

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: P893356

Luminaire Tested: 4MB-3SL-ACL-UNV-L850

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893356  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-ACL-UNV-L850  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K (C)  
Light Source: -  
Ballast/Driver: -

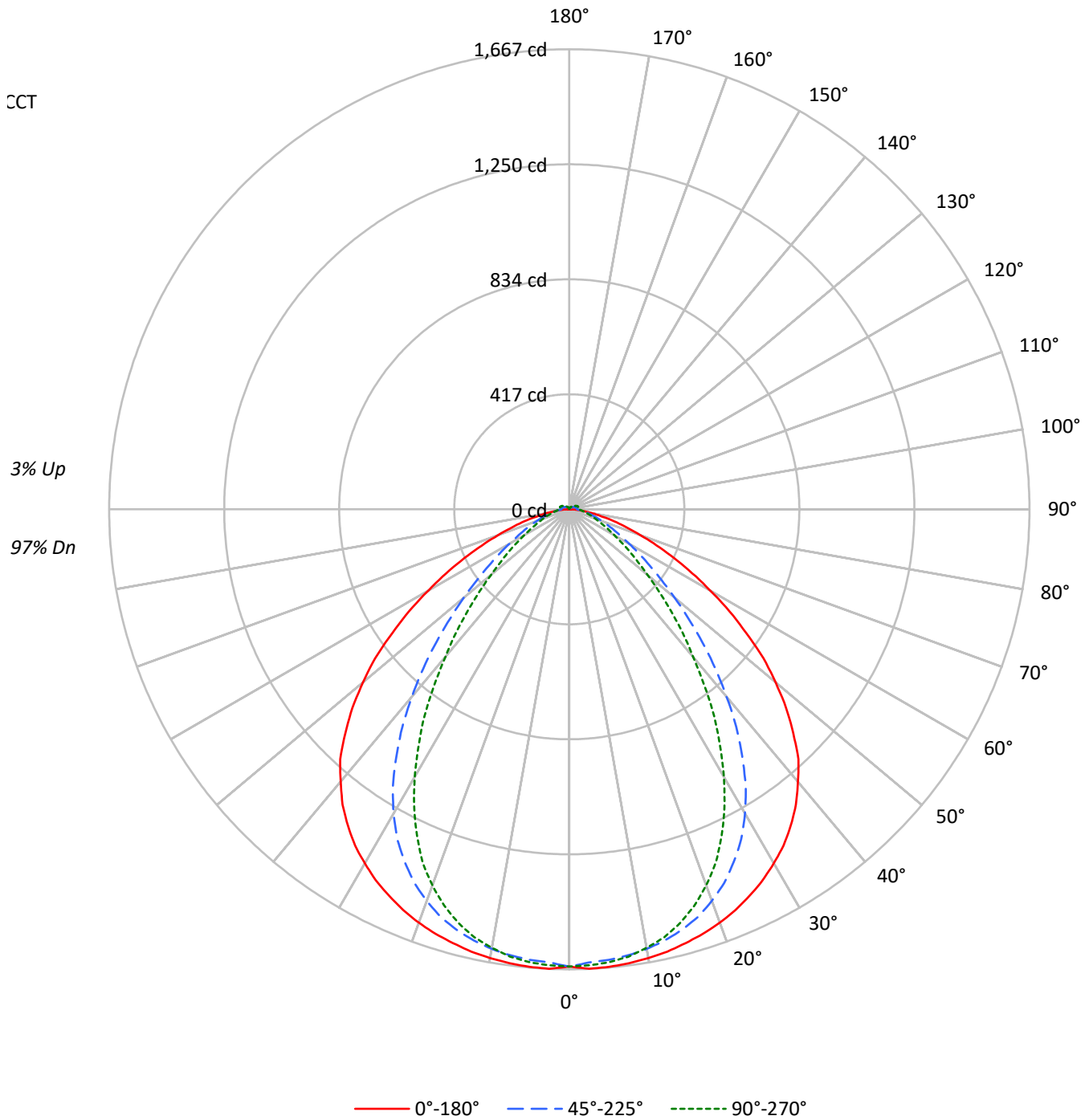
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3399.1 lumens  
Efficiency: N/A  
Efficacy: 161.1 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 21.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 5.2  
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	93	94	92	90	90	89	87	85				85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74				74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64				64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57				57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45				45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40				40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31				31

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

	0°	45°	90°
0°	16874	16874	16874
5°	16982	16416	16391
10°	17012	16060	15815
15°	17063	15643	15095
20°	17146	15068	14110
25°	17197	14269	12798
30°	17214	13172	11151
35°	17140	11641	9328
40°	16836	9834	7341
45°	16188	7938	5692
50°	15070	6159	4270
55°	13490	4716	3266
60°	11591	3625	2488
65°	9665	2859	1978
70°	7729	2294	1616
75°	6157	1850	1376
80°	4508	1525	1203
85°	3102	1297	1109

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16188 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.9	4.6
10°-20°	447.1	13.2
20°-30°	651.8	19.2
30°-40°	700.3	20.6
40°-50°	582.9	17.1
50°-60°	389.8	11.5
60°-70°	223.1	6.6
70°-80°	111.0	3.3
80°-90°	45.4	1.3
90°-100°	26.4	0.8
100°-110°	23.2	0.7
110°-120°	17.1	0.5
120°-130°	11.0	0.3
130°-140°	6.5	0.2
140°-150°	3.7	0.1
150°-160°	1.9	0.1
160°-170°	0.8	0.0
170°-180°	0.2	0.0
0°-30°	1255.9	36.9
0°-40°	1956.2	57.5
0°-60°	2928.9	86.2
0°-90°	3308.4	97.3
90°-120°	66.7	2.0
90°-150°	87.9	2.6
90°-180°	91.0	2.7
0°-180°	3399.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1657	1657	1657	1657	1657	
5°	1664	1659	1639	1653	1647	158
15°	1627	1616	1578	1566	1552	460
25°	1545	1508	1410	1339	1306	713
35°	1399	1297	1091	957	915	874
45°	1148	954	682	552	519	882
55°	782	565	355	281	266	701
65°	419	284	179	145	137	419
75°	169	123	88	78	76	181
85°	33	37	41	43	44	38
90°	5	16	28	33	34	5
95°	7	16	28	33	34	6
105°	5	13	25	32	34	5
115°	2	7	19	27	29	2
125°	2	5	13	19	21	1
135°	1	4	9	13	14	1
145°	1	3	6	9	10	1
155°	1	2	4	5	7	0
165°	2	2	3	3	4	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1656.9	1656.9	1656.9	1656.9	1656.9
2.5°	1666.6	1662.2	1643.4	1658.4	1654.0
5°	1664.2	1658.9	1639.0	1652.6	1647.3
7.5°	1658.9	1653.1	1630.3	1641.0	1635.2
10°	1651.1	1643.9	1617.8	1623.1	1613.9
12.5°	1641.5	1632.3	1599.9	1598.4	1588.3
15°	1627.4	1616.3	1577.7	1566.1	1552.0
17.5°	1612.9	1596.5	1549.1	1525.5	1506.1
20°	1594.1	1572.3	1510.0	1474.7	1450.5
22.5°	1572.3	1542.9	1466.0	1411.9	1386.7
25°	1545.3	1508.5	1409.9	1338.9	1305.5
27.5°	1516.3	1467.5	1349.0	1255.7	1217.6
30°	1481.5	1421.1	1273.1	1161.0	1119.9
32.5°	1444.7	1362.1	1190.0	1061.4	1016.5
35°	1398.8	1297.3	1091.4	957.0	915.0
37.5°	1349.0	1220.0	993.8	850.2	802.8
40°	1288.6	1138.3	886.5	744.4	697.5
42.5°	1228.7	1049.4	783.5	648.7	608.1
45°	1147.5	953.7	681.5	551.5	519.1
47.5°	1065.8	851.2	583.9	472.7	440.8
50°	974.9	750.6	498.3	396.8	370.2
52.5°	886.5	656.9	420.5	335.4	312.7
55°	782.5	564.6	355.3	280.8	266.3
57.5°	688.8	479.0	299.7	237.8	224.3
60°	589.7	406.0	250.9	201.1	188.5
62.5°	502.7	341.2	211.2	170.6	161.9
65°	419.1	284.2	178.8	145.0	137.3
67.5°	342.2	237.3	150.8	123.7	117.5
70°	274.5	192.4	127.1	105.4	101.0
72.5°	216.1	154.7	105.9	90.9	87.0
75°	168.7	122.8	88.5	78.3	75.9
77.5°	121.8	95.7	74.0	67.2	65.7
80°	86.0	72.5	60.9	58.0	57.0
82.5°	57.0	52.7	50.3	50.3	49.8
85°	32.9	36.7	41.1	43.0	43.5
87.5°	16.9	24.7	32.9	36.7	37.2
90°	4.8	15.5	28.0	33.4	34.3
92.5°	7.3	15.5	27.6	33.4	34.3
95°	7.3	15.5	27.6	33.4	34.3
97.5°	6.8	15.0	27.6	33.4	34.3
100°	6.3	14.0	27.1	33.4	34.3
102.5°	5.3	13.5	26.1	32.9	34.3
105°	4.8	12.6	24.7	32.4	33.8
107.5°	4.4	10.6	23.2	30.9	32.9
110°	3.4	9.2	22.2	29.5	31.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	8.2	20.8	28.0	30.5
115°	2.4	7.3	19.3	26.6	29.0
117.5°	1.9	6.8	17.4	24.7	27.1
120°	1.5	6.3	16.0	23.2	25.1
122.5°	1.5	5.8	14.0	21.3	23.2
125°	1.5	4.8	13.1	19.3	21.3
127.5°	1.0	4.4	11.6	17.4	19.3
130°	1.0	4.4	10.6	16.0	17.4
132.5°	1.0	3.9	9.7	14.5	16.0
135°	1.0	3.9	8.7	13.1	14.5
137.5°	1.0	3.4	7.7	12.1	13.5
140°	1.0	3.4	7.3	10.6	12.1
142.5°	1.0	2.9	6.3	10.2	11.1
145°	1.0	2.9	5.8	8.7	10.2
147.5°	1.0	2.9	5.3	8.2	9.2
150°	1.0	2.4	4.8	6.8	8.2
152.5°	1.0	2.4	4.4	6.3	7.7
155°	1.0	2.4	3.9	5.3	6.8
157.5°	1.0	2.4	3.9	4.8	5.8
160°	1.5	1.9	3.4	4.4	5.3
162.5°	1.5	1.9	2.9	3.9	4.8
165°	1.5	1.9	2.9	3.4	4.4
167.5°	1.5	1.9	2.4	2.9	3.4
170°	1.5	1.5	2.4	2.4	2.4
172.5°	1.5	1.5	1.9	2.4	1.9
175°	1.5	1.5	1.9	1.9	1.9
177.5°	1.5	1.5	1.9	1.9	1.9
180°	1.5	1.5	1.5	1.5	1.5



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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	18.55	19.94	18.96	20.32	20.70	13.85	15.24	14.26	15.61	15.99
	3H	19.65	20.89	20.07	21.27	21.70	14.99	16.23	15.41	16.62	17.05
	4H	19.95	21.12	20.40	21.52	21.97	15.49	16.65	15.93	17.06	17.50
	6H	20.10	21.17	20.56	21.59	22.05	15.99	17.06	16.45	17.48	17.94
	8H	20.12	21.14	20.59	21.58	22.05	16.25	17.27	16.72	17.71	18.18
	12H	20.11	21.09	20.59	21.52	22.02	16.54	17.52	17.02	17.95	18.45
4H	2H	18.53	19.70	18.98	20.10	20.55	14.34	15.51	14.79	15.91	16.36
	3H	19.77	20.73	20.23	21.19	21.65	15.66	16.62	16.12	17.07	17.54
	4H	20.16	21.02	20.63	21.49	21.99	16.25	17.12	16.73	17.58	18.09
	6H	20.39	21.14	20.89	21.63	22.16	16.87	17.62	17.38	18.12	18.64
	8H	20.43	21.13	20.94	21.62	22.16	17.19	17.90	17.70	18.39	18.92
	12H	20.44	21.07	20.97	21.59	22.13	17.57	18.19	18.10	18.72	19.26
8H	4H	20.14	20.84	20.65	21.34	21.87	16.49	17.19	17.00	17.69	18.22
	6H	20.42	21.00	20.96	21.54	22.08	17.22	17.80	17.76	18.34	18.88
	8H	20.49	21.01	21.05	21.57	22.12	17.62	18.14	18.18	18.70	19.25
	12H	20.54	21.00	21.09	21.54	22.17	18.11	18.57	18.67	19.11	19.74
12H	4H	20.12	20.75	20.65	21.27	21.81	16.51	17.13	17.04	17.66	18.20
	6H	20.40	20.92	20.96	21.48	22.03	17.25	17.77	17.81	18.33	18.88
	8H	20.51	20.97	21.06	21.51	22.13	17.71	18.18	18.27	18.72	19.34