

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: P838742

Luminaire Tested: HCSQ660D010-HM64560830-61SQMB

Issue Date: 5/21/2024



**Test Information**

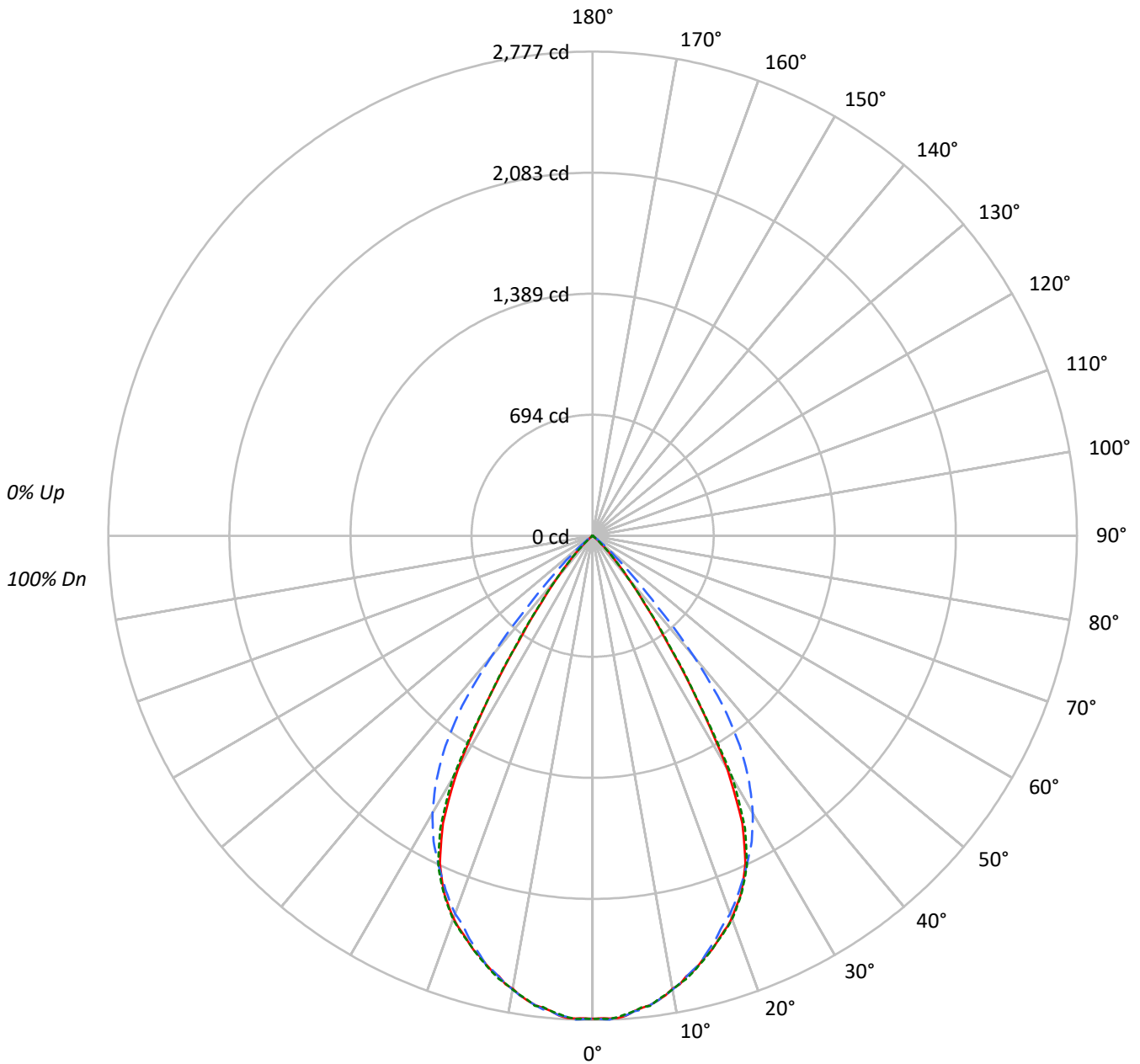
Test Method: LM-79-2019  
Report Number: P838742  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560830-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2753.6 lumens  
Efficiency: N/A  
Efficacy: 49.2 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									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	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°	119264	119264	119264
5°	118259	118358	118259
10°	115298	115495	115495
15°	111334	111035	111637
20°	106918	105681	107225
25°	98453	99203	99417
30°	76742	91289	79651
35°	38911	77349	40330
40°	17705	50590	17705
45°	6850	19046	6716
50°	1058	6028	1058
55°	338	1186	338
60°	198	198	198
65°	234	0	234
70°	0	0	290
75°	0	0	383
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 19046 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	258.6	9.4
10°-20°	701.4	25.5
20°-30°	945.6	34.3
30°-40°	664.8	24.1
40°-50°	169.8	6.2
50°-60°	11.7	0.4
60°-70°	1.4	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°	1905.6	69.2
0°-40°	2570.4	93.3
0°-60°	2752.0	99.9
0°-90°	2753.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2753.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2770	2770	2770	2770	2770	
5°	2736	2741	2738	2741	2736	259
15°	2498	2493	2491	2498	2504	703
25°	2072	2079	2088	2095	2093	926
35°	740	981	1472	1006	767	498
45°	112	169	313	171	110	98
55°	4	4	16	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°	2770.0	2770.0	2770.0	2770.0	2770.0
1°	2767.7	2770.0	2772.2	2772.2	2770.0
2°	2770.0	2763.2	2776.7	2770.0	2772.2
3°	2770.0	2756.5	2763.2	2767.7	2765.5
4°	2758.7	2749.7	2756.5	2754.2	2749.7
5°	2736.2	2740.7	2738.5	2740.7	2736.2
6°	2722.7	2727.2	2731.7	2725.0	2718.2
7°	2711.5	2709.2	2711.5	2716.0	2716.0
8°	2691.2	2695.7	2691.2	2693.5	2686.7
9°	2668.7	2668.7	2668.7	2673.2	2666.5
10°	2637.2	2648.5	2641.7	2646.2	2641.7
11°	2621.5	2617.0	2617.0	2619.2	2617.0
12°	2583.2	2587.7	2585.5	2590.0	2596.7
13°	2563.0	2565.2	2556.2	2567.5	2567.5
14°	2531.5	2529.2	2533.7	2531.5	2536.0
15°	2497.7	2493.2	2491.0	2497.7	2504.5
16°	2473.0	2461.7	2455.0	2464.0	2473.0
17°	2437.0	2425.7	2416.7	2434.7	2437.0
18°	2401.0	2396.5	2374.0	2396.5	2407.7
19°	2371.7	2356.0	2335.7	2360.5	2374.0
20°	2333.5	2320.0	2306.5	2320.0	2340.2
22.5°	2223.2	2211.9	2200.7	2216.4	2227.7
25°	2072.4	2079.2	2088.2	2094.9	2092.7
27.5°	1858.7	1919.4	1975.7	1939.7	1892.4
30°	1543.6	1696.6	1836.2	1721.4	1602.1
32.5°	1118.3	1379.4	1669.6	1431.1	1129.6
35°	740.3	981.1	1471.6	1005.8	767.3
37.5°	481.5	659.3	1228.6	661.6	504.0
40°	315.0	429.8	900.1	438.8	315.0
42.5°	193.5	272.3	546.8	283.5	193.5
45°	112.5	168.8	312.8	171.0	110.3
47.5°	51.8	92.3	177.8	90.0	54.0
50°	15.8	40.5	90.0	40.5	15.8
52.5°	6.8	11.3	42.8	11.3	6.8
55°	4.5	4.5	15.8	4.5	4.5
57.5°	4.5	2.3	4.5	4.5	4.5
60°	2.3	2.3	2.3	2.3	2.3
62.5°	2.3	2.3	2.3	2.3	2.3
65°	2.3	2.3	0.0	2.3	2.3
67.5°	2.3	0.0	0.0	0.0	2.3
70°	0.0	0.0	0.0	0.0	2.3
72.5°	0.0	0.0	0.0	0.0	2.3
75°	0.0	0.0	0.0	0.0	2.3



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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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