

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: P838642

Luminaire Tested: HCSQ645D010-HM64560930-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838642
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-HM64560930-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

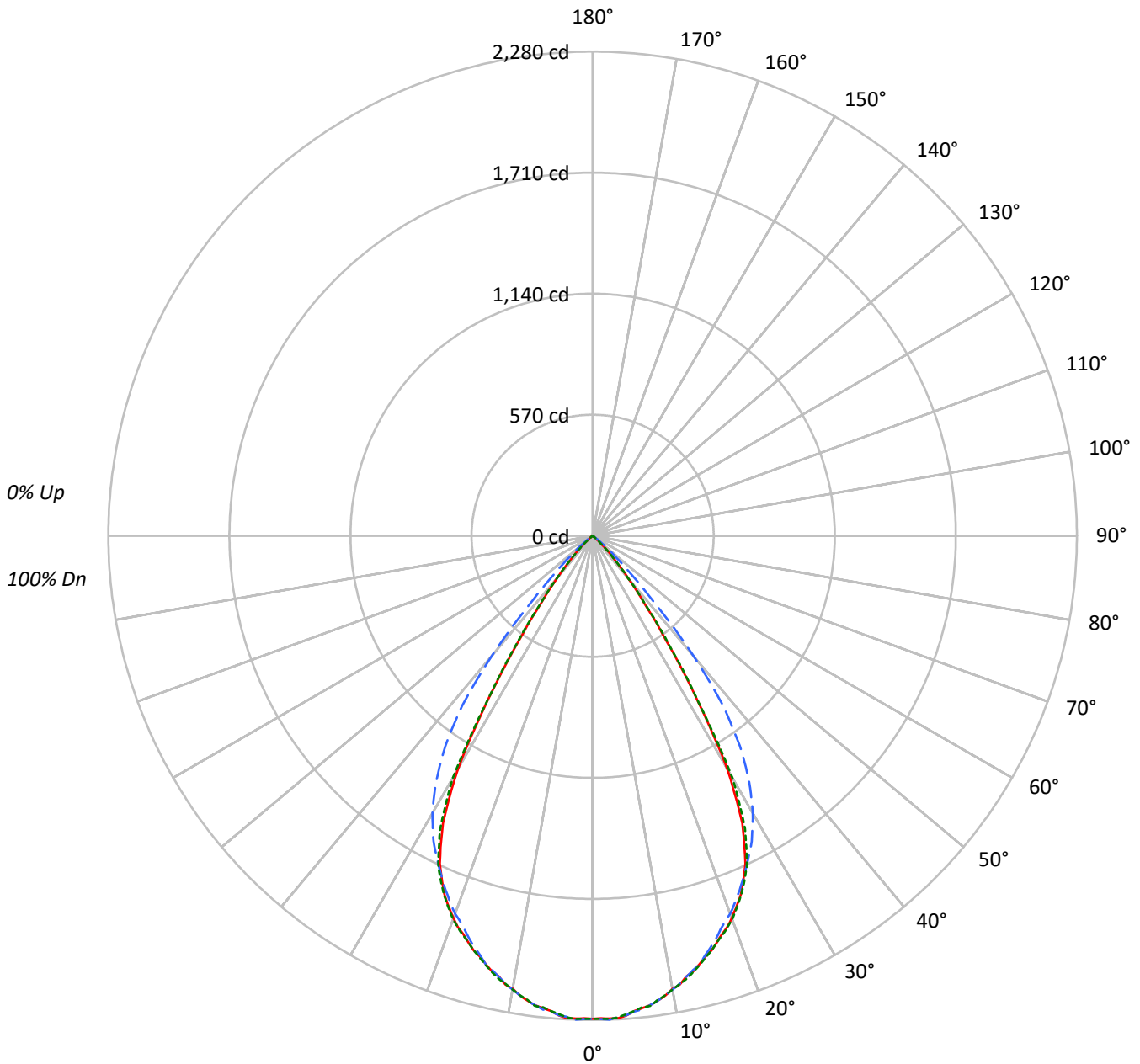
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2261.3 lumens
Efficiency: N/A
Efficacy: 49.3 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°	97947	97947	97947
5°	97120	97202	97120
10°	94688	94850	94850
15°	91436	91186	91681
20°	87807	86790	88059
25°	80856	81469	81645
30°	63025	74972	65417
35°	31957	63526	33124
40°	14540	41547	14540
45°	5626	15643	5517
50°	864	4950	864
55°	278	968	278
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: 15643 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.4	9.4
10°-20°	576.1	25.5
20°-30°	776.5	34.3
30°-40°	546.0	24.1
40°-50°	139.4	6.2
50°-60°	9.6	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°	1565.0	69.2
0°-40°	2111.0	93.4
0°-60°	2260.0	99.9
0°-90°	2261.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2261.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2275	2275	2275	2275	2275	
5°	2247	2251	2249	2251	2247	212
15°	2051	2048	2046	2051	2057	577
25°	1702	1708	1715	1720	1719	761
35°	608	806	1209	826	630	409
45°	92	139	257	140	91	81
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2274.9	2274.9	2274.9	2274.9	2274.9
1°	2273.0	2274.9	2276.7	2276.7	2274.9
2°	2274.9	2269.3	2280.4	2274.9	2276.7
3°	2274.9	2263.8	2269.3	2273.0	2271.2
4°	2265.6	2258.2	2263.8	2261.9	2258.2
5°	2247.1	2250.8	2249.0	2250.8	2247.1
6°	2236.1	2239.8	2243.5	2237.9	2232.4
7°	2226.8	2225.0	2226.8	2230.5	2230.5
8°	2210.2	2213.9	2210.2	2212.0	2206.5
9°	2191.7	2191.7	2191.7	2195.4	2189.9
10°	2165.8	2175.1	2169.5	2173.2	2169.5
11°	2152.9	2149.2	2149.2	2151.1	2149.2
12°	2121.5	2125.2	2123.3	2127.0	2132.6
13°	2104.9	2106.7	2099.3	2108.6	2108.6
14°	2079.0	2077.1	2080.8	2079.0	2082.7
15°	2051.3	2047.6	2045.7	2051.3	2056.8
16°	2030.9	2021.7	2016.2	2023.5	2030.9
17°	2001.4	1992.1	1984.7	1999.5	2001.4
18°	1971.8	1968.1	1949.6	1968.1	1977.3
19°	1947.8	1934.8	1918.2	1938.5	1949.6
20°	1916.4	1905.3	1894.2	1905.3	1921.9
22.5°	1825.8	1816.6	1807.3	1820.3	1829.5
25°	1702.0	1707.5	1714.9	1720.5	1718.6
27.5°	1526.4	1576.3	1622.5	1593.0	1554.2
30°	1267.7	1393.4	1508.0	1413.7	1315.8
32.5°	918.4	1132.8	1371.2	1175.3	927.7
35°	608.0	805.7	1208.6	826.0	630.2
37.5°	395.5	541.5	1009.0	543.3	413.9
40°	258.7	353.0	739.2	360.4	258.7
42.5°	158.9	223.6	449.1	232.8	158.9
45°	92.4	138.6	256.9	140.4	90.6
47.5°	42.5	75.8	146.0	73.9	44.4
50°	12.9	33.3	73.9	33.3	12.9
52.5°	5.5	9.2	35.1	9.2	5.5
55°	3.7	3.7	12.9	3.7	3.7
57.5°	3.7	1.8	3.7	3.7	3.7
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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