

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: P838607

Luminaire Tested: HCSQ640D010-HM63040935-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838607
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-HM63040935-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

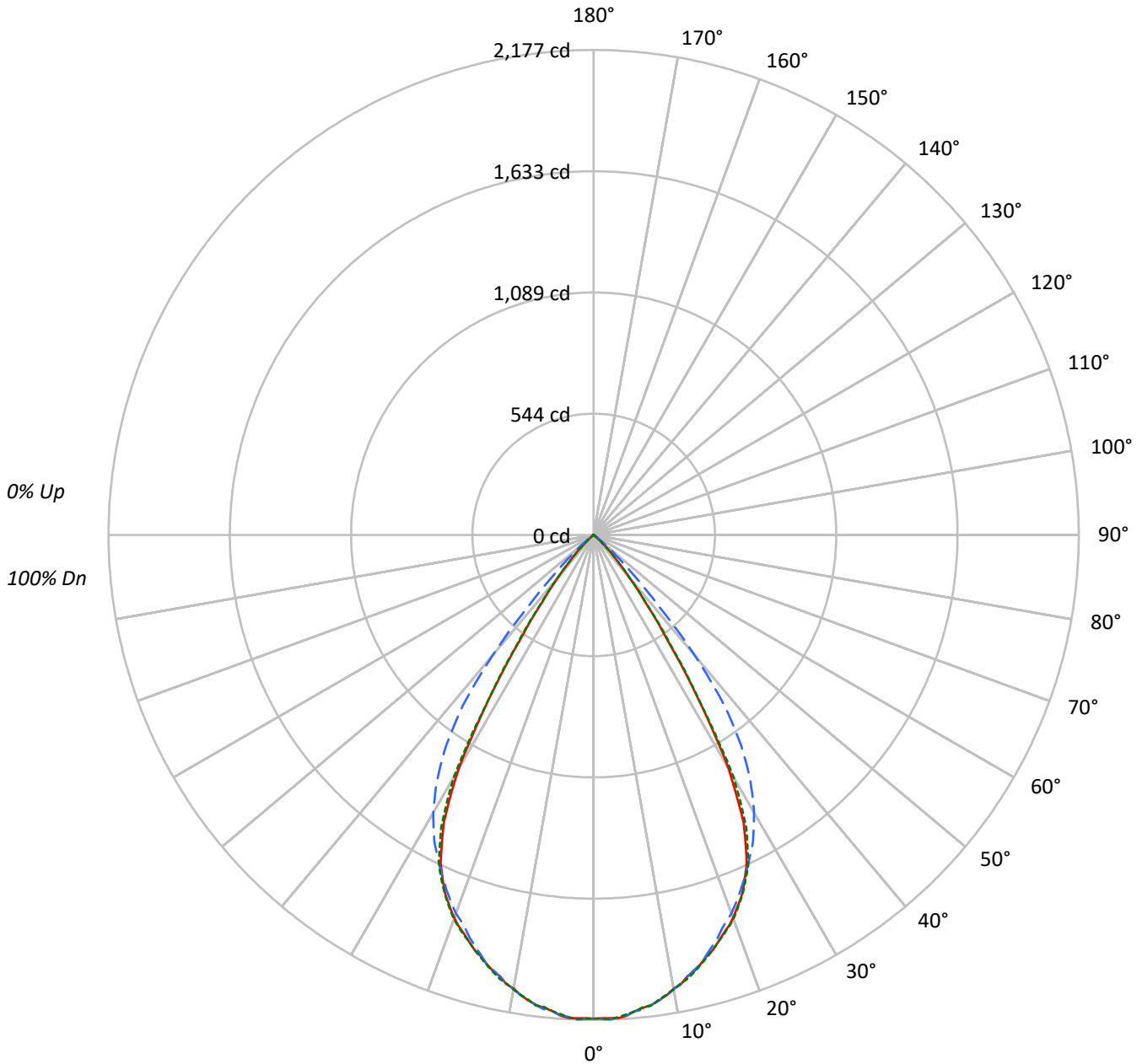
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2158.6 lumens
Efficiency: N/A
Efficacy: 52.6 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

TEST NUMBER: P838607
CATALOG NUMBER: HCSQ640D010-HM63040935-61SQMB

Luminous Intensity Polar Plot





TEST NUMBER: P838607

CATALOG NUMBER: HCSQ640D010-HM63040935-61SQMB

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°	93491	93491	93491
5°	92707	92781	92707
10°	90386	90539	90539
15°	87277	87041	87513
20°	83812	82845	84055
25°	77179	77768	77935
30°	60162	71562	62439
35°	30501	60635	31616
40°	13883	39658	13883
45°	5370	14930	5261
50°	824	4729	824
55°	263	923	263
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: 14930 cd/sqm



TEST NUMBER: P838607

CATALOG NUMBER: HCSQ640D010-HM63040935-61SQMB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.8	9.4
10°-20°	549.9	25.5
20°-30°	741.2	34.3
30°-40°	521.1	24.1
40°-50°	133.1	6.2
50°-60°	9.2	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°	1493.9	69.2
0°-40°	2015.0	93.4
0°-60°	2157.3	99.9
0°-90°	2158.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2158.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2171	2171	2171	2171	2171	
5°	2145	2148	2147	2148	2145	203
15°	1958	1954	1953	1958	1963	551
25°	1625	1630	1637	1642	1640	726
35°	580	769	1154	788	602	391
45°	88	132	245	134	86	77
55°	4	4	12	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	



TEST NUMBER: P838607

CATALOG NUMBER: HCSQ640D010-HM63040935-61SQMB

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2171.4	2171.4	2171.4	2171.4	2171.4
1°	2169.7	2171.4	2173.2	2173.2	2171.4
2°	2171.4	2166.1	2176.7	2171.4	2173.2
3°	2171.4	2160.8	2166.1	2169.7	2167.9
4°	2162.6	2155.6	2160.8	2159.1	2155.6
5°	2145.0	2148.5	2146.7	2148.5	2145.0
6°	2134.4	2137.9	2141.4	2136.2	2130.9
7°	2125.6	2123.8	2125.6	2129.1	2129.1
8°	2109.7	2113.2	2109.7	2111.5	2106.2
9°	2092.1	2092.1	2092.1	2095.6	2090.3
10°	2067.4	2076.2	2070.9	2074.4	2070.9
11°	2055.0	2051.5	2051.5	2053.2	2051.5
12°	2025.0	2028.6	2026.8	2030.3	2035.6
13°	2009.1	2010.9	2003.9	2012.7	2012.7
14°	1984.5	1982.7	1986.2	1984.5	1988.0
15°	1958.0	1954.5	1952.7	1958.0	1963.3
16°	1938.6	1929.8	1924.5	1931.5	1938.6
17°	1910.4	1901.5	1894.5	1908.6	1910.4
18°	1882.1	1878.6	1861.0	1878.6	1887.4
19°	1859.2	1846.9	1831.0	1850.4	1861.0
20°	1829.2	1818.6	1808.1	1818.6	1834.5
22.5°	1742.8	1734.0	1725.2	1737.5	1746.3
25°	1624.6	1629.9	1637.0	1642.2	1640.5
27.5°	1457.0	1504.7	1548.8	1520.5	1483.5
30°	1210.1	1330.0	1439.4	1349.4	1255.9
32.5°	876.7	1081.3	1308.9	1121.9	885.5
35°	580.3	769.1	1153.6	788.5	601.5
37.5°	377.5	516.8	963.1	518.6	395.1
40°	247.0	336.9	705.6	344.0	247.0
42.5°	151.7	213.4	428.6	222.3	151.7
45°	88.2	132.3	245.2	134.1	86.4
47.5°	40.6	72.3	139.4	70.6	42.3
50°	12.3	31.8	70.6	31.8	12.3
52.5°	5.3	8.8	33.5	8.8	5.3
55°	3.5	3.5	12.3	3.5	3.5
57.5°	3.5	1.8	3.5	3.5	3.5
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



TEST NUMBER: P838607

CATALOG NUMBER: HCSQ640D010-HM63040935-61SQMB

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



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



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

Scaled Data Report



77.5°	0.0	0.0	0.0	0.0	0.0
80°	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



(END OF REPORT)