

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: P837428

Luminaire Tested: HCSQ425D010-HM40525940-41SQC

Issue Date: 5/17/2024



**Test Information**

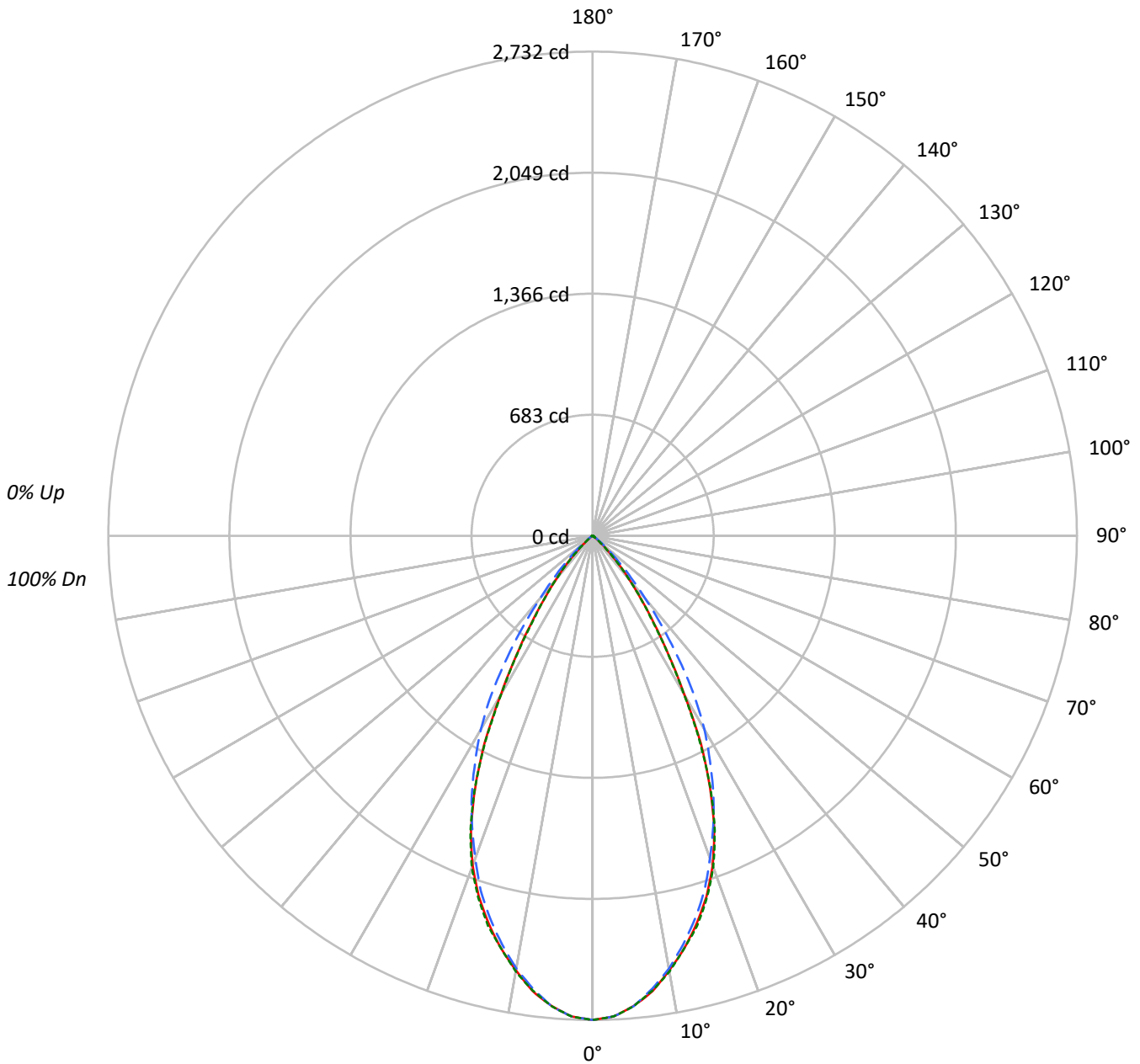
Test Method: LM-79-2019  
Report Number: P837428  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ425D010-HM40525940-41SQC  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2207.5 lumens  
Efficiency: N/A  
Efficacy: 79.7 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<sub>in</sub>): 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					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			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94					94			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87					87			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81					81			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76					76			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71					71			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66					66			
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62					62			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58					58			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55					55			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52					52			

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

	0°	45°	90°
0°	264635	264635	264635
5°	258955	259062	259062
10°	244941	243849	245590
15°	227264	224154	228487
20°	204010	199443	205268
25°	167561	172425	168149
30°	115833	140879	114961
35°	71324	99518	69621
40°	40240	58185	39962
45°	18372	29168	17619
50°	4672	11695	4853
55°	2246	3564	2061
60°	1511	1298	1724
65°	1261	1009	1261
70°	935	935	1246
75°	823	823	1235
80°	1227	1227	1227
85°	1223	2445	2445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 29168 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.5	11.3
10°-20°	627.6	28.4
20°-30°	717.4	32.5
30°-40°	445.3	20.2
40°-50°	140.3	6.4
50°-60°	18.2	0.8
60°-70°	5.4	0.2
70°-80°	2.8	0.1
80°-90°	1.9	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°	1593.5	72.2
0°-40°	2038.8	92.4
0°-60°	2197.3	99.5
0°-90°	2207.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2207.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2732	2732	2732	2732	2732	
5°	2663	2661	2664	2662	2664	249
15°	2266	2249	2235	2249	2278	632
25°	1568	1590	1613	1590	1573	703
35°	603	696	842	680	589	388
45°	134	161	213	162	129	113
55°	13	13	21	13	12	13
65°	6	6	4	6	6	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°	2731.7	2731.7	2731.7	2731.7	2731.7
2.5°	2715.0	2717.3	2715.0	2719.5	2715.0
5°	2662.9	2660.7	2664.0	2661.8	2664.0
7.5°	2592.0	2578.7	2577.6	2586.4	2587.5
10°	2490.0	2486.7	2478.9	2486.7	2496.6
12.5°	2385.8	2372.5	2361.4	2376.9	2385.8
15°	2266.0	2249.4	2235.0	2249.4	2278.2
17.5°	2134.1	2110.8	2098.6	2115.3	2143.0
20°	1978.9	1954.5	1934.6	1949.0	1991.1
22.5°	1792.7	1790.4	1777.1	1784.9	1800.4
25°	1567.6	1589.8	1613.1	1589.8	1573.1
27.5°	1320.4	1380.2	1433.5	1363.6	1310.4
30°	1035.5	1126.4	1259.4	1119.7	1027.7
32.5°	800.4	895.8	1065.4	883.6	793.8
35°	603.1	696.2	841.5	679.6	588.7
37.5°	443.5	513.3	639.7	508.9	443.5
40°	318.2	363.6	460.1	362.5	316.0
42.5°	220.6	250.6	321.5	248.3	214.0
45°	134.1	160.8	212.9	161.9	128.6
47.5°	71.0	102.0	134.1	97.6	71.0
50°	31.0	54.3	77.6	53.2	32.2
52.5°	16.6	23.3	42.1	23.3	16.6
55°	13.3	13.3	21.1	13.3	12.2
57.5°	10.0	10.0	11.1	10.0	10.0
60°	7.8	7.8	6.7	7.8	8.9
62.5°	6.7	6.7	5.5	6.7	6.7
65°	5.5	5.5	4.4	5.5	5.5
67.5°	4.4	4.4	4.4	4.4	4.4
70°	3.3	3.3	3.3	4.4	4.4
72.5°	3.3	3.3	3.3	3.3	3.3
75°	2.2	2.2	2.2	2.2	3.3
77.5°	2.2	2.2	2.2	2.2	2.2
80°	2.2	2.2	2.2	2.2	2.2
82.5°	1.1	2.2	2.2	2.2	2.2
85°	1.1	2.2	2.2	2.2	2.2
87.5°	1.1	1.1	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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Scaled Data Report







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

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