

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: P893144

Luminaire Tested: 4MB-10HL-A-UNV-L950

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893144  
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-10HL-A-UNV-L950  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

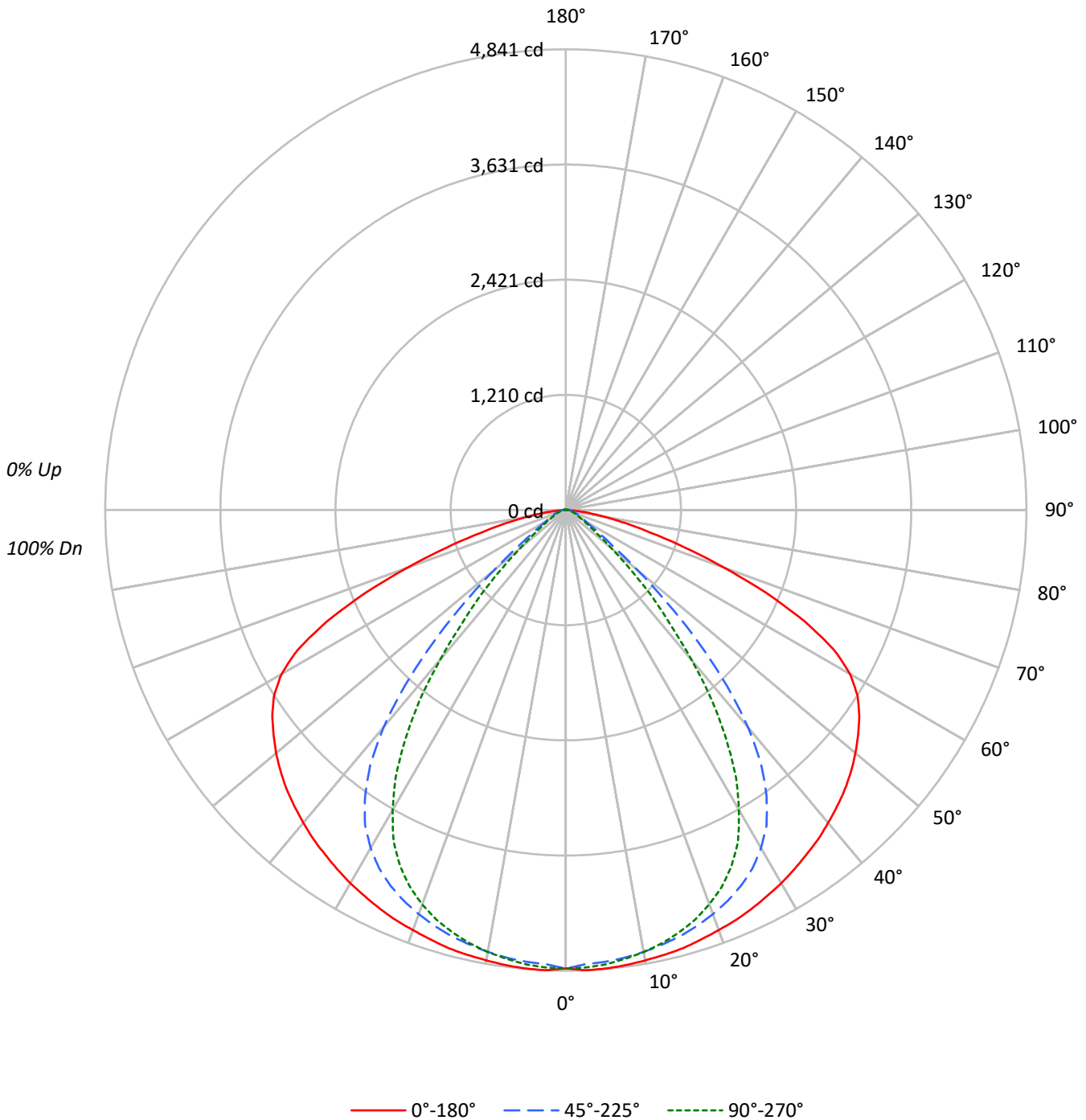
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9753.0 lumens  
Efficiency: N/A  
Efficacy: 129.2 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): 75.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 7.45  
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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	34	32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	49051	49051	49051
5°	49434	48726	49006
10°	49695	48762	48772
15°	50244	48881	48458
20°	50906	48973	47798
25°	51942	48955	46326
30°	53256	48224	42795
35°	54889	45742	36528
40°	57035	39618	27319
45°	59757	28509	18188
50°	62967	15622	9967
55°	66862	7679	5739
60°	70322	5064	3968
65°	66742	4147	3138
70°	52541	3770	2900
75°	36433	3726	2758
80°	23976	3736	3419
85°	13730	5749	5854

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 60°  
 Luminance: 70322 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	456.8	4.7
10°-20°	1318.3	13.5
20°-30°	2008.5	20.6
30°-40°	2280.9	23.4
40°-50°	1831.5	18.8
50°-60°	982.5	10.1
60°-70°	519.6	5.3
70°-80°	235.6	2.4
80°-90°	75.0	0.8
90°-100°	23.2	0.2
100°-110°	8.3	0.1
110°-120°	2.6	0.0
120°-130°	1.9	0.0
130°-140°	2.0	0.0
140°-150°	2.1	0.0
150°-160°	2.0	0.0
160°-170°	1.5	0.0
170°-180°	0.6	0.0
0°-30°	3783.6	38.8
0°-40°	6064.5	62.2
0°-60°	8878.5	91.0
0°-90°	9708.7	99.5
90°-120°	34.1	0.3
90°-150°	40.2	0.4
90°-180°	44.0	0.5
0°-180°	9753.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4816	4816	4816	4816	4816	
5°	4836	4826	4766	4806	4794	461
15°	4765	4735	4636	4623	4596	1347
25°	4622	4549	4357	4204	4123	2136
35°	4415	4227	3679	3146	2938	2770
45°	4149	3511	1979	1377	1263	3205
55°	3766	1405	432	338	323	3357
65°	2770	327	172	139	130	2678
75°	926	187	95	75	70	1047
85°	118	70	49	49	50	160
90°	5	32	36	41	39	7
95°	5	13	28	25	24	4
105°	3	2	6	13	16	3
115°	2	2	2	4	4	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	4	4	4	2
155°	4	4	5	6	5	1
165°	4	5	6	6	6	1
175°	5	5	6	7	6	0
180°	6	6	6	6	6	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4816.4	4816.4	4816.4	4816.4	4816.4
2.5°	4841.0	4831.9	4777.2	4822.8	4810.9
5°	4835.5	4825.5	4766.3	4806.4	4793.6
7.5°	4823.7	4810.9	4744.5	4777.2	4757.2
10°	4805.5	4792.7	4715.3	4738.1	4716.2
12.5°	4787.2	4765.4	4677.1	4684.4	4663.4
15°	4765.4	4735.3	4636.1	4623.4	4596.0
17.5°	4731.7	4698.0	4582.4	4552.3	4514.1
20°	4697.1	4651.6	4518.7	4457.7	4410.3
22.5°	4665.2	4602.4	4445.8	4348.4	4284.7
25°	4622.4	4548.7	4356.6	4204.5	4122.6
27.5°	4576.0	4485.9	4246.4	4018.8	3921.4
30°	4528.7	4410.3	4100.8	3785.7	3639.1
32.5°	4473.1	4327.5	3925.9	3503.5	3330.5
35°	4414.9	4227.3	3679.2	3145.7	2938.1
37.5°	4359.3	4111.7	3375.1	2711.4	2527.5
40°	4290.1	3976.9	2980.0	2245.2	2054.9
42.5°	4221.8	3769.3	2506.5	1798.2	1616.1
45°	4149.0	3510.8	1979.4	1376.6	1262.8
47.5°	4066.2	3156.6	1448.6	1002.4	904.1
50°	3974.2	2646.7	986.0	682.9	629.1
52.5°	3873.1	2050.4	641.0	470.7	439.8
55°	3765.7	1404.9	432.5	337.8	323.2
57.5°	3636.4	880.4	320.5	254.0	245.8
60°	3452.5	570.9	248.6	204.9	194.8
62.5°	3175.7	408.8	208.5	167.5	159.3
65°	2769.6	326.9	172.1	139.3	130.2
67.5°	2283.5	279.5	147.5	119.3	112.9
70°	1764.5	245.8	126.6	103.8	97.4
72.5°	1316.5	214.9	109.3	90.1	81.9
75°	925.9	186.6	94.7	74.7	70.1
77.5°	651.0	161.2	78.3	63.7	62.8
80°	408.8	133.8	63.7	59.2	58.3
82.5°	248.6	105.6	55.5	54.6	53.7
85°	117.5	70.1	49.2	49.2	50.1
87.5°	38.2	46.4	41.9	43.7	43.7
90°	4.6	31.9	35.5	41.0	39.2
92.5°	4.6	22.8	32.8	32.8	26.4
95°	4.6	12.7	28.2	24.6	23.7
97.5°	4.6	6.4	20.9	23.7	22.8
100°	4.6	3.6	15.5	20.9	22.8
102.5°	3.6	2.7	10.0	17.3	19.1
105°	2.7	1.8	5.5	12.7	15.5
107.5°	1.8	1.8	3.6	9.1	10.9
110°	1.8	0.9	2.7	6.4	7.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	0.9	2.7	4.6	4.6
115°	1.8	1.8	1.8	3.6	3.6
117.5°	1.8	1.8	1.8	2.7	2.7
120°	1.8	1.8	1.8	2.7	1.8
122.5°	1.8	1.8	1.8	2.7	1.8
125°	1.8	1.8	1.8	2.7	1.8
127.5°	1.8	1.8	2.7	2.7	1.8
130°	1.8	1.8	2.7	2.7	1.8
132.5°	1.8	1.8	2.7	2.7	2.7
135°	2.7	1.8	2.7	2.7	2.7
137.5°	2.7	2.7	2.7	3.6	2.7
140°	2.7	2.7	3.6	3.6	2.7
142.5°	2.7	2.7	3.6	3.6	3.6
145°	2.7	2.7	3.6	3.6	3.6
147.5°	2.7	2.7	3.6	4.6	3.6
150°	2.7	3.6	4.6	4.6	3.6
152.5°	2.7	3.6	4.6	4.6	4.6
155°	3.6	3.6	4.6	5.5	4.6
157.5°	3.6	3.6	4.6	5.5	4.6
160°	3.6	3.6	5.5	5.5	5.5
162.5°	3.6	4.6	5.5	6.4	5.5
165°	3.6	4.6	5.5	6.4	5.5
167.5°	3.6	4.6	5.5	6.4	6.4
170°	3.6	4.6	6.4	6.4	6.4
172.5°	4.6	4.6	6.4	7.3	6.4
175°	4.6	4.6	6.4	7.3	6.4
177.5°	4.6	4.6	6.4	7.3	6.4
180°	6.4	6.4	6.4	6.4	6.4



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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	23.19	24.58	23.56	24.90	25.23	11.40	12.79	11.78	13.11	13.44
	3H	26.09	27.32	26.48	27.66	28.04	12.36	13.59	12.75	13.93	14.31
	4H	26.87	28.02	27.28	28.38	28.78	12.78	13.93	13.19	14.29	14.68
	6H	27.31	28.37	27.73	28.75	29.15	13.26	14.32	13.68	14.70	15.10
	8H	27.41	28.41	27.85	28.81	29.23	13.57	14.57	14.01	14.97	15.39
	12H	27.45	28.41	27.89	28.80	29.24	13.97	14.93	14.41	15.33	15.77
4H	2H	23.00	24.15	23.41	24.51	24.91	11.92	13.07	12.33	13.43	13.82
	3H	25.92	26.86	26.34	27.28	27.69	13.13	14.07	13.55	14.48	14.90
	4H	26.71	27.56	27.16	27.99	28.44	13.67	14.51	14.11	14.94	15.39
	6H	27.24	27.97	27.71	28.43	28.90	14.30	15.03	14.77	15.49	15.96
	8H	27.39	28.07	27.86	28.52	29.00	14.70	15.39	15.18	15.84	16.32
	12H	27.47	28.07	27.96	28.56	29.05	15.23	15.84	15.73	16.33	16.81
8H	4H	26.60	27.28	27.08	27.74	28.22	14.23	14.91	14.70	15.37	15.85
	6H	27.13	27.69	27.64	28.20	28.69	15.00	15.56	15.51	16.07	16.56
	8H	27.30	27.80	27.82	28.32	28.83	15.52	16.03	16.05	16.55	17.05
	12H	27.42	27.87	27.94	28.37	28.95	16.23	16.67	16.75	17.18	17.75
12H	4H	26.56	27.17	27.05	27.66	28.14	14.48	15.08	14.97	15.57	16.06
	6H	27.08	27.58	27.60	28.11	28.61	15.28	15.78	15.80	16.30	16.80
	8H	27.27	27.72	27.79	28.22	28.80	15.87	16.32	16.39	16.82	17.40