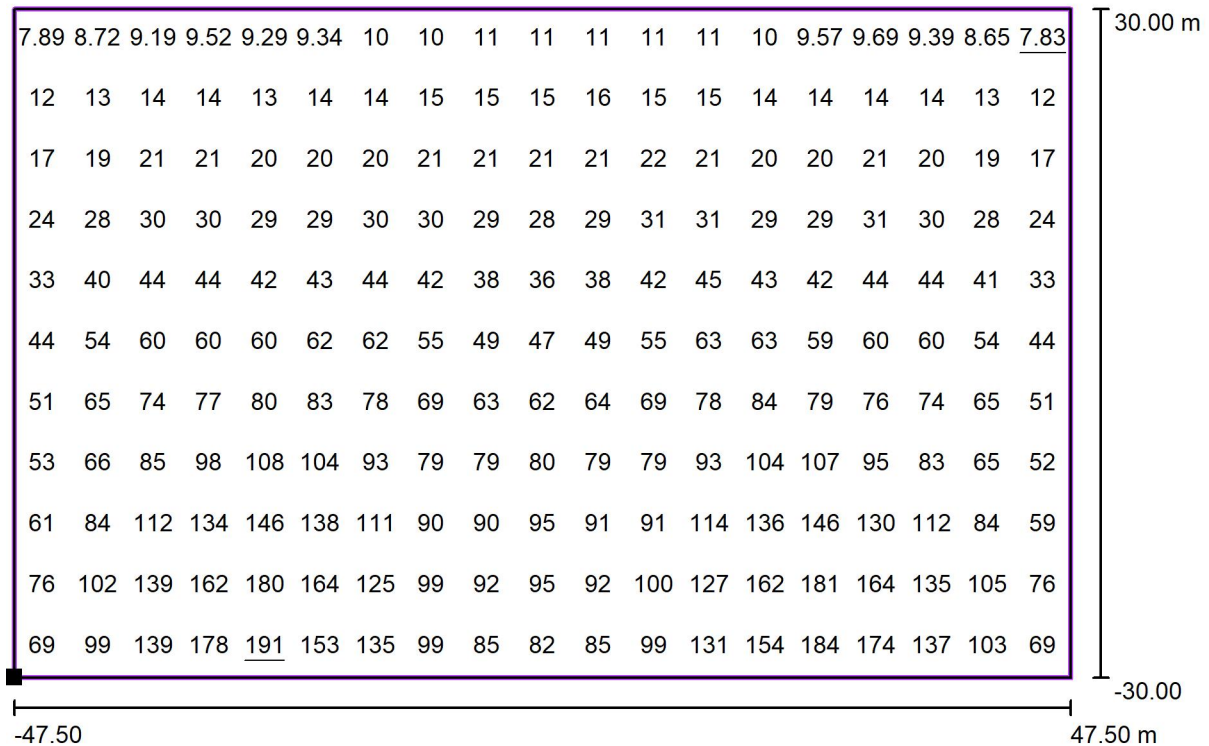
Operator Michael Butterill

Telephone 0845 643 0722

Fax

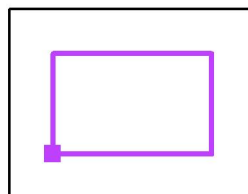
e-Mail sales@directsportslighting.co.uk

Exterior Scene 1 / General Sport Area 1 Calculation Grid (PA) / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 680

Position of surface in external scene:
Marked point: (-47.500 m, -30.000 m, 0.000 m)



Grid: 19 x 11 Points

 E_{av} [lx]
62

 E_{min} [lx]
7.83

 E_{max} [lx]
191

 u_0
0.13

 E_{min} / E_{max}
0.04