

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: P838638

Luminaire Tested: HCSQ645D010-HM64560927-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838638
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-HM64560927-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

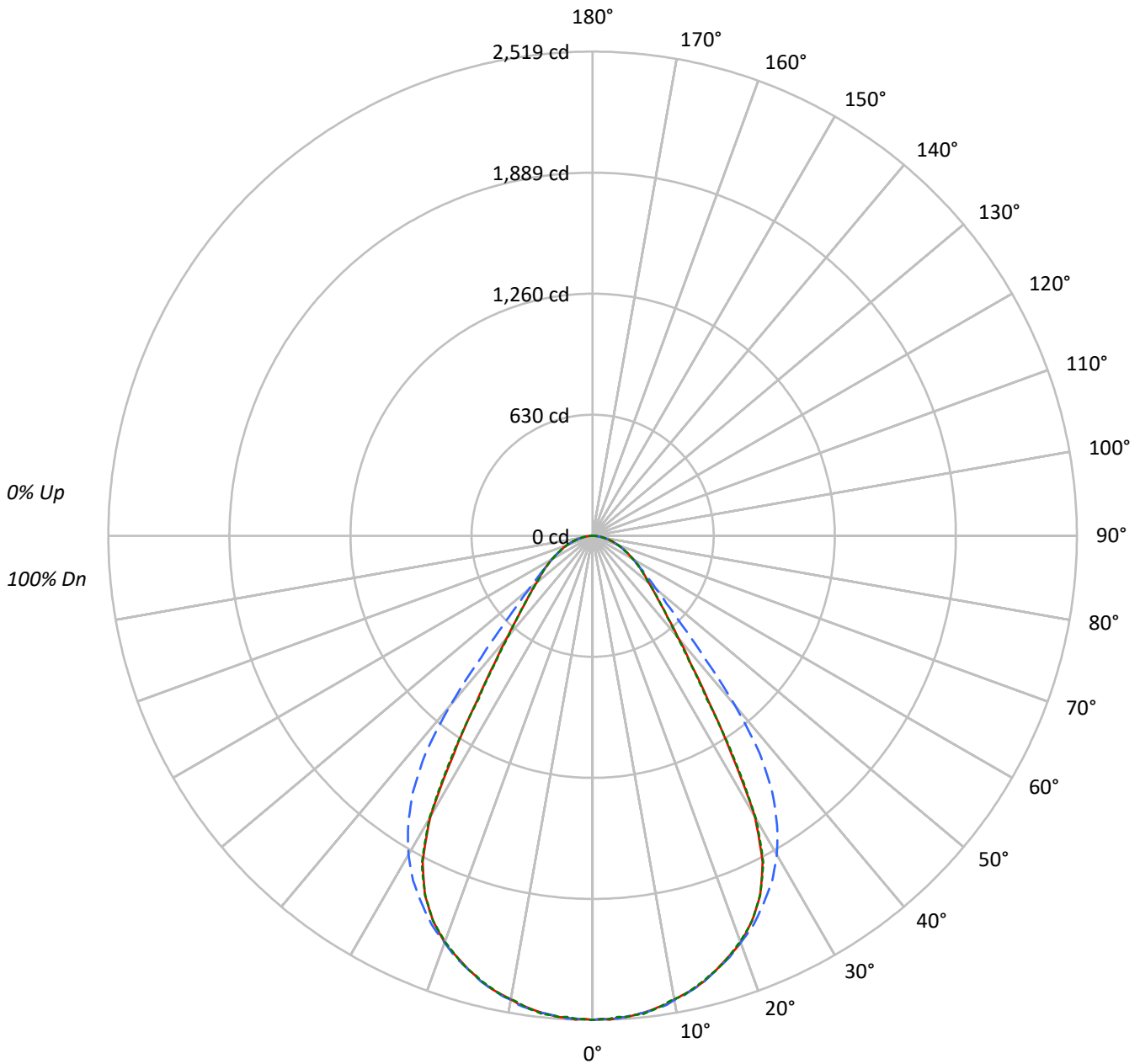
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3714.9 lumens
Efficiency: N/A
Efficacy: 80.9 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: P838638
CATALOG NUMBER: HCSQ645D010-HM64560927-61SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P838638

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQMW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	108440	108440	108440
5°	108167	108094	108167
10°	107109	107188	106956
15°	105517	105597	105361
20°	103138	103221	102900
25°	97992	100082	97911
30°	83911	95286	84438
35°	55137	85664	54301
40°	38973	64597	38281
45°	30220	39761	30433
50°	25701	29004	25467
55°	23120	23781	23120
60°	20916	20916	20916
65°	19184	19011	19011
70°	17498	17498	17725
75°	16403	15804	16103
80°	14406	14406	14406
85°	12153	12153	12153

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 39761 cd/sqm



TEST NUMBER: P838638

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.4	6.4
10°-20°	666.8	17.9
20°-30°	950.2	25.6
30°-40°	810.2	21.8
40°-50°	448.2	12.1
50°-60°	282.3	7.6
60°-70°	187.5	5.0
70°-80°	103.0	2.8
80°-90°	29.3	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°	1854.4	49.9
0°-40°	2664.6	71.7
0°-60°	3395.2	91.4
0°-90°	3714.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3714.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2519	2519	2519	2519	2519	
5°	2503	2506	2501	2497	2503	237
15°	2367	2367	2369	2367	2364	666
25°	2063	2087	2107	2086	2061	932
35°	1049	1237	1630	1239	1033	682
45°	496	544	653	540	500	393
55°	308	313	317	312	308	277
65°	188	190	187	188	187	187
75°	99	97	95	97	97	103
85°	25	25	25	26	25	29
90°	0	0	0	0	0	



TEST NUMBER: P838638

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2518.6	2518.6	2518.6	2518.6	2518.6
1°	2513.3	2516.8	2516.8	2515.0	2516.8
2°	2518.6	2513.3	2513.3	2513.3	2515.0
3°	2511.5	2515.0	2515.0	2509.8	2506.2
4°	2509.8	2508.0	2508.0	2513.3	2509.8
5°	2502.7	2506.2	2501.0	2497.4	2502.7
6°	2495.7	2497.4	2495.7	2497.4	2502.7
7°	2486.9	2492.2	2490.4	2488.6	2488.6
8°	2476.3	2483.4	2479.8	2479.8	2478.1
9°	2465.8	2467.5	2471.0	2471.0	2460.5
10°	2449.9	2455.2	2451.7	2453.4	2446.4
11°	2435.8	2442.9	2441.1	2437.6	2439.4
12°	2423.5	2427.0	2425.3	2420.0	2421.8
13°	2407.7	2411.2	2409.4	2409.4	2404.2
14°	2390.1	2386.6	2391.8	2388.3	2386.6
15°	2367.2	2367.2	2369.0	2367.2	2363.7
16°	2346.1	2347.8	2347.8	2346.1	2347.8
17°	2321.4	2328.5	2326.7	2323.2	2325.0
18°	2298.6	2303.8	2305.6	2303.8	2298.6
19°	2277.4	2281.0	2279.2	2272.2	2272.2
20°	2251.0	2252.8	2252.8	2249.3	2245.8
22.5°	2168.3	2180.6	2189.4	2182.4	2168.3
25°	2062.7	2087.4	2106.7	2085.6	2061.0
27.5°	1914.9	1964.2	2022.2	1969.4	1923.7
30°	1687.8	1800.5	1916.6	1811.0	1698.4
32.5°	1342.9	1564.6	1786.4	1585.8	1364.0
35°	1049.0	1237.3	1629.8	1239.0	1033.1
37.5°	837.8	971.5	1429.1	962.7	829.0
40°	693.4	783.2	1149.3	779.7	681.1
42.5°	579.0	647.7	860.6	640.6	579.0
45°	496.3	543.8	653.0	540.3	499.8
47.5°	434.7	464.6	522.7	462.9	434.7
50°	383.7	401.3	433.0	399.5	380.2
52.5°	343.2	353.8	366.1	350.2	339.7
55°	308.0	313.3	316.8	311.5	308.0
57.5°	274.6	278.1	276.3	274.6	272.8
60°	242.9	244.6	242.9	244.6	242.9
62.5°	214.7	216.5	213.0	214.7	213.0
65°	188.3	190.1	186.6	188.3	186.6
67.5°	163.7	163.7	163.7	163.7	161.9
70°	139.0	140.8	139.0	140.8	140.8
72.5°	117.9	117.9	116.2	117.9	117.9
75°	98.6	96.8	95.0	96.8	96.8



TEST NUMBER: P838638

CATALOG NUMBER: HCSQ645D010-HM64560927-61SQMW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	42.2	42.2	40.5	42.2	42.2
85°	24.6	24.6	24.6	26.4	24.6
87.5°	12.3	10.6	10.6	12.3	12.3
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°	77.4	77.4	75.7	77.4	77.4
80°	58.1	59.8	58.1	59.8	58.1

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

Scaled Data Report



(END OF REPORT)