

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: P838605

Luminaire Tested: HCSQ640D010-HM63040935-61SQH

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838605  
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: HCSQ640D010-HM63040935-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

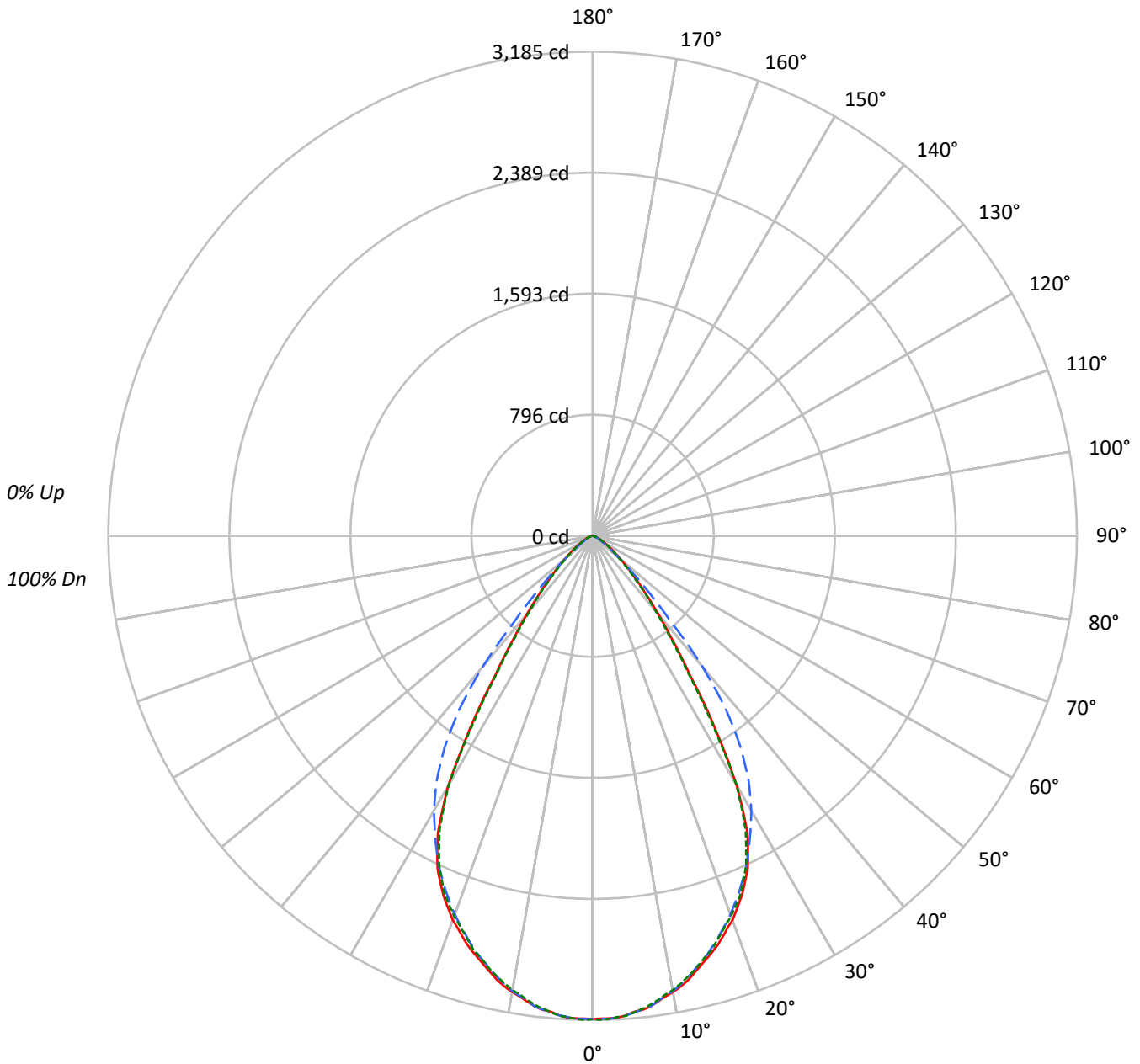
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3576.4 lumens  
Efficiency: N/A  
Efficacy: 87.2 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): 41  
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	79	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°	136913	136913	136913
5°	135837	136066	135988
10°	133241	132935	132624
15°	128535	127826	127751
20°	123234	121457	122020
25°	114705	113698	113446
30°	94257	103728	93999
35°	58217	89086	56824
40°	37371	63147	36084
45°	24380	30603	23199
50°	16183	15239	15125
55°	10990	7942	10194
60°	7440	4857	6837
65°	5206	3596	4676
70°	3336	2669	3109
75°	2346	2046	2046
80°	1760	1314	1314
85°	889	1729	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 30603 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.0	8.3
10°-20°	806.0	22.5
20°-30°	1088.1	30.4
30°-40°	849.2	23.7
40°-50°	355.7	9.9
50°-60°	120.6	3.4
60°-70°	43.0	1.2
70°-80°	14.0	0.4
80°-90°	2.9	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°	2191.1	61.3
0°-40°	3040.2	85.0
0°-60°	3516.5	98.3
0°-90°	3576.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3576.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3180	3180	3180	3180	3180	
5°	3143	3146	3148	3143	3146	297
15°	2884	2877	2868	2864	2866	811
25°	2414	2404	2393	2393	2388	1086
35°	1108	1300	1695	1298	1081	728
45°	400	429	503	409	381	321
55°	146	134	106	127	136	135
65°	51	42	35	41	46	53
75°	14	12	12	12	12	16
85°	2	2	4	2	2	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3179.9	3179.9	3179.9	3179.9	3179.9
1°	3176.4	3181.7	3178.1	3179.9	3185.2
2°	3176.4	3176.4	3179.9	3178.1	3179.9
3°	3172.8	3172.8	3169.3	3169.3	3169.3
4°	3162.3	3162.3	3162.3	3158.7	3165.8
5°	3142.9	3146.4	3148.2	3142.9	3146.4
6°	3135.8	3137.6	3134.0	3132.3	3128.8
7°	3119.9	3114.6	3119.9	3107.6	3109.4
8°	3093.5	3093.5	3090.0	3086.4	3082.9
9°	3068.8	3068.8	3065.3	3060.0	3056.4
10°	3047.6	3042.3	3040.6	3035.3	3033.5
11°	3022.9	3012.4	3010.6	3005.3	3005.3
12°	2993.0	2987.7	2975.3	2973.6	2973.6
13°	2955.9	2950.6	2941.8	2934.8	2941.8
14°	2920.6	2917.1	2901.2	2906.5	2904.8
15°	2883.6	2876.6	2867.7	2864.2	2866.0
16°	2850.1	2837.8	2825.4	2827.2	2837.8
17°	2814.8	2797.2	2784.8	2783.1	2788.4
18°	2770.7	2756.6	2737.2	2744.3	2744.3
19°	2726.6	2707.2	2694.9	2693.1	2700.2
20°	2689.6	2659.6	2650.8	2649.0	2663.1
22.5°	2562.6	2532.6	2525.6	2532.6	2546.7
25°	2414.5	2403.9	2393.3	2393.3	2388.0
27.5°	2204.6	2229.3	2241.6	2216.9	2176.4
30°	1895.9	2000.0	2086.4	1987.7	1890.7
32.5°	1493.8	1709.0	1908.3	1703.7	1458.6
35°	1107.6	1299.8	1694.9	1298.1	1081.1
37.5°	853.6	977.1	1440.9	961.2	828.9
40°	664.9	737.2	1123.5	728.4	642.0
42.5°	516.8	562.6	747.8	552.0	499.1
45°	400.4	428.6	502.6	409.2	381.0
47.5°	312.2	324.5	343.9	310.4	294.5
50°	241.6	241.6	227.5	232.8	225.8
52.5°	186.9	179.9	153.4	169.3	172.8
55°	146.4	134.0	105.8	127.0	135.8
57.5°	111.1	98.8	75.8	93.5	102.3
60°	86.4	74.1	56.4	70.5	79.4
62.5°	67.0	56.4	44.1	52.9	60.0
65°	51.1	42.3	35.3	40.6	45.9
67.5°	38.8	31.7	26.5	30.0	35.3
70°	26.5	24.7	21.2	22.9	24.7
72.5°	19.4	17.6	15.9	15.9	17.6
75°	14.1	12.3	12.3	12.3	12.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	3.5	3.5	3.5	3.5	3.5
85°	1.8	1.8	3.5	1.8	1.8
87.5°	1.8	1.8	1.8	1.8	1.8
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°	8.8	8.8	8.8	8.8	8.8
80°	7.1	7.1	5.3	5.3	5.3

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Scaled Data Report



(END OF REPORT)