

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: P893148

Luminaire Tested: 4MB-10HL-ACL-UNV-L850

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893148  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-ACL-UNV-L850  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K  
Light Source: -  
Ballast/Driver: -

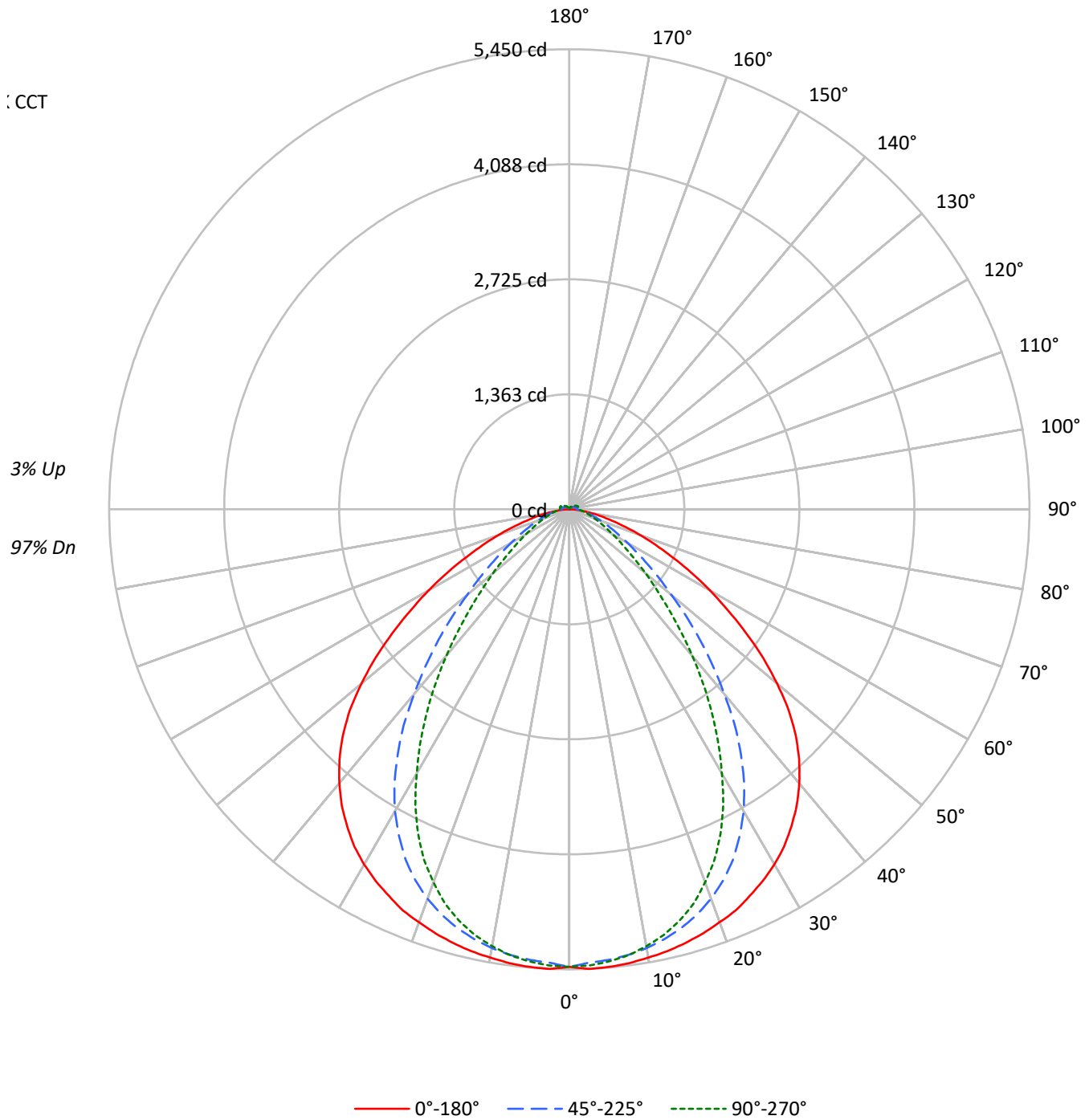
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10994.0 lumens  
Efficiency: N/A  
Efficacy: 145.6 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')  
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				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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97				97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	85				85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	74				74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	65				65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	57				57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	45				45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	41				41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31				31

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

	0°	45°	90°
0°	55196	55196	55196
5°	55528	53662	53516
10°	55573	52397	51509
15°	55763	50896	49078
20°	55997	48981	45734
25°	56251	46391	41549
30°	56452	42723	35991
35°	56191	37775	30003
40°	55358	31681	23853
45°	53530	25520	18035
50°	49642	19508	13604
55°	44069	14944	10133
60°	37818	11498	7842
65°	31199	9011	6204
70°	25201	7221	5074
75°	19176	5900	4328
80°	14343	4832	3821
85°	9768	4092	3474

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 53530 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	512.7	4.7
10°-20°	1455.8	13.2
20°-30°	2119.1	19.3
30°-40°	2274.1	20.7
40°-50°	1881.7	17.1
50°-60°	1247.2	11.3
60°-70°	710.6	6.5
70°-80°	352.4	3.2
80°-90°	142.5	1.3
90°-100°	83.7	0.8
100°-110°	74.5	0.7
110°-120°	56.2	0.5
120°-130°	37.3	0.3
130°-140°	22.9	0.2
140°-150°	13.1	0.1
150°-160°	6.7	0.1
160°-170°	2.9	0.0
170°-180°	0.7	0.0
0°-30°	4087.6	37.2
0°-40°	6361.7	57.9
0°-60°	9490.6	86.3
0°-90°	10696.0	97.3
90°-120°	214.4	2.0
90°-150°	287.8	2.6
90°-180°	298.0	2.7
0°-180°	10994.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5420	5420	5420	5420	5420	
5°	5442	5428	5358	5398	5378	518
15°	5318	5276	5133	5086	5046	1503
25°	5055	4923	4584	4334	4238	2332
35°	4586	4222	3542	3078	2943	2866
45°	3794	3082	2191	1765	1645	2908
55°	2556	1807	1126	891	826	2287
65°	1353	907	564	455	431	1359
75°	525	391	282	246	239	580
85°	104	111	130	137	136	119
90°	14	46	88	108	111	13
95°	16	48	89	108	111	13
105°	13	36	81	104	109	14
115°	8	24	62	88	96	8
125°	4	16	45	65	73	4
135°	3	13	30	46	51	3
145°	4	10	21	32	36	3
155°	4	9	14	20	25	2
165°	6	6	10	12	15	2
175°	6	6	8	8	6	1
180°	6	6	6	6	6	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5419.8	5419.8	5419.8	5419.8	5419.8
2.5°	5450.4	5438.4	5376.2	5423.1	5408.9
5°	5441.6	5427.5	5357.7	5398.0	5378.4
7.5°	5423.1	5405.7	5327.2	5354.4	5330.5
10°	5393.7	5371.9	5278.1	5283.6	5256.3
12.5°	5362.1	5328.3	5213.8	5198.6	5164.8
15°	5318.5	5276.0	5133.2	5086.3	5046.0
17.5°	5268.3	5209.5	5032.9	4950.0	4897.7
20°	5206.2	5127.7	4908.6	4782.2	4701.5
22.5°	5146.2	5030.7	4760.4	4579.4	4494.4
25°	5054.7	4922.8	4583.8	4334.1	4238.2
27.5°	4964.2	4786.5	4366.8	4060.5	3949.3
30°	4858.5	4625.2	4129.2	3752.0	3614.7
32.5°	4736.4	4448.6	3853.4	3431.6	3285.5
35°	4585.9	4221.9	3541.6	3078.4	2943.2
37.5°	4424.6	3972.2	3220.1	2742.6	2603.1
40°	4237.1	3707.3	2856.0	2393.8	2266.3
42.5°	4028.9	3404.3	2518.1	2065.7	1938.2
45°	3794.5	3081.6	2191.0	1764.8	1644.9
47.5°	3525.3	2751.3	1874.9	1493.4	1393.1
50°	3211.4	2421.1	1578.4	1253.6	1179.5
52.5°	2895.2	2110.4	1339.7	1062.8	983.2
55°	2556.2	1807.3	1126.0	890.6	826.3
57.5°	2228.1	1539.2	940.7	746.7	702.0
60°	1924.0	1299.4	795.8	630.1	594.1
62.5°	1631.8	1095.5	666.0	533.0	501.4
65°	1352.8	906.9	563.6	454.6	430.6
67.5°	1107.5	757.6	475.3	388.1	369.5
70°	895.0	612.6	400.1	332.5	317.2
72.5°	696.6	491.6	335.7	287.8	274.7
75°	525.4	391.3	282.3	246.4	238.7
77.5°	395.7	304.1	233.3	212.6	207.1
80°	273.6	226.7	192.9	184.2	181.0
82.5°	174.4	162.4	158.1	158.1	158.1
85°	103.6	111.2	129.7	137.3	136.3
87.5°	49.1	73.0	104.6	118.8	121.0
90°	14.2	45.8	88.3	107.9	111.2
92.5°	16.4	46.9	88.3	107.9	111.2
95°	16.4	48.0	89.4	107.9	111.2
97.5°	16.4	45.8	88.3	109.0	112.3
100°	16.4	44.7	87.2	107.9	112.3
102.5°	14.2	41.4	83.9	106.8	111.2
105°	13.1	36.0	80.7	103.6	109.0
107.5°	10.9	32.7	77.4	100.3	106.8
110°	9.8	29.4	73.0	97.0	104.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.7	26.2	67.6	93.7	100.3
115°	7.6	24.0	62.1	88.3	95.9
117.5°	6.5	21.8	56.7	82.8	91.6
120°	5.5	19.6	52.3	77.4	85.0
122.5°	5.5	18.5	48.0	70.9	79.6
125°	4.4	16.4	44.7	65.4	73.0
127.5°	4.4	15.3	40.3	60.0	66.5
130°	3.3	15.3	37.1	55.6	62.1
132.5°	3.3	14.2	32.7	50.1	56.7
135°	3.3	13.1	30.5	45.8	51.2
137.5°	3.3	13.1	27.3	42.5	48.0
140°	4.4	12.0	24.0	38.2	43.6
142.5°	4.4	10.9	22.9	34.9	39.2
145°	4.4	9.8	20.7	31.6	36.0
147.5°	4.4	9.8	18.5	28.3	32.7
150°	4.4	8.7	17.4	25.1	29.4
152.5°	4.4	8.7	16.4	21.8	27.3
155°	4.4	8.7	14.2	19.6	25.1
157.5°	4.4	7.6	13.1	17.4	21.8
160°	5.5	7.6	12.0	15.3	19.6
162.5°	5.5	7.6	10.9	14.2	17.4
165°	5.5	6.5	9.8	12.0	15.3
167.5°	5.5	6.5	9.8	10.9	13.1
170°	5.5	6.5	8.7	8.7	9.8
172.5°	5.5	6.5	7.6	8.7	6.5
175°	5.5	6.5	7.6	7.6	6.5
177.5°	5.5	6.5	6.5	7.6	6.5
180°	6.5	6.5	6.5	6.5	6.5



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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	22.60	23.99	23.01	24.36	24.74	17.72	19.11	18.13	19.48	19.86
	3H	23.70	24.93	24.12	25.32	25.75	18.86	20.10	19.29	20.49	20.92
	4H	23.99	25.15	24.44	25.55	26.00	19.37	20.53	19.81	20.93	21.38
	6H	24.14	25.20	24.59	25.63	26.09	19.87	20.94	20.33	21.37	21.83
	8H	24.15	25.16	24.62	25.61	26.08	20.14	21.15	20.61	21.60	22.07
	12H	24.14	25.11	24.62	25.55	26.04	20.43	21.41	20.91	21.84	22.34
4H	2H	22.57	23.73	23.02	24.14	24.59	18.22	19.38	18.67	19.79	20.23
	3H	23.81	24.77	24.27	25.22	25.69	19.54	20.50	20.00	20.95	21.42
	4H	24.18	25.04	24.66	25.51	26.02	20.14	21.00	20.62	21.47	21.97
	6H	24.41	25.16	24.92	25.65	26.18	20.77	21.51	21.27	22.01	22.53
	8H	24.45	25.14	24.96	25.64	26.17	21.09	21.79	21.60	22.28	22.82
	12H	24.45	25.08	24.98	25.60	26.14	21.47	22.09	22.00	22.62	23.15
8H	4H	24.16	24.86	24.68	25.36	25.89	20.38	21.08	20.89	21.58	22.11
	6H	24.44	25.01	24.98	25.56	26.10	21.11	21.69	21.66	22.23	22.77
	8H	24.50	25.02	25.06	25.58	26.13	21.52	22.04	22.08	22.60	23.15
	12H	24.54	25.00	25.10	25.54	26.17	22.02	22.48	22.57	23.02	23.64
12H	4H	24.14	24.76	24.67	25.29	25.83	20.40	21.02	20.93	21.55	22.08
	6H	24.42	24.93	24.98	25.49	26.05	21.15	21.67	21.71	22.23	22.78
	8H	24.51	24.97	25.07	25.51	26.14	21.61	22.07	22.17	22.61	23.24