

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: P838592

Luminaire Tested: HCSQ640D010-HM63040840-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838592
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-HM63040840-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

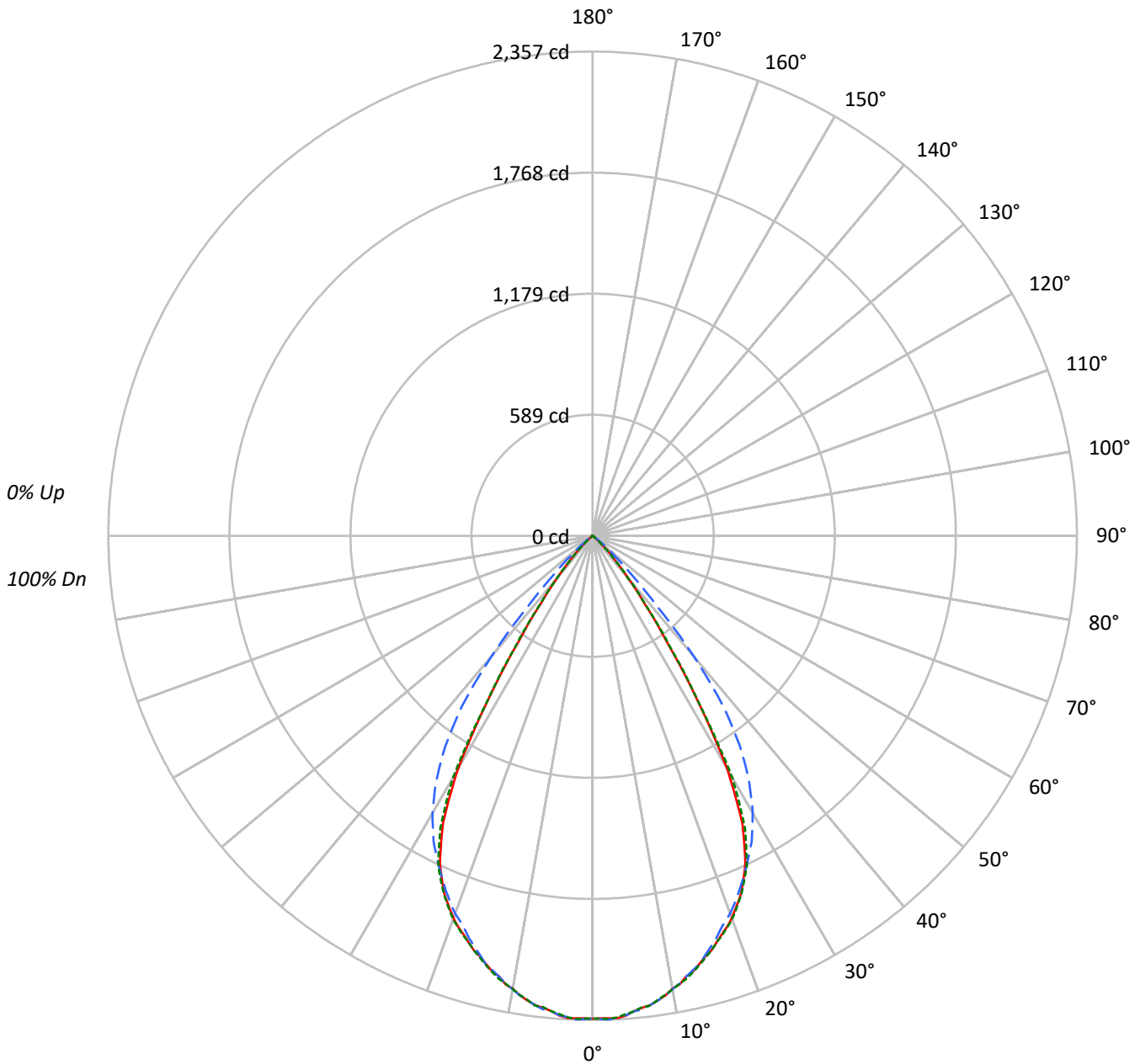
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2336.9 lumens
Efficiency: N/A
Efficacy: 57.0 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°	101220	101220	101220
5°	100366	100452	100366
10°	97854	98020	98020
15°	94489	94235	94743
20°	90740	89690	91001
25°	83559	84191	84377
30°	65133	77473	67599
35°	33024	65649	34228
40°	15029	42935	15029
45°	5815	16166	5699
50°	898	5117	898
55°	285	1006	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: 16166 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.5	9.4
10°-20°	595.3	25.5
20°-30°	802.5	34.3
30°-40°	564.2	24.1
40°-50°	144.1	6.2
50°-60°	9.9	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°	1617.3	69.2
0°-40°	2181.5	93.4
0°-60°	2335.6	99.9
0°-90°	2336.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2336.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2351	2351	2351	2351	2351	
5°	2322	2326	2324	2326	2322	219
15°	2120	2116	2114	2120	2126	597
25°	1759	1765	1772	1778	1776	786
35°	628	833	1249	854	651	423
45°	96	143	266	145	94	83
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°	2350.9	2350.9	2350.9	2350.9	2350.9
1°	2349.0	2350.9	2352.8	2352.8	2350.9
2°	2350.9	2345.2	2356.6	2350.9	2352.8
3°	2350.9	2339.4	2345.2	2349.0	2347.1
4°	2341.3	2333.7	2339.4	2337.5	2333.7
5°	2322.2	2326.1	2324.2	2326.1	2322.2
6°	2310.8	2314.6	2318.4	2312.7	2307.0
7°	2301.2	2299.3	2301.2	2305.1	2305.1
8°	2284.0	2287.9	2284.0	2286.0	2280.2
9°	2265.0	2265.0	2265.0	2268.8	2263.0
10°	2238.2	2247.8	2242.0	2245.9	2242.0
11°	2224.8	2221.0	2221.0	2222.9	2221.0
12°	2192.4	2196.2	2194.3	2198.1	2203.8
13°	2175.2	2177.1	2169.5	2179.0	2179.0
14°	2148.5	2146.5	2150.4	2148.5	2152.3
15°	2119.8	2116.0	2114.1	2119.8	2125.5
16°	2098.8	2089.3	2083.5	2091.2	2098.8
17°	2068.2	2058.7	2051.1	2066.3	2068.2
18°	2037.7	2033.9	2014.8	2033.9	2043.4
19°	2012.9	1999.5	1982.3	2003.3	2014.8
20°	1980.4	1968.9	1957.5	1968.9	1986.1
22.5°	1886.8	1877.3	1867.7	1881.1	1890.6
25°	1758.9	1764.6	1772.2	1778.0	1776.1
27.5°	1577.4	1629.0	1676.8	1646.2	1606.1
30°	1310.1	1439.9	1558.3	1461.0	1359.7
32.5°	949.1	1170.7	1417.0	1214.6	958.7
35°	628.3	832.6	1249.0	853.7	651.2
37.5°	408.7	559.6	1042.7	561.5	427.8
40°	267.4	364.8	763.9	372.4	267.4
42.5°	164.2	231.1	464.1	240.6	164.2
45°	95.5	143.2	265.5	145.1	93.6
47.5°	43.9	78.3	150.9	76.4	45.8
50°	13.4	34.4	76.4	34.4	13.4
52.5°	5.7	9.5	36.3	9.5	5.7
55°	3.8	3.8	13.4	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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