

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: METALUX

Report Number: P894019

Luminaire Tested: 4MB-9HL-FLT-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894019
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-FLT-UNV-L840
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

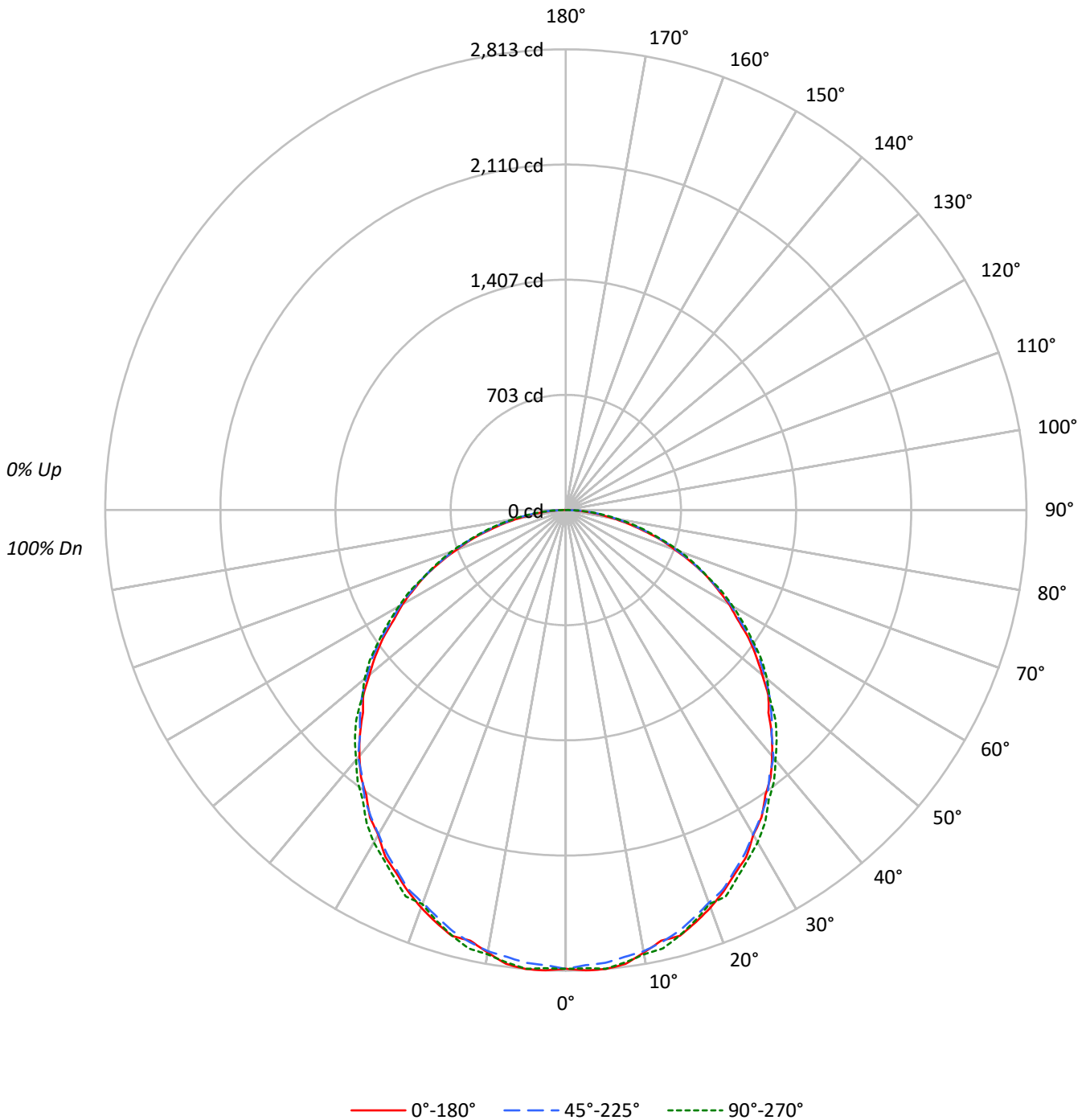
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7762.0 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
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				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	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	69	65	61	61	61	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	45	45	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	40	40	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	35	35	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	32	32	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19931	19931	19931
5°	20094	19826	20077
10°	19820	19767	19898
15°	19823	19619	19806
20°	19561	19324	19396
25°	19209	19104	19446
30°	18820	18790	19257
35°	18456	18615	18772
40°	18207	18320	18500
45°	17619	17886	18215
50°	17332	17586	17761
55°	16903	17112	17292
60°	16376	16616	16771
65°	15891	15952	15952
70°	14776	15130	15506
75°	13605	14138	14438
80°	11997	13042	13484
85°	10768	12049	12939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 18215 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.1	3.4
10°-20°	755.7	9.7
20°-30°	1133.4	14.6
30°-40°	1346.1	17.3
40°-50°	1378.3	17.8
50°-60°	1234.8	15.9
60°-70°	938.1	12.1
70°-80°	546.4	7.0
80°-90°	164.1	2.1
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°	2154.2	27.8
0°-40°	3500.4	45.1
0°-60°	6113.5	78.8
0°-90°	7762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2801	2801	2801	2801	2801	
5°	2813	2802	2776	2793	2811	266
15°	2691	2709	2663	2674	2689	755
25°	2447	2469	2434	2465	2477	1129
35°	2125	2172	2143	2152	2161	1336
45°	1751	1794	1778	1792	1810	1362
55°	1363	1383	1380	1395	1394	1214
65°	944	944	948	960	948	927
75°	495	503	514	530	525	527
85°	132	134	148	157	158	148
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2801.3	2801.3	2801.3	2801.3	2801.3
2.5°	2813.4	2800.1	2782.0	2788.0	2800.1
5°	2813.4	2802.5	2775.9	2792.9	2811.0
7.5°	2795.3	2809.8	2751.7	2751.7	2785.6
10°	2743.3	2771.1	2736.0	2732.4	2754.1
12.5°	2693.6	2744.5	2703.3	2715.4	2742.0
15°	2691.2	2709.4	2663.4	2674.3	2688.8
17.5°	2639.2	2657.3	2607.7	2628.3	2628.3
20°	2583.5	2587.2	2552.1	2596.8	2561.7
22.5°	2519.4	2556.9	2508.5	2523.0	2553.3
25°	2446.8	2468.6	2433.5	2464.9	2477.0
27.5°	2387.5	2414.1	2365.7	2403.2	2406.9
30°	2290.7	2319.7	2287.1	2311.3	2343.9
32.5°	2225.3	2235.0	2218.1	2254.4	2264.1
35°	2124.9	2172.1	2143.1	2151.5	2161.2
37.5°	2054.7	2069.2	2043.8	2072.9	2088.6
40°	1960.3	1982.1	1972.4	1977.3	1991.8
42.5°	1862.3	1885.3	1859.9	1895.0	1905.9
45°	1751.0	1794.5	1777.6	1792.1	1810.3
47.5°	1678.4	1692.9	1688.1	1696.5	1684.4
50°	1565.8	1580.4	1588.8	1599.7	1604.6
52.5°	1465.4	1476.3	1492.0	1498.1	1509.0
55°	1362.6	1383.1	1379.5	1395.2	1394.0
57.5°	1242.8	1273.0	1263.3	1286.3	1286.3
60°	1150.8	1155.6	1167.7	1178.6	1178.6
62.5°	1044.3	1050.4	1056.4	1066.1	1073.3
65°	943.9	943.9	947.5	959.6	947.5
67.5°	827.7	822.9	835.0	849.5	848.3
70°	710.3	716.4	727.3	745.4	745.4
72.5°	609.9	609.9	622.0	631.7	630.5
75°	494.9	503.4	514.3	530.0	525.2
77.5°	392.1	398.1	416.3	430.8	432.0
80°	292.8	298.9	318.3	332.8	329.1
82.5°	204.5	213.0	231.1	242.0	240.8
85°	131.9	134.3	147.6	157.3	158.5
87.5°	60.5	65.3	75.0	78.7	78.7
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	21.93	23.56	22.29	23.88	24.19	22.03	23.67	22.40	23.98	24.30
	3H	23.71	25.19	24.08	25.51	25.87	23.87	25.35	24.24	25.68	26.04
	4H	24.37	25.77	24.77	26.11	26.49	24.57	25.96	24.96	26.31	26.69
	6H	24.84	26.14	25.25	26.50	26.89	25.11	26.41	25.53	26.78	27.17
	8H	24.99	26.23	25.42	26.62	27.02	25.30	26.54	25.73	26.93	27.33
	12H	25.10	26.29	25.53	26.67	27.10	25.45	26.64	25.88	27.02	27.45
4H	2H	22.57	23.97	22.97	24.32	24.69	22.65	24.05	23.05	24.40	24.77
	3H	24.57	25.75	24.98	26.14	26.54	24.72	25.89	25.13	26.29	26.69
	4H	25.36	26.43	25.80	26.84	27.28	25.55	26.62	25.99	27.03	27.47
	6H	25.96	26.89	26.42	27.33	27.79	26.24	27.17	26.70	27.61	28.07
	8H	26.16	27.03	26.62	27.47	27.94	26.49	27.36	26.95	27.80	28.27
	12H	26.31	27.10	26.79	27.57	28.04	26.69	27.47	27.17	27.94	28.41
8H	4H	25.70	26.57	26.16	27.01	27.48	25.87	26.74	26.33	27.18	27.65
	6H	26.42	27.15	26.92	27.64	28.11	26.69	27.42	27.18	27.90	28.38
	8H	26.70	27.35	27.20	27.85	28.34	27.02	27.67	27.53	28.18	28.67
	12H	26.92	27.50	27.43	27.99	28.55	27.31	27.89	27.82	28.38	28.94
12H	4H	25.74	26.53	26.22	27.00	27.47	25.90	26.68	26.38	27.16	27.63
	6H	26.50	27.15	27.00	27.65	28.14	26.75	27.40	27.26	27.91	28.39
	8H	26.83	27.41	27.34	27.90	28.46	27.15	27.72	27.65	28.21	28.77