

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: P837709

Luminaire Tested: HCSQ460D010-HM44560940-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837709
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: HCSQ460D010-HM44560940-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

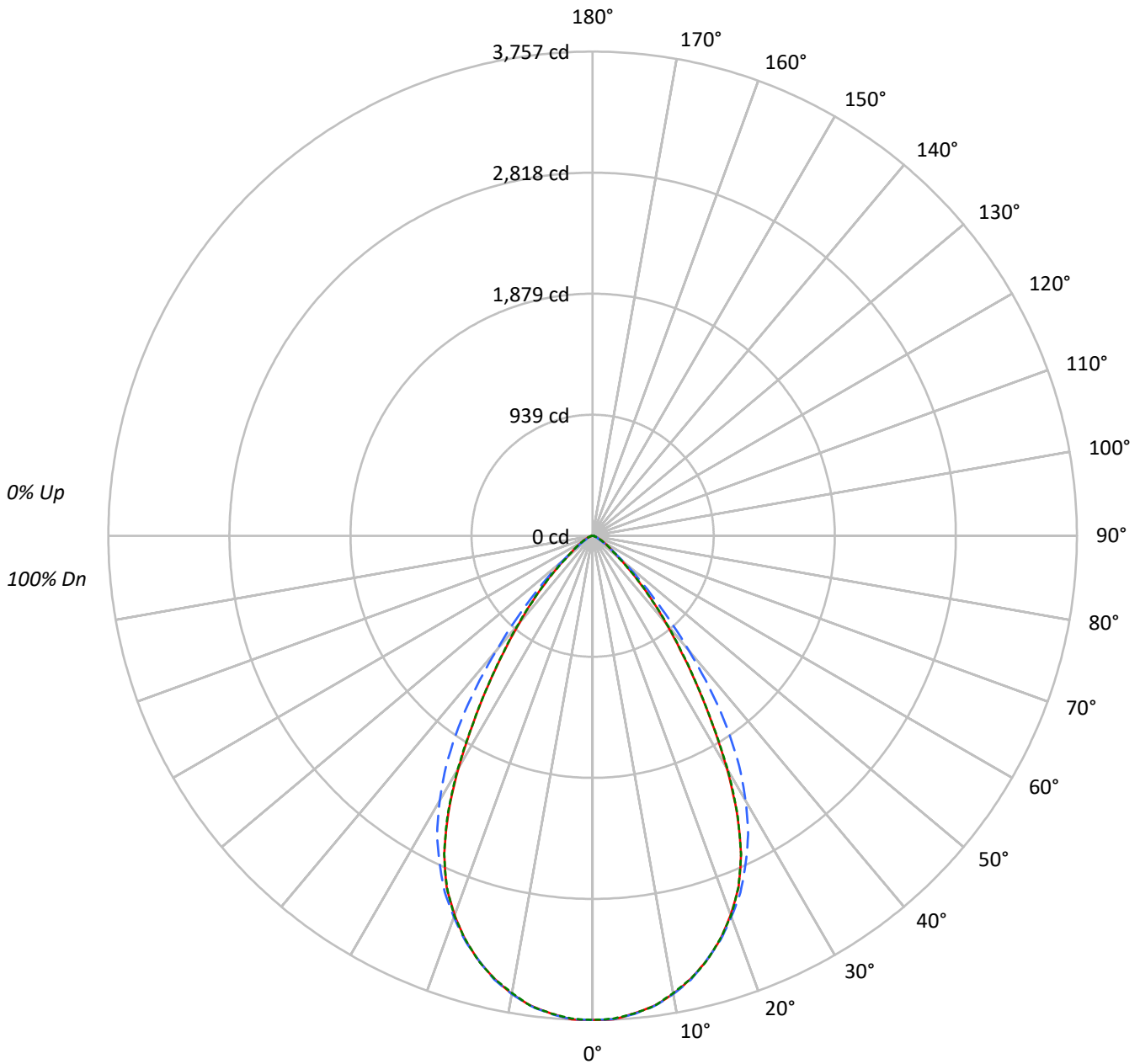
Lumens per Lamp: N/A
Luminaire Lumens: 4223.3 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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: P837709

CATALOG NUMBER: HCSQ460D010-HM44560940-41SQH

Luminous Intensity Polar Plot





TEST NUMBER: P837709

CATALOG NUMBER: HCSQ460D010-HM44560940-41SQH

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92			92																
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85			85																
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77			77																
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71			71																
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65			65																
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60			60																
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56			56																
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52			52																
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	363971	363971	363971
5°	361753	362201	361753
10°	354978	355204	354289
15°	342360	342129	342600
20°	322732	324412	323453
25°	291212	300148	291212
30°	232595	265561	234407
35°	166041	214896	166313
40°	112108	146152	113866
45°	71214	86476	71529
50°	40572	46163	39170
55°	26652	22345	26264
60°	18426	13039	17980
65°	12768	9582	12768
70°	9205	7223	9205
75°	6064	6064	6064
80°	3905	5188	5188
85°	5113	5113	5113

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 86476 cd/sqm



TEST NUMBER: P837709

CATALOG NUMBER: HCSQ460D010-HM44560940-41SQH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.0	8.3
10°-20°	957.1	22.7
20°-30°	1253.1	29.7
30°-40°	984.9	23.3
40°-50°	460.0	10.9
50°-60°	142.6	3.4
60°-70°	50.9	1.2
70°-80°	17.9	0.4
80°-90°	4.9	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°	2562.1	60.7
0°-40°	3547.0	84.0
0°-60°	4149.6	98.3
0°-90°	4223.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4223.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3757	3757	3757	3757	3757	
5°	3720	3722	3725	3729	3720	352
15°	3414	3414	3411	3414	3416	956
25°	2724	2762	2808	2764	2724	1225
35°	1404	1532	1817	1550	1406	885
45°	520	582	631	571	522	414
55°	158	148	132	146	156	148
65°	56	51	42	49	56	58
75°	16	16	16	16	16	19
85°	5	5	5	5	5	4
90°	0	0	0	0	0	



TEST NUMBER: P837709

CATALOG NUMBER: HCSQ460D010-HM44560940-41SQH

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3757.1	3757.1	3757.1	3757.1	3757.1
2.5°	3757.1	3752.5	3754.8	3750.1	3750.1
5°	3720.0	3722.3	3724.6	3729.3	3720.0
7.5°	3678.2	3682.8	3680.5	3680.5	3680.5
10°	3608.6	3610.9	3610.9	3610.9	3601.6
12.5°	3520.4	3525.0	3527.4	3520.4	3520.4
15°	3413.6	3413.6	3411.3	3413.6	3416.0
17.5°	3286.0	3293.0	3293.0	3286.0	3283.7
20°	3130.5	3142.1	3146.8	3137.5	3137.5
22.5°	2956.5	2968.1	2995.9	2972.7	2954.2
25°	2724.4	2761.6	2808.0	2763.9	2724.4
27.5°	2425.1	2506.3	2613.0	2520.2	2432.0
30°	2079.3	2211.6	2374.0	2218.5	2095.5
32.5°	1726.5	1875.1	2114.1	1886.7	1726.5
35°	1404.0	1531.6	1817.1	1550.2	1406.3
37.5°	1116.2	1239.2	1489.8	1253.1	1132.5
40°	886.5	986.3	1155.7	983.9	900.4
42.5°	691.5	763.5	874.9	761.2	689.2
45°	519.8	582.5	631.2	570.9	522.1
47.5°	382.9	424.7	452.5	417.7	373.6
50°	269.2	299.4	306.3	292.4	259.9
52.5°	201.9	201.9	204.2	199.6	197.3
55°	157.8	148.5	132.3	146.2	155.5
57.5°	123.0	113.7	92.8	109.1	120.7
60°	95.1	85.9	67.3	83.5	92.8
62.5°	74.3	65.0	53.4	65.0	71.9
65°	55.7	51.1	41.8	48.7	55.7
67.5°	41.8	37.1	32.5	37.1	41.8
70°	32.5	30.2	25.5	27.8	32.5
72.5°	23.2	20.9	20.9	20.9	23.2
75°	16.2	16.2	16.2	16.2	16.2
77.5°	11.6	11.6	11.6	11.6	11.6
80°	7.0	7.0	9.3	9.3	9.3
82.5°	4.6	4.6	7.0	7.0	7.0
85°	4.6	4.6	4.6	4.6	4.6
87.5°	2.3	2.3	2.3	4.6	4.6
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)