

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: P837271

Luminaire Tested: HCSQ407D010-HM40525940-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837271
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: HCSQ407D010-HM40525940-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

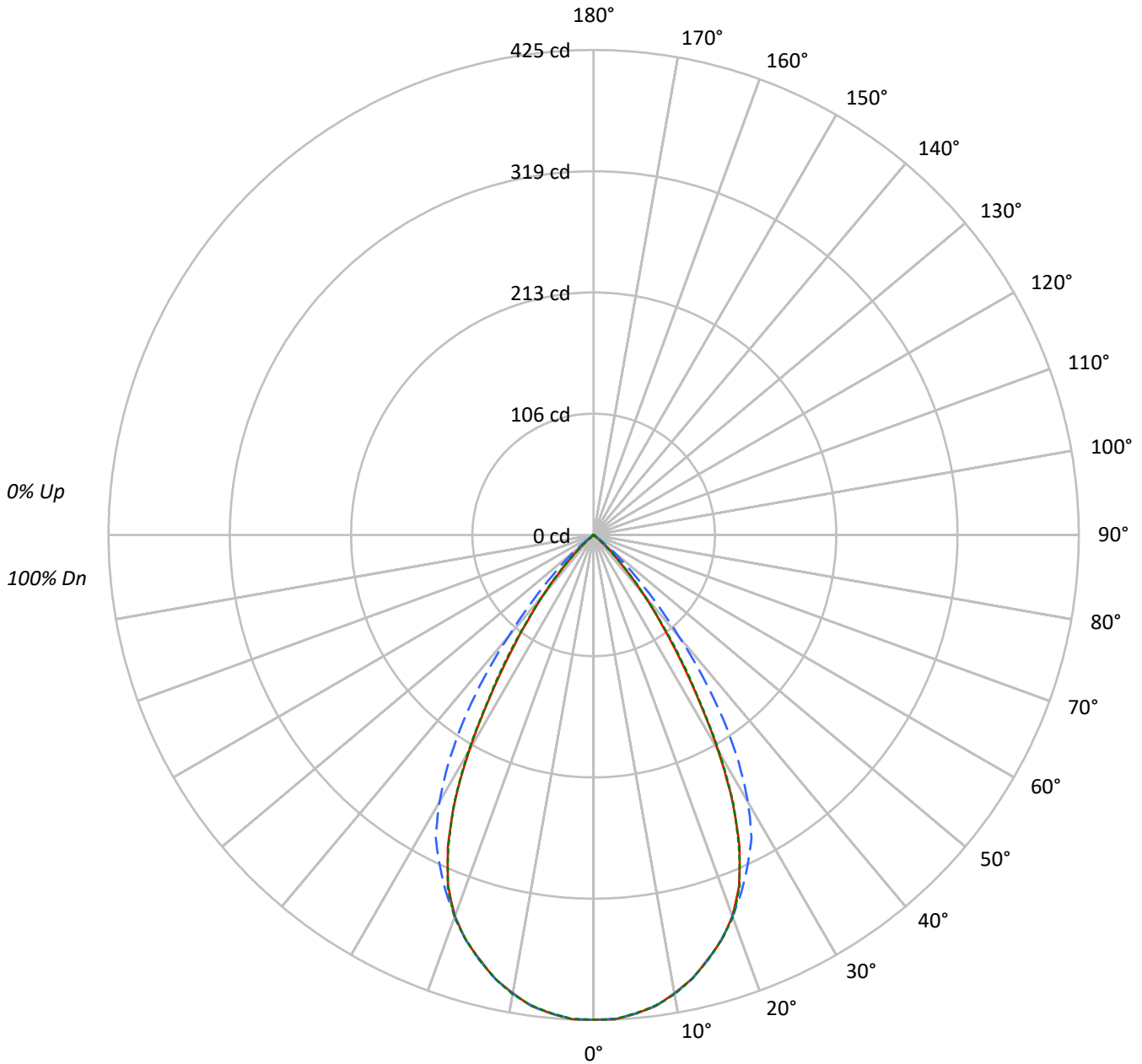
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 424.3 lumens
Efficiency: N/A
Efficacy: 53.0 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): 8
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					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°	41153	41153	41153
5°	40960	40960	40921
10°	40115	40155	40194
15°	38653	38693	38693
20°	36639	36680	36763
25°	32302	34119	32174
30°	24375	30236	24598
35°	15280	23534	15800
40°	8625	14644	8625
45°	3617	7398	3562
50°	301	2848	362
55°	135	591	135
60°	155	78	155
65°	92	92	92
70°	113	113	113
75°	150	150	150
80°	0	223	223
85°	0	445	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7398 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	9.4
10°-20°	108.3	25.5
20°-30°	140.5	33.1
30°-40°	99.9	23.5
40°-50°	32.4	7.6
50°-60°	2.3	0.6
60°-70°	0.4	0.1
70°-80°	0.4	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°	288.6	68.0
0°-40°	388.5	91.6
0°-60°	423.2	99.7
0°-90°	424.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	424.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	425	425	425	425	425	
5°	421	422	421	421	421	40
15°	385	387	386	387	386	108
25°	302	310	319	312	301	135
35°	129	153	199	154	134	83
45°	26	37	54	38	26	22
55°	1	1	4	1	1	1
65°	0	0	0	0	0	0
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°	424.8	424.8	424.8	424.8	424.8
2.5°	424.8	424.8	424.4	424.4	424.8
5°	421.2	421.6	421.2	421.2	420.8
7.5°	416.5	416.5	416.1	416.1	416.1
10°	407.8	408.2	408.2	408.2	408.6
12.5°	398.4	398.4	398.4	398.4	398.4
15°	385.4	386.6	385.8	386.6	385.8
17.5°	372.4	372.4	372.0	372.8	372.0
20°	355.4	355.4	355.8	356.6	356.6
22.5°	333.0	336.9	338.5	337.7	333.8
25°	302.2	310.1	319.2	311.7	301.0
27.5°	263.6	278.6	299.5	281.0	264.4
30°	217.9	240.4	270.3	241.2	219.9
32.5°	170.6	196.6	236.4	198.6	172.2
35°	129.2	152.9	199.0	154.5	133.6
37.5°	95.4	117.0	158.0	117.8	98.1
40°	68.2	83.9	115.8	85.5	68.2
42.5°	43.7	59.5	81.6	59.9	45.7
45°	26.4	37.4	54.0	38.2	26.0
47.5°	11.8	21.3	33.5	22.1	11.8
50°	2.0	8.7	18.9	9.1	2.4
52.5°	1.2	1.6	9.1	1.6	1.2
55°	0.8	0.8	3.5	0.8	0.8
57.5°	0.8	0.8	0.8	0.8	0.8
60°	0.8	0.4	0.4	0.4	0.8
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4
80°	0.0	0.4	0.4	0.4	0.4
82.5°	0.0	0.4	0.4	0.4	0.4
85°	0.0	0.0	0.4	0.4	0.4
87.5°	0.0	0.0	0.4	0.4	0.4
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



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Scaled Data Report





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

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