

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: P838612

Luminaire Tested: HCSQ640D010-HM63040940-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838612
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040940-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

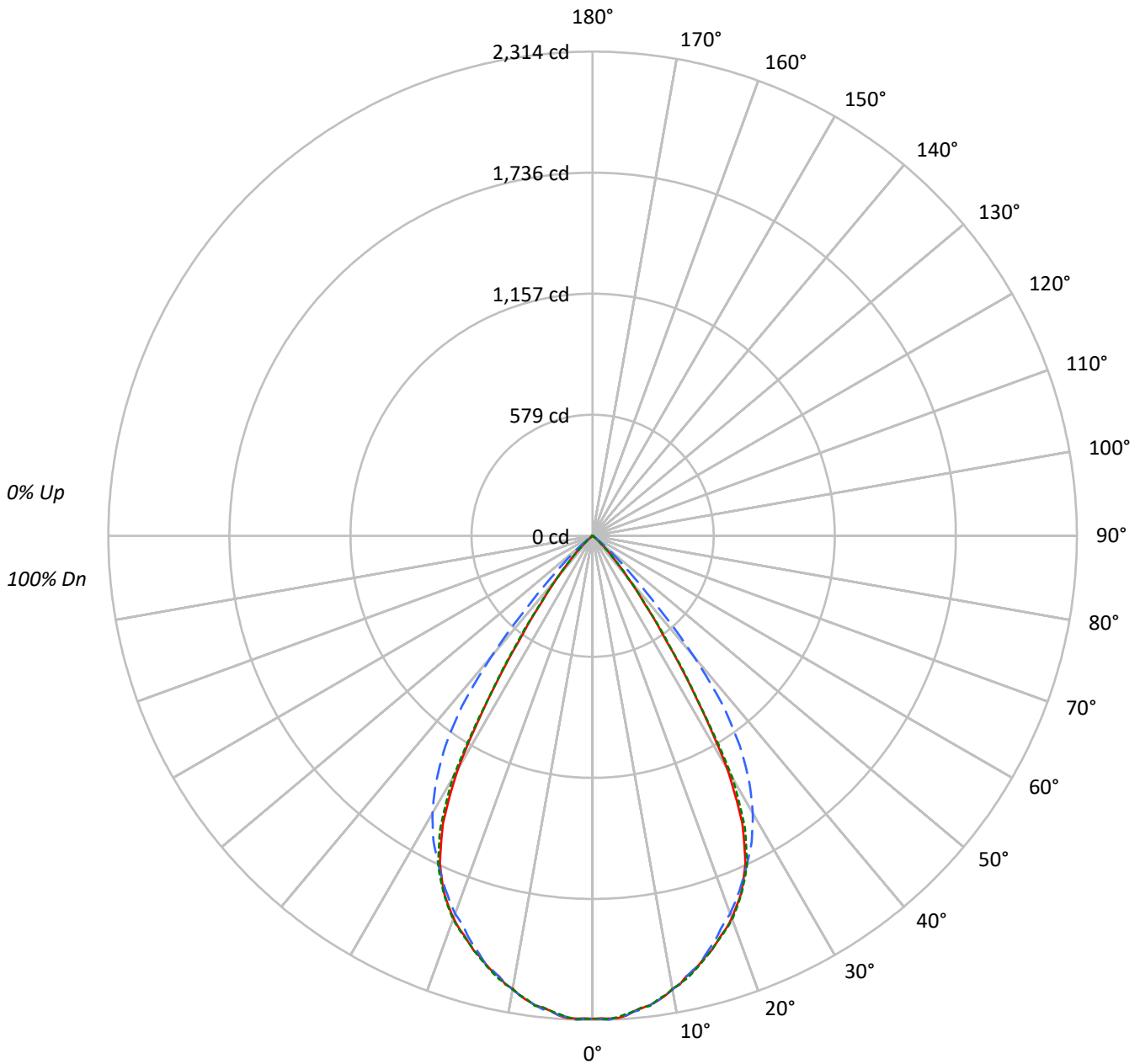
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2294.8 lumens
Efficiency: N/A
Efficacy: 56.0 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03
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	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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81								
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70								
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65								
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60								
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56								
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53								
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	99394	99394	99394
5°	98555	98637	98555
10°	96088	96254	96254
15°	92786	92532	93036
20°	89104	88073	89361
25°	82049	82676	82852
30°	63955	76076	66381
35°	32430	64461	33613
40°	14754	42160	14754
45°	5711	15874	5596
50°	877	5024	877
55°	285	983	285
60°	164	164	164
65°	194	0	194
70°	0	0	239
75°	0	0	316
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15874 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.5	9.4
10°-20°	584.6	25.5
20°-30°	788.0	34.3
30°-40°	554.0	24.1
40°-50°	141.5	6.2
50°-60°	9.8	0.4
60°-70°	1.2	0.1
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	1588.1	69.2
0°-40°	2142.2	93.3
0°-60°	2293.4	99.9
0°-90°	2294.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2294.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2308	2308	2308	2308	2308	
5°	2280	2284	2282	2284	2280	215
15°	2082	2078	2076	2082	2087	586
25°	1727	1733	1740	1746	1744	772
35°	617	818	1226	838	640	415
45°	94	141	261	142	92	82
55°	4	4	13	4	4	5
65°	2	2	0	2	2	2
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2308.5	2308.5	2308.5	2308.5	2308.5
1°	2306.6	2308.5	2310.3	2310.3	2308.5
2°	2308.5	2302.8	2314.1	2308.5	2310.3
3°	2308.5	2297.2	2302.8	2306.6	2304.7
4°	2299.1	2291.6	2297.2	2295.3	2291.6
5°	2280.3	2284.1	2282.2	2284.1	2280.3
6°	2269.1	2272.8	2276.6	2271.0	2265.3
7°	2259.7	2257.8	2259.7	2263.5	2263.5
8°	2242.8	2246.6	2242.8	2244.7	2239.1
9°	2224.1	2224.1	2224.1	2227.8	2222.2
10°	2197.8	2207.2	2201.6	2205.3	2201.6
11°	2184.7	2181.0	2181.0	2182.8	2181.0
12°	2152.8	2156.6	2154.7	2158.4	2164.1
13°	2135.9	2137.8	2130.3	2139.7	2139.7
14°	2109.7	2107.8	2111.6	2109.7	2113.4
15°	2081.6	2077.8	2075.9	2081.6	2087.2
16°	2060.9	2051.6	2045.9	2053.4	2060.9
17°	2030.9	2021.6	2014.1	2029.1	2030.9
18°	2000.9	1997.2	1978.4	1997.2	2006.6
19°	1976.5	1963.4	1946.5	1967.2	1978.4
20°	1944.7	1933.4	1922.2	1933.4	1950.3
22.5°	1852.8	1843.4	1834.0	1847.2	1856.5
25°	1727.1	1732.8	1740.3	1745.9	1744.0
27.5°	1549.0	1599.6	1646.5	1616.5	1577.1
30°	1286.4	1414.0	1530.2	1434.6	1335.2
32.5°	932.0	1149.5	1391.5	1192.7	941.4
35°	617.0	817.6	1226.4	838.3	639.5
37.5°	401.3	549.5	1023.9	551.3	420.1
40°	262.5	358.2	750.1	365.7	262.5
42.5°	161.3	226.9	455.7	236.3	161.3
45°	93.8	140.6	260.7	142.5	91.9
47.5°	43.1	76.9	148.1	75.0	45.0
50°	13.1	33.8	75.0	33.8	13.1
52.5°	5.6	9.4	35.6	9.4	5.6
55°	3.8	3.8	13.1	3.8	3.8
57.5°	3.8	1.9	3.8	3.8	3.8
60°	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9
65°	1.9	1.9	0.0	1.9	1.9
67.5°	1.9	0.0	0.0	0.0	1.9
70°	0.0	0.0	0.0	0.0	1.9
72.5°	0.0	0.0	0.0	0.0	1.9
75°	0.0	0.0	0.0	0.0	1.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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