

DATE: 3 May 2024
DESIGNER: AS
PROJECT No: 000000
PROJECT NAME: Dowlais MUGA



Documents referenced: Sport England, Artificial Sports Lighting, updated guidance for 2012. ILP Guidance Note GN.01/21– Reduction of Obtrusive Light Table 3 (CIE 150 table 2): Maximum values of vertical illuminance on premises. Designed to meet 200 lux Ave as requested by the Customer. Designed to meet Environmental Zone E2 - 5 lux Max light intrusion through windows pre-curfew.

Luminares used:

4 no. MFL 200, 3000K, 220w, T3*, mounted at 5M to help reduce light spill. *This optic provides zero upward light.

MUGA RESULTS:

206 Ave, 103 Min, 50 Uo

LIGHT SPILL RESULTS (vertical illuminance) - aimed for E2 - 5 lux Max Pre-curfew

Right side of House 1: 2.26 Max

Front of House 1: 0.26 Max

Rear of Semi detached 1: 0.47 Max

Right side of Semi detached 1: 0.32 Max

Outdoor Lighting Report

PREPARED BY: ARK Lighting
McGann House
Chesham Road
Barnsley
S70 2NT

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	MUGA	-273.33	-59.37	28.20	14.20	1.01	1.01
2	Classroom	-227.99	-47.05	17.00	10.00	1.00	1.00
3	House 1	-303.30	-53.05	13.00	8.00	1.00	1.00
4	Semi detached 1	-302.26	-32.63	10.00	12.00	1.00	1.00
5	Spill Light	-324.35	-105.36	117.11	119.10	4.68	7.01
6	House 2	-320.64	-100.29	16.00	7.00	0.64	0.28
7	Semi detached property 2	-300.53	-7.76	9.00	14.50	0.36	0.58
8	Right Side of House 1	-290.23	-45.03	8.04	5.00	1.00	1.00
9	Front of House 1	-303.30	-53.16	13.00	5.00	1.08	1.00
10	Rear of Semi detached 1	-292.09	-20.62	12.04	5.00	1.09	1.00
11	Right of Semi detached 1	-302.27	-32.73	10.01	5.00	1.11	1.00
12	Front of House 2	-320.14	-93.09	16.04	5.00	1.07	1.00
13	Road	-323.44	-79.72	115.66	9.00	2.03	2.25

Luminaires

Luminaire A Data

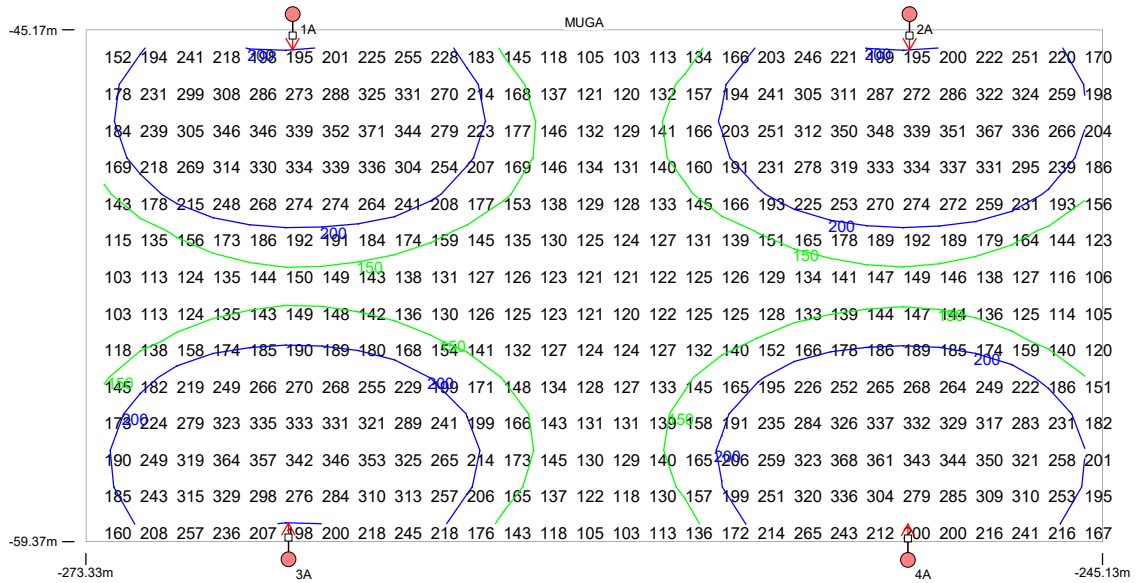
Supplier	
Type	MFL-200-PLUS-T3-3000K
Lamp(s)	HP5050-5000K
Lamp Flux (klm)	32.17
File Name	MFL-200-PLUS-T3-3000K.lgt
Maintenance Factor	0.93
Imax70,80,90(cd/klm)	278.1, 23.0, 6.0
No. in Project	4

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	-267.60	-44.73	5.00	270.00	0.00	0.00	0.60			
2	A	-250.49	-44.73	5.00	270.00	0.00	0.00	0.60			
3	A	-267.71	-59.85	5.00	90.00	0.00	0.00	0.60			
4	A	-250.54	-59.87	5.00	90.00	0.00	0.00	0.60			

Horizontal Illuminance (lux)

MUGA

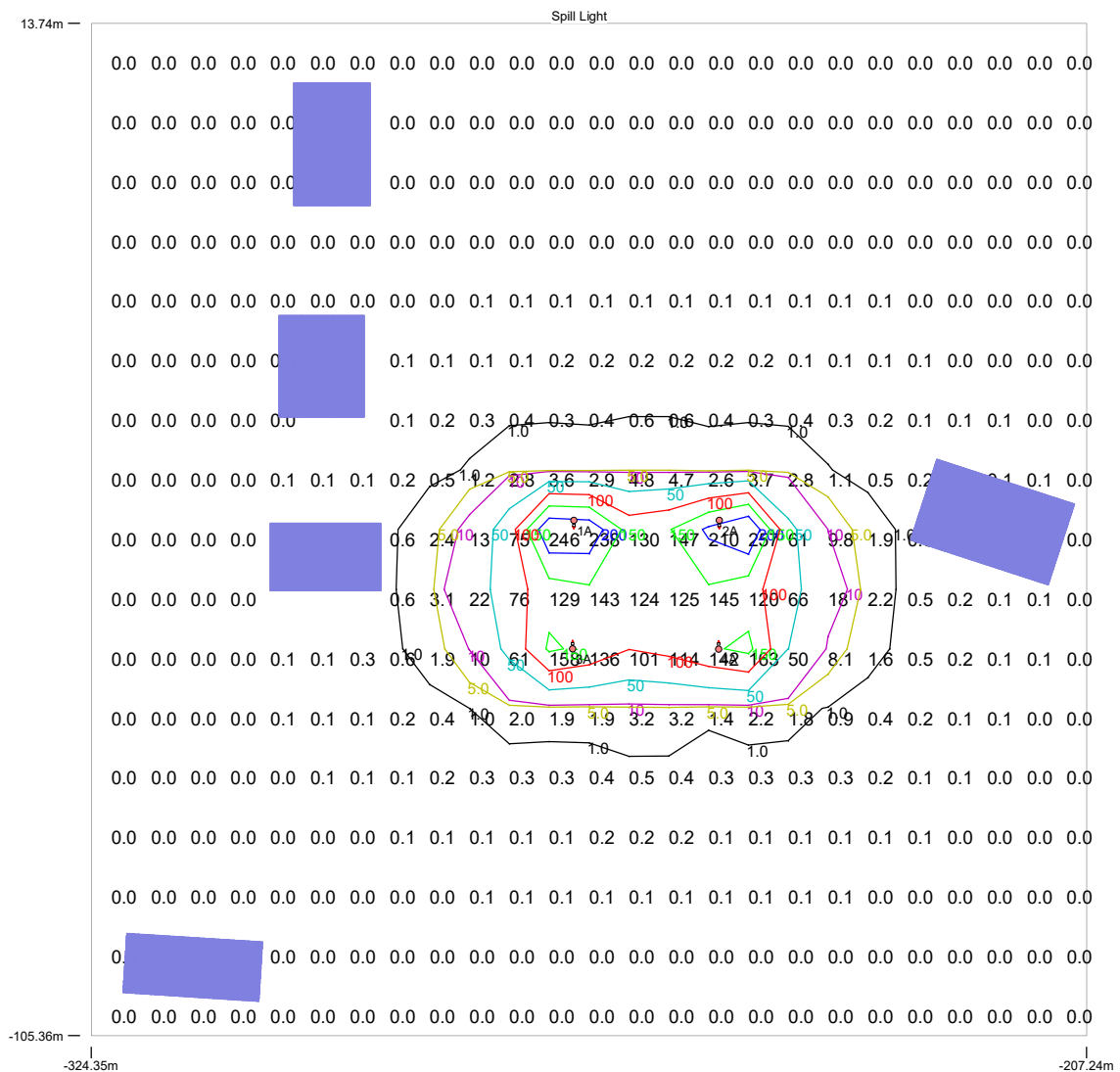


Results

Eav	206.71
Emin	103.07
E _{max}	370.77
Emin/E _{max}	0.28
Emin/Eav	0.50

Horizontal Illuminance (lux)

Spill Light

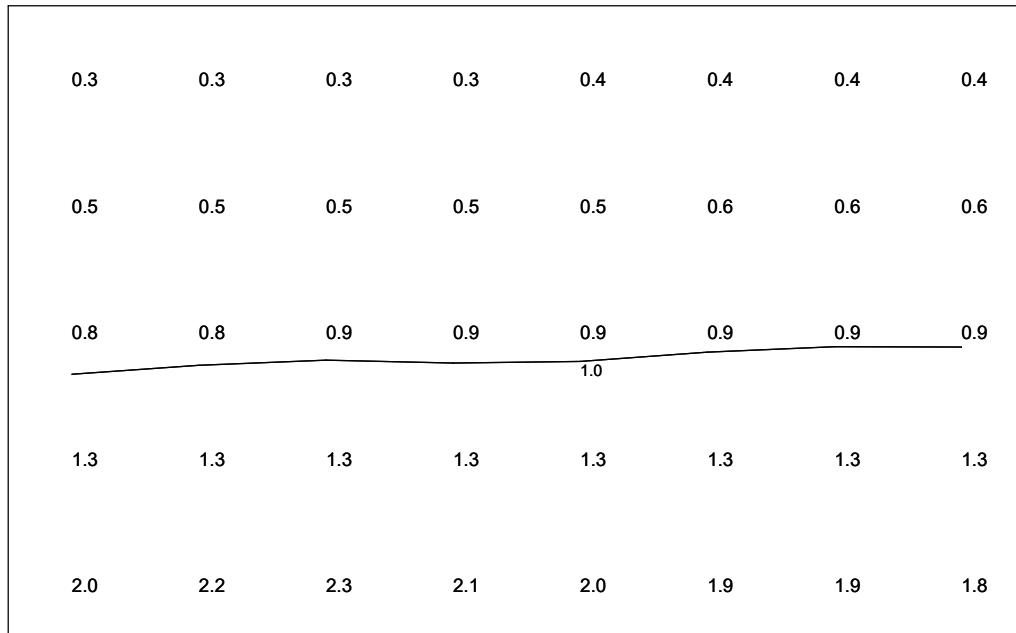


Results

Eav	8.38
Emin	0.00
Emax	256.60
Emin/Emax	0.00
Emin/Eav	0.00

Illuminance (lux)

Right Side of House 1



Results

Eav	1.01
Emin	0.29
E _{max}	2.26
E _{min} /E _{max}	0.13
E _{min} /E _{av}	0.29

Illuminance (lux)

Front of House 1

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3

Results

Eav	0.08
Emin	0.02
E _{max}	0.26
Emin/E _{max}	0.07
Emin/Eav	0.23

Illuminance (lux)

Rear of Semi detached 1

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4
0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5

Results

Eav	0.23
Emin	0.11
E _{max}	0.47
Emin/E _{max}	0.23
Emin/Eav	0.46

Illuminance (lux)

Right of Semi detached 1

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3

Results

Eav	0.16
Emin	0.07
E _{max}	0.32
E _{min} /E _{max}	0.21
E _{min} /E _{av}	0.42

Illuminance (lux)

Front of House 2

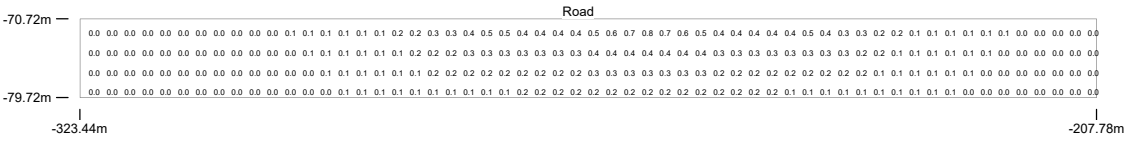
0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Results

Eav	0.08
Emin	0.04
E _{max}	0.13
E _{min} /E _{max}	0.33
E _{min} /E _{av}	0.55

Horizontal Illuminance (lux)

Road



Results

Eav	0.16
Emin	0.01
Emax	0.78
Emin/Emax	0.01
Emin/Eav	0.06