

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: P838768

Luminaire Tested: HCSQ660D010-HM64560935-61SQMW

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838768  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560935-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

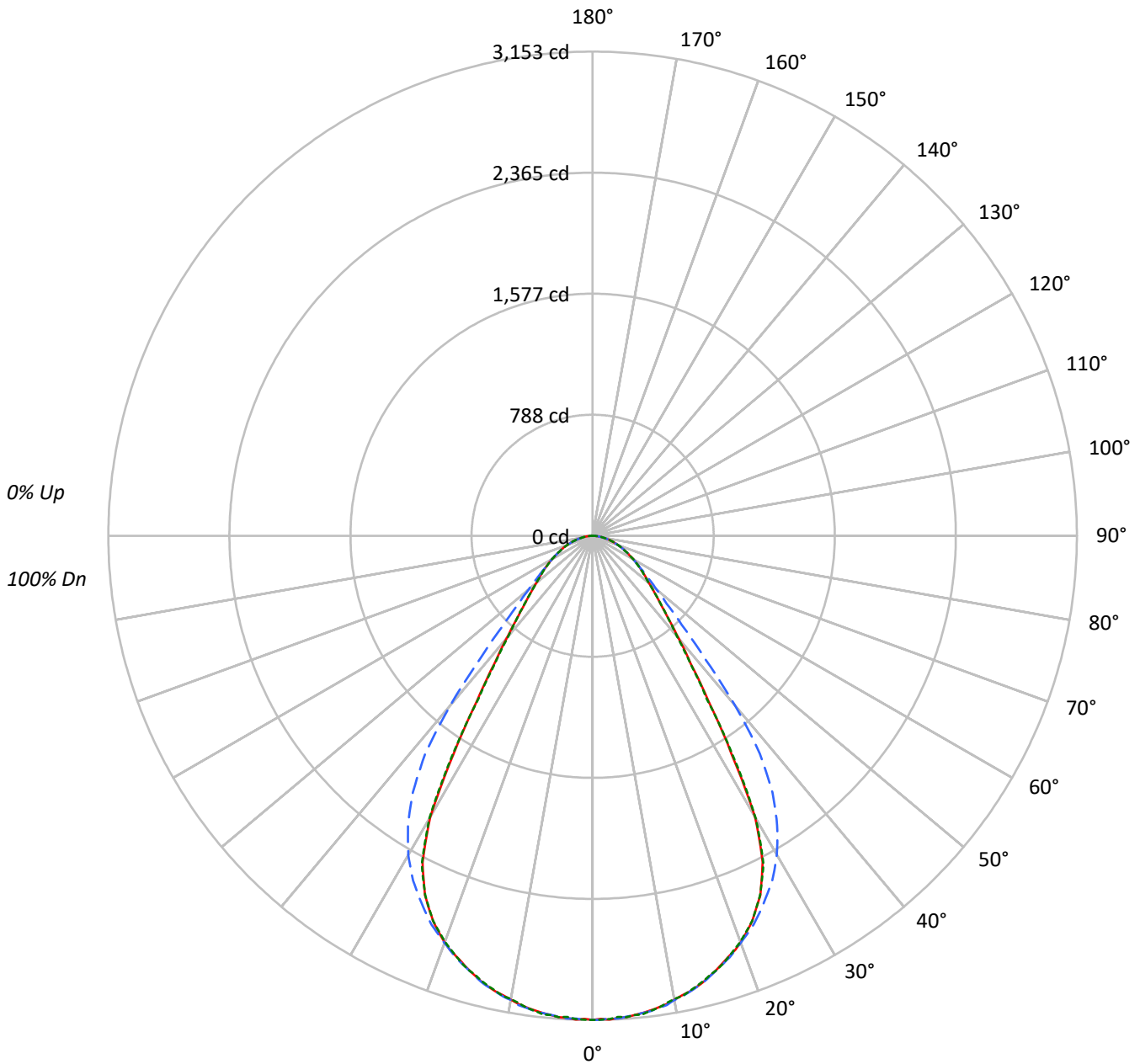
Lumens per Lamp: N/A  
Luminaire Lumens: 4651.1 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 56  
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																			
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71																			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	67	73	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41																			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38																			

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

	0°	45°	90°
0°	135763	135763	135763
5°	135426	135331	135426
10°	134102	134198	133910
15°	132105	132204	131909
20°	129131	129232	128829
25°	122686	125304	122581
30°	105061	119299	105717
35°	69029	107251	67988
40°	48797	80874	47932
45°	37837	49777	38105
50°	32178	36311	31884
55°	28945	29771	28945
60°	26186	26186	26186
65°	24023	23799	23799
70°	21917	21917	22194
75°	20528	19796	20162
80°	18026	18026	18026
85°	15215	15215	15215

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 49777 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.3	6.4
10°-20°	834.8	17.9
20°-30°	1189.6	25.6
30°-40°	1014.4	21.8
40°-50°	561.2	12.1
50°-60°	353.5	7.6
60°-70°	234.7	5.0
70°-80°	129.0	2.8
80°-90°	36.7	0.8
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°	2321.8	49.9
0°-40°	3336.1	71.7
0°-60°	4250.7	91.4
0°-90°	4651.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4651.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3153	3153	3153	3153	3153	
5°	3133	3138	3131	3127	3133	297
15°	2964	2964	2966	2964	2959	834
25°	2582	2613	2638	2611	2580	1167
35°	1313	1549	2040	1551	1294	854
45°	621	681	818	676	626	493
55°	386	392	397	390	386	346
65°	236	238	234	236	234	235
75°	123	121	119	121	121	130
85°	31	31	31	33	31	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3153.2	3153.2	3153.2	3153.2	3153.2
1°	3146.6	3151.0	3151.0	3148.8	3151.0
2°	3153.2	3146.6	3146.6	3146.6	3148.8
3°	3144.4	3148.8	3148.8	3142.2	3137.8
4°	3142.2	3140.0	3140.0	3146.6	3142.2
5°	3133.4	3137.8	3131.2	3126.8	3133.4
6°	3124.6	3126.8	3124.6	3126.8	3133.4
7°	3113.6	3120.2	3118.0	3115.8	3115.8
8°	3100.3	3109.2	3104.8	3104.8	3102.6
9°	3087.1	3089.3	3093.7	3093.7	3080.5
10°	3067.3	3073.9	3069.5	3071.7	3062.9
11°	3049.7	3058.5	3056.3	3051.9	3054.1
12°	3034.2	3038.6	3036.4	3029.8	3032.0
13°	3014.4	3018.8	3016.6	3016.6	3010.0
14°	2992.4	2988.0	2994.6	2990.2	2988.0
15°	2963.7	2963.7	2965.9	2963.7	2959.3
16°	2937.3	2939.5	2939.5	2937.3	2939.5
17°	2906.4	2915.3	2913.0	2908.6	2910.8
18°	2877.8	2884.4	2886.6	2884.4	2877.8
19°	2851.4	2855.8	2853.6	2844.7	2844.7
20°	2818.3	2820.5	2820.5	2816.1	2811.7
22.5°	2714.7	2730.2	2741.2	2732.4	2714.7
25°	2582.5	2613.4	2637.6	2611.2	2580.3
27.5°	2397.4	2459.1	2531.8	2465.7	2408.4
30°	2113.2	2254.2	2399.6	2267.4	2126.4
32.5°	1681.3	1958.9	2236.6	1985.4	1707.7
35°	1313.3	1549.1	2040.5	1551.3	1293.5
37.5°	1048.9	1216.3	1789.3	1205.3	1037.9
40°	868.2	980.6	1438.9	976.2	852.8
42.5°	725.0	810.9	1077.5	802.1	725.0
45°	621.4	680.9	817.5	676.5	625.8
47.5°	544.3	581.7	654.4	579.5	544.3
50°	480.4	502.4	542.1	500.2	476.0
52.5°	429.7	442.9	458.3	438.5	425.3
55°	385.6	392.2	396.6	390.0	385.6
57.5°	343.7	348.2	346.0	343.7	341.5
60°	304.1	306.3	304.1	306.3	304.1
62.5°	268.8	271.0	266.6	268.8	266.6
65°	235.8	238.0	233.6	235.8	233.6
67.5°	204.9	204.9	204.9	204.9	202.7
70°	174.1	176.3	174.1	176.3	176.3
72.5°	147.6	147.6	145.4	147.6	147.6
75°	123.4	121.2	119.0	121.2	121.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	52.9	52.9	50.7	52.9	52.9
85°	30.8	30.8	30.8	33.1	30.8
87.5°	15.4	13.2	13.2	15.4	15.4
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°	97.0	97.0	94.8	97.0	97.0
80°	72.7	74.9	72.7	74.9	72.7

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Scaled Data Report



(END OF REPORT)