

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: P838762

Luminaire Tested: HCSQ660D010-HM64560930-61SQMB

Issue Date: 5/21/2024



**Test Information**

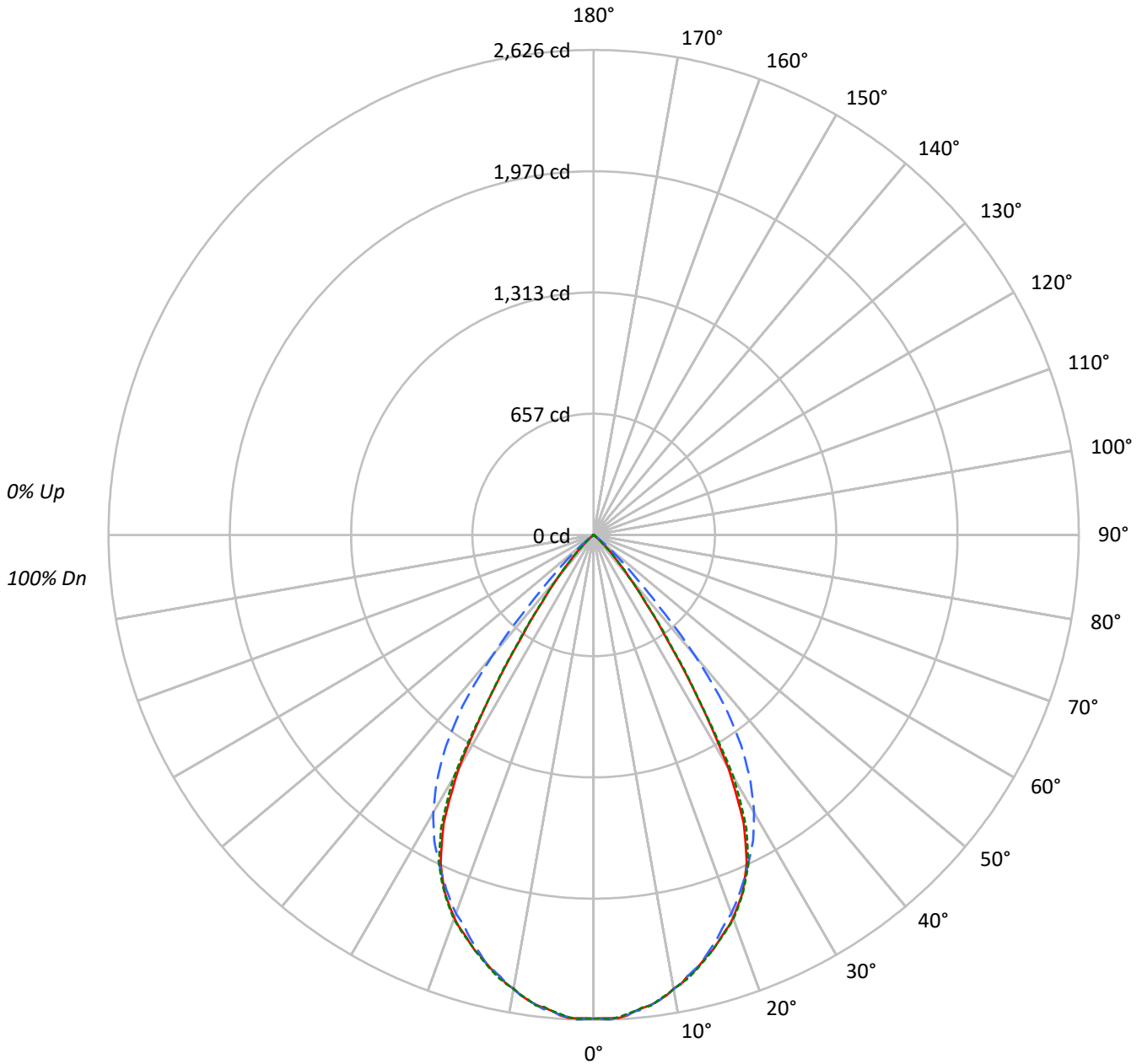
Test Method: LM-79-2019  
Report Number: P838762  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560930-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2603.6 lumens  
Efficiency: N/A  
Efficacy: 46.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03  
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 (Ain): 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								
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81								
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70								
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65								
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60								
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56								
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53								
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50								

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

	0°	45°	90°
0°	112771	112771	112771
5°	111819	111914	111819
10°	109020	109208	109208
15°	105272	104986	105557
20°	101095	99926	101388
25°	93094	93802	94001
30°	72566	86318	75315
35°	36793	73139	38133
40°	16744	47836	16744
45°	6479	18005	6351
50°	998	5700	998
55°	323	1118	323
60°	181	181	181
65°	214	0	214
70°	0	0	264
75°	0	0	349
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 18005 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.6	9.4
10°-20°	663.2	25.5
20°-30°	894.1	34.3
30°-40°	628.6	24.1
40°-50°	160.5	6.2
50°-60°	11.1	0.4
60°-70°	1.3	0.1
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	1801.9	69.2
0°-40°	2430.5	93.4
0°-60°	2602.1	99.9
0°-90°	2603.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2603.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2619	2619	2619	2619	2619	
5°	2587	2592	2589	2592	2587	244
15°	2362	2358	2355	2362	2368	665
25°	1960	1966	1974	1981	1979	876
35°	700	928	1392	951	726	471
45°	106	160	296	162	104	93
55°	4	4	15	4	4	5
65°	2	2	0	2	2	2
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2619.2	2619.2	2619.2	2619.2	2619.2
1°	2617.0	2619.2	2621.3	2621.3	2619.2
2°	2619.2	2612.8	2625.5	2619.2	2621.3
3°	2619.2	2606.4	2612.8	2617.0	2614.9
4°	2608.5	2600.0	2606.4	2604.3	2600.0
5°	2587.2	2591.5	2589.4	2591.5	2587.2
6°	2574.5	2578.7	2583.0	2576.6	2570.2
7°	2563.8	2561.7	2563.8	2568.1	2568.1
8°	2544.7	2548.9	2544.7	2546.8	2540.4
9°	2523.4	2523.4	2523.4	2527.7	2521.3
10°	2493.6	2504.3	2497.9	2502.1	2497.9
11°	2478.7	2474.5	2474.5	2476.6	2474.5
12°	2442.6	2446.8	2444.7	2448.9	2455.3
13°	2423.4	2425.5	2417.0	2427.7	2427.7
14°	2393.6	2391.5	2395.8	2393.6	2397.9
15°	2361.7	2357.5	2355.3	2361.7	2368.1
16°	2338.3	2327.7	2321.3	2329.8	2338.3
17°	2304.3	2293.6	2285.1	2302.1	2304.3
18°	2270.2	2266.0	2244.7	2266.0	2276.6
19°	2242.6	2227.7	2208.5	2231.9	2244.7
20°	2206.4	2193.6	2180.9	2193.6	2212.8
22.5°	2102.1	2091.5	2080.9	2095.8	2106.4
25°	1959.6	1966.0	1974.5	1980.9	1978.7
27.5°	1757.5	1814.9	1868.1	1834.1	1789.4
30°	1459.6	1604.3	1736.2	1627.7	1514.9
32.5°	1057.5	1304.3	1578.7	1353.2	1068.1
35°	700.0	927.7	1391.5	951.1	725.5
37.5°	455.3	623.4	1161.7	625.5	476.6
40°	297.9	406.4	851.1	414.9	297.9
42.5°	183.0	257.4	517.0	268.1	183.0
45°	106.4	159.6	295.7	161.7	104.3
47.5°	48.9	87.2	168.1	85.1	51.1
50°	14.9	38.3	85.1	38.3	14.9
52.5°	6.4	10.6	40.4	10.6	6.4
55°	4.3	4.3	14.9	4.3	4.3
57.5°	4.3	2.1	4.3	4.3	4.3
60°	2.1	2.1	2.1	2.1	2.1
62.5°	2.1	2.1	2.1	2.1	2.1
65°	2.1	2.1	0.0	2.1	2.1
67.5°	2.1	0.0	0.0	0.0	2.1
70°	0.0	0.0	0.0	0.0	2.1
72.5°	0.0	0.0	0.0	0.0	2.1
75°	0.0	0.0	0.0	0.0	2.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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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77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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(END OF REPORT)