

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: P837356

Luminaire Tested: HCSQ420D010-HM40525827-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837356
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: HCSQ420D010-HM40525827-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

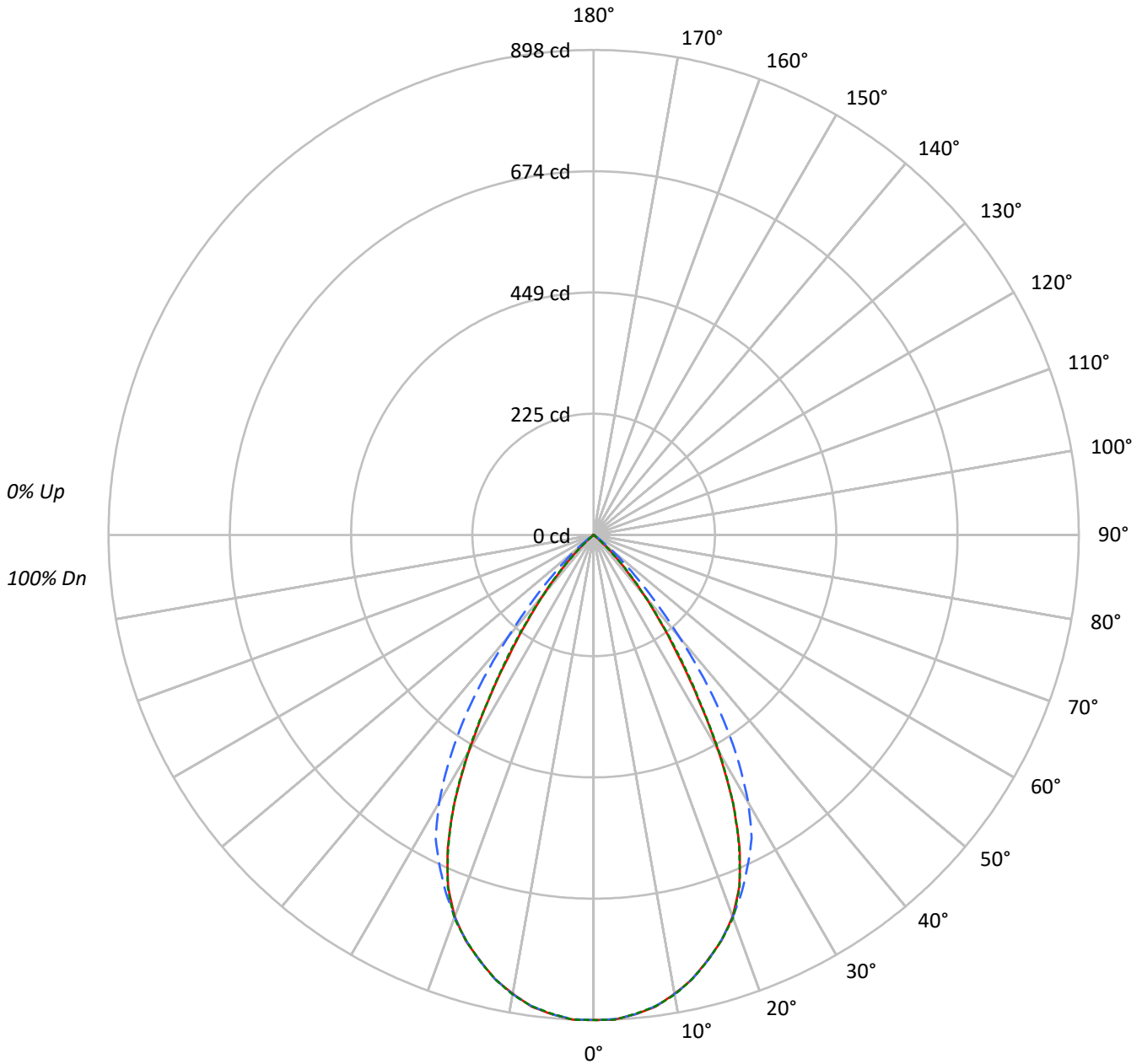
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 897.3 lumens
Efficiency: N/A
Efficacy: 44.9 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): 20
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	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°	87023	87023	87023
5°	86626	86626	86548
10°	84844	84923	85011
15°	81739	81819	81819
20°	77495	77577	77752
25°	68324	72151	68057
30°	51546	63952	52016
35°	32321	49765	33409
40°	18236	30983	18236
45°	7645	15646	7535
50°	633	6028	754
55°	287	1267	287
60°	329	155	329
65°	183	183	183
70°	227	227	227
75°	299	299	299
80°	0	446	446
85°	0	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15646 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	9.4
10°-20°	229.0	25.5
20°-30°	297.1	33.1
30°-40°	211.2	23.5
40°-50°	68.5	7.6
50°-60°	5.0	0.6
60°-70°	0.8	0.1
70°-80°	0.8	0.1
80°-90°	0.6	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°	610.4	68.0
0°-40°	821.6	91.6
0°-60°	895.1	99.8
0°-90°	897.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	897.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	891	892	891	891	890	84
15°	815	818	816	818	816	229
25°	639	656	675	659	637	286
35°	273	323	421	327	282	175
45°	56	79	114	81	55	46
55°	2	2	8	2	2	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°	898.3	898.3	898.3	898.3	898.3
2.5°	898.3	898.3	897.5	897.5	898.3
5°	890.8	891.7	890.8	890.8	890.0
7.5°	880.8	880.8	880.0	880.0	880.0
10°	862.5	863.3	863.3	863.3	864.2
12.5°	842.5	842.5	842.5	842.5	842.5
15°	815.0	817.5	815.8	817.5	815.8
17.5°	787.5	787.5	786.7	788.3	786.7
20°	751.7	751.7	752.5	754.2	754.2
22.5°	704.2	712.5	715.8	714.2	705.8
25°	639.2	655.8	675.0	659.2	636.7
27.5°	557.5	589.2	633.3	594.2	559.2
30°	460.8	508.3	571.7	510.0	465.0
32.5°	360.8	415.8	500.0	420.0	364.2
35°	273.3	323.3	420.8	326.7	282.5
37.5°	201.7	247.5	334.2	249.2	207.5
40°	144.2	177.5	245.0	180.8	144.2
42.5°	92.5	125.8	172.5	126.7	96.7
45°	55.8	79.2	114.2	80.8	55.0
47.5°	25.0	45.0	70.8	46.7	25.0
50°	4.2	18.3	40.0	19.2	5.0
52.5°	2.5	3.3	19.2	3.3	2.5
55°	1.7	1.7	7.5	1.7	1.7
57.5°	1.7	1.7	1.7	1.7	1.7
60°	1.7	0.8	0.8	0.8	1.7
62.5°	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8
67.5°	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8
80°	0.0	0.8	0.8	0.8	0.8
82.5°	0.0	0.8	0.8	0.8	0.8
85°	0.0	0.0	0.8	0.8	0.8
87.5°	0.0	0.0	0.8	0.8	0.8
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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