

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: P837322

Luminaire Tested: HCSQ415D010-HM40525830-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837322
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-HM40525830-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

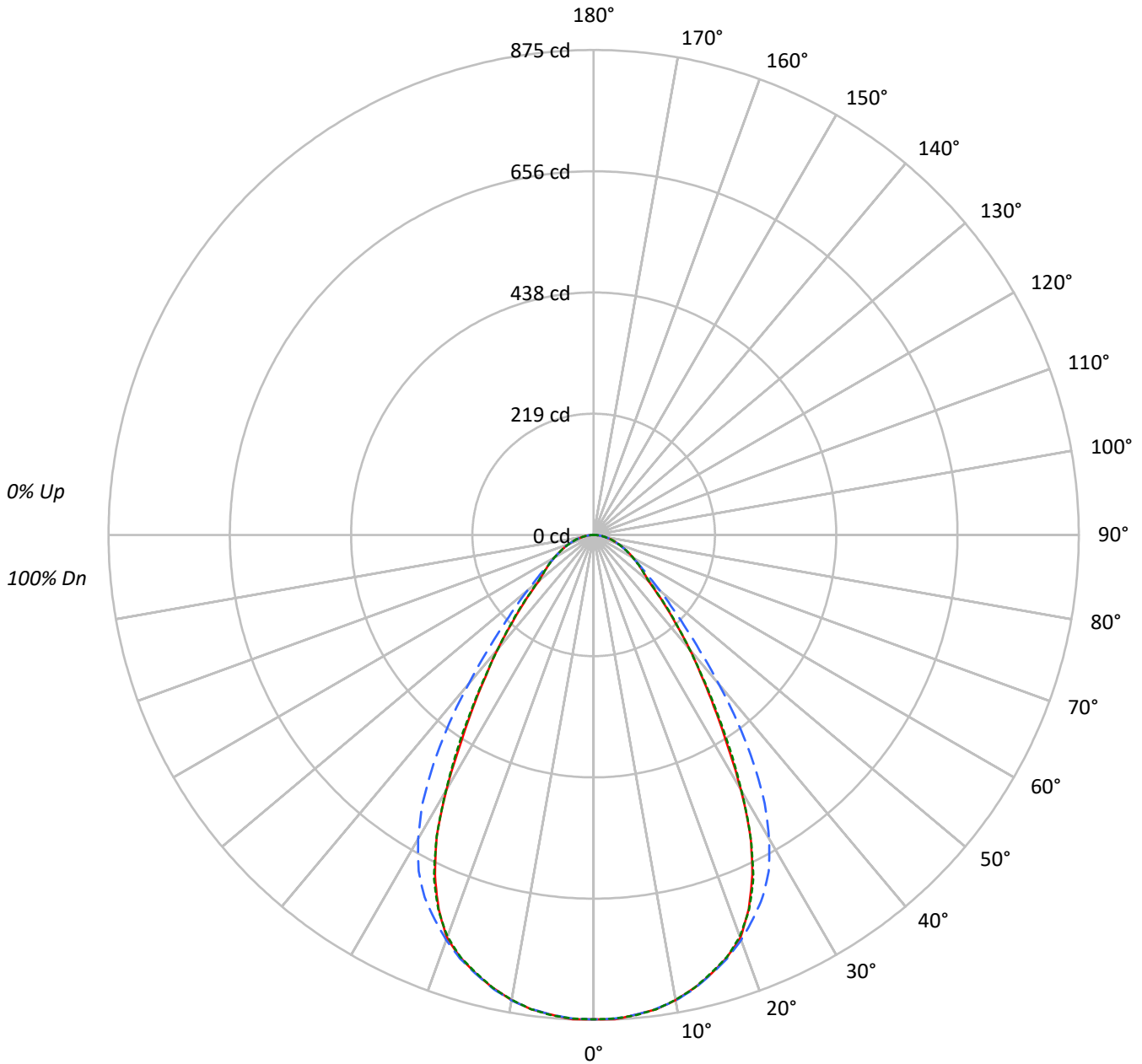
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1268.4 lumens
Efficiency: N/A
Efficacy: 90.6 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									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	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°	84669	84669	84669
5°	84526	84526	84594
10°	83841	83900	83772
15°	82210	82270	82070
20°	79742	80165	79464
25°	72375	77089	72878
30°	59399	70798	59634
35°	44656	59427	45295
40°	34006	44312	33917
45°	25400	31442	25866
50°	19336	23436	19758
55°	17430	18359	17430
60°	15926	15791	15791
65°	14487	14487	14487
70°	13454	13284	13284
75°	12464	12202	12464
80°	11381	10990	11381
85°	9781	9781	9781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 31442 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.4	6.5
10°-20°	230.7	18.2
20°-30°	317.4	25.0
30°-40°	270.2	21.3
40°-50°	163.2	12.9
50°-60°	96.2	7.6
60°-70°	63.1	5.0
70°-80°	35.0	2.8
80°-90°	10.2	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°	630.5	49.7
0°-40°	900.7	71.0
0°-60°	1160.1	91.5
0°-90°	1268.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1268.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	874	874	874	874	874	
5°	869	870	869	869	870	82
15°	820	822	820	820	818	231
25°	677	698	721	700	682	306
35°	378	416	502	427	383	239
45°	185	205	230	207	189	146
55°	103	105	109	105	103	93
65°	63	64	63	63	63	63
75°	33	33	33	33	33	35
85°	9	9	9	9	9	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	874.0	874.0	874.0	874.0	874.0
2.5°	874.7	872.6	873.3	872.6	873.3
5°	869.2	869.9	869.2	868.6	869.9
7.5°	863.1	862.4	862.4	861.8	863.1
10°	852.3	850.9	852.9	851.6	851.6
12.5°	837.3	839.4	838.7	838.7	837.3
15°	819.7	821.7	820.3	819.7	818.3
17.5°	799.3	800.6	801.3	798.6	798.6
20°	773.5	776.2	777.6	772.8	770.8
22.5°	730.7	742.9	750.4	742.2	732.1
25°	677.1	698.1	721.2	699.5	681.8
27.5°	612.5	642.4	683.8	647.2	612.5
30°	531.0	575.2	632.9	579.9	533.1
32.5°	446.8	493.7	574.5	501.8	456.3
35°	377.6	415.6	502.5	427.1	383.0
37.5°	317.8	350.4	427.1	357.9	321.2
40°	268.9	294.7	350.4	298.1	268.2
42.5°	222.1	246.5	283.9	249.9	224.8
45°	185.4	205.1	229.5	207.1	188.8
47.5°	154.2	170.5	188.1	170.5	156.2
50°	128.3	141.3	155.5	141.3	131.1
52.5°	114.8	118.8	128.3	119.5	114.8
55°	103.2	105.3	108.7	105.3	103.2
57.5°	92.4	93.7	93.0	93.0	92.4
60°	82.2	82.8	81.5	82.2	81.5
62.5°	72.7	72.7	71.3	72.7	72.0
65°	63.2	63.8	63.2	63.2	63.2
67.5°	55.0	55.0	54.3	55.0	55.0
70°	47.5	47.5	46.9	47.5	46.9
72.5°	40.1	40.1	39.4	39.4	39.4
75°	33.3	33.3	32.6	32.6	33.3
77.5°	26.5	26.5	25.8	26.5	26.5
80°	20.4	20.4	19.7	20.4	20.4
82.5°	14.3	14.3	14.3	14.9	14.9
85°	8.8	8.8	8.8	8.8	8.8
87.5°	4.1	4.1	4.1	4.1	4.8
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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