

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: P893800

Luminaire Tested: 4MB-7HL-A-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893800
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-A-UNV-L950
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

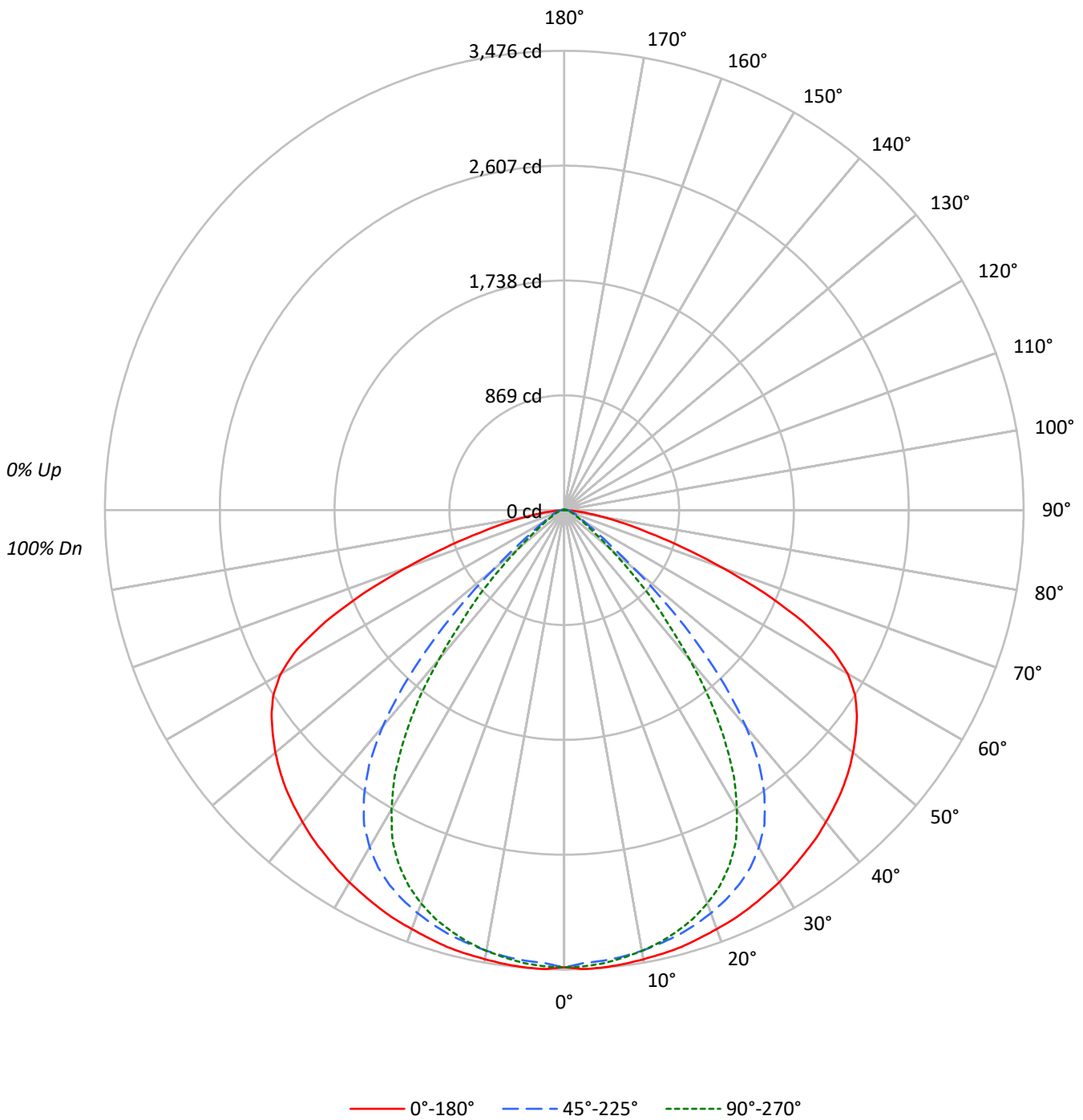
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7003.0 lumens
Efficiency: N/A
Efficacy: 135.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	35220	35220	35220
5°	35496	34988	35188
10°	35683	35014	35020
15°	36077	35098	34795
20°	36553	35164	34321
25°	37297	35152	33264
30°	38239	34626	30728
35°	39411	32845	26228
40°	40954	28446	19616
45°	42907	20469	13059
50°	45212	11217	7157
55°	48009	5513	4121
60°	50493	3636	2850
65°	47923	2978	2253
70°	37727	2707	2084
75°	26163	2676	1979
80°	17213	2686	2452
85°	9851	4125	4207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 50493 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.0	4.7
10°-20°	946.6	13.5
20°-30°	1442.1	20.6
30°-40°	1637.8	23.4
40°-50°	1315.1	18.8
50°-60°	705.4	10.1
60°-70°	373.1	5.3
70°-80°	169.1	2.4
80°-90°	53.9	0.8
90°-100°	16.7	0.2
100°-110°	6.0	0.1
110°-120°	1.9	0.0
120°-130°	1.4	0.0
130°-140°	1.5	0.0
140°-150°	1.5	0.0
150°-160°	1.4	0.0
160°-170°	1.1	0.0
170°-180°	0.4	0.0
0°-30°	2716.7	38.8
0°-40°	4354.5	62.2
0°-60°	6375.0	91.0
0°-90°	6971.2	99.5
90°-120°	24.5	0.4
90°-150°	28.9	0.4
90°-180°	32.0	0.5
0°-180°	7003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3458	3458	3458	3458	3458	
5°	3472	3465	3422	3451	3442	331
15°	3422	3400	3329	3320	3300	967
25°	3319	3266	3128	3019	2960	1534
35°	3170	3035	2642	2259	2110	1989
45°	2979	2521	1421	988	907	2301
55°	2704	1009	310	242	232	2411
65°	1989	235	124	100	94	1923
75°	665	134	68	54	50	752
85°	84	50	35	35	36	115
90°	3	23	26	29	28	5
95°	3	9	20	18	17	3
105°	2	1	4	9	11	2
115°	1	1	1	3	3	1
125°	1	1	1	2	1	1
135°	2	1	2	2	2	1
145°	2	2	3	3	3	1
155°	3	3	3	4	3	1
165°	3	3	4	5	4	1
175°	3	3	5	5	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3458.3	3458.3	3458.3	3458.3	3458.3
2.5°	3476.0	3469.4	3430.2	3462.9	3454.4
5°	3472.1	3464.9	3422.4	3451.1	3442.0
7.5°	3463.6	3454.4	3406.7	3430.2	3415.8
10°	3450.5	3441.3	3385.8	3402.1	3386.4
12.5°	3437.4	3421.7	3358.3	3363.5	3348.5
15°	3421.7	3400.1	3328.9	3319.7	3300.1
17.5°	3397.5	3373.3	3290.3	3268.7	3241.3
20°	3372.7	3340.0	3244.6	3200.8	3166.8
22.5°	3349.8	3304.7	3192.3	3122.3	3076.5
25°	3319.1	3266.1	3128.2	3019.0	2960.2
27.5°	3285.7	3221.0	3049.1	2885.6	2815.7
30°	3251.7	3166.8	2944.5	2718.3	2613.0
32.5°	3211.9	3107.3	2819.0	2515.6	2391.4
35°	3170.0	3035.4	2641.8	2258.7	2109.6
37.5°	3130.1	2952.3	2423.4	1946.9	1814.8
40°	3080.5	2855.6	2139.7	1612.1	1475.5
42.5°	3031.4	2706.5	1799.8	1291.2	1160.4
45°	2979.1	2520.9	1421.2	988.5	906.7
47.5°	2919.6	2266.5	1040.1	719.8	649.2
50°	2853.6	1900.4	708.0	490.3	451.7
52.5°	2781.0	1472.2	460.2	338.0	315.8
55°	2703.9	1008.7	310.5	242.5	232.1
57.5°	2611.1	632.2	230.1	182.4	176.5
60°	2479.0	409.9	178.5	147.1	139.9
62.5°	2280.3	293.5	149.7	120.3	114.4
65°	1988.7	234.7	123.6	100.0	93.5
67.5°	1639.6	200.7	105.9	85.6	81.1
70°	1267.0	176.5	90.9	74.5	70.0
72.5°	945.3	154.3	78.4	64.7	58.8
75°	664.9	134.0	68.0	53.6	50.3
77.5°	467.4	115.7	56.2	45.8	45.1
80°	293.5	96.1	45.8	42.5	41.8
82.5°	178.5	75.8	39.9	39.2	38.6
85°	84.3	50.3	35.3	35.3	36.0
87.5°	27.5	33.3	30.1	31.4	31.4
90°	3.3	22.9	25.5	29.4	28.1
92.5°	3.3	16.3	23.5	23.5	19.0
95°	3.3	9.2	20.3	17.7	17.0
97.5°	3.3	4.6	15.0	17.0	16.3
100°	3.3	2.6	11.1	15.0	16.3
102.5°	2.6	2.0	7.2	12.4	13.7
105°	2.0	1.3	3.9	9.2	11.1
107.5°	1.3	1.3	2.6	6.5	7.8
110°	1.3	0.7	2.0	4.6	5.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	0.7	2.0	3.3	3.3
115°	1.3	1.3	1.3	2.6	2.6
117.5°	1.3	1.3	1.3	2.0	2.0
120°	1.3	1.3	1.3	2.0	1.3
122.5°	1.3	1.3	1.3	2.0	1.3
125°	1.3	1.3	1.3	2.0	1.3
127.5°	1.3	1.3	2.0	2.0	1.3
130°	1.3	1.3	2.0	2.0	1.3
132.5°	1.3	1.3	2.0	2.0	2.0
135°	2.0	1.3	2.0	2.0	2.0
137.5°	2.0	2.0	2.0	2.6	2.0
140°	2.0	2.0	2.6	2.6	2.0
142.5°	2.0	2.0	2.6	2.6	2.6
145°	2.0	2.0	2.6	2.6	2.6
147.5°	2.0	2.0	2.6	3.3	2.6
150°	2.0	2.6	3.3	3.3	2.6
152.5°	2.0	2.6	3.3	3.3	3.3
155°	2.6	2.6	3.3	3.9	3.3
157.5°	2.6	2.6	3.3	3.9	3.3
160°	2.6	2.6	3.9	3.9	3.9
162.5°	2.6	3.3	3.9	4.6	3.9
165°	2.6	3.3	3.9	4.6	3.9
167.5°	2.6	3.3	3.9	4.6	4.6
170°	2.6	3.3	4.6	4.6	4.6
172.5°	3.3	3.3	4.6	5.2	4.6
175°	3.3	3.3	4.6	5.2	4.6
177.5°	3.3	3.3	4.6	5.2	4.6
180°	4.6	4.6	4.6	4.6	4.6



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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	22.04	23.43	22.41	23.75	24.08	10.25	11.64	10.62	11.96	12.29
	3H	24.94	26.17	25.33	26.51	26.89	11.21	12.44	11.60	12.78	13.16
	4H	25.72	26.87	26.13	27.23	27.63	11.63	12.78	12.04	13.14	13.53
	6H	26.16	27.22	26.58	27.60	28.00	12.11	13.17	12.53	13.55	13.95
	8H	26.26	27.26	26.70	27.66	28.08	12.42	13.42	12.85	13.82	14.24
	12H	26.30	27.26	26.74	27.65	28.09	12.82	13.78	13.26	14.18	14.62
4H	2H	21.85	23.00	22.26	23.36	23.76	10.77	11.92	11.18	12.28	12.67
	3H	24.77	25.71	25.19	26.13	26.54	11.98	12.92	12.40	13.33	13.75
	4H	25.56	26.41	26.01	26.84	27.29	12.52	13.36	12.96	13.79	14.24
	6H	26.09	26.82	26.56	27.28	27.75	13.15	13.88	13.62	14.33	14.81
	8H	26.24	26.92	26.71	27.37	27.85	13.55	14.24	14.03	14.69	15.17
	12H	26.31	26.92	26.81	27.41	27.89	14.08	14.69	14.58	15.18	15.66
8H	4H	25.45	26.13	25.93	26.59	27.07	13.08	13.76	13.55	14.22	14.70
	6H	25.98	26.54	26.49	27.05	27.54	13.85	14.41	14.36	14.91	15.41
	8H	26.15	26.65	26.67	27.17	27.68	14.37	14.88	14.90	15.40	15.90
	12H	26.27	26.71	26.79	27.22	27.80	15.08	15.52	15.60	16.02	16.60
12H	4H	25.41	26.02	25.90	26.51	26.99	13.33	13.93	13.82	14.42	14.91
	6H	25.93	26.43	26.45	26.95	27.46	14.12	14.63	14.65	15.15	15.65
	8H	26.12	26.57	26.64	27.07	27.65	14.72	15.17	15.24	15.67	16.25