

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: P893198

Luminaire Tested: 4MB-10HL-LVRA-UNV-L935

Issue Date: 11/11/2024

**Test Information**

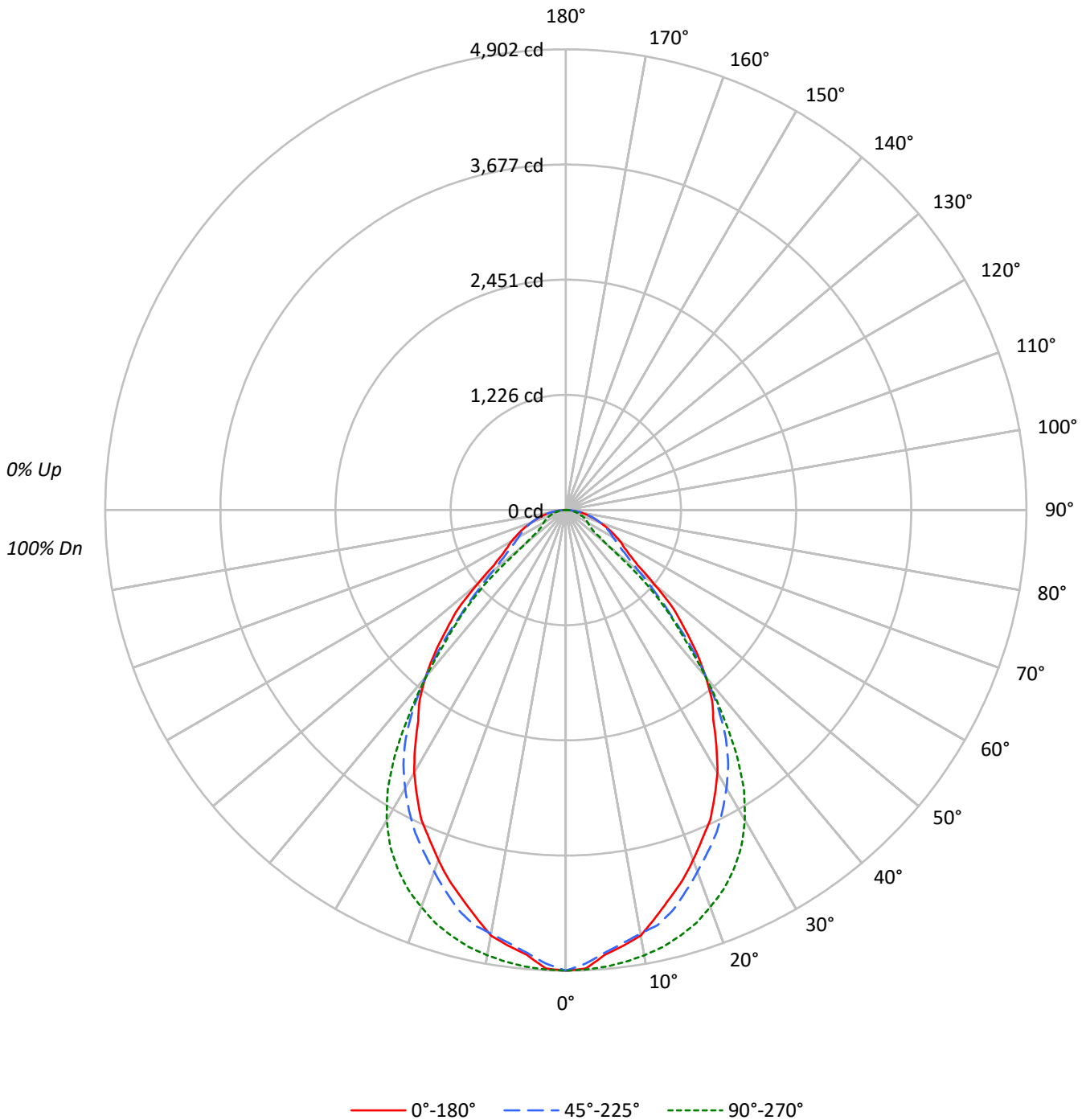
Test Method: LM-79-2019  
Report Number: P893198  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-LVRA-UNV-L935  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7955.0 lumens  
Efficiency: N/A  
Efficacy: 105.4 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12  
Luminous Opening: Rectangular (W 0.38' 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
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	92	90	90	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	37	35

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

	0°	45°	90°
0°	34874	34874	34874
5°	33934	33780	34836
10°	33213	33067	34755
15°	31498	32466	34560
20°	30006	31019	34033
25°	28542	29762	33164
30°	26518	28095	31312
35°	23777	25819	27465
40°	21543	21589	21472
45°	18012	15952	15559
50°	13606	11228	6362
55°	10233	8980	4012
60°	9510	8269	3865
65°	8847	8253	3870
70°	8094	8094	3811
75°	7675	7884	3681
80°	7093	7453	3778
85°	6188	6498	4123

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 18432 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	452.8	5.7
10°-20°	1247.6	15.7
20°-30°	1769.1	22.2
30°-40°	1822.5	22.9
40°-50°	1273.0	16.0
50°-60°	610.8	7.7
60°-70°	428.5	5.4
70°-80°	267.9	3.4
80°-90°	82.9	1.0
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°	3469.4	43.6
0°-40°	5291.9	66.5
0°-60°	7175.7	90.2
0°-90°	7955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7955.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4902	4902	4902	4902	4902	
5°	4751	4745	4730	4854	4878	450
15°	4276	4308	4408	4534	4692	1204
25°	3636	3672	3791	4048	4224	1662
35°	2738	2812	2972	3034	3162	1725
45°	1790	1832	1585	1505	1546	1379
55°	825	784	724	464	323	773
65°	526	491	490	373	230	521
75°	279	275	287	248	134	294
85°	76	76	80	78	50	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4901.5	4901.5	4901.5	4901.5	4901.5
2.5°	4882.6	4867.4	4830.8	4897.7	4892.7
5°	4751.2	4744.9	4729.7	4853.5	4877.5
7.5°	4676.7	4664.0	4646.3	4782.8	4849.7
10°	4597.1	4612.2	4576.9	4701.9	4810.6
12.5°	4432.9	4473.3	4521.3	4618.6	4762.6
15°	4276.2	4307.8	4407.6	4533.9	4691.8
17.5°	4129.7	4166.3	4252.2	4441.7	4609.7
20°	3962.9	4013.4	4096.8	4339.4	4494.8
22.5°	3791.1	3837.8	3942.7	4202.9	4376.0
25°	3635.7	3672.4	3791.1	4047.6	4224.4
27.5°	3429.8	3498.0	3610.5	3858.1	4043.8
30°	3227.7	3285.8	3419.7	3628.1	3811.3
32.5°	2983.9	3068.5	3216.3	3375.5	3528.3
35°	2737.5	2812.1	2972.5	3034.4	3162.0
37.5°	2558.1	2578.4	2669.3	2661.7	2733.7
40°	2319.4	2359.8	2324.4	2229.7	2311.8
42.5°	2061.7	2109.7	1966.9	1857.0	1886.1
45°	1790.1	1831.8	1585.4	1504.6	1546.3
47.5°	1555.1	1551.3	1278.4	1224.1	1166.0
50°	1229.2	1269.6	1014.4	913.4	574.8
52.5°	960.1	975.3	836.3	583.6	377.7
55°	824.9	784.5	723.9	463.6	323.4
57.5°	732.7	682.2	641.7	430.8	295.6
60°	668.3	611.4	581.1	409.3	271.6
62.5°	595.0	550.8	539.4	390.4	250.1
65°	525.5	491.4	490.2	372.7	229.9
67.5°	456.0	437.1	442.1	351.2	207.2
70°	389.1	385.3	389.1	323.4	183.2
72.5°	332.2	328.5	338.6	288.0	156.6
75°	279.2	275.4	286.8	247.6	133.9
77.5°	222.3	224.9	232.4	205.9	112.4
80°	173.1	173.1	181.9	161.7	92.2
82.5°	123.8	125.1	130.1	118.7	72.0
85°	75.8	75.8	79.6	78.3	50.5
87.5°	25.3	29.1	34.1	36.6	25.3
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	17.99	19.34	18.35	19.65	19.97	14.32	15.67	14.68	15.99	16.30
	3H	19.73	20.93	20.11	21.26	21.63	16.30	17.50	16.67	17.83	18.20
	4H	20.40	21.52	20.80	21.87	22.26	17.00	18.13	17.40	18.48	18.86
	6H	20.90	21.94	21.32	22.31	22.71	17.52	18.56	17.94	18.93	19.32
	8H	21.07	22.06	21.50	22.45	22.86	17.71	18.69	18.14	19.08	19.49
	12H	21.18	22.13	21.62	22.51	22.94	17.85	18.79	18.28	19.17	19.60
4H	2H	18.52	19.64	18.92	20.00	20.38	15.94	17.07	16.34	17.42	17.80
	3H	20.49	21.42	20.91	21.83	22.23	18.12	19.05	18.53	19.45	19.86
	4H	21.30	22.13	21.73	22.55	22.99	19.00	19.83	19.43	20.25	20.70
	6H	21.94	22.66	22.40	23.11	23.57	19.64	20.37	20.10	20.81	21.28
	8H	22.16	22.84	22.63	23.28	23.75	19.85	20.53	20.32	20.97	21.44
	12H	22.31	22.91	22.80	23.40	23.87	20.01	20.61	20.49	21.09	21.56
8H	4H	21.58	22.26	22.05	22.70	23.17	19.65	20.32	20.12	20.77	21.24
	6H	22.36	22.92	22.86	23.41	23.90	20.51	21.06	21.01	21.56	22.04
	8H	22.67	23.17	23.19	23.68	24.17	20.84	21.34	21.36	21.85	22.34
	12H	22.90	23.34	23.41	23.84	24.41	21.10	21.54	21.61	22.03	22.60
12H	4H	21.60	22.20	22.08	22.68	23.15	19.72	20.32	20.21	20.80	21.28
	6H	22.42	22.92	22.94	23.43	23.92	20.65	21.15	21.17	21.66	22.15
	8H	22.78	23.22	23.29	23.72	24.29	21.06	21.50	21.57	21.99	22.56