

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: P837332

Luminaire Tested: HCSQ415D010-HM40525840-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837332
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-HM40525840-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

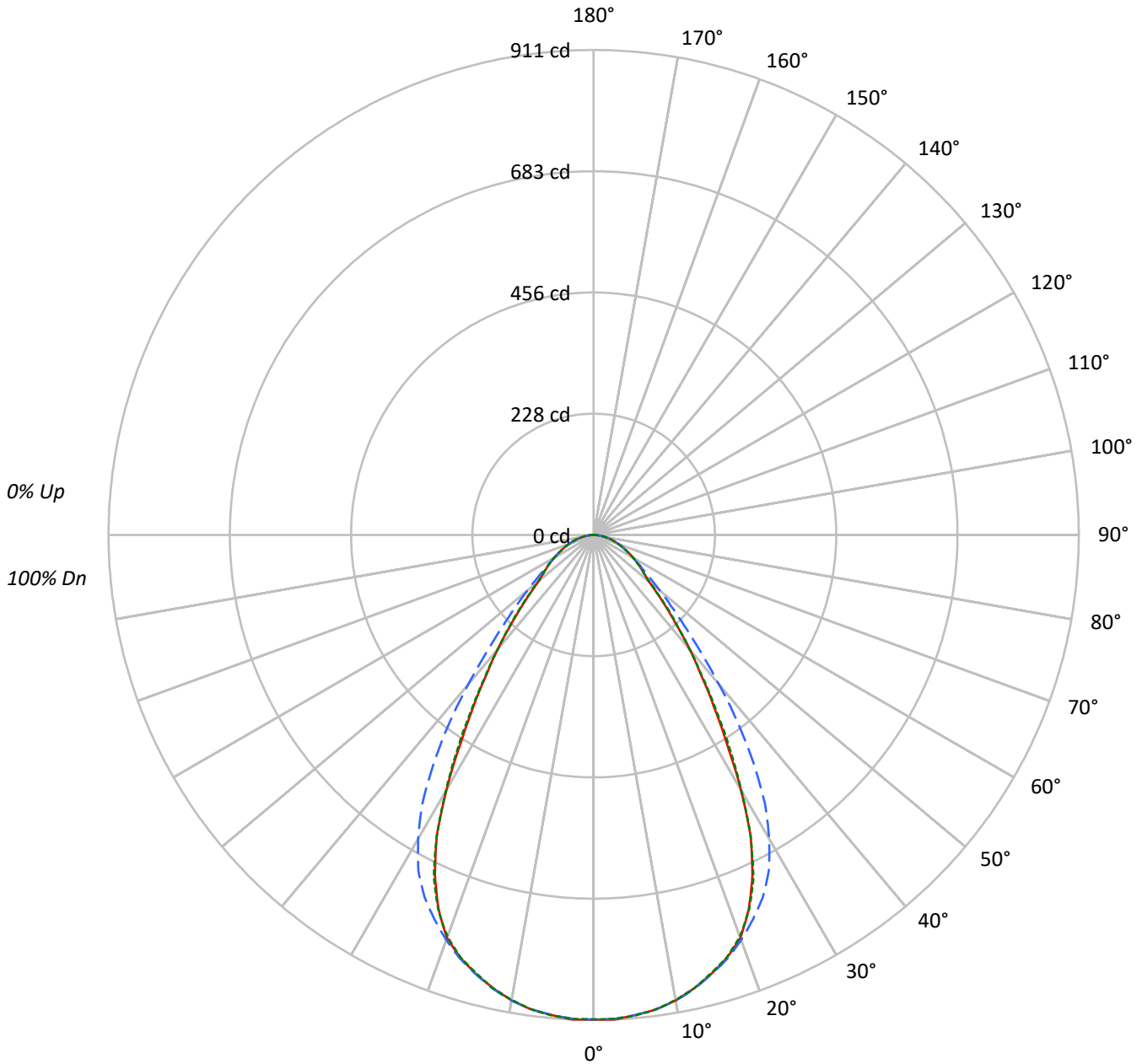
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1321.1 lumens
Efficiency: N/A
Efficacy: 94.4 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°	88186	88186	88186
5°	88046	88046	88114
10°	87323	87392	87254
15°	85630	85700	85480
20°	83062	83495	82763
25°	75379	80296	75913
30°	61871	73740	62117
35°	46513	61899	47175
40°	35422	46159	35333
45°	26455	32757	26935
50°	20150	24415	20572
55°	18156	19119	18156
60°	16585	16449	16449
65°	15083	15083	15083
70°	14021	13822	13822
75°	12988	12726	12988
80°	11827	11437	11827
85°	10226	10226	10226

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 32757 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	6.5
10°-20°	240.3	18.2
20°-30°	330.6	25.0
30°-40°	281.4	21.3
40°-50°	170.0	12.9
50°-60°	100.2	7.6
60°-70°	65.7	5.0
70°-80°	36.4	2.8
80°-90°	10.7	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°	656.8	49.7
0°-40°	938.2	71.0
0°-60°	1208.3	91.5
0°-90°	1321.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1321.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	905	906	905	905	906	86
15°	854	856	854	854	852	240
25°	705	727	751	729	710	319
35°	393	433	523	445	399	249
45°	193	214	239	216	197	152
55°	108	110	113	110	108	97
65°	66	66	66	66	66	66
75°	35	35	34	34	35	37
85°	9	9	9	9	9	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	910.3	910.3	910.3	910.3	910.3
2.5°	911.1	908.9	909.6	908.9	909.6
5°	905.4	906.1	905.4	904.7	906.1
7.5°	899.0	898.3	898.3	897.6	899.0
10°	887.7	886.3	888.4	887.0	887.0
12.5°	872.1	874.3	873.6	873.6	872.1
15°	853.8	855.9	854.5	853.8	852.3
17.5°	832.5	834.0	834.7	831.8	831.8
20°	805.7	808.5	809.9	804.9	802.8
22.5°	761.1	773.8	781.6	773.1	762.5
25°	705.2	727.1	751.2	728.6	710.2
27.5°	638.0	669.1	712.3	674.1	638.0
30°	553.1	599.1	659.2	604.1	555.3
32.5°	465.4	514.2	598.4	522.7	475.3
35°	393.3	432.9	523.4	444.9	398.9
37.5°	331.0	365.0	444.9	372.8	334.6
40°	280.1	307.0	365.0	310.5	279.4
42.5°	231.3	256.8	295.7	260.3	234.1
45°	193.1	213.6	239.1	215.7	196.6
47.5°	160.6	177.5	195.9	177.5	162.7
50°	133.7	147.1	162.0	147.1	136.5
52.5°	119.5	123.8	133.7	124.5	119.5
55°	107.5	109.6	113.2	109.6	107.5
57.5°	96.2	97.6	96.9	96.9	96.2
60°	85.6	86.3	84.9	85.6	84.9
62.5°	75.7	75.7	74.3	75.7	75.0
65°	65.8	66.5	65.8	65.8	65.8
67.5°	57.3	57.3	56.6	57.3	57.3
70°	49.5	49.5	48.8	49.5	48.8
72.5°	41.7	41.7	41.0	41.0	41.0
75°	34.7	34.7	34.0	34.0	34.7
77.5°	27.6	27.6	26.9	27.6	27.6
80°	21.2	21.2	20.5	21.2	21.2
82.5°	14.9	14.9	14.9	15.6	15.6
85°	9.2	9.2	9.2	9.2	9.2
87.5°	4.2	4.2	4.2	4.2	5.0
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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