

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: P837286

Luminaire Tested: HCSQ410D010-HM40525835-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837286
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525835-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

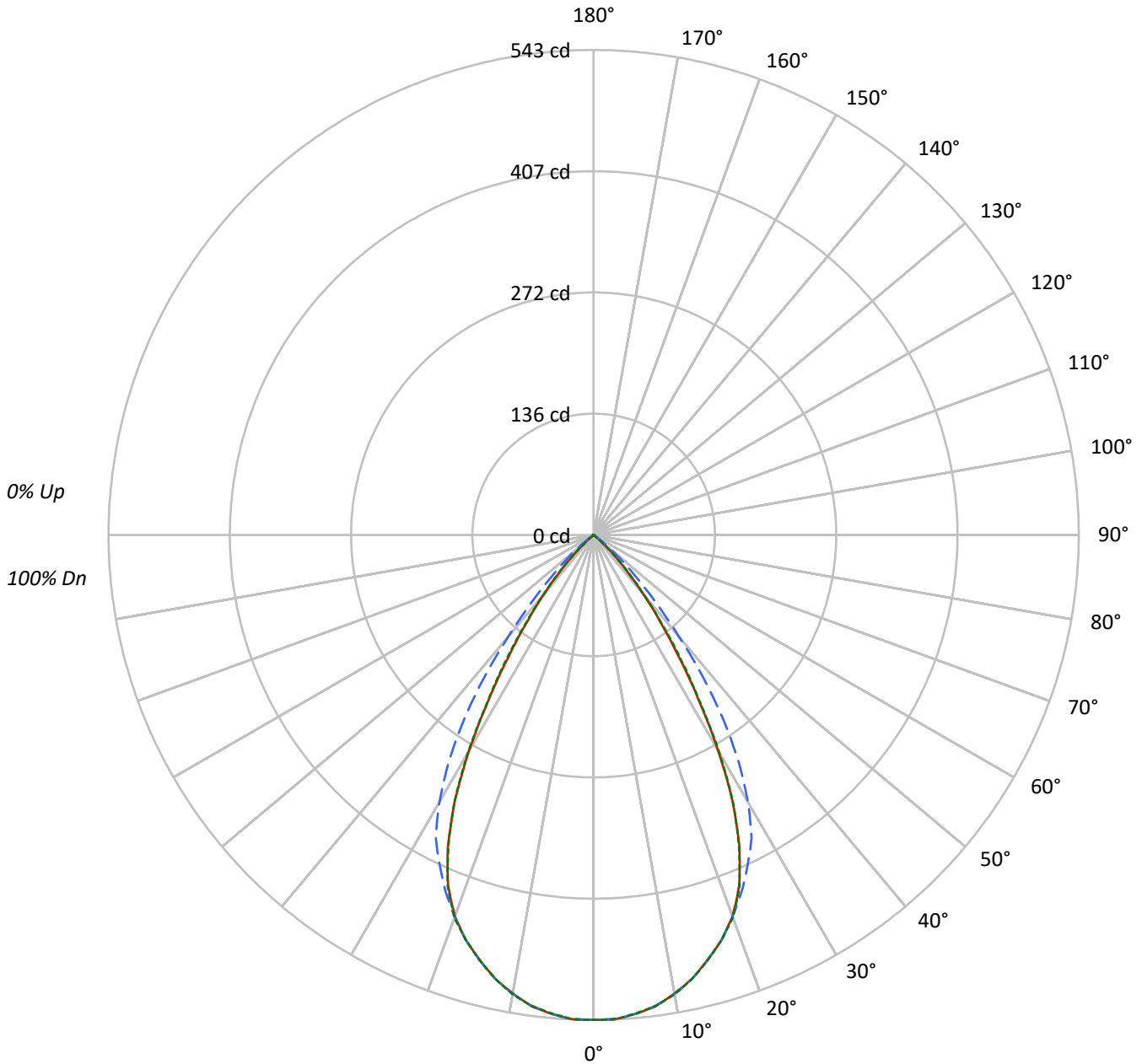
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 542.3 lumens
Efficiency: N/A
Efficacy: 54.8 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
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 (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

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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					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								
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	52594	52594	52594
5°	52357	52357	52299
10°	51270	51320	51369
15°	49394	49444	49444
20°	46825	46887	46990
25°	41292	43601	41131
30°	31154	38648	31433
35°	19537	30074	20188
40°	11015	18729	11015
45°	4617	9453	4548
50°	377	3647	452
55°	169	760	169
60°	194	97	194
65°	115	115	115
70°	142	142	142
75°	187	187	187
80°	0	279	279
85°	0	556	556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9453 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.9	9.4
10°-20°	138.4	25.5
20°-30°	179.6	33.1
30°-40°	127.7	23.5
40°-50°	41.4	7.6
50°-60°	3.0	0.5
60°-70°	0.5	0.1
70°-80°	0.5	0.1
80°-90°	0.3	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°	368.9	68.0
0°-40°	496.5	91.6
0°-60°	540.9	99.7
0°-90°	542.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	542.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	538	539	538	538	538	51
15°	492	494	493	494	493	138
25°	386	396	408	398	385	173
35°	165	195	254	197	171	106
45°	34	48	69	49	33	28
55°	1	1	4	1	1	1
65°	0	0	0	0	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	542.9	542.9	542.9	542.9	542.9
2.5°	542.9	542.9	542.4	542.4	542.9
5°	538.4	538.9	538.4	538.4	537.8
7.5°	532.3	532.3	531.8	531.8	531.8
10°	521.2	521.7	521.7	521.7	522.2
12.5°	509.1	509.1	509.1	509.1	509.1
15°	492.5	494.0	493.0	494.0	493.0
17.5°	475.9	475.9	475.4	476.4	475.4
20°	454.2	454.2	454.8	455.8	455.8
22.5°	425.5	430.6	432.6	431.6	426.6
25°	386.3	396.3	407.9	398.3	384.8
27.5°	336.9	356.0	382.7	359.1	337.9
30°	278.5	307.2	345.5	308.2	281.0
32.5°	218.1	251.3	302.2	253.8	220.1
35°	165.2	195.4	254.3	197.4	170.7
37.5°	121.9	149.6	201.9	150.6	125.4
40°	87.1	107.3	148.1	109.3	87.1
42.5°	55.9	76.0	104.2	76.5	58.4
45°	33.7	47.8	69.0	48.8	33.2
47.5°	15.1	27.2	42.8	28.2	15.1
50°	2.5	11.1	24.2	11.6	3.0
52.5°	1.5	2.0	11.6	2.0	1.5
55°	1.0	1.0	4.5	1.0	1.0
57.5°	1.0	1.0	1.0	1.0	1.0
60°	1.0	0.5	0.5	0.5	1.0
62.5°	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5
80°	0.0	0.5	0.5	0.5	0.5
82.5°	0.0	0.5	0.5	0.5	0.5
85°	0.0	0.0	0.5	0.5	0.5
87.5°	0.0	0.0	0.5	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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Scaled Data Report





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

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