

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: P838623

Luminaire Tested: HCSQ645D010-HM64560830-61SQMW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838623
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ645D010-HM64560830-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

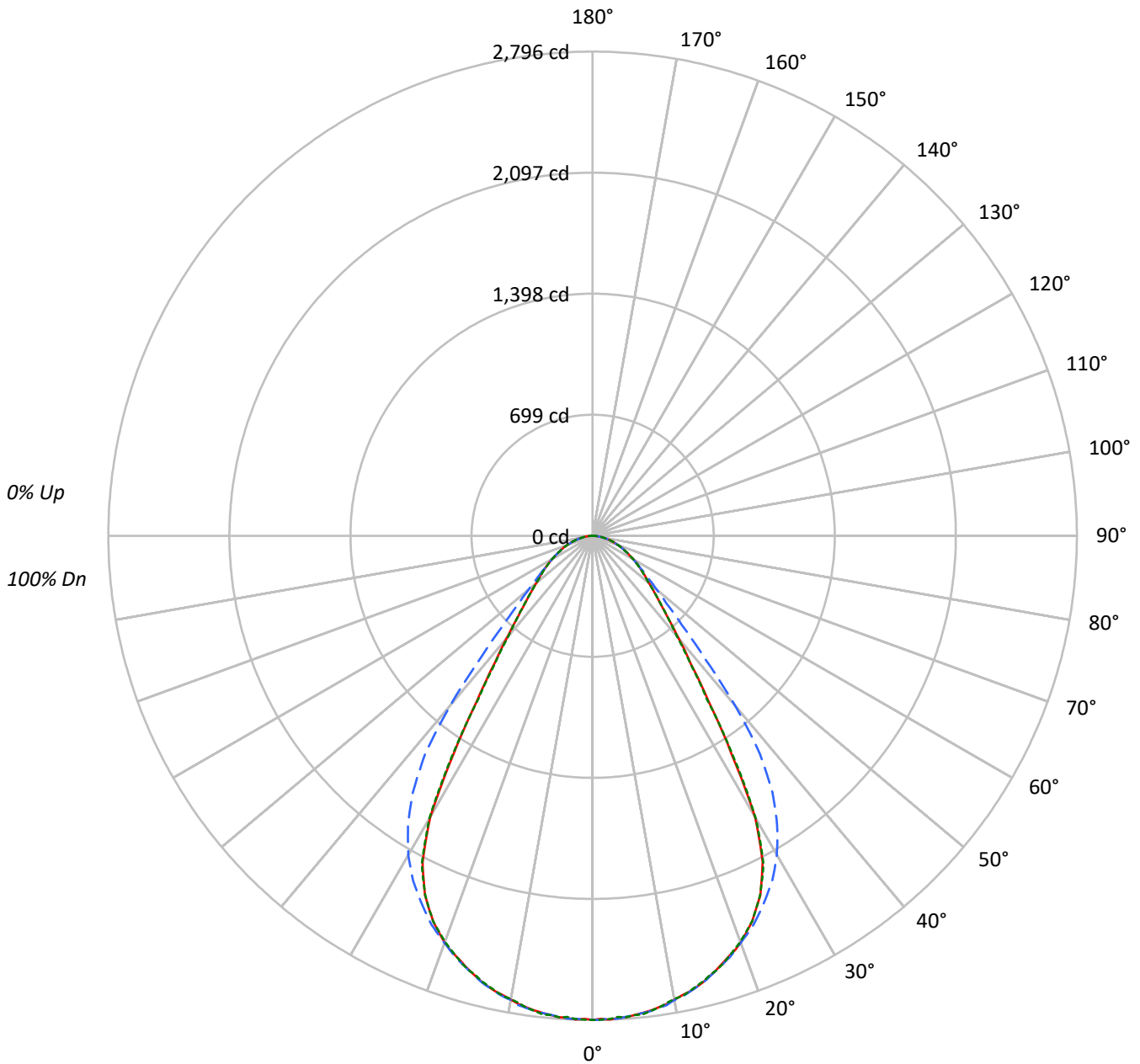
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4124.7 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 45.9
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

TEST NUMBER: P838623
CATALOG NUMBER: HCSQ645D010-HM64560830-61SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P838623

CATALOG NUMBER: HCSQ645D010-HM64560830-61SQMW

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	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	77	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	67	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	80	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	51	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°	120397	120397	120397
5°	120100	120014	120100
10°	118922	119010	118752
15°	117155	117240	116981
20°	114515	114607	114249
25°	108800	111123	108710
30°	93169	105796	93750
35°	61218	95110	60293
40°	43272	71718	42502
45°	33556	44145	33794
50°	28535	32199	28273
55°	25672	26400	25672
60°	23224	23224	23224
65°	21303	21099	21099
70°	19437	19437	19676
75°	18199	17550	17883
80°	15993	15993	15993
85°	13536	13536	13536

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 44145 cd/sqm



TEST NUMBER: P838623

CATALOG NUMBER: HCSQ645D010-HM64560830-61SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.6	6.4
10°-20°	740.3	17.9
20°-30°	1055.0	25.6
30°-40°	899.5	21.8
40°-50°	497.7	12.1
50°-60°	313.5	7.6
60°-70°	208.1	5.0
70°-80°	114.4	2.8
80°-90°	32.6	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°	2059.0	49.9
0°-40°	2958.5	71.7
0°-60°	3769.6	91.4
0°-90°	4124.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4124.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2796	2796	2796	2796	2796	
5°	2779	2783	2777	2773	2779	263
15°	2628	2628	2630	2628	2624	740
25°	2290	2318	2339	2316	2288	1035
35°	1165	1374	1810	1376	1147	757
45°	551	604	725	600	555	437
55°	342	348	352	346	342	307
65°	209	211	207	209	207	208
75°	109	108	106	108	108	115
85°	27	27	27	29	27	33
90°	0	0	0	0	0	



TEST NUMBER: P838623

CATALOG NUMBER: HCSQ645D010-HM64560830-61SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2796.3	2796.3	2796.3	2796.3	2796.3
1°	2790.5	2794.4	2794.4	2792.4	2794.4
2°	2796.3	2790.5	2790.5	2790.5	2792.4
3°	2788.5	2792.4	2792.4	2786.6	2782.7
4°	2786.6	2784.6	2784.6	2790.5	2786.6
5°	2778.8	2782.7	2776.8	2772.9	2778.8
6°	2770.9	2772.9	2770.9	2772.9	2778.8
7°	2761.2	2767.0	2765.1	2763.1	2763.1
8°	2749.4	2757.3	2753.4	2753.4	2751.4
9°	2737.7	2739.7	2743.6	2743.6	2731.9
10°	2720.1	2726.0	2722.1	2724.0	2716.2
11°	2704.5	2712.3	2710.4	2706.5	2708.4
12°	2690.8	2694.7	2692.8	2686.9	2688.9
13°	2673.2	2677.1	2675.2	2675.2	2669.3
14°	2653.7	2649.8	2655.7	2651.7	2649.8
15°	2628.3	2628.3	2630.2	2628.3	2624.4
16°	2604.8	2606.8	2606.8	2604.8	2606.8
17°	2577.5	2585.3	2583.3	2579.4	2581.4
18°	2552.1	2557.9	2559.9	2557.9	2552.1
19°	2528.6	2532.5	2530.6	2522.8	2522.8
20°	2499.3	2501.3	2501.3	2497.4	2493.5
22.5°	2407.5	2421.2	2430.9	2423.1	2407.5
25°	2290.2	2317.6	2339.1	2315.6	2288.3
27.5°	2126.1	2180.8	2245.3	2186.7	2135.9
30°	1874.0	1999.1	2128.0	2010.8	1885.7
32.5°	1491.0	1737.2	1983.4	1760.7	1514.4
35°	1164.7	1373.7	1809.5	1375.7	1147.1
37.5°	930.2	1078.7	1586.7	1068.9	920.4
40°	769.9	869.6	1276.0	865.7	756.2
42.5°	642.9	719.1	955.6	711.3	642.9
45°	551.1	603.8	725.0	599.9	555.0
47.5°	482.7	515.9	580.4	513.9	482.7
50°	426.0	445.5	480.7	443.6	422.1
52.5°	381.1	392.8	406.5	388.9	377.1
55°	342.0	347.8	351.7	345.9	342.0
57.5°	304.8	308.8	306.8	304.8	302.9
60°	269.7	271.6	269.7	271.6	269.7
62.5°	238.4	240.4	236.4	238.4	236.4
65°	209.1	211.0	207.1	209.1	207.1
67.5°	181.7	181.7	181.7	181.7	179.8
70°	154.4	156.3	154.4	156.3	156.3
72.5°	130.9	130.9	129.0	130.9	130.9
75°	109.4	107.5	105.5	107.5	107.5



TEST NUMBER: P838623

CATALOG NUMBER: HCSQ645D010-HM64560830-61SQMW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	46.9	46.9	44.9	46.9	46.9
85°	27.4	27.4	27.4	29.3	27.4
87.5°	13.7	11.7	11.7	13.7	13.7
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





77.5°	86.0	86.0	84.0	86.0	86.0
80°	64.5	66.4	64.5	66.4	64.5

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)