

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: P837418

Luminaire Tested: HCSQ425D010-HM40525930-41SQC

Issue Date: 5/17/2024



**Test Information**

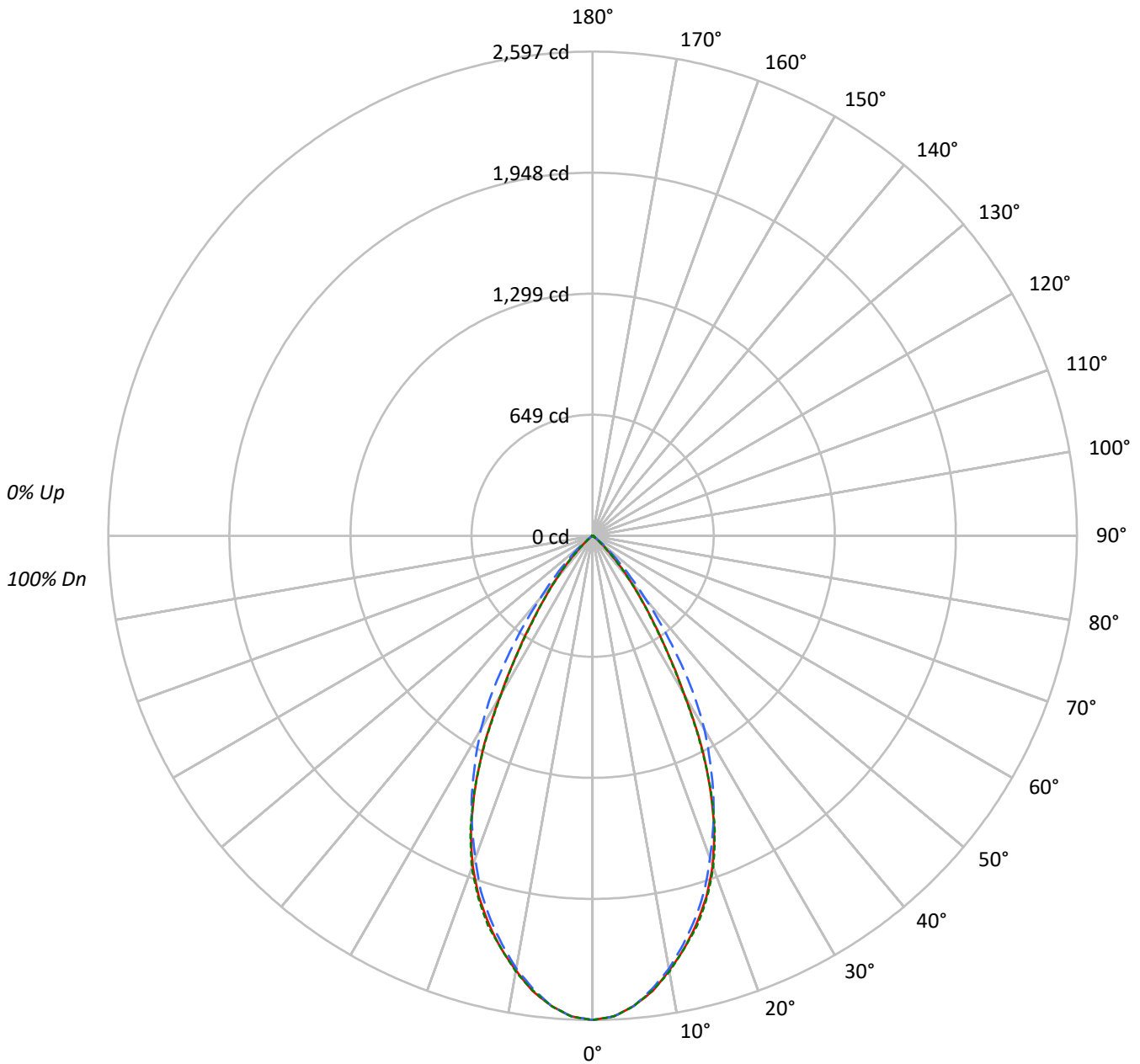
Test Method: LM-79-2019  
Report Number: P837418  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ425D010-HM40525930-41SQC  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2098.3 lumens  
Efficiency: N/A  
Efficacy: 75.8 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 (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				
RW	70	50	30	10	70	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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94		
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87		
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81		
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76		
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71		
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66		
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62		
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58		
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55		
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	251547	251547	251547
5°	246148	246255	246255
10°	232822	231789	233451
15°	216031	213072	217194
20°	193917	189577	195113
25°	159277	163895	159833
30°	110106	133910	109278
35°	67800	94587	66180
40°	38242	55302	37977
45°	17468	27716	16742
50°	4446	11123	4612
55°	2128	3378	1959
60°	1434	1221	1628
65°	1215	963	1215
70°	906	906	1190
75°	786	786	1198
80°	1172	1172	1172
85°	1223	2334	2334

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 27716 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	236.2	11.3
10°-20°	596.5	28.4
20°-30°	681.9	32.5
30°-40°	423.3	20.2
40°-50°	133.4	6.4
50°-60°	17.3	0.8
60°-70°	5.1	0.2
70°-80°	2.7	0.1
80°-90°	1.8	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°	1514.7	72.2
0°-40°	1938.0	92.4
0°-60°	2088.6	99.5
0°-90°	2098.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2098.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2597	2597	2597	2597	2597	
5°	2531	2529	2532	2530	2532	237
15°	2154	2138	2124	2138	2166	601
25°	1490	1511	1533	1511	1495	668
35°	573	662	800	646	560	368
45°	128	153	202	154	122	108
55°	13	13	20	13	12	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°	2596.6	2596.6	2596.6	2596.6	2596.6
2.5°	2580.8	2582.9	2580.8	2585.0	2580.8
5°	2531.2	2529.1	2532.3	2530.2	2532.3
7.5°	2463.8	2451.1	2450.1	2458.5	2459.6
10°	2366.8	2363.7	2356.3	2363.7	2373.2
12.5°	2267.8	2255.1	2244.6	2259.4	2267.8
15°	2154.0	2138.2	2124.5	2138.2	2165.6
17.5°	2028.6	2006.4	1994.9	2010.7	2037.0
20°	1881.0	1857.9	1838.9	1852.6	1892.6
22.5°	1704.0	1701.9	1689.2	1696.6	1711.4
25°	1490.1	1511.2	1533.3	1511.2	1495.3
27.5°	1255.1	1312.0	1362.6	1296.2	1245.6
30°	984.3	1070.7	1197.1	1064.3	976.9
32.5°	760.8	851.5	1012.7	839.9	754.5
35°	573.3	661.8	799.8	646.0	559.6
37.5°	421.5	487.9	608.0	483.7	421.5
40°	302.4	345.6	437.3	344.6	300.3
42.5°	209.7	238.2	305.6	236.1	203.4
45°	127.5	152.8	202.3	153.9	122.2
47.5°	67.4	97.0	127.5	92.7	67.4
50°	29.5	51.6	73.8	50.6	30.6
52.5°	15.8	22.1	40.0	22.1	15.8
55°	12.6	12.6	20.0	12.6	11.6
57.5°	9.5	9.5	10.5	9.5	9.5
60°	7.4	7.4	6.3	7.4	8.4
62.5°	6.3	6.3	5.3	6.3	6.3
65°	5.3	5.3	4.2	5.3	5.3
67.5°	4.2	4.2	4.2	4.2	4.2
70°	3.2	3.2	3.2	4.2	4.2
72.5°	3.2	3.2	3.2	3.2	3.2
75°	2.1	2.1	2.1	2.1	3.2
77.5°	2.1	2.1	2.1	2.1	2.1
80°	2.1	2.1	2.1	2.1	2.1
82.5°	1.1	2.1	2.1	2.1	2.1
85°	1.1	2.1	2.1	2.1	2.1
87.5°	1.1	1.1	2.1	2.1	2.1
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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