

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: P837421

Luminaire Tested: HCSQ425D010-HM40525930-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837421
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: HCSQ425D010-HM40525930-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

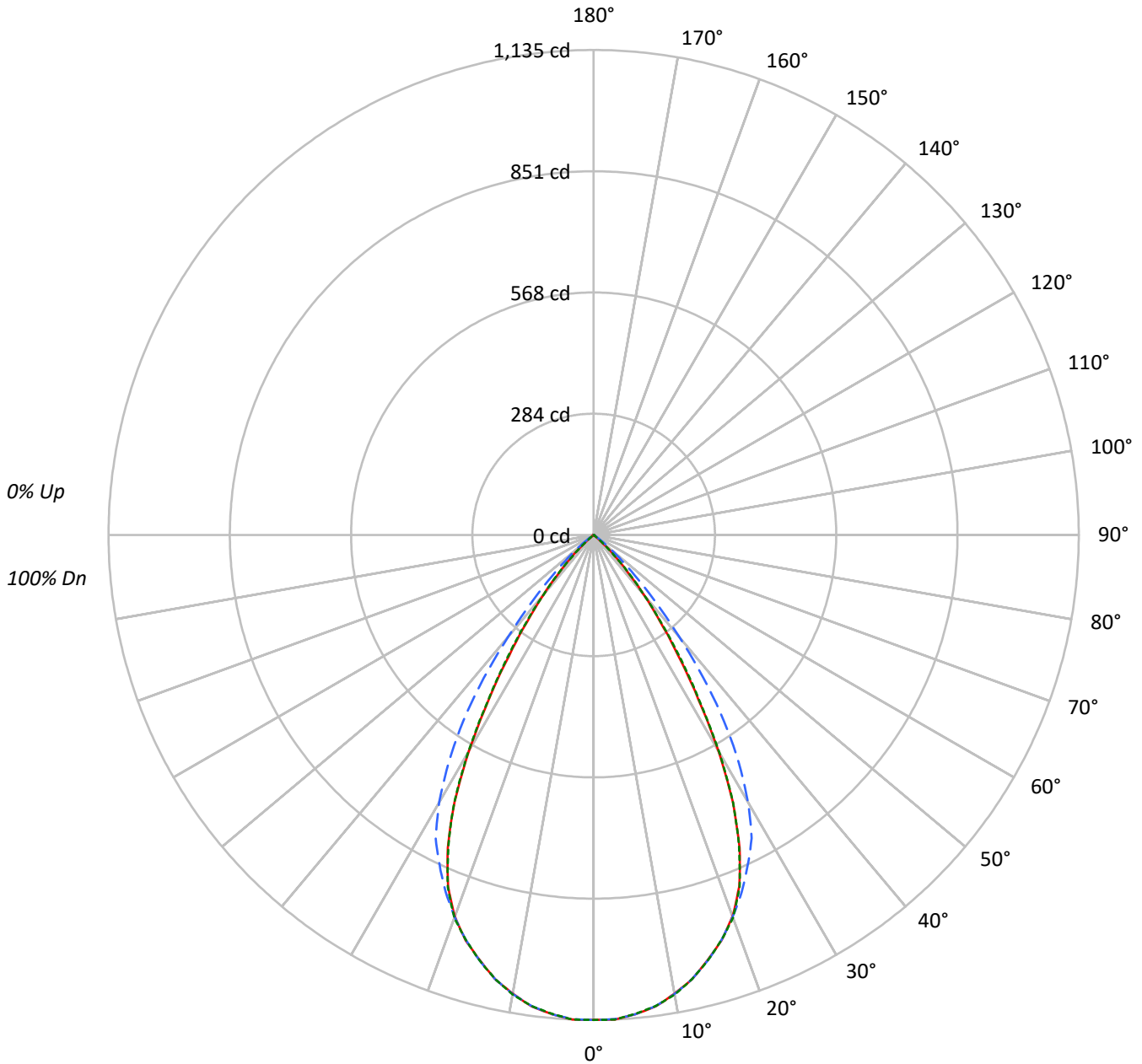
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1134.1 lumens
Efficiency: N/A
Efficacy: 40.9 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): 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					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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80					80			
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74					74			
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69					69			
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64					64			
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60					60			
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56					56			
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52					52			
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49					49			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	109973	109973	109973
5°	109479	109479	109372
10°	107223	107322	107430
15°	103292	103402	103402
20°	97928	98031	98258
25°	86335	91177	86004
30°	65148	80809	65730
35°	40848	62892	42220
40°	23041	39153	23041
45°	9672	19769	9522
50°	799	7611	949
55°	355	1605	355
60°	407	213	407
65°	252	252	252
70°	312	312	312
75°	412	412	412
80°	0	614	614
85°	0	1223	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 19769 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	9.4
10°-20°	289.4	25.5
20°-30°	375.5	33.1
30°-40°	267.0	23.5
40°-50°	86.6	7.6
50°-60°	6.2	0.6
60°-70°	1.1	0.1
70°-80°	1.1	0.1
80°-90°	0.8	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°	771.3	68.0
0°-40°	1038.3	91.5
0°-60°	1131.1	99.7
0°-90°	1134.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1134.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1135	1135	1135	1135	1135	
5°	1126	1127	1126	1126	1125	106
15°	1030	1033	1031	1033	1031	289
25°	808	829	853	833	805	362
35°	345	409	532	413	357	221
45°	71	100	144	102	70	59
55°	2	2	10	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°	1135.2	1135.2	1135.2	1135.2	1135.2
2.5°	1135.2	1135.2	1134.2	1134.2	1135.2
5°	1125.8	1126.8	1125.8	1125.8	1124.7
7.5°	1113.1	1113.1	1112.1	1112.1	1112.1
10°	1090.0	1091.0	1091.0	1091.0	1092.1
12.5°	1064.7	1064.7	1064.7	1064.7	1064.7
15°	1029.9	1033.1	1031.0	1033.1	1031.0
17.5°	995.2	995.2	994.1	996.2	994.1
20°	949.9	949.9	950.9	953.1	953.1
22.5°	889.9	900.4	904.6	902.5	892.0
25°	807.7	828.8	853.0	833.0	804.6
27.5°	704.5	744.5	800.4	750.9	706.6
30°	582.4	642.4	722.4	644.5	587.6
32.5°	456.0	525.5	631.9	530.8	460.2
35°	345.4	408.6	531.8	412.8	357.0
37.5°	254.8	312.8	422.3	314.9	262.2
40°	182.2	224.3	309.6	228.5	182.2
42.5°	116.9	159.0	218.0	160.1	122.2
45°	70.6	100.0	144.3	102.2	69.5
47.5°	31.6	56.9	89.5	59.0	31.6
50°	5.3	23.2	50.5	24.2	6.3
52.5°	3.2	4.2	24.2	4.2	3.2
55°	2.1	2.1	9.5	2.1	2.1
57.5°	2.1	2.1	2.1	2.1	2.1
60°	2.1	1.1	1.1	1.1	2.1
62.5°	1.1	1.1	1.1	1.1	1.1
65°	1.1	1.1	1.1	1.1	1.1
67.5°	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1
72.5°	1.1	1.1	1.1	1.1	1.1
75°	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1
80°	0.0	1.1	1.1	1.1	1.1
82.5°	0.0	1.1	1.1	1.1	1.1
85°	0.0	0.0	1.1	1.1	1.1
87.5°	0.0	0.0	1.1	1.1	1.1
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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