

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: P838447

Luminaire Tested: HCSQ620D010-HM60525935-61SQMB

Issue Date: 5/21/2024

**Test Information**

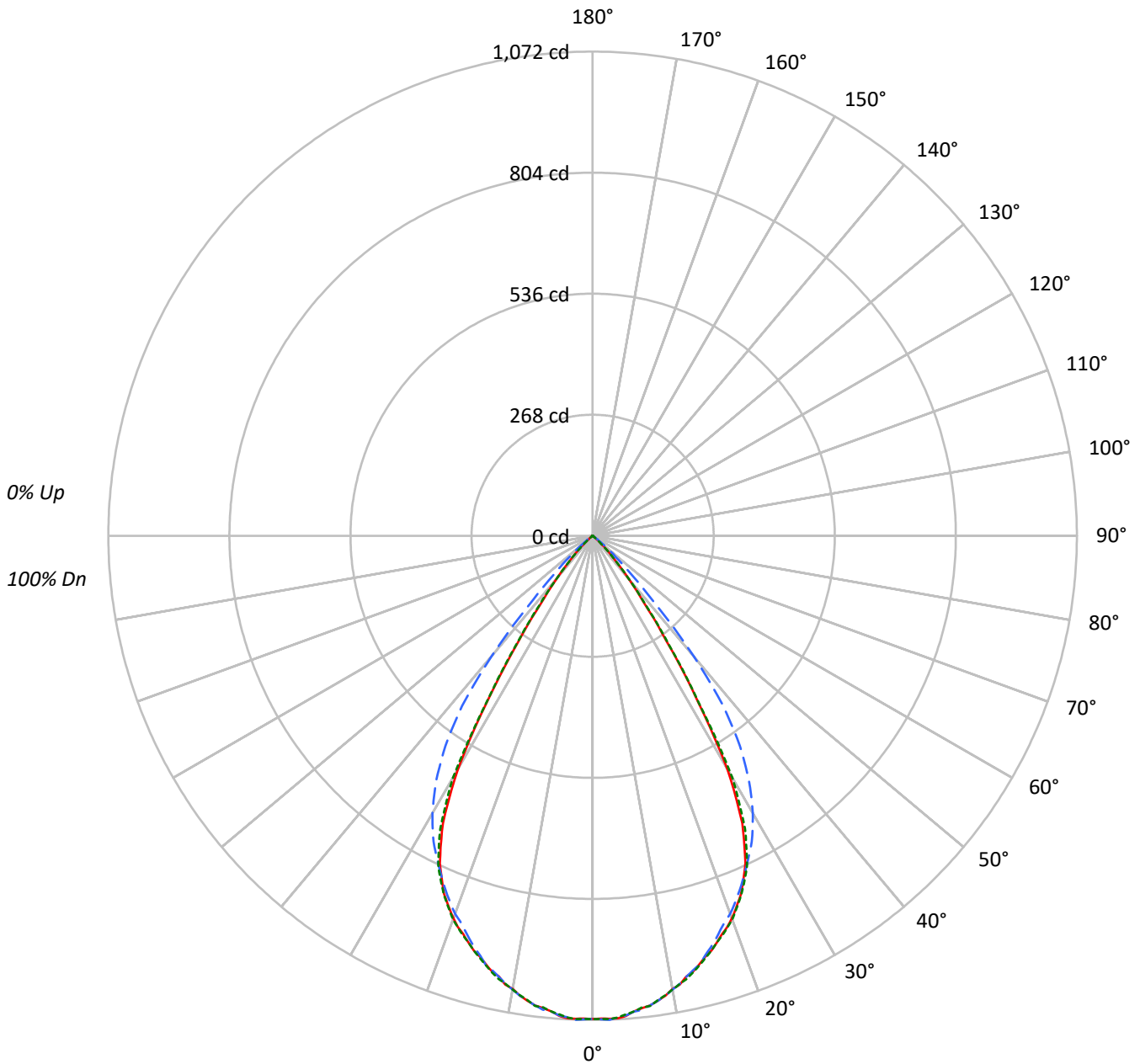
Test Method: LM-79-2019  
Report Number: P838447  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ620D010-HM60525935-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1063.5 lumens  
Efficiency: N/A  
Efficacy: 53.2 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					70					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	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°	46065	46065	46065
5°	45675	45714	45675
10°	44533	44607	44607
15°	43001	42885	43117
20°	41292	40815	41416
25°	38024	38314	38400
30°	29641	35259	30765
35°	15027	29876	15579
40°	6840	19537	6840
45°	2649	7355	2594
50°	409	2331	409
55°	128	458	128
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: 7355 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.9	9.4
10°-20°	270.9	25.5
20°-30°	365.2	34.3
30°-40°	256.8	24.1
40°-50°	65.6	6.2
50°-60°	4.5	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°	736.0	69.2
0°-40°	992.8	93.3
0°-60°	1062.9	99.9
0°-90°	1063.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1063.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1057	1059	1058	1059	1057	100
15°	965	963	962	965	967	272
25°	800	803	806	809	808	358
35°	286	379	568	388	296	192
45°	44	65	121	66	43	38
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°	1069.9	1069.9	1069.9	1069.9	1069.9
1°	1069.0	1069.9	1070.7	1070.7	1069.9
2°	1069.9	1067.2	1072.5	1069.9	1070.7
3°	1069.9	1064.6	1067.2	1069.0	1068.1
4°	1065.5	1062.0	1064.6	1063.8	1062.0
5°	1056.8	1058.6	1057.7	1058.6	1056.8
6°	1051.6	1053.3	1055.1	1052.5	1049.9
7°	1047.3	1046.4	1047.3	1049.0	1049.0
8°	1039.4	1041.2	1039.4	1040.3	1037.7
9°	1030.7	1030.7	1030.7	1032.5	1029.9
10°	1018.6	1022.9	1020.3	1022.1	1020.3
11°	1012.5	1010.8	1010.8	1011.6	1010.8
12°	997.7	999.5	998.6	1000.3	1002.9
13°	989.9	990.8	987.3	991.6	991.6
14°	977.7	976.9	978.6	977.7	979.5
15°	964.7	963.0	962.1	964.7	967.3
16°	955.1	950.8	948.2	951.7	955.1
17°	941.2	936.9	933.4	940.4	941.2
18°	927.3	925.6	916.9	925.6	929.9
19°	916.0	909.9	902.1	911.7	916.9
20°	901.2	896.0	890.8	896.0	903.9
22.5°	858.7	854.3	850.0	856.1	860.4
25°	800.4	803.0	806.5	809.1	808.3
27.5°	717.9	741.3	763.1	749.2	730.9
30°	596.2	655.3	709.2	664.9	618.8
32.5°	431.9	532.8	644.9	552.7	436.3
35°	285.9	378.9	568.4	388.5	296.4
37.5°	186.0	254.6	474.5	255.5	194.7
40°	121.7	166.0	347.6	169.5	121.7
42.5°	74.7	105.2	211.2	109.5	74.7
45°	43.5	65.2	120.8	66.1	42.6
47.5°	20.0	35.6	68.7	34.8	20.9
50°	6.1	15.6	34.8	15.6	6.1
52.5°	2.6	4.3	16.5	4.3	2.6
55°	1.7	1.7	6.1	1.7	1.7
57.5°	1.7	0.9	1.7	1.7	1.7
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)