

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: P838657

Luminaire Tested: HCSQ650D010-HM64560827-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838657
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-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

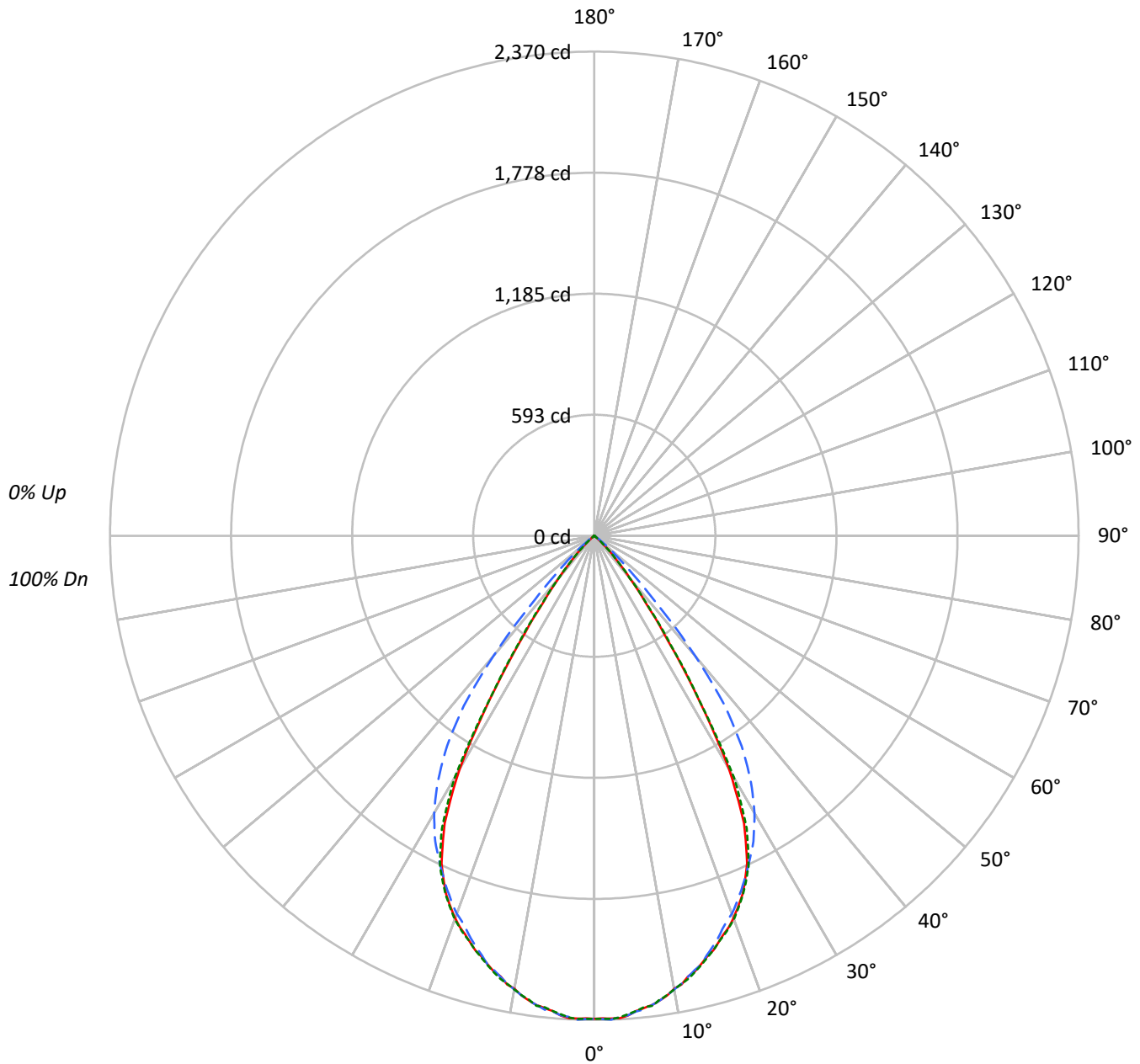
Lumens per Lamp: N/A
Luminaire Lumens: 2350.5 lumens
Efficiency: N/A
Efficacy: 47.3 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (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					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	101809	101809	101809
5°	100954	101036	100954
10°	98427	98593	98593
15°	95042	94783	95296
20°	91267	90213	91532
25°	84044	84685	84866
30°	65511	77925	67997
35°	33219	66027	34428
40°	15114	43182	15114
45°	5845	16258	5730
50°	898	5144	898
55°	285	1006	285
60°	164	164	164
65°	194	0	194
70°	0	0	239
75°	0	0	316
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 16258 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.8	9.4
10°-20°	598.8	25.5
20°-30°	807.2	34.3
30°-40°	567.5	24.1
40°-50°	144.9	6.2
50°-60°	10.0	0.4
60°-70°	1.2	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°	1626.7	69.2
0°-40°	2194.2	93.4
0°-60°	2349.1	99.9
0°-90°	2350.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2350.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2365	2365	2365	2365	2365	
5°	2336	2340	2338	2340	2336	221
15°	2132	2128	2126	2132	2138	600
25°	1769	1775	1783	1788	1786	791
35°	632	838	1256	859	655	425
45°	96	144	267	146	94	84
55°	4	4	13	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°	2364.6	2364.6	2364.6	2364.6	2364.6
1°	2362.7	2364.6	2366.5	2366.5	2364.6
2°	2364.6	2358.8	2370.3	2364.6	2366.5
3°	2364.6	2353.1	2358.8	2362.7	2360.7
4°	2355.0	2347.3	2353.1	2351.1	2347.3
5°	2335.8	2339.6	2337.7	2339.6	2335.8
6°	2324.2	2328.1	2331.9	2326.2	2320.4
7°	2314.6	2312.7	2314.6	2318.5	2318.5
8°	2297.4	2301.2	2297.4	2299.3	2293.5
9°	2278.1	2278.1	2278.1	2282.0	2276.2
10°	2251.3	2260.9	2255.1	2258.9	2255.1
11°	2237.8	2234.0	2234.0	2235.9	2234.0
12°	2205.2	2209.0	2207.1	2210.9	2216.7
13°	2187.9	2189.8	2182.1	2191.7	2191.7
14°	2161.0	2159.0	2162.9	2161.0	2164.8
15°	2132.2	2128.3	2126.4	2132.2	2137.9
16°	2111.0	2101.4	2095.7	2103.3	2111.0
17°	2080.3	2070.7	2063.0	2078.4	2080.3
18°	2049.6	2045.7	2026.5	2045.7	2055.3
19°	2024.6	2011.1	1993.9	2015.0	2026.5
20°	1991.9	1980.4	1968.9	1980.4	1997.7
22.5°	1897.8	1888.2	1878.6	1892.0	1901.7
25°	1769.1	1774.9	1782.6	1788.3	1786.4
27.5°	1586.6	1638.5	1686.5	1655.8	1615.4
30°	1317.7	1448.3	1567.4	1469.5	1367.7
32.5°	954.7	1177.5	1425.3	1221.7	964.3
35°	632.0	837.5	1256.2	858.6	655.0
37.5°	411.1	562.8	1048.8	564.7	430.3
40°	268.9	366.9	768.3	374.6	268.9
42.5°	165.2	232.4	466.8	242.0	165.2
45°	96.0	144.1	267.0	146.0	94.1
47.5°	44.2	78.8	151.7	76.8	46.1
50°	13.4	34.6	76.8	34.6	13.4
52.5°	5.8	9.6	36.5	9.6	5.8
55°	3.8	3.8	13.4	3.8	3.8
57.5°	3.8	1.9	3.8	3.8	3.8
60°	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9
65°	1.9	1.9	0.0	1.9	1.9
67.5°	1.9	0.0	0.0	0.0	1.9
70°	0.0	0.0	0.0	0.0	1.9
72.5°	0.0	0.0	0.0	0.0	1.9
75°	0.0	0.0	0.0	0.0	1.9



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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



Report Generated By 670245859 / DESKTOP-T8S5UU9





— 0°-180° - - 45°-225° - - - 90°-270°







77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)