

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: P837712

Luminaire Tested: HCSQ460D010-HM44560940-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560940-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

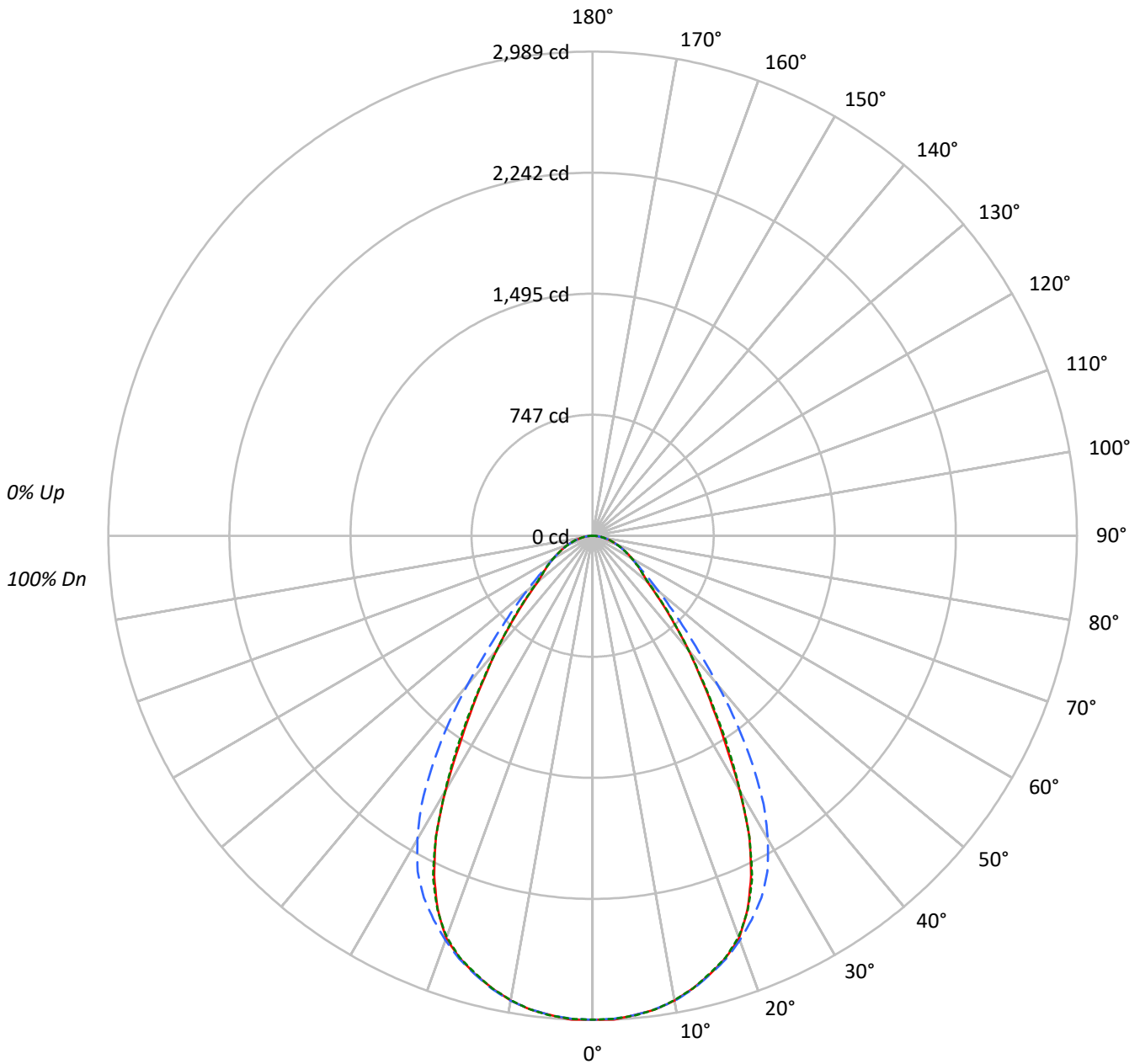
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4334.7 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
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					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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	289367	289367	289367
5°	288887	288887	289111
10°	286522	286748	286296
15°	280950	281181	280479
20°	272525	273958	271567
25°	247333	263463	249076
30°	203019	241969	203802
35°	152607	203105	154806
40°	116231	151451	115928
45°	86805	107478	88394
50°	66102	80103	67504
55°	59587	62712	59587
60°	54405	53960	53960
65°	49467	49467	49467
70°	46027	45347	45347
75°	42558	41697	42558
80°	38829	37546	38829
85°	33568	33568	33568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 107478 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.7	6.5
10°-20°	788.6	18.2
20°-30°	1084.6	25.0
30°-40°	923.3	21.3
40°-50°	557.7	12.9
50°-60°	328.7	7.6
60°-70°	215.6	5.0
70°-80°	119.5	2.8
80°-90°	35.0	0.8
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°	2154.9	49.7
0°-40°	3078.3	71.0
0°-60°	3964.6	91.5
0°-90°	4334.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4334.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2987	2987	2987	2987	2987	
5°	2971	2973	2971	2968	2973	282
15°	2801	2808	2804	2801	2797	788
25°	2314	2386	2465	2390	2330	1046
35°	1290	1420	1717	1460	1309	817
45°	634	701	784	708	645	498
55°	353	360	371	360	353	317
65°	216	218	216	216	216	216
75°	114	114	111	111	114	121
85°	30	30	30	30	30	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2987.0	2987.0	2987.0	2987.0	2987.0
2.5°	2989.3	2982.3	2984.6	2982.3	2984.6
5°	2970.7	2973.0	2970.7	2968.4	2973.0
7.5°	2949.8	2947.5	2947.5	2945.2	2949.8
10°	2912.7	2908.1	2915.0	2910.4	2910.4
12.5°	2861.6	2868.6	2866.3	2866.3	2861.6
15°	2801.3	2808.3	2803.6	2801.3	2796.6
17.5°	2731.7	2736.3	2738.6	2729.3	2729.3
20°	2643.5	2652.8	2657.4	2641.2	2634.2
22.5°	2497.3	2539.0	2564.6	2536.7	2501.9
25°	2313.9	2385.9	2464.8	2390.5	2330.2
27.5°	2093.4	2195.5	2337.1	2211.8	2093.4
30°	1814.9	1965.8	2163.1	1982.0	1821.9
32.5°	1527.1	1687.3	1963.5	1715.1	1559.6
35°	1290.4	1420.4	1717.4	1459.8	1309.0
37.5°	1086.2	1197.6	1459.8	1223.1	1097.8
40°	919.1	1007.3	1197.6	1018.9	916.7
42.5°	758.9	842.5	970.1	854.1	768.2
45°	633.6	700.9	784.5	707.9	645.2
47.5°	526.8	582.5	642.9	582.5	533.8
50°	438.6	482.7	531.5	482.7	447.9
52.5°	392.2	406.2	438.6	408.5	392.2
55°	352.8	359.7	371.3	359.7	352.8
57.5°	315.6	320.3	318.0	318.0	315.6
60°	280.8	283.1	278.5	280.8	278.5
62.5°	248.3	248.3	243.7	248.3	246.0
65°	215.8	218.2	215.8	215.8	215.8
67.5°	188.0	188.0	185.7	188.0	188.0
70°	162.5	162.5	160.1	162.5	160.1
72.5°	136.9	136.9	134.6	134.6	134.6
75°	113.7	113.7	111.4	111.4	113.7
77.5°	90.5	90.5	88.2	90.5	90.5
80°	69.6	69.6	67.3	69.6	69.6
82.5°	48.7	48.7	48.7	51.1	51.1
85°	30.2	30.2	30.2	30.2	30.2
87.5°	13.9	13.9	13.9	13.9	16.2
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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