

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: P837517

Luminaire Tested: HCSQ440D010-HM43040827-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837517
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-HM43040827-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

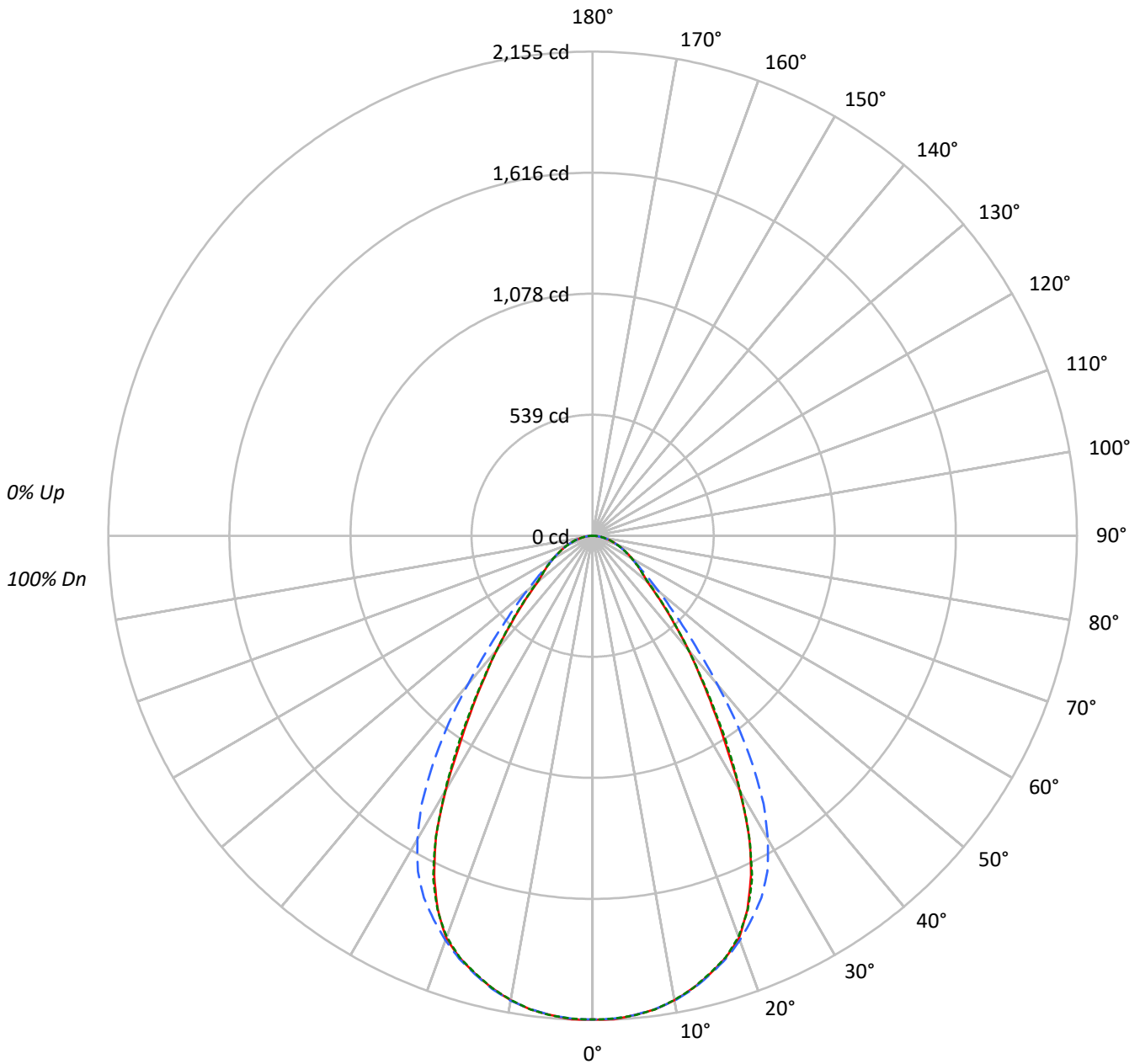
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3124.4 lumens
Efficiency: N/A
Efficacy: 76.2 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°	208563	208563	208563
5°	208222	208222	208387
10°	206518	206685	206351
15°	202501	202672	202170
20°	196433	197464	195742
25°	178271	189901	179522
30°	146338	174404	146897
35°	109996	146398	111581
40°	83768	109162	83566
45°	62569	77461	63720
50°	47655	57738	48665
55°	42951	45214	42951
60°	39215	38886	38886
65°	35668	35668	35668
70°	33168	32686	32686
75°	30692	30056	30692
80°	28006	27057	28006
85°	24120	24120	24120

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 77461 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.1	6.5
10°-20°	568.4	18.2
20°-30°	781.8	25.0
30°-40°	665.5	21.3
40°-50°	402.0	12.9
50°-60°	236.9	7.6
60°-70°	155.4	5.0
70°-80°	86.1	2.8
80°-90°	25.2	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°	1553.2	49.7
0°-40°	2218.8	71.0
0°-60°	2857.7	91.5
0°-90°	3124.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3124.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2153	2153	2153	2153	2153	
5°	2141	2143	2141	2140	2143	203
15°	2019	2024	2021	2019	2016	568
25°	1668	1720	1777	1723	1680	754
35°	930	1024	1238	1052	944	589
45°	457	505	565	510	465	359
55°	254	259	268	259	254	229
65°	156	157	156	156	156	156
75°	82	82	80	80	82	87
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°	2152.9	2152.9	2152.9	2152.9	2152.9
2.5°	2154.6	2149.6	2151.3	2149.6	2151.3
5°	2141.2	2142.9	2141.2	2139.6	2142.9
7.5°	2126.2	2124.5	2124.5	2122.8	2126.2
10°	2099.4	2096.1	2101.1	2097.7	2097.7
12.5°	2062.6	2067.6	2066.0	2066.0	2062.6
15°	2019.1	2024.1	2020.8	2019.1	2015.8
17.5°	1968.9	1972.3	1974.0	1967.3	1967.3
20°	1905.4	1912.1	1915.4	1903.7	1898.7
22.5°	1800.0	1830.1	1848.5	1828.4	1803.3
25°	1667.8	1719.7	1776.6	1723.0	1679.5
27.5°	1508.9	1582.5	1684.6	1594.2	1508.9
30°	1308.2	1416.9	1559.1	1428.6	1313.2
32.5°	1100.7	1216.2	1415.2	1236.2	1124.2
35°	930.1	1023.8	1237.9	1052.2	943.5
37.5°	782.9	863.2	1052.2	881.6	791.3
40°	662.4	726.0	863.2	734.4	660.8
42.5°	547.0	607.2	699.2	615.6	553.7
45°	456.7	505.2	565.4	510.2	465.1
47.5°	379.7	419.9	463.4	419.9	384.8
50°	316.2	348.0	383.1	348.0	322.9
52.5°	282.7	292.7	316.2	294.4	282.7
55°	254.3	259.3	267.7	259.3	254.3
57.5°	227.5	230.9	229.2	229.2	227.5
60°	202.4	204.1	200.7	202.4	200.7
62.5°	179.0	179.0	175.6	179.0	177.3
65°	155.6	157.2	155.6	155.6	155.6
67.5°	135.5	135.5	133.8	135.5	135.5
70°	117.1	117.1	115.4	117.1	115.4
72.5°	98.7	98.7	97.0	97.0	97.0
75°	82.0	82.0	80.3	80.3	82.0
77.5°	65.2	65.2	63.6	65.2	65.2
80°	50.2	50.2	48.5	50.2	50.2
82.5°	35.1	35.1	35.1	36.8	36.8
85°	21.7	21.7	21.7	21.7	21.7
87.5°	10.0	10.0	10.0	10.0	11.7
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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