

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: P837477

Luminaire Tested: HCSQ435D010-HM43040827-41SQMW

Issue Date: 5/17/2024



**Test Information**

Test Method: LM-79-2019  
Report Number: P837477  
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-HM43040827-41SQMW  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: -

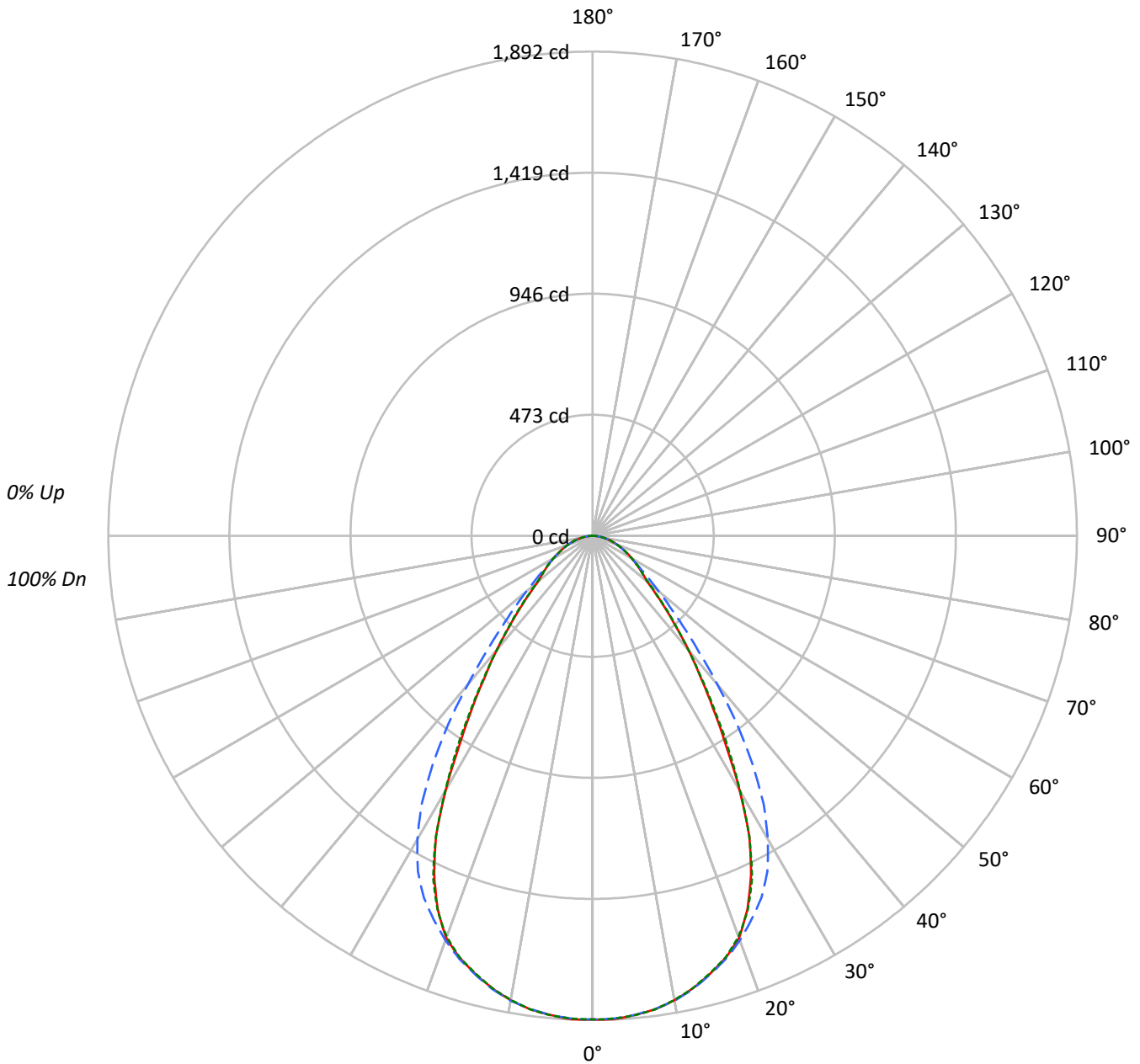
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2743.1 lumens  
Efficiency: N/A  
Efficacy: 80.7 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°	183114	183114	183114
5°	182812	182812	182958
10°	181315	181463	181168
15°	177789	177940	177498
20°	172453	173371	171855
25°	156519	166727	157620
30°	128474	153117	128966
35°	96574	128528	97957
40°	73550	95833	73361
45°	54938	68008	55938
50°	41837	50684	42727
55°	37698	39691	37698
60°	34430	34139	34139
65°	31312	31312	31312
70°	29118	28693	28693
75°	26949	26388	26949
80°	24603	23766	24603
85°	21230	21230	21230

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 68008 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.3	6.5
10°-20°	499.1	18.2
20°-30°	686.4	25.0
30°-40°	584.3	21.3
40°-50°	352.9	12.9
50°-60°	208.0	7.6
60°-70°	136.4	5.0
70°-80°	75.7	2.8
80°-90°	22.1	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°	1363.7	49.7
0°-40°	1948.0	71.0
0°-60°	2508.9	91.5
0°-90°	2743.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2743.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1890	1890	1890	1890	1890	
5°	1880	1881	1880	1878	1881	178
15°	1773	1777	1774	1773	1770	499
25°	1464	1510	1560	1513	1475	662
35°	817	899	1087	924	828	517
45°	401	444	496	448	408	315
55°	223	228	235	228	223	201
65°	137	138	137	137	137	137
75°	72	72	70	70	72	76
85°	19	19	19	19	19	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1890.2	1890.2	1890.2	1890.2	1890.2
2.5°	1891.7	1887.3	1888.7	1887.3	1888.7
5°	1879.9	1881.4	1879.9	1878.5	1881.4
7.5°	1866.7	1865.2	1865.2	1863.8	1866.7
10°	1843.2	1840.3	1844.7	1841.7	1841.7
12.5°	1810.9	1815.3	1813.8	1813.8	1810.9
15°	1772.7	1777.1	1774.2	1772.7	1769.8
17.5°	1728.7	1731.6	1733.1	1727.2	1727.2
20°	1672.8	1678.7	1681.7	1671.4	1667.0
22.5°	1580.3	1606.8	1622.9	1605.3	1583.3
25°	1464.3	1509.8	1559.8	1512.8	1474.6
27.5°	1324.8	1389.4	1479.0	1399.7	1324.8
30°	1148.5	1244.0	1368.8	1254.3	1152.9
32.5°	966.4	1067.7	1242.5	1085.4	987.0
35°	816.6	898.8	1086.8	923.8	828.3
37.5°	687.3	757.8	923.8	774.0	694.7
40°	581.6	637.4	757.8	644.8	580.1
42.5°	480.3	533.1	613.9	540.5	486.1
45°	401.0	443.5	496.4	448.0	408.3
47.5°	333.4	368.6	406.8	368.6	337.8
50°	277.6	305.5	336.3	305.5	283.5
52.5°	248.2	257.0	277.6	258.5	248.2
55°	223.2	227.6	235.0	227.6	223.2
57.5°	199.7	202.7	201.2	201.2	199.7
60°	177.7	179.2	176.2	177.7	176.2
62.5°	157.2	157.2	154.2	157.2	155.7
65°	136.6	138.1	136.6	136.6	136.6
67.5°	119.0	119.0	117.5	119.0	119.0
70°	102.8	102.8	101.3	102.8	101.3
72.5°	86.7	86.7	85.2	85.2	85.2
75°	72.0	72.0	70.5	70.5	72.0
77.5°	57.3	57.3	55.8	57.3	57.3
80°	44.1	44.1	42.6	44.1	44.1
82.5°	30.8	30.8	30.8	32.3	32.3
85°	19.1	19.1	19.1	19.1	19.1
87.5°	8.8	8.8	8.8	8.8	10.3
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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