

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: P837298

Luminaire Tested: HCSQ410D010-HM40525930-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837298
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: HCSQ410D010-HM40525930-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

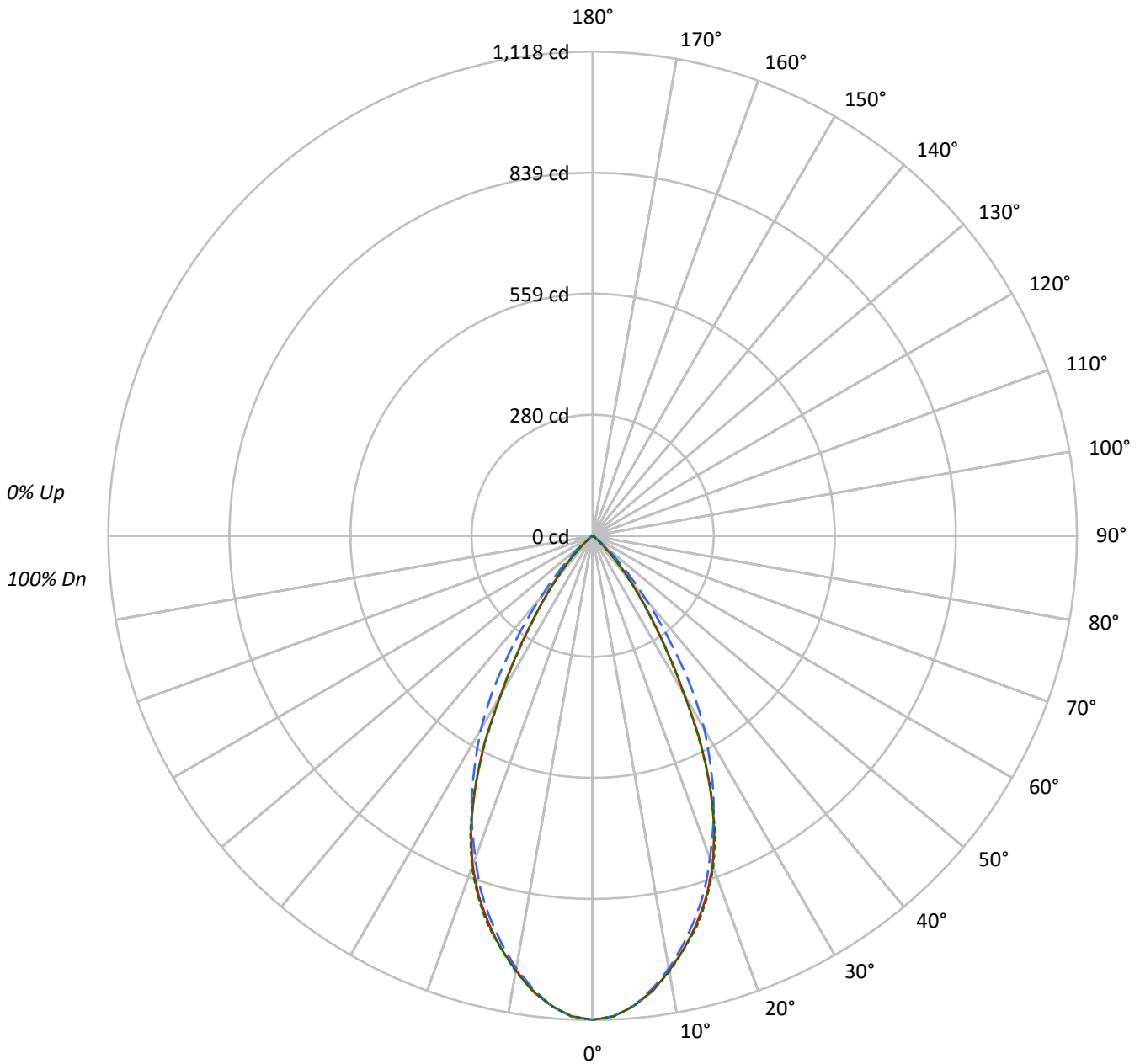
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 903.1 lumens
Efficiency: N/A
Efficacy: 91.2 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): 9.9
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					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	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°	108258	108258	108258
5°	105939	105988	105988
10°	100209	99757	100475
15°	92981	91708	93473
20°	83464	81588	83979
25°	68549	70537	68795
30°	47385	57631	47027
35°	29175	40706	28478
40°	16465	23800	16352
45°	7521	11933	7206
50°	1914	4778	1989
55°	912	1453	844
60°	620	523	698
65°	527	413	527
70°	397	397	510
75°	337	337	524
80°	502	502	502
85°	556	1000	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11933 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.7	11.3
10°-20°	256.7	28.4
20°-30°	293.5	32.5
30°-40°	182.2	20.2
40°-50°	57.4	6.4
50°-60°	7.4	0.8
60°-70°	2.2	0.2
70°-80°	1.2	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°	651.9	72.2
0°-40°	834.1	92.4
0°-60°	898.9	99.5
0°-90°	903.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	903.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1118	1118	1118	1118	1118	
5°	1089	1088	1090	1089	1090	102
15°	927	920	914	920	932	259
25°	641	650	660	650	644	288
35°	247	285	344	278	241	159
45°	55	66	87	66	53	46
55°	5	5	9	5	5	5
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1117.5	1117.5	1117.5	1117.5	1117.5
2.5°	1110.7	1111.6	1110.7	1112.6	1110.7
5°	1089.4	1088.5	1089.9	1089.0	1089.9
7.5°	1060.4	1055.0	1054.5	1058.1	1058.6
10°	1018.7	1017.3	1014.1	1017.3	1021.4
12.5°	976.0	970.6	966.1	972.4	976.0
15°	927.1	920.2	914.4	920.2	932.0
17.5°	873.1	863.6	858.6	865.4	876.7
20°	809.6	799.6	791.4	797.3	814.6
22.5°	733.4	732.5	727.0	730.2	736.6
25°	641.3	650.4	659.9	650.4	643.6
27.5°	540.2	564.7	586.4	557.9	536.1
30°	423.6	460.8	515.2	458.1	420.4
32.5°	327.5	366.5	435.9	361.5	324.7
35°	246.7	284.8	344.2	278.0	240.8
37.5°	181.4	210.0	261.7	208.2	181.4
40°	130.2	148.8	188.2	148.3	129.3
42.5°	90.3	102.5	131.5	101.6	87.5
45°	54.9	65.8	87.1	66.2	52.6
47.5°	29.0	41.7	54.9	39.9	29.0
50°	12.7	22.2	31.7	21.8	13.2
52.5°	6.8	9.5	17.2	9.5	6.8
55°	5.4	5.4	8.6	5.4	5.0
57.5°	4.1	4.1	4.5	4.1	4.1
60°	3.2	3.2	2.7	3.2	3.6
62.5°	2.7	2.7	2.3	2.7	2.7
65°	2.3	2.3	1.8	2.3	2.3
67.5°	1.8	1.8	1.8	1.8	1.8
70°	1.4	1.4	1.4	1.8	1.8
72.5°	1.4	1.4	1.4	1.4	1.4
75°	0.9	0.9	0.9	0.9	1.4
77.5°	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9
82.5°	0.5	0.9	0.9	0.9	0.9
85°	0.5	0.9	0.9	0.9	0.9
87.5°	0.5	0.5	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





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

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