

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: P837681

Luminaire Tested: HCSQ460D010-HM44560830-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837681
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-HM44560830-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

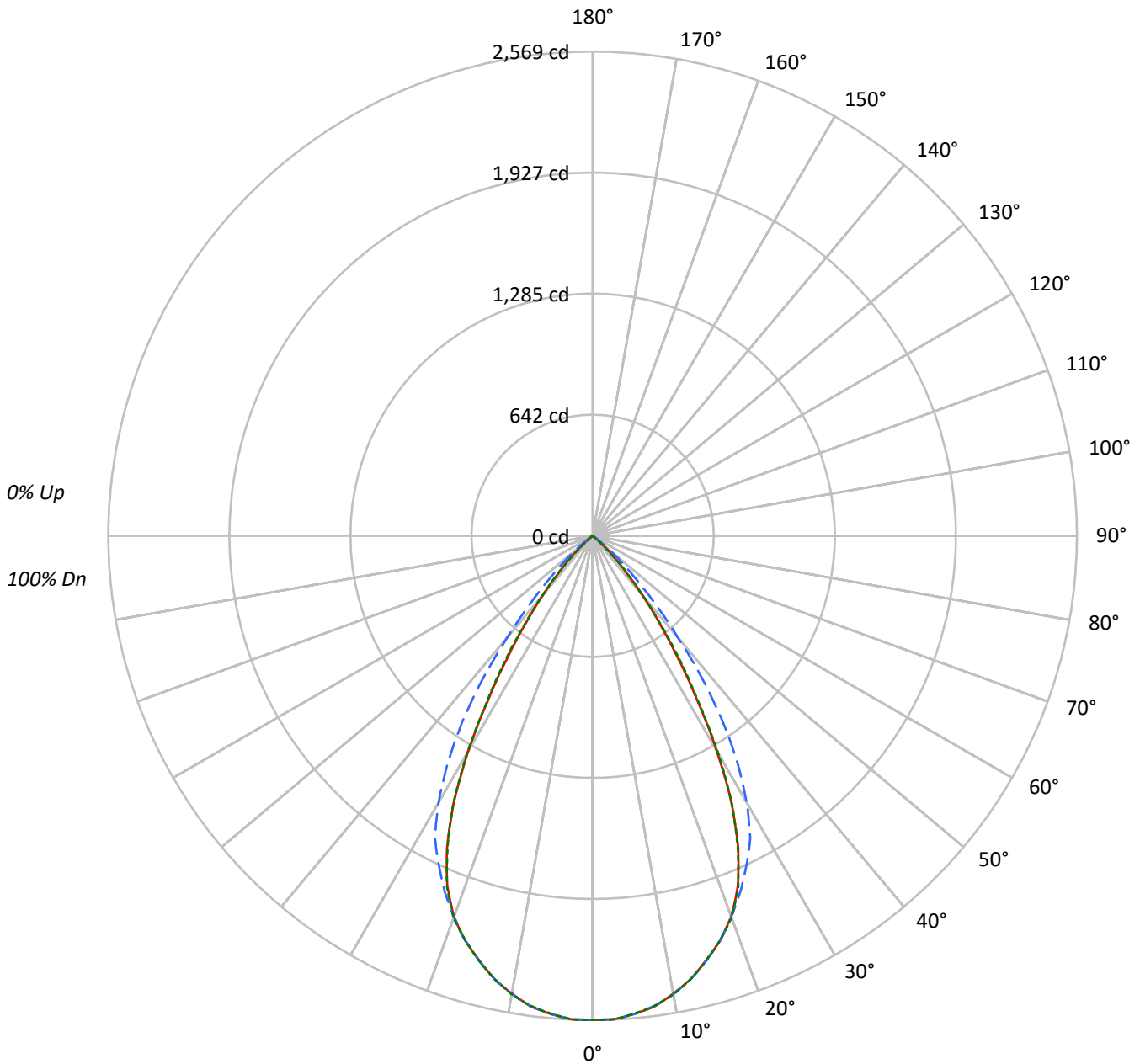
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2566.0 lumens
Efficiency: N/A
Efficacy: 45.8 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	100	100	100	100	100		
	1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	248844	248844	248844
5°	247713	247713	247480
10°	242610	242846	243072
15°	233732	233963	233963
20°	221587	221825	222319
25°	195363	206309	194594
30°	147401	182861	148732
35°	92434	142318	95533
40°	52128	88599	52128
45°	21879	44731	21551
50°	1793	17241	2155
55°	811	3614	811
60°	930	465	930
65°	550	550	550
70°	680	680	680
75°	898	898	898
80°	0	1339	1339
85°	0	2668	2668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 44731 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.8	9.4
10°-20°	654.9	25.5
20°-30°	849.6	33.1
30°-40°	604.0	23.5
40°-50°	195.9	7.6
50°-60°	14.1	0.6
60°-70°	2.5	0.1
70°-80°	2.5	0.1
80°-90°	1.7	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°	1745.3	68.0
0°-40°	2349.4	91.6
0°-60°	2559.4	99.7
0°-90°	2566.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2566.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2569	2569	2569	2569	2569	
5°	2547	2550	2547	2547	2545	241
15°	2330	2338	2333	2338	2333	654
25°	1828	1875	1930	1885	1820	818
35°	782	925	1203	934	808	500
45°	160	226	326	231	157	133
55°	5	5	21	5	5	6
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°	2568.7	2568.7	2568.7	2568.7	2568.7
2.5°	2568.7	2568.7	2566.4	2566.4	2568.7
5°	2547.3	2549.7	2547.3	2547.3	2544.9
7.5°	2518.7	2518.7	2516.3	2516.3	2516.3
10°	2466.3	2468.7	2468.7	2468.7	2471.0
12.5°	2409.1	2409.1	2409.1	2409.1	2409.1
15°	2330.5	2337.6	2332.8	2337.6	2332.8
17.5°	2251.8	2251.8	2249.4	2254.2	2249.4
20°	2149.4	2149.4	2151.7	2156.5	2156.5
22.5°	2013.5	2037.4	2046.9	2042.1	2018.3
25°	1827.7	1875.3	1930.1	1884.9	1820.5
27.5°	1594.1	1684.7	1811.0	1699.0	1598.9
30°	1317.7	1453.6	1634.7	1458.3	1329.6
32.5°	1031.8	1189.1	1429.7	1201.0	1041.3
35°	781.6	924.6	1203.4	934.1	807.8
37.5°	576.7	707.7	955.5	712.5	593.3
40°	412.2	507.6	700.6	517.1	412.2
42.5°	264.5	359.8	493.3	362.2	276.4
45°	159.7	226.4	326.5	231.1	157.3
47.5°	71.5	128.7	202.5	133.4	71.5
50°	11.9	52.4	114.4	54.8	14.3
52.5°	7.1	9.5	54.8	9.5	7.1
55°	4.8	4.8	21.4	4.8	4.8
57.5°	4.8	4.8	4.8	4.8	4.8
60°	4.8	2.4	2.4	2.4	4.8
62.5°	2.4	2.4	2.4	2.4	2.4
65°	2.4	2.4	2.4	2.4	2.4
67.5°	2.4	2.4	2.4	2.4	2.4
70°	2.4	2.4	2.4	2.4	2.4
72.5°	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4
77.5°	2.4	2.4	2.4	2.4	2.4
80°	0.0	2.4	2.4	2.4	2.4
82.5°	0.0	2.4	2.4	2.4	2.4
85°	0.0	0.0	2.4	2.4	2.4
87.5°	0.0	0.0	2.4	2.4	2.4
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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