

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: P838732

Luminaire Tested: HCSQ655D010-HM64560940-61SQMB

Issue Date: 5/21/2024

**Test Information**

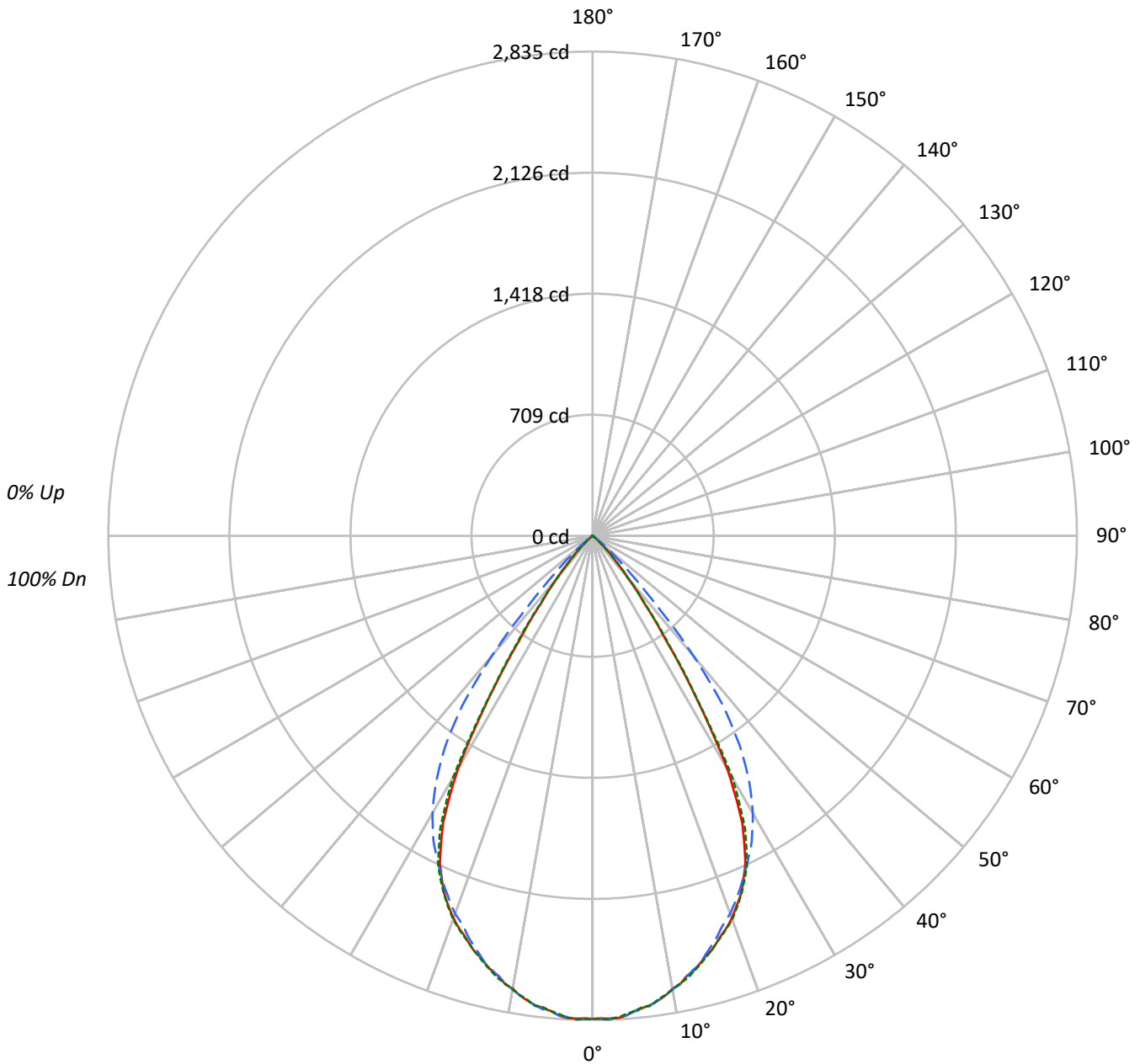
Test Method: LM-79-2019  
Report Number: P838732  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ655D010-HM64560940-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2811.5 lumens  
Efficiency: N/A  
Efficacy: 52.1 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): 54  
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°	121774	121774	121774
5°	120748	120848	120748
10°	117729	117930	117930
15°	113678	113371	113986
20°	109168	107903	109484
25°	100529	101289	101507
30°	78358	93208	81331
35°	39731	78979	41182
40°	18081	51653	18081
45°	6996	19448	6856
50°	1078	6156	1078
55°	345	1209	345
60°	198	198	198
65°	234	0	234
70°	0	0	290
75°	0	0	383
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 19448 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	264.1	9.4
10°-20°	716.2	25.5
20°-30°	965.5	34.3
30°-40°	678.8	24.1
40°-50°	173.3	6.2
50°-60°	12.0	0.4
60°-70°	1.4	0.1
70°-80°	0.2	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°	1945.8	69.2
0°-40°	2624.6	93.4
0°-60°	2809.9	99.9
0°-90°	2811.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2811.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2828	2828	2828	2828	2828	
5°	2794	2798	2796	2798	2794	264
15°	2550	2546	2543	2550	2557	718
25°	2116	2123	2132	2139	2137	946
35°	756	1002	1503	1027	784	509
45°	115	172	319	175	113	100
55°	5	5	16	5	5	6
65°	2	2	0	2	2	2
75°	0	0	0	0	2	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°	2828.3	2828.3	2828.3	2828.3	2828.3
1°	2826.0	2828.3	2830.6	2830.6	2828.3
2°	2828.3	2821.4	2835.2	2828.3	2830.6
3°	2828.3	2814.5	2821.4	2826.0	2823.7
4°	2816.8	2807.6	2814.5	2812.2	2807.6
5°	2793.8	2798.4	2796.1	2798.4	2793.8
6°	2780.1	2784.7	2789.3	2782.4	2775.5
7°	2768.6	2766.3	2768.6	2773.2	2773.2
8°	2747.9	2752.5	2747.9	2750.2	2743.3
9°	2724.9	2724.9	2724.9	2729.5	2722.6
10°	2692.8	2704.2	2697.4	2701.9	2697.4
11°	2676.7	2672.1	2672.1	2674.4	2672.1
12°	2637.6	2642.2	2639.9	2644.5	2651.4
13°	2616.9	2619.2	2610.0	2621.5	2621.5
14°	2584.8	2582.5	2587.1	2584.8	2589.4
15°	2550.3	2545.7	2543.4	2550.3	2557.2
16°	2525.0	2513.5	2506.7	2515.8	2525.0
17°	2488.3	2476.8	2467.6	2486.0	2488.3
18°	2451.5	2446.9	2423.9	2446.9	2458.4
19°	2421.6	2405.6	2384.9	2410.2	2423.9
20°	2382.6	2368.8	2355.0	2368.8	2389.5
22.5°	2270.0	2258.5	2247.0	2263.1	2274.6
25°	2116.1	2123.0	2132.1	2139.0	2136.7
27.5°	1897.8	1959.8	2017.3	1980.5	1932.3
30°	1576.1	1732.4	1874.8	1757.6	1635.9
32.5°	1141.9	1408.4	1704.8	1461.3	1153.4
35°	755.9	1001.7	1502.6	1027.0	783.5
37.5°	491.7	673.2	1254.5	675.5	514.7
40°	321.7	438.8	919.0	448.0	321.7
42.5°	197.6	278.0	558.3	289.5	197.6
45°	114.9	172.3	319.4	174.6	112.6
47.5°	52.8	94.2	181.5	91.9	55.1
50°	16.1	41.4	91.9	41.4	16.1
52.5°	6.9	11.5	43.7	11.5	6.9
55°	4.6	4.6	16.1	4.6	4.6
57.5°	4.6	2.3	4.6	4.6	4.6
60°	2.3	2.3	2.3	2.3	2.3
62.5°	2.3	2.3	2.3	2.3	2.3
65°	2.3	2.3	0.0	2.3	2.3
67.5°	2.3	0.0	0.0	0.0	2.3
70°	0.0	0.0	0.0	0.0	2.3
72.5°	0.0	0.0	0.0	0.0	2.3
75°	0.0	0.0	0.0	0.0	2.3



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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)