

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: P837575

Luminaire Tested: HCSQ445D010-HM44560927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837575
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-HM44560927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

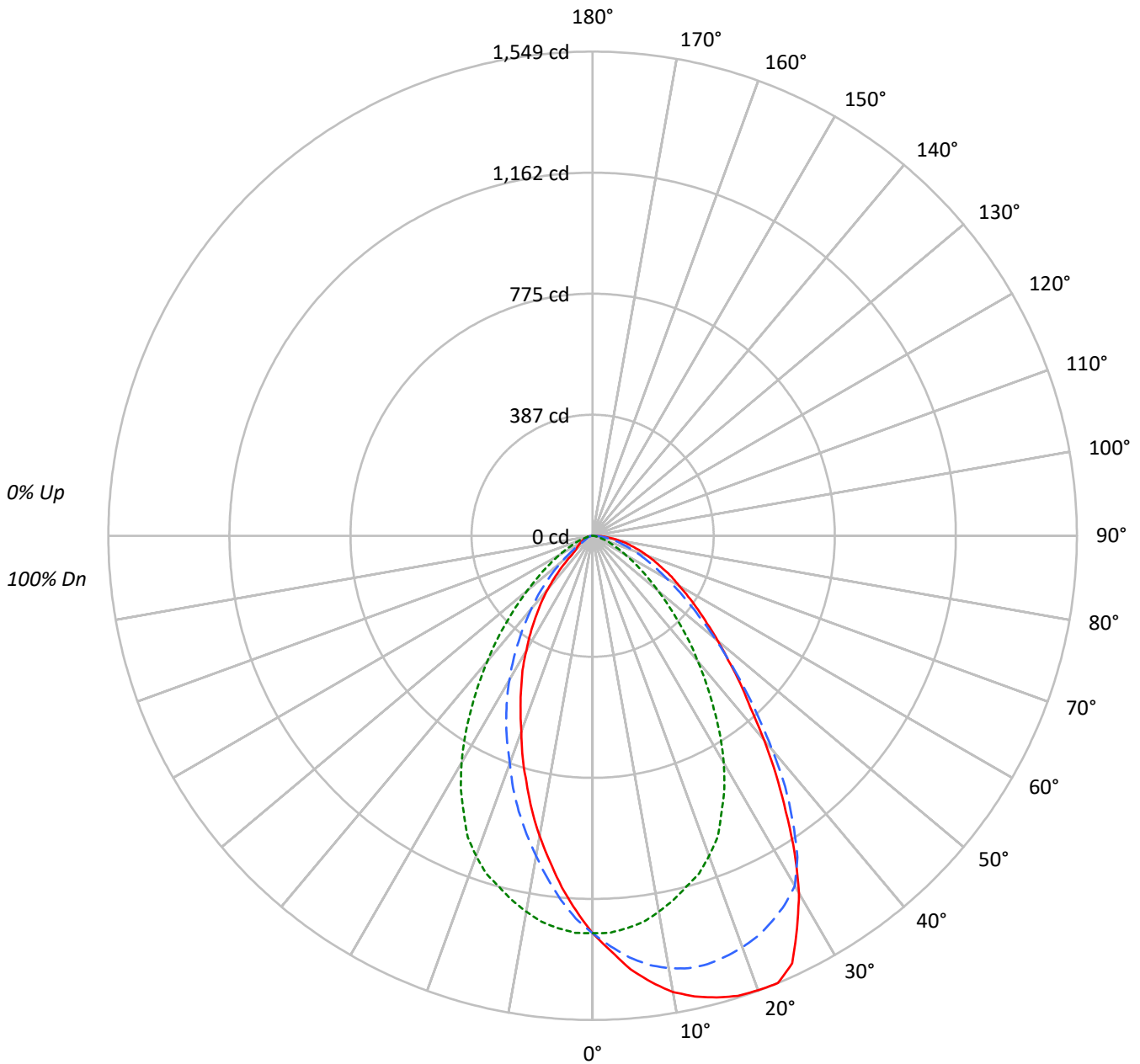
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2056.4 lumens
Efficiency: N/A
Efficacy: 44.8 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): 45.9
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°	123167	123167	123167	123167	123167
5°	135385	131700	122578	113641	109780
10°	145814	138190	120100	102354	95970
15°	153368	142336	116470	91517	81929
20°	159515	144453	112289	79752	68783
25°	161340	145339	104282	69970	57828
30°	147658	144638	93808	59511	47407
35°	127322	132017	79981	48843	37537
40°	107872	112893	66140	38546	28049
45°	91408	93641	52869	28661	18030
50°	78822	76908	41039	19291	10866
55°	69451	63353	31364	10657	9745
60°	61845	53107	23405	5948	8738
65°	56642	45479	17352	5364	7862
70°	52599	39343	12774	5098	7676
75°	49258	34435	8759	4716	6737
80°	47309	30181	6025	5021	6025
85°	46128	26010	4001	4001	4001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 95121 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.2	5.8
10°-20°	328.2	16.0
20°-30°	458.9	22.3
30°-40°	448.6	21.8
40°-50°	325.5	15.8
50°-60°	196.2	9.5
60°-70°	110.3	5.4
70°-80°	54.6	2.7
80°-90°	14.9	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°	906.3	44.1
0°-40°	1354.9	65.9
0°-60°	1876.6	91.3
0°-90°	2056.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2056.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1271	1271	1271	1271	1271	
5°	1392	1354	1260	1169	1129	135
15°	1529	1419	1161	912	817	433
25°	1509	1360	976	655	541	680
35°	1077	1116	676	413	317	674
45°	667	684	386	209	132	517
55°	411	375	186	63	58	370
65°	247	198	76	23	34	248
75°	132	92	23	13	18	142
85°	42	23	4	4	4	46
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°	1271.4	1271.4	1271.4	1271.4	1271.4	1271.4	1271.4	1271.4	1271.4
2.5°	1329.1	1325.5	1314.6	1293.0	1271.4	1246.1	1226.3	1211.8	1201.0
5°	1392.2	1385.0	1354.3	1309.2	1260.5	1211.8	1168.6	1143.3	1128.9
7.5°	1440.9	1428.2	1385.0	1321.8	1246.1	1172.2	1105.4	1065.8	1049.5
10°	1482.3	1460.7	1404.8	1320.0	1220.9	1123.5	1040.5	993.6	975.6
12.5°	1509.4	1485.9	1417.4	1318.2	1193.8	1074.8	977.4	916.1	898.1
15°	1529.2	1500.4	1419.2	1303.8	1161.3	1024.3	912.5	840.4	816.9
17.5°	1543.7	1504.0	1412.0	1287.6	1132.5	972.0	845.8	768.2	744.8
20°	1547.3	1504.0	1401.2	1264.1	1089.2	919.7	773.6	696.1	667.2
22.5°	1549.1	1498.6	1385.0	1235.3	1044.1	860.2	714.1	633.0	602.3
25°	1509.4	1480.5	1359.7	1186.6	975.6	795.3	654.6	566.2	541.0
27.5°	1415.6	1413.8	1330.9	1121.7	912.5	724.9	593.3	508.5	485.1
30°	1320.0	1321.8	1293.0	1049.5	838.6	658.2	532.0	449.0	423.8
32.5°	1202.8	1220.9	1219.1	968.4	759.2	595.1	472.5	394.9	369.7
35°	1076.6	1109.1	1116.3	876.4	676.3	523.0	413.0	342.6	317.4
37.5°	963.0	995.4	1011.7	795.3	598.7	459.9	357.1	295.7	270.5
40°	853.0	880.0	892.7	701.5	523.0	394.9	304.8	247.1	221.8
42.5°	746.6	786.3	782.6	622.2	456.2	342.6	257.9	200.2	174.9
45°	667.2	694.3	683.5	539.2	385.9	288.5	209.2	155.1	131.6
47.5°	587.9	607.7	591.5	468.9	326.4	238.0	169.5	113.6	88.4
50°	523.0	532.0	510.3	398.5	272.3	194.8	128.0	75.7	72.1
52.5°	461.7	467.1	436.4	339.0	225.4	156.9	93.8	59.5	63.1
55°	411.2	409.4	375.1	286.7	185.7	120.8	63.1	54.1	57.7
57.5°	362.5	357.1	322.8	238.0	151.5	93.8	37.9	46.9	50.5
60°	319.2	313.8	274.1	196.6	120.8	70.3	30.7	41.5	45.1
62.5°	284.9	272.3	232.6	162.3	97.4	50.5	27.1	36.1	39.7
65°	247.1	236.2	198.4	131.6	75.7	36.1	23.4	30.7	34.3
67.5°	216.4	203.8	167.7	108.2	61.3	25.2	21.6	27.1	30.7
70°	185.7	174.9	138.9	86.6	45.1	16.2	18.0	23.4	27.1
72.5°	160.5	147.9	115.4	68.5	34.3	12.6	16.2	19.8	21.6
75°	131.6	120.8	92.0	52.3	23.4	10.8	12.6	16.2	18.0
77.5°	110.0	99.2	72.1	39.7	16.2	9.0	10.8	14.4	14.4
80°	84.8	75.7	54.1	27.1	10.8	5.4	9.0	10.8	10.8
82.5°	61.3	54.1	37.9	18.0	5.4	5.4	5.4	7.2	7.2
85°	41.5	36.1	23.4	10.8	3.6	3.6	3.6	3.6	3.6
87.5°	23.4	18.0	10.8	3.6	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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