

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: P837705

Luminaire Tested: HCSQ460D010-HM44560935-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837705
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-HM44560935-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

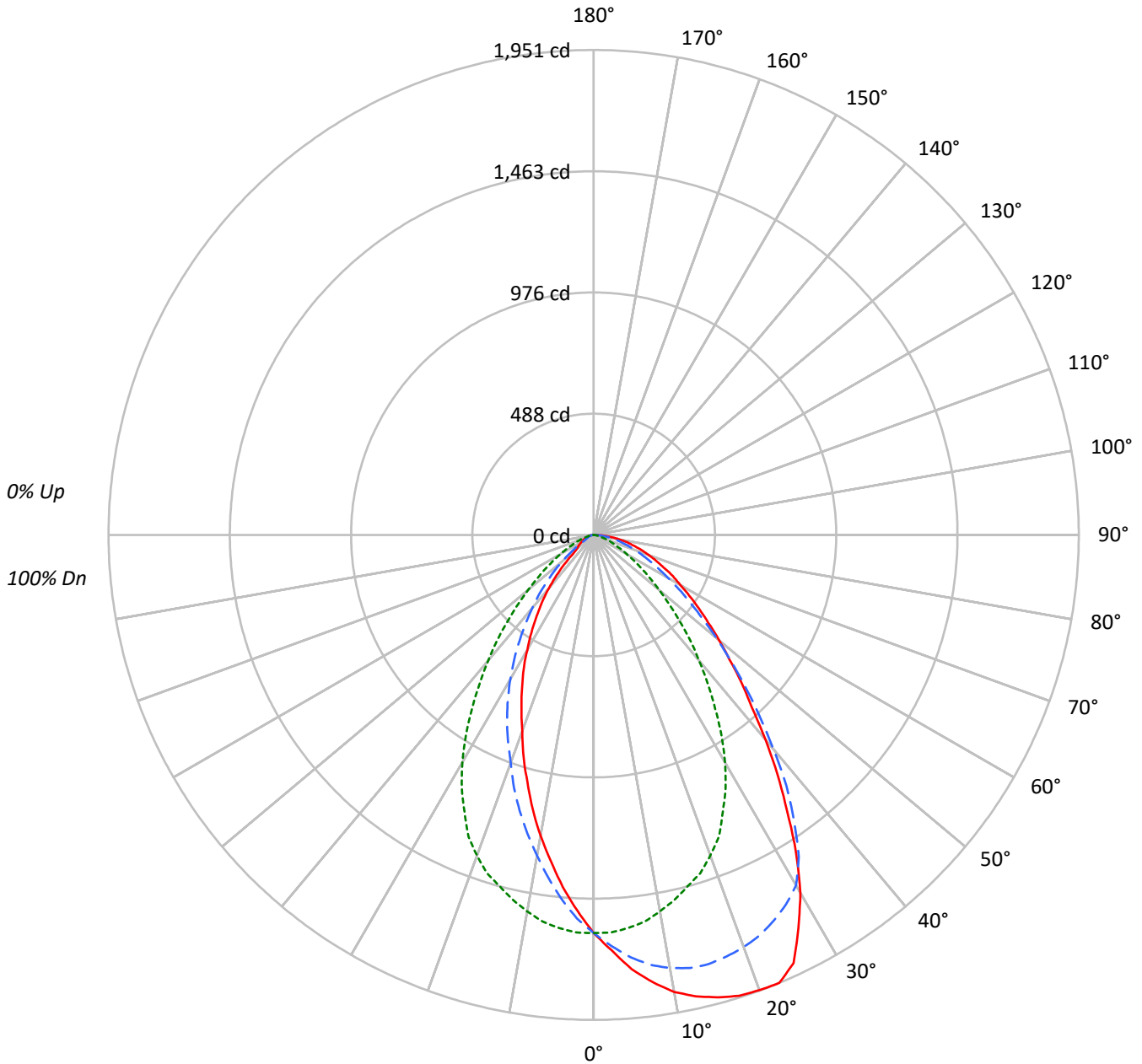
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2589.9 lumens
Efficiency: N/A
Efficacy: 46.2 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°	155117	155117	155117	155117	155117
5°	170500	165872	154377	143116	138264
10°	183647	174036	151254	128914	120867
15°	193164	179263	146688	115257	103181
20°	200897	181928	141423	100443	86629
25°	203198	183049	131336	88120	72835
30°	185971	182156	118138	74948	59701
35°	160353	166266	100725	61509	47270
40°	135858	142168	83288	48536	35333
45°	115123	117932	66583	36100	22715
50°	99259	96862	51679	24310	13685
55°	87455	79787	39505	13427	12279
60°	77888	66883	29489	7479	11005
65°	71335	57261	21868	6762	9903
70°	66251	49540	16088	6430	9659
75°	62059	43344	11042	5951	8497
80°	59526	37992	7587	6360	7587
85°	58021	32790	5002	5002	5002

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 119795 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	5.8
10°-20°	413.4	16.0
20°-30°	577.9	22.3
30°-40°	564.9	21.8
40°-50°	409.9	15.8
50°-60°	247.1	9.5
60°-70°	138.9	5.4
70°-80°	68.8	2.7
80°-90°	18.8	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°	1141.4	44.1
0°-40°	1706.4	65.9
0°-60°	2363.4	91.3
0°-90°	2589.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2589.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1601	1601	1601	1601	1601	
5°	1753	1706	1588	1472	1422	171
15°	1926	1787	1463	1149	1029	545
25°	1901	1712	1229	824	681	857
35°	1356	1406	852	520	400	849
45°	840	861	486	264	166	652
55°	518	472	234	80	73	466
65°	311	250	95	30	43	312
75°	166	116	30	16	23	178
85°	52	30	4	4	4	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°	1601.2	1601.2	1601.2	1601.2	1601.2	1601.2	1601.2	1601.2	1601.2
2.5°	1673.9	1669.3	1655.7	1628.4	1601.2	1569.4	1544.4	1526.2	1512.6
5°	1753.3	1744.3	1705.7	1648.9	1587.5	1526.2	1471.7	1439.9	1421.8
7.5°	1814.7	1798.8	1744.3	1664.8	1569.4	1476.3	1392.2	1342.3	1321.8
10°	1866.9	1839.6	1769.2	1662.5	1537.6	1414.9	1310.5	1251.4	1228.7
12.5°	1901.0	1871.4	1785.1	1660.2	1503.5	1353.6	1231.0	1153.8	1131.0
15°	1926.0	1889.6	1787.4	1642.1	1462.6	1290.0	1149.2	1058.4	1028.8
17.5°	1944.1	1894.2	1778.3	1621.6	1426.3	1224.2	1065.2	967.5	938.0
20°	1948.7	1894.2	1764.7	1592.1	1371.8	1158.3	974.3	876.7	840.3
22.5°	1950.9	1887.3	1744.3	1555.8	1315.0	1083.3	899.4	797.2	758.6
25°	1901.0	1864.6	1712.5	1494.4	1228.7	1001.6	824.4	713.1	681.4
27.5°	1782.9	1780.6	1676.1	1412.7	1149.2	913.0	747.2	640.5	610.9
30°	1662.5	1664.8	1628.4	1321.8	1056.1	829.0	670.0	565.5	533.7
32.5°	1514.9	1537.6	1535.3	1219.6	956.2	749.5	595.0	497.4	465.6
35°	1355.9	1396.8	1405.9	1103.8	851.7	658.6	520.1	431.5	399.7
37.5°	1212.8	1253.7	1274.1	1001.6	754.0	579.1	449.7	372.5	340.7
40°	1074.3	1108.3	1124.2	883.5	658.6	497.4	383.8	311.2	279.4
42.5°	940.3	990.2	985.7	783.6	574.6	431.5	324.8	252.1	220.3
45°	840.3	874.4	860.8	679.1	486.0	363.4	263.5	195.3	165.8
47.5°	740.4	765.4	744.9	590.5	411.1	299.8	213.5	143.1	111.3
50°	658.6	670.0	642.7	501.9	342.9	245.3	161.3	95.4	90.8
52.5°	581.4	588.2	549.6	427.0	283.9	197.6	118.1	74.9	79.5
55°	517.8	515.6	472.4	361.1	233.9	152.2	79.5	68.1	72.7
57.5°	456.5	449.7	406.5	299.8	190.8	118.1	47.7	59.1	63.6
60°	402.0	395.2	345.2	247.6	152.2	88.6	38.6	52.2	56.8
62.5°	358.8	342.9	293.0	204.4	122.6	63.6	34.1	45.4	50.0
65°	311.2	297.5	249.8	165.8	95.4	45.4	29.5	38.6	43.2
67.5°	272.5	256.6	211.2	136.3	77.2	31.8	27.3	34.1	38.6
70°	233.9	220.3	174.9	109.0	56.8	20.4	22.7	29.5	34.1
72.5°	202.1	186.2	145.4	86.3	43.2	15.9	20.4	25.0	27.3
75°	165.8	152.2	115.8	65.9	29.5	13.6	15.9	20.4	22.7
77.5°	138.5	124.9	90.8	50.0	20.4	11.4	13.6	18.2	18.2
80°	106.7	95.4	68.1	34.1	13.6	6.8	11.4	13.6	13.6
82.5°	77.2	68.1	47.7	22.7	6.8	6.8	6.8	9.1	9.1
85°	52.2	45.4	29.5	13.6	4.5	4.5	4.5	4.5	4.5
87.5°	29.5	22.7	13.6	4.5	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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