

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: P837226

Luminaire Tested: HCSQ405D010-HM40525935-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837226
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: HCSQ405D010-HM40525935-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

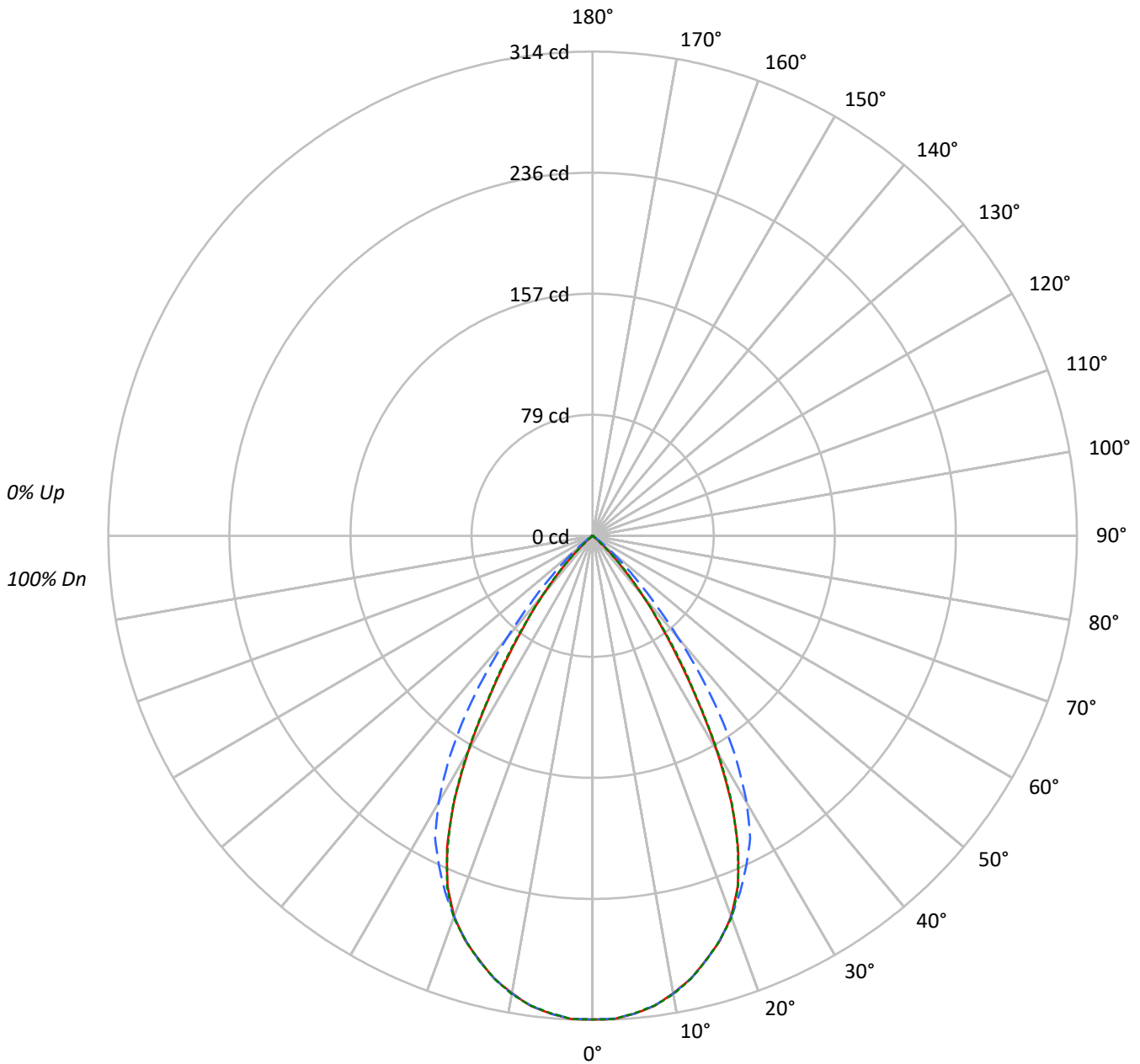
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 313.4 lumens
Efficiency: N/A
Efficacy: 52.2 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): 6
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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CATALOG NUMBER: HCSQ405D010-HM40525935-41SQMB

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°	30390	30390	30390
5°	30253	30253	30224
10°	29629	29659	29688
15°	28543	28573	28573
20°	27062	27093	27155
25°	23858	25194	23762
30°	17999	22328	18166
35°	11294	17385	11673
40°	6361	10825	6361
45°	2672	5466	2630
50°	226	2110	256
55°	101	439	101
60°	116	58	116
65°	69	69	69
70°	85	85	85
75°	112	112	112
80°	0	167	167
85°	0	333	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5466 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.4	9.4
10°-20°	80.0	25.5
20°-30°	103.8	33.1
30°-40°	73.8	23.5
40°-50°	23.9	7.6
50°-60°	1.7	0.6
60°-70°	0.3	0.1
70°-80°	0.3	0.1
80°-90°	0.2	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°	213.2	68.0
0°-40°	286.9	91.6
0°-60°	312.6	99.7
0°-90°	313.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	313.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	314	314	314	314	314	
5°	311	311	311	311	311	29
15°	285	286	285	286	285	80
25°	223	229	236	230	222	100
35°	96	113	147	114	99	61
45°	20	28	40	28	19	16
55°	1	1	3	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°	313.7	313.7	313.7	313.7	313.7
2.5°	313.7	313.7	313.4	313.4	313.7
5°	311.1	311.4	311.1	311.1	310.8
7.5°	307.6	307.6	307.3	307.3	307.3
10°	301.2	301.5	301.5	301.5	301.8
12.5°	294.2	294.2	294.2	294.2	294.2
15°	284.6	285.5	284.9	285.5	284.9
17.5°	275.0	275.0	274.7	275.3	274.7
20°	262.5	262.5	262.8	263.4	263.4
22.5°	245.9	248.8	250.0	249.4	246.5
25°	223.2	229.0	235.7	230.2	222.3
27.5°	194.7	205.8	221.2	207.5	195.3
30°	160.9	177.5	199.6	178.1	162.4
32.5°	126.0	145.2	174.6	146.7	127.2
35°	95.5	112.9	147.0	114.1	98.7
37.5°	70.4	86.4	116.7	87.0	72.5
40°	50.3	62.0	85.6	63.2	50.3
42.5°	32.3	43.9	60.2	44.2	33.8
45°	19.5	27.6	39.9	28.2	19.2
47.5°	8.7	15.7	24.7	16.3	8.7
50°	1.5	6.4	14.0	6.7	1.7
52.5°	0.9	1.2	6.7	1.2	0.9
55°	0.6	0.6	2.6	0.6	0.6
57.5°	0.6	0.6	0.6	0.6	0.6
60°	0.6	0.3	0.3	0.3	0.6
62.5°	0.3	0.3	0.3	0.3	0.3
65°	0.3	0.3	0.3	0.3	0.3
67.5°	0.3	0.3	0.3	0.3	0.3
70°	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3
75°	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3
80°	0.0	0.3	0.3	0.3	0.3
82.5°	0.0	0.3	0.3	0.3	0.3
85°	0.0	0.0	0.3	0.3	0.3
87.5°	0.0	0.0	0.3	0.3	0.3
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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