

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

Report Number: P885843

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMBB-400LM-2700K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885843
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-141)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMBB-400LM-2700K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 272.3 lumens
Efficiency: N/A
Efficacy: 45.4 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.55
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

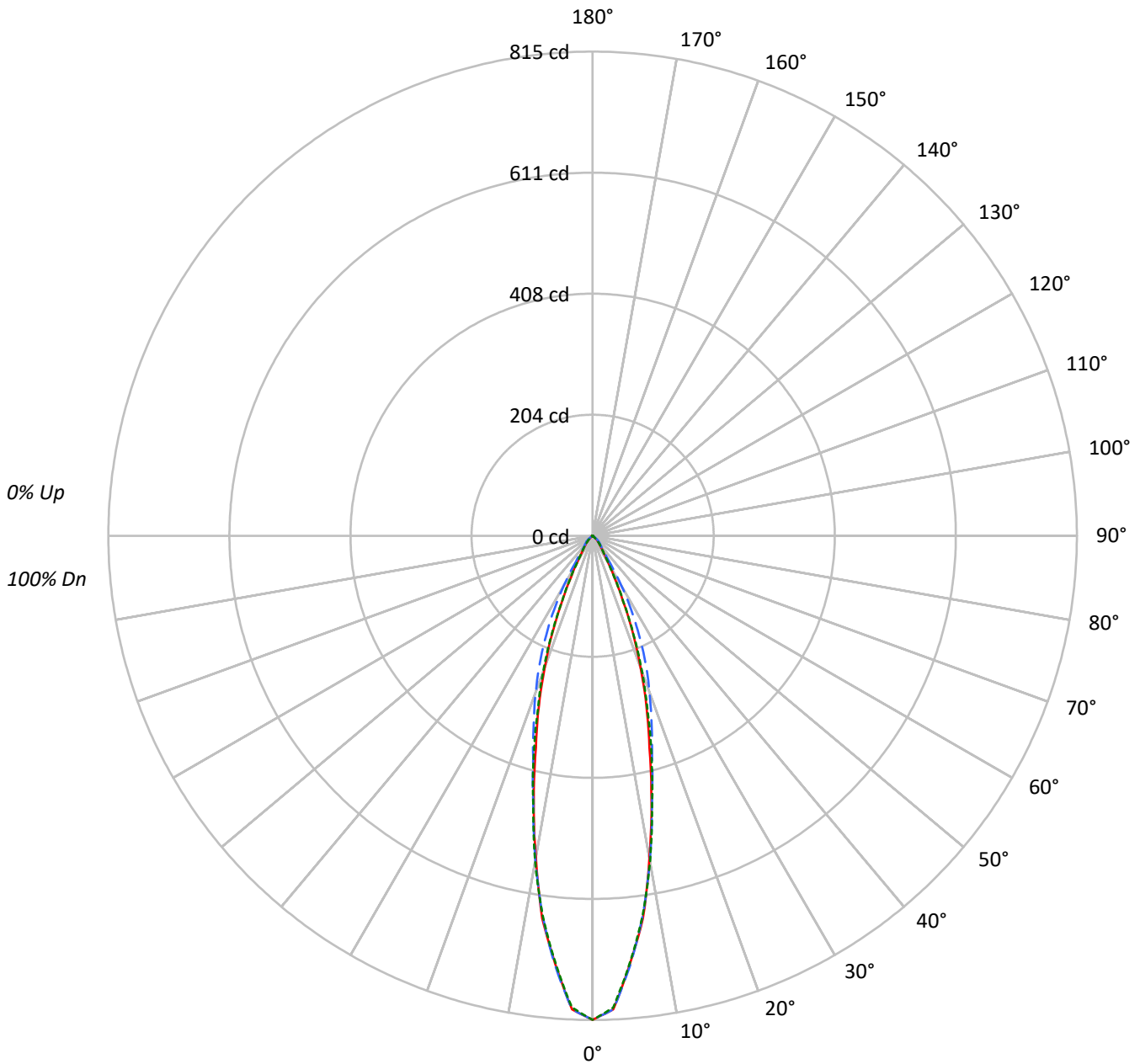
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95						95													
2	110	106	102	100	108	104	101	98	101	99	96	98	96	94	95	94	92	91						91													
3	106	100	96	93	104	99	95	92	96	93	91	94	92	89	92	90	88	87						87													
4	102	95	91	87	100	94	90	87	92	89	86	90	87	85	89	86	84	83						83													
5	98	91	86	83	96	90	86	82	88	84	81	87	83	81	85	82	80	79						79													
6	94	87	82	78	93	86	81	78	85	81	78	83	80	77	82	79	77	75						75													
7	91	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	73	72						72													
8	87	80	75	71	86	79	75	71	78	74	71	77	73	71	76	73	70	69						69													
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68	67						67													
10	82	74	69	66	81	73	69	66	73	68	66	72	68	65	71	68	65	64						64													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1262953	1262953	1262953
5°	1124476	1129143	1121364
10°	866447	872743	875891
15°	591170	620054	613635
20°	387961	460703	401157
25°	205401	316739	208822
30°	95039	172000	93070
35°	51090	62443	51090
40°	34398	42491	36421
45°	21921	32881	21921
50°	4823	24114	4823
55°	2702	2702	2702
60°	3100	0	3100
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 32881 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	23.5
10°-20°	106.6	39.2
20°-30°	69.0	25.3
30°-40°	22.4	8.2
40°-50°	8.8	3.2
50°-60°	1.4	0.5
60°-70°	0.1	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	239.5	88.0
0°-40°	261.9	96.2
0°-60°	272.2	100.0
0°-90°	272.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	272.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	815	815	815	815	815	
5°	723	726	726	721	721	64
15°	368	378	386	384	382	103
25°	120	144	185	145	122	58
35°	27	34	33	33	27	18
45°	10	11	15	12	10	7
55°	1	1	1	1	1	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	814.8	814.8	814.8	814.8	814.8
2.5°	797.8	795.8	797.8	794.8	794.8
5°	722.7	725.7	725.7	720.7	720.7
7.5°	649.6	647.6	645.6	641.6	644.6
10°	550.5	548.5	554.5	557.5	556.5
12.5°	457.4	457.4	461.4	470.4	462.4
15°	368.4	378.4	386.4	384.4	382.4
17.5°	301.3	311.3	329.3	319.3	307.3
20°	235.2	253.2	279.3	257.2	243.2
22.5°	177.2	198.2	233.2	201.2	180.2
25°	120.1	144.1	185.2	145.1	122.1
27.5°	79.1	95.1	141.1	98.1	81.1
30°	53.1	66.1	96.1	65.1	52.0
32.5°	35.0	48.0	56.1	47.0	36.0
35°	27.0	34.0	33.0	33.0	27.0
37.5°	21.0	25.0	25.0	24.0	22.0
40°	17.0	18.0	21.0	18.0	18.0
42.5°	13.0	15.0	18.0	15.0	14.0
45°	10.0	11.0	15.0	12.0	10.0
47.5°	3.0	7.0	13.0	7.0	3.0
50°	2.0	2.0	10.0	2.0	2.0
52.5°	2.0	1.0	5.0	1.0	2.0
55°	1.0	1.0	1.0	1.0	1.0
57.5°	1.0	1.0	1.0	1.0	1.0
60°	1.0	0.0	0.0	1.0	1.0
62.5°	1.0	0.0	0.0	0.0	1.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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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