

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: P838637

Luminaire Tested: HCSQ645D010-HM64560927-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838637
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-HM64560927-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

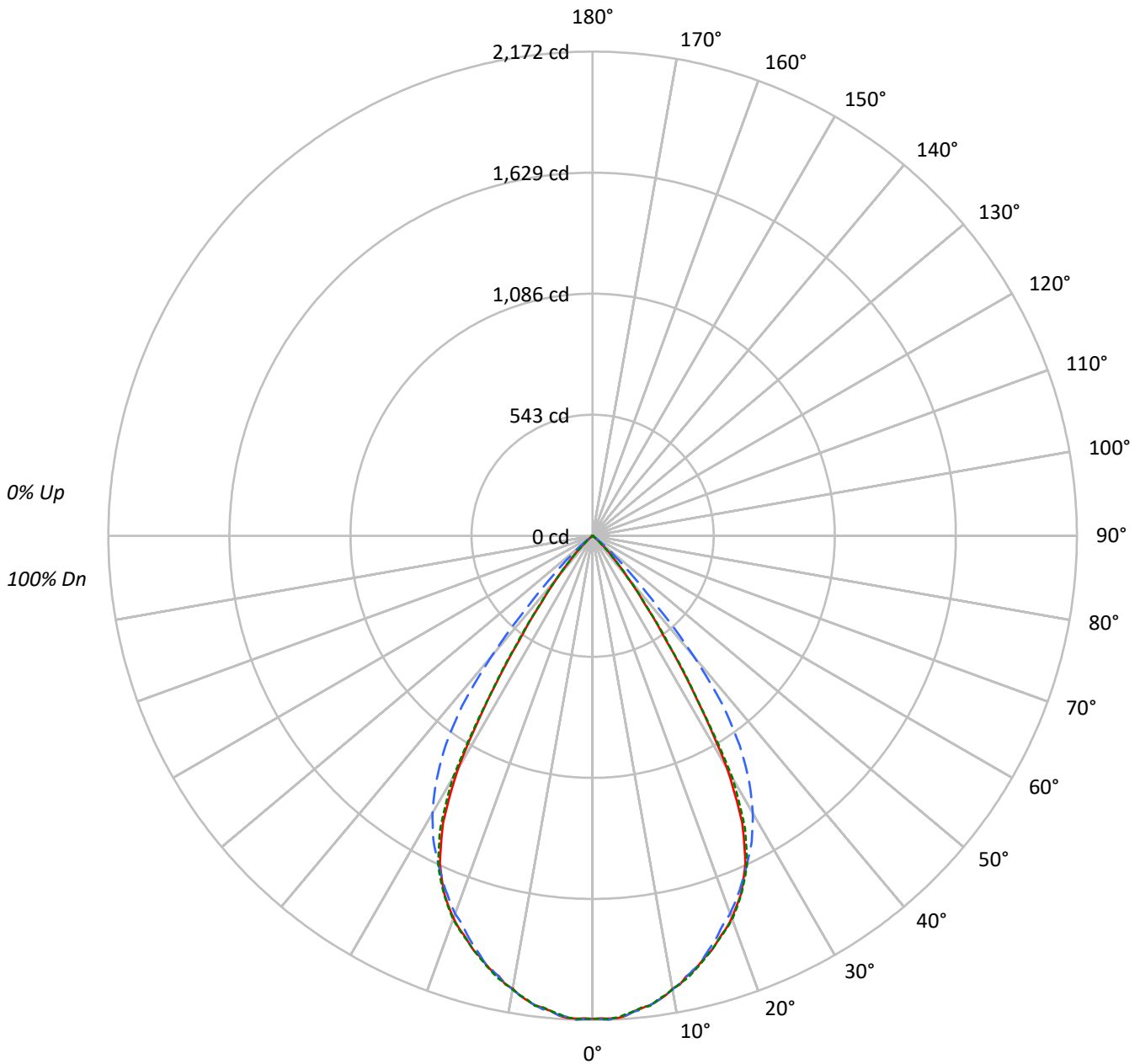
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2154.0 lumens
Efficiency: N/A
Efficacy: 46.9 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 (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									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	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°	93297	93297	93297
5°	92513	92586	92513
10°	90194	90347	90347
15°	87094	86858	87330
20°	83638	82671	83881
25°	77018	77602	77768
30°	60033	71413	62310
35°	30438	60509	31547
40°	13849	39574	13849
45°	5358	14900	5255
50°	824	4716	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: 14900 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.3	9.4
10°-20°	548.7	25.5
20°-30°	739.7	34.3
30°-40°	520.1	24.1
40°-50°	132.8	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°	1490.7	69.2
0°-40°	2010.8	93.3
0°-60°	2152.7	99.9
0°-90°	2154.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2154.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2167	2167	2167	2167	2167	
5°	2140	2144	2142	2144	2140	202
15°	1954	1950	1949	1954	1959	550
25°	1621	1626	1634	1639	1637	724
35°	579	768	1151	787	600	390
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2166.9	2166.9	2166.9	2166.9	2166.9
1°	2165.1	2166.9	2168.6	2168.6	2166.9
2°	2166.9	2161.6	2172.2	2166.9	2168.6
3°	2166.9	2156.3	2161.6	2165.1	2163.4
4°	2158.1	2151.0	2156.3	2154.6	2151.0
5°	2140.5	2144.0	2142.2	2144.0	2140.5
6°	2129.9	2133.4	2137.0	2131.7	2126.4
7°	2121.1	2119.4	2121.1	2124.6	2124.6
8°	2105.3	2108.8	2105.3	2107.0	2101.7
9°	2087.7	2087.7	2087.7	2091.2	2085.9
10°	2063.0	2071.8	2066.5	2070.1	2066.5
11°	2050.7	2047.2	2047.2	2048.9	2047.2
12°	2020.8	2024.3	2022.5	2026.1	2031.3
13°	2004.9	2006.7	1999.7	2008.5	2008.5
14°	1980.3	1978.5	1982.1	1980.3	1983.8
15°	1953.9	1950.4	1948.6	1953.9	1959.2
16°	1934.5	1925.7	1920.4	1927.5	1934.5
17°	1906.4	1897.6	1890.5	1904.6	1906.4
18°	1878.2	1874.7	1857.1	1874.7	1883.5
19°	1855.3	1843.0	1827.1	1846.5	1857.1
20°	1825.4	1814.8	1804.3	1814.8	1830.7
22.5°	1739.1	1730.3	1721.5	1733.9	1742.7
25°	1621.2	1626.5	1633.5	1638.8	1637.0
27.5°	1454.0	1501.5	1545.5	1517.3	1480.4
30°	1207.5	1327.2	1436.4	1346.6	1253.3
32.5°	874.8	1079.0	1306.1	1119.5	883.7
35°	579.1	767.5	1151.2	786.8	600.2
37.5°	376.7	515.8	961.1	517.5	394.3
40°	246.4	336.2	704.1	343.3	246.4
42.5°	151.4	213.0	427.7	221.8	151.4
45°	88.0	132.0	244.7	133.8	86.3
47.5°	40.5	72.2	139.1	70.4	42.2
50°	12.3	31.7	70.4	31.7	12.3
52.5°	5.3	8.8	33.4	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



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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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