

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: P838628

Luminaire Tested: HCSQ645D010-HM64560835-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838628
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-HM64560835-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

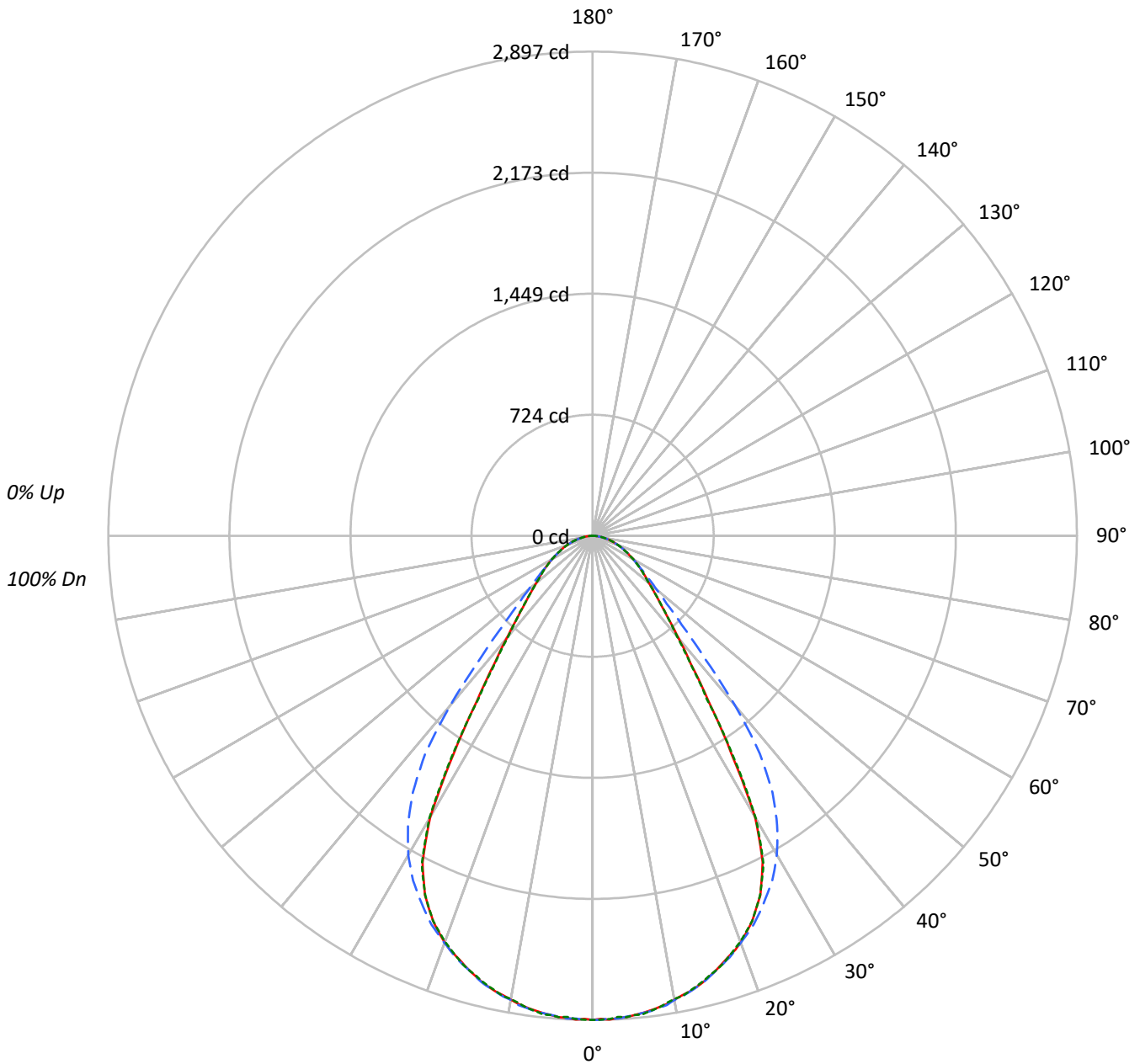
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4273.4 lumens
Efficiency: N/A
Efficacy: 93.1 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

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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								
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°	124741	124741	124741
5°	124431	124340	124431
10°	123211	123299	123036
15°	121381	121470	121198
20°	118643	118740	118368
25°	112724	115128	112629
30°	96529	109615	97131
35°	63420	98542	62464
40°	44835	74309	44037
45°	34762	45734	35012
50°	29566	33357	29292
55°	26596	27354	26596
60°	24060	24060	24060
65°	22067	21863	21863
70°	20129	20129	20394
75°	18865	18183	18532
80°	16563	16563	16563
85°	13980	13980	13980

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 45734 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.1	6.4
10°-20°	767.0	17.9
20°-30°	1093.0	25.6
30°-40°	932.0	21.8
40°-50°	515.6	12.1
50°-60°	324.8	7.6
60°-70°	215.6	5.0
70°-80°	118.5	2.8
80°-90°	33.7	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°	2133.2	49.9
0°-40°	3065.2	71.7
0°-60°	3905.6	91.4
0°-90°	4273.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4273.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2897	2897	2897	2897	2897	
5°	2879	2883	2877	2873	2879	273
15°	2723	2723	2725	2723	2719	767
25°	2373	2401	2423	2399	2371	1072
35°	1207	1423	1875	1425	1188	784
45°	571	626	751	622	575	453
55°	354	360	364	358	354	318
65°	217	219	215	217	215	216
75°	113	111	109	111	111	119
85°	28	28	28	30	28	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2897.2	2897.2	2897.2	2897.2	2897.2
1°	2891.1	2895.1	2895.1	2893.1	2895.1
2°	2897.2	2891.1	2891.1	2891.1	2893.1
3°	2889.1	2893.1	2893.1	2887.1	2883.0
4°	2887.1	2885.0	2885.0	2891.1	2887.1
5°	2879.0	2883.0	2876.9	2872.9	2879.0
6°	2870.9	2872.9	2870.9	2872.9	2879.0
7°	2860.7	2866.8	2864.8	2862.8	2862.8
8°	2848.6	2856.7	2852.6	2852.6	2850.6
9°	2836.4	2838.5	2842.5	2842.5	2830.4
10°	2818.2	2824.3	2820.2	2822.3	2814.2
11°	2802.0	2810.1	2808.1	2804.0	2806.1
12°	2787.8	2791.9	2789.9	2783.8	2785.8
13°	2769.6	2773.7	2771.6	2771.6	2765.6
14°	2749.4	2745.3	2751.4	2747.4	2745.3
15°	2723.1	2723.1	2725.1	2723.1	2719.0
16°	2698.8	2700.8	2700.8	2698.8	2700.8
17°	2670.4	2678.5	2676.5	2672.4	2674.5
18°	2644.1	2650.2	2652.2	2650.2	2644.1
19°	2619.8	2623.9	2621.8	2613.7	2613.7
20°	2589.4	2591.5	2591.5	2587.4	2583.4
22.5°	2494.3	2508.5	2518.6	2510.5	2494.3
25°	2372.8	2401.2	2423.4	2399.1	2370.8
27.5°	2202.7	2259.4	2326.2	2265.5	2212.9
30°	1941.6	2071.1	2204.8	2083.3	1953.7
32.5°	1544.8	1799.9	2054.9	1824.1	1569.0
35°	1206.6	1423.3	1874.8	1425.3	1188.4
37.5°	963.7	1117.6	1644.0	1107.4	953.6
40°	797.7	900.9	1322.1	896.9	783.5
42.5°	666.1	745.0	990.0	736.9	666.1
45°	570.9	625.6	751.1	621.5	575.0
47.5°	500.1	534.5	601.3	532.5	500.1
50°	441.4	461.6	498.0	459.6	437.3
52.5°	394.8	406.9	421.1	402.9	390.7
55°	354.3	360.4	364.4	358.4	354.3
57.5°	315.8	319.9	317.9	315.8	313.8
60°	279.4	281.4	279.4	281.4	279.4
62.5°	247.0	249.0	245.0	247.0	245.0
65°	216.6	218.7	214.6	216.6	214.6
67.5°	188.3	188.3	188.3	188.3	186.3
70°	159.9	162.0	159.9	162.0	162.0
72.5°	135.6	135.6	133.6	135.6	135.6
75°	113.4	111.4	109.3	111.4	111.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	48.6	48.6	46.6	48.6	48.6
85°	28.3	28.3	28.3	30.4	28.3
87.5°	14.2	12.1	12.1	14.2	14.2
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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77.5°	89.1	89.1	87.1	89.1	89.1
80°	66.8	68.8	66.8	68.8	66.8

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Scaled Data Report



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