

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: P838672

Luminaire Tested: HCSQ650D010-HM64560840-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838672
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: HCSQ650D010-HM64560840-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

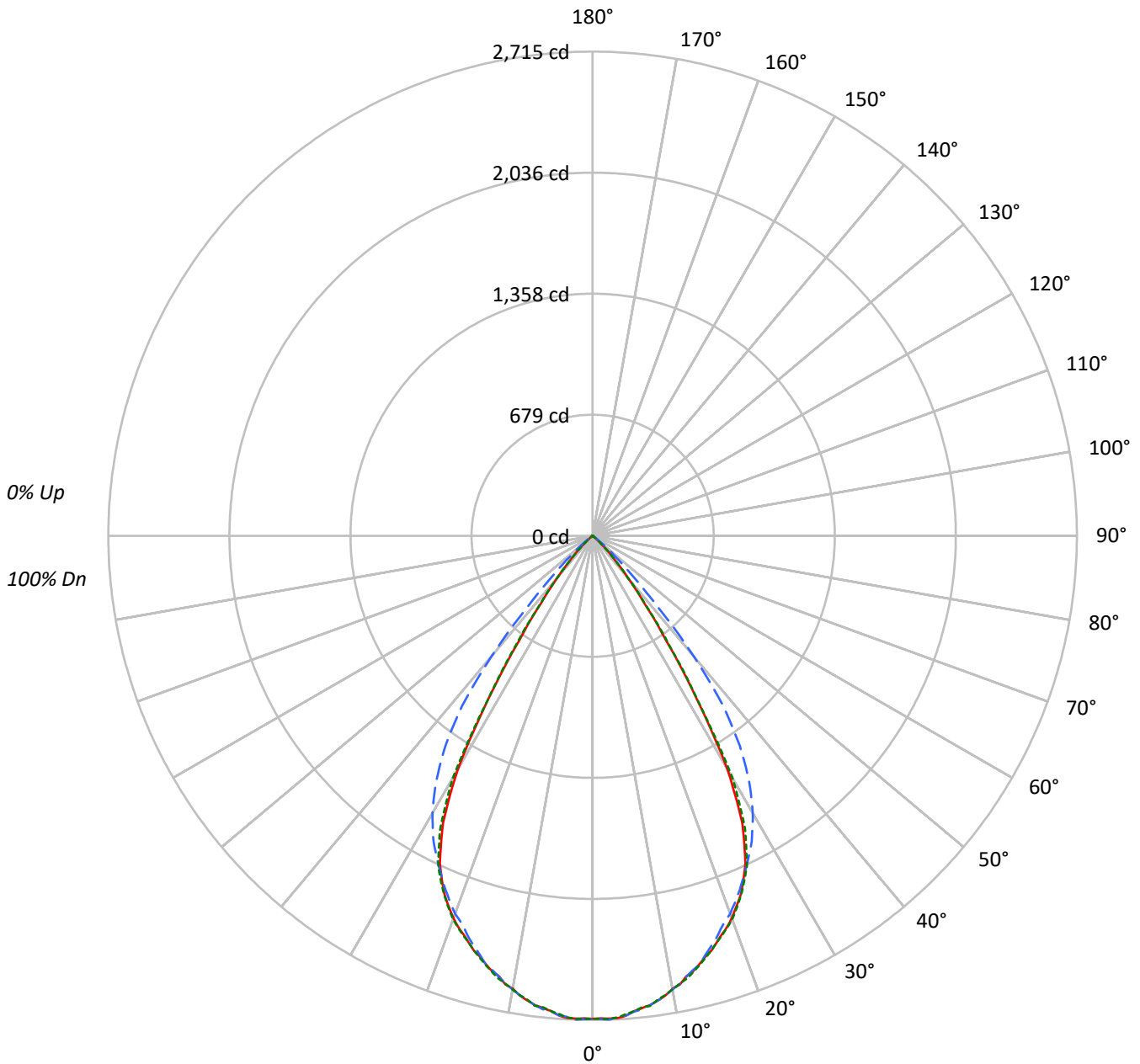
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2692.4 lumens
Efficiency: N/A
Efficacy: 54.2 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): 49.7
Input Voltage (V): NR
Input Current (A_{in}): 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					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			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87					87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81					81			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75					75			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70					70			
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65					65			
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60					60			
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56					56			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53					53			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50					50			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	116621	116621	116621
5°	115640	115735	115640
10°	112740	112933	112933
15°	108864	108570	109158
20°	104545	103335	104847
25°	96272	97004	97213
30°	75042	89261	77886
35°	38049	75636	39437
40°	17311	49466	17311
45°	6698	18620	6564
50°	1032	5894	1032
55°	330	1156	330
60°	189	189	189
65°	224	0	224
70°	0	0	277
75°	0	0	366
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18620 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.9	9.4
10°-20°	685.9	25.5
20°-30°	924.6	34.3
30°-40°	650.1	24.1
40°-50°	166.0	6.2
50°-60°	11.5	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°	1863.4	69.2
0°-40°	2513.4	93.4
0°-60°	2690.9	99.9
0°-90°	2692.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2692.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2709	2709	2709	2709	2709	
5°	2676	2680	2678	2680	2676	253
15°	2442	2438	2436	2442	2449	687
25°	2026	2033	2042	2048	2046	906
35°	724	959	1439	984	750	487
45°	110	165	306	167	108	96
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°	2708.6	2708.6	2708.6	2708.6	2708.6
1°	2706.4	2708.6	2710.8	2710.8	2708.6
2°	2708.6	2702.0	2715.2	2708.6	2710.8
3°	2708.6	2695.4	2702.0	2706.4	2704.2
4°	2697.6	2688.8	2695.4	2693.2	2688.8
5°	2675.6	2680.0	2677.8	2680.0	2675.6
6°	2662.3	2666.7	2671.2	2664.5	2657.9
7°	2651.3	2649.1	2651.3	2655.7	2655.7
8°	2631.5	2635.9	2631.5	2633.7	2627.1
9°	2609.5	2609.5	2609.5	2613.9	2607.3
10°	2578.7	2589.7	2583.1	2587.5	2583.1
11°	2563.3	2558.9	2558.9	2561.1	2558.9
12°	2525.9	2530.3	2528.1	2532.5	2539.1
13°	2506.1	2508.3	2499.5	2510.5	2510.5
14°	2475.3	2473.1	2477.5	2475.3	2479.7
15°	2442.3	2437.9	2435.7	2442.3	2448.9
16°	2418.1	2407.1	2400.5	2409.3	2418.1
17°	2382.9	2371.9	2363.1	2380.7	2382.9
18°	2347.7	2343.3	2321.3	2343.3	2354.3
19°	2319.1	2303.7	2283.9	2308.1	2321.3
20°	2281.7	2268.5	2255.3	2268.5	2288.3
22.5°	2173.9	2162.9	2151.9	2167.3	2178.3
25°	2026.5	2033.1	2041.9	2048.5	2046.3
27.5°	1817.4	1876.8	1931.9	1896.6	1850.4
30°	1509.4	1659.0	1795.4	1683.2	1566.6
32.5°	1093.5	1348.8	1632.6	1399.4	1104.5
35°	723.9	959.3	1439.0	983.5	750.3
37.5°	470.9	644.7	1201.4	646.9	492.9
40°	308.0	420.3	880.1	429.1	308.0
42.5°	189.2	266.2	534.7	277.2	189.2
45°	110.0	165.0	305.8	167.2	107.8
47.5°	50.6	90.2	173.8	88.0	52.8
50°	15.4	39.6	88.0	39.6	15.4
52.5°	6.6	11.0	41.8	11.0	6.6
55°	4.4	4.4	15.4	4.4	4.4
57.5°	4.4	2.2	4.4	4.4	4.4
60°	2.2	2.2	2.2	2.2	2.2
62.5°	2.2	2.2	2.2	2.2	2.2
65°	2.2	2.2	0.0	2.2	2.2
67.5°	2.2	0.0	0.0	0.0	2.2
70°	0.0	0.0	0.0	0.0	2.2
72.5°	0.0	0.0	0.0	0.0	2.2
75°	0.0	0.0	0.0	0.0	2.2



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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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