

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: P837547

Luminaire Tested: HCSQ440D010-HM43040935-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837547
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: HCSQ440D010-HM43040935-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

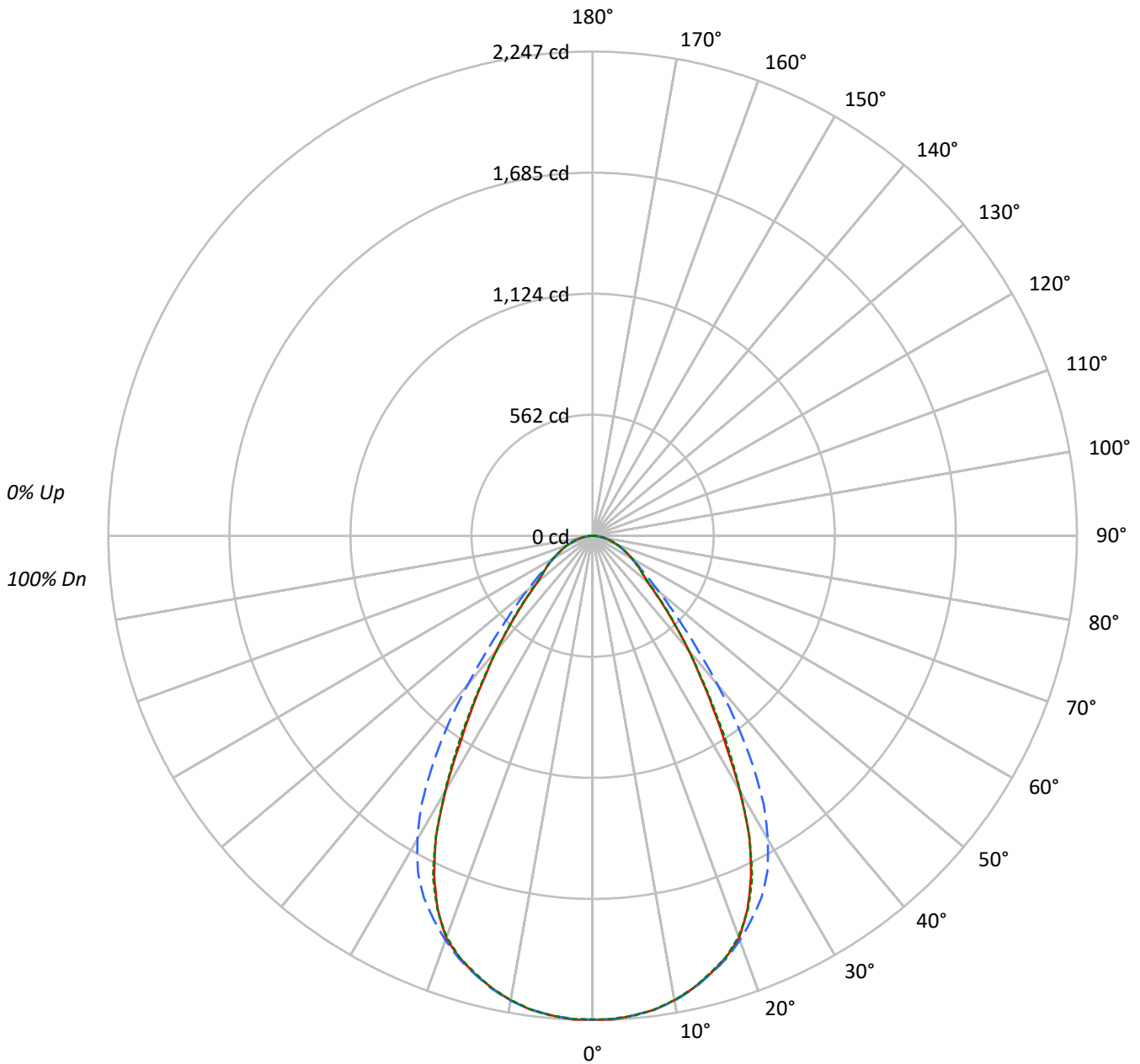
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3258.3 lumens
Efficiency: N/A
Efficacy: 79.5 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): 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	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°	217505	217505	217505
5°	217149	217149	217324
10°	215371	215538	215194
15°	211187	211357	210836
20°	204845	205928	204124
25°	185914	198035	187218
30°	152602	181877	153195
35°	114715	152678	116359
40°	87360	113841	87145
45°	65254	80790	66446
50°	49690	60209	50745
55°	44792	47139	44792
60°	40901	40552	40552
65°	37181	37181	37181
70°	34584	34103	34103
75°	32002	31329	32002
80°	29177	28229	29177
85°	25232	25232	25232

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 80790 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.8	6.5
10°-20°	592.8	18.2
20°-30°	815.3	25.0
30°-40°	694.0	21.3
40°-50°	419.2	12.9
50°-60°	247.1	7.6
60°-70°	162.0	5.0
70°-80°	89.8	2.8
80°-90°	26.3	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°	1619.8	49.7
0°-40°	2313.8	71.0
0°-60°	2980.1	91.5
0°-90°	3258.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3258.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2245	2245	2245	2245	2245	
5°	2233	2235	2233	2231	2235	212
15°	2106	2111	2107	2106	2102	592
25°	1739	1793	1853	1797	1752	786
35°	970	1068	1291	1097	984	614
45°	476	527	590	532	485	374
55°	265	270	279	270	265	238
65°	162	164	162	162	162	162
75°	86	86	84	84	86	91
85°	23	23	23	23	23	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2245.2	2245.2	2245.2	2245.2	2245.2
2.5°	2247.0	2241.7	2243.5	2241.7	2243.5
5°	2233.0	2234.8	2233.0	2231.3	2234.8
7.5°	2217.3	2215.6	2215.6	2213.8	2217.3
10°	2189.4	2185.9	2191.1	2187.6	2187.6
12.5°	2151.0	2156.2	2154.5	2154.5	2151.0
15°	2105.7	2110.9	2107.4	2105.7	2102.2
17.5°	2053.3	2056.8	2058.6	2051.6	2051.6
20°	1987.0	1994.0	1997.5	1985.3	1980.0
22.5°	1877.1	1908.5	1927.7	1906.8	1880.6
25°	1739.3	1793.4	1852.7	1796.9	1751.5
27.5°	1573.6	1650.3	1756.7	1662.5	1573.6
30°	1364.2	1477.6	1625.9	1489.8	1369.5
32.5°	1147.9	1268.3	1475.9	1289.2	1172.3
35°	970.0	1067.7	1291.0	1097.3	983.9
37.5°	816.4	900.2	1097.3	919.4	825.2
40°	690.8	757.1	900.2	765.9	689.1
42.5°	570.5	633.3	729.2	642.0	577.4
45°	476.3	526.8	589.7	532.1	485.0
47.5°	396.0	437.9	483.2	437.9	401.2
50°	329.7	362.9	399.5	362.9	336.7
52.5°	294.8	305.3	329.7	307.0	294.8
55°	265.2	270.4	279.1	270.4	265.2
57.5°	237.3	240.7	239.0	239.0	237.3
60°	211.1	212.8	209.3	211.1	209.3
62.5°	186.7	186.7	183.2	186.7	184.9
65°	162.2	164.0	162.2	162.2	162.2
67.5°	141.3	141.3	139.6	141.3	141.3
70°	122.1	122.1	120.4	122.1	120.4
72.5°	102.9	102.9	101.2	101.2	101.2
75°	85.5	85.5	83.7	83.7	85.5
77.5°	68.0	68.0	66.3	68.0	68.0
80°	52.3	52.3	50.6	52.3	52.3
82.5°	36.6	36.6	36.6	38.4	38.4
85°	22.7	22.7	22.7	22.7	22.7
87.5°	10.5	10.5	10.5	10.5	12.2
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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