

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: P838540

Luminaire Tested: HCSQ635D010-HM63040830-61SQH

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838540  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040830-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

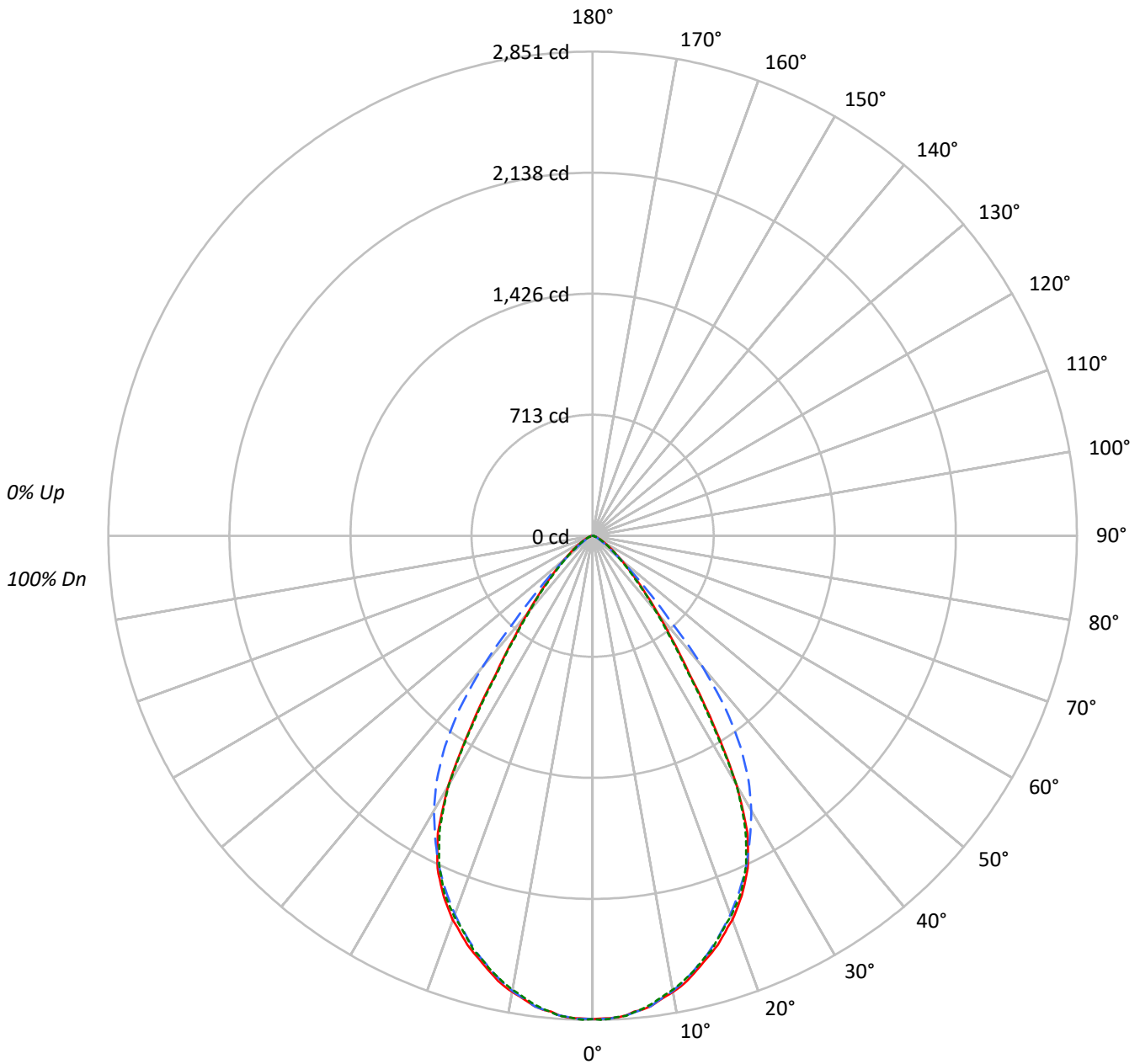
Lumens per Lamp: N/A  
Luminaire Lumens: 3200.9 lumens  
Efficiency: N/A  
Efficacy: 94.1 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 34  
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					100			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92					92			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85					85			
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78					78			
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71					71			
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66					66			
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61					61			
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56					56			
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52					52			
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48					48			
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45					45			

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

	0°	45°	90°
0°	122541	122541	122541
5°	121574	121777	121712
10°	119255	118979	118699
15°	115042	114409	114338
20°	110295	108705	109214
25°	102662	101759	101536
30°	84364	92840	84130
35°	52104	79735	50858
40°	33448	56514	32295
45°	21817	27394	20763
50°	14488	13638	13531
55°	9834	7109	9120
60°	6656	4349	6114
65°	4666	3219	4177
70°	2984	2379	2782
75°	2096	1830	1830
80°	1562	1165	1165
85°	790	1581	790

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 27394 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	265.8	8.3
10°-20°	721.4	22.5
20°-30°	973.8	30.4
30°-40°	760.0	23.7
40°-50°	318.4	9.9
50°-60°	107.9	3.4
60°-70°	38.5	1.2
70°-80°	12.5	0.4
80°-90°	2.6	0.1
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°	1961.0	61.3
0°-40°	2721.0	85.0
0°-60°	3147.4	98.3
0°-90°	3200.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3200.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2846	2846	2846	2846	2846	
5°	2813	2816	2818	2813	2816	266
15°	2581	2575	2567	2564	2565	726
25°	2161	2152	2142	2142	2137	972
35°	991	1163	1517	1162	968	652
45°	358	384	450	366	341	288
55°	131	120	95	114	122	121
65°	46	38	32	36	41	47
75°	13	11	11	11	11	14
85°	2	2	3	2	2	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2846.1	2846.1	2846.1	2846.1	2846.1
1°	2842.9	2847.6	2844.5	2846.1	2850.8
2°	2842.9	2842.9	2846.1	2844.5	2846.1
3°	2839.7	2839.7	2836.6	2836.6	2836.6
4°	2830.3	2830.3	2830.3	2827.1	2833.4
5°	2812.9	2816.1	2817.6	2812.9	2816.1
6°	2806.6	2808.2	2805.0	2803.4	2800.3
7°	2792.4	2787.7	2792.4	2781.3	2782.9
8°	2768.7	2768.7	2765.6	2762.4	2759.2
9°	2746.6	2746.6	2743.5	2738.7	2735.6
10°	2727.7	2722.9	2721.4	2716.6	2715.0
11°	2705.6	2696.1	2694.5	2689.8	2689.8
12°	2678.7	2674.0	2663.0	2661.4	2661.4
13°	2645.6	2640.9	2633.0	2626.6	2633.0
14°	2614.0	2610.9	2596.7	2601.4	2599.8
15°	2580.9	2574.6	2566.7	2563.5	2565.1
16°	2550.9	2539.8	2528.8	2530.4	2539.8
17°	2519.3	2503.5	2492.5	2490.9	2495.6
18°	2479.8	2467.2	2449.9	2456.2	2456.2
19°	2440.4	2423.0	2412.0	2410.4	2416.7
20°	2407.2	2380.4	2372.5	2370.9	2383.6
22.5°	2293.6	2266.7	2260.4	2266.7	2279.4
25°	2161.0	2151.5	2142.0	2142.0	2137.3
27.5°	1973.1	1995.2	2006.3	1984.2	1947.9
30°	1696.9	1790.0	1867.4	1779.0	1692.2
32.5°	1337.0	1529.6	1708.0	1524.8	1305.4
35°	991.3	1163.4	1517.0	1161.8	967.6
37.5°	764.0	874.5	1289.6	860.3	741.9
40°	595.1	659.8	1005.5	651.9	574.6
42.5°	462.5	503.5	669.3	494.1	446.7
45°	358.3	383.6	449.9	366.2	341.0
47.5°	279.4	290.4	307.8	277.8	263.6
50°	216.3	216.3	203.6	208.4	202.0
52.5°	167.3	161.0	137.3	151.5	154.7
55°	131.0	120.0	94.7	113.7	121.5
57.5°	99.4	88.4	67.9	83.7	91.6
60°	77.3	66.3	50.5	63.1	71.0
62.5°	60.0	50.5	39.5	47.4	53.7
65°	45.8	37.9	31.6	36.3	41.0
67.5°	34.7	28.4	23.7	26.8	31.6
70°	23.7	22.1	18.9	20.5	22.1
72.5°	17.4	15.8	14.2	14.2	15.8
75°	12.6	11.0	11.0	11.0	11.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	3.2	3.2	3.2	3.2	3.2
85°	1.6	1.6	3.2	1.6	1.6
87.5°	1.6	1.6	1.6	1.6	1.6
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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Scaled Data Report





77.5°	7.9	7.9	7.9	7.9	7.9
80°	6.3	6.3	4.7	4.7	4.7

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Scaled Data Report



(END OF REPORT)