

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: P837545

Luminaire Tested: HCSQ440D010-HM43040935-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837545
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: HCSQ440D010-HM43040935-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

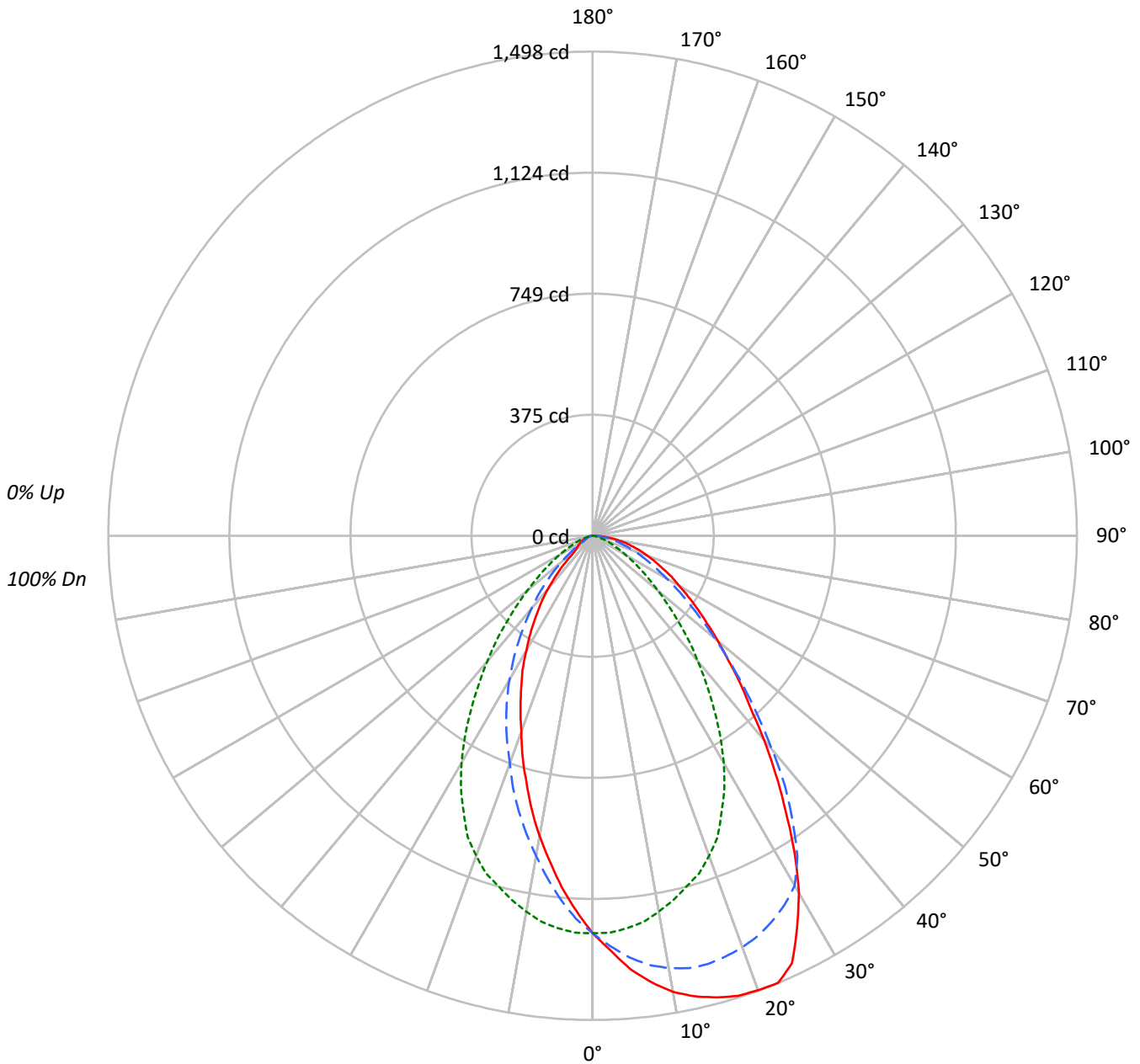
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1988.5 lumens
Efficiency: N/A
Efficacy: 48.5 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): 41
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										
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°	119089	119089	119089	119089	119089
5°	130912	127343	118533	109878	106153
10°	140994	133626	116126	98970	92802
15°	148303	137632	112629	88488	79221
20°	154237	139680	108577	77124	66515
25°	156006	140539	100840	67662	55914
30°	142781	139850	90698	57542	45841
35°	123112	127653	77332	47222	36295
40°	104306	109149	63952	37268	27126
45°	88394	90545	51129	27716	17440
50°	76215	74376	39682	18658	10505
55°	67154	61259	30334	10303	9424
60°	59792	51344	22630	5735	8448
65°	54762	43966	16779	5203	7587
70°	50871	38040	12349	4928	7421
75°	47648	33275	8497	4566	6513
80°	45746	29177	5858	4854	5858
85°	44572	25232	3890	3890	3890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 91970 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.3	5.8
10°-20°	317.4	16.0
20°-30°	443.7	22.3
30°-40°	433.7	21.8
40°-50°	314.7	15.8
50°-60°	189.7	9.5
60°-70°	106.6	5.4
70°-80°	52.8	2.7
80°-90°	14.5	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°	876.4	44.1
0°-40°	1310.1	65.9
0°-60°	1814.6	91.3
0°-90°	1988.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1988.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1229	1229	1229	1229	1229	
5°	1346	1310	1219	1130	1092	131
15°	1479	1372	1123	882	790	419
25°	1460	1315	943	633	523	658
35°	1041	1079	654	399	307	652
45°	645	661	373	202	127	500
55°	398	363	180	61	56	358
65°	239	192	73	23	33	239
75°	127	89	23	12	17	137
85°	40	23	4	4	4	44
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°	1229.3	1229.3	1229.3	1229.3	1229.3	1229.3	1229.3	1229.3	1229.3
2.5°	1285.1	1281.6	1271.2	1250.2	1229.3	1204.9	1185.7	1171.8	1161.3
5°	1346.2	1339.2	1309.5	1265.9	1218.9	1171.8	1129.9	1105.5	1091.6
7.5°	1393.2	1381.0	1339.2	1278.1	1204.9	1133.4	1068.9	1030.5	1014.8
10°	1433.3	1412.4	1358.4	1276.4	1180.5	1086.3	1006.1	960.8	943.4
12.5°	1459.5	1436.8	1370.6	1274.7	1154.3	1039.3	945.1	885.8	868.4
15°	1478.7	1450.8	1372.3	1260.7	1123.0	990.4	882.3	812.6	789.9
17.5°	1492.6	1454.3	1365.3	1245.0	1095.1	939.9	817.8	742.8	720.2
20°	1496.1	1454.3	1354.9	1222.3	1053.2	889.3	748.1	673.1	645.2
22.5°	1497.9	1449.0	1339.2	1194.4	1009.6	831.8	690.5	612.0	582.4
25°	1459.5	1431.6	1314.8	1147.4	943.4	769.0	633.0	547.5	523.1
27.5°	1368.8	1367.1	1286.9	1084.6	882.3	701.0	573.7	491.7	469.1
30°	1276.4	1278.1	1250.2	1014.8	810.8	636.5	514.4	434.2	409.8
32.5°	1163.1	1180.5	1178.8	936.4	734.1	575.4	456.9	381.9	357.5
35°	1041.0	1072.4	1079.4	847.4	653.9	505.7	399.3	331.3	306.9
37.5°	931.1	962.5	978.2	769.0	578.9	444.6	345.3	286.0	261.6
40°	824.8	850.9	863.1	678.3	505.7	381.9	294.7	238.9	214.5
42.5°	721.9	760.3	756.8	601.6	441.2	331.3	249.4	193.6	169.1
45°	645.2	671.3	660.9	521.4	373.2	279.0	202.3	150.0	127.3
47.5°	568.5	587.6	571.9	453.4	315.6	230.2	163.9	109.9	85.4
50°	505.7	514.4	493.5	385.4	263.3	188.3	123.8	73.2	69.7
52.5°	446.4	451.6	422.0	327.8	218.0	151.7	90.7	57.5	61.0
55°	397.6	395.8	362.7	277.3	179.6	116.8	61.0	52.3	55.8
57.5°	350.5	345.3	312.1	230.2	146.5	90.7	36.6	45.3	48.8
60°	308.6	303.4	265.0	190.1	116.8	68.0	29.6	40.1	43.6
62.5°	275.5	263.3	224.9	156.9	94.2	48.8	26.2	34.9	38.4
65°	238.9	228.4	191.8	127.3	73.2	34.9	22.7	29.6	33.1
67.5°	209.2	197.0	162.2	104.6	59.3	24.4	20.9	26.2	29.6
70°	179.6	169.1	134.3	83.7	43.6	15.7	17.4	22.7	26.2
72.5°	155.2	143.0	111.6	66.3	33.1	12.2	15.7	19.2	20.9
75°	127.3	116.8	88.9	50.6	22.7	10.5	12.2	15.7	17.4
77.5°	106.4	95.9	69.7	38.4	15.7	8.7	10.5	13.9	13.9
80°	82.0	73.2	52.3	26.2	10.5	5.2	8.7	10.5	10.5
82.5°	59.3	52.3	36.6	17.4	5.2	5.2	5.2	7.0	7.0
85°	40.1	34.9	22.7	10.5	3.5	3.5	3.5	3.5	3.5
87.5°	22.7	17.4	10.5	3.5	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

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Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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