

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837413

Luminaire Tested: HCSQ425D010-HM40525927-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837413
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ425D010-HM40525927-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

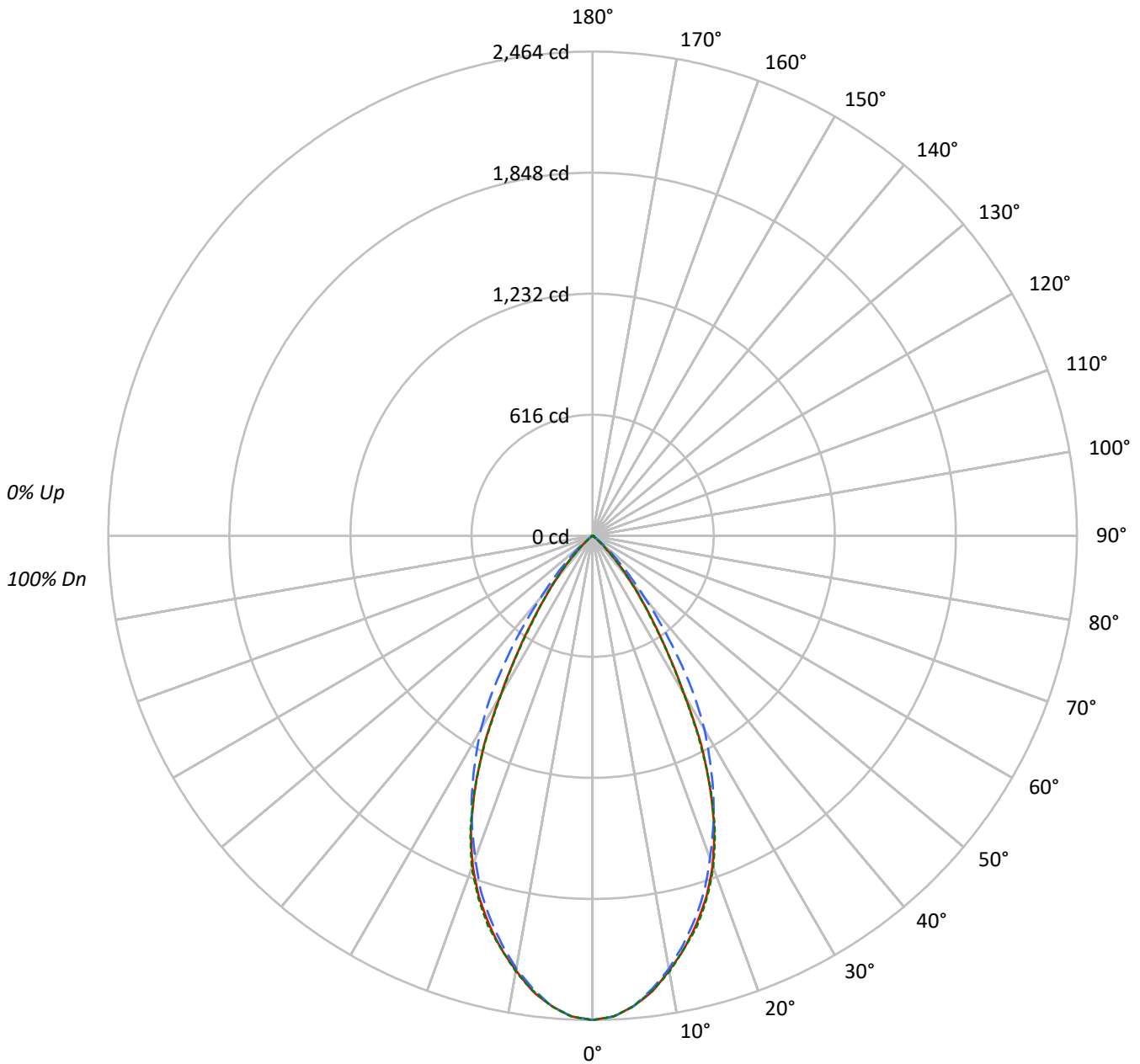
Lumens per Lamp: N/A
Luminaire Lumens: 1991.0 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 27.7
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

TEST NUMBER: P837413

CATALOG NUMBER: HCSQ425D010-HM40525927-41SQC

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	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	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94	94	94	94	94	94		
	2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	87	87		
	3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	81	81		
	4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	76	76		
	5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71	71	71	71	71	71		
	6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66	66	66	66	66	66		
	7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	62	62		
	8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58	58	58	58	58	58		
	9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	55	55		
	10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	52	52		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	238682	238682	238682
5°	233564	233661	233661
10°	220919	219935	221509
15°	204978	202170	206082
20°	184000	179876	185134
25°	151132	155515	151667
30°	104468	127064	103685
35°	64323	89750	62798
40°	36295	52482	36042
45°	16577	26304	15892
50°	4220	10550	4371
55°	2027	3209	1858
60°	1356	1163	1550
65°	1146	917	1146
70°	850	850	1133
75°	749	749	1123
80°	1116	1116	1116
85°	1112	2223	2223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 26304 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.1	11.3
10°-20°	566.0	28.4
20°-30°	647.1	32.5
30°-40°	401.7	20.2
40°-50°	126.6	6.4
50°-60°	16.4	0.8
60°-70°	4.8	0.2
70°-80°	2.6	0.1
80°-90°	1.7	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°	1437.2	72.2
0°-40°	1838.9	92.4
0°-60°	1981.8	99.5
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2464	2464	2464	2464	2464	
5°	2402	2400	2403	2401	2403	224
15°	2044	2029	2016	2029	2055	570
25°	1414	1434	1455	1434	1419	634
35°	544	628	759	613	531	350
45°	121	145	192	146	116	102
55°	12	12	19	12	11	12
65°	5	5	4	5	5	5
75°	2	2	2	2	3	3
85°	1	2	2	2	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2463.8	2463.8	2463.8	2463.8	2463.8
2.5°	2448.8	2450.8	2448.8	2452.8	2448.8
5°	2401.8	2399.8	2402.8	2400.8	2402.8
7.5°	2337.8	2325.8	2324.8	2332.8	2333.8
10°	2245.8	2242.8	2235.8	2242.8	2251.8
12.5°	2151.8	2139.8	2129.8	2143.8	2151.8
15°	2043.8	2028.8	2015.8	2028.8	2054.8
17.5°	1924.8	1903.8	1892.8	1907.8	1932.8
20°	1784.8	1762.8	1744.8	1757.8	1795.8
22.5°	1616.8	1614.8	1602.9	1609.8	1623.8
25°	1413.9	1433.9	1454.9	1433.9	1418.9
27.5°	1190.9	1244.9	1292.9	1229.9	1181.9
30°	933.9	1015.9	1135.9	1009.9	926.9
32.5°	721.9	807.9	960.9	796.9	715.9
35°	543.9	627.9	758.9	612.9	531.0
37.5°	400.0	463.0	576.9	459.0	400.0
40°	287.0	328.0	415.0	327.0	285.0
42.5°	199.0	226.0	290.0	224.0	193.0
45°	121.0	145.0	192.0	146.0	116.0
47.5°	64.0	92.0	121.0	88.0	64.0
50°	28.0	49.0	70.0	48.0	29.0
52.5°	15.0	21.0	38.0	21.0	15.0
55°	12.0	12.0	19.0	12.0	11.0
57.5°	9.0	9.0	10.0	9.0	9.0
60°	7.0	7.0	6.0	7.0	8.0
62.5°	6.0	6.0	5.0	6.0	6.0
65°	5.0	5.0	4.0	5.0	5.0
67.5°	4.0	4.0	4.0	4.0	4.0
70°	3.0	3.0	3.0	4.0	4.0
72.5°	3.0	3.0	3.0	3.0	3.0
75°	2.0	2.0	2.0	2.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0
80°	2.0	2.0	2.0	2.0	2.0
82.5°	1.0	2.0	2.0	2.0	2.0
85°	1.0	2.0	2.0	2.0	2.0
87.5°	1.0	1.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

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— 0°-180° - - 45°-225° - - - - 90°-270°

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