

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: P838603

Luminaire Tested: HCSQ640D010-HM63040930-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838603
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-HM63040930-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

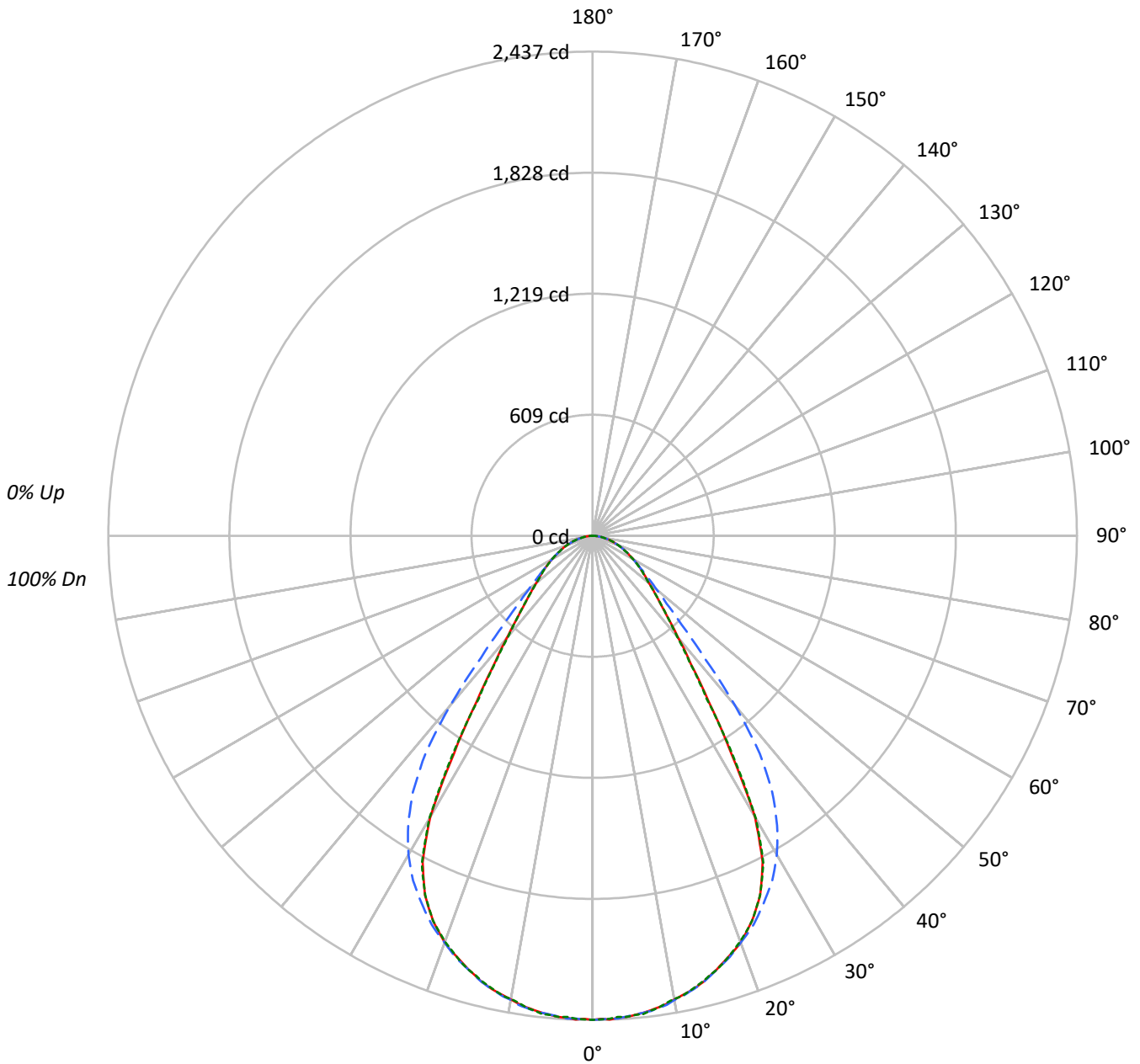
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3594.1 lumens
Efficiency: N/A
Efficacy: 87.7 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

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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°	104909	104909	104909
5°	104649	104575	104649
10°	103625	103699	103476
15°	102085	102160	101933
20°	99784	99862	99551
25°	94804	96828	94724
30°	81182	92189	81694
35°	53339	82873	52535
40°	37708	62495	37039
45°	29239	38464	29446
50°	24864	28059	24636
55°	22369	23007	22369
60°	20236	20236	20236
65°	18562	18389	18389
70°	16932	16932	17146
75°	15870	15288	15587
80°	13935	13935	13935
85°	11757	11757	11757

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 38464 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.7	6.4
10°-20°	645.1	17.9
20°-30°	919.3	25.6
30°-40°	783.8	21.8
40°-50°	433.6	12.1
50°-60°	273.1	7.6
60°-70°	181.4	5.0
70°-80°	99.6	2.8
80°-90°	28.4	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°	1794.1	49.9
0°-40°	2577.9	71.7
0°-60°	3284.7	91.4
0°-90°	3594.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3594.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2437	2437	2437	2437	2437	
5°	2421	2425	2420	2416	2421	230
15°	2290	2290	2292	2290	2287	645
25°	1996	2020	2038	2018	1994	901
35°	1015	1197	1577	1199	1000	660
45°	480	526	632	523	484	381
55°	298	303	306	301	298	268
65°	182	184	180	182	180	181
75°	95	94	92	94	94	100
85°	24	24	24	26	24	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2436.6	2436.6	2436.6	2436.6	2436.6
1°	2431.5	2434.9	2434.9	2433.2	2434.9
2°	2436.6	2431.5	2431.5	2431.5	2433.2
3°	2429.8	2433.2	2433.2	2428.1	2424.7
4°	2428.1	2426.4	2426.4	2431.5	2428.1
5°	2421.3	2424.7	2419.6	2416.2	2421.3
6°	2414.5	2416.2	2414.5	2416.2	2421.3
7°	2406.0	2411.1	2409.4	2407.7	2407.7
8°	2395.8	2402.6	2399.2	2399.2	2397.5
9°	2385.5	2387.3	2390.7	2390.7	2380.4
10°	2370.2	2375.3	2371.9	2373.6	2366.8
11°	2356.6	2363.4	2361.7	2358.3	2360.0
12°	2344.7	2348.1	2346.4	2341.3	2343.0
13°	2329.4	2332.8	2331.1	2331.1	2326.0
14°	2312.3	2308.9	2314.0	2310.6	2308.9
15°	2290.2	2290.2	2291.9	2290.2	2286.8
16°	2269.8	2271.5	2271.5	2269.8	2271.5
17°	2245.9	2252.7	2251.0	2247.6	2249.3
18°	2223.8	2228.9	2230.6	2228.9	2223.8
19°	2203.4	2206.8	2205.1	2198.2	2198.2
20°	2177.8	2179.5	2179.5	2176.1	2172.7
22.5°	2097.8	2109.7	2118.2	2111.4	2097.8
25°	1995.6	2019.5	2038.2	2017.8	1993.9
27.5°	1852.6	1900.3	1956.5	1905.4	1861.1
30°	1632.9	1741.9	1854.3	1752.1	1643.2
32.5°	1299.2	1513.7	1728.3	1534.2	1319.6
35°	1014.8	1197.0	1576.7	1198.7	999.5
37.5°	810.5	939.9	1382.6	931.4	802.0
40°	670.9	757.7	1111.9	754.3	659.0
42.5°	560.2	626.6	832.6	619.8	560.2
45°	480.2	526.1	631.7	522.7	483.6
47.5°	420.6	449.5	505.7	447.8	420.6
50°	371.2	388.2	418.9	386.5	367.8
52.5°	332.0	342.3	354.2	338.8	328.6
55°	298.0	303.1	306.5	301.4	298.0
57.5°	265.6	269.0	267.3	265.6	263.9
60°	235.0	236.7	235.0	236.7	235.0
62.5°	207.7	209.4	206.0	207.7	206.0
65°	182.2	183.9	180.5	182.2	180.5
67.5°	158.4	158.4	158.4	158.4	156.7
70°	134.5	136.2	134.5	136.2	136.2
72.5°	114.1	114.1	112.4	114.1	114.1
75°	95.4	93.7	91.9	93.7	93.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	40.9	40.9	39.2	40.9	40.9
85°	23.8	23.8	23.8	25.5	23.8
87.5°	11.9	10.2	10.2	11.9	11.9
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°	74.9	74.9	73.2	74.9	74.9
80°	56.2	57.9	56.2	57.9	56.2

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