

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: P837539

Luminaire Tested: HCSQ440D010-HM43040930-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837539
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-HM43040930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

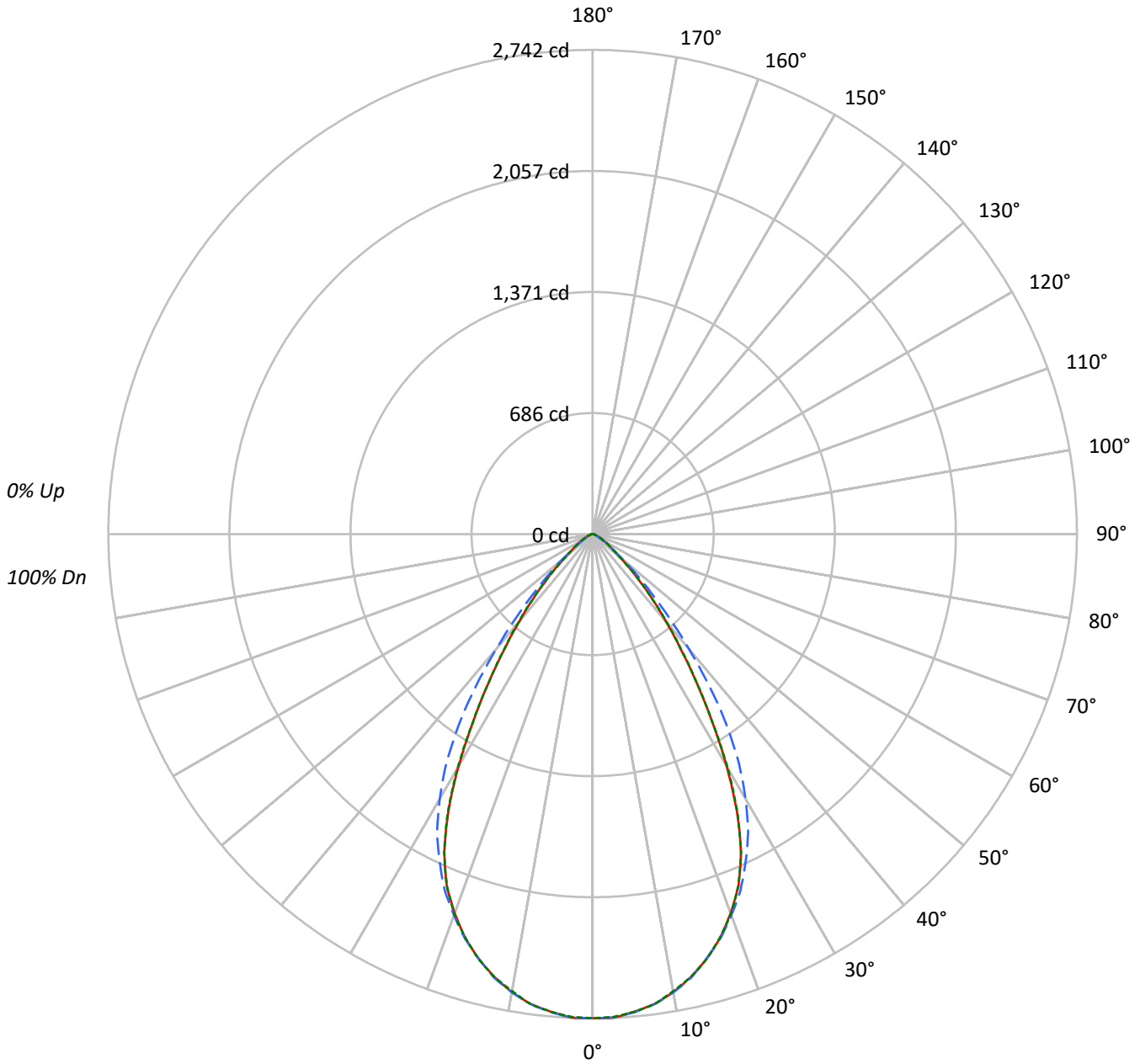
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3082.2 lumens
Efficiency: N/A
Efficacy: 75.2 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 (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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CATALOG NUMBER: HCSQ440D010-HM43040930-41SQH

Luminous Intensity Polar Plot





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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°	265623	265623	265623
5°	264002	264333	264002
10°	259057	259224	258555
15°	249860	249689	250020
20°	235526	236752	236051
25°	212530	219039	212530
30°	169740	193801	171071
35°	121172	156829	121373
40°	81808	106658	83098
45°	51979	63117	52212
50°	29615	33699	28590
55°	19457	16299	19170
60°	13446	9513	13117
65°	9307	6991	9307
70°	6713	5268	6713
75°	4454	4454	4454
80°	2845	3794	3794
85°	3779	3779	3779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 63117 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.9	8.3
10°-20°	698.5	22.7
20°-30°	914.5	29.7
30°-40°	718.8	23.3
40°-50°	335.7	10.9
50°-60°	104.0	3.4
60°-70°	37.1	1.2
70°-80°	13.1	0.4
80°-90°	3.6	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°	1869.8	60.7
0°-40°	2588.6	84.0
0°-60°	3028.4	98.3
0°-90°	3082.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3082.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2742	2742	2742	2742	2742	
5°	2715	2716	2718	2722	2715	257
15°	2491	2491	2490	2491	2493	698
25°	1988	2015	2049	2017	1988	894
35°	1025	1118	1326	1131	1026	646
45°	379	425	461	417	381	302
55°	115	108	96	107	114	108
65°	41	37	30	36	41	42
75°	12	12	12	12	12	14
85°	3	3	3	3	3	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2741.9	2741.9	2741.9	2741.9	2741.9
2.5°	2741.9	2738.5	2740.2	2736.8	2736.8
5°	2714.8	2716.5	2718.2	2721.6	2714.8
7.5°	2684.3	2687.7	2686.0	2686.0	2686.0
10°	2633.5	2635.2	2635.2	2635.2	2628.4
12.5°	2569.2	2572.5	2574.2	2569.2	2569.2
15°	2491.3	2491.3	2489.6	2491.3	2492.9
17.5°	2398.1	2403.2	2403.2	2398.1	2396.4
20°	2284.6	2293.1	2296.5	2289.7	2289.7
22.5°	2157.6	2166.1	2186.4	2169.5	2155.9
25°	1988.3	2015.4	2049.2	2017.1	1988.3
27.5°	1769.8	1829.1	1907.0	1839.2	1774.9
30°	1517.4	1614.0	1732.5	1619.1	1529.3
32.5°	1260.0	1368.4	1542.8	1376.9	1260.0
35°	1024.6	1117.8	1326.1	1131.3	1026.3
37.5°	814.6	904.4	1087.3	914.5	826.5
40°	646.9	719.8	843.4	718.1	657.1
42.5°	504.7	557.2	638.5	555.5	503.0
45°	379.4	425.1	460.7	416.6	381.1
47.5°	279.4	309.9	330.2	304.8	272.7
50°	196.5	218.5	223.6	213.4	189.7
52.5°	147.3	147.3	149.0	145.6	144.0
55°	115.2	108.4	96.5	106.7	113.5
57.5°	89.8	83.0	67.7	79.6	88.1
60°	69.4	62.7	49.1	61.0	67.7
62.5°	54.2	47.4	39.0	47.4	52.5
65°	40.6	37.3	30.5	35.6	40.6
67.5°	30.5	27.1	23.7	27.1	30.5
70°	23.7	22.0	18.6	20.3	23.7
72.5°	16.9	15.2	15.2	15.2	16.9
75°	11.9	11.9	11.9	11.9	11.9
77.5°	8.5	8.5	8.5	8.5	8.5
80°	5.1	5.1	6.8	6.8	6.8
82.5°	3.4	3.4	5.1	5.1	5.1
85°	3.4	3.4	3.4	3.4	3.4
87.5°	1.7	1.7	1.7	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

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— 0°-180° - - 45°-225° - - - 90°-270°

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