

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: P837664

Luminaire Tested: HCSQ455D010-HM44560935-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837664
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ455D010-HM44560935-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

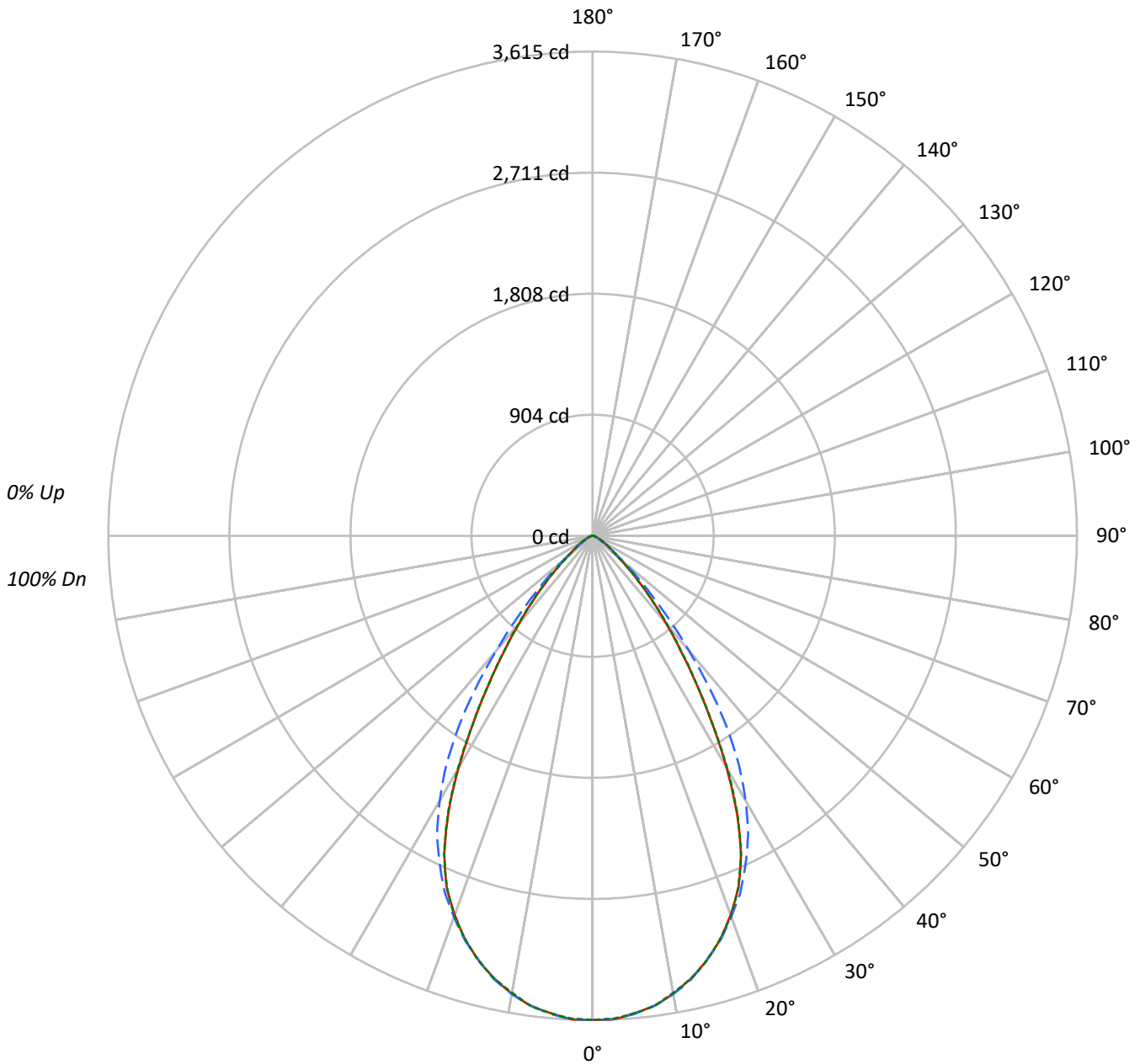
Lumens per Lamp: N/A
Luminaire Lumens: 4063.2 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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				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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	92	92
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85	85	85	85
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77	77	77	77
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71	71	71	71
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65	65	65	65
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60	60	60	60
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56	56	56	56
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52	52	52	52
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48	48	48	48
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45	45	45	45

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	350176	350176	350176
5°	348032	348469	348032
10°	341521	341737	340862
15°	329382	329161	329612
20°	310505	312113	311185
25°	280170	288764	280170
30°	223780	255493	225525
35°	159750	206747	160010
40°	107859	140613	109554
45°	68515	83202	68816
50°	39034	44415	37693
55°	25639	21501	25267
60°	17728	12536	17302
65°	12287	9215	12287
70°	8866	6968	8866
75°	5839	5839	5839
80°	3738	4965	4965
85°	5002	5002	5002

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 83202 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.6	8.3
10°-20°	920.8	22.7
20°-30°	1205.6	29.7
30°-40°	947.6	23.3
40°-50°	442.6	10.9
50°-60°	137.2	3.4
60°-70°	48.9	1.2
70°-80°	17.2	0.4
80°-90°	4.8	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°	2465.0	60.7
0°-40°	3412.6	84.0
0°-60°	3992.3	98.3
0°-90°	4063.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4063.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3615	3615	3615	3615	3615	
5°	3579	3581	3583	3588	3579	338
15°	3284	3284	3282	3284	3286	920
25°	2621	2657	2702	2659	2621	1179
35°	1351	1474	1748	1491	1353	852
45°	500	560	607	549	502	398
55°	152	143	127	141	150	142
65°	54	49	40	47	54	56
75°	16	16	16	16	16	18
85°	4	4	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3614.7	3614.7	3614.7	3614.7	3614.7
2.5°	3614.7	3610.2	3612.4	3608.0	3608.0
5°	3578.9	3581.2	3583.4	3587.9	3578.9
7.5°	3538.8	3543.2	3541.0	3541.0	3541.0
10°	3471.8	3474.0	3474.0	3474.0	3465.1
12.5°	3386.9	3391.4	3393.6	3386.9	3386.9
15°	3284.2	3284.2	3282.0	3284.2	3286.5
17.5°	3161.4	3168.1	3168.1	3161.4	3159.2
20°	3011.9	3023.0	3027.5	3018.5	3018.5
22.5°	2844.4	2855.6	2882.4	2860.0	2842.2
25°	2621.1	2656.9	2701.5	2659.1	2621.1
27.5°	2333.1	2411.3	2514.0	2424.7	2339.8
30°	2000.5	2127.7	2284.0	2134.4	2016.1
32.5°	1661.1	1804.0	2033.9	1815.1	1661.1
35°	1350.8	1473.6	1748.2	1491.4	1353.0
37.5°	1073.9	1192.2	1433.4	1205.6	1089.5
40°	852.9	948.9	1111.9	946.6	866.3
42.5°	665.3	734.5	841.7	732.3	663.1
45°	500.1	560.4	607.3	549.2	502.3
47.5°	368.4	408.6	435.4	401.9	359.5
50°	259.0	288.0	294.7	281.3	250.1
52.5°	194.2	194.2	196.5	192.0	189.8
55°	151.8	142.9	127.3	140.7	149.6
57.5°	118.3	109.4	89.3	104.9	116.1
60°	91.5	82.6	64.7	80.4	89.3
62.5°	71.4	62.5	51.4	62.5	69.2
65°	53.6	49.1	40.2	46.9	53.6
67.5°	40.2	35.7	31.3	35.7	40.2
70°	31.3	29.0	24.6	26.8	31.3
72.5°	22.3	20.1	20.1	20.1	22.3
75°	15.6	15.6	15.6	15.6	15.6
77.5°	11.2	11.2	11.2	11.2	11.2
80°	6.7	6.7	8.9	8.9	8.9
82.5°	4.5	4.5	6.7	6.7	6.7
85°	4.5	4.5	4.5	4.5	4.5
87.5°	2.2	2.2	2.2	4.5	4.5
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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