

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: P837490

Luminaire Tested: HCSQ435D010-HM43040840-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837490
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: HCSQ435D010-HM43040840-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

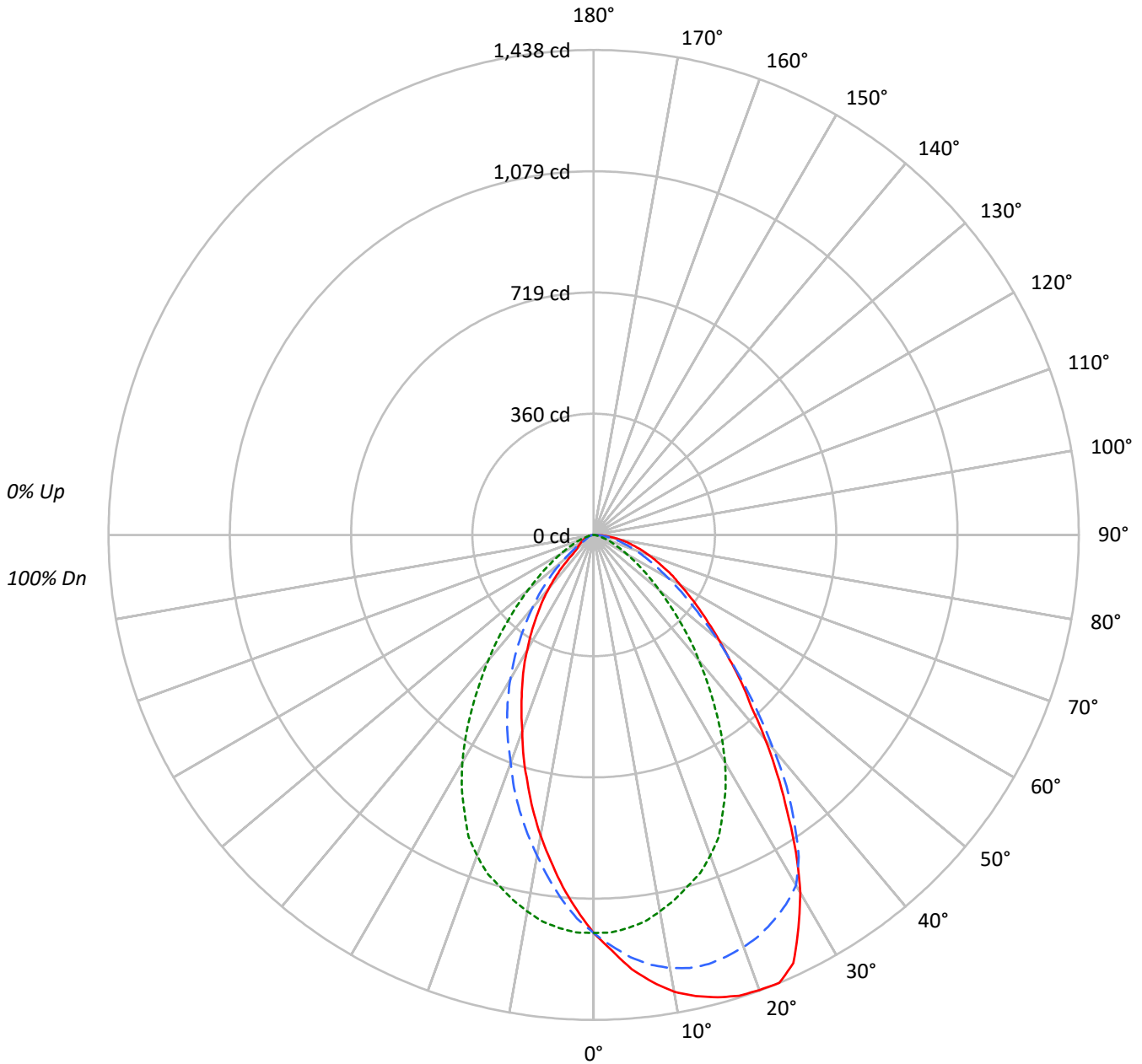
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1908.7 lumens
Efficiency: N/A
Efficacy: 56.1 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): 34
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

TEST NUMBER: P837490
CATALOG NUMBER: HCSQ435D010-HM43040840-41SQLWW

Luminous Intensity Polar Plot





TEST NUMBER: P837490

CATALOG NUMBER: HCSQ435D010-HM43040840-41SQLWW

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°	114313	114313	114313	114313	114313
5°	125661	122238	113777	105472	101894
10°	135347	128264	111473	95006	89074
15°	142356	132116	108106	84938	76042
20°	148051	134072	104227	74031	63845
25°	149753	134895	96789	64946	53670
30°	137053	134246	87062	55238	43995
35°	118180	122532	74234	45330	34840
40°	100120	104774	61385	35776	26039
45°	84846	86914	49074	26606	16742
50°	73155	71392	38085	17905	10098
55°	64451	58793	29118	9897	9053
60°	57408	49290	21719	5522	8099
65°	52562	42201	16115	4997	7289
70°	48831	36510	11840	4730	7109
75°	45739	31965	8160	4379	6251
80°	43905	28006	5579	4686	5579
85°	42794	24231	3668	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 88284 cd/sqm



TEST NUMBER: P837490

CATALOG NUMBER: HCSQ435D010-HM43040840-41SQLWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.7	5.8
10°-20°	304.6	16.0
20°-30°	425.9	22.3
30°-40°	416.3	21.8
40°-50°	302.1	15.8
50°-60°	182.1	9.5
60°-70°	102.4	5.4
70°-80°	50.7	2.7
80°-90°	13.9	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°	841.2	44.1
0°-40°	1257.5	65.9
0°-60°	1741.8	91.3
0°-90°	1908.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1908.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1180	1180	1180	1180	1180	
5°	1292	1257	1170	1085	1048	126
15°	1419	1317	1078	847	758	402
25°	1401	1262	906	608	502	631
35°	999	1036	628	383	295	626
45°	619	634	358	194	122	480
55°	382	348	172	59	54	343
65°	229	184	70	22	32	230
75°	122	85	22	12	17	132
85°	38	22	3	3	3	43
90°	0	0	0	0	0	



TEST NUMBER: P837490

CATALOG NUMBER: HCSQ435D010-HM43040840-41SQLWW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1180.0	1180.0	1180.0	1180.0	1180.0	1180.0	1180.0	1180.0	1180.0
2.5°	1233.6	1230.2	1220.2	1200.1	1180.0	1156.6	1138.2	1124.8	1114.7
5°	1292.2	1285.5	1257.0	1215.2	1170.0	1124.8	1084.6	1061.2	1047.8
7.5°	1337.4	1325.6	1285.5	1226.9	1156.6	1088.0	1026.0	989.2	974.1
10°	1375.9	1355.8	1303.9	1225.2	1133.2	1042.8	965.8	922.3	905.5
12.5°	1401.0	1379.2	1315.6	1223.5	1108.1	997.6	907.2	850.3	833.5
15°	1419.4	1392.6	1317.3	1210.2	1077.9	950.7	846.9	780.0	758.2
17.5°	1432.8	1395.9	1310.6	1195.1	1051.1	902.2	785.0	713.0	691.3
20°	1436.1	1395.9	1300.5	1173.3	1011.0	853.6	718.1	646.1	619.3
22.5°	1437.8	1390.9	1285.5	1146.5	969.1	798.4	662.8	587.5	559.0
25°	1401.0	1374.2	1262.0	1101.4	905.5	738.1	607.6	525.6	502.1
27.5°	1313.9	1312.3	1235.3	1041.1	846.9	672.9	550.7	472.0	450.3
30°	1225.2	1226.9	1200.1	974.1	778.3	610.9	493.8	416.8	393.3
32.5°	1116.4	1133.2	1131.5	898.8	704.7	552.4	438.5	366.6	343.1
35°	999.3	1029.4	1036.1	813.5	627.7	485.4	383.3	318.0	294.6
37.5°	893.8	923.9	939.0	738.1	555.7	426.8	331.4	274.5	251.1
40°	791.7	816.8	828.5	651.1	485.4	366.6	282.9	229.3	205.9
42.5°	692.9	729.8	726.4	577.5	423.5	318.0	239.4	185.8	162.4
45°	619.3	644.4	634.4	500.5	358.2	267.8	194.2	143.9	122.2
47.5°	545.7	564.1	549.0	435.2	303.0	220.9	157.3	105.4	82.0
50°	485.4	493.8	473.7	369.9	252.7	180.8	118.8	70.3	67.0
52.5°	428.5	433.5	405.1	314.7	209.2	145.6	87.0	55.2	58.6
55°	381.6	380.0	348.1	266.1	172.4	112.1	58.6	50.2	53.6
57.5°	336.4	331.4	299.6	220.9	140.6	87.0	35.1	43.5	46.9
60°	296.3	291.2	254.4	182.4	112.1	65.3	28.5	38.5	41.8
62.5°	264.5	252.7	215.9	150.6	90.4	46.9	25.1	33.5	36.8
65°	229.3	219.3	184.1	122.2	70.3	33.5	21.8	28.5	31.8
67.5°	200.9	189.1	155.7	100.4	56.9	23.4	20.1	25.1	28.5
70°	172.4	162.4	128.9	80.3	41.8	15.1	16.7	21.8	25.1
72.5°	149.0	137.3	107.1	63.6	31.8	11.7	15.1	18.4	20.1
75°	122.2	112.1	85.4	48.5	21.8	10.0	11.7	15.1	16.7
77.5°	102.1	92.1	67.0	36.8	15.1	8.4	10.0	13.4	13.4
80°	78.7	70.3	50.2	25.1	10.0	5.0	8.4	10.0	10.0
82.5°	56.9	50.2	35.1	16.7	5.0	5.0	5.0	6.7	6.7
85°	38.5	33.5	21.8	10.0	3.3	3.3	3.3	3.3	3.3
87.5°	21.8	16.7	10.0	3.3	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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)