

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: P837403

Luminaire Tested: HCSQ425D010-HM40525835-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837403
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-HM40525835-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

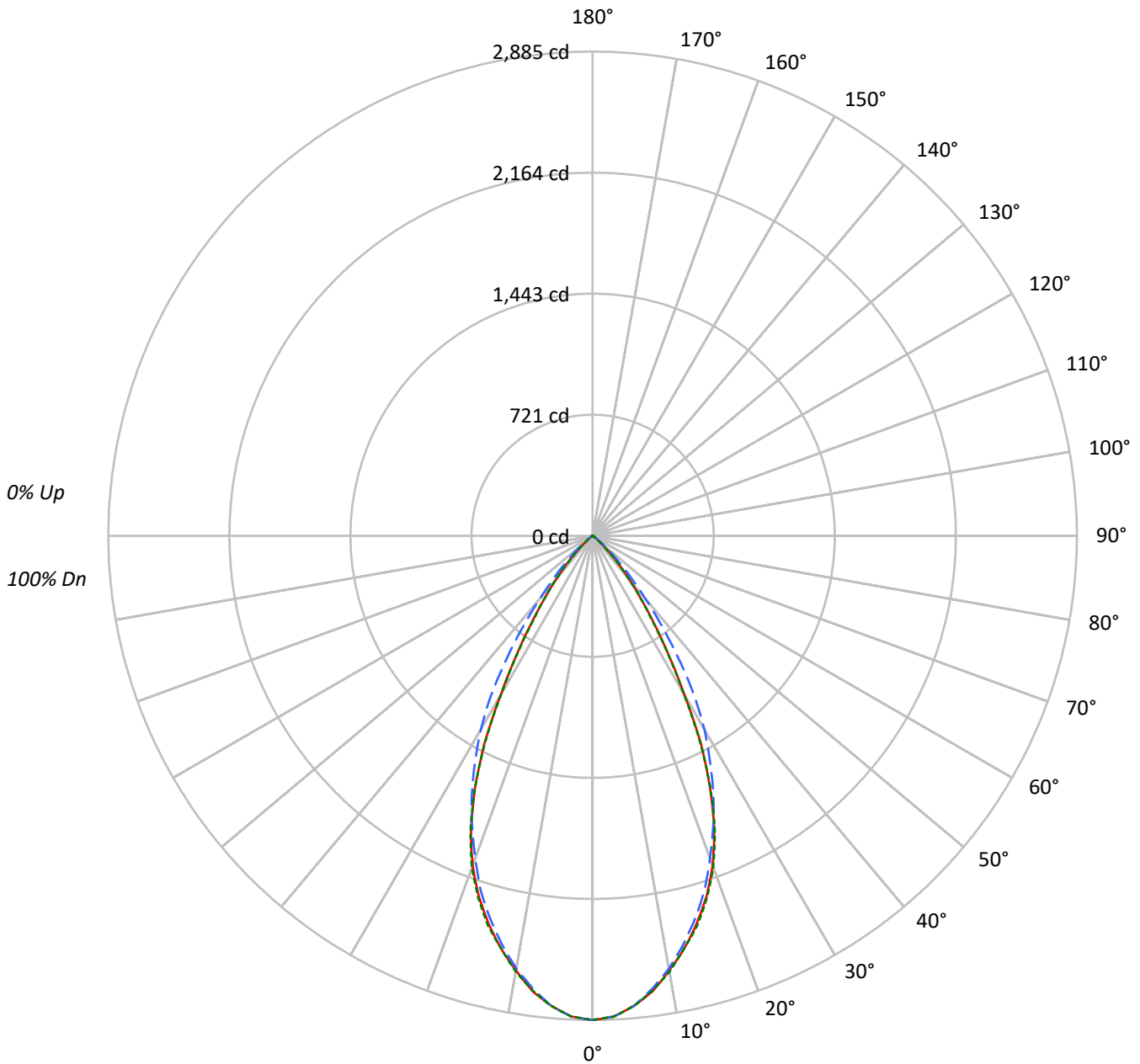
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2331.4 lumens
Efficiency: N/A
Efficacy: 84.2 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

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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									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	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°	279495	279495	279495
5°	273503	273620	273620
10°	258693	257542	259392
15°	240031	236741	241325
20°	215464	210639	216794
25°	176967	182109	177598
30°	122332	148788	121415
35°	75334	105100	73524
40°	42491	61448	42200
45°	19413	30798	18605
50°	4943	12358	5124
55°	2381	3750	2179
60°	1589	1356	1821
65°	1352	1077	1352
70°	991	991	1331
75°	861	861	1310
80°	1283	1283	1283
85°	1334	2556	2556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 30798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.4	11.3
10°-20°	662.8	28.4
20°-30°	757.7	32.5
30°-40°	470.3	20.2
40°-50°	148.2	6.4
50°-60°	19.2	0.8
60°-70°	5.7	0.2
70°-80°	3.0	0.1
80°-90°	2.0	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°	1683.0	72.2
0°-40°	2153.3	92.4
0°-60°	2320.7	99.5
0°-90°	2331.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2331.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2885	2885	2885	2885	2885	
5°	2812	2810	2814	2811	2814	263
15°	2393	2376	2360	2376	2406	667
25°	1656	1679	1704	1679	1662	743
35°	637	735	889	718	622	409
45°	142	170	225	171	136	119
55°	14	14	22	14	13	14
65°	6	6	5	6	6	6
75°	2	2	2	2	4	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°	2885.1	2885.1	2885.1	2885.1	2885.1
2.5°	2867.5	2869.9	2867.5	2872.2	2867.5
5°	2812.5	2810.1	2813.7	2811.3	2813.7
7.5°	2737.6	2723.5	2722.3	2731.7	2732.9
10°	2629.8	2626.3	2618.1	2626.3	2636.9
12.5°	2519.8	2505.7	2494.0	2510.4	2519.8
15°	2393.3	2375.7	2360.5	2375.7	2406.2
17.5°	2254.0	2229.4	2216.5	2234.1	2263.3
20°	2090.0	2064.3	2043.2	2058.4	2102.9
22.5°	1893.3	1891.0	1876.9	1885.1	1901.5
25°	1655.6	1679.1	1703.7	1679.1	1661.5
27.5°	1394.5	1457.8	1514.0	1440.2	1384.0
30°	1093.6	1189.6	1330.1	1182.6	1085.4
32.5°	845.4	946.1	1125.2	933.2	838.4
35°	637.0	735.3	888.7	717.8	621.7
37.5°	468.4	542.1	675.6	537.4	468.4
40°	336.0	384.1	485.9	382.9	333.7
42.5°	233.0	264.6	339.6	262.3	226.0
45°	141.7	169.8	224.8	171.0	135.8
47.5°	74.9	107.7	141.7	103.0	74.9
50°	32.8	57.4	82.0	56.2	34.0
52.5°	17.6	24.6	44.5	24.6	17.6
55°	14.1	14.1	22.2	14.1	12.9
57.5°	10.5	10.5	11.7	10.5	10.5
60°	8.2	8.2	7.0	8.2	9.4
62.5°	7.0	7.0	5.9	7.0	7.0
65°	5.9	5.9	4.7	5.9	5.9
67.5°	4.7	4.7	4.7	4.7	4.7
70°	3.5	3.5	3.5	4.7	4.7
72.5°	3.5	3.5	3.5	3.5	3.5
75°	2.3	2.3	2.3	2.3	3.5
77.5°	2.3	2.3	2.3	2.3	2.3
80°	2.3	2.3	2.3	2.3	2.3
82.5°	1.2	2.3	2.3	2.3	2.3
85°	1.2	2.3	2.3	2.3	2.3
87.5°	1.2	1.2	2.3	2.3	2.3
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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