

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: P837240

Luminaire Tested: HCSQ407D010-HM40525830-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837240
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: HCSQ407D010-HM40525830-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

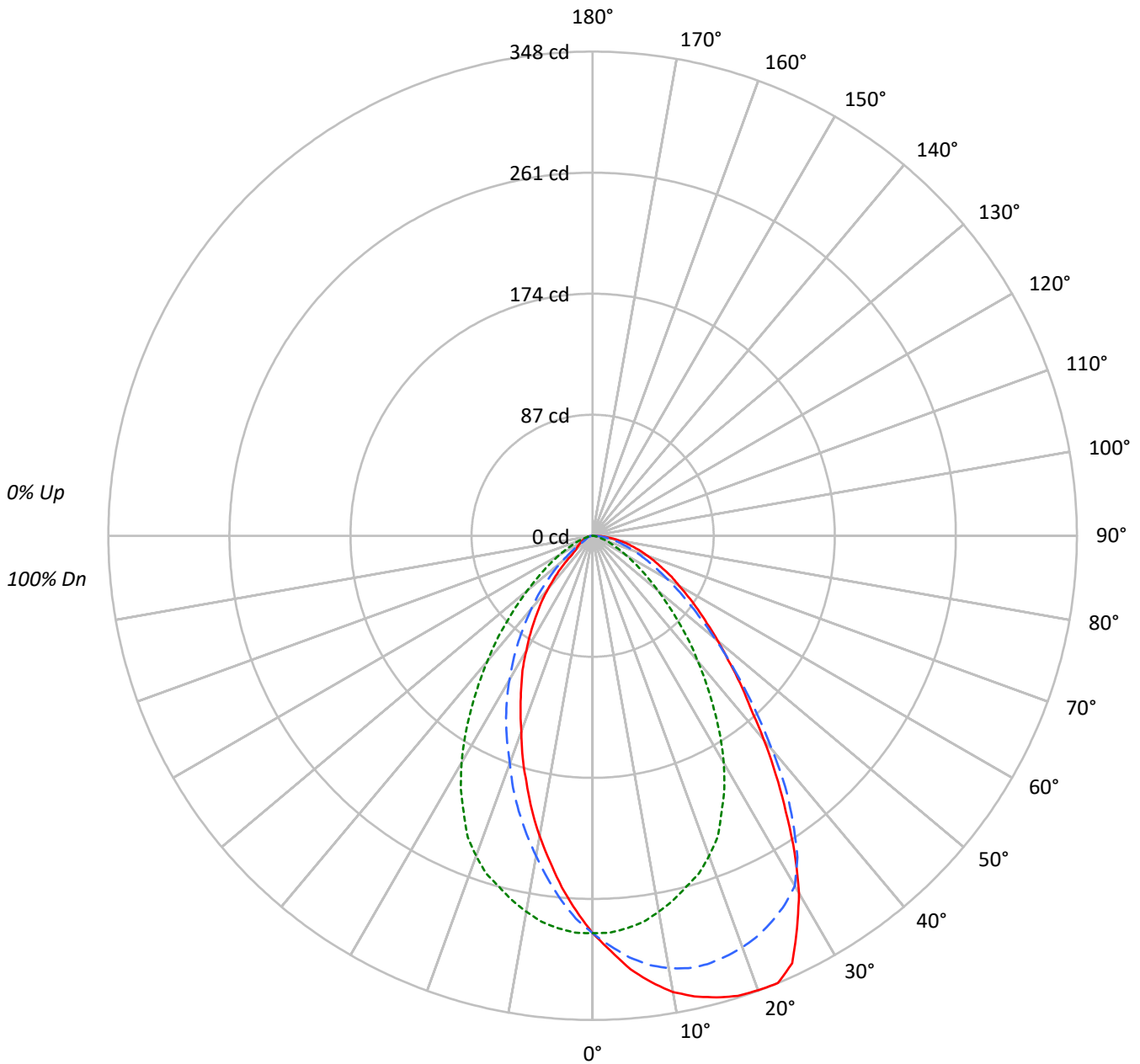
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 462.0 lumens
Efficiency: N/A
Efficacy: 57.7 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): 8
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: P837240
CATALOG NUMBER: HCSQ407D010-HM40525830-41SQLWW

Luminous Intensity Polar Plot





TEST NUMBER: P837240

CATALOG NUMBER: HCSQ407D010-HM40525830-41SQLWW

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°	27668	27668	27668	27668	27668
5°	30418	29582	27540	25527	24661
10°	32757	31046	26983	22999	21563
15°	34451	31973	26166	20560	18404
20°	35835	32454	25227	17918	15454
25°	36246	32655	23430	15724	12987
30°	33178	32496	21075	13368	10649
35°	28608	29660	17964	10975	8432
40°	24230	25356	14859	8663	6298
45°	20537	21030	11878	6439	4055
50°	17709	17287	9224	4340	2442
55°	15606	14238	7043	2398	2196
60°	13892	11935	5251	1337	1957
65°	12722	10224	3897	1215	1765
70°	11811	8837	2861	1161	1728
75°	11079	7748	1984	1048	1535
80°	10600	6806	1339	1116	1339
85°	10337	5891	889	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 21372 cd/sqm



TEST NUMBER: P837240

CATALOG NUMBER: HCSQ407D010-HM40525830-41SQLWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.8	5.8
10°-20°	73.7	16.0
20°-30°	103.1	22.3
30°-40°	100.8	21.8
40°-50°	73.1	15.8
50°-60°	44.1	9.5
60°-70°	24.8	5.4
70°-80°	12.3	2.7
80°-90°	3.4	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°	203.6	44.1
0°-40°	304.4	65.9
0°-60°	421.6	91.3
0°-90°	462.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	462.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	286	286	286	286	286	
5°	313	304	283	262	254	30
15°	344	319	261	205	184	97
25°	339	306	219	147	122	153
35°	242	251	152	93	71	151
45°	150	154	87	47	30	116
55°	92	84	42	14	13	83
65°	56	45	17	5	8	56
75°	30	21	5	3	4	32
85°	9	5	1	1	1	10
90°	0	0	0	0	0	



TEST NUMBER: P837240

CATALOG NUMBER: HCSQ407D010-HM40525830-41SQLWW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	285.6	285.6	285.6	285.6	285.6	285.6	285.6	285.6	285.6
2.5°	298.6	297.8	295.3	290.5	285.6	279.9	275.5	272.2	269.8
5°	312.8	311.1	304.2	294.1	283.2	272.2	262.5	256.8	253.6
7.5°	323.7	320.9	311.1	297.0	279.9	263.3	248.3	239.4	235.8
10°	333.0	328.2	315.6	296.6	274.3	252.4	233.8	223.2	219.2
12.5°	339.1	333.8	318.4	296.1	268.2	241.5	219.6	205.8	201.8
15°	343.5	337.1	318.8	292.9	260.9	230.1	205.0	188.8	183.5
17.5°	346.8	337.9	317.2	289.3	254.4	218.4	190.0	172.6	167.3
20°	347.6	337.9	314.8	284.0	244.7	206.6	173.8	156.4	149.9
22.5°	348.0	336.7	311.1	277.5	234.6	193.2	160.4	142.2	135.3
25°	339.1	332.6	305.5	266.6	219.2	178.7	147.1	127.2	121.5
27.5°	318.0	317.6	299.0	252.0	205.0	162.9	133.3	114.2	109.0
30°	296.6	297.0	290.5	235.8	188.4	147.9	119.5	100.9	95.2
32.5°	270.2	274.3	273.9	217.6	170.6	133.7	106.1	88.7	83.1
35°	241.9	249.2	250.8	196.9	151.9	117.5	92.8	77.0	71.3
37.5°	216.3	223.6	227.3	178.7	134.5	103.3	80.2	66.4	60.8
40°	191.6	197.7	200.5	157.6	117.5	88.7	68.5	55.5	49.8
42.5°	167.7	176.6	175.8	139.8	102.5	77.0	57.9	45.0	39.3
45°	149.9	156.0	153.5	121.1	86.7	64.8	47.0	34.8	29.6
47.5°	132.1	136.5	132.9	105.3	73.3	53.5	38.1	25.5	19.9
50°	117.5	119.5	114.7	89.5	61.2	43.8	28.8	17.0	16.2
52.5°	103.7	104.9	98.0	76.2	50.6	35.2	21.1	13.4	14.2
55°	92.4	92.0	84.3	64.4	41.7	27.1	14.2	12.2	13.0
57.5°	81.4	80.2	72.5	53.5	34.0	21.1	8.5	10.5	11.3
60°	71.7	70.5	61.6	44.2	27.1	15.8	6.9	9.3	10.1
62.5°	64.0	61.2	52.3	36.5	21.9	11.3	6.1	8.1	8.9
65°	55.5	53.1	44.6	29.6	17.0	8.1	5.3	6.9	7.7
67.5°	48.6	45.8	37.7	24.3	13.8	5.7	4.9	6.1	6.9
70°	41.7	39.3	31.2	19.4	10.1	3.6	4.1	5.3	6.1
72.5°	36.1	33.2	25.9	15.4	7.7	2.8	3.6	4.5	4.9
75°	29.6	27.1	20.7	11.7	5.3	2.4	2.8	3.6	4.1
77.5°	24.7	22.3	16.2	8.9	3.6	2.0	2.4	3.2	3.2
80°	19.0	17.0	12.2	6.1	2.4	1.2	2.0	2.4	2.4
82.5°	13.8	12.2	8.5	4.1	1.2	1.2	1.2	1.6	1.6
85°	9.3	8.1	5.3	2.4	0.8	0.8	0.8	0.8	0.8
87.5°	5.3	4.1	2.4	0.8	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



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)