

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: P838598

Luminaire Tested: HCSQ640D010-HM63040927-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838598
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-HM63040927-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

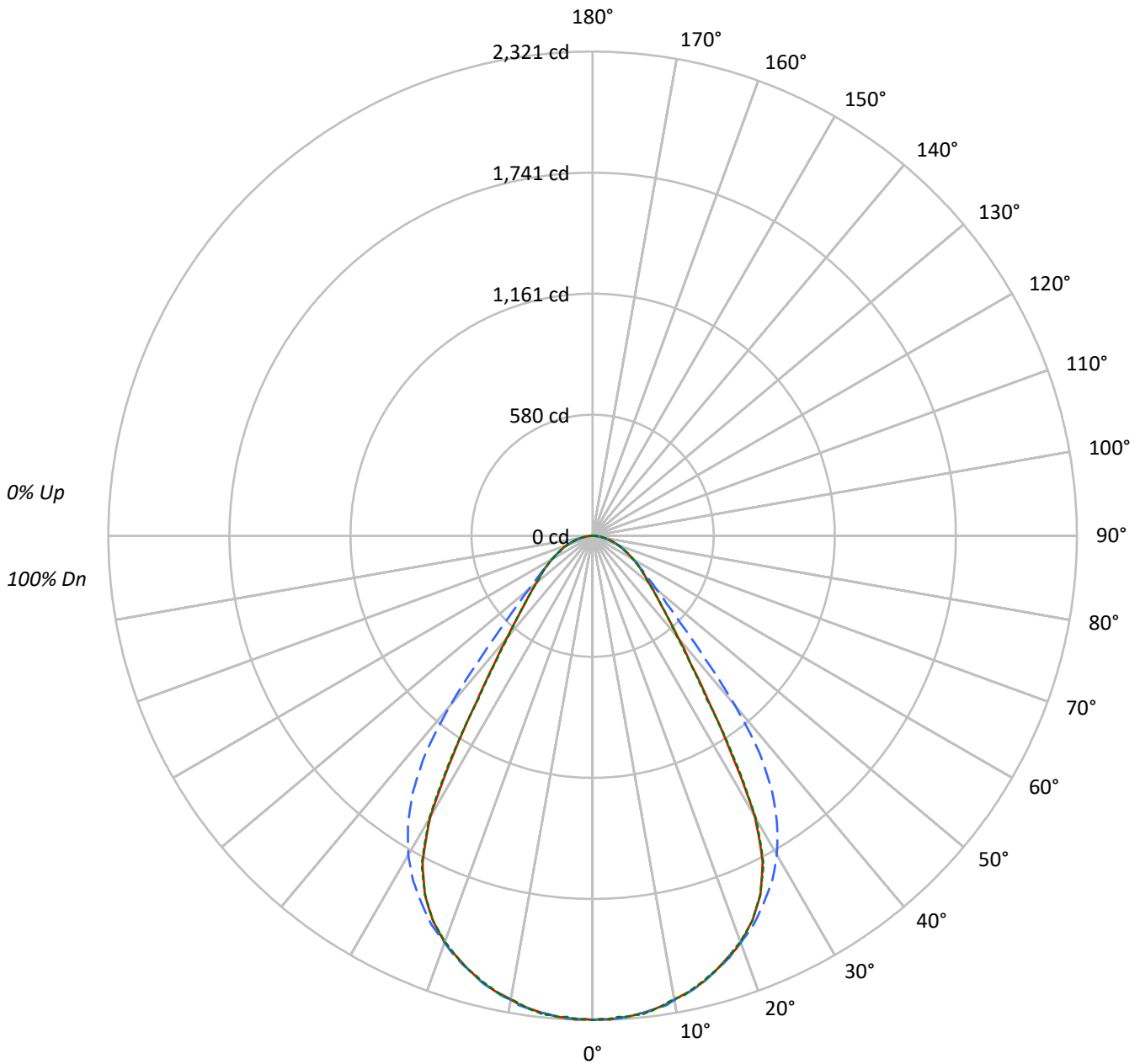
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3423.5 lumens
Efficiency: N/A
Efficacy: 83.5 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 (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

TEST NUMBER: P838598
CATALOG NUMBER: HCSQ640D010-HM63040927-61SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P838598

CATALOG NUMBER: HCSQ640D010-HM63040927-61SQMW

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°	99932	99932	99932
5°	99683	99609	99683
10°	98706	98776	98566
15°	97239	97311	97092
20°	95047	95125	94827
25°	90305	92229	90229
30°	77329	87814	77811
35°	50811	78942	50044
40°	35915	59527	35280
45°	27851	36637	28046
50°	23685	26726	23464
55°	21304	21912	21304
60°	19272	19272	19272
65°	17676	17513	17513
70°	16126	16126	16340
75°	15105	14573	14839
80°	13265	13265	13265
85°	11214	11214	11214

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 36637 cd/sqm



TEST NUMBER: P838598

CATALOG NUMBER: HCSQ640D010-HM63040927-61SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.8	6.4
10°-20°	614.5	17.9
20°-30°	875.7	25.6
30°-40°	746.6	21.8
40°-50°	413.1	12.1
50°-60°	260.2	7.6
60°-70°	172.7	5.0
70°-80°	94.9	2.8
80°-90°	27.0	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°	1709.0	49.9
0°-40°	2455.6	71.7
0°-60°	3128.8	91.4
0°-90°	3423.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3423.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2321	2321	2321	2321	2321	
5°	2306	2310	2305	2302	2306	219
15°	2182	2182	2183	2182	2178	614
25°	1901	1924	1941	1922	1899	859
35°	967	1140	1502	1142	952	628
45°	457	501	602	498	461	363
55°	284	289	292	287	284	255
65°	174	175	172	174	172	173
75°	91	89	88	89	89	95
85°	23	23	23	24	23	27
90°	0	0	0	0	0	



TEST NUMBER: P838598

CATALOG NUMBER: HCSQ640D010-HM63040927-61SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2321.0	2321.0	2321.0	2321.0	2321.0
1°	2316.1	2319.3	2319.3	2317.7	2319.3
2°	2321.0	2316.1	2316.1	2316.1	2317.7
3°	2314.5	2317.7	2317.7	2312.9	2309.6
4°	2312.9	2311.2	2311.2	2316.1	2312.9
5°	2306.4	2309.6	2304.7	2301.5	2306.4
6°	2299.9	2301.5	2299.9	2301.5	2306.4
7°	2291.8	2296.6	2295.0	2293.4	2293.4
8°	2282.0	2288.5	2285.3	2285.3	2283.7
9°	2272.3	2273.9	2277.2	2277.2	2267.4
10°	2257.7	2262.6	2259.3	2261.0	2254.5
11°	2244.7	2251.2	2249.6	2246.4	2248.0
12°	2233.4	2236.6	2235.0	2230.1	2231.8
13°	2218.8	2222.0	2220.4	2220.4	2215.5
14°	2202.6	2199.3	2204.2	2200.9	2199.3
15°	2181.5	2181.5	2183.1	2181.5	2178.2
16°	2162.0	2163.6	2163.6	2162.0	2163.6
17°	2139.3	2145.8	2144.2	2140.9	2142.6
18°	2118.2	2123.1	2124.7	2123.1	2118.2
19°	2098.8	2102.0	2100.4	2093.9	2093.9
20°	2074.4	2076.1	2076.1	2072.8	2069.6
22.5°	1998.2	2009.6	2017.7	2011.2	1998.2
25°	1900.9	1923.6	1941.4	1922.0	1899.3
27.5°	1764.6	1810.1	1863.6	1814.9	1772.8
30°	1555.4	1659.2	1766.3	1669.0	1565.1
32.5°	1237.5	1441.9	1646.2	1461.3	1257.0
35°	966.7	1140.2	1501.9	1141.8	952.1
37.5°	772.0	895.3	1317.0	887.2	763.9
40°	639.0	721.8	1059.1	718.5	627.7
42.5°	533.6	596.9	793.1	590.4	533.6
45°	457.4	501.2	601.7	497.9	460.6
47.5°	400.6	428.2	481.7	426.6	400.6
50°	353.6	369.8	399.0	368.2	350.3
52.5°	316.3	326.0	337.4	322.8	313.0
55°	283.8	288.7	291.9	287.1	283.8
57.5°	253.0	256.3	254.6	253.0	251.4
60°	223.8	225.4	223.8	225.4	223.8
62.5°	197.9	199.5	196.3	197.9	196.3
65°	173.5	175.2	171.9	173.5	171.9
67.5°	150.8	150.8	150.8	150.8	149.2
70°	128.1	129.8	128.1	129.8	129.8
72.5°	108.7	108.7	107.0	108.7	108.7
75°	90.8	89.2	87.6	89.2	89.2



TEST NUMBER: P838598

CATALOG NUMBER: HCSQ640D010-HM63040927-61SQMW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	38.9	38.9	37.3	38.9	38.9
85°	22.7	22.7	22.7	24.3	22.7
87.5°	11.4	9.7	9.7	11.4	11.4
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°	71.4	71.4	69.7	71.4	71.4
80°	53.5	55.1	53.5	55.1	53.5

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

Scaled Data Report



(END OF REPORT)