

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: P838582

Luminaire Tested: HCSQ640D010-HM63040830-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838582
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: HCSQ640D010-HM63040830-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

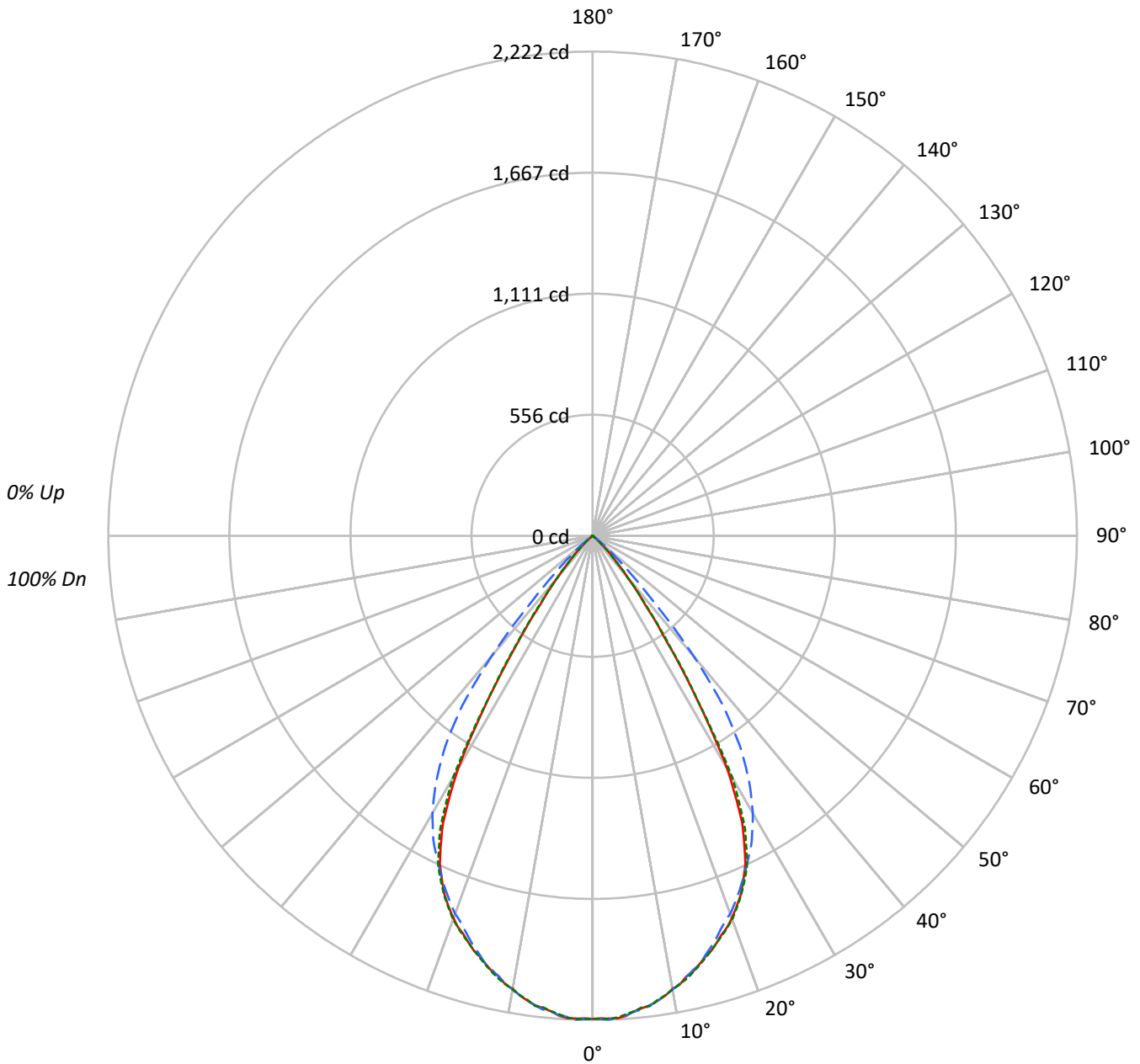
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2203.9 lumens
Efficiency: N/A
Efficacy: 53.8 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): 41
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										
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°	95459	95459	95459
5°	94656	94734	94656
10°	92284	92446	92446
15°	89113	88873	89354
20°	85576	84586	85823
25°	78804	79403	79574
30°	61425	73068	63756
35°	31148	61912	32283
40°	14169	40490	14169
45°	5486	15241	5377
50°	844	4823	844
55°	270	946	270
60°	155	155	155
65°	183	0	183
70°	0	0	227
75°	0	0	299
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 15241 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.0	9.4
10°-20°	561.4	25.5
20°-30°	756.8	34.3
30°-40°	532.1	24.1
40°-50°	135.9	6.2
50°-60°	9.4	0.4
60°-70°	1.1	0.1
70°-80°	0.1	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°	1525.3	69.2
0°-40°	2057.4	93.4
0°-60°	2202.6	99.9
0°-90°	2203.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2203.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2217	2217	2217	2217	2217	
5°	2190	2194	2192	2194	2190	207
15°	1999	1996	1994	1999	2005	563
25°	1659	1664	1671	1677	1675	741
35°	593	785	1178	805	614	399
45°	90	135	250	137	88	79
55°	4	4	13	4	4	4
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°	2217.1	2217.1	2217.1	2217.1	2217.1
1°	2215.3	2217.1	2218.9	2218.9	2217.1
2°	2217.1	2211.7	2222.5	2217.1	2218.9
3°	2217.1	2206.3	2211.7	2215.3	2213.5
4°	2208.1	2200.9	2206.3	2204.5	2200.9
5°	2190.1	2193.7	2191.9	2193.7	2190.1
6°	2179.3	2182.9	2186.5	2181.1	2175.7
7°	2170.3	2168.5	2170.3	2173.9	2173.9
8°	2154.1	2157.7	2154.1	2155.9	2150.5
9°	2136.1	2136.1	2136.1	2139.7	2134.3
10°	2110.8	2119.9	2114.5	2118.1	2114.5
11°	2098.2	2094.6	2094.6	2096.4	2094.6
12°	2067.6	2071.2	2069.4	2073.0	2078.4
13°	2051.4	2053.2	2046.0	2055.0	2055.0
14°	2026.2	2024.4	2028.0	2026.2	2029.8
15°	1999.2	1995.6	1993.8	1999.2	2004.6
16°	1979.4	1970.4	1965.0	1972.2	1979.4
17°	1950.6	1941.5	1934.3	1948.8	1950.6
18°	1921.7	1918.1	1900.1	1918.1	1927.1
19°	1898.3	1885.7	1869.5	1889.3	1900.1
20°	1867.7	1856.9	1846.1	1856.9	1873.1
22.5°	1779.5	1770.4	1761.4	1774.0	1783.1
25°	1658.8	1664.2	1671.4	1676.8	1675.0
27.5°	1487.7	1536.3	1581.3	1552.5	1514.7
30°	1235.5	1358.0	1469.7	1377.8	1282.4
32.5°	895.1	1104.1	1336.4	1145.5	904.1
35°	592.6	785.3	1177.9	805.1	614.2
37.5°	385.4	527.7	983.4	529.5	403.4
40°	252.1	344.0	720.4	351.2	252.1
42.5°	154.9	217.9	437.7	226.9	154.9
45°	90.1	135.1	250.3	136.9	88.3
47.5°	41.4	73.8	142.3	72.0	43.2
50°	12.6	32.4	72.0	32.4	12.6
52.5°	5.4	9.0	34.2	9.0	5.4
55°	3.6	3.6	12.6	3.6	3.6
57.5°	3.6	1.8	3.6	3.6	3.6
60°	1.8	1.8	1.8	1.8	1.8
62.5°	1.8	1.8	1.8	1.8	1.8
65°	1.8	1.8	0.0	1.8	1.8
67.5°	1.8	0.0	0.0	0.0	1.8
70°	0.0	0.0	0.0	0.0	1.8
72.5°	0.0	0.0	0.0	0.0	1.8
75°	0.0	0.0	0.0	0.0	1.8



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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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