

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: P837645

Luminaire Tested: HCSQ455D010-HM44560835-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837645
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-HM44560835-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

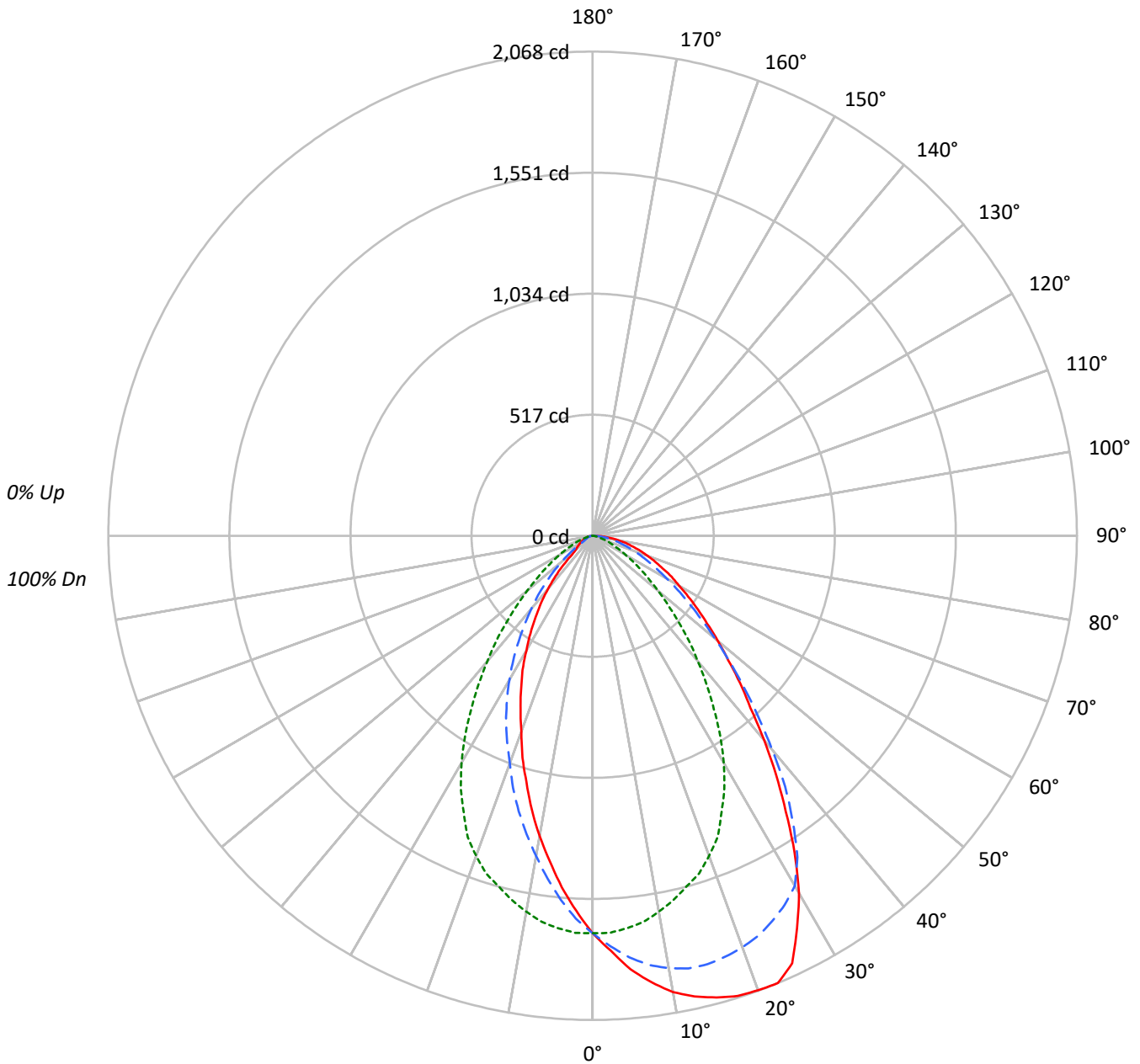
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2745.6 lumens
Efficiency: N/A
Efficacy: 50.8 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 (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°	164436	164436	164436	164436	164436
5°	180750	175830	163654	151713	146568
10°	194684	184493	160343	136655	128127
15°	204768	190035	155504	122187	109389
20°	212969	192855	149917	106484	91835
25°	215405	194048	139224	93422	77207
30°	197146	193108	125241	79456	63292
35°	169991	176247	106780	65198	50108
40°	144015	150717	88296	51457	37445
45°	122042	125015	70584	38265	24085
50°	105227	102695	54799	25757	14514
55°	92708	84584	41886	14238	13005
60°	82577	70913	31252	7924	11664
65°	75599	60699	23175	7175	10476
70°	70245	52514	17051	6826	10225
75°	65802	45964	11716	6326	9021
80°	63152	40279	8034	6695	8034
85°	61578	34791	5335	5335	5335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 126988 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.2	5.8
10°-20°	438.2	16.0
20°-30°	612.7	22.3
30°-40°	598.9	21.8
40°-50°	434.6	15.8
50°-60°	262.0	9.5
60°-70°	147.3	5.4
70°-80°	72.9	2.7
80°-90°	19.9	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°	1210.0	44.1
0°-40°	1808.9	65.9
0°-60°	2505.4	91.3
0°-90°	2745.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2745.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1697	1697	1697	1697	1697	
5°	1859	1808	1683	1560	1507	181
15°	2042	1895	1550	1218	1091	578
25°	2015	1815	1302	874	722	908
35°	1437	1490	903	551	424	900
45°	891	912	515	279	176	691
55°	549	501	248	84	77	494
65°	330	265	101	31	46	330
75°	176	123	31	17	24	189
85°	55	31	5	5	5	61
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°	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4	1697.4
2.5°	1774.4	1769.6	1755.2	1726.3	1697.4	1663.7	1637.2	1617.9	1603.5
5°	1858.7	1849.1	1808.1	1747.9	1682.9	1617.9	1560.1	1526.4	1507.2
7.5°	1923.7	1906.8	1849.1	1764.8	1663.7	1565.0	1475.9	1422.9	1401.2
10°	1979.1	1950.2	1875.5	1762.4	1630.0	1500.0	1389.2	1326.6	1302.5
12.5°	2015.2	1983.9	1892.4	1760.0	1593.9	1435.0	1304.9	1223.1	1199.0
15°	2041.7	2003.2	1894.8	1740.7	1550.5	1367.5	1218.3	1122.0	1090.7
17.5°	2060.9	2008.0	1885.2	1719.1	1512.0	1297.7	1129.2	1025.7	994.4
20°	2065.8	2008.0	1870.7	1687.8	1454.2	1227.9	1032.9	929.3	890.8
22.5°	2068.2	2000.7	1849.1	1649.2	1394.0	1148.4	953.4	845.1	804.2
25°	2015.2	1976.7	1815.4	1584.2	1302.5	1061.8	874.0	756.0	722.3
27.5°	1890.0	1887.6	1776.8	1497.5	1218.3	967.9	792.1	679.0	647.7
30°	1762.4	1764.8	1726.3	1401.2	1119.6	878.8	710.3	599.5	565.8
32.5°	1605.9	1630.0	1627.6	1292.9	1013.6	794.5	630.8	527.3	493.6
35°	1437.4	1480.7	1490.3	1170.1	902.9	698.2	551.3	457.5	423.7
37.5°	1285.7	1329.0	1350.7	1061.8	799.3	613.9	476.7	394.9	361.1
40°	1138.8	1174.9	1191.8	936.6	698.2	527.3	406.9	329.8	296.1
42.5°	996.8	1049.7	1044.9	830.6	609.1	457.5	344.3	267.2	233.5
45°	890.8	926.9	912.5	719.9	515.2	385.2	279.3	207.1	175.8
47.5°	784.9	811.4	789.7	626.0	435.8	317.8	226.3	151.7	118.0
50°	698.2	710.3	681.4	532.1	363.6	260.0	170.9	101.1	96.3
52.5°	616.4	623.6	582.6	452.6	301.0	209.5	125.2	79.5	84.3
55°	548.9	546.5	500.8	382.8	248.0	161.3	84.3	72.2	77.0
57.5°	483.9	476.7	431.0	317.8	202.2	125.2	50.6	62.6	67.4
60°	426.2	418.9	366.0	262.4	161.3	93.9	40.9	55.4	60.2
62.5°	380.4	363.6	310.6	216.7	130.0	67.4	36.1	48.2	53.0
65°	329.8	315.4	264.8	175.8	101.1	48.2	31.3	40.9	45.7
67.5°	288.9	272.1	223.9	144.5	81.9	33.7	28.9	36.1	40.9
70°	248.0	233.5	185.4	115.6	60.2	21.7	24.1	31.3	36.1
72.5°	214.3	197.4	154.1	91.5	45.7	16.9	21.7	26.5	28.9
75°	175.8	161.3	122.8	69.8	31.3	14.4	16.9	21.7	24.1
77.5°	146.9	132.4	96.3	53.0	21.7	12.0	14.4	19.3	19.3
80°	113.2	101.1	72.2	36.1	14.4	7.2	12.0	14.4	14.4
82.5°	81.9	72.2	50.6	24.1	7.2	7.2	7.2	9.6	9.6
85°	55.4	48.2	31.3	14.4	4.8	4.8	4.8	4.8	4.8
87.5°	31.3	24.1	14.4	4.8	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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