

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: P838743

Luminaire Tested: HCSQ660D010-HM64560830-61SQMW

Issue Date: 5/21/2024



**Test Information**

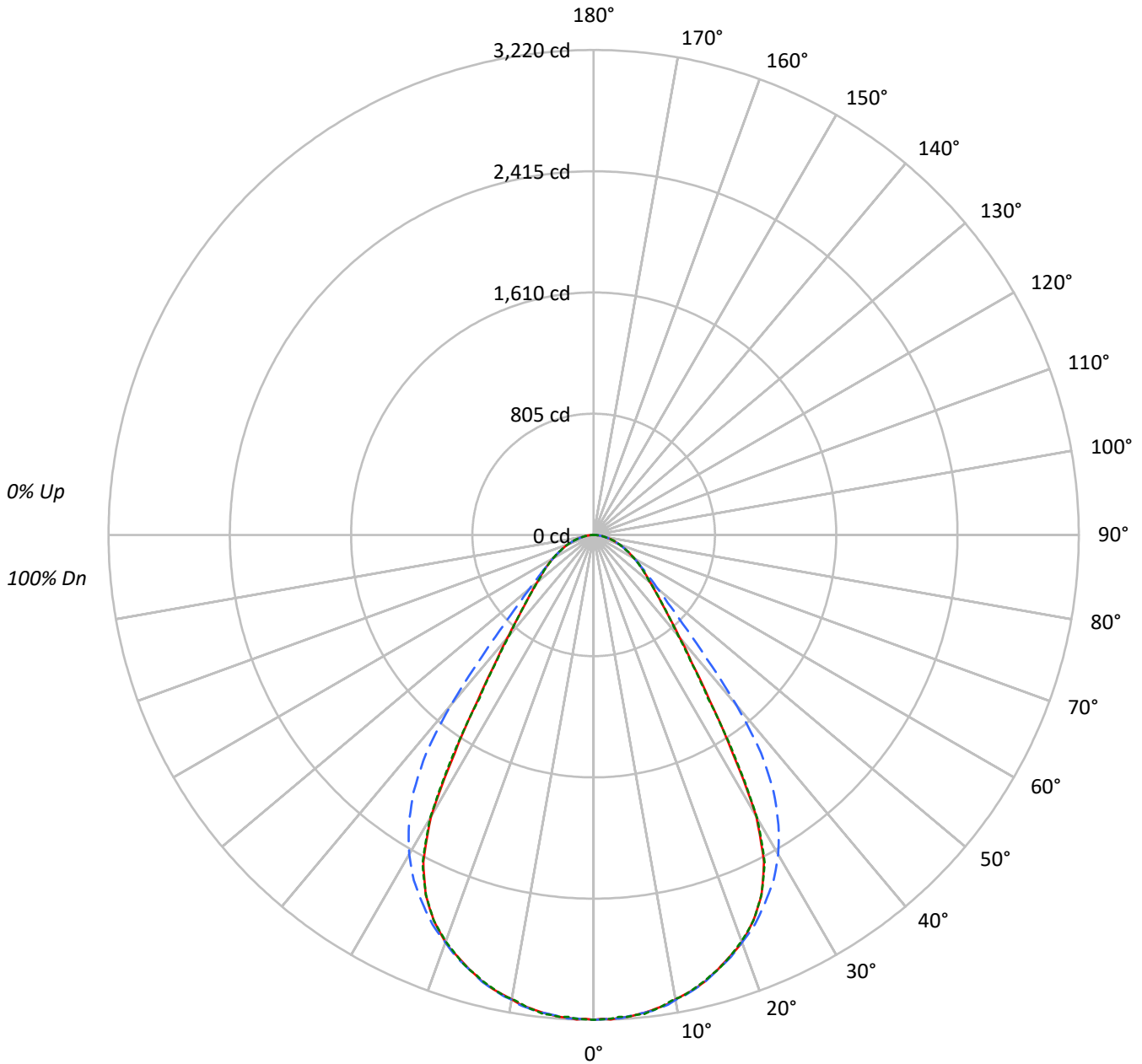
Test Method: LM-79-2019  
Report Number: P838743  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560830-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4748.9 lumens  
Efficiency: N/A  
Efficacy: 84.8 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°	138622	138622	138622
5°	138274	138179	138274
10°	136922	137022	136725
15°	134887	134985	134686
20°	131848	131949	131537
25°	125266	127940	125161
30°	107268	121810	107939
35°	70479	109506	69418
40°	49820	82577	48938
45°	38635	50825	38909
50°	32855	37075	32554
55°	29553	30401	29553
60°	26738	26738	26738
65°	24522	24298	24298
70°	22370	22370	22660
75°	20961	20212	20578
80°	18398	18398	18398
85°	15561	15561	15561

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 50825 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	303.5	6.4
10°-20°	852.4	17.9
20°-30°	1214.7	25.6
30°-40°	1035.7	21.8
40°-50°	573.0	12.1
50°-60°	360.9	7.6
60°-70°	239.6	5.0
70°-80°	131.6	2.8
80°-90°	37.5	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°	2370.6	49.9
0°-40°	3406.3	71.7
0°-60°	4340.2	91.4
0°-90°	4748.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4748.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3220	3220	3220	3220	3220	
5°	3199	3204	3197	3193	3199	303
15°	3026	3026	3028	3026	3022	852
25°	2637	2668	2693	2666	2635	1191
35°	1341	1582	2083	1584	1321	872
45°	634	695	835	691	639	503
55°	394	400	405	398	394	354
65°	241	243	238	241	238	240
75°	126	124	122	124	124	132
85°	32	32	32	34	32	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3219.6	3219.6	3219.6	3219.6	3219.6
1°	3212.8	3217.3	3217.3	3215.1	3217.3
2°	3219.6	3212.8	3212.8	3212.8	3215.1
3°	3210.6	3215.1	3215.1	3208.3	3203.8
4°	3208.3	3206.1	3206.1	3212.8	3208.3
5°	3199.3	3203.8	3197.1	3192.6	3199.3
6°	3190.3	3192.6	3190.3	3192.6	3199.3
7°	3179.1	3185.8	3183.6	3181.3	3181.3
8°	3165.6	3174.6	3170.1	3170.1	3167.8
9°	3152.1	3154.3	3158.8	3158.8	3145.3
10°	3131.8	3138.6	3134.1	3136.3	3127.3
11°	3113.8	3122.8	3120.6	3116.1	3118.3
12°	3098.1	3102.6	3100.3	3093.6	3095.8
13°	3077.8	3082.3	3080.1	3080.1	3073.3
14°	3055.3	3050.8	3057.6	3053.1	3050.8
15°	3026.1	3026.1	3028.3	3026.1	3021.6
16°	2999.1	3001.3	3001.3	2999.1	3001.3
17°	2967.6	2976.6	2974.3	2969.8	2972.1
18°	2938.3	2945.1	2947.3	2945.1	2938.3
19°	2911.3	2915.8	2913.6	2904.6	2904.6
20°	2877.6	2879.8	2879.8	2875.3	2870.8
22.5°	2771.8	2787.6	2798.8	2789.8	2771.8
25°	2636.8	2668.3	2693.1	2666.1	2634.6
27.5°	2447.9	2510.9	2585.1	2517.6	2459.1
30°	2157.6	2301.6	2450.1	2315.1	2171.1
32.5°	1716.7	2000.1	2283.6	2027.1	1743.7
35°	1340.9	1581.7	2083.4	1583.9	1320.7
37.5°	1070.9	1241.9	1826.9	1230.7	1059.7
40°	886.4	1001.2	1469.2	996.7	870.7
42.5°	740.2	828.0	1100.2	819.0	740.2
45°	634.5	695.2	834.7	690.7	639.0
47.5°	555.7	594.0	668.2	591.7	555.7
50°	490.5	513.0	553.5	510.7	486.0
52.5°	438.7	452.2	468.0	447.7	434.2
55°	393.7	400.5	405.0	398.2	393.7
57.5°	351.0	355.5	353.2	351.0	348.7
60°	310.5	312.7	310.5	312.7	310.5
62.5°	274.5	276.7	272.2	274.5	272.2
65°	240.7	243.0	238.5	240.7	238.5
67.5°	209.2	209.2	209.2	209.2	207.0
70°	177.7	180.0	177.7	180.0	180.0
72.5°	150.7	150.7	148.5	150.7	150.7
75°	126.0	123.7	121.5	123.7	123.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	54.0	54.0	51.7	54.0	54.0
85°	31.5	31.5	31.5	33.7	31.5
87.5°	15.7	13.5	13.5	15.7	15.7
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°	99.0	99.0	96.7	99.0	99.0
80°	74.2	76.5	74.2	76.5	74.2

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Scaled Data Report



(END OF REPORT)