

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: P837685

Luminaire Tested: HCSQ460D010-HM44560835-41SQLWW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837685
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560835-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

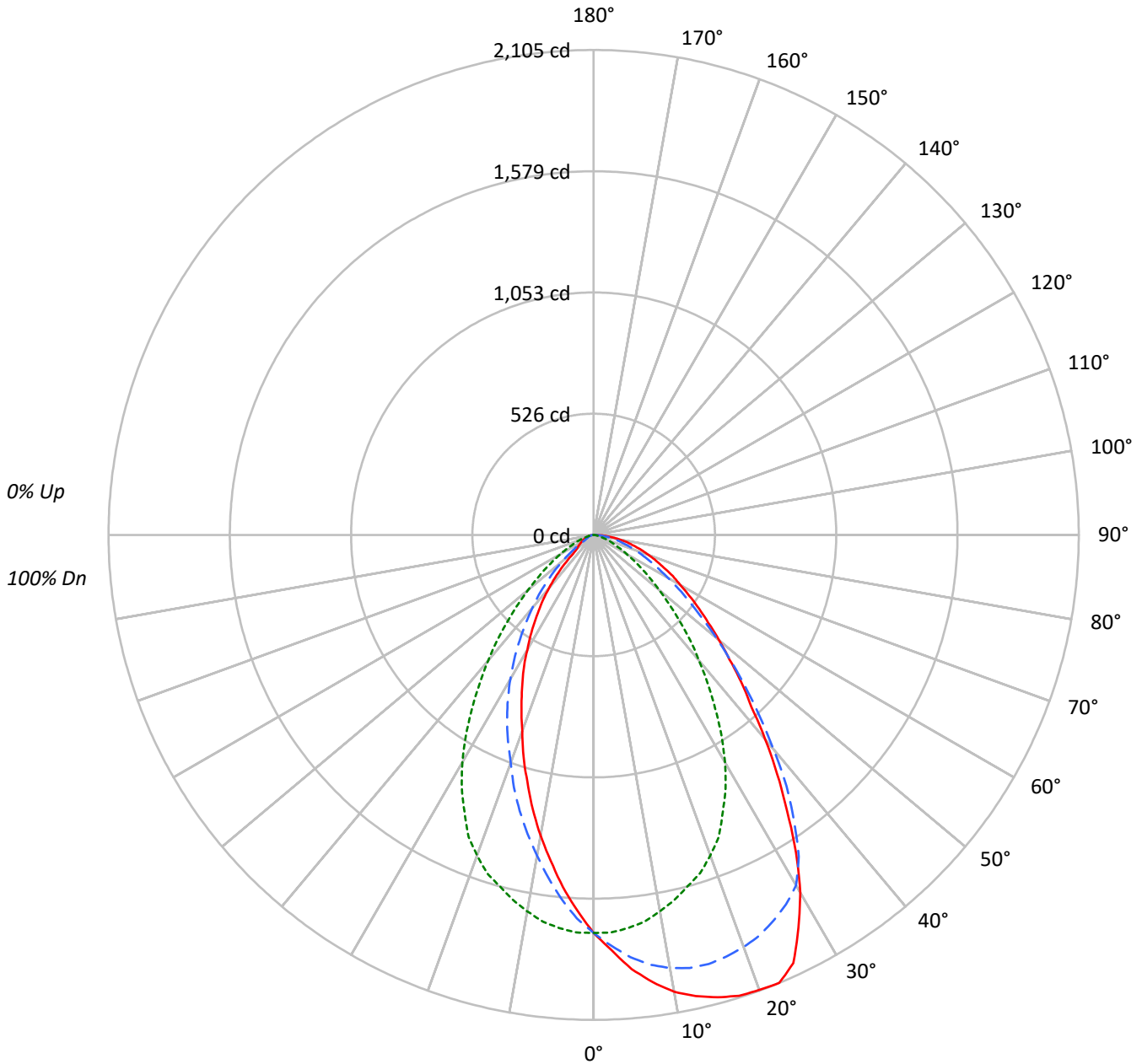
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2794.0 lumens
Efficiency: N/A
Efficacy: 49.9 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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					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	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89								
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78								
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69								
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62								
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55								
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50								
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45								
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42								
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38								
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	167333	167333	167333	167333	167333
5°	183940	178932	166543	154387	149145
10°	198117	187749	163166	139066	130389
15°	208378	193385	158242	124333	111315
20°	216721	196258	152557	108361	93454
25°	219200	197458	141683	95068	78564
30°	200614	196508	127445	80854	64410
35°	172983	179358	108660	66357	50995
40°	146557	153373	89851	52368	38116
45°	124193	127221	71830	38936	24510
50°	107080	104503	55763	26224	14770
55°	94346	86070	42630	14491	13242
60°	84030	72153	31814	8079	11877
65°	76951	61777	23587	7312	10682
70°	71491	53448	17363	6939	10423
75°	66962	46787	11940	6438	9170
80°	64268	41004	8201	6862	8201
85°	62690	35458	5446	5446	5446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 129235 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.0	5.8
10°-20°	445.9	16.0
20°-30°	623.5	22.3
30°-40°	609.4	21.8
40°-50°	442.2	15.8
50°-60°	266.6	9.5
60°-70°	149.9	5.4
70°-80°	74.2	2.7
80°-90°	20.3	0.7
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°	1231.3	44.1
0°-40°	1840.8	65.9
0°-60°	2549.6	91.3
0°-90°	2794.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2794.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1727	1727	1727	1727	1727	
5°	1892	1840	1713	1588	1534	184
15°	2078	1928	1578	1240	1110	588
25°	2051	1847	1326	889	735	924
35°	1463	1517	919	561	431	916
45°	906	929	524	284	179	703
55°	559	510	252	86	78	502
65°	336	270	103	32	47	336
75°	179	125	32	17	24	193
85°	56	32	5	5	5	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1727.3	1727.3	1727.3	1727.3	1727.3	1727.3	1727.3	1727.3	1727.3
2.5°	1805.7	1800.8	1786.1	1756.7	1727.3	1693.0	1666.0	1646.4	1631.7
5°	1891.5	1881.7	1840.0	1778.7	1712.6	1646.4	1587.6	1553.3	1533.7
7.5°	1957.6	1940.5	1881.7	1795.9	1693.0	1592.5	1501.9	1448.0	1425.9
10°	2014.0	1984.6	1908.6	1793.4	1658.7	1526.4	1413.7	1350.0	1325.5
12.5°	2050.7	2018.9	1925.8	1791.0	1621.9	1460.2	1327.9	1244.6	1220.1
15°	2077.7	2038.5	1928.2	1771.4	1577.8	1391.6	1239.7	1141.7	1109.9
17.5°	2097.3	2043.4	1918.4	1749.3	1538.6	1320.6	1149.1	1043.7	1011.9
20°	2102.2	2043.4	1903.7	1717.5	1479.8	1249.5	1051.1	945.7	906.5
22.5°	2104.6	2036.0	1881.7	1678.3	1418.6	1168.7	970.2	860.0	818.3
25°	2050.7	2011.5	1847.3	1612.1	1325.5	1080.5	889.4	769.3	735.0
27.5°	1923.3	1920.9	1808.1	1523.9	1239.7	984.9	806.1	690.9	659.1
30°	1793.4	1795.9	1756.7	1425.9	1139.3	894.3	722.8	610.1	575.8
32.5°	1634.2	1658.7	1656.2	1315.7	1031.5	808.5	641.9	536.6	502.3
35°	1462.7	1506.8	1516.6	1190.7	918.8	710.5	561.1	465.5	431.2
37.5°	1308.3	1352.4	1374.5	1080.5	813.4	624.8	485.1	401.8	367.5
40°	1158.9	1195.6	1212.8	953.1	710.5	536.6	414.1	335.7	301.4
42.5°	1014.3	1068.2	1063.3	845.3	619.9	465.5	350.4	272.0	237.7
45°	906.5	943.3	928.6	732.6	524.3	392.0	284.2	210.7	178.9
47.5°	798.7	825.7	803.6	637.0	443.5	323.4	230.3	154.4	120.1
50°	710.5	722.8	693.4	541.5	370.0	264.6	174.0	102.9	98.0
52.5°	627.2	634.6	592.9	460.6	306.3	213.2	127.4	80.9	85.8
55°	558.6	556.2	509.6	389.6	252.4	164.2	85.8	73.5	78.4
57.5°	492.5	485.1	438.6	323.4	205.8	127.4	51.5	63.7	68.6
60°	433.7	426.3	372.4	267.1	164.2	95.6	41.7	56.4	61.3
62.5°	387.1	370.0	316.1	220.5	132.3	68.6	36.8	49.0	53.9
65°	335.7	321.0	269.5	178.9	102.9	49.0	31.9	41.7	46.6
67.5°	294.0	276.9	227.9	147.0	83.3	34.3	29.4	36.8	41.7
70°	252.4	237.7	188.7	117.6	61.3	22.1	24.5	31.9	36.8
72.5°	218.1	200.9	156.8	93.1	46.6	17.2	22.1	27.0	29.4
75°	178.9	164.2	125.0	71.1	31.9	14.7	17.2	22.1	24.5
77.5°	149.5	134.8	98.0	53.9	22.1	12.3	14.7	19.6	19.6
80°	115.2	102.9	73.5	36.8	14.7	7.4	12.3	14.7	14.7
82.5°	83.3	73.5	51.5	24.5	7.4	7.4	7.4	9.8	9.8
85°	56.4	49.0	31.9	14.7	4.9	4.9	4.9	4.9	4.9
87.5°	31.9	24.5	14.7	4.9	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	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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