

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: P837326

Luminaire Tested: HCSQ415D010-HM40525835-41SQMB

Issue Date: 5/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P837326  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ415D010-HM40525835-41SQMB  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: -

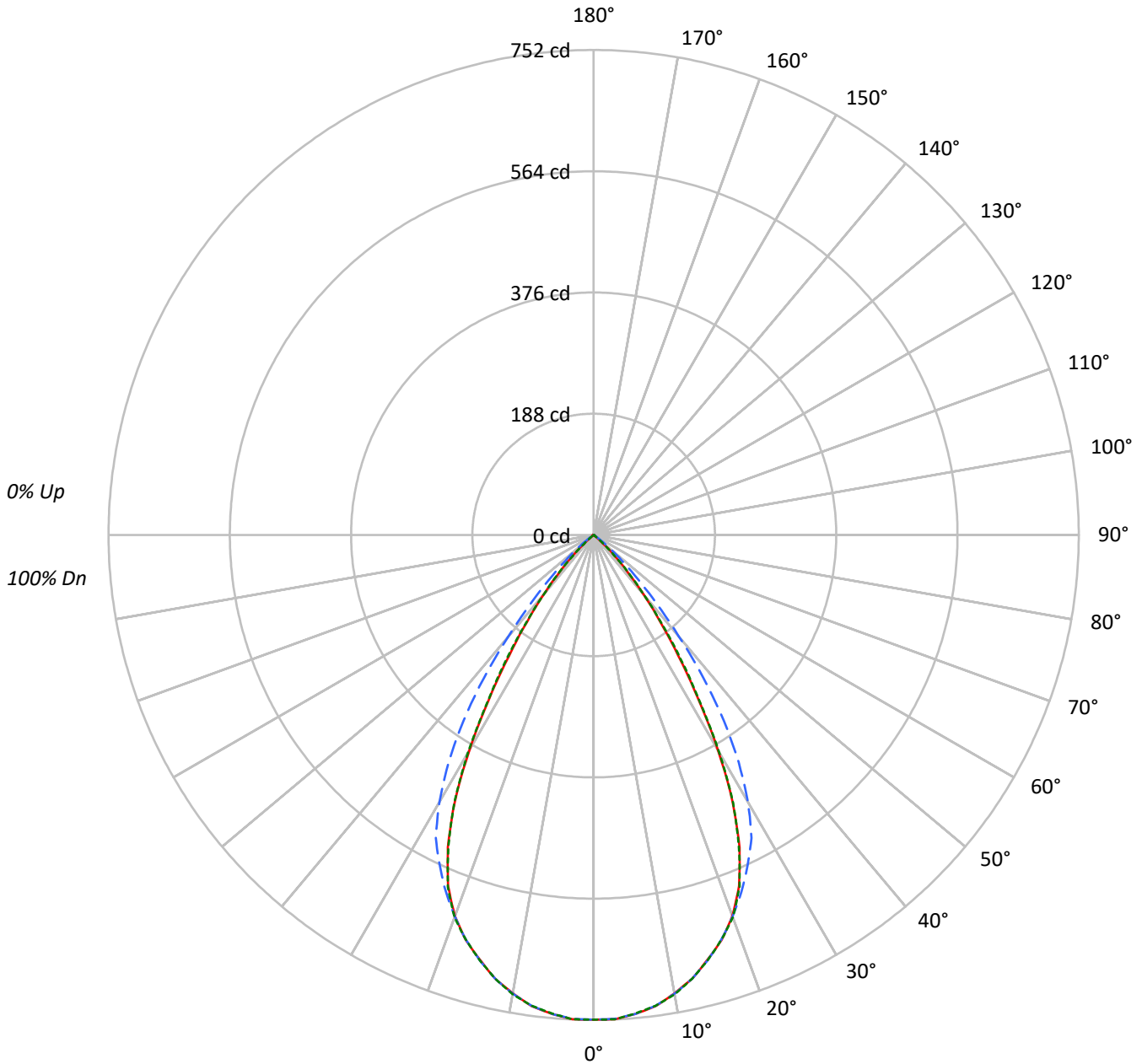
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 750.8 lumens  
Efficiency: N/A  
Efficacy: 53.6 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 14  
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				
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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93		
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87		
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80		
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74		
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69		
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64		
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60		
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56		
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52		
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49		

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

	0°	45°	90°
0°	72821	72821	72821
5°	72487	72487	72419
10°	70994	71062	71131
15°	68390	68460	68460
20°	64835	64907	65051
25°	57165	60372	56940
30°	43134	53504	43526
35°	27047	41640	27957
40°	15251	25925	15251
45°	6398	13084	6302
50°	527	5049	633
55°	236	1064	236
60°	271	136	271
65°	160	160	160
70°	198	198	198
75°	262	262	262
80°	0	391	391
85°	0	778	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 13084 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.4	9.4
10°-20°	191.6	25.5
20°-30°	248.6	33.1
30°-40°	176.7	23.5
40°-50°	57.3	7.6
50°-60°	4.1	0.6
60°-70°	0.7	0.1
70°-80°	0.7	0.1
80°-90°	0.5	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°	510.7	68.0
0°-40°	687.5	91.6
0°-60°	748.9	99.7
0°-90°	750.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	750.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	745	746	745	745	745	70
15°	682	684	683	684	683	191
25°	535	549	565	552	533	239
35°	229	270	352	273	236	146
45°	47	66	96	68	46	39
55°	1	1	6	1	1	2
65°	1	1	1	1	1	1
75°	1	1	1	1	1	1
85°	0	0	1	1	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	751.7	751.7	751.7	751.7	751.7
2.5°	751.7	751.7	751.0	751.0	751.7
5°	745.4	746.1	745.4	745.4	744.7
7.5°	737.0	737.0	736.3	736.3	736.3
10°	721.7	722.4	722.4	722.4	723.1
12.5°	704.9	704.9	704.9	704.9	704.9
15°	681.9	684.0	682.6	684.0	682.6
17.5°	658.9	658.9	658.2	659.6	658.2
20°	628.9	628.9	629.6	631.0	631.0
22.5°	589.2	596.2	599.0	597.6	590.6
25°	534.8	548.8	564.8	551.5	532.7
27.5°	466.5	493.0	529.9	497.2	467.9
30°	385.6	425.3	478.3	426.7	389.1
32.5°	301.9	347.9	418.4	351.4	304.7
35°	228.7	270.5	352.1	273.3	236.4
37.5°	168.7	207.1	279.6	208.5	173.6
40°	120.6	148.5	205.0	151.3	120.6
42.5°	77.4	105.3	144.3	106.0	80.9
45°	46.7	66.2	95.5	67.6	46.0
47.5°	20.9	37.7	59.3	39.0	20.9
50°	3.5	15.3	33.5	16.0	4.2
52.5°	2.1	2.8	16.0	2.8	2.1
55°	1.4	1.4	6.3	1.4	1.4
57.5°	1.4	1.4	1.4	1.4	1.4
60°	1.4	0.7	0.7	0.7	1.4
62.5°	0.7	0.7	0.7	0.7	0.7
65°	0.7	0.7	0.7	0.7	0.7
67.5°	0.7	0.7	0.7	0.7	0.7
70°	0.7	0.7	0.7	0.7	0.7
72.5°	0.7	0.7	0.7	0.7	0.7
75°	0.7	0.7	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7	0.7
80°	0.0	0.7	0.7	0.7	0.7
82.5°	0.0	0.7	0.7	0.7	0.7
85°	0.0	0.0	0.7	0.7	0.7
87.5°	0.0	0.0	0.7	0.7	0.7
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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