

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: P838677

Luminaire Tested: HCSQ650D010-HM64560927-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838677
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: HCSQ650D010-HM64560927-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

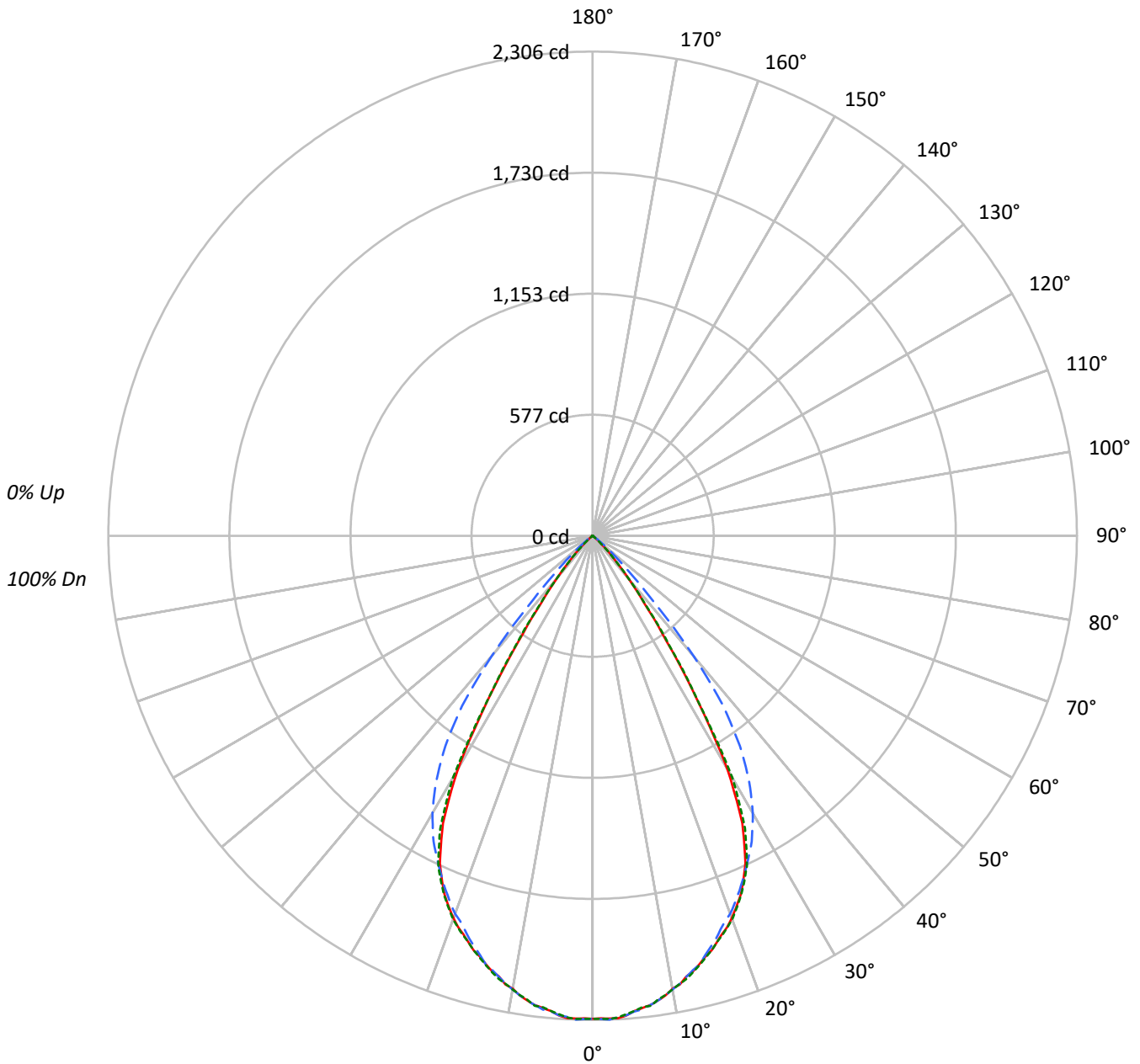
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2287.0 lumens
Efficiency: N/A
Efficacy: 46.0 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): 49.7
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°	99058	99058	99058
5°	98222	98304	98222
10°	95764	95926	95926
15°	92470	92220	92719
20°	88802	87775	89058
25°	81773	82396	82571
30°	63741	75822	66158
35°	32320	64246	33497
40°	14709	42019	14709
45°	5687	15819	5578
50°	877	5010	877
55°	278	983	278
60°	164	164	164
65°	194	0	194
70°	0	0	239
75°	0	0	316
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15819 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.8	9.4
10°-20°	582.6	25.5
20°-30°	785.4	34.3
30°-40°	552.2	24.1
40°-50°	141.0	6.2
50°-60°	9.7	0.4
60°-70°	1.2	0.1
70°-80°	0.2	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°	1582.8	69.2
0°-40°	2134.9	93.4
0°-60°	2285.7	99.9
0°-90°	2287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2287.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2301	2301	2301	2301	2301	
5°	2273	2276	2274	2276	2273	215
15°	2074	2071	2069	2074	2080	584
25°	1721	1727	1734	1740	1738	769
35°	615	815	1222	835	637	414
45°	93	140	260	142	92	82
55°	4	4	13	4	4	5
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°	2300.7	2300.7	2300.7	2300.7	2300.7
1°	2298.8	2300.7	2302.5	2302.5	2300.7
2°	2300.7	2295.1	2306.3	2300.7	2302.5
3°	2300.7	2289.5	2295.1	2298.8	2296.9
4°	2291.3	2283.9	2289.5	2287.6	2283.9
5°	2272.6	2276.4	2274.5	2276.4	2272.6
6°	2261.4	2265.2	2268.9	2263.3	2257.7
7°	2252.1	2250.2	2252.1	2255.8	2255.8
8°	2235.3	2239.0	2235.3	2237.1	2231.5
9°	2216.6	2216.6	2216.6	2220.3	2214.7
10°	2190.4	2199.8	2194.1	2197.9	2194.1
11°	2177.3	2173.6	2173.6	2175.5	2173.6
12°	2145.6	2149.3	2147.4	2151.2	2156.8
13°	2128.7	2130.6	2123.1	2132.5	2132.5
14°	2102.6	2100.7	2104.4	2102.6	2106.3
15°	2074.5	2070.8	2068.9	2074.5	2080.1
16°	2054.0	2044.6	2039.0	2046.5	2054.0
17°	2024.1	2014.7	2007.2	2022.2	2024.1
18°	1994.2	1990.4	1971.7	1990.4	1999.8
19°	1969.9	1956.8	1940.0	1960.5	1971.7
20°	1938.1	1926.9	1915.7	1926.9	1943.7
22.5°	1846.5	1837.2	1827.8	1840.9	1850.3
25°	1721.3	1726.9	1734.4	1740.0	1738.1
27.5°	1543.8	1594.2	1640.9	1611.0	1571.8
30°	1282.1	1409.2	1525.1	1429.7	1330.7
32.5°	928.9	1145.7	1386.8	1188.7	938.2
35°	614.9	814.9	1222.3	835.4	637.3
37.5°	400.0	547.6	1020.4	549.5	418.6
40°	261.7	357.0	747.6	364.4	261.7
42.5°	160.7	226.1	454.2	235.5	160.7
45°	93.4	140.2	259.8	142.0	91.6
47.5°	43.0	76.6	147.6	74.8	44.9
50°	13.1	33.6	74.8	33.6	13.1
52.5°	5.6	9.3	35.5	9.3	5.6
55°	3.7	3.7	13.1	3.7	3.7
57.5°	3.7	1.9	3.7	3.7	3.7
60°	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9
65°	1.9	1.9	0.0	1.9	1.9
67.5°	1.9	0.0	0.0	0.0	1.9
70°	0.0	0.0	0.0	0.0	1.9
72.5°	0.0	0.0	0.0	0.0	1.9
75°	0.0	0.0	0.0	0.0	1.9



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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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