

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: P837337

Luminaire Tested: HCSQ415D010-HM40525927-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837337
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ415D010-HM40525927-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

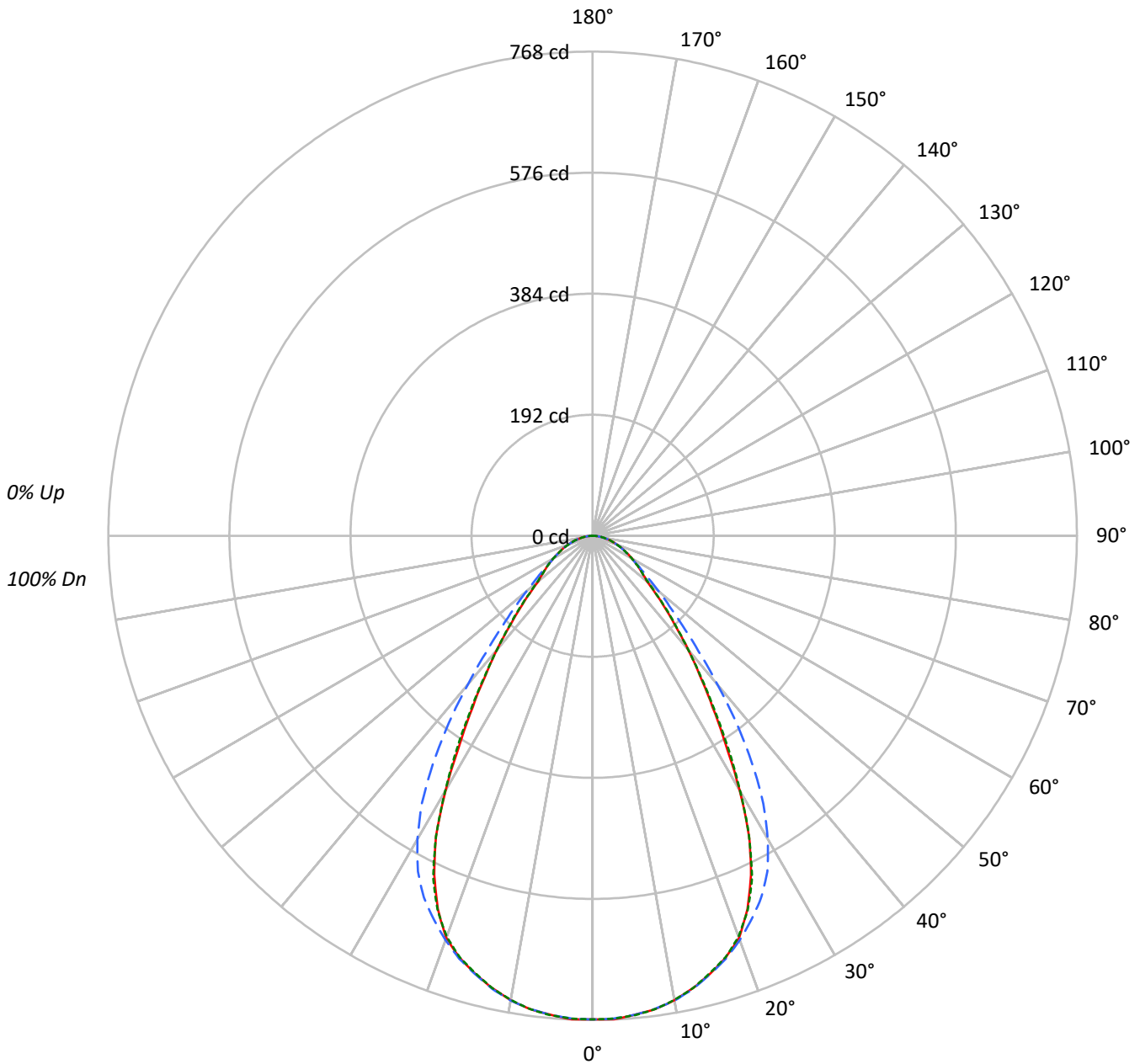
Lumens per Lamp: N/A
Luminaire Lumens: 1113.2 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	74313	74313	74313
5°	74189	74189	74247
10°	73581	73640	73522
15°	72151	72211	72030
20°	69979	70350	69742
25°	63514	67662	63963
30°	52139	62139	52340
35°	39192	52154	39748
40°	29845	38887	29769
45°	22290	27592	22701
50°	16970	20572	17332
55°	15302	16113	15302
60°	13969	13853	13853
65°	12699	12699	12699
70°	11811	11641	11641
75°	10929	10705	10929
80°	9986	9651	9986
85°	8559	8559	8559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 27592 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	6.5
10°-20°	202.5	18.2
20°-30°	278.5	25.0
30°-40°	237.1	21.3
40°-50°	143.2	12.9
50°-60°	84.4	7.6
60°-70°	55.4	5.0
70°-80°	30.7	2.8
80°-90°	9.0	0.8
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°	553.4	49.7
0°-40°	790.5	71.0
0°-60°	1018.1	91.5
0°-90°	1113.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1113.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	763	764	763	762	764	72
15°	719	721	720	719	718	202
25°	594	613	633	614	598	269
35°	331	365	441	375	336	210
45°	163	180	201	182	166	128
55°	91	92	95	92	91	81
65°	55	56	55	55	55	55
75°	29	29	29	29	29	31
85°	8	8	8	8	8	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	767.1	767.1	767.1	767.1	767.1
2.5°	767.7	765.9	766.5	765.9	766.5
5°	762.9	763.5	762.9	762.3	763.5
7.5°	757.5	756.9	756.9	756.3	757.5
10°	748.0	746.8	748.6	747.4	747.4
12.5°	734.9	736.7	736.1	736.1	734.9
15°	719.4	721.2	720.0	719.4	718.2
17.5°	701.5	702.7	703.3	700.9	700.9
20°	678.8	681.2	682.4	678.3	676.5
22.5°	641.3	652.0	658.6	651.4	642.5
25°	594.2	612.7	633.0	613.9	598.4
27.5°	537.6	563.8	600.2	568.0	537.6
30°	466.1	504.8	555.5	509.0	467.9
32.5°	392.2	433.3	504.2	440.4	400.5
35°	331.4	364.8	441.0	374.9	336.1
37.5°	278.9	307.5	374.9	314.1	281.9
40°	236.0	258.7	307.5	261.6	235.4
42.5°	194.9	216.3	249.1	219.3	197.3
45°	162.7	180.0	201.4	181.8	165.7
47.5°	135.3	149.6	165.1	149.6	137.1
50°	112.6	124.0	136.5	124.0	115.0
52.5°	100.7	104.3	112.6	104.9	100.7
55°	90.6	92.4	95.4	92.4	90.6
57.5°	81.1	82.2	81.7	81.7	81.1
60°	72.1	72.7	71.5	72.1	71.5
62.5°	63.8	63.8	62.6	63.8	63.2
65°	55.4	56.0	55.4	55.4	55.4
67.5°	48.3	48.3	47.7	48.3	48.3
70°	41.7	41.7	41.1	41.7	41.1
72.5°	35.2	35.2	34.6	34.6	34.6
75°	29.2	29.2	28.6	28.6	29.2
77.5°	23.2	23.2	22.6	23.2	23.2
80°	17.9	17.9	17.3	17.9	17.9
82.5°	12.5	12.5	12.5	13.1	13.1
85°	7.7	7.7	7.7	7.7	7.7
87.5°	3.6	3.6	3.6	3.6	4.2
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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