

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P838427

Luminaire Tested: HCSQ620D010-HM60525835-61SQMB

Issue Date: 5/21/2024

**Test Information**

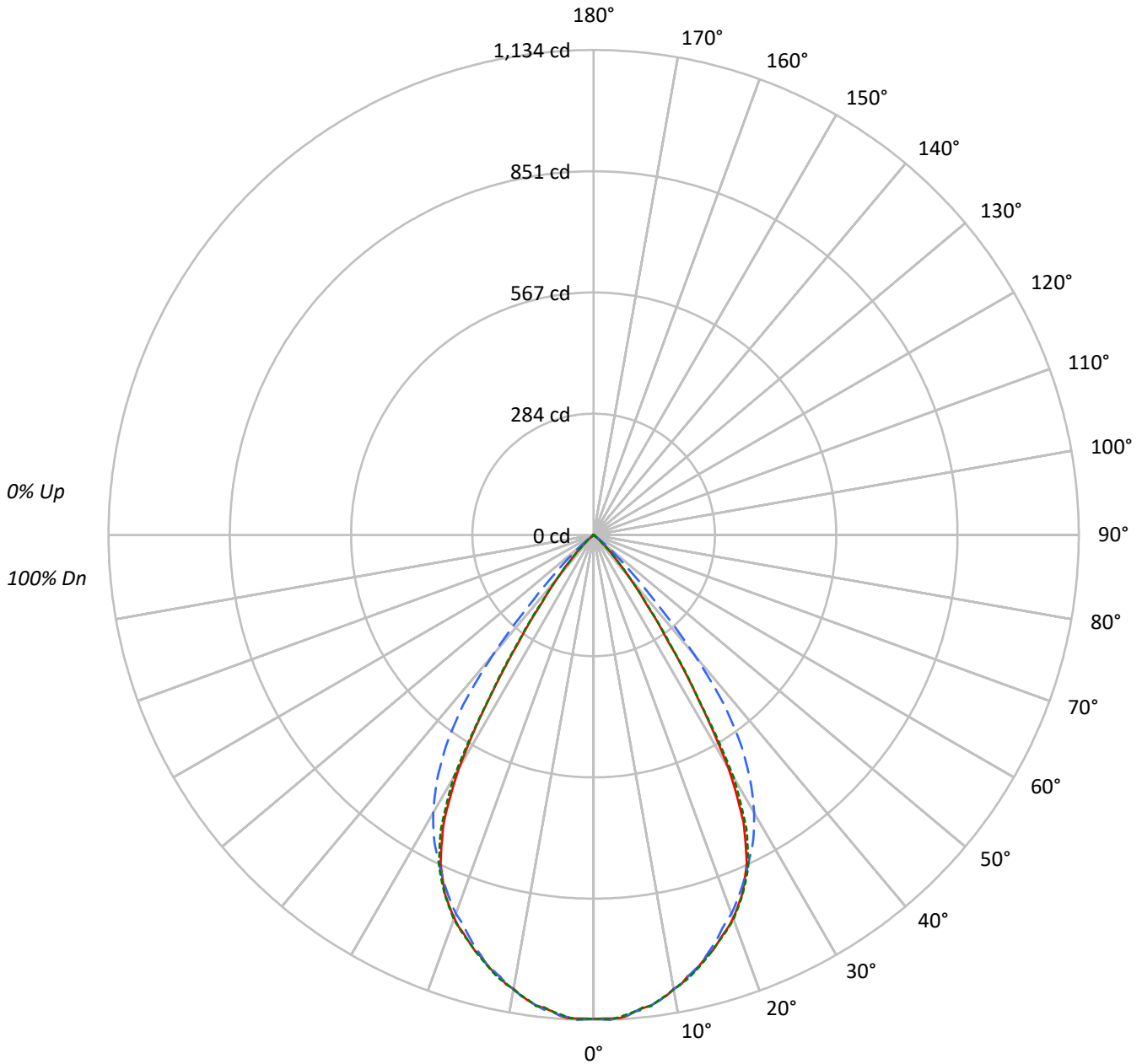
Test Method: LM-79-2019  
Report Number: P838427  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ620D010-HM60525835-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1125.0 lumens  
Efficiency: N/A  
Efficacy: 56.2 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93																			
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87																			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81																			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75																			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70																			
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65																			
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60																			
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56																			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53																			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	48726	48726	48726
5°	48320	48359	48320
10°	47108	47187	47187
15°	45488	45363	45613
20°	43684	43180	43807
25°	40224	40533	40618
30°	31356	37297	32544
35°	15900	31605	16478
40°	7234	20667	7234
45°	2801	7782	2740
50°	429	2465	429
55°	135	480	135
60°	78	78	78
65°	92	0	92
70°	0	0	113
75°	0	0	150
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 7782 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.7	9.4
10°-20°	286.6	25.5
20°-30°	386.3	34.3
30°-40°	271.6	24.1
40°-50°	69.4	6.2
50°-60°	4.8	0.4
60°-70°	0.6	0.1
70°-80°	0.1	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	778.6	69.2
0°-40°	1050.2	93.4
0°-60°	1124.3	99.9
0°-90°	1125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1125.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1118	1120	1119	1120	1118	106
15°	1020	1019	1018	1020	1023	287
25°	847	850	853	856	855	378
35°	302	401	601	411	314	204
45°	46	69	128	70	45	40
55°	2	2	6	2	2	2
65°	1	1	0	1	1	1
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1131.7	1131.7	1131.7	1131.7	1131.7
1°	1130.8	1131.7	1132.7	1132.7	1131.7
2°	1131.7	1129.0	1134.5	1131.7	1132.7
3°	1131.7	1126.2	1129.0	1130.8	1129.9
4°	1127.1	1123.5	1126.2	1125.3	1123.5
5°	1118.0	1119.8	1118.9	1119.8	1118.0
6°	1112.4	1114.3	1116.1	1113.4	1110.6
7°	1107.8	1106.9	1107.8	1109.7	1109.7
8°	1099.6	1101.4	1099.6	1100.5	1097.7
9°	1090.4	1090.4	1090.4	1092.2	1089.5
10°	1077.5	1082.1	1079.3	1081.2	1079.3
11°	1071.1	1069.2	1069.2	1070.1	1069.2
12°	1055.4	1057.3	1056.4	1058.2	1061.0
13°	1047.2	1048.1	1044.4	1049.0	1049.0
14°	1034.3	1033.4	1035.2	1034.3	1036.1
15°	1020.5	1018.7	1017.7	1020.5	1023.3
16°	1010.4	1005.8	1003.0	1006.7	1010.4
17°	995.7	991.1	987.4	994.8	995.7
18°	981.0	979.1	969.9	979.1	983.7
19°	969.0	962.6	954.3	964.4	969.9
20°	953.4	947.9	942.4	947.9	956.1
22.5°	908.3	903.7	899.1	905.6	910.2
25°	846.7	849.5	853.2	855.9	855.0
27.5°	759.4	784.2	807.2	792.5	773.2
30°	630.7	693.2	750.2	703.3	654.6
32.5°	456.9	563.6	682.2	584.7	461.5
35°	302.5	400.8	601.3	411.0	313.5
37.5°	196.7	269.4	502.0	270.3	205.9
40°	128.7	175.6	367.7	179.3	128.7
42.5°	79.1	111.2	223.4	115.8	79.1
45°	46.0	69.0	127.8	69.9	45.0
47.5°	21.1	37.7	72.6	36.8	22.1
50°	6.4	16.5	36.8	16.5	6.4
52.5°	2.8	4.6	17.5	4.6	2.8
55°	1.8	1.8	6.4	1.8	1.8
57.5°	1.8	0.9	1.8	1.8	1.8
60°	0.9	0.9	0.9	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.0	0.9	0.9
67.5°	0.9	0.0	0.0	0.0	0.9
70°	0.0	0.0	0.0	0.0	0.9
72.5°	0.0	0.0	0.0	0.0	0.9
75°	0.0	0.0	0.0	0.0	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°

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77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)