

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: P837484

Luminaire Tested: HCSQ435D010-HM43040835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837484
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: HCSQ435D010-HM43040835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

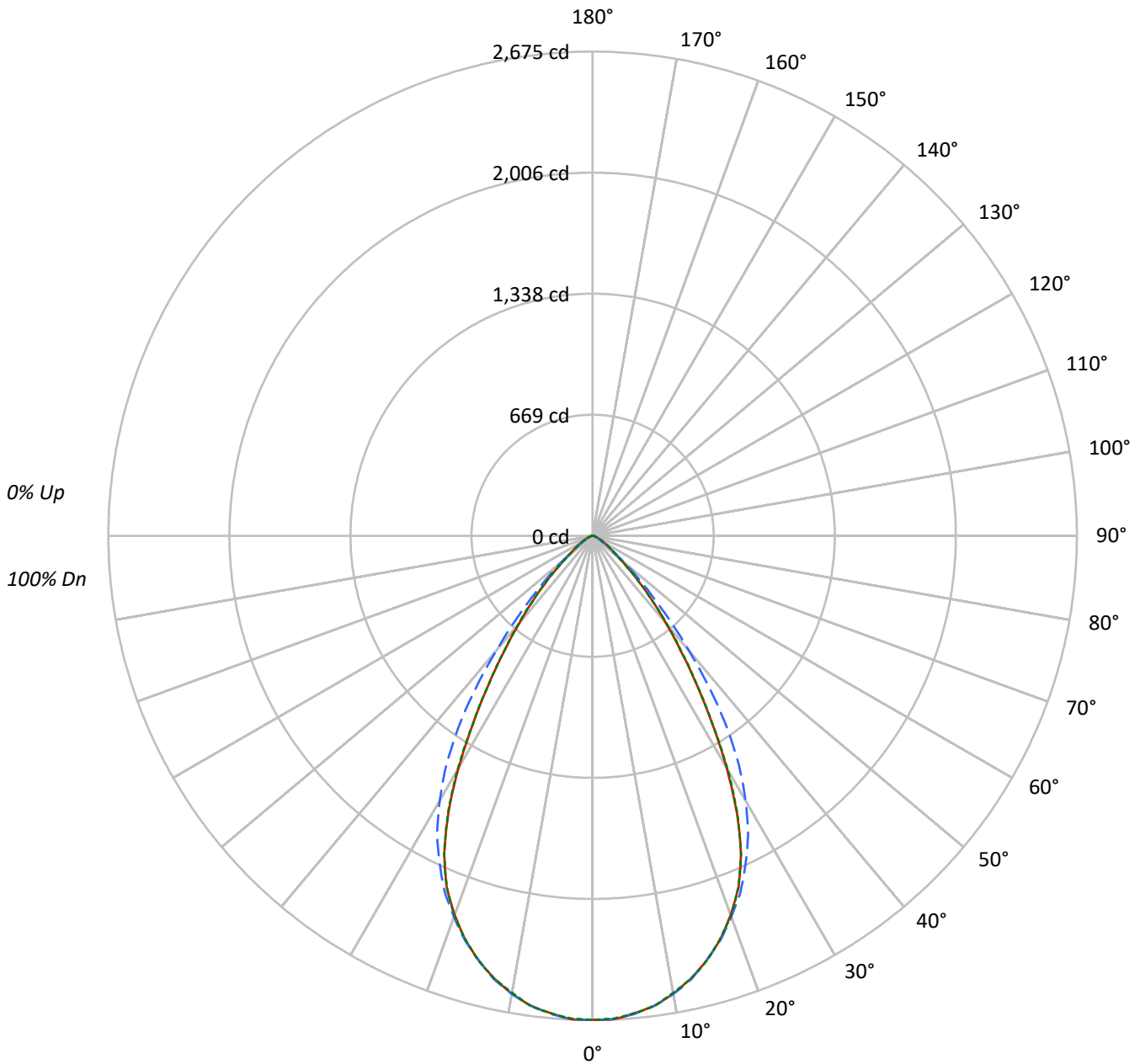
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3006.7 lumens
Efficiency: N/A
Efficacy: 88.4 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): 34
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	55	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	259122	259122	259122
5°	257535	257856	257535
10°	252712	252879	252230
15°	243742	243571	243902
20°	229763	230959	230278
25°	207324	213684	207324
30°	165589	189058	166887
35°	118204	152985	118405
40°	79810	104053	81062
45°	50705	61569	50924
50°	28876	32870	27882
55°	18967	15910	18697
60°	13117	9281	12807
65°	9100	6808	9100
70°	6543	5155	6543
75°	4342	4342	4342
80°	2789	3682	3682
85°	3668	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 61569 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.6	8.3
10°-20°	681.4	22.7
20°-30°	892.1	29.7
30°-40°	701.2	23.3
40°-50°	327.5	10.9
50°-60°	101.5	3.4
60°-70°	36.2	1.2
70°-80°	12.8	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°	1824.1	60.7
0°-40°	2525.2	84.0
0°-60°	2954.2	98.3
0°-90°	3006.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3006.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2675	2675	2675	2675	2675	
5°	2648	2650	2652	2655	2648	250
15°	2430	2430	2429	2430	2432	681
25°	1940	1966	1999	1968	1940	872
35°	1000	1090	1294	1104	1001	630
45°	370	415	449	406	372	295
55°	112	106	94	104	111	105
65°	40	36	30	35	40	41
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°	2674.8	2674.8	2674.8	2674.8	2674.8
2.5°	2674.8	2671.5	2673.1	2669.8	2669.8
5°	2648.3	2650.0	2651.6	2654.9	2648.3
7.5°	2618.6	2621.9	2620.2	2620.2	2620.2
10°	2569.0	2570.7	2570.7	2570.7	2564.1
12.5°	2506.3	2509.6	2511.2	2506.3	2506.3
15°	2430.3	2430.3	2428.6	2430.3	2431.9
17.5°	2339.4	2344.3	2344.3	2339.4	2337.7
20°	2228.7	2237.0	2240.3	2233.7	2233.7
22.5°	2104.8	2113.1	2132.9	2116.4	2103.1
25°	1939.6	1966.0	1999.1	1967.7	1939.6
27.5°	1726.5	1784.3	1860.3	1794.2	1731.4
30°	1480.3	1574.5	1690.1	1579.4	1491.9
32.5°	1229.2	1334.9	1505.1	1343.2	1229.2
35°	999.5	1090.4	1293.6	1103.6	1001.2
37.5°	794.7	882.2	1060.7	892.1	806.2
40°	631.1	702.1	822.8	700.5	641.0
42.5°	492.3	543.5	622.8	541.9	490.7
45°	370.1	414.7	449.4	406.4	371.7
47.5°	272.6	302.3	322.2	297.4	266.0
50°	191.6	213.1	218.1	208.2	185.0
52.5°	143.7	143.7	145.4	142.1	140.4
55°	112.3	105.7	94.2	104.1	110.7
57.5°	87.6	81.0	66.1	77.6	85.9
60°	67.7	61.1	47.9	59.5	66.1
62.5°	52.9	46.3	38.0	46.3	51.2
65°	39.7	36.3	29.7	34.7	39.7
67.5°	29.7	26.4	23.1	26.4	29.7
70°	23.1	21.5	18.2	19.8	23.1
72.5°	16.5	14.9	14.9	14.9	16.5
75°	11.6	11.6	11.6	11.6	11.6
77.5°	8.3	8.3	8.3	8.3	8.3
80°	5.0	5.0	6.6	6.6	6.6
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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