

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: P838560

Luminaire Tested: HCSQ635D010-HM63040930-61SQH

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838560  
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-HM63040930-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

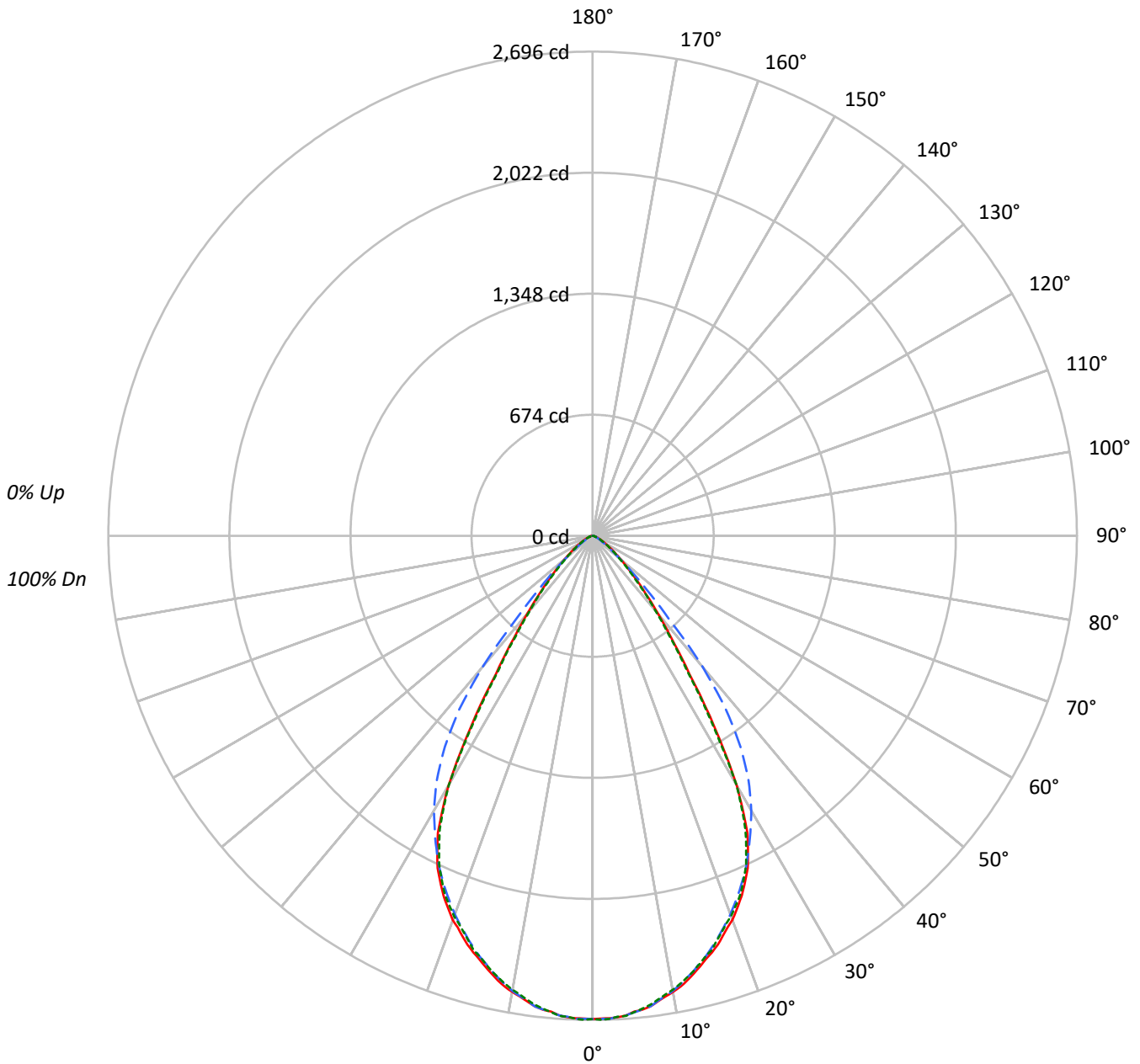
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3026.6 lumens  
Efficiency: N/A  
Efficacy: 89.0 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									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				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°	115867	115867	115867
5°	114953	115147	115082
10°	112758	112500	112238
15°	108775	108178	108111
20°	104293	102785	103267
25°	97070	96220	96006
30°	79770	87784	79546
35°	49266	75394	48088
40°	31627	53440	30536
45°	20629	25903	19631
50°	13698	12894	12794
55°	9301	6726	8625
60°	6295	4116	5787
65°	4411	3046	3953
70°	2820	2253	2631
75°	1980	1730	1730
80°	1488	1116	1116
85°	741	1482	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 25903 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	251.3	8.3
10°-20°	682.1	22.5
20°-30°	920.8	30.4
30°-40°	718.6	23.7
40°-50°	301.0	9.9
50°-60°	102.1	3.4
60°-70°	36.4	1.2
70°-80°	11.8	0.4
80°-90°	2.4	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°	1854.2	61.3
0°-40°	2572.9	85.0
0°-60°	2976.0	98.3
0°-90°	3026.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2691	2691	2691	2691	2691	
5°	2660	2663	2664	2660	2663	252
15°	2440	2434	2427	2424	2425	686
25°	2043	2034	2025	2025	2021	919
35°	937	1100	1434	1098	915	616
45°	339	363	425	346	322	272
55°	124	113	90	108	115	114
65°	43	36	30	34	39	44
75°	12	10	10	10	10	13
85°	2	2	3	2	2	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2691.1	2691.1	2691.1	2691.1	2691.1
1°	2688.1	2692.6	2689.6	2691.1	2695.6
2°	2688.1	2688.1	2691.1	2689.6	2691.1
3°	2685.1	2685.1	2682.1	2682.1	2682.1
4°	2676.2	2676.2	2676.2	2673.2	2679.1
5°	2659.7	2662.7	2664.2	2659.7	2662.7
6°	2653.8	2655.3	2652.3	2650.8	2647.8
7°	2640.3	2635.9	2640.3	2629.9	2631.4
8°	2618.0	2618.0	2615.0	2612.0	2609.0
9°	2597.1	2597.1	2594.1	2589.6	2586.6
10°	2579.1	2574.7	2573.2	2568.7	2567.2
11°	2558.2	2549.3	2547.8	2543.3	2543.3
12°	2532.9	2528.4	2517.9	2516.5	2516.5
13°	2501.5	2497.1	2489.6	2483.6	2489.6
14°	2471.7	2468.7	2455.3	2459.7	2458.2
15°	2440.3	2434.4	2426.9	2423.9	2425.4
16°	2412.0	2401.5	2391.1	2392.6	2401.5
17°	2382.1	2367.2	2356.8	2355.3	2359.7
18°	2344.8	2332.9	2316.5	2322.4	2322.4
19°	2307.5	2291.1	2280.6	2279.1	2285.1
20°	2276.2	2250.8	2243.3	2241.8	2253.8
22.5°	2168.7	2143.3	2137.3	2143.3	2155.3
25°	2043.3	2034.4	2025.4	2025.4	2020.9
27.5°	1865.7	1886.6	1897.0	1876.1	1841.8
30°	1604.5	1692.6	1765.7	1682.1	1600.0
32.5°	1264.2	1446.3	1615.0	1441.8	1234.3
35°	937.3	1100.0	1434.4	1098.5	914.9
37.5°	722.4	826.9	1219.4	813.4	701.5
40°	562.7	623.9	950.8	616.4	543.3
42.5°	437.3	476.1	632.8	467.2	422.4
45°	338.8	362.7	425.4	346.3	322.4
47.5°	264.2	274.6	291.0	262.7	249.3
50°	204.5	204.5	192.5	197.0	191.0
52.5°	158.2	152.2	129.9	143.3	146.3
55°	123.9	113.4	89.6	107.5	114.9
57.5°	94.0	83.6	64.2	79.1	86.6
60°	73.1	62.7	47.8	59.7	67.2
62.5°	56.7	47.8	37.3	44.8	50.7
65°	43.3	35.8	29.9	34.3	38.8
67.5°	32.8	26.9	22.4	25.4	29.9
70°	22.4	20.9	17.9	19.4	20.9
72.5°	16.4	14.9	13.4	13.4	14.9
75°	11.9	10.4	10.4	10.4	10.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	3.0	3.0	3.0	3.0	3.0
85°	1.5	1.5	3.0	1.5	1.5
87.5°	1.5	1.5	1.5	1.5	1.5
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°	7.5	7.5	7.5	7.5	7.5
80°	6.0	6.0	4.5	4.5	4.5

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Scaled Data Report



(END OF REPORT)