

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: P837683

Luminaire Tested: HCSQ460D010-HM44560835-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837683
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560835-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

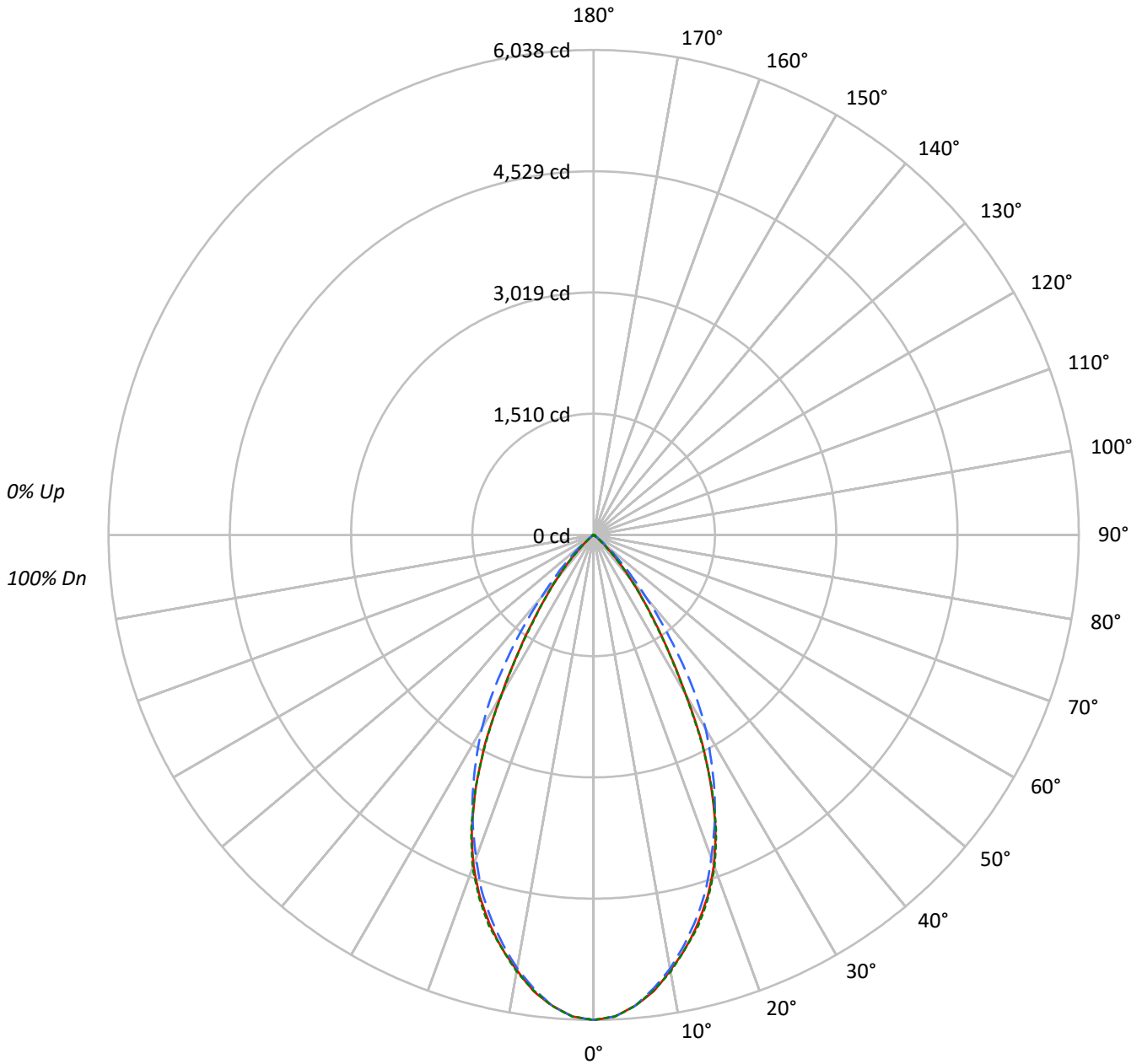
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4879.7 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
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 (Ain): 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				
RW	70	50	30	10	70	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	94		
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87		
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81		
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76		
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71		
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66		
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62		
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58		
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55		
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	584963	584963	584963
5°	572426	572659	572659
10°	541438	539028	542884
15°	502367	495487	505075
20°	450958	440855	453742
25°	370396	381128	371700
30°	256041	311413	254117
35°	157656	219969	153896
40°	88941	128612	88321
45°	40621	64460	38950
50°	10339	25847	10716
55°	4966	7871	4560
60°	3333	2848	3798
65°	2819	2246	2819
70°	2096	2096	2776
75°	1834	1834	2770
80°	2734	2734	2734
85°	2779	5446	5446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 64460 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	549.3	11.3
10°-20°	1387.2	28.4
20°-30°	1585.8	32.5
30°-40°	984.4	20.2
40°-50°	310.2	6.4
50°-60°	40.2	0.8
60°-70°	11.9	0.2
70°-80°	6.4	0.1
80°-90°	4.3	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°	3522.4	72.2
0°-40°	4506.8	92.4
0°-60°	4857.1	99.5
0°-90°	4879.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4879.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6038	6038	6038	6038	6038	
5°	5886	5882	5889	5884	5889	550
15°	5009	4972	4940	4972	5036	1397
25°	3465	3514	3566	3514	3477	1555
35°	1333	1539	1860	1502	1301	857
45°	296	355	470	358	284	250
55°	29	29	47	29	27	29
65°	12	12	10	12	12	12
75°	5	5	5	5	7	6
85°	2	5	5	5	5	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6038.3	6038.3	6038.3	6038.3	6038.3
2.5°	6001.5	6006.4	6001.5	6011.3	6001.5
5°	5886.4	5881.5	5888.8	5883.9	5888.8
7.5°	5729.5	5700.1	5697.7	5717.3	5719.7
10°	5504.1	5496.7	5479.6	5496.7	5518.8
12.5°	5273.7	5244.3	5219.8	5254.1	5273.7
15°	5009.0	4972.3	4940.4	4972.3	5036.0
17.5°	4717.4	4666.0	4639.0	4675.8	4737.0
20°	4374.3	4320.4	4276.3	4308.2	4401.3
22.5°	3962.6	3957.7	3928.3	3945.5	3979.8
25°	3465.2	3514.2	3565.6	3514.2	3477.4
27.5°	2918.7	3051.0	3168.6	3014.2	2896.6
30°	2288.9	2489.8	2783.9	2475.1	2271.7
32.5°	1769.3	1980.1	2355.0	1953.1	1754.6
35°	1333.1	1539.0	1860.0	1502.2	1301.3
37.5°	980.2	1134.6	1414.0	1124.8	980.2
40°	703.3	803.8	1017.0	801.3	698.4
42.5°	487.7	553.8	710.7	548.9	473.0
45°	296.5	355.3	470.5	357.8	284.3
47.5°	156.8	225.5	296.5	215.7	156.8
50°	68.6	120.1	171.5	117.6	71.1
52.5°	36.8	51.5	93.1	51.5	36.8
55°	29.4	29.4	46.6	29.4	27.0
57.5°	22.1	22.1	24.5	22.1	22.1
60°	17.2	17.2	14.7	17.2	19.6
62.5°	14.7	14.7	12.3	14.7	14.7
65°	12.3	12.3	9.8	12.3	12.3
67.5°	9.8	9.8	9.8	9.8	9.8
70°	7.4	7.4	7.4	9.8	9.8
72.5°	7.4	7.4	7.4	7.4	7.4
75°	4.9	4.9	4.9	4.9	7.4
77.5°	4.9	4.9	4.9	4.9	4.9
80°	4.9	4.9	4.9	4.9	4.9
82.5°	2.5	4.9	4.9	4.9	4.9
85°	2.5	4.9	4.9	4.9	4.9
87.5°	2.5	2.5	4.9	4.9	4.9
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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