

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: P837531

Luminaire Tested: HCSQ440D010-HM43040840-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837531
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ440D010-HM43040840-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

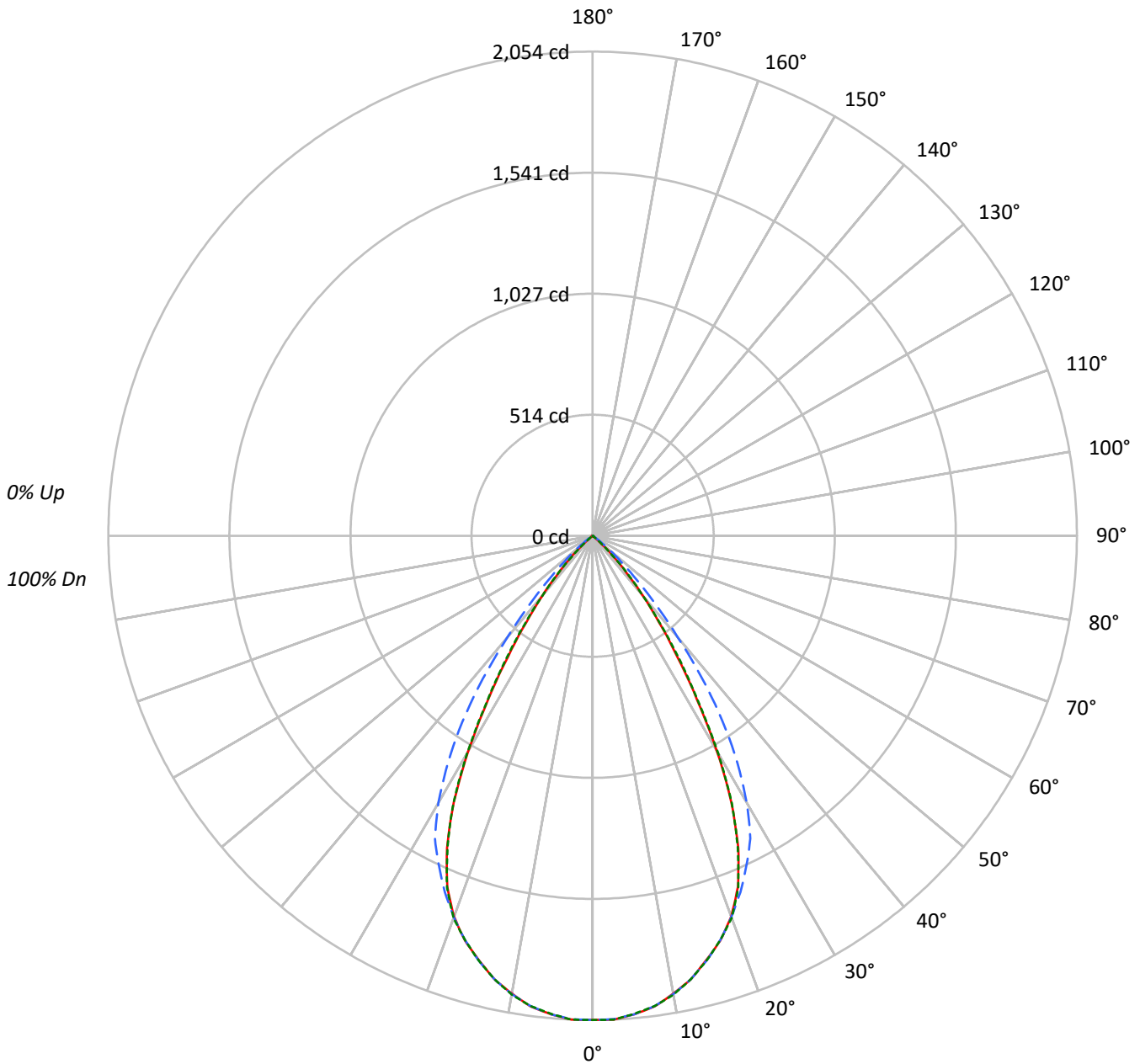
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2052.0 lumens
Efficiency: N/A
Efficacy: 50.0 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' 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

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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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	199002	199002	199002
5°	198099	198099	197914
10°	194015	194202	194389
15°	186916	187106	187106
20°	177196	177392	177794
25°	156231	164985	155621
30°	117880	146226	118943
35°	73914	113805	76398
40°	41694	70844	41694
45°	17495	35771	17235
50°	1432	13790	1718
55°	642	2905	642
60°	736	368	736
65°	436	436	436
70°	538	538	538
75°	711	711	711
80°	0	1060	1060
85°	0	2112	2112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 35771 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.5	9.4
10°-20°	523.8	25.5
20°-30°	679.4	33.1
30°-40°	483.1	23.5
40°-50°	156.6	7.6
50°-60°	11.3	0.6
60°-70°	1.9	0.1
70°-80°	2.0	0.1
80°-90°	1.3	0.1
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°	1395.7	68.0
0°-40°	1878.8	91.6
0°-60°	2046.7	99.7
0°-90°	2052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2054	2054	2054	2054	2054	
5°	2037	2039	2037	2037	2035	193
15°	1864	1869	1866	1869	1866	523
25°	1462	1500	1544	1507	1456	654
35°	625	739	962	747	646	400
45°	128	181	261	185	126	106
55°	4	4	17	4	4	4
65°	2	2	2	2	2	2
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2054.2	2054.2	2054.2	2054.2	2054.2
2.5°	2054.2	2054.2	2052.3	2052.3	2054.2
5°	2037.1	2039.0	2037.1	2037.1	2035.2
7.5°	2014.2	2014.2	2012.3	2012.3	2012.3
10°	1972.3	1974.2	1974.2	1974.2	1976.1
12.5°	1926.5	1926.5	1926.5	1926.5	1926.5
15°	1863.7	1869.4	1865.6	1869.4	1865.6
17.5°	1800.8	1800.8	1798.9	1802.7	1798.9
20°	1718.8	1718.8	1720.7	1724.6	1724.6
22.5°	1610.2	1629.3	1636.9	1633.1	1614.0
25°	1461.6	1499.7	1543.5	1507.3	1455.9
27.5°	1274.8	1347.2	1448.2	1358.7	1278.6
30°	1053.8	1162.4	1307.2	1166.2	1063.3
32.5°	825.1	950.9	1143.4	960.4	832.7
35°	625.0	739.4	962.3	747.0	646.0
37.5°	461.2	566.0	764.1	569.8	474.5
40°	329.7	405.9	560.2	413.5	329.7
42.5°	211.5	287.7	394.5	289.6	221.0
45°	127.7	181.0	261.1	184.8	125.8
47.5°	57.2	102.9	162.0	106.7	57.2
50°	9.5	41.9	91.5	43.8	11.4
52.5°	5.7	7.6	43.8	7.6	5.7
55°	3.8	3.8	17.2	3.8	3.8
57.5°	3.8	3.8	3.8	3.8	3.8
60°	3.8	1.9	1.9	1.9	3.8
62.5°	1.9	1.9	1.9	1.9	1.9
65°	1.9	1.9	1.9	1.9	1.9
67.5°	1.9	1.9	1.9	1.9	1.9
70°	1.9	1.9	1.9	1.9	1.9
72.5°	1.9	1.9	1.9	1.9	1.9
75°	1.9	1.9	1.9	1.9	1.9
77.5°	1.9	1.9	1.9	1.9	1.9
80°	0.0	1.9	1.9	1.9	1.9
82.5°	0.0	1.9	1.9	1.9	1.9
85°	0.0	0.0	1.9	1.9	1.9
87.5°	0.0	0.0	1.9	1.9	1.9
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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