

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: P893390

Luminaire Tested: 4MB-3SL-ASYMR-UNV-L935

Issue Date: 11/11/2024

**Test Information**

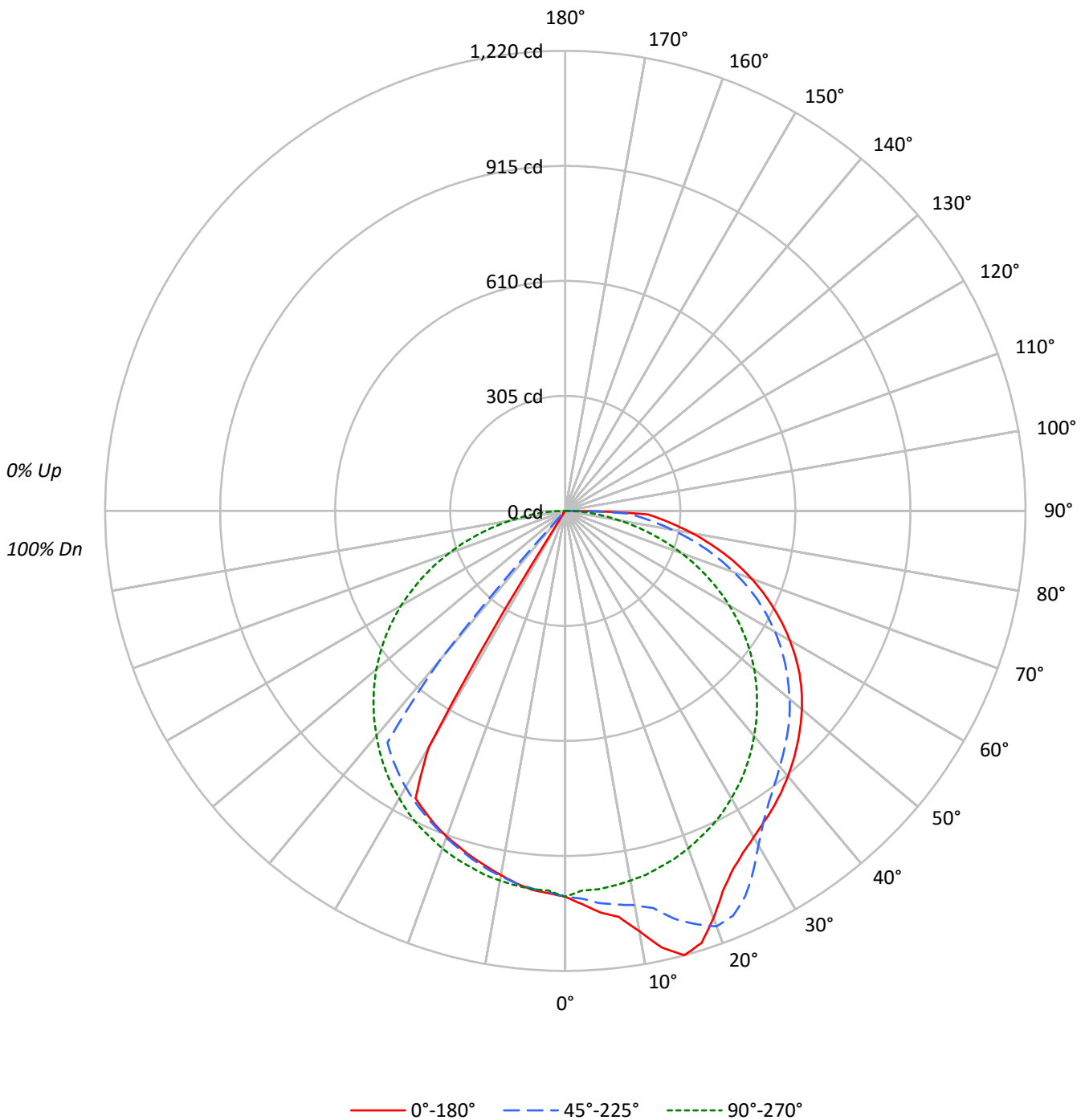
Test Method: LM-79-2019  
Report Number: P893390  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-ASYMR-UNV-L935  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2768.0 lumens  
Efficiency: N/A  
Efficacy: 131.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.28 / 1.25  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.1  
Input Voltage (V):  
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				
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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	85	85	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	71	71	71	69
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	53	53	53	50
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	41	41	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

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

	0°	45°	90°	135°	180°
0°	13285	13285	13285	13285	13285
5°	13931	13611	13129	13106	13152
10°	14926	13999	13126	12972	12934
15°	16399	15060	13131	12848	12784
20°	15877	16202	13165	12745	12703
25°	15044	16169	13197	12701	12610
30°	14979	15348	13196	12686	10859
35°	15232	14926	13217	12688	149
40°	15564	14998	13200	8750	100
45°	15989	15301	13203	162	64
50°	16549	15684	13210	119	24
55°	17178	16130	13171	79	14
60°	17865	16678	13055	31	16
65°	18706	17338	12819	37	37
70°	19955	18064	12415	46	46
75°	21844	19225	11875	115	60
80°	25634	21514	11000	172	90
85°	38156	30200	10295	268	179

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 65403 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.0	3.5
10°-20°	292.7	10.6
20°-30°	449.9	16.3
30°-40°	482.2	17.4
40°-50°	437.9	15.8
50°-60°	399.5	14.4
60°-70°	297.2	10.7
70°-80°	209.2	7.6
80°-90°	101.3	3.7
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°	840.7	30.4
0°-40°	1322.9	47.8
0°-60°	2160.3	78.0
0°-90°	2768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2768.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1023	1023	1023	1023	1023	
5°	1069	1044	1007	1006	1009	104
15°	1220	1120	977	956	951	337
25°	1050	1128	921	886	880	488
35°	961	942	834	800	9	602
45°	871	833	719	9	4	673
55°	759	712	582	4	1	678
65°	609	564	417	1	1	603
75°	435	383	237	2	1	459
85°	256	203	69	2	1	257
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1023.1	1023.1	1023.1	1023.1	1023.1	1023.1	1023.1	1023.1	1023.1
2.5°	1044.2	1032.4	1029.5	1037.7	1007.8	1027.7	1011.3	1014.9	1014.9
5°	1068.8	1052.4	1044.2	1041.8	1007.2	1020.7	1005.5	1005.5	1009.0
7.5°	1085.8	1067.6	1052.9	1047.1	1002.0	1013.7	996.1	996.1	996.1
10°	1132.0	1098.1	1061.7	1051.2	995.5	1004.3	983.8	985.0	980.9
12.5°	1186.5	1156.1	1078.7	1049.4	988.5	992.6	970.9	970.3	965.6
15°	1219.9	1197.1	1120.3	1047.1	976.8	980.3	955.7	953.9	951.0
17.5°	1201.2	1197.7	1149.0	1045.3	966.2	963.3	938.7	936.9	934.6
20°	1149.0	1157.8	1172.5	1041.8	952.7	946.9	922.3	921.1	919.3
22.5°	1091.0	1099.8	1161.9	1047.7	936.3	929.3	904.7	903.5	901.2
25°	1050.0	1050.0	1128.5	1061.7	921.1	908.2	886.5	884.8	880.1
27.5°	1021.3	1016.0	1078.7	1077.6	901.8	887.1	867.2	865.4	859.6
30°	999.0	990.2	1023.6	1085.2	880.1	864.3	846.1	844.3	724.2
32.5°	979.1	969.7	977.4	1091.6	858.4	839.7	823.8	587.7	25.8
35°	960.9	950.4	941.6	1086.9	833.8	815.0	800.4	17.0	9.4
37.5°	940.4	932.2	912.3	1062.3	807.4	788.7	774.6	9.4	8.2
40°	918.2	910.6	884.8	1026.0	778.7	762.9	516.2	8.2	5.9
42.5°	895.3	889.5	859.0	973.3	750.0	734.2	16.4	6.4	4.7
45°	870.7	865.4	833.2	909.4	719.0	704.3	8.8	4.7	3.5
47.5°	845.5	837.9	806.3	840.8	687.3	672.7	7.6	3.5	2.3
50°	819.2	810.9	776.4	780.5	653.9	639.3	5.9	2.3	1.2
52.5°	789.9	779.9	744.7	726.0	618.8	605.3	4.7	1.2	0.6
55°	758.8	747.7	712.5	678.5	581.8	566.6	3.5	1.2	0.6
57.5°	724.2	711.9	678.5	633.4	542.6	383.2	2.3	1.2	0.6
60°	687.9	675.6	642.2	591.2	502.7	26.4	1.2	1.2	0.6
62.5°	649.2	636.3	604.1	548.4	460.0	21.7	1.2	1.2	1.2
65°	608.8	593.6	564.3	504.5	417.2	18.2	1.2	1.2	1.2
67.5°	568.4	549.0	521.5	459.4	373.2	15.2	1.2	1.2	1.2
70°	525.6	504.5	475.8	413.7	327.0	12.3	1.2	1.2	1.2
72.5°	481.6	461.1	430.1	367.4	283.6	9.4	1.2	1.2	1.2
75°	435.4	416.6	383.2	321.1	236.7	7.0	2.3	1.2	1.2
77.5°	387.3	372.7	335.2	273.6	191.0	4.7	2.3	1.2	1.2
80°	342.8	326.4	287.7	225.6	147.1	3.5	2.3	1.8	1.2
82.5°	297.1	282.4	243.8	181.6	105.5	2.9	2.3	1.8	1.2
85°	256.1	242.0	202.7	141.8	69.1	2.3	1.8	1.8	1.2
87.5°	219.7	206.8	168.2	103.7	39.3	1.8	1.8	1.8	1.2
90°	0.0	0.0	0.0	0.0	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	23.52	25.13	23.88	25.45	25.76	18.95	20.57	19.32	20.88	21.19
	3H	25.96	27.43	26.34	27.76	28.12	19.59	21.06	19.97	21.38	21.74
	4H	27.09	28.47	27.49	28.82	29.20	19.74	21.12	20.14	21.47	21.84
	6H	28.18	29.47	28.59	29.83	30.22	19.78	21.06	20.19	21.43	21.82
	8H	28.71	29.94	29.14	30.33	30.73	19.77	20.99	20.19	21.38	21.78
	12H	29.28	30.46	29.71	30.84	31.27	19.75	20.93	20.18	21.31	21.74
4H	2H	24.18	25.56	24.57	25.91	26.28	20.08	21.46	20.48	21.81	22.18
	3H	26.86	28.03	27.27	28.43	28.83	21.42	22.59	21.83	22.99	23.39
	4H	28.16	29.22	28.59	29.64	30.07	21.96	23.02	22.39	23.43	23.87
	6H	29.44	30.38	29.89	30.82	31.27	22.23	23.17	22.68	23.61	24.06
	8H	30.07	30.95	30.53	31.39	31.85	22.27	23.15	22.73	23.59	24.05
	12H	30.76	31.55	31.23	32.02	32.49	22.28	23.07	22.76	23.55	24.01
8H	4H	28.52	29.40	28.98	29.84	30.31	22.90	23.78	23.36	24.22	24.69
	6H	30.01	30.74	30.50	31.23	31.70	23.49	24.23	23.99	24.72	25.19
	8H	30.79	31.45	31.30	31.96	32.44	23.67	24.34	24.18	24.84	25.33
	12H	31.68	32.27	32.19	32.76	33.32	23.77	24.36	24.28	24.85	25.41
12H	4H	28.56	29.36	29.04	29.83	30.30	23.12	23.91	23.60	24.39	24.85
	6H	30.09	30.76	30.60	31.27	31.75	23.84	24.51	24.35	25.01	25.50
	8H	30.97	31.57	31.48	32.06	32.61	24.16	24.75	24.66	25.24	25.79