

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: P838726

Luminaire Tested: HCSQ655D010-HM64560935-61SQLWW

Issue Date: 5/21/2024

**Test Information**

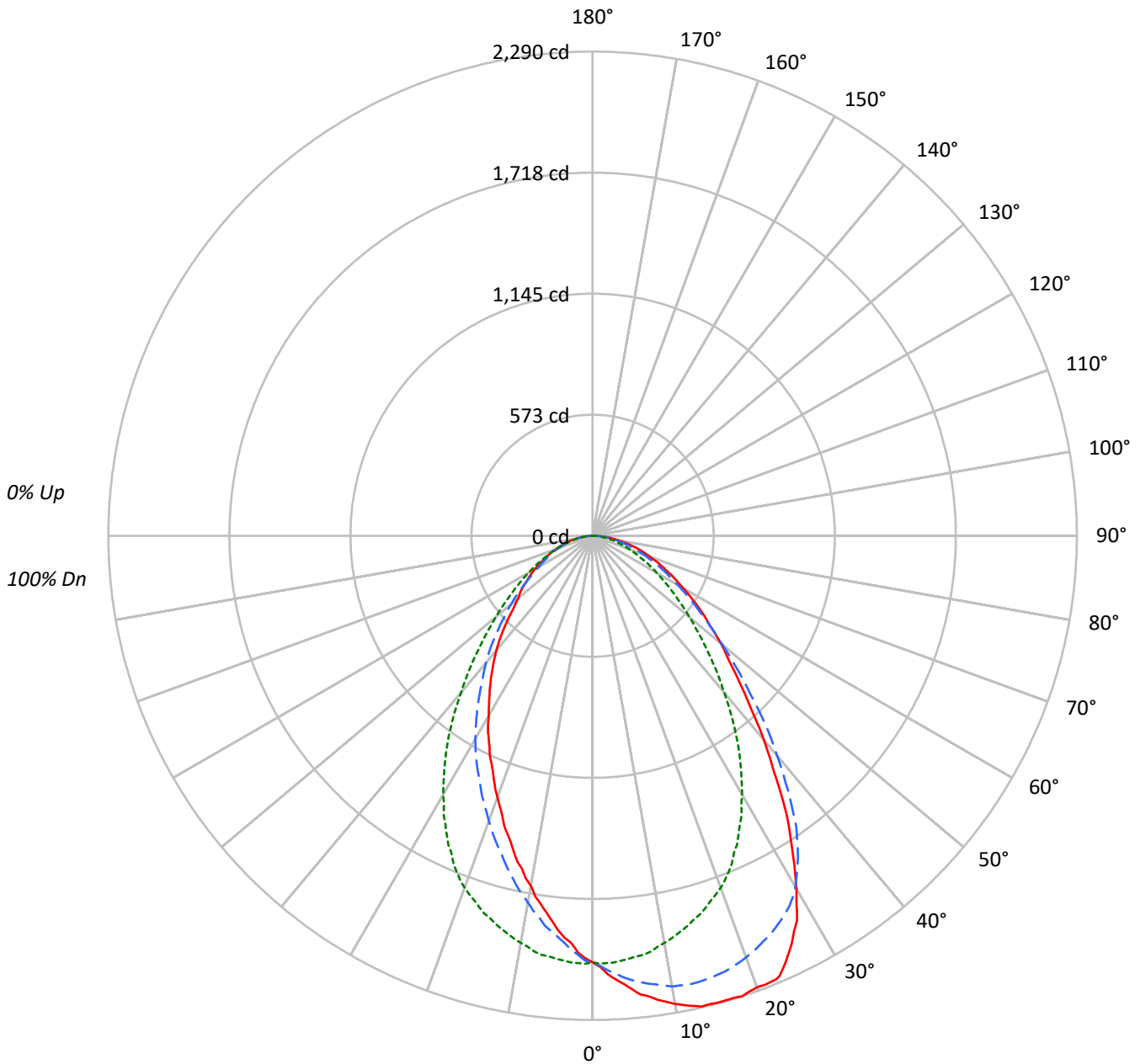
Test Method: LM-79-2019  
Report Number: P838726  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ655D010-HM64560935-61SQLWW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3815.7 lumens  
Efficiency: N/A  
Efficacy: 70.7 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<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

TEST NUMBER: P838726  
CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

### Luminous Intensity Polar Plot





TEST NUMBER: P838726

CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

**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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	195475	195475	195475	195475	195475
5°	209457	205149	195172	185087	182151
10°	221234	212946	192333	173200	165340
15°	229239	216888	187858	160559	150369
20°	234299	218716	182629	147886	135639
25°	233694	218687	172499	135558	122849
30°	215569	214479	158050	123977	109714
35°	188559	198392	141549	110883	99388
40°	159279	171710	122402	99171	89611
45°	134674	143846	104780	87024	78434
50°	119499	120629	89869	75868	69026
55°	106912	103264	77726	65313	64958
60°	95442	89997	67813	56517	61109
65°	87656	79977	58934	52493	55954
70°	80781	71590	52004	48945	52004
75°	76020	63893	45290	44467	47723
80°	69903	57267	39777	41004	43403
85°	69692	51630	33568	33568	38459

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 45°  
 Luminance: 145031 cd/sqm



TEST NUMBER: P838726

CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.3	5.0
10°-20°	530.5	13.9
20°-30°	756.6	19.8
30°-40°	779.8	20.4
40°-50°	627.7	16.5
50°-60°	443.9	11.6
60°-70°	287.7	7.5
70°-80°	154.5	4.1
80°-90°	44.6	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°	1477.4	38.7
0°-40°	2257.2	59.2
0°-60°	3328.8	87.2
0°-90°	3815.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3815.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2018	2018	2018	2018	2018	
5°	2154	2110	2007	1903	1873	209
15°	2286	2163	1873	1601	1499	646
25°	2186	2046	1614	1268	1149	995
35°	1594	1678	1197	938	840	990
45°	983	1050	765	635	572	768
55°	633	611	460	387	385	566
65°	382	349	257	229	244	382
75°	203	171	121	119	128	215
85°	63	46	30	30	35	69
90°	0	0	0	0	0	



TEST NUMBER: P838726

CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	2017.8	2017.8	2017.8	2017.8	2017.8	2017.8	2017.8	2017.8	2017.8	2017.8	2017.8
1°	2039.4	2048.1	2041.6	2041.6	2035.1	2032.9	2037.3	2030.8	2028.6	2024.3	2015.6
2°	2076.1	2069.7	2067.5	2069.7	2056.7	2056.7	2050.2	2037.3	2030.8	2022.1	1998.4
3°	2102.1	2097.7	2093.4	2091.3	2078.3	2067.5	2058.9	2043.7	2030.8	2020.0	1985.4
4°	2125.8	2125.8	2121.5	2112.9	2099.9	2086.9	2069.7	2052.4	2032.9	2013.5	1968.1
5°	2153.9	2156.1	2136.6	2134.5	2119.3	2099.9	2080.5	2056.7	2032.9	2007.0	1957.3
6°	2182.0	2171.2	2166.9	2151.8	2130.1	2112.9	2089.1	2063.2	2030.8	2000.5	1933.6
7°	2195.0	2192.8	2182.0	2166.9	2147.4	2119.3	2095.6	2061.0	2026.4	1996.2	1916.3
8°	2216.6	2216.6	2203.6	2184.2	2156.1	2130.1	2099.9	2058.9	2024.3	1985.4	1892.5
9°	2231.7	2231.7	2214.4	2197.1	2171.2	2136.6	2102.1	2056.7	2013.5	1968.1	1870.9
10°	2249.0	2244.6	2231.7	2205.8	2184.2	2145.3	2102.1	2054.5	2007.0	1955.2	1849.3
11°	2261.9	2255.5	2240.3	2220.9	2186.3	2147.4	2102.1	2054.5	1998.4	1942.2	1827.7
12°	2272.7	2268.4	2249.0	2225.2	2190.6	2151.8	2099.9	2045.9	1983.2	1924.9	1799.6
13°	2285.7	2272.7	2253.3	2231.7	2192.8	2147.4	2091.3	2032.9	1972.4	1909.8	1775.8
14°	2283.5	2281.4	2264.1	2233.8	2190.6	2143.1	2089.1	2020.0	1957.3	1892.5	1747.8
15°	2285.7	2283.5	2264.1	2236.0	2188.5	2136.6	2082.6	2011.3	1942.2	1873.1	1719.7
16°	2285.7	2285.7	2259.8	2231.7	2186.3	2130.1	2069.7	2002.7	1927.1	1857.9	1695.9
17°	2285.7	2285.7	2264.1	2225.2	2179.8	2125.8	2056.7	1985.4	1909.8	1836.3	1661.3
18°	2290.0	2283.5	2255.5	2223.0	2171.2	2115.0	2048.1	1972.4	1894.7	1812.6	1637.6
19°	2279.2	2274.9	2251.1	2210.1	2164.7	2102.1	2035.1	1957.3	1879.5	1793.1	1609.5
20°	2272.7	2279.2	2246.8	2203.6	2151.8	2091.3	2022.1	1942.2	1857.9	1771.5	1581.4
21°	2274.9	2272.7	2238.2	2192.8	2143.1	2076.1	2007.0	1924.9	1834.2	1745.6	1555.5
22.5°	2270.6	2264.1	2227.4	2177.7	2117.2	2056.7	1981.1	1896.8	1799.6	1700.2	1505.8
23°	2261.9	2255.5	2227.4	2173.4	2108.5	2048.1	1968.1	1879.5	1786.6	1685.1	1492.8
24°	2227.4	2225.2	2212.2	2158.2	2097.7	2030.8	1953.0	1851.5	1747.8	1641.9	1460.4
25°	2186.3	2190.6	2184.2	2149.6	2080.5	2011.3	1929.2	1816.9	1711.0	1613.8	1421.5
26°	2147.4	2147.4	2143.1	2130.1	2063.2	1989.7	1894.7	1775.8	1674.3	1572.8	1380.5
27°	2097.7	2106.4	2097.7	2091.3	2045.9	1966.0	1857.9	1747.8	1633.3	1533.9	1345.9
28°	2058.9	2058.9	2054.5	2043.7	2028.6	1937.9	1819.1	1706.7	1594.4	1499.3	1307.0
29°	1989.7	2002.7	2004.8	2007.0	2004.8	1901.1	1782.3	1661.3	1553.3	1449.6	1270.3
30°	1927.1	1940.0	1948.7	1963.8	1966.0	1868.7	1739.1	1624.6	1514.4	1412.9	1237.9
32.5°	1756.4	1780.2	1803.9	1829.9	1842.8	1771.5	1633.3	1508.0	1395.6	1304.9	1138.5
35°	1594.4	1600.9	1626.8	1687.3	1700.2	1654.9	1508.0	1389.1	1283.3	1196.9	1045.6
37.5°	1410.7	1423.7	1460.4	1529.6	1533.9	1497.2	1395.6	1257.3	1158.0	1082.4	950.6
40°	1259.5	1266.0	1291.9	1350.2	1369.7	1345.9	1257.3	1132.0	1041.3	967.9	859.8
42.5°	1108.3	1116.9	1149.3	1194.7	1222.8	1194.7	1116.9	1008.9	920.3	866.3	773.4
45°	983.0	993.8	1024.0	1050.0	1058.6	1041.3	972.2	883.6	820.9	764.8	693.5
47.5°	875.0	885.8	907.4	918.2	929.0	911.7	857.7	784.2	721.6	676.2	611.4
50°	792.9	790.7	805.8	810.1	810.1	790.7	745.3	684.8	633.0	596.3	542.3
52.5°	700.0	704.3	715.1	710.8	708.6	691.3	652.4	600.6	557.4	525.0	475.3
55°	633.0	626.5	633.0	628.7	620.0	602.8	568.2	525.0	488.2	460.2	414.8
57.5°	559.5	559.5	561.7	553.1	542.3	522.8	492.6	458.0	425.6	401.8	365.1
60°	492.6	496.9	494.7	486.1	475.3	453.7	429.9	395.4	367.3	350.0	315.4



TEST NUMBER: P838726

CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	334.9	334.9	328.4	321.9	306.8	287.3	270.0	248.4	233.3	218.2	196.6
70°	285.2	289.5	280.9	270.0	259.2	246.3	226.8	209.6	194.4	183.6	166.4
72.5°	246.3	244.1	237.6	226.8	218.2	203.1	185.8	172.8	159.9	151.2	138.3
75°	203.1	203.1	196.6	188.0	177.2	164.2	151.2	140.4	129.6	121.0	114.5
77.5°	162.0	164.2	157.7	151.2	142.6	129.6	118.8	110.2	101.5	95.1	90.7
80°	125.3	127.5	121.0	116.7	105.9	99.4	90.7	82.1	75.6	71.3	69.1
82.5°	95.1	92.9	88.6	86.4	77.8	71.3	62.7	58.3	54.0	49.7	49.7
85°	62.7	60.5	58.3	56.2	49.7	43.2	41.0	36.7	32.4	30.2	30.2
87.5°	32.4	32.4	30.2	28.1	25.9	21.6	19.4	15.1	13.0	13.0	13.0
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: P838726

CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	2017.8	2017.8	2017.8
1°	2009.2	2000.5	1998.4
2°	1983.2	1970.3	1972.4
3°	1959.5	1944.4	1929.2
4°	1929.2	1905.5	1905.5
5°	1903.3	1879.5	1873.1
6°	1879.5	1840.7	1832.0
7°	1857.9	1810.4	1795.3
8°	1821.2	1773.7	1758.6
9°	1795.3	1743.4	1728.3
10°	1760.7	1708.9	1680.8
11°	1732.6	1674.3	1652.7
12°	1702.4	1631.1	1609.5
13°	1667.8	1594.4	1581.4
14°	1635.4	1564.1	1540.4
15°	1600.9	1527.4	1499.3
16°	1564.1	1490.7	1464.7
17°	1533.9	1451.8	1432.3
18°	1503.6	1417.2	1387.0
19°	1466.9	1384.8	1350.2
20°	1434.5	1343.8	1315.7
21°	1399.9	1313.5	1283.3
22.5°	1352.4	1255.2	1227.1
23°	1337.3	1237.9	1207.7
24°	1302.7	1203.3	1177.4
25°	1268.2	1177.4	1149.3
26°	1237.9	1138.5	1112.6
27°	1207.7	1108.3	1080.2
28°	1175.3	1075.9	1054.3
29°	1142.8	1041.3	1019.7
30°	1108.3	1017.5	980.8
32.5°	1021.9	939.8	909.5
35°	937.6	866.3	840.4
37.5°	855.5	797.2	773.4
40°	784.2	732.4	708.6
42.5°	710.8	663.2	639.5
45°	635.2	596.3	572.5
47.5°	566.0	533.6	507.7
50°	503.4	471.0	458.0
52.5°	442.9	421.3	427.8
55°	386.7	386.7	384.6
57.5°	332.7	347.8	350.0
60°	291.7	311.1	315.4





TEST NUMBER: P838726

CATALOG NUMBER: HCSQ655D010-HM64560935-61SQLWW

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	200.9	211.7	216.0
70°	172.8	181.5	183.6
72.5°	146.9	153.4	157.7
75°	118.8	127.5	127.5
77.5°	97.2	101.5	103.7
80°	73.5	75.6	77.8
82.5°	51.8	54.0	56.2
85°	30.2	32.4	34.6
87.5°	13.0	13.0	13.0
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°	436.4	440.7	434.2	423.4	412.6	393.2	371.6	341.3	319.7	302.5	272.2
65°	382.4	384.6	380.2	369.4	358.6	339.2	317.6	291.7	274.4	257.1	231.2

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°	261.4	276.5	278.7
65°	229.0	242.0	244.1

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

Scaled Data Report



(END OF REPORT)