

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: P837514

Luminaire Tested: HCSQ440D010-HM43040827-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837514
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: HCSQ440D010-HM43040827-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

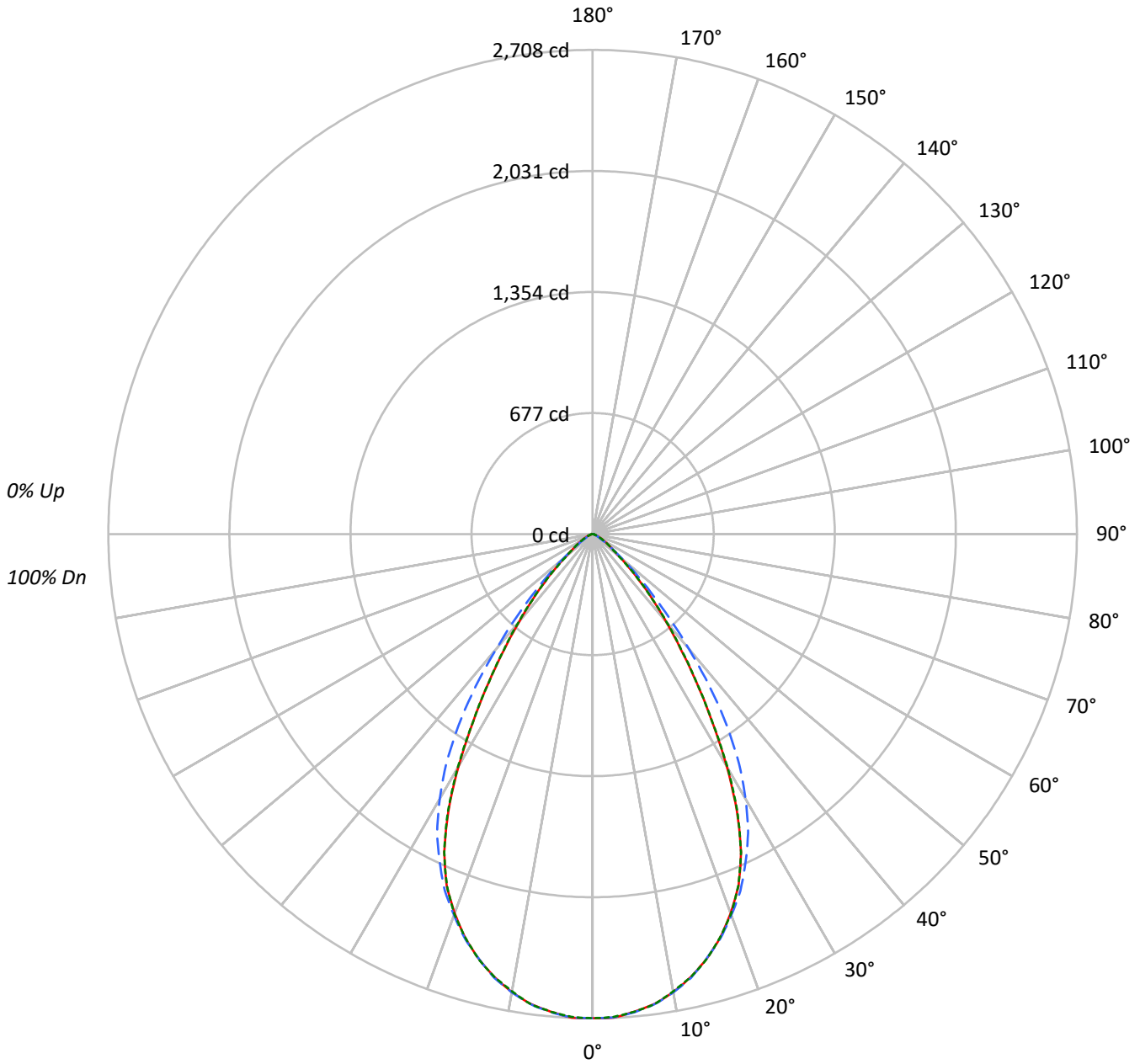
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3044.1 lumens
Efficiency: N/A
Efficacy: 74.2 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): 41
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	100	98	97	96	95	94	92
	1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	90	88	90	88	86	85
	2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85	85	82	80	85	82	79	77
	3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77	77	74	74	79	76	73	71
	4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71	71	68	68	74	70	67	65
	5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65	65	62	62	69	65	62	60
	6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60	60	58	58	65	61	57	56
	7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56	56	54	54	61	57	53	52
	8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52	52	50	50	58	53	50	48
	9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48	48	47	47	55	50	46	45
	10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45	45	44	44	55	50	46	45

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	262348	262348	262348
5°	260744	261065	260744
10°	255860	256027	255368
15°	246770	246600	246941
20°	232618	233825	233134
25°	209900	216335	209900
30°	167648	191407	168957
35°	119682	154889	119871
40°	80809	105343	82074
45°	51335	62336	51568
50°	29238	33277	28228
55°	19204	16096	18933
60°	13291	9397	12962
65°	9192	6900	9192
70°	6628	5212	6628
75°	4379	4379	4379
80°	2789	3738	3738
85°	3668	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 62336 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.7	8.3
10°-20°	689.8	22.7
20°-30°	903.2	29.7
30°-40°	709.9	23.3
40°-50°	331.6	10.9
50°-60°	102.8	3.4
60°-70°	36.7	1.2
70°-80°	12.9	0.4
80°-90°	3.5	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°	1846.7	60.7
0°-40°	2556.6	84.0
0°-60°	2991.0	98.3
0°-90°	3044.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3044.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2708	2708	2708	2708	2708	
5°	2681	2683	2685	2688	2681	254
15°	2460	2460	2459	2460	2462	689
25°	1964	1990	2024	1992	1964	883
35°	1012	1104	1310	1117	1014	638
45°	375	420	455	412	376	298
55°	114	107	95	105	112	106
65°	40	37	30	35	40	42
75°	12	12	12	12	12	13
85°	3	3	3	3	3	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2708.1	2708.1	2708.1	2708.1	2708.1
2.5°	2708.1	2704.7	2706.4	2703.0	2703.0
5°	2681.3	2683.0	2684.6	2688.0	2681.3
7.5°	2651.2	2654.5	2652.9	2652.9	2652.9
10°	2601.0	2602.7	2602.7	2602.7	2596.0
12.5°	2537.4	2540.8	2542.5	2537.4	2537.4
15°	2460.5	2460.5	2458.8	2460.5	2462.2
17.5°	2368.5	2373.5	2373.5	2368.5	2366.8
20°	2256.4	2264.8	2268.1	2261.4	2261.4
22.5°	2131.0	2139.3	2159.4	2142.7	2129.3
25°	1963.7	1990.5	2023.9	1992.1	1963.7
27.5°	1747.9	1806.5	1883.4	1816.5	1753.0
30°	1498.7	1594.1	1711.1	1599.1	1510.4
32.5°	1244.5	1351.5	1523.8	1359.9	1244.5
35°	1012.0	1104.0	1309.7	1117.3	1013.6
37.5°	804.6	893.2	1073.9	903.2	816.3
40°	639.0	710.9	833.0	709.2	649.0
42.5°	498.5	550.3	630.6	548.6	496.8
45°	374.7	419.8	455.0	411.5	376.4
47.5°	276.0	306.1	326.2	301.1	269.3
50°	194.0	215.8	220.8	210.8	187.3
52.5°	145.5	145.5	147.2	143.8	142.2
55°	113.7	107.1	95.3	105.4	112.1
57.5°	88.7	82.0	66.9	78.6	87.0
60°	68.6	61.9	48.5	60.2	66.9
62.5°	53.5	46.8	38.5	46.8	51.9
65°	40.1	36.8	30.1	35.1	40.1
67.5°	30.1	26.8	23.4	26.8	30.1
70°	23.4	21.7	18.4	20.1	23.4
72.5°	16.7	15.1	15.1	15.1	16.7
75°	11.7	11.7	11.7	11.7	11.7
77.5°	8.4	8.4	8.4	8.4	8.4
80°	5.0	5.0	6.7	6.7	6.7
82.5°	3.3	3.3	5.0	5.0	5.0
85°	3.3	3.3	3.3	3.3	3.3
87.5°	1.7	1.7	1.7	3.3	3.3
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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