

Halewood Leisure Centre

Date: 24-01-2019
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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
1:4000

2. Summary

2.1 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	P1	27.52	90.56	1.80
Bb	P2	30.68	87.23	1.80
Cc	P3	37.05	81.13	1.80
Dd	P4	40.09	77.31	1.80
Ee	P5	47.11	60.13	1.80
Ff	P6	75.86	40.71	1.80
Gg	P7	85.01	15.22	1.80
Hh	P8	101.81	-13.56	1.80

2.2 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Block	10	36.01	50.62	14.90
		-36.01	50.62	14.90
Block1	20	36.01	1.15	14.90

2.3 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
C	8	Floodlight FL11, FL11mxpro_750_PL33TBLC_TM10_10.000h	1 * LED 5000 K CRI >= 70	1426.2	1 * 163000
D	4	Floodlight FL11, FL11mx_750_PL33TBLC_TM10.1000h	1 * LED 5000 K CRI >= 70	968.3	1 * 108960

The total installed power: 15.28 (kWatt)

2.4 Calculation Results

(II)luminance Calculations:

Calculation	Type	Unit	Ave Min/AveMin/Max		
Football	Surface Illuminance	lux	230	0.65	0.48
General1	Surface Illuminance	lux	26.5	0.00	0.00

Obtrusive Light Calculations:

Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
		X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
Aa	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	5164
Bb	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	4729
Cc	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	5664
Dd	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	5349
Ee	C	-36.00	47.00	15.00	-27.86	7.50	0.00	5075
Ff	D	-36.00	47.00	15.00	-37.58	10.00	0.00	3840
Gg	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	4151
Hh	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	4123
Hh	C	-36.00	-1.50	15.00	29.24	10.00	-0.00	4123

3. Calculation Results

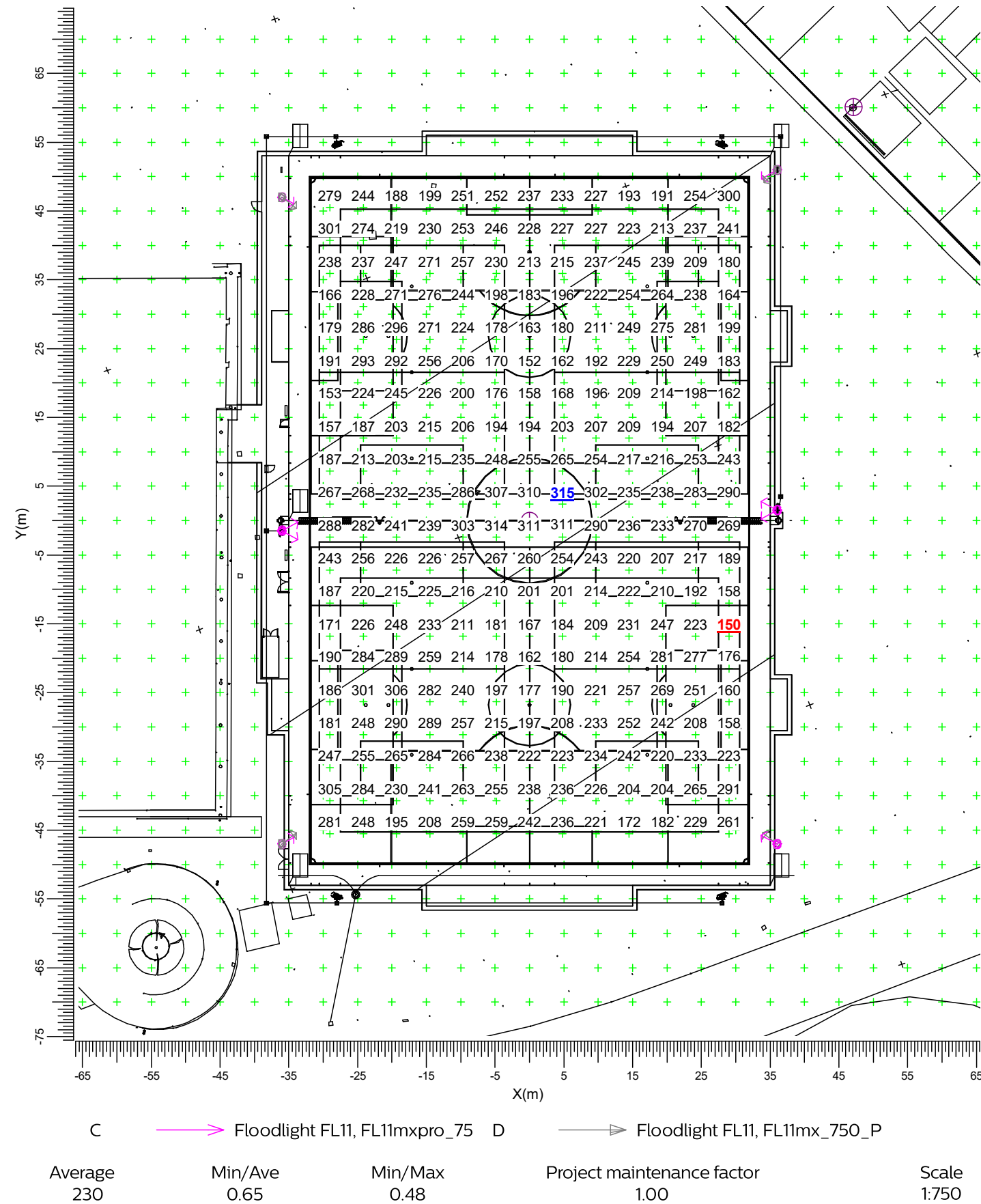
3.1 Football: Graphical Table

Grid

Calculation

: Football at Z = -0.00 m

: Surface Illuminance (lux)



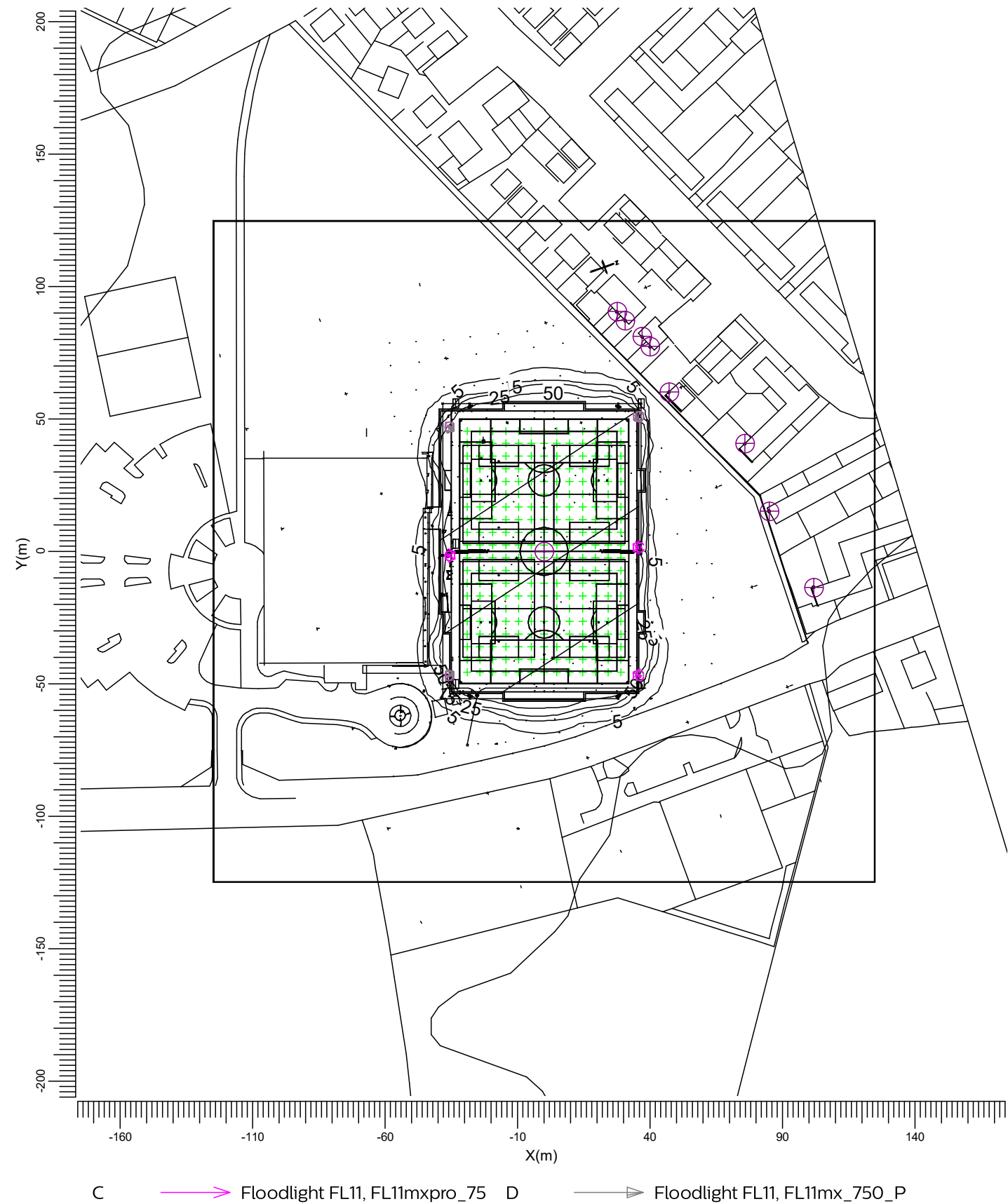
3.2 General1: Graphical Table

Grid : General1 at Z = -0.00 m
Calculation : Surface Illuminance (lux)



3.3 General1: Iso Contour

Grid : General1 at Z = -0.00 m
Calculation : Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
26.5	0.00	0.00	1.00	1:2000

4. Luminaire Details

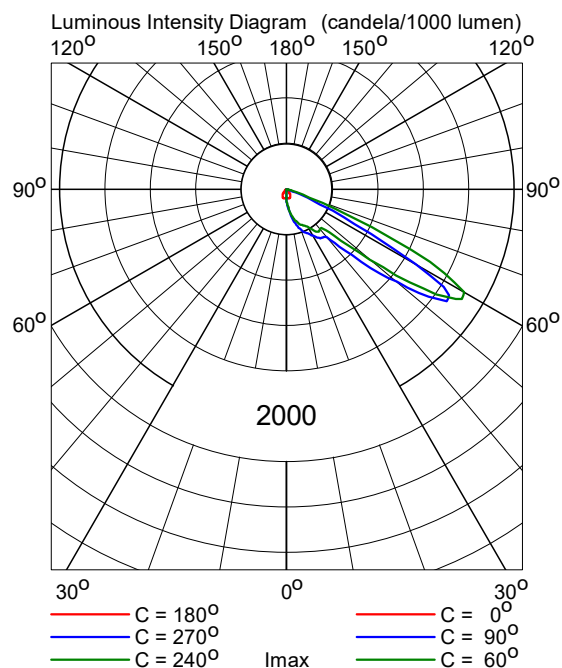
4.1 Project Luminaires

Floodlight FL11, FL11mxpro_750 1xLED 5000 K 3b blc

Light output ratios

DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 163000 lm
Luminaire wattage	: 1426.2 W
Measurement code	: 59257_7

Note: Luminaire data not from database.

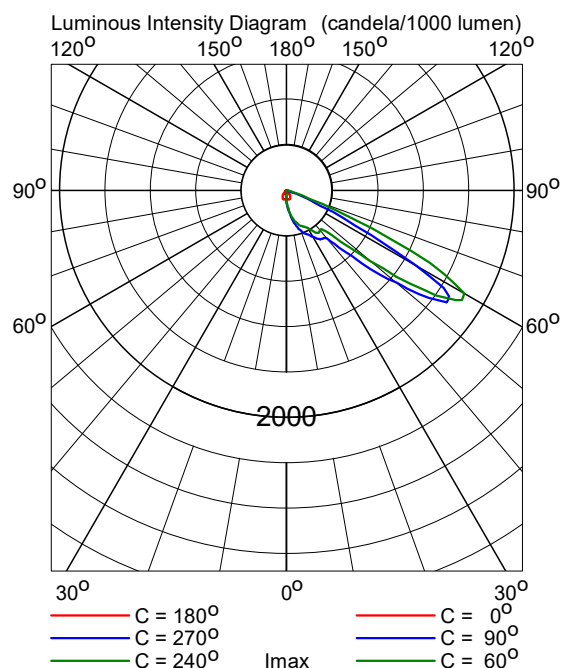


Floodlight FL11, FL11mx_750_PL 1xLED 5000 K 2b blc

Light output ratios

DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 108960 lm
Luminaire wattage	: 968.3 W
Measurement code	: 59257_19

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
C	8	Floodlight FL11, FL11mxpro_750_PL33TBLC_TM10_10.000h	1 * LED 5000 K CRI >= 70	1 * 163000
D	4	Floodlight FL11, FL11mx_750_PL33TBLC_TM10.1000h	1 * LED 5000 K CRI >= 70	1 * 108960

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles		
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0
1 * C	-36.00	-47.00	15.00	27.9	7.5	-0.0
1 * D	-36.00	-47.00	15.00	37.6	10.0	-0.0
1 * C	-36.00	-1.50	15.00	-29.2	10.0	0.0
1 * C	-36.00	-1.50	15.00	29.2	10.0	-0.0
1 * C	-36.00	47.00	15.00	-27.9	7.5	0.0
1 * D	-36.00	47.00	15.00	-37.6	10.0	0.0
1 * D	36.00	-47.00	15.00	142.9	10.0	0.0
1 * C	36.00	-47.00	15.00	151.9	10.0	0.0
1 * C	36.00	1.50	15.00	-150.9	10.0	0.0
1 * C	36.00	1.50	15.00	150.9	10.0	-0.0
1 * C	36.00	51.00	15.00	-148.5	10.0	0.0
1 * D	36.00	51.00	15.00	-135.6	10.0	0.0