

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: P837670

Luminaire Tested: HCSQ455D010-HM44560940-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837670
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: HCSQ455D010-HM44560940-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

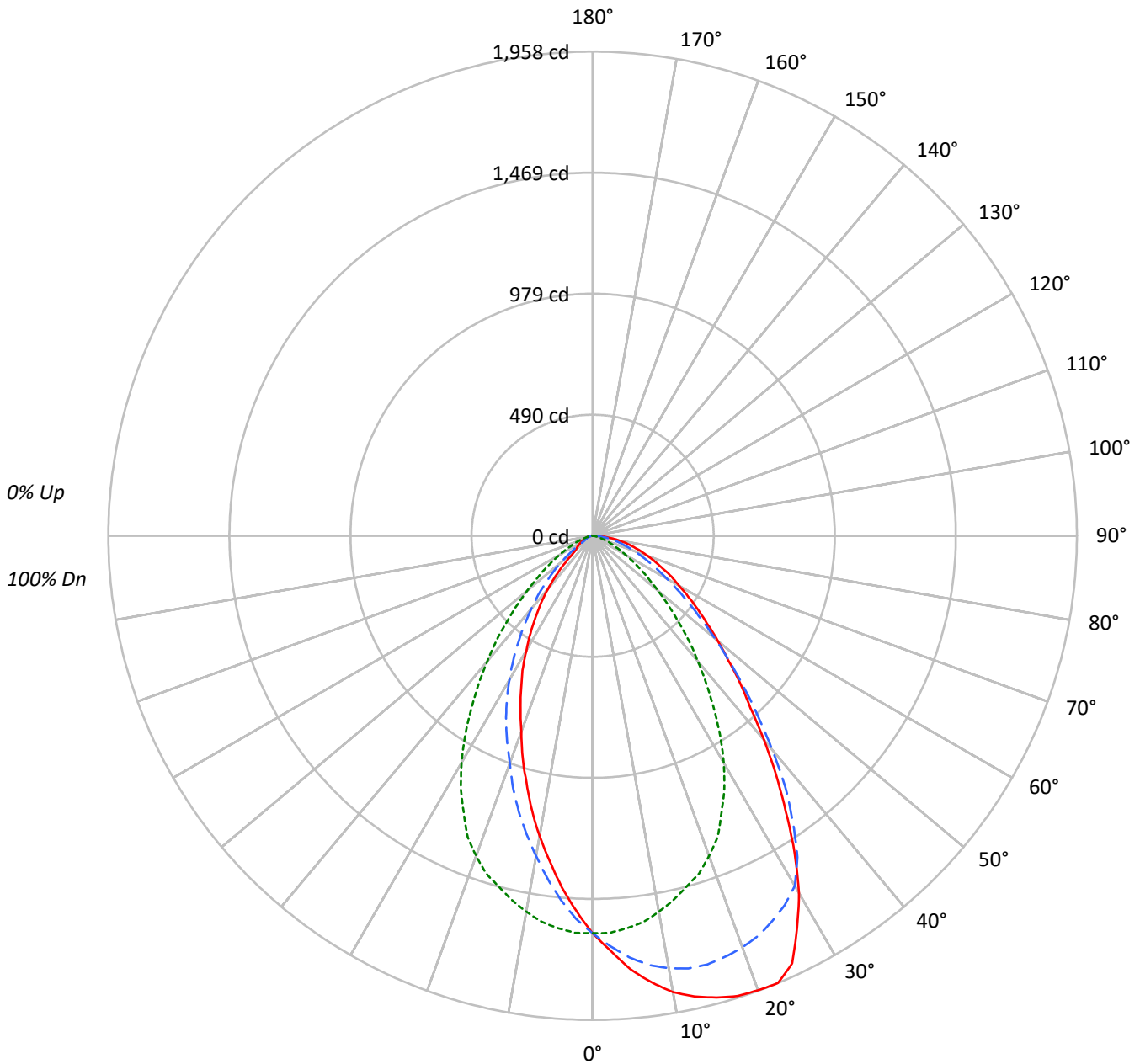
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2599.6 lumens
Efficiency: N/A
Efficacy: 48.1 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): 54
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°	155689	155689	155689	155689	155689
5°	171142	166484	154951	143651	138769
10°	184325	174685	151814	129386	121320
15°	193876	179935	147240	115688	103572
20°	201639	182608	141948	100825	86959
25°	203947	183723	131828	88452	73102
30°	186664	182839	118574	75227	59925
35°	160944	166881	101103	61733	47447
40°	136364	142700	83604	48726	35460
45°	115562	118370	66830	36223	22797
50°	99635	97224	51875	24400	13745
55°	87793	80091	39657	13478	12313
60°	78178	67135	29586	7518	11044
65°	71588	57490	21937	6785	9926
70°	66506	49709	16145	6458	9687
75°	62283	43531	11079	5989	8534
80°	59749	38159	7643	6360	7643
85°	58244	32901	5113	5113	5113

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 120247 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	5.8
10°-20°	414.9	16.0
20°-30°	580.1	22.3
30°-40°	567.0	21.8
40°-50°	411.4	15.8
50°-60°	248.1	9.5
60°-70°	139.4	5.4
70°-80°	69.1	2.7
80°-90°	18.9	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°	1145.7	44.1
0°-40°	1712.7	65.9
0°-60°	2372.2	91.3
0°-90°	2599.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2599.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1607	1607	1607	1607	1607	
5°	1760	1712	1593	1477	1427	171
15°	1933	1794	1468	1154	1033	547
25°	1908	1719	1233	828	684	860
35°	1361	1411	855	522	401	852
45°	844	864	488	264	166	654
55°	520	474	235	80	73	467
65°	312	251	96	30	43	313
75°	166	116	30	16	23	179
85°	52	30	5	5	5	58
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°	1607.1	1607.1	1607.1	1607.1	1607.1	1607.1	1607.1	1607.1	1607.1
2.5°	1680.1	1675.5	1661.8	1634.5	1607.1	1575.2	1550.1	1531.9	1518.2
5°	1759.9	1750.7	1712.0	1655.0	1593.4	1531.9	1477.2	1445.3	1427.0
7.5°	1821.4	1805.5	1750.7	1671.0	1575.2	1481.7	1397.4	1347.2	1326.7
10°	1873.8	1846.5	1775.8	1668.7	1543.3	1420.2	1315.3	1256.1	1233.3
12.5°	1908.0	1878.4	1791.8	1666.4	1509.1	1358.6	1235.5	1158.0	1135.2
15°	1933.1	1896.6	1794.1	1648.2	1468.1	1294.8	1153.5	1062.3	1032.7
17.5°	1951.3	1901.2	1784.9	1627.6	1431.6	1228.7	1069.1	971.1	941.5
20°	1955.9	1901.2	1771.3	1598.0	1376.9	1162.6	978.0	879.9	843.5
22.5°	1958.2	1894.4	1750.7	1561.5	1319.9	1087.4	902.7	800.1	761.4
25°	1908.0	1871.6	1718.8	1500.0	1233.3	1005.3	827.5	715.8	683.9
27.5°	1789.5	1787.2	1682.4	1417.9	1153.5	916.4	750.0	642.9	613.2
30°	1668.7	1671.0	1634.5	1326.7	1060.0	832.1	672.5	567.6	535.7
32.5°	1520.5	1543.3	1541.0	1224.2	959.7	752.3	597.3	499.2	467.3
35°	1360.9	1402.0	1411.1	1107.9	854.9	661.1	522.0	433.1	401.2
37.5°	1217.3	1258.3	1278.9	1005.3	756.8	581.3	451.4	373.9	341.9
40°	1078.3	1112.5	1128.4	886.8	661.1	499.2	385.3	312.3	280.4
42.5°	943.8	993.9	989.4	786.5	576.7	433.1	326.0	253.0	221.1
45°	843.5	877.7	864.0	681.6	487.8	364.7	264.4	196.0	166.4
47.5°	743.2	768.2	747.7	592.7	412.6	300.9	214.3	143.6	111.7
50°	661.1	672.5	645.1	503.8	344.2	246.2	161.9	95.7	91.2
52.5°	583.6	590.4	551.7	428.6	285.0	198.3	118.5	75.2	79.8
55°	519.8	517.5	474.2	362.5	234.8	152.7	79.8	68.4	72.9
57.5°	458.2	451.4	408.1	300.9	191.5	118.5	47.9	59.3	63.8
60°	403.5	396.7	346.5	248.5	152.7	88.9	38.8	52.4	57.0
62.5°	360.2	344.2	294.1	205.2	123.1	63.8	34.2	45.6	50.2
65°	312.3	298.6	250.8	166.4	95.7	45.6	29.6	38.8	43.3
67.5°	273.6	257.6	212.0	136.8	77.5	31.9	27.4	34.2	38.8
70°	234.8	221.1	175.5	109.4	57.0	20.5	22.8	29.6	34.2
72.5°	202.9	186.9	145.9	86.6	43.3	16.0	20.5	25.1	27.4
75°	166.4	152.7	116.3	66.1	29.6	13.7	16.0	20.5	22.8
77.5°	139.1	125.4	91.2	50.2	20.5	11.4	13.7	18.2	18.2
80°	107.1	95.7	68.4	34.2	13.7	6.8	11.4	13.7	13.7
82.5°	77.5	68.4	47.9	22.8	6.8	6.8	6.8	9.1	9.1
85°	52.4	45.6	29.6	13.7	4.6	4.6	4.6	4.6	4.6
87.5°	29.6	22.8	13.7	4.6	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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