

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: P838706

Luminaire Tested: HCSQ655D010-HM64560835-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838706
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ655D010-HM64560835-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

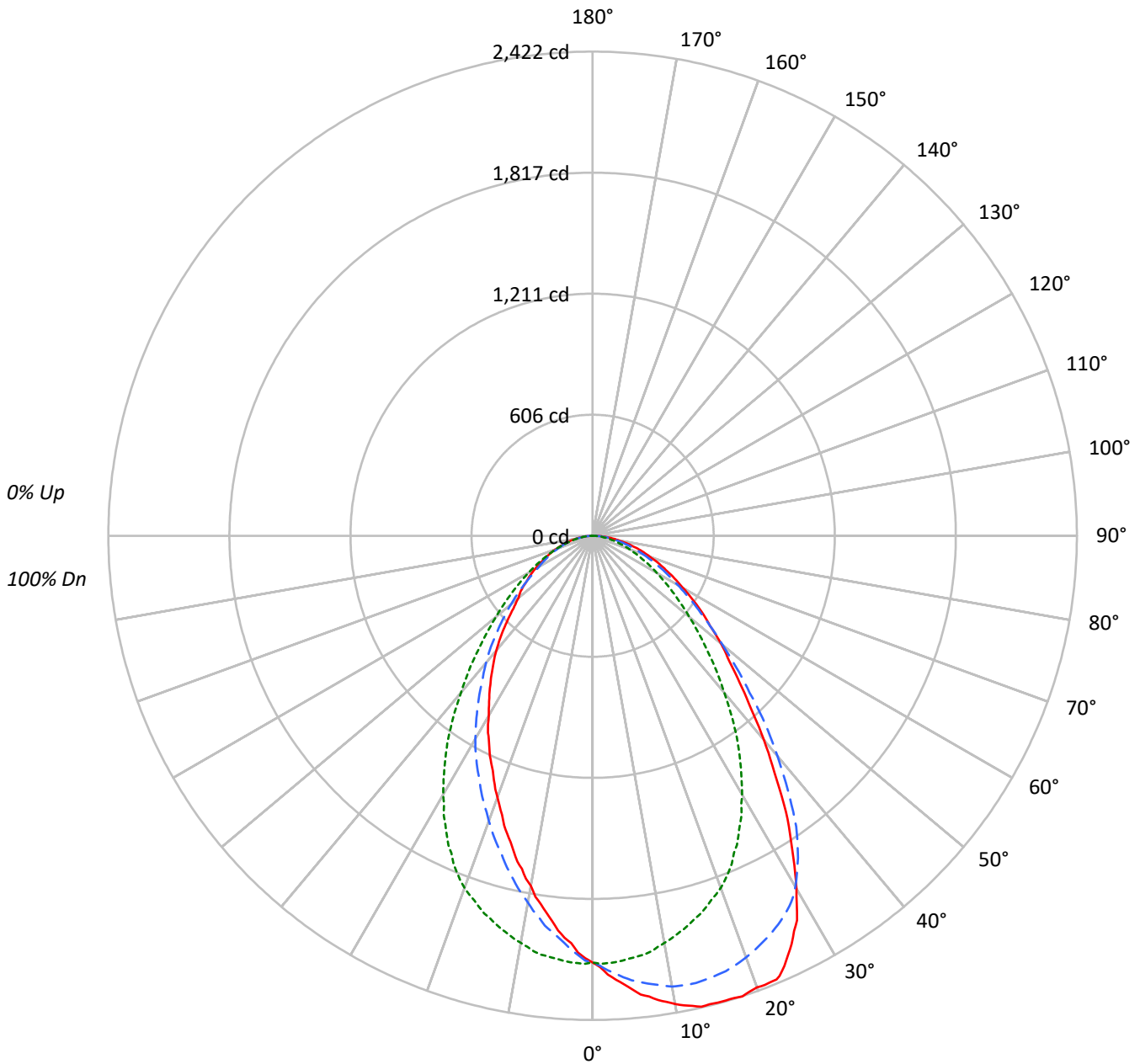
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4036.4 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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

TEST NUMBER: P838706
CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

Luminous Intensity Polar Plot





TEST NUMBER: P838706

CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51					51			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46					46			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42					42			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38					38			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34					34			
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32					32			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	206781	206781	206781	206781	206781
5°	221574	217023	206462	195794	192682
10°	234032	225262	203458	183224	174902
15°	242498	229435	198720	169846	159074
20°	247855	231361	193196	156443	143484
25°	247216	231337	182483	143393	129957
30°	228042	226890	167189	131147	116068
35°	199462	209870	149733	117305	105136
40°	168498	181644	129472	104913	94796
45°	142455	152169	110835	92052	82969
50°	126402	127607	95069	80254	73020
55°	113094	109234	82219	69096	68707
60°	100964	95199	71727	59772	64655
65°	92722	84608	62350	55519	59186
70°	85455	75725	55034	51777	55034
75°	80399	67579	47910	47049	50455
80°	73975	60558	42064	43348	45914
85°	73694	54631	35569	35569	40682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 153415 cd/sqm



TEST NUMBER: P838706

CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.3	5.0
10°-20°	561.1	13.9
20°-30°	800.4	19.8
30°-40°	824.9	20.4
40°-50°	664.0	16.5
50°-60°	469.6	11.6
60°-70°	304.3	7.5
70°-80°	163.5	4.1
80°-90°	47.2	1.2
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°	1562.9	38.7
0°-40°	2387.8	59.2
0°-60°	3521.4	87.2
0°-90°	4036.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4036.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2134	2134	2134	2134	2134	
5°	2278	2232	2123	2013	1981	221
15°	2418	2288	1981	1694	1586	684
25°	2313	2164	1707	1342	1216	1053
35°	1687	1775	1266	992	889	1047
45°	1040	1111	809	672	606	812
55°	670	647	487	409	407	599
65°	404	369	272	242	258	404
75°	215	181	128	126	135	228
85°	66	49	32	32	37	73
90°	0	0	0	0	0	



TEST NUMBER: P838706

CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	2134.5	2134.5	2134.5	2134.5	2134.5	2134.5	2134.5	2134.5	2134.5	2134.5	2134.5
1°	2157.4	2166.5	2159.7	2159.7	2152.8	2150.5	2155.1	2148.3	2146.0	2141.4	2132.3
2°	2196.2	2189.4	2187.1	2189.4	2175.7	2175.7	2168.8	2155.1	2148.3	2139.1	2114.0
3°	2223.7	2219.1	2214.5	2212.2	2198.5	2187.1	2178.0	2162.0	2148.3	2136.8	2100.3
4°	2248.8	2248.8	2244.2	2235.1	2221.4	2207.7	2189.4	2171.1	2150.5	2130.0	2082.0
5°	2278.5	2280.8	2260.2	2258.0	2242.0	2221.4	2200.8	2175.7	2150.5	2123.1	2070.6
6°	2308.2	2296.8	2292.2	2276.2	2253.4	2235.1	2210.0	2182.5	2148.3	2116.3	2045.4
7°	2321.9	2319.7	2308.2	2292.2	2271.7	2242.0	2216.8	2180.2	2143.7	2111.7	2027.1
8°	2344.8	2344.8	2331.1	2310.5	2280.8	2253.4	2221.4	2178.0	2141.4	2100.3	2002.0
9°	2360.8	2360.8	2342.5	2324.2	2296.8	2260.2	2223.7	2175.7	2130.0	2082.0	1979.1
10°	2379.1	2374.5	2360.8	2333.4	2310.5	2269.4	2223.7	2173.4	2123.1	2068.3	1956.3
11°	2392.8	2385.9	2369.9	2349.4	2312.8	2271.7	2223.7	2173.4	2114.0	2054.6	1933.4
12°	2404.2	2399.6	2379.1	2353.9	2317.4	2276.2	2221.4	2164.3	2098.0	2036.3	1903.7
13°	2417.9	2404.2	2383.6	2360.8	2319.7	2271.7	2212.2	2150.5	2086.5	2020.3	1878.6
14°	2415.6	2413.4	2395.1	2363.1	2317.4	2267.1	2210.0	2136.8	2070.6	2002.0	1848.9
15°	2417.9	2415.6	2395.1	2365.4	2315.1	2260.2	2203.1	2127.7	2054.6	1981.4	1819.2
16°	2417.9	2417.9	2390.5	2360.8	2312.8	2253.4	2189.4	2118.5	2038.6	1965.4	1794.0
17°	2417.9	2417.9	2395.1	2353.9	2305.9	2248.8	2175.7	2100.3	2020.3	1942.6	1757.5
18°	2422.5	2415.6	2385.9	2351.7	2296.8	2237.4	2166.5	2086.5	2004.3	1917.4	1732.3
19°	2411.1	2406.5	2381.4	2337.9	2289.9	2223.7	2152.8	2070.6	1988.3	1896.9	1702.6
20°	2404.2	2411.1	2376.8	2331.1	2276.2	2212.2	2139.1	2054.6	1965.4	1874.0	1672.9
21°	2406.5	2404.2	2367.6	2319.7	2267.1	2196.2	2123.1	2036.3	1940.3	1846.6	1645.5
22.5°	2401.9	2395.1	2356.2	2303.7	2239.7	2175.7	2095.7	2006.6	1903.7	1798.6	1592.9
23°	2392.8	2385.9	2356.2	2299.1	2230.5	2166.5	2082.0	1988.3	1890.0	1782.6	1579.2
24°	2356.2	2353.9	2340.2	2283.1	2219.1	2148.3	2066.0	1958.6	1848.9	1736.9	1544.9
25°	2312.8	2317.4	2310.5	2273.9	2200.8	2127.7	2040.8	1922.0	1810.0	1707.2	1503.8
26°	2271.7	2271.7	2267.1	2253.4	2182.5	2104.8	2004.3	1878.6	1771.2	1663.8	1460.4
27°	2219.1	2228.2	2219.1	2212.2	2164.3	2079.7	1965.4	1848.9	1727.7	1622.6	1423.8
28°	2178.0	2178.0	2173.4	2162.0	2146.0	2050.0	1924.3	1805.4	1686.6	1586.1	1382.7
29°	2104.8	2118.5	2120.8	2123.1	2120.8	2011.1	1885.4	1757.5	1643.2	1533.5	1343.8
30°	2038.6	2052.3	2061.4	2077.4	2079.7	1976.9	1839.7	1718.6	1602.0	1494.6	1309.5
32.5°	1858.0	1883.1	1908.3	1935.7	1949.4	1874.0	1727.7	1595.2	1476.4	1380.4	1204.4
35°	1686.6	1693.5	1720.9	1784.9	1798.6	1750.6	1595.2	1469.5	1357.5	1266.1	1106.1
37.5°	1492.4	1506.1	1544.9	1618.0	1622.6	1583.8	1476.4	1330.1	1225.0	1145.0	1005.6
40°	1332.4	1339.2	1366.7	1428.4	1448.9	1423.8	1330.1	1197.5	1101.6	1023.8	909.6
42.5°	1172.4	1181.5	1215.8	1263.8	1293.5	1263.8	1181.5	1067.3	973.6	916.4	818.2
45°	1039.8	1051.3	1083.3	1110.7	1119.8	1101.6	1028.4	934.7	868.4	809.0	733.6
47.5°	925.6	937.0	959.9	971.3	982.7	964.4	907.3	829.6	763.3	715.3	646.8
50°	838.7	836.4	852.4	857.0	857.0	836.4	788.5	724.5	669.6	630.8	573.6
52.5°	740.5	745.0	756.5	751.9	749.6	731.3	690.2	635.3	589.6	555.3	502.8
55°	669.6	662.8	669.6	665.0	655.9	637.6	601.1	555.3	516.5	486.8	438.8
57.5°	591.9	591.9	594.2	585.1	573.6	553.1	521.1	484.5	450.2	425.1	386.2
60°	521.1	525.6	523.4	514.2	502.8	479.9	454.8	418.2	388.5	370.2	333.7



TEST NUMBER: P838706

CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	354.2	354.2	347.4	340.5	324.5	304.0	285.7	262.8	246.8	230.8	208.0
70°	301.7	306.2	297.1	285.7	274.2	260.5	240.0	221.7	205.7	194.3	176.0
72.5°	260.5	258.2	251.4	240.0	230.8	214.8	196.5	182.8	169.1	160.0	146.3
75°	214.8	214.8	208.0	198.8	187.4	173.7	160.0	148.5	137.1	128.0	121.1
77.5°	171.4	173.7	166.8	160.0	150.8	137.1	125.7	116.6	107.4	100.6	96.0
80°	132.6	134.8	128.0	123.4	112.0	105.1	96.0	86.8	80.0	75.4	73.1
82.5°	100.6	98.3	93.7	91.4	82.3	75.4	66.3	61.7	57.1	52.6	52.6
85°	66.3	64.0	61.7	59.4	52.6	45.7	43.4	38.9	34.3	32.0	32.0
87.5°	34.3	34.3	32.0	29.7	27.4	22.9	20.6	16.0	13.7	13.7	13.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P838706

CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	2134.5	2134.5	2134.5
1°	2125.4	2116.3	2114.0
2°	2098.0	2084.3	2086.5
3°	2072.8	2056.8	2040.8
4°	2040.8	2015.7	2015.7
5°	2013.4	1988.3	1981.4
6°	1988.3	1947.1	1938.0
7°	1965.4	1915.1	1899.1
8°	1926.6	1876.3	1860.3
9°	1899.1	1844.3	1828.3
10°	1862.6	1807.7	1778.0
11°	1832.9	1771.2	1748.3
12°	1800.9	1725.5	1702.6
13°	1764.3	1686.6	1672.9
14°	1730.0	1654.6	1629.5
15°	1693.5	1615.8	1586.1
16°	1654.6	1576.9	1549.5
17°	1622.6	1535.8	1515.2
18°	1590.6	1499.2	1467.2
19°	1551.8	1464.9	1428.4
20°	1517.5	1421.5	1391.8
21°	1480.9	1389.5	1357.5
22.5°	1430.6	1327.8	1298.1
23°	1414.6	1309.5	1277.5
24°	1378.1	1273.0	1245.5
25°	1341.5	1245.5	1215.8
26°	1309.5	1204.4	1177.0
27°	1277.5	1172.4	1142.7
28°	1243.2	1138.1	1115.3
29°	1209.0	1101.6	1078.7
30°	1172.4	1076.4	1037.6
32.5°	1081.0	994.1	962.1
35°	991.9	916.4	889.0
37.5°	905.0	843.3	818.2
40°	829.6	774.7	749.6
42.5°	751.9	701.6	676.5
45°	671.9	630.8	605.6
47.5°	598.8	564.5	537.1
50°	532.5	498.2	484.5
52.5°	468.5	445.6	452.5
55°	409.1	409.1	406.8
57.5°	351.9	367.9	370.2
60°	308.5	329.1	333.7



TEST NUMBER: P838706

CATALOG NUMBER: HCSQ655D010-HM64560835-61SQLWW

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	212.5	224.0	228.5
70°	182.8	192.0	194.3
72.5°	155.4	162.3	166.8
75°	125.7	134.8	134.8
77.5°	102.8	107.4	109.7
80°	77.7	80.0	82.3
82.5°	54.8	57.1	59.4
85°	32.0	34.3	36.6
87.5°	13.7	13.7	13.7
90°	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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





62.5°	461.6	466.2	459.4	447.9	436.5	415.9	393.1	361.1	338.2	320.0	288.0
65°	404.5	406.8	402.2	390.8	379.4	358.8	336.0	308.5	290.2	272.0	244.5

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



62.5°	276.5	292.5	294.8
65°	242.2	256.0	258.2

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)