

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: P838737

Luminaire Tested: HCSQ660D010-HM64560827-61SQMB

Issue Date: 5/21/2024

**Test Information**

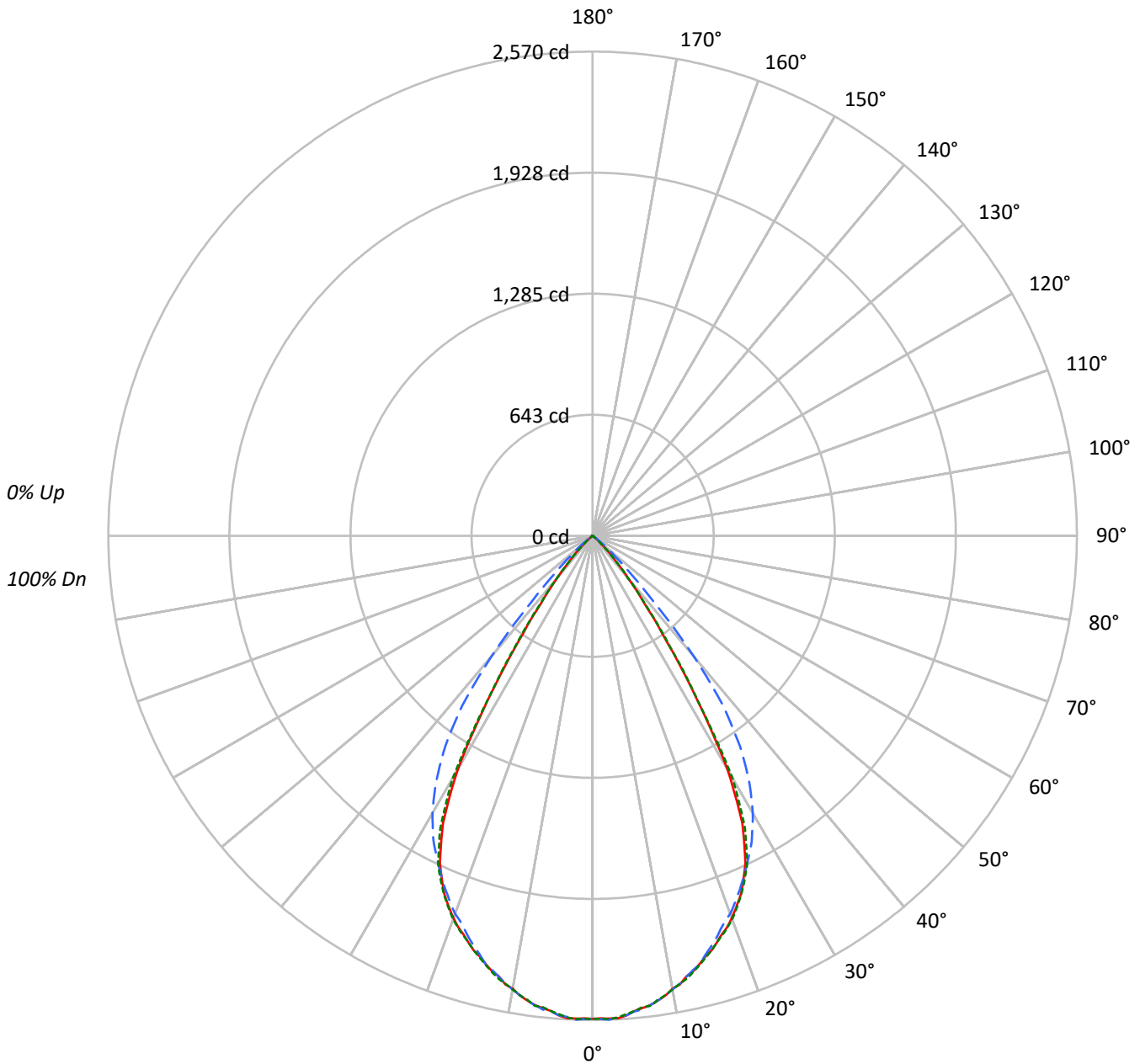
Test Method: LM-79-2019  
Report Number: P838737  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560827-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2548.9 lumens  
Efficiency: N/A  
Efficacy: 45.5 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 (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					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	100	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81	81	81	81	81	81		
	4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75	75	75	75	75	75		
	5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70	70	70	70	70	70		
	6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65	65	65	65	65	65		
	7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	60	60	60	60	60		
	8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56	56	56	56	56	56		
	9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53	53	53	53	53	53		
	10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50	50	50	50	50	50		

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

	0°	45°	90°
0°	110399	110399	110399
5°	109472	109563	109472
10°	106729	106913	106913
15°	103061	102780	103337
20°	98969	97823	99257
25°	91137	91830	92030
30°	71040	84503	73734
35°	36020	71604	37334
40°	16389	46830	16389
45°	6339	17628	6217
50°	978	5580	978
55°	315	1096	315
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: 17628 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.4	9.4
10°-20°	649.3	25.5
20°-30°	875.3	34.3
30°-40°	615.4	24.1
40°-50°	157.1	6.2
50°-60°	10.9	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°	1764.0	69.2
0°-40°	2379.4	93.4
0°-60°	2547.4	99.9
0°-90°	2548.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2548.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2564	2564	2564	2564	2564	
5°	2533	2537	2535	2537	2533	239
15°	2312	2308	2306	2312	2318	651
25°	1918	1925	1933	1939	1937	857
35°	685	908	1362	931	710	461
45°	104	156	290	158	102	91
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2564.1	2564.1	2564.1	2564.1	2564.1
1°	2562.0	2564.1	2566.2	2566.2	2564.1
2°	2564.1	2557.9	2570.4	2564.1	2566.2
3°	2564.1	2551.6	2557.9	2562.0	2560.0
4°	2553.7	2545.4	2551.6	2549.5	2545.4
5°	2532.9	2537.1	2535.0	2537.1	2532.9
6°	2520.4	2524.6	2528.7	2522.5	2516.2
7°	2510.0	2507.9	2510.0	2514.1	2514.1
8°	2491.2	2495.4	2491.2	2493.3	2487.1
9°	2470.4	2470.4	2470.4	2474.6	2468.3
10°	2441.2	2451.6	2445.4	2449.6	2445.4
11°	2426.7	2422.5	2422.5	2424.6	2422.5
12°	2391.2	2395.4	2393.3	2397.5	2403.7
13°	2372.5	2374.6	2366.2	2376.7	2376.7
14°	2343.3	2341.3	2345.4	2343.3	2347.5
15°	2312.1	2307.9	2305.8	2312.1	2318.3
16°	2289.2	2278.8	2272.5	2280.8	2289.2
17°	2255.9	2245.4	2237.1	2253.8	2255.9
18°	2222.5	2218.4	2197.5	2218.4	2228.8
19°	2195.4	2180.9	2162.1	2185.0	2197.5
20°	2160.0	2147.5	2135.0	2147.5	2166.3
22.5°	2058.0	2047.6	2037.1	2051.7	2062.1
25°	1918.4	1924.7	1933.0	1939.2	1937.2
27.5°	1720.5	1776.8	1828.8	1795.5	1751.8
30°	1428.9	1570.6	1699.7	1593.5	1483.1
32.5°	1035.2	1276.9	1545.6	1324.8	1045.6
35°	685.3	908.2	1362.3	931.1	710.3
37.5°	445.8	610.3	1137.3	612.4	466.6
40°	291.6	397.8	833.2	406.2	291.6
42.5°	179.1	252.0	506.2	262.5	179.1
45°	104.1	156.2	289.5	158.3	102.1
47.5°	47.9	85.4	164.6	83.3	50.0
50°	14.6	37.5	83.3	37.5	14.6
52.5°	6.2	10.4	39.6	10.4	6.2
55°	4.2	4.2	14.6	4.2	4.2
57.5°	4.2	2.1	4.2	4.2	4.2
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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Scaled Data Report



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