

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: P838643

Luminaire Tested: HCSQ645D010-HM64560930-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838643
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-HM64560930-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

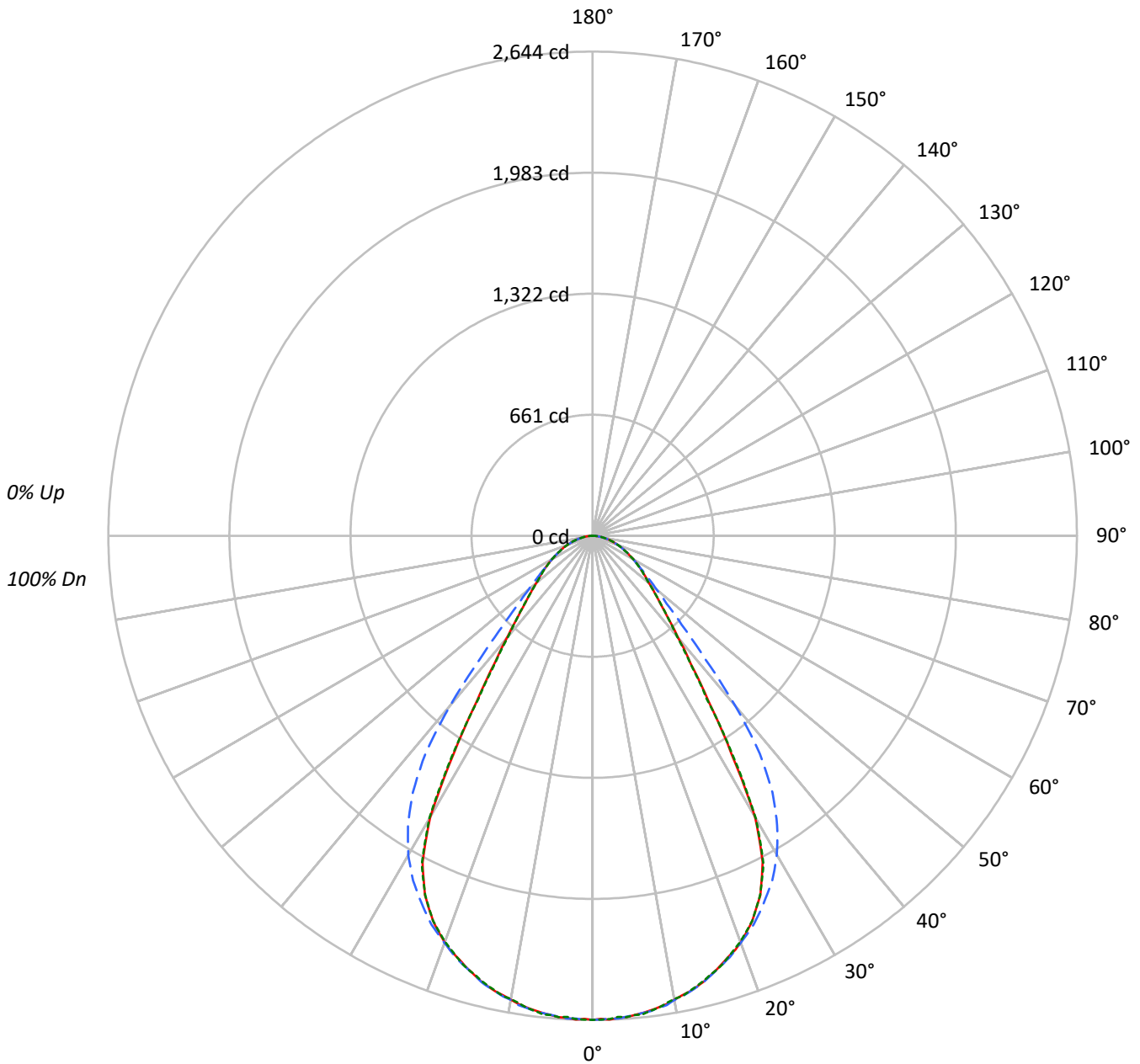
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3900.1 lumens
Efficiency: N/A
Efficacy: 85.0 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 (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	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°	113843	113843	113843
5°	113561	113479	113561
10°	112447	112531	112286
15°	110777	110857	110612
20°	108279	108366	108027
25°	102876	105070	102790
30°	88097	100039	88644
35°	57880	89932	57008
40°	40917	67817	40192
45°	31730	41740	31955
50°	26981	30444	26733
55°	24276	24967	24276
60°	21958	21958	21958
65°	20141	19958	19958
70°	18379	18379	18606
75°	17218	16602	16902
80°	15125	15125	15125
85°	12795	12795	12795

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 41740 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.3	6.4
10°-20°	700.0	17.9
20°-30°	997.6	25.6
30°-40°	850.6	21.8
40°-50°	470.6	12.1
50°-60°	296.4	7.6
60°-70°	196.8	5.0
70°-80°	108.1	2.8
80°-90°	30.8	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°	1946.9	49.9
0°-40°	2797.4	71.7
0°-60°	3564.4	91.4
0°-90°	3900.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3900.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2644	2644	2644	2644	2644	
5°	2628	2631	2626	2622	2628	249
15°	2485	2485	2487	2485	2482	700
25°	2166	2191	2212	2190	2164	978
35°	1101	1299	1711	1301	1085	716
45°	521	571	686	567	525	413
55°	323	329	333	327	323	291
65°	198	200	196	198	196	197
75°	104	102	100	102	102	109
85°	26	26	26	28	26	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2644.1	2644.1	2644.1	2644.1	2644.1
1°	2638.5	2642.2	2642.2	2640.4	2642.2
2°	2644.1	2638.5	2638.5	2638.5	2640.4
3°	2636.7	2640.4	2640.4	2634.8	2631.1
4°	2634.8	2633.0	2633.0	2638.5	2634.8
5°	2627.5	2631.1	2625.6	2621.9	2627.5
6°	2620.1	2621.9	2620.1	2621.9	2627.5
7°	2610.8	2616.4	2614.5	2612.7	2612.7
8°	2599.7	2607.1	2603.4	2603.4	2601.6
9°	2588.7	2590.5	2594.2	2594.2	2583.1
10°	2572.0	2577.6	2573.9	2575.7	2568.3
11°	2557.2	2564.6	2562.8	2559.1	2560.9
12°	2544.3	2548.0	2546.2	2540.6	2542.5
13°	2527.7	2531.4	2529.5	2529.5	2524.0
14°	2509.2	2505.5	2511.0	2507.4	2505.5
15°	2485.2	2485.2	2487.0	2485.2	2481.5
16°	2463.0	2464.9	2464.9	2463.0	2464.9
17°	2437.1	2444.5	2442.7	2439.0	2440.8
18°	2413.1	2418.7	2420.5	2418.7	2413.1
19°	2390.9	2394.6	2392.8	2385.4	2385.4
20°	2363.2	2365.1	2365.1	2361.4	2357.7
22.5°	2276.4	2289.3	2298.6	2291.2	2276.4
25°	2165.5	2191.4	2211.7	2189.5	2163.7
27.5°	2010.3	2062.1	2123.0	2067.6	2019.6
30°	1772.0	1890.2	2012.2	1901.3	1783.0
32.5°	1409.8	1642.6	1875.4	1664.8	1432.0
35°	1101.2	1298.9	1711.0	1300.8	1084.6
37.5°	879.5	1019.9	1500.3	1010.7	870.3
40°	728.0	822.2	1206.6	818.5	715.1
42.5°	607.9	680.0	903.5	672.6	607.9
45°	521.1	570.9	685.5	567.2	524.8
47.5°	456.4	487.8	548.8	485.9	456.4
50°	402.8	421.3	454.5	419.4	399.1
52.5°	360.3	371.4	384.3	367.7	356.6
55°	323.4	328.9	332.6	327.0	323.4
57.5°	288.2	291.9	290.1	288.2	286.4
60°	255.0	256.8	255.0	256.8	255.0
62.5°	225.4	227.3	223.6	225.4	223.6
65°	197.7	199.6	195.9	197.7	195.9
67.5°	171.8	171.8	171.8	171.8	170.0
70°	146.0	147.8	146.0	147.8	147.8
72.5°	123.8	123.8	121.9	123.8	123.8
75°	103.5	101.6	99.8	101.6	101.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	44.3	44.3	42.5	44.3	44.3
85°	25.9	25.9	25.9	27.7	25.9
87.5°	12.9	11.1	11.1	12.9	12.9
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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77.5°	81.3	81.3	79.5	81.3	81.3
80°	61.0	62.8	61.0	62.8	61.0

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