

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: P838617

Luminaire Tested: HCSQ645D010-HM64560827-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838617
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: HCSQ645D010-HM64560827-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

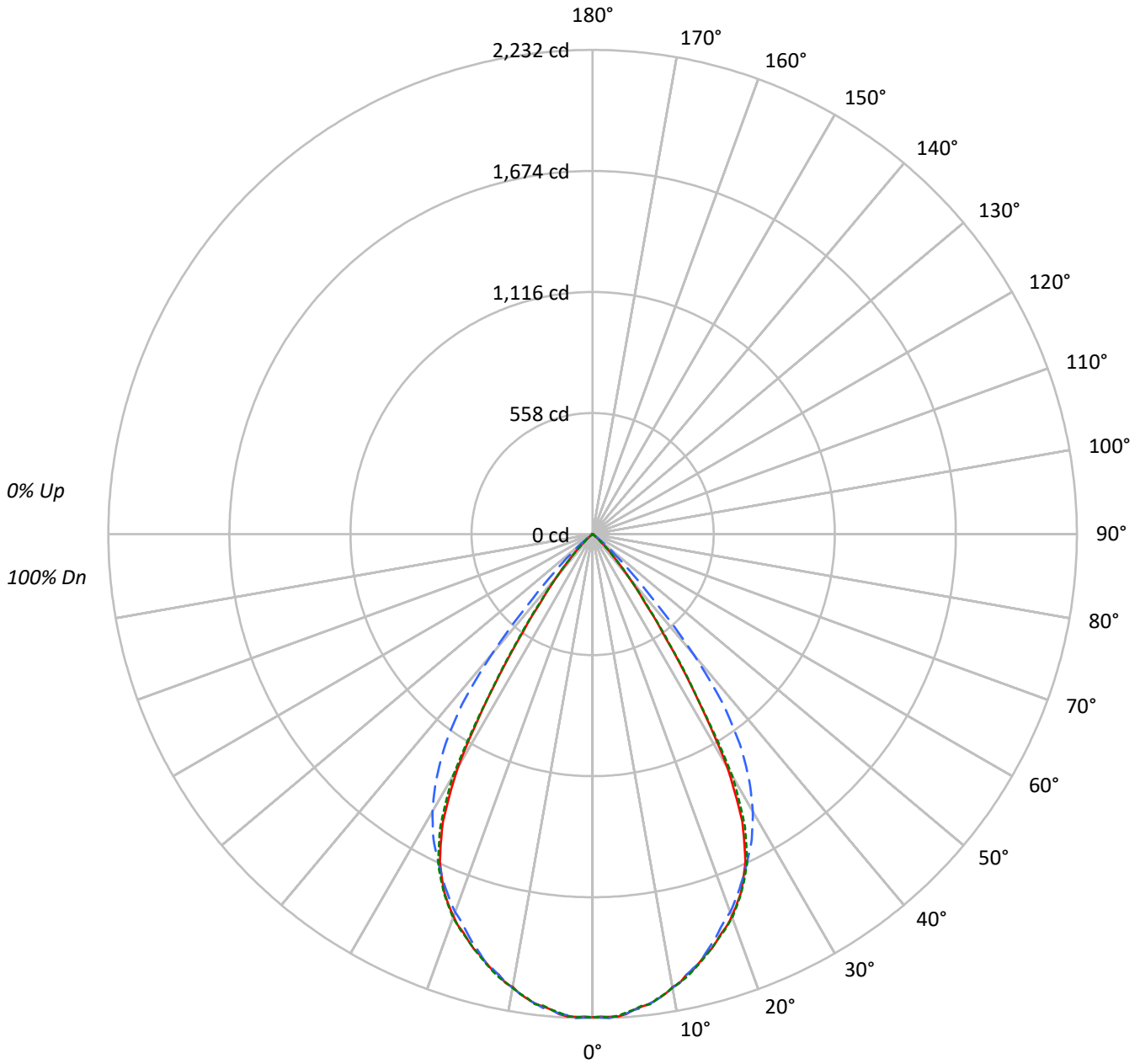
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2213.8 lumens
Efficiency: N/A
Efficacy: 48.2 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): 45.9
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

TEST NUMBER: P838617
CATALOG NUMBER: HCSQ645D010-HM64560827-61SQMB

Luminous Intensity Polar Plot





TEST NUMBER: P838617

CATALOG NUMBER: HCSQ645D010-HM64560827-61SQMB

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	100	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81	81	81	81	81	81		
	4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75	75	75	75	75	75		
	5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70	70	70	70	70	70		
	6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65	65	65	65	65	65		
	7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	60	60	60	60	60		
	8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56	56	56	56	56	56		
	9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53	53	53	53	53	53		
	10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50	50	50	50	50	50		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	95889	95889	95889
5°	95080	95158	95080
10°	92699	92857	92857
15°	89515	89269	89755
20°	85961	84967	86208
25°	79156	79759	79930
30°	61703	73396	64040
35°	31284	62190	32425
40°	14237	40676	14237
45°	5511	15314	5395
50°	851	4850	851
55°	270	953	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: 15314 cd/sqm



TEST NUMBER: P838617

CATALOG NUMBER: HCSQ645D010-HM64560827-61SQMB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.9	9.4
10°-20°	564.0	25.5
20°-30°	760.2	34.3
30°-40°	534.5	24.1
40°-50°	136.5	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°	1532.1	69.2
0°-40°	2066.6	93.4
0°-60°	2212.6	99.9
0°-90°	2213.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2213.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2200	2204	2202	2204	2200	208
15°	2008	2004	2003	2008	2014	565
25°	1666	1672	1679	1684	1682	745
35°	595	789	1183	809	617	401
45°	90	136	252	138	89	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	



TEST NUMBER: P838617

CATALOG NUMBER: HCSQ645D010-HM64560827-61SQMB

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2227.1	2227.1	2227.1	2227.1	2227.1
1°	2225.3	2227.1	2228.9	2228.9	2227.1
2°	2227.1	2221.6	2232.5	2227.1	2228.9
3°	2227.1	2216.2	2221.6	2225.3	2223.5
4°	2218.0	2210.8	2216.2	2214.4	2210.8
5°	2199.9	2203.6	2201.7	2203.6	2199.9
6°	2189.1	2192.7	2196.3	2190.9	2185.5
7°	2180.0	2178.2	2180.0	2183.7	2183.7
8°	2163.7	2167.4	2163.7	2165.6	2160.1
9°	2145.7	2145.7	2145.7	2149.3	2143.8
10°	2120.3	2129.4	2123.9	2127.6	2123.9
11°	2107.7	2104.0	2104.0	2105.9	2104.0
12°	2076.9	2080.5	2078.7	2082.3	2087.8
13°	2060.6	2062.4	2055.2	2064.2	2064.2
14°	2035.3	2033.5	2037.1	2035.3	2038.9
15°	2008.2	2004.5	2002.7	2008.2	2013.6
16°	1988.3	1979.2	1973.8	1981.0	1988.3
17°	1959.3	1950.3	1943.0	1957.5	1959.3
18°	1930.4	1926.8	1908.7	1926.8	1935.8
19°	1906.8	1894.2	1877.9	1897.8	1908.7
20°	1876.1	1865.2	1854.4	1865.2	1881.5
22.5°	1787.4	1778.4	1769.4	1782.0	1791.1
25°	1666.2	1671.7	1678.9	1684.3	1682.5
27.5°	1494.4	1543.2	1588.4	1559.5	1521.5
30°	1241.1	1364.1	1476.3	1384.0	1288.1
32.5°	899.2	1109.0	1342.4	1150.6	908.2
35°	595.2	788.8	1183.2	808.7	616.9
37.5°	387.2	530.1	987.8	531.9	405.3
40°	253.3	345.5	723.7	352.8	253.3
42.5°	155.6	218.9	439.6	228.0	155.6
45°	90.5	135.7	251.5	137.5	88.6
47.5°	41.6	74.2	142.9	72.4	43.4
50°	12.7	32.6	72.4	32.6	12.7
52.5°	5.4	9.0	34.4	9.0	5.4
55°	3.6	3.6	12.7	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



TEST NUMBER: P838617

CATALOG NUMBER: HCSQ645D010-HM64560827-61SQMB

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)