DATE: **17 August 2020**

DESIGNER: **SS**

PROJECT No: **21555**

PROJECT NAME: **Manchester Airport Car Park**

21555-A-01C

S278 Road: 50 Lux / Car park: 10 Lux

Uniformity: 25%

Grid spacing as per BS88 1.5m by 1.5m

Based on drawing P6684-CP-ME-602

Outdoor Lighting Report

PREPARED BY:

Harttron Ltd
Units 3-3a
Second Avenue
Poynton Industrial estate
Poynton
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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	Grid 1	382227.67	385725.59	204.00	183.00	1.50	1.50
2	Grid 2	382226.20	385786.37	39.00	129.00	1.50	1.50

Luminaires



Luminaire A Data

Supplier	Holophane Europe
Type	VMX.2.LA164.V3.D4D4.W122
Lamp(s)	LED C.16000 Lumens
Lamp Flux (klm)	16.59
File Name	VMX.2.LA164.V3.D4D4.W122.IES
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	715.1, 302.4, 0.0
No. in Project	8



Luminaire B Data

Supplier	Holophane Europe
Type	VMX.2.LA044.V1.D4D4.W027
Lamp(s)	LED C.4000 Lumens
Lamp Flux (klm)	3.92
File Name	VMX.2.LA044.V1.D4D4.W027.IES
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	715.1, 302.4, 0.0
No. in Project	86

Layout

ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	B	382314.81	385856.10	4.00	238.00	0.00	0.00	0.30			
2	A	382298.91	385858.58	4.00	263.00	0.00	0.00	0.30			
3	A	382283.73	385846.46	4.00	319.00	0.00	0.00	0.30			
4	B	382335.90	385842.66	4.00	236.00	0.00	0.00	0.30			
5	B	382382.46	385813.03	4.00	234.00	0.00	0.00	0.30			
6	B	382356.97	385829.50	4.00	234.00	0.00	0.00	0.30			
7	B	382410.93	385785.38	4.00	223.00	0.00	0.00	0.30			
8	A	382272.78	385828.75	6.00	325.00	0.00	0.00	0.30			
9	A	382286.39	385824.54	6.00	117.00	0.00	0.00	0.30			
10	A	382251.83	385796.31	6.00	323.00	0.00	0.00	0.30			
11	A	382261.25	385789.11	6.00	144.00	0.00	0.00	0.30			
12	A	382261.92	385811.56	6.00	328.00	0.00	0.00	0.30			
13	A	382272.20	385806.35	6.00	149.00	0.00	0.00	0.30			
14/1	B	382303.23	385844.03	6.00	65.00	0.00	0.00	0.30			
15/1	B	382303.23	385844.03	6.00	245.00	0.00	0.00	0.30			
16/2	B	382327.13	385828.84	6.00	58.00	0.00	0.00	0.30			
17/2	B	382327.13	385828.84	6.00	238.00	0.00	0.00	0.30			
18/3	B	382301.30	385826.55	6.00	58.00	0.00	0.00	0.30			
19/3	B	382301.30	385826.55	6.00	238.00	0.00	0.00	0.30			

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Layout Continued

ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
20/4	B	382293.23	385812.70	6.00	58.00	0.00	0.00	0.30			
21/4	B	382293.23	385812.70	6.00	238.00	0.00	0.00	0.30			
22/5	B	382284.81	385798.94	6.00	58.00	0.00	0.00	0.30			
23/5	B	382284.81	385798.94	6.00	238.00	0.00	0.00	0.30			
24/6	B	382276.30	385785.41	6.00	58.00	0.00	0.00	0.30			
25/6	B	382276.30	385785.41	6.00	238.00	0.00	0.00	0.30			
26	B	382262.02	385773.20	6.00	22.00	0.00	0.00	0.30			
27/7	B	382276.16	385766.56	6.00	58.00	0.00	0.00	0.30			
28/7	B	382276.16	385766.56	6.00	238.00	0.00	0.00	0.30			
29/8	B	382327.30	385809.83	6.00	58.00	0.00	0.00	0.30			
30/8	B	382327.30	385809.83	6.00	238.00	0.00	0.00	0.30			
31/9	B	382318.59	385796.59	6.00	58.00	0.00	0.00	0.30			
32/9	B	382318.59	385796.59	6.00	238.00	0.00	0.00	0.30			
33/10	B	382310.09	385783.14	6.00	58.00	0.00	0.00	0.30			
34/10	B	382310.09	385783.14	6.00	238.00	0.00	0.00	0.30			
35/11	B	382301.38	385769.49	6.00	58.00	0.00	0.00	0.30			
36/11	B	382301.38	385769.49	6.00	238.00	0.00	0.00	0.30			
37/12	B	382301.45	385750.53	6.00	58.00	0.00	0.00	0.30			
38/12	B	382301.45	385750.53	6.00	238.00	0.00	0.00	0.30			
39/13	B	382295.25	385735.62	6.00	58.00	0.00	0.00	0.30			
40/13	B	382295.25	385735.62	6.00	238.00	0.00	0.00	0.30			
41/14	B	382290.65	385719.74	6.00	58.00	0.00	0.00	0.30			
42/14	B	382290.65	385719.74	6.00	238.00	0.00	0.00	0.30			
43	B	382304.07	385710.35	6.00	277.00	0.00	0.00	0.30			
44	B	382329.16	385714.02	6.00	274.00	0.00	0.00	0.30			
45	B	382355.15	385717.52	6.00	272.00	0.00	0.00	0.30			
46/15	B	382348.10	385721.49	6.00	58.00	0.00	0.00	0.30			
47/22	B	382377.98	385721.66	6.00	58.00	0.00	0.00	0.30			
48/16	B	382441.48	385730.10	6.00	58.00	0.00	0.00	0.30			
49/16	B	382441.48	385730.10	6.00	238.00	0.00	0.00	0.30			
51	B	382441.42	385751.44	6.00	228.00	0.00	0.00	0.30			
52	B	382420.37	385770.47	6.00	234.00	0.00	0.00	0.30			
53	B	382403.57	385724.26	6.00	281.00	0.00	0.00	0.30			
54	B	382424.77	385727.92	6.00	296.00	0.00	0.00	0.30			
54/17	B	382420.36	385732.66	6.00	58.00	0.00	0.00	0.30			
55/17	B	382420.36	385732.66	6.00	238.00	0.00	0.00	0.30			

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Layout Continued

ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
56/18	B	382428.87	385746.03	6.00	58.00	0.00	0.00	0.30			
57/18	B	382428.87	385746.03	6.00	238.00	0.00	0.00	0.30			
58/19	B	382403.57	385762.21	6.00	58.00	0.00	0.00	0.30			
59/19	B	382403.57	385762.21	6.00	238.00	0.00	0.00	0.30			
60/20	B	382397.07	385747.25	6.00	58.00	0.00	0.00	0.30			
61/20	B	382397.07	385747.25	6.00	238.00	0.00	0.00	0.30			
62/21	B	382388.55	385733.51	6.00	58.00	0.00	0.00	0.30			
63/21	B	382388.55	385733.51	6.00	238.00	0.00	0.00	0.30			
64/22	B	382377.98	385721.66	6.00	238.00	0.00	0.00	0.30			
65/15	B	382348.10	385721.49	6.00	238.00	0.00	0.00	0.30			
66/23	B	382320.34	385719.55	6.00	58.00	0.00	0.00	0.30			
67/23	B	382320.34	385719.55	6.00	238.00	0.00	0.00	0.30			
68/24	B	382352.64	385737.28	6.00	58.00	0.00	0.00	0.30			
69/24	B	382352.64	385737.28	6.00	238.00	0.00	0.00	0.30			
70/25	B	382361.29	385750.97	6.00	58.00	0.00	0.00	0.30			
71/25	B	382361.29	385750.97	6.00	238.00	0.00	0.00	0.30			
72/26	B	382369.62	385764.66	6.00	58.00	0.00	0.00	0.30			
73/26	B	382369.62	385764.66	6.00	238.00	0.00	0.00	0.30			
74/27	B	382378.11	385777.71	6.00	58.00	0.00	0.00	0.30			
75/27	B	382378.11	385777.71	6.00	238.00	0.00	0.00	0.30			
77	B	382403.25	385781.24	6.00	234.00	0.00	0.00	0.30			
77/28	B	382377.87	385797.25	6.00	58.00	0.00	0.00	0.30			
78/28	B	382377.87	385797.25	6.00	238.00	0.00	0.00	0.30			
79/29	B	382348.72	385815.43	6.00	58.00	0.00	0.00	0.30			
80/29	B	382348.72	385815.43	6.00	238.00	0.00	0.00	0.30			
81/30	B	382346.32	385798.05	6.00	58.00	0.00	0.00	0.30			
82/30	B	382346.32	385798.05	6.00	238.00	0.00	0.00	0.30			
83/31	B	382347.36	385778.44	6.00	58.00	0.00	0.00	0.30			
84/31	B	382347.36	385778.44	6.00	238.00	0.00	0.00	0.30			
85/32	B	382337.75	385765.70	6.00	58.00	0.00	0.00	0.30			
86/32	B	382337.75	385765.70	6.00	238.00	0.00	0.00	0.30			
87/33	B	382329.10	385752.09	6.00	58.00	0.00	0.00	0.30			
88/33	B	382329.10	385752.09	6.00	238.00	0.00	0.00	0.30			
89/34	B	382327.10	385734.39	6.00	58.00	0.00	0.00	0.30			
90/34	B	382327.10	385734.39	6.00	238.00	0.00	0.00	0.30			
92	B	382276.55	385703.60	6.00	59.00	0.00	0.00	0.30			

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Layout Continued

ID /Mast	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
93	B	382276.14	385744.89	6.00	338.00	0.00	0.00	0.30			
94	B	382271.27	385747.87	6.00	195.00	0.00	0.00	0.30			
95	B	382275.88	385750.86	6.00	53.00	0.00	0.00	0.30			

DATE: 17 August 2020 DESIGNER: SS

PROJECT No: 21555 PROJECT NAME: Manchester Airport Car Park

Horizontal Illuminance (lux)

Grid 1



Results

Eav	13.67
Emin	3.40
Emax	51.48
Emin/Emax	0.07
Emin/Eav	0.25

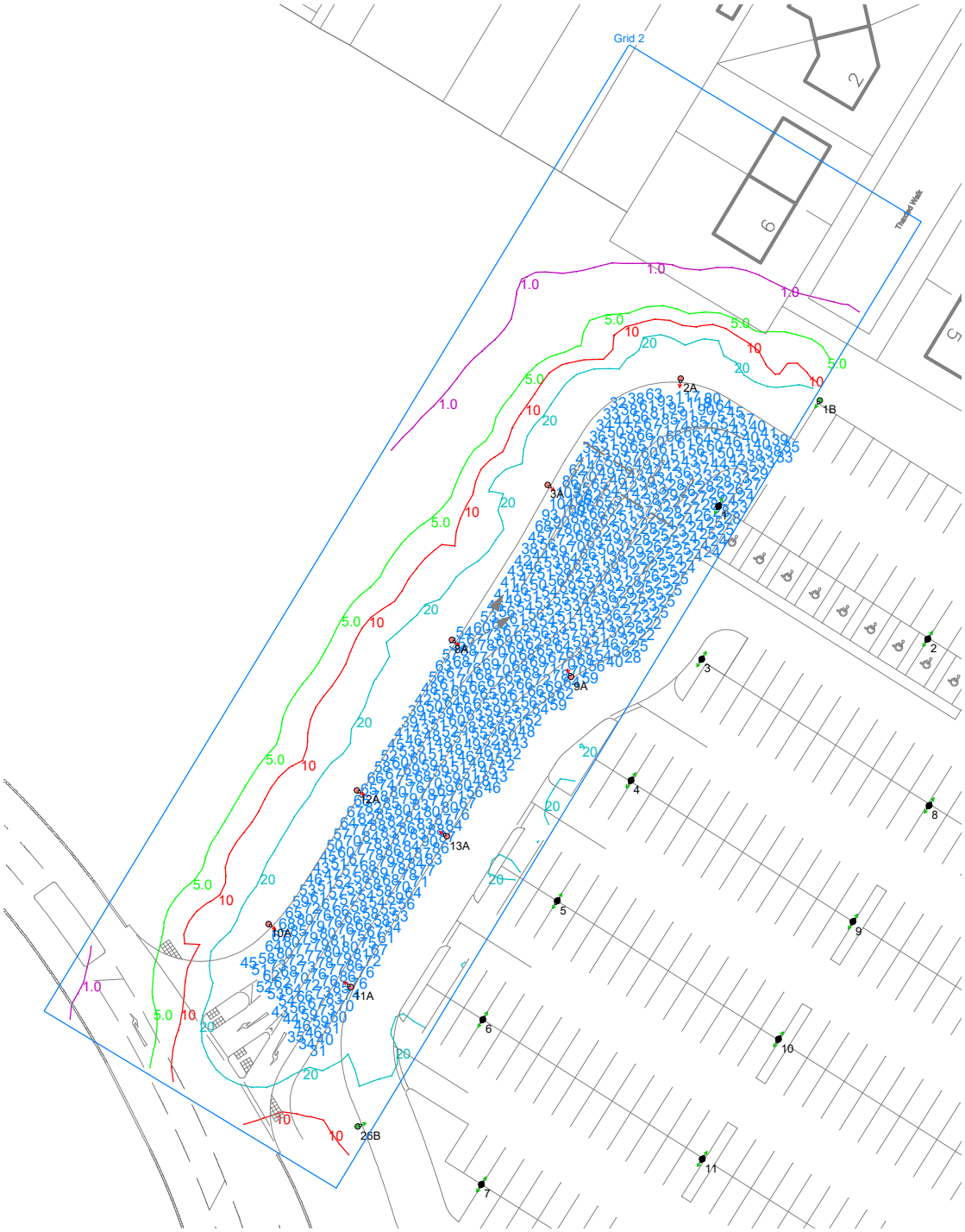
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DATE: 17 August 2020 DESIGNER: SS

PROJECT No: 21555 PROJECT NAME: Manchester Airport Car Park

Horizontal Illuminance (lux)

Grid 2



Results

Eav	13.67
Emin	3.40
Emax	51.48
Emin/Emax	0.07
Emin/Eav	0.25

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