

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837690

Luminaire Tested: HCSQ460D010-HM44560840-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837690
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-HM44560840-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

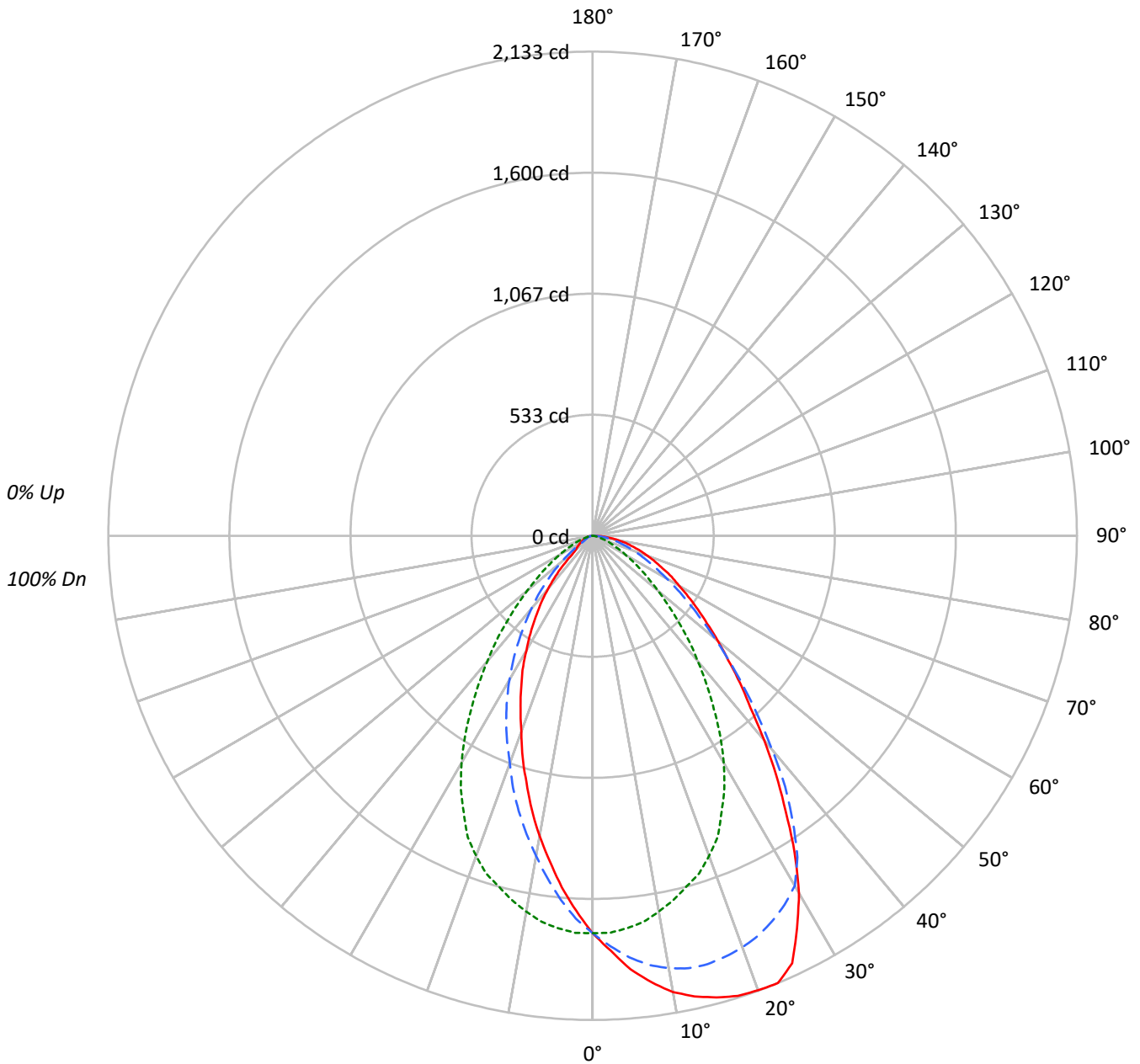
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2831.6 lumens
Efficiency: N/A
Efficacy: 50.6 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 (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					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°	169590	169590	169590	169590	169590
5°	186420	181343	168789	156478	151158
10°	200783	190287	165370	140944	132150
15°	211187	195992	160378	126018	112819
20°	219639	198907	154618	109825	94722
25°	222161	200131	143596	96351	79623
30°	203321	199159	129167	81939	65272
35°	175313	181782	110127	67244	51681
40°	148529	155434	91065	53063	38621
45°	125878	128933	72803	39457	24839
50°	108527	105905	56517	26570	14966
55°	95630	87235	43204	14677	13427
60°	85154	73122	32240	8176	12032
65°	77983	62602	23908	7404	10820
70°	72454	54156	17590	7024	10537
75°	67860	47386	12090	6513	9283
80°	65105	41562	8312	6918	8312
85°	63468	35902	5558	5558	5558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 130974 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.2	5.8
10°-20°	451.9	16.0
20°-30°	631.9	22.3
30°-40°	617.6	21.8
40°-50°	448.2	15.8
50°-60°	270.2	9.5
60°-70°	151.9	5.4
70°-80°	75.2	2.7
80°-90°	20.6	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°	1248.0	44.1
0°-40°	1865.6	65.9
0°-60°	2584.0	91.3
0°-90°	2831.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2831.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1751	1751	1751	1751	1751	
5°	1917	1865	1736	1609	1554	186
15°	2106	1954	1599	1256	1125	596
25°	2078	1872	1343	901	745	937
35°	1482	1537	931	569	437	928
45°	919	941	531	288	181	712
55°	566	516	256	87	80	509
65°	340	273	104	32	47	341
75°	181	127	32	17	25	195
85°	57	32	5	5	5	63
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°	1750.6	1750.6	1750.6	1750.6	1750.6	1750.6	1750.6	1750.6	1750.6
2.5°	1830.1	1825.1	1810.2	1780.4	1750.6	1715.8	1688.5	1668.7	1653.8
5°	1917.0	1907.0	1864.8	1802.7	1735.7	1668.7	1609.1	1574.3	1554.4
7.5°	1984.0	1966.6	1907.0	1820.1	1715.8	1614.0	1522.2	1467.5	1445.2
10°	2041.1	2011.3	1934.4	1817.6	1681.1	1547.0	1432.8	1368.2	1343.4
12.5°	2078.4	2046.1	1951.7	1815.2	1643.8	1479.9	1345.9	1261.4	1236.6
15°	2105.7	2066.0	1954.2	1795.3	1599.1	1410.4	1256.5	1157.1	1124.9
17.5°	2125.6	2070.9	1944.3	1772.9	1559.4	1338.4	1164.6	1057.8	1025.5
20°	2130.5	2070.9	1929.4	1740.7	1499.8	1266.4	1065.3	958.5	918.8
22.5°	2133.0	2063.5	1907.0	1700.9	1437.7	1184.4	983.3	871.6	829.4
25°	2078.4	2038.6	1872.3	1633.9	1343.4	1095.1	901.4	779.7	744.9
27.5°	1949.3	1946.8	1832.5	1544.5	1256.5	998.2	816.9	700.2	668.0
30°	1817.6	1820.1	1780.4	1445.2	1154.7	906.3	732.5	618.3	583.5
32.5°	1656.2	1681.1	1678.6	1333.4	1045.4	819.4	650.6	543.8	509.0
35°	1482.4	1527.1	1537.1	1206.8	931.2	720.1	568.6	471.8	437.0
37.5°	1326.0	1370.7	1393.0	1095.1	824.4	633.2	491.7	407.2	372.5
40°	1174.5	1211.8	1229.1	965.9	720.1	543.8	419.6	340.2	305.4
42.5°	1028.0	1082.6	1077.7	856.7	628.2	471.8	355.1	275.6	240.9
45°	918.8	956.0	941.1	742.5	531.4	397.3	288.0	213.5	181.3
47.5°	809.5	836.8	814.5	645.6	449.4	327.8	233.4	156.4	121.7
50°	720.1	732.5	702.7	548.8	375.0	268.2	176.3	104.3	99.3
52.5°	635.7	643.1	600.9	466.8	310.4	216.0	129.1	81.9	86.9
55°	566.2	563.7	516.5	394.8	255.8	166.4	86.9	74.5	79.5
57.5°	499.1	491.7	444.5	327.8	208.6	129.1	52.1	64.6	69.5
60°	439.5	432.1	377.4	270.7	166.4	96.8	42.2	57.1	62.1
62.5°	392.3	375.0	320.3	223.5	134.1	69.5	37.2	49.7	54.6
65°	340.2	325.3	273.1	181.3	104.3	49.7	32.3	42.2	47.2
67.5°	298.0	280.6	230.9	149.0	84.4	34.8	29.8	37.2	42.2
70°	255.8	240.9	191.2	119.2	62.1	22.3	24.8	32.3	37.2
72.5°	221.0	203.6	158.9	94.4	47.2	17.4	22.3	27.3	29.8
75°	181.3	166.4	126.6	72.0	32.3	14.9	17.4	22.3	24.8
77.5°	151.5	136.6	99.3	54.6	22.3	12.4	14.9	19.9	19.9
80°	116.7	104.3	74.5	37.2	14.9	7.4	12.4	14.9	14.9
82.5°	84.4	74.5	52.1	24.8	7.4	7.4	7.4	9.9	9.9
85°	57.1	49.7	32.3	14.9	5.0	5.0	5.0	5.0	5.0
87.5°	32.3	24.8	14.9	5.0	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

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Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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