

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: P838583

Luminaire Tested: HCSQ640D010-HM63040830-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838583
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: HCSQ640D010-HM63040830-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

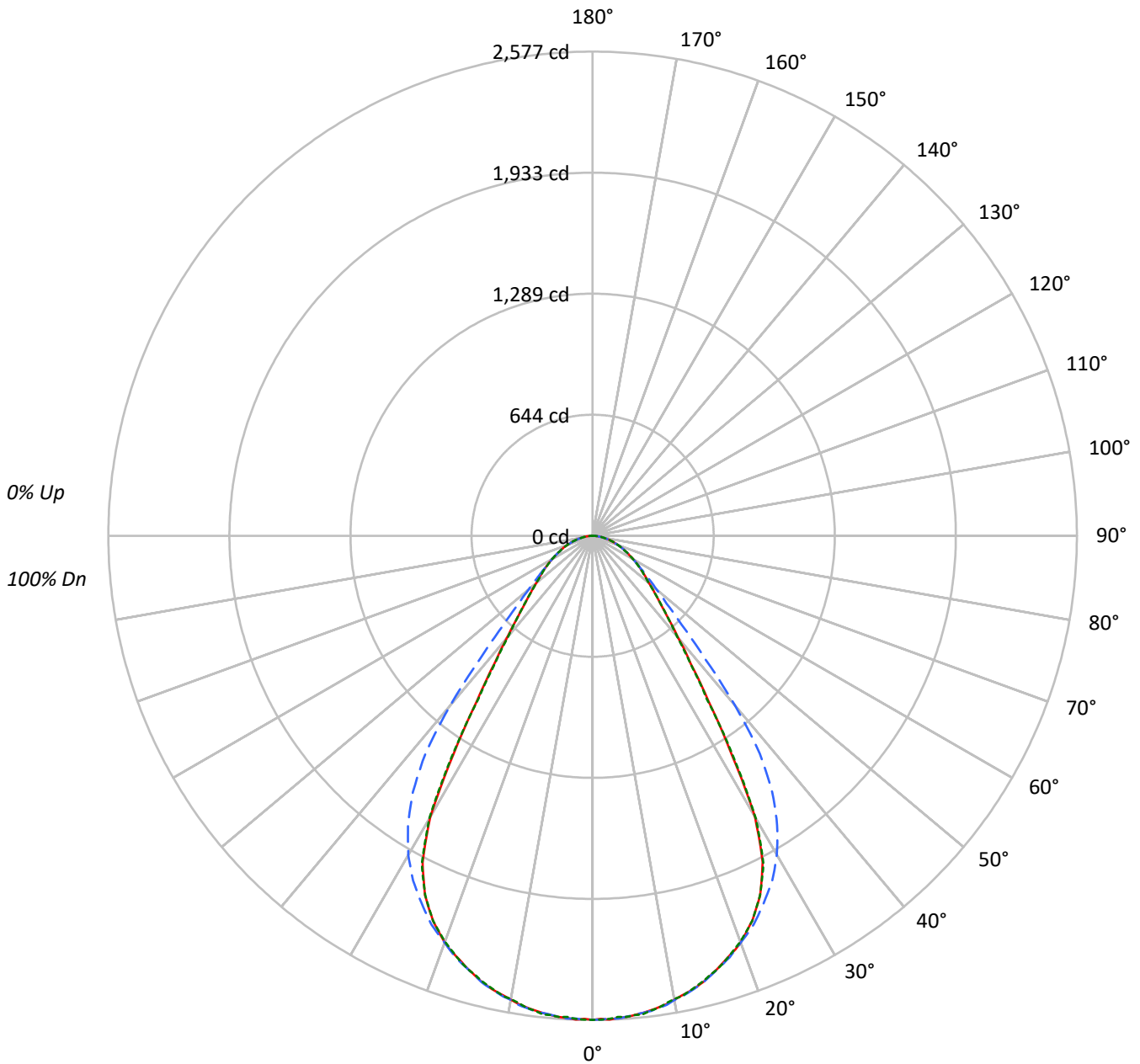
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3801.0 lumens
Efficiency: N/A
Efficacy: 92.7 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): 41
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: P838583
CATALOG NUMBER: HCSQ640D010-HM63040830-61SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P838583

CATALOG NUMBER: HCSQ640D010-HM63040830-61SQMW

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	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°	110954	110954	110954
5°	110674	110596	110674
10°	109593	109671	109435
15°	107964	108044	107803
20°	105530	105613	105283
25°	100263	102405	100177
30°	85860	97499	86397
35°	56414	87646	55563
40°	39878	66092	39169
45°	30920	40681	31139
50°	26297	29673	26056
55°	23653	24329	23653
60°	21399	21399	21399
65°	19632	19449	19449
70°	17914	17914	18140
75°	16769	16170	16469
80°	14728	14728	14728
85°	12449	12449	12449

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 40681 cd/sqm



TEST NUMBER: P838583

CATALOG NUMBER: HCSQ640D010-HM63040830-61SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.9	6.4
10°-20°	682.3	17.9
20°-30°	972.2	25.6
30°-40°	829.0	21.8
40°-50°	458.6	12.1
50°-60°	288.9	7.6
60°-70°	191.8	5.0
70°-80°	105.4	2.8
80°-90°	30.0	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°	1897.4	49.9
0°-40°	2726.4	71.7
0°-60°	3473.9	91.4
0°-90°	3801.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3801.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2577	2577	2577	2577	2577	
5°	2561	2564	2559	2555	2561	243
15°	2422	2422	2424	2422	2418	682
25°	2110	2136	2156	2134	2109	953
35°	1073	1266	1668	1268	1057	698
45°	508	556	668	553	511	403
55°	315	320	324	319	315	283
65°	193	194	191	193	191	192
75°	101	99	97	99	99	106
85°	25	25	25	27	25	30
90°	0	0	0	0	0	



TEST NUMBER: P838583

CATALOG NUMBER: HCSQ640D010-HM63040830-61SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2577.0	2577.0	2577.0	2577.0	2577.0
1°	2571.5	2575.2	2575.2	2573.3	2575.2
2°	2577.0	2571.5	2571.5	2571.5	2573.3
3°	2569.7	2573.3	2573.3	2567.9	2564.3
4°	2567.9	2566.1	2566.1	2571.5	2567.9
5°	2560.7	2564.3	2558.9	2555.3	2560.7
6°	2553.5	2555.3	2553.5	2555.3	2560.7
7°	2544.5	2549.9	2548.1	2546.3	2546.3
8°	2533.7	2540.9	2537.3	2537.3	2535.5
9°	2522.9	2524.7	2528.3	2528.3	2517.5
10°	2506.7	2512.1	2508.5	2510.3	2503.1
11°	2492.3	2499.5	2497.7	2494.1	2495.9
12°	2479.7	2483.3	2481.5	2476.1	2477.9
13°	2463.5	2467.1	2465.3	2465.3	2459.9
14°	2445.5	2441.9	2447.3	2443.7	2441.9
15°	2422.1	2422.1	2423.9	2422.1	2418.5
16°	2400.5	2402.3	2402.3	2400.5	2402.3
17°	2375.3	2382.5	2380.7	2377.1	2378.9
18°	2351.9	2357.3	2359.1	2357.3	2351.9
19°	2330.2	2333.8	2332.0	2324.8	2324.8
20°	2303.2	2305.0	2305.0	2301.4	2297.8
22.5°	2218.6	2231.2	2240.2	2233.0	2218.6
25°	2110.5	2135.8	2155.6	2134.0	2108.7
27.5°	1959.3	2009.7	2069.1	2015.1	1968.3
30°	1727.0	1842.2	1961.1	1853.0	1737.8
32.5°	1374.0	1600.9	1827.8	1622.5	1395.6
35°	1073.3	1266.0	1667.5	1267.8	1057.1
37.5°	857.2	994.0	1462.3	985.0	848.2
40°	709.5	801.4	1175.9	797.8	696.9
42.5°	592.5	662.7	880.6	655.5	592.5
45°	507.8	556.4	668.1	552.8	511.4
47.5°	444.8	475.4	534.8	473.6	444.8
50°	392.6	410.6	443.0	408.8	389.0
52.5°	351.2	362.0	374.6	358.4	347.6
55°	315.1	320.5	324.1	318.7	315.1
57.5°	280.9	284.5	282.7	280.9	279.1
60°	248.5	250.3	248.5	250.3	248.5
62.5°	219.7	221.5	217.9	219.7	217.9
65°	192.7	194.5	190.9	192.7	190.9
67.5°	167.5	167.5	167.5	167.5	165.7
70°	142.3	144.1	142.3	144.1	144.1
72.5°	120.7	120.7	118.9	120.7	120.7
75°	100.8	99.0	97.2	99.0	99.0



TEST NUMBER: P838583

CATALOG NUMBER: HCSQ640D010-HM63040830-61SQMW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	43.2	43.2	41.4	43.2	43.2
85°	25.2	25.2	25.2	27.0	25.2
87.5°	12.6	10.8	10.8	12.6	12.6
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°	79.2	79.2	77.4	79.2	79.2
80°	59.4	61.2	59.4	61.2	59.4

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

Scaled Data Report



(END OF REPORT)