

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: P837542

Luminaire Tested: HCSQ440D010-HM43040930-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837542
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-HM43040930-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

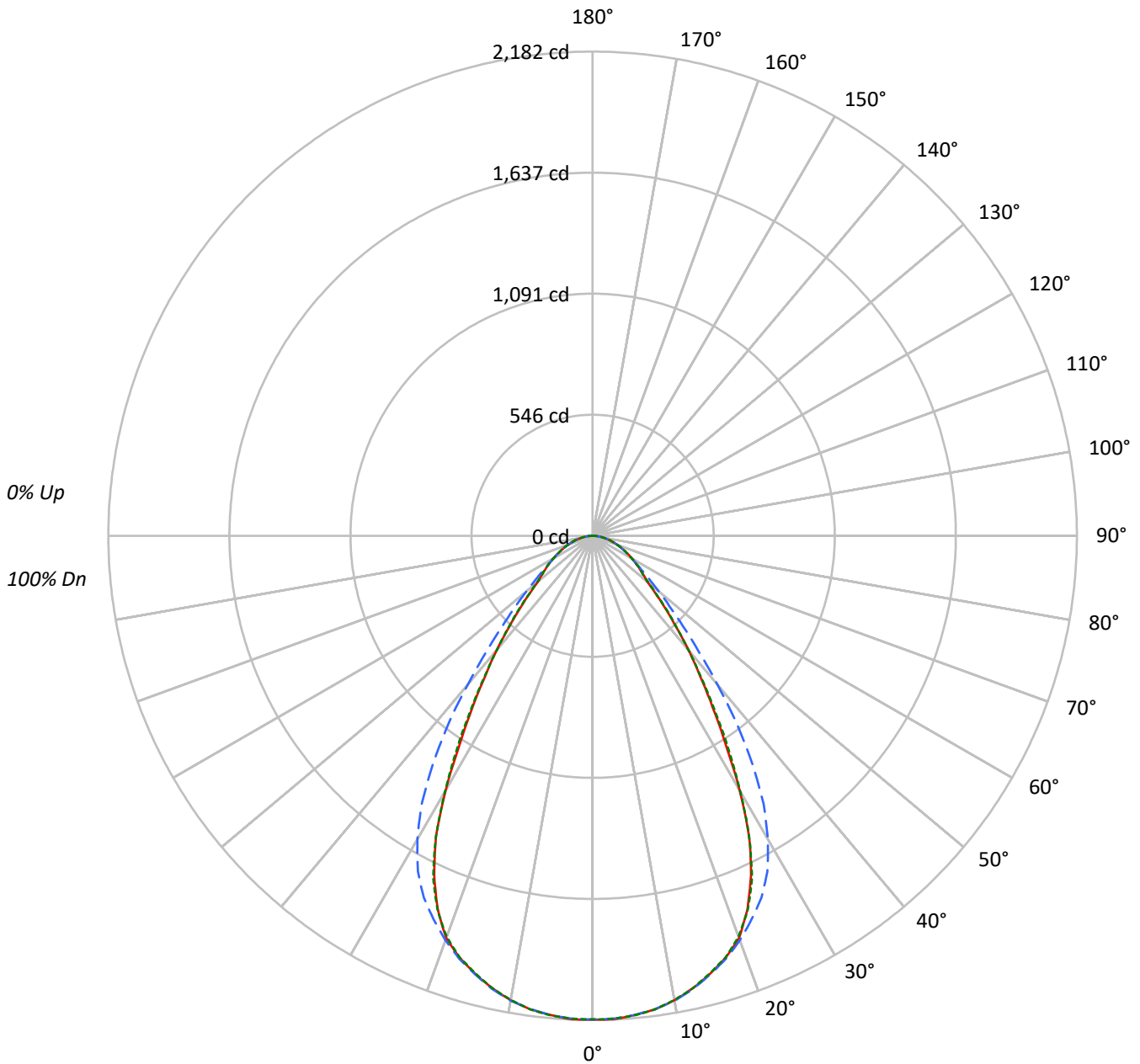
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3163.5 lumens
Efficiency: N/A
Efficacy: 77.2 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									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°	211179	211179	211179
5°	210828	210828	210994
10°	209105	209272	208938
15°	205039	205209	204698
20°	198886	199928	198185
25°	180505	192274	181767
30°	148161	176586	148732
35°	111368	148231	112977
40°	84818	110528	84603
45°	63350	78434	64514
50°	48243	58461	49268
55°	43491	45771	43491
60°	39700	39390	39390
65°	36103	36103	36103
70°	33593	33111	33111
75°	31067	30430	31067
80°	28340	27392	28340
85°	24453	24453	24453

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 78434 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.6	6.5
10°-20°	575.5	18.2
20°-30°	791.5	25.0
30°-40°	673.8	21.3
40°-50°	407.0	12.9
50°-60°	239.9	7.6
60°-70°	157.3	5.0
70°-80°	87.2	2.8
80°-90°	25.5	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°	1572.7	49.7
0°-40°	2246.5	71.0
0°-60°	2893.4	91.5
0°-90°	3163.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3163.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2180	2180	2180	2180	2180	
5°	2168	2170	2168	2166	2170	206
15°	2044	2049	2046	2044	2041	575
25°	1689	1741	1799	1745	1700	763
35°	942	1037	1253	1065	955	596
45°	462	512	572	517	471	363
55°	258	262	271	262	258	232
65°	158	159	158	158	158	158
75°	83	83	81	81	83	88
85°	22	22	22	22	22	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2179.9	2179.9	2179.9	2179.9	2179.9
2.5°	2181.6	2176.5	2178.2	2176.5	2178.2
5°	2168.0	2169.7	2168.0	2166.3	2169.7
7.5°	2152.8	2151.1	2151.1	2149.4	2152.8
10°	2125.7	2122.3	2127.4	2124.0	2124.0
12.5°	2088.4	2093.5	2091.8	2091.8	2088.4
15°	2044.4	2049.4	2046.1	2044.4	2041.0
17.5°	1993.5	1996.9	1998.6	1991.9	1991.9
20°	1929.2	1936.0	1939.3	1927.5	1922.4
22.5°	1822.5	1853.0	1871.6	1851.3	1825.9
25°	1688.7	1741.2	1798.8	1744.6	1700.5
27.5°	1527.8	1602.3	1705.6	1614.1	1527.8
30°	1324.5	1434.6	1578.6	1446.5	1329.6
32.5°	1114.5	1231.4	1432.9	1251.7	1138.2
35°	941.7	1036.6	1253.4	1065.4	955.3
37.5°	792.7	874.0	1065.4	892.6	801.1
40°	670.7	735.1	874.0	743.6	669.0
42.5°	553.9	614.8	708.0	623.3	560.6
45°	462.4	511.5	572.5	516.6	470.9
47.5°	384.5	425.1	469.2	425.1	389.6
50°	320.1	352.3	387.9	352.3	326.9
52.5°	286.2	296.4	320.1	298.1	286.2
55°	257.5	262.5	271.0	262.5	257.5
57.5°	230.4	233.7	232.0	232.0	230.4
60°	204.9	206.6	203.3	204.9	203.3
62.5°	181.2	181.2	177.8	181.2	179.5
65°	157.5	159.2	157.5	157.5	157.5
67.5°	137.2	137.2	135.5	137.2	137.2
70°	118.6	118.6	116.9	118.6	116.9
72.5°	99.9	99.9	98.2	98.2	98.2
75°	83.0	83.0	81.3	81.3	83.0
77.5°	66.1	66.1	64.4	66.1	66.1
80°	50.8	50.8	49.1	50.8	50.8
82.5°	35.6	35.6	35.6	37.3	37.3
85°	22.0	22.0	22.0	22.0	22.0
87.5°	10.2	10.2	10.2	10.2	11.9
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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