

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: P837507

Luminaire Tested: HCSQ435D010-HM43040935-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837507
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: HCSQ435D010-HM43040935-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

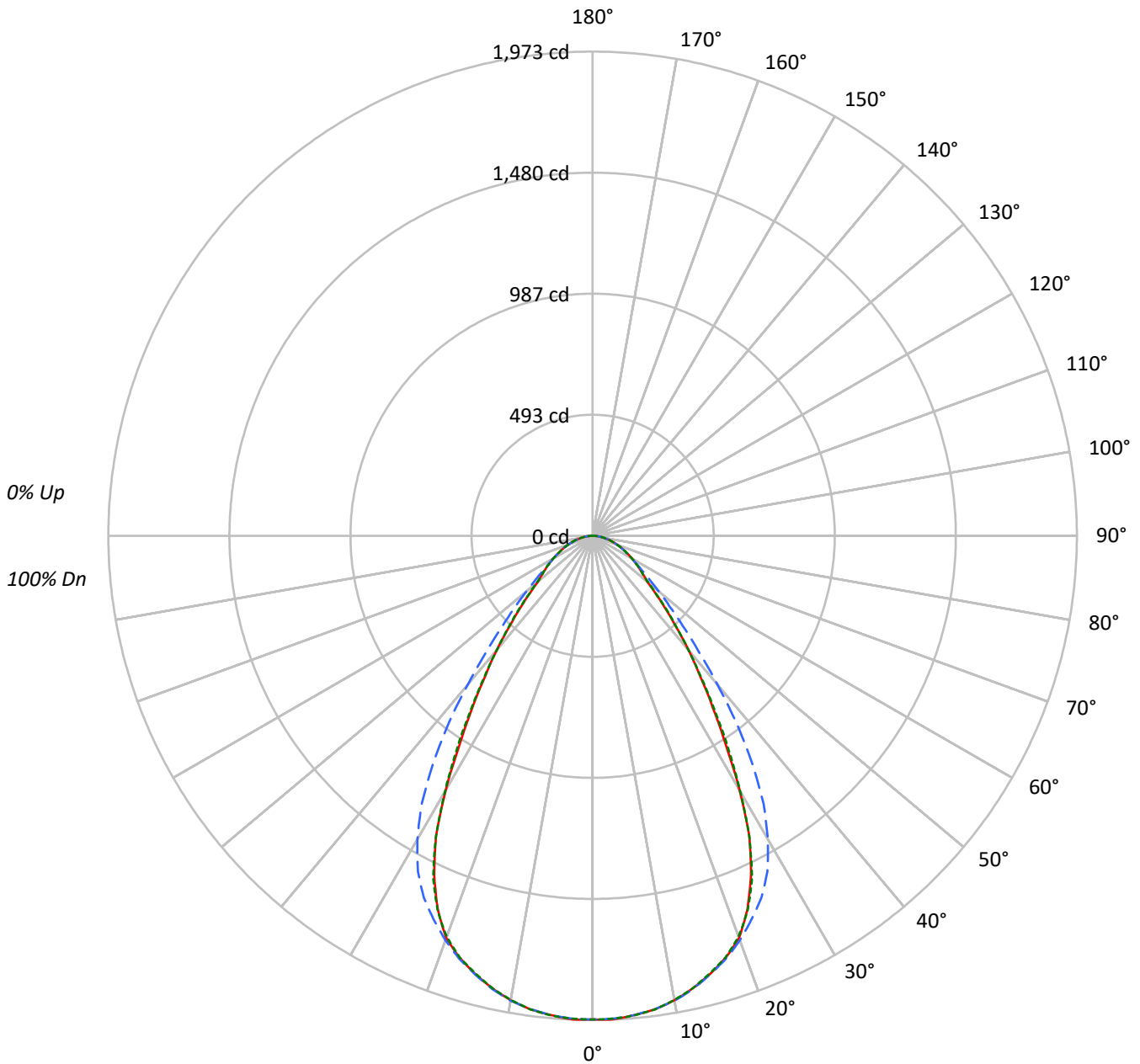
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2860.6 lumens
Efficiency: N/A
Efficacy: 84.1 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): 34
Input Voltage (V): NR
Input Current (Ain): 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°	190961	190961	190961
5°	190650	190650	190796
10°	189087	189234	188939
15°	185411	185562	185100
20°	179845	180794	179216
25°	163221	173868	164376
30°	133977	159683	134492
35°	100713	134039	102156
40°	76699	99943	76509
45°	57281	70926	58336
50°	43631	52854	44550
55°	39319	41397	39319
60°	35902	35611	35611
65°	32642	32642	32642
70°	30364	29939	29939
75°	28110	27511	28110
80°	25607	24770	25607
85°	22119	22119	22119

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 70926 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.9	6.5
10°-20°	520.4	18.2
20°-30°	715.8	25.0
30°-40°	609.3	21.3
40°-50°	368.1	12.9
50°-60°	216.9	7.6
60°-70°	142.3	5.0
70°-80°	78.9	2.8
80°-90°	23.1	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°	1422.1	49.7
0°-40°	2031.5	71.0
0°-60°	2616.4	91.5
0°-90°	2860.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2860.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1971	1971	1971	1971	1971	
5°	1960	1962	1960	1959	1962	186
15°	1849	1853	1850	1849	1846	520
25°	1527	1574	1627	1578	1538	690
35°	852	937	1133	963	864	539
45°	418	463	518	467	426	329
55°	233	237	245	237	233	209
65°	142	144	142	142	142	143
75°	75	75	74	74	75	80
85°	20	20	20	20	20	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1971.2	1971.2	1971.2	1971.2	1971.2
2.5°	1972.8	1968.2	1969.7	1968.2	1969.7
5°	1960.5	1962.0	1960.5	1959.0	1962.0
7.5°	1946.7	1945.2	1945.2	1943.7	1946.7
10°	1922.2	1919.1	1923.7	1920.7	1920.7
12.5°	1888.5	1893.1	1891.6	1891.6	1888.5
15°	1848.7	1853.3	1850.2	1848.7	1845.6
17.5°	1802.7	1805.8	1807.3	1801.2	1801.2
20°	1744.5	1750.7	1753.7	1743.0	1738.4
22.5°	1648.0	1675.6	1692.5	1674.1	1651.1
25°	1527.0	1574.5	1626.6	1577.6	1537.8
27.5°	1381.5	1448.9	1542.4	1459.7	1381.5
30°	1197.7	1297.3	1427.5	1308.0	1202.3
32.5°	1007.8	1113.5	1295.8	1131.9	1029.3
35°	851.6	937.4	1133.4	963.4	863.8
37.5°	716.8	790.3	963.4	807.2	724.5
40°	606.5	664.7	790.3	672.4	605.0
42.5°	500.8	556.0	640.2	563.6	507.0
45°	418.1	462.6	517.7	467.2	425.8
47.5°	347.7	384.4	424.3	384.4	352.3
50°	289.5	318.6	350.7	318.6	295.6
52.5°	258.8	268.0	289.5	269.6	258.8
55°	232.8	237.4	245.1	237.4	232.8
57.5°	208.3	211.4	209.8	209.8	208.3
60°	185.3	186.9	183.8	185.3	183.8
62.5°	163.9	163.9	160.8	163.9	162.4
65°	142.4	144.0	142.4	142.4	142.4
67.5°	124.1	124.1	122.5	124.1	124.1
70°	107.2	107.2	105.7	107.2	105.7
72.5°	90.4	90.4	88.8	88.8	88.8
75°	75.1	75.1	73.5	73.5	75.1
77.5°	59.7	59.7	58.2	59.7	59.7
80°	45.9	45.9	44.4	45.9	45.9
82.5°	32.2	32.2	32.2	33.7	33.7
85°	19.9	19.9	19.9	19.9	19.9
87.5°	9.2	9.2	9.2	9.2	10.7
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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