

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: P837254

Luminaire Tested: HCSQ407D010-HM40525927-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837254
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ407D010-HM40525927-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

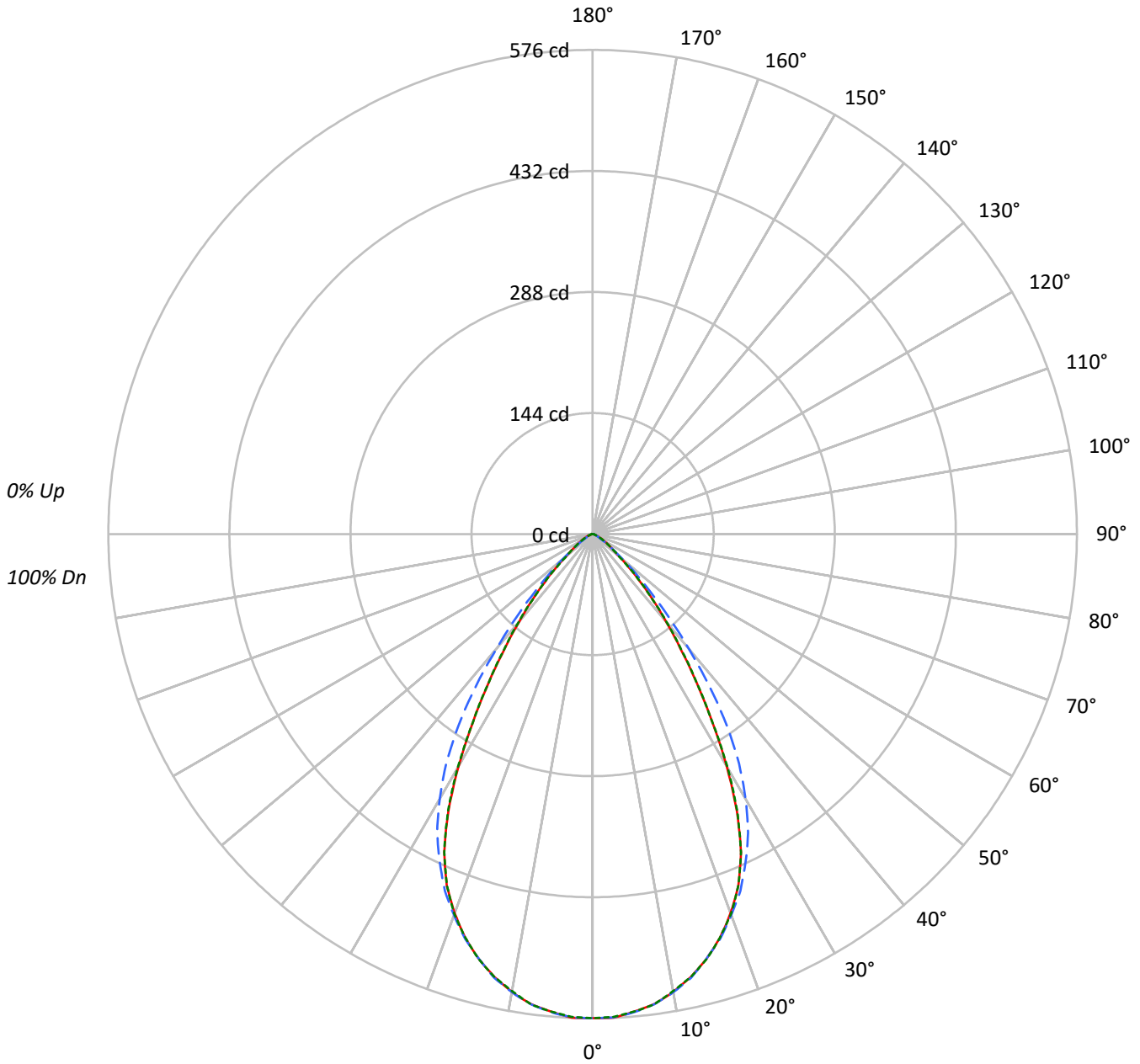
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 647.3 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
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 (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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92			92																
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85			85																
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77			77																
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71			71																
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65			65																
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60			60																
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56			56																
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52			52																
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	54	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	55791	55791	55791
5°	55449	55517	55449
10°	54408	54438	54300
15°	52473	52443	52513
20°	49464	49722	49577
25°	44637	46006	44637
30°	35650	40707	35930
35°	25450	32936	25486
40°	17186	22396	17452
45°	10919	13248	10960
50°	6224	7083	5998
55°	4087	3429	4020
60°	2829	1996	2751
65°	1948	1467	1948
70°	1416	1105	1416
75°	936	936	936
80°	614	781	781
85°	778	778	778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13248 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	8.3
10°-20°	146.7	22.7
20°-30°	192.1	29.7
30°-40°	151.0	23.3
40°-50°	70.5	10.9
50°-60°	21.8	3.4
60°-70°	7.8	1.2
70°-80°	2.8	0.4
80°-90°	0.8	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°	392.7	60.7
0°-40°	543.7	84.0
0°-60°	636.0	98.3
0°-90°	647.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	576	576	576	576	576	
5°	570	570	571	572	570	54
15°	523	523	523	523	524	147
25°	418	423	430	424	418	188
35°	215	235	278	238	216	136
45°	80	89	97	88	80	63
55°	24	23	20	22	24	23
65°	8	8	6	8	8	9
75°	2	2	2	2	2	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	575.9	575.9	575.9	575.9	575.9
2.5°	575.9	575.1	575.5	574.8	574.8
5°	570.2	570.5	570.9	571.6	570.2
7.5°	563.8	564.5	564.1	564.1	564.1
10°	553.1	553.4	553.4	553.4	552.0
12.5°	539.6	540.3	540.6	539.6	539.6
15°	523.2	523.2	522.9	523.2	523.6
17.5°	503.7	504.7	504.7	503.7	503.3
20°	479.8	481.6	482.3	480.9	480.9
22.5°	453.1	454.9	459.2	455.6	452.8
25°	417.6	423.3	430.4	423.6	417.6
27.5°	371.7	384.1	400.5	386.3	372.8
30°	318.7	339.0	363.9	340.0	321.2
32.5°	264.6	287.4	324.0	289.2	264.6
35°	215.2	234.8	278.5	237.6	215.5
37.5°	171.1	189.9	228.4	192.1	173.6
40°	135.9	151.2	177.1	150.8	138.0
42.5°	106.0	117.0	134.1	116.7	105.6
45°	79.7	89.3	96.7	87.5	80.0
47.5°	58.7	65.1	69.4	64.0	57.3
50°	41.3	45.9	47.0	44.8	39.8
52.5°	30.9	30.9	31.3	30.6	30.2
55°	24.2	22.8	20.3	22.4	23.8
57.5°	18.9	17.4	14.2	16.7	18.5
60°	14.6	13.2	10.3	12.8	14.2
62.5°	11.4	10.0	8.2	10.0	11.0
65°	8.5	7.8	6.4	7.5	8.5
67.5°	6.4	5.7	5.0	5.7	6.4
70°	5.0	4.6	3.9	4.3	5.0
72.5°	3.6	3.2	3.2	3.2	3.6
75°	2.5	2.5	2.5	2.5	2.5
77.5°	1.8	1.8	1.8	1.8	1.8
80°	1.1	1.1	1.4	1.4	1.4
82.5°	0.7	0.7	1.1	1.1	1.1
85°	0.7	0.7	0.7	0.7	0.7
87.5°	0.4	0.4	0.4	0.7	0.7
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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