

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: P885846

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMBB-400LM-4000K

Issue Date: 6/19/2024

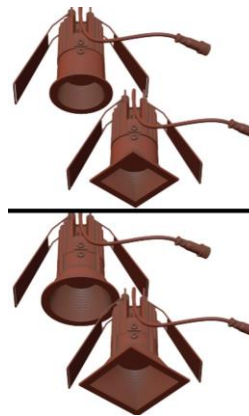
Test Information

Test Method: LM-79-2019
Report Number: P885846
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-4000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 318.4 lumens
Efficiency: N/A
Efficacy: 53.1 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

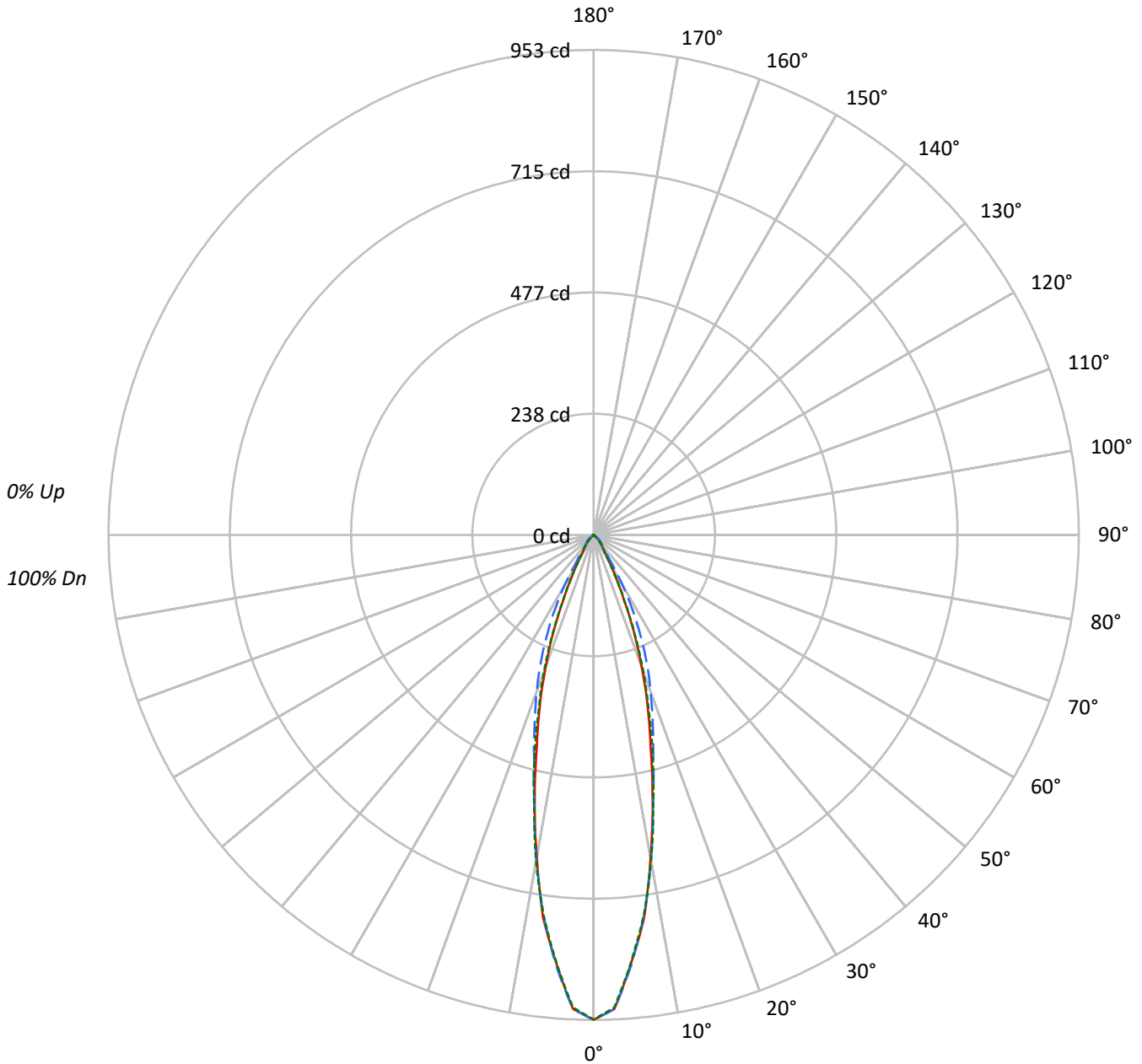
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1476545	1476545	1476545
5°	1314611	1320057	1311032
10°	1012980	1020377	1024155
15°	691142	724841	717299
20°	453611	538559	469116
25°	240120	370270	244224
30°	110968	200995	108999
35°	59794	73040	59794
40°	40266	49776	42694
45°	25647	38580	25647
50°	5546	28213	5546
55°	3243	3243	3243
60°	3720	0	3720
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: 38580 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	23.5
10°-20°	124.7	39.2
20°-30°	80.7	25.3
30°-40°	26.2	8.2
40°-50°	10.3	3.2
50°-60°	1.7	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°	280.0	88.0
0°-40°	306.3	96.2
0°-60°	318.2	100.0
0°-90°	318.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	318.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	953	953	953	953	953	
5°	845	848	848	843	843	75
15°	431	442	452	449	447	121
25°	140	168	216	170	143	67
35°	32	40	39	39	32	21
45°	12	13	18	14	12	8
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°	952.6	952.6	952.6	952.6	952.6
2.5°	932.7	930.3	932.7	929.2	929.2
5°	844.9	848.4	848.4	842.6	842.6
7.5°	759.5	757.1	754.8	750.1	753.6
10°	643.6	641.3	648.3	651.8	650.7
12.5°	534.8	534.8	539.5	550.0	540.7
15°	430.7	442.4	451.7	449.4	447.0
17.5°	352.2	363.9	385.0	373.3	359.3
20°	275.0	296.1	326.5	300.8	284.4
22.5°	207.1	231.7	272.7	235.2	210.6
25°	140.4	168.5	216.5	169.7	142.8
27.5°	92.4	111.2	165.0	114.7	94.8
30°	62.0	77.2	112.3	76.1	60.9
32.5°	41.0	56.2	65.5	55.0	42.1
35°	31.6	39.8	38.6	38.6	31.6
37.5°	24.6	29.3	29.3	28.1	25.7
40°	19.9	21.1	24.6	21.1	21.1
42.5°	15.2	17.6	21.1	17.6	16.4
45°	11.7	12.9	17.6	14.0	11.7
47.5°	3.5	8.2	15.2	8.2	3.5
50°	2.3	2.3	11.7	2.3	2.3
52.5°	2.3	1.2	5.9	1.2	2.3
55°	1.2	1.2	1.2	1.2	1.2
57.5°	1.2	1.2	1.2	1.2	1.2
60°	1.2	0.0	0.0	1.2	1.2
62.5°	1.2	0.0	0.0	0.0	1.2
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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