

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: P837706

Luminaire Tested: HCSQ460D010-HM44560935-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837706
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560935-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

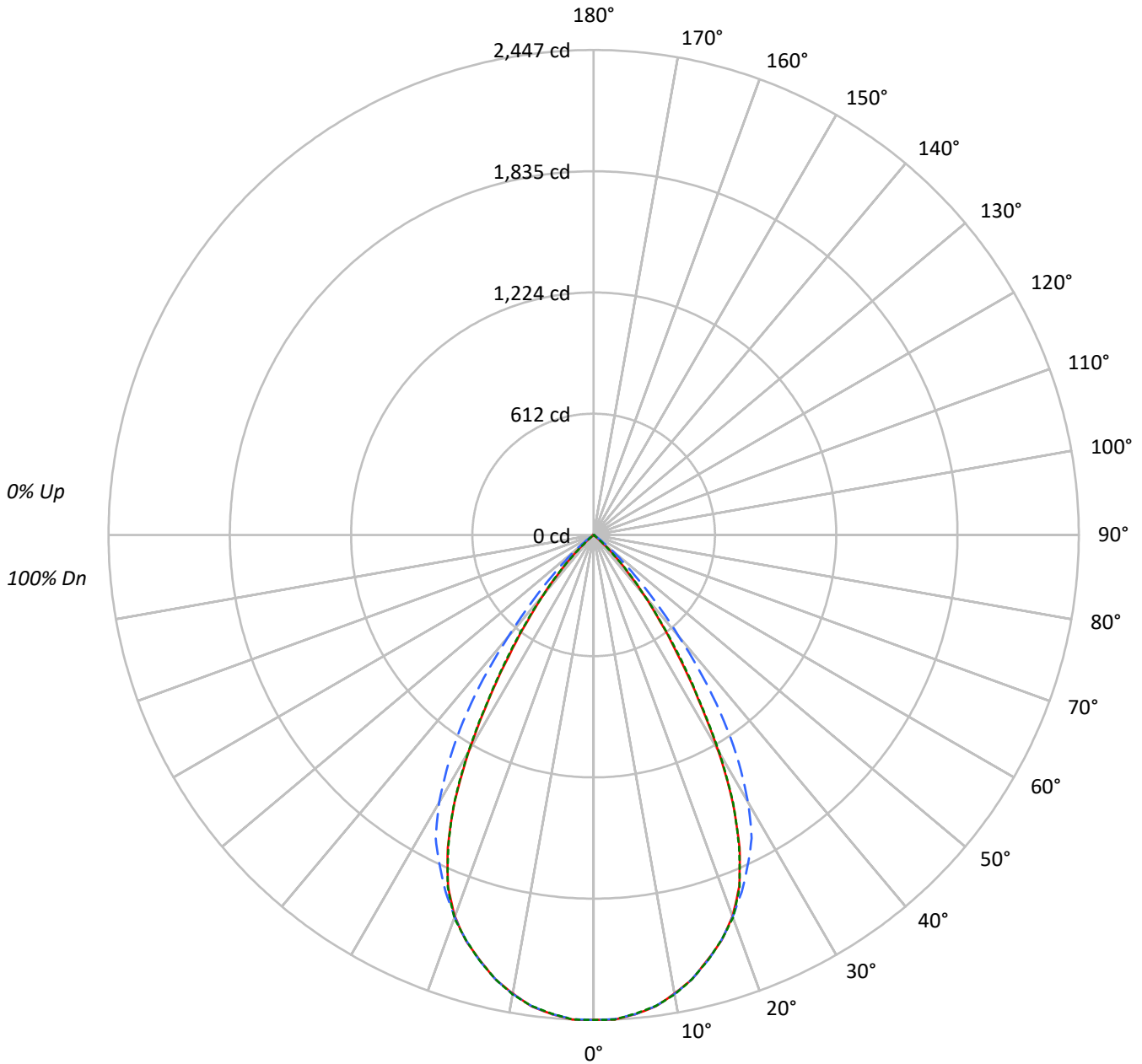
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2444.6 lumens
Efficiency: N/A
Efficacy: 43.7 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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					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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	237074	237074	237074
5°	235995	235995	235772
10°	231130	231356	231573
15°	222670	222901	222901
20°	211103	211330	211804
25°	186117	196550	185390
30°	140432	174203	141696
35°	88059	135577	91015
40°	49662	84401	49662
45°	20838	42608	20523
50°	1718	16428	2050
55°	760	3446	760
60°	872	446	872
65°	527	527	527
70°	651	651	651
75°	861	861	861
80°	0	1283	1283
85°	0	2556	2556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 42608 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.4	9.4
10°-20°	624.0	25.5
20°-30°	809.4	33.1
30°-40°	575.5	23.5
40°-50°	186.6	7.6
50°-60°	13.4	0.6
60°-70°	2.3	0.1
70°-80°	2.4	0.1
80°-90°	1.6	0.1
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°	1662.8	68.0
0°-40°	2238.2	91.6
0°-60°	2438.3	99.7
0°-90°	2444.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2444.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2447	2447	2447	2447	2447	
5°	2427	2429	2427	2427	2424	229
15°	2220	2227	2222	2227	2222	623
25°	1741	1787	1839	1796	1734	780
35°	745	881	1146	890	770	476
45°	152	216	311	220	150	127
55°	4	4	20	4	4	5
65°	2	2	2	2	2	3
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2447.2	2447.2	2447.2	2447.2	2447.2
2.5°	2447.2	2447.2	2444.9	2444.9	2447.2
5°	2426.8	2429.1	2426.8	2426.8	2424.5
7.5°	2399.5	2399.5	2397.3	2397.3	2397.3
10°	2349.6	2351.9	2351.9	2351.9	2354.1
12.5°	2295.1	2295.1	2295.1	2295.1	2295.1
15°	2220.2	2227.0	2222.5	2227.0	2222.5
17.5°	2145.3	2145.3	2143.0	2147.6	2143.0
20°	2047.7	2047.7	2049.9	2054.5	2054.5
22.5°	1918.3	1941.0	1950.1	1945.5	1922.8
25°	1741.2	1786.6	1838.8	1795.7	1734.4
27.5°	1518.7	1605.0	1725.3	1618.6	1523.3
30°	1255.4	1384.8	1557.3	1389.3	1266.7
32.5°	983.0	1132.8	1362.1	1144.2	992.1
35°	744.6	880.8	1146.4	889.9	769.6
37.5°	549.4	674.2	910.3	678.8	565.3
40°	392.7	483.5	667.4	492.6	392.7
42.5°	252.0	342.8	469.9	345.1	263.3
45°	152.1	215.7	311.0	220.2	149.8
47.5°	68.1	122.6	193.0	127.1	68.1
50°	11.4	49.9	109.0	52.2	13.6
52.5°	6.8	9.1	52.2	9.1	6.8
55°	4.5	4.5	20.4	4.5	4.5
57.5°	4.5	4.5	4.5	4.5	4.5
60°	4.5	2.3	2.3	2.3	4.5
62.5°	2.3	2.3	2.3	2.3	2.3
65°	2.3	2.3	2.3	2.3	2.3
67.5°	2.3	2.3	2.3	2.3	2.3
70°	2.3	2.3	2.3	2.3	2.3
72.5°	2.3	2.3	2.3	2.3	2.3
75°	2.3	2.3	2.3	2.3	2.3
77.5°	2.3	2.3	2.3	2.3	2.3
80°	0.0	2.3	2.3	2.3	2.3
82.5°	0.0	2.3	2.3	2.3	2.3
85°	0.0	0.0	2.3	2.3	2.3
87.5°	0.0	0.0	2.3	2.3	2.3
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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