

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: P837524

Luminaire Tested: HCSQ440D010-HM43040835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837524
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ440D010-HM43040835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

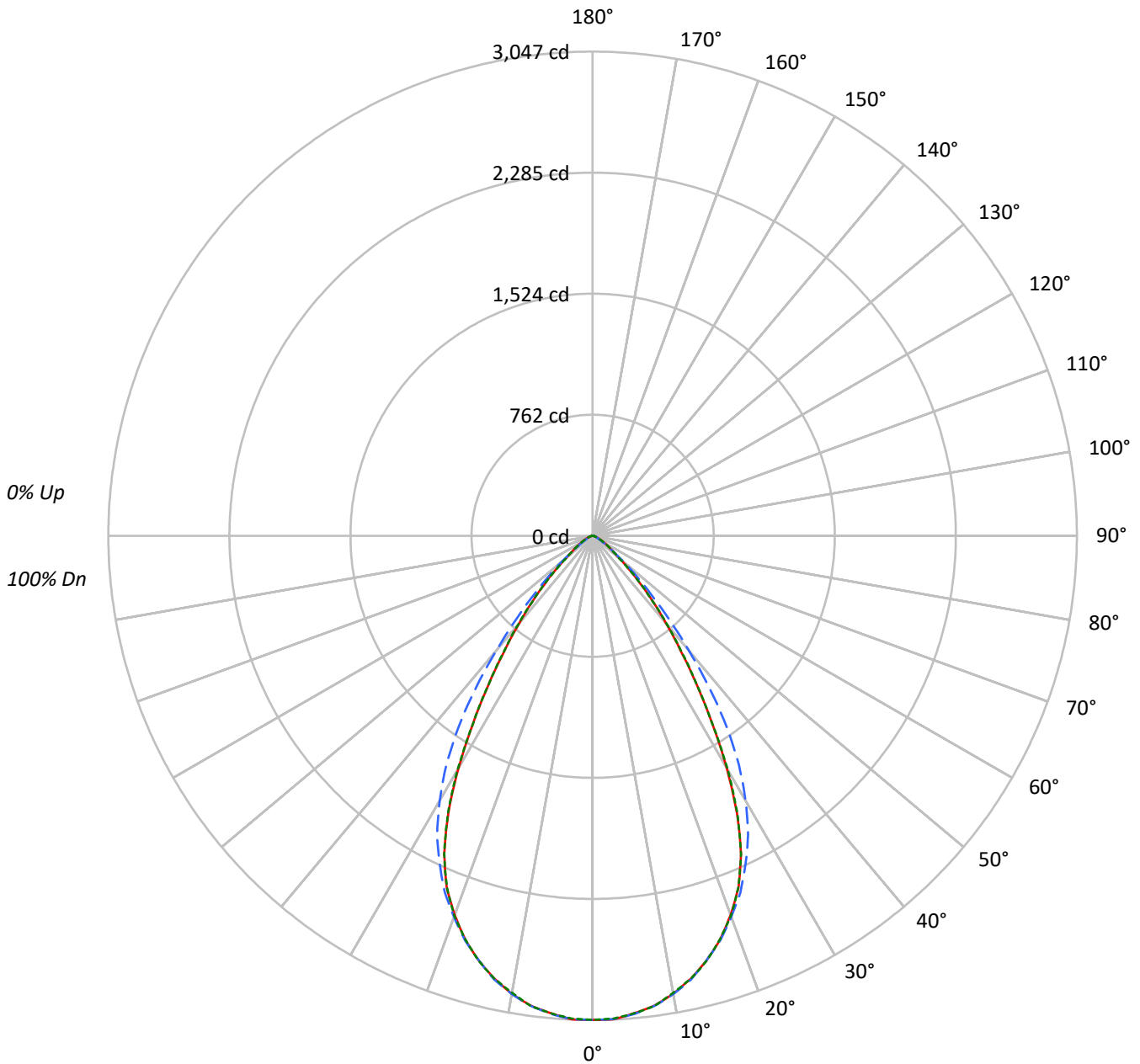
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3424.6 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
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

TEST NUMBER: P837524
CATALOG NUMBER: HCSQ440D010-HM43040835-41SQH

Luminous Intensity Polar Plot





TEST NUMBER: P837524

CATALOG NUMBER: HCSQ440D010-HM43040835-41SQH

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	50	30	10	0			
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	98	97	96	95	94	92
	1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	92	90	88	85	85	85	85
	2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85	85	85	82	80	85	82	79	77
	3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77	77	77	74	74	79	76	73	71
	4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71	71	71	68	68	74	70	67	65
	5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65	65	65	62	62	69	65	62	60
	6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60	60	60	62	62	69	65	62	60
	7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56	56	56	58	58	65	61	57	56
	8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52	52	52	54	54	61	57	53	52
	9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48	48	48	50	50	58	53	50	48
	10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45	45	45	47	47	55	50	46	45

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	295141	295141	295141
5°	293341	293701	293341
10°	287840	288027	287289
15°	277621	277430	277801
20°	261701	263062	262278
25°	236142	243378	236142
30°	188611	215335	190076
35°	134642	174249	134855
40°	90901	118507	92330
45°	57747	70118	58007
50°	32900	37437	31770
55°	21619	18123	21298
60°	14958	10579	14589
65°	10361	7771	10361
70°	7449	5863	7449
75°	4941	4941	4941
80°	3124	4184	4184
85°	4224	4224	4224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 70118 cd/sqm



TEST NUMBER: P837524

CATALOG NUMBER: HCSQ440D010-HM43040835-41SQH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.4	8.3
10°-20°	776.1	22.7
20°-30°	1016.1	29.7
30°-40°	798.6	23.3
40°-50°	373.0	10.9
50°-60°	115.6	3.4
60°-70°	41.3	1.2
70°-80°	14.5	0.4
80°-90°	4.0	0.1
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°	2077.6	60.7
0°-40°	2876.2	84.0
0°-60°	3364.8	98.3
0°-90°	3424.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3424.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3047	3047	3047	3047	3047	
5°	3016	3018	3020	3024	3016	285
15°	2768	2768	2766	2768	2770	775
25°	2209	2239	2277	2241	2209	993
35°	1138	1242	1473	1257	1140	718
45°	422	472	512	463	423	336
55°	128	120	107	119	126	120
65°	45	41	34	40	45	47
75°	13	13	13	13	13	15
85°	4	4	4	4	4	3
90°	0	0	0	0	0	



TEST NUMBER: P837524

CATALOG NUMBER: HCSQ440D010-HM43040835-41SQH

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3046.6	3046.6	3046.6	3046.6	3046.6
2.5°	3046.6	3042.8	3044.7	3040.9	3040.9
5°	3016.5	3018.3	3020.2	3024.0	3016.5
7.5°	2982.6	2986.3	2984.5	2984.5	2984.5
10°	2926.1	2928.0	2928.0	2928.0	2920.5
12.5°	2854.6	2858.4	2860.3	2854.6	2854.6
15°	2768.1	2768.1	2766.2	2768.1	2769.9
17.5°	2664.6	2670.2	2670.2	2664.6	2662.7
20°	2538.5	2547.9	2551.7	2544.1	2544.1
22.5°	2397.4	2406.8	2429.3	2410.5	2395.5
25°	2209.2	2239.3	2276.9	2241.2	2209.2
27.5°	1966.4	2032.3	2118.9	2043.6	1972.1
30°	1686.1	1793.3	1925.0	1799.0	1699.2
32.5°	1400.0	1520.5	1714.3	1529.9	1400.0
35°	1138.5	1242.0	1473.4	1257.0	1140.3
37.5°	905.1	1004.9	1208.1	1016.1	918.3
40°	718.8	799.7	937.1	797.9	730.1
42.5°	560.8	619.1	709.4	617.2	558.9
45°	421.5	472.3	511.8	462.9	423.4
47.5°	310.5	344.4	366.9	338.7	303.0
50°	218.3	242.7	248.4	237.1	210.8
52.5°	163.7	163.7	165.6	161.8	159.9
55°	128.0	120.4	107.3	118.6	126.1
57.5°	99.7	92.2	75.3	88.4	97.9
60°	77.2	69.6	54.6	67.7	75.3
62.5°	60.2	52.7	43.3	52.7	58.3
65°	45.2	41.4	33.9	39.5	45.2
67.5°	33.9	30.1	26.3	30.1	33.9
70°	26.3	24.5	20.7	22.6	26.3
72.5°	18.8	16.9	16.9	16.9	18.8
75°	13.2	13.2	13.2	13.2	13.2
77.5°	9.4	9.4	9.4	9.4	9.4
80°	5.6	5.6	7.5	7.5	7.5
82.5°	3.8	3.8	5.6	5.6	5.6
85°	3.8	3.8	3.8	3.8	3.8
87.5°	1.9	1.9	1.9	3.8	3.8
90°	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)