

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: P837293

Luminaire Tested: HCSQ410D010-HM40525927-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837293
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525927-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

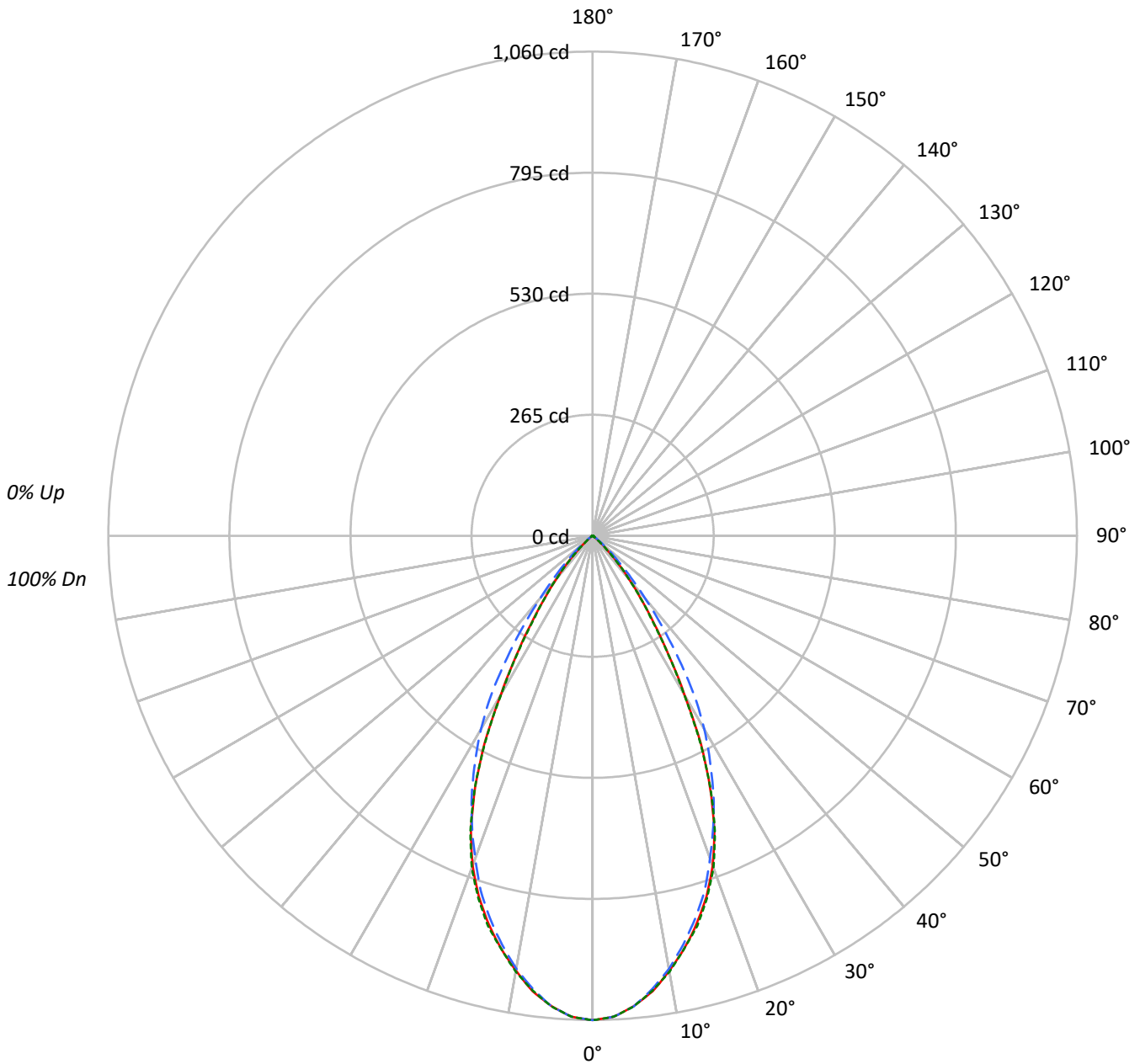
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 857.0 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
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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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																			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71																			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66																			
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62																			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58																			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55																			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	102727	102727	102727
5°	100523	100562	100562
10°	95084	94661	95330
15°	88218	87014	88699
20°	79196	77423	79680
25°	65043	66935	65278
30°	44957	54689	44622
35°	27685	38625	27023
40°	15618	22586	15504
45°	7138	11316	6836
50°	1809	4536	1884
55°	878	1385	794
60°	581	504	659
65°	504	390	504
70°	368	368	482
75°	337	337	487
80°	502	502	502
85°	445	1000	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.5	11.3
10°-20°	243.6	28.4
20°-30°	278.5	32.5
30°-40°	172.9	20.2
40°-50°	54.5	6.4
50°-60°	7.1	0.8
60°-70°	2.1	0.2
70°-80°	1.1	0.1
80°-90°	0.8	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°	618.6	72.2
0°-40°	791.4	92.4
0°-60°	853.0	99.5
0°-90°	857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1060	1060	1060	1060	1060	
5°	1034	1033	1034	1033	1034	97
15°	880	873	868	873	884	245
25°	608	617	626	617	611	273
35°	234	270	327	264	228	150
45°	52	62	83	63	50	44
55°	5	5	8	5	5	5
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	1	1	1	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.4	1060.4	1060.4	1060.4	1060.4
2.5°	1053.9	1054.8	1053.9	1055.6	1053.9
5°	1033.7	1032.8	1034.1	1033.3	1034.1
7.5°	1006.2	1001.0	1000.6	1004.0	1004.4
10°	966.6	965.3	962.3	965.3	969.1
12.5°	926.1	920.9	916.6	922.7	926.1
15°	879.6	873.2	867.6	873.2	884.4
17.5°	828.4	819.4	814.7	821.1	831.9
20°	768.2	758.7	751.0	756.6	772.9
22.5°	695.9	695.0	689.9	692.9	698.9
25°	608.5	617.1	626.2	617.1	610.7
27.5°	512.5	535.8	556.4	529.3	508.7
30°	401.9	437.2	488.9	434.7	398.9
32.5°	310.7	347.7	413.6	343.0	308.1
35°	234.1	270.3	326.6	263.8	228.5
37.5°	172.1	199.3	248.3	197.5	172.1
40°	123.5	141.2	178.6	140.7	122.6
42.5°	85.6	97.3	124.8	96.4	83.1
45°	52.1	62.4	82.6	62.8	49.9
47.5°	27.5	39.6	52.1	37.9	27.5
50°	12.0	21.1	30.1	20.7	12.5
52.5°	6.5	9.0	16.4	9.0	6.5
55°	5.2	5.2	8.2	5.2	4.7
57.5°	3.9	3.9	4.3	3.9	3.9
60°	3.0	3.0	2.6	3.0	3.4
62.5°	2.6	2.6	2.2	2.6	2.6
65°	2.2	2.2	1.7	2.2	2.2
67.5°	1.7	1.7	1.7	1.7	1.7
70°	1.3	1.3	1.3	1.7	1.7
72.5°	1.3	1.3	1.3	1.3	1.3
75°	0.9	0.9	0.9	0.9	1.3
77.5°	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9
82.5°	0.4	0.9	0.9	0.9	0.9
85°	0.4	0.9	0.9	0.9	0.9
87.5°	0.4	0.4	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





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

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