

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: P837580

Luminaire Tested: HCSQ445D010-HM44560930-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837580
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: HCSQ445D010-HM44560930-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

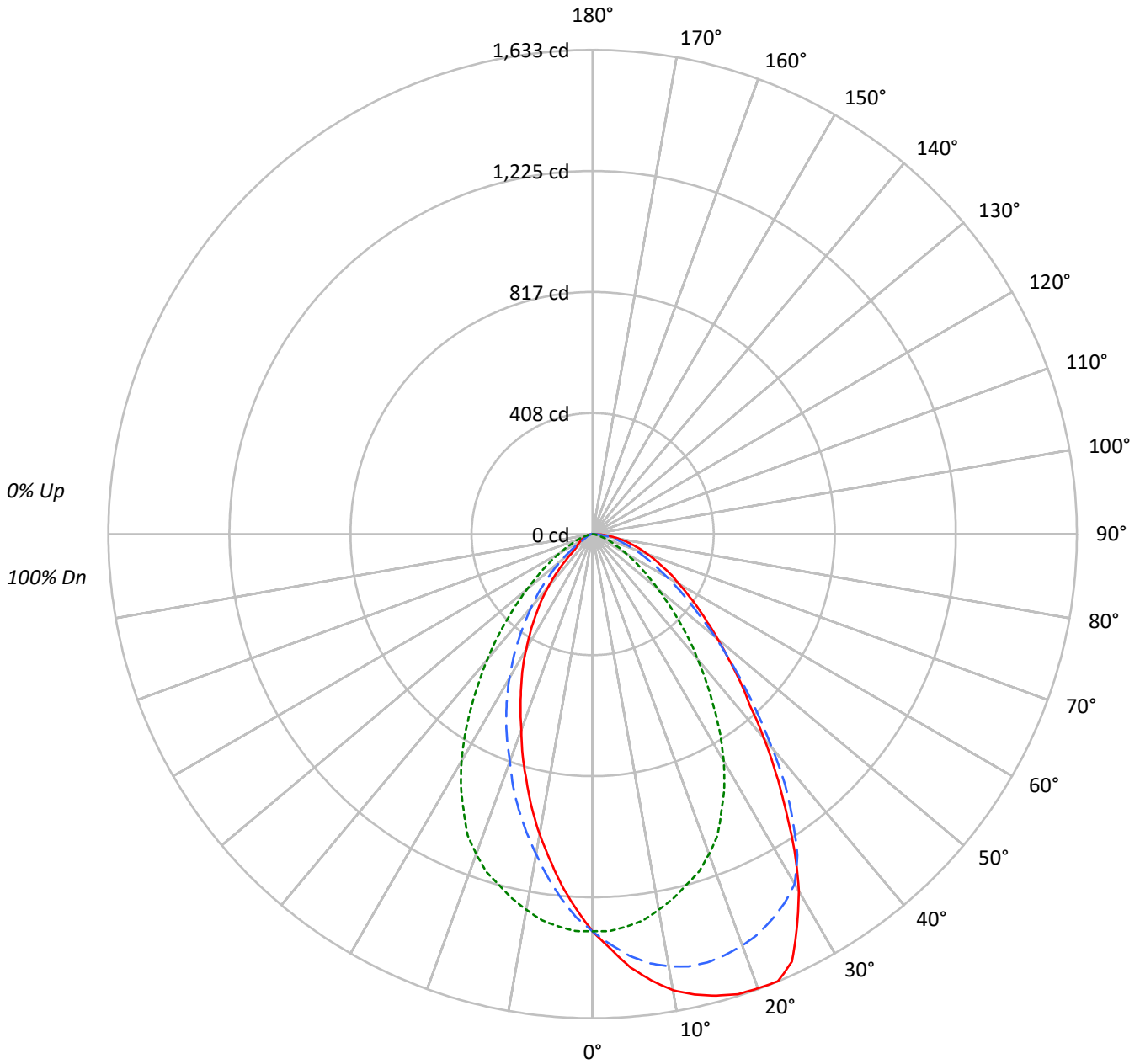
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2167.3 lumens
Efficiency: N/A
Efficacy: 47.2 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): 45.9
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°	129803	129803	129803	129803	129803
5°	142679	138798	129191	119768	115693
10°	153673	145637	126573	107872	101144
15°	161642	150008	122748	96452	86342
20°	168113	152237	118340	84051	72495
25°	170041	153174	109905	73744	60949
30°	155623	152434	98864	62721	49958
35°	134181	139125	84286	51468	39559
40°	113689	118975	69706	40620	29567
45°	96340	98683	55719	30209	19002
50°	83072	81068	43254	20331	11454
55°	73183	66765	33070	11232	10269
60°	65178	55975	24664	6258	9203
65°	59691	47931	18292	5662	8275
70°	55459	41439	13454	5382	8072
75°	51915	36269	9245	4978	7112
80°	49819	31799	6360	5300	6360
85°	48573	27455	4224	4224	4224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 100245 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	5.8
10°-20°	345.9	16.0
20°-30°	483.6	22.3
30°-40°	472.7	21.8
40°-50°	343.0	15.8
50°-60°	206.8	9.5
60°-70°	116.2	5.4
70°-80°	57.6	2.7
80°-90°	15.7	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°	955.2	44.1
0°-40°	1427.9	65.9
0°-60°	1977.7	91.3
0°-90°	2167.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2167.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1340	1340	1340	1340	1340	
5°	1467	1427	1328	1232	1190	143
15°	1612	1496	1224	962	861	456
25°	1591	1433	1028	690	570	717
35°	1135	1176	713	435	334	710
45°	703	720	407	220	139	545
55°	433	395	196	66	61	390
65°	260	209	80	25	36	261
75°	139	97	25	13	19	149
85°	44	25	4	4	4	48
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°	1339.9	1339.9	1339.9	1339.9	1339.9	1339.9	1339.9	1339.9	1339.9
2.5°	1400.7	1396.9	1385.5	1362.7	1339.9	1313.3	1292.4	1277.2	1265.8
5°	1467.2	1459.6	1427.3	1379.8	1328.5	1277.2	1231.6	1204.9	1189.7
7.5°	1518.5	1505.2	1459.6	1393.1	1313.3	1235.4	1165.0	1123.2	1106.1
10°	1562.2	1539.4	1480.5	1391.2	1286.7	1184.0	1096.6	1047.2	1028.2
12.5°	1590.8	1566.0	1493.8	1389.3	1258.2	1132.7	1030.1	965.5	946.5
15°	1611.7	1581.3	1495.7	1374.1	1223.9	1079.5	961.7	885.7	860.9
17.5°	1626.9	1585.1	1488.1	1357.0	1193.5	1024.4	891.4	809.6	784.9
20°	1630.7	1585.1	1476.7	1332.3	1147.9	969.3	815.3	733.6	703.2
22.5°	1632.6	1579.4	1459.6	1301.9	1100.4	906.6	752.6	667.1	634.8
25°	1590.8	1560.3	1433.0	1250.6	1028.2	838.1	689.9	596.8	570.2
27.5°	1491.9	1490.0	1402.6	1182.1	961.7	764.0	625.3	536.0	511.2
30°	1391.2	1393.1	1362.7	1106.1	883.8	693.7	560.7	473.2	446.6
32.5°	1267.7	1286.7	1284.8	1020.6	800.1	627.2	497.9	416.2	389.6
35°	1134.6	1168.8	1176.4	923.7	712.7	551.2	435.2	361.1	334.5
37.5°	1014.9	1049.1	1066.2	838.1	631.0	484.6	376.3	311.7	285.1
40°	899.0	927.5	940.8	739.3	551.2	416.2	321.2	260.4	233.8
42.5°	786.8	828.6	824.8	655.7	480.8	361.1	271.8	211.0	184.4
45°	703.2	731.7	720.3	568.3	406.7	304.1	220.5	163.4	138.7
47.5°	619.6	640.5	623.4	494.1	344.0	250.9	178.7	119.7	93.1
50°	551.2	560.7	537.9	420.0	287.0	205.3	134.9	79.8	76.0
52.5°	486.5	492.2	459.9	357.3	237.6	165.3	98.8	62.7	66.5
55°	433.3	431.4	395.3	302.2	195.8	127.3	66.5	57.0	60.8
57.5°	382.0	376.3	340.2	250.9	159.6	98.8	39.9	49.4	53.2
60°	336.4	330.7	288.9	207.2	127.3	74.1	32.3	43.7	47.5
62.5°	300.3	287.0	245.2	171.0	102.6	53.2	28.5	38.0	41.8
65°	260.4	249.0	209.1	138.7	79.8	38.0	24.7	32.3	36.1
67.5°	228.1	214.8	176.8	114.0	64.6	26.6	22.8	28.5	32.3
70°	195.8	184.4	146.3	91.2	47.5	17.1	19.0	24.7	28.5
72.5°	169.1	155.8	121.6	72.2	36.1	13.3	17.1	20.9	22.8
75°	138.7	127.3	96.9	55.1	24.7	11.4	13.3	17.1	19.0
77.5°	115.9	104.5	76.0	41.8	17.1	9.5	11.4	15.2	15.2
80°	89.3	79.8	57.0	28.5	11.4	5.7	9.5	11.4	11.4
82.5°	64.6	57.0	39.9	19.0	5.7	5.7	5.7	7.6	7.6
85°	43.7	38.0	24.7	11.4	3.8	3.8	3.8	3.8	3.8
87.5°	24.7	19.0	11.4	3.8	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

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Scaled Data Report



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Scaled Data Report





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

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