

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: P893709

Luminaire Tested: 4MB-6SL-ASMF-UNV-L930

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893709  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-185-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-6SL-ASMF-UNV-L930  
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

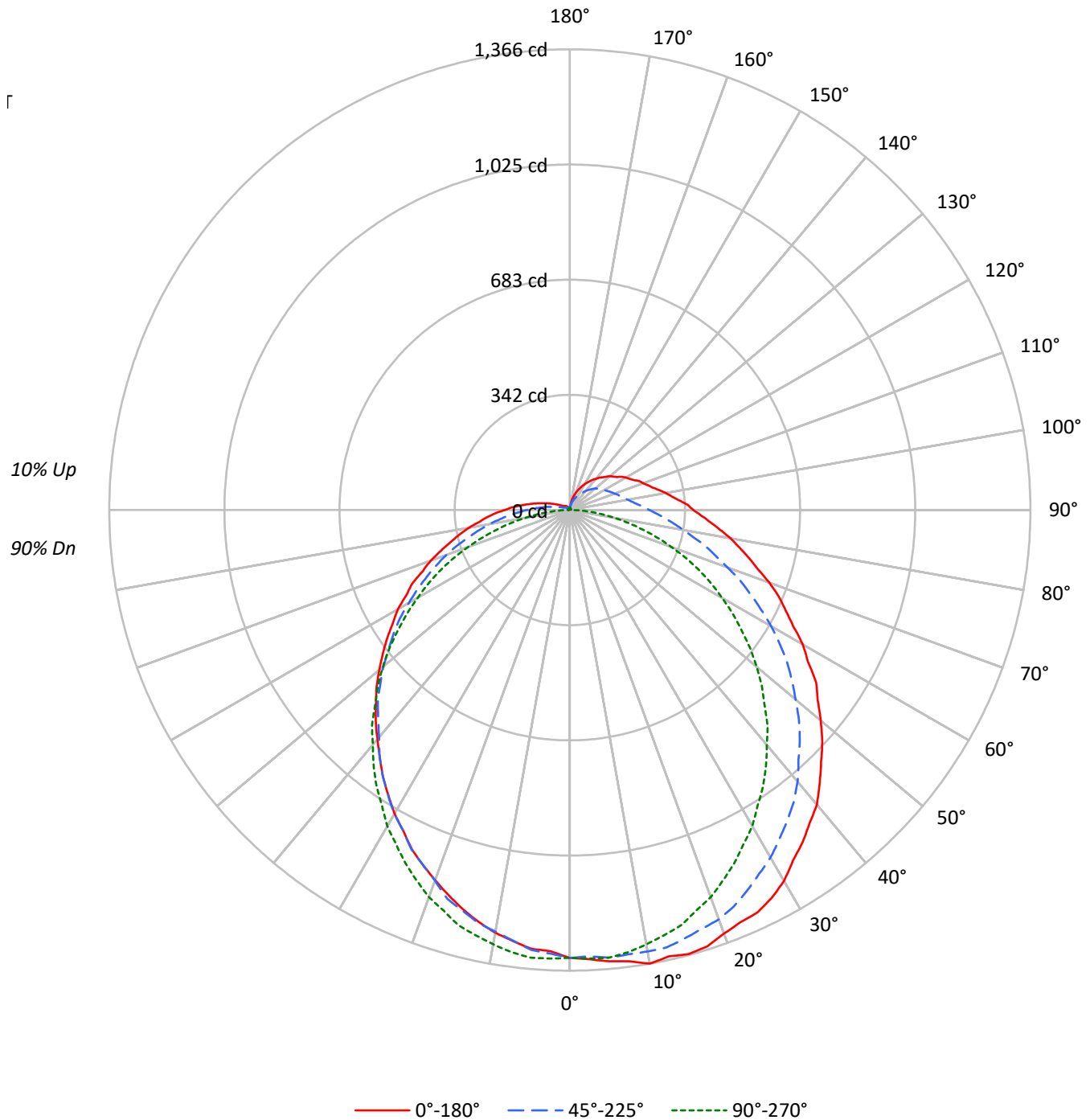
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4565.0 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')  
CIE Type: Direct

Input Watts (W): 44.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 4  
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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	93	93	93	90
1	105	99	95	90	101	96	92	88	90	87	83	85	82	79	79	77	75	75	75	75	72
2	95	86	79	72	91	83	76	71	78	72	68	73	69	65	69	65	62	62	62	62	59
3	86	75	66	60	83	73	65	58	68	62	56	64	59	54	60	56	52	52	52	52	49
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	44	44	44	44	42
5	72	59	50	43	69	57	49	42	54	47	41	51	45	40	48	43	38	38	38	38	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	34	34	34	31
7	62	48	39	33	59	47	38	32	44	37	32	42	36	31	40	34	30	30	30	30	28
8	57	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22
10	50	37	29	24	49	36	29	23	34	28	23	33	27	22	31	26	22	22	22	22	20

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

	0°	45°	90°	135°	180°
0°	13523	13523	13523	13523	13523
5°	13692	13211	13083	12981	13314
10°	14044	12935	12488	12353	13089
15°	14251	12662	11935	11837	12813
20°	14320	12399	11302	11221	12513
25°	14580	12001	10639	10708	12285
30°	14669	11617	10006	10153	12008
35°	14635	11198	9343	9618	11750
40°	14765	10765	8663	9017	11497
45°	14721	10253	7991	8560	11357
50°	14834	9728	7345	8034	11265
55°	15163	9269	6606	7509	11226
60°	15415	8701	5848	6950	11376
65°	15948	8085	5081	6395	11632
70°	17252	7495	4165	5864	12028
75°	19385	7068	3185	5247	12859
80°	24093	6655	2132	4705	15103
85°	36016	6564	1070	4140	21176

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 118586 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.0	2.8
10°-20°	361.1	7.9
20°-30°	544.5	11.9
30°-40°	653.5	14.3
40°-50°	680.5	14.9
50°-60°	630.8	13.8
60°-70°	519.5	11.4
70°-80°	374.7	8.2
80°-90°	237.9	5.2
90°-100°	146.7	3.2
100°-110°	97.8	2.1
110°-120°	69.6	1.5
120°-130°	51.0	1.1
130°-140°	35.1	0.8
140°-150°	21.4	0.5
150°-160°	10.6	0.2
160°-170°	3.9	0.1
170°-180°	0.6	0.0
0°-30°	1031.5	22.6
0°-40°	1685.0	36.9
0°-60°	2996.3	65.6
0°-90°	4128.3	90.4
90°-120°	314.1	6.9
90°-150°	421.5	9.2
90°-180°	437.0	9.6
0°-180°	4565.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1328	1328	1328	1328	1328	
5°	1343	1332	1332	1309	1306	129
15°	1363	1315	1275	1230	1226	384
25°	1316	1245	1154	1111	1109	605
35°	1203	1125	999	966	966	754
45°	1054	965	816	805	813	816
55°	892	787	622	637	661	793
65°	706	591	424	467	515	703
75°	550	418	223	310	365	583
85°	419	284	58	179	246	356
90°	366	236	5	128	192	202
95°	326	200	3	86	148	259
105°	256	157	3	35	78	273
115°	210	130	4	17	37	210
125°	171	108	5	13	21	155
135°	137	86	5	10	16	107
145°	105	61	5	7	11	66
155°	72	40	5	5	7	34
165°	42	23	5	3	4	12
175°	6	10	6	3	1	1
180°	4	4	4	4	4	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1327.8	1327.8	1327.8	1327.8	1327.8	1327.8	1327.8	1327.8	1327.8
2.5°	1333.1	1337.1	1324.4	1332.4	1331.1	1332.4	1316.5	1329.8	1309.2
5°	1343.0	1345.0	1332.4	1337.1	1332.4	1321.1	1309.2	1304.5	1305.9
7.5°	1349.7	1360.3	1329.1	1330.4	1322.5	1310.5	1287.9	1291.9	1289.3
10°	1365.6	1353.7	1329.1	1323.1	1307.8	1295.2	1269.3	1271.3	1272.7
12.5°	1355.6	1353.0	1328.4	1306.5	1291.3	1280.6	1254.1	1247.4	1250.8
15°	1363.0	1351.7	1315.2	1297.9	1274.7	1256.1	1229.5	1224.9	1225.5
17.5°	1356.3	1347.0	1301.9	1278.0	1245.4	1234.2	1208.9	1201.0	1197.0
20°	1336.4	1331.7	1291.9	1250.8	1221.5	1199.6	1169.1	1164.4	1167.8
22.5°	1323.1	1311.8	1272.0	1230.8	1188.3	1169.1	1138.6	1137.9	1138.6
25°	1316.5	1301.9	1244.8	1201.6	1154.5	1137.2	1110.7	1100.7	1109.3
27.5°	1296.6	1283.3	1216.2	1169.1	1116.6	1093.4	1071.5	1069.5	1070.8
30°	1270.0	1244.1	1190.3	1132.6	1082.1	1058.2	1040.3	1027.0	1039.6
32.5°	1232.2	1217.6	1156.5	1093.4	1037.6	1021.1	1003.1	1001.8	1001.8
35°	1203.0	1192.3	1124.6	1058.9	999.1	976.6	965.9	961.3	965.9
37.5°	1169.1	1153.2	1090.8	1017.1	956.0	936.7	926.1	922.1	925.5
40°	1139.9	1110.7	1050.9	973.9	908.9	891.6	880.3	884.3	887.6
42.5°	1096.7	1080.1	1003.8	930.1	868.4	849.8	840.5	843.8	851.8
45°	1054.2	1039.0	964.6	884.3	815.9	806.0	805.3	803.3	813.3
47.5°	1015.7	993.8	921.5	839.1	772.1	760.8	762.1	768.8	777.4
50°	971.3	945.4	873.7	790.7	723.6	716.3	721.6	726.3	737.6
52.5°	926.8	906.2	829.9	744.9	674.5	669.2	676.5	691.8	698.4
55°	892.3	855.1	786.7	691.1	622.1	622.7	637.3	646.0	660.6
57.5°	837.2	809.3	737.6	643.3	572.9	577.6	597.5	612.1	621.4
60°	798.0	762.8	689.8	592.2	521.1	528.5	551.0	572.9	588.9
62.5°	747.5	717.0	640.0	541.7	473.3	484.0	509.2	535.1	546.4
65°	706.4	671.8	590.9	491.3	423.6	436.2	467.4	496.6	515.2
67.5°	671.2	635.3	547.0	444.8	373.1	391.7	428.2	456.8	471.4
70°	629.4	587.5	497.2	393.0	320.7	342.6	389.0	422.2	438.8
72.5°	584.9	551.0	454.1	345.2	272.2	298.7	349.9	384.4	400.3
75°	550.4	512.5	417.6	297.4	223.1	254.9	310.0	349.2	365.1
77.5°	515.2	480.7	376.4	253.6	179.2	215.1	274.8	318.0	334.6
80°	484.0	444.1	341.9	217.8	133.4	175.9	241.7	284.1	303.4
82.5°	449.4	414.9	312.0	179.9	94.9	140.1	209.1	255.6	271.5
85°	418.9	383.1	284.1	150.0	58.4	108.2	179.2	227.0	246.3
87.5°	391.0	361.2	258.3	127.5	29.2	82.3	150.7	199.2	221.1
90°	365.8	331.9	236.3	106.9	5.3	59.7	127.5	175.3	191.9
92.5°	349.9	309.4	218.4	93.6	3.3	42.5	106.2	153.4	172.6
95°	326.0	290.1	199.8	83.6	3.3	28.5	85.6	131.4	148.0
97.5°	305.4	272.2	186.6	77.7	2.7	19.3	70.4	110.2	127.5
100°	289.5	258.3	174.6	72.4	3.3	13.9	55.8	93.6	108.9
102.5°	271.5	243.0	165.3	69.0	3.3	10.0	43.8	79.0	92.9
105°	255.6	230.4	156.7	65.7	3.3	8.6	35.2	65.1	77.7
107.5°	243.6	217.1	149.4	63.7	3.3	8.6	27.9	53.1	63.7
110°	231.7	206.5	142.1	61.7	3.3	8.0	21.9	43.8	53.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	223.7	196.5	135.4	59.7	4.0	8.0	17.9	36.5	43.8
115°	209.8	187.9	129.5	59.1	4.0	7.3	16.6	29.9	37.2
117.5°	199.8	179.9	123.5	57.1	4.0	7.3	15.9	24.6	29.9
120°	192.5	170.6	118.2	55.1	4.0	6.6	14.6	21.9	25.2
122.5°	183.2	162.0	113.5	53.8	4.0	6.6	13.9	20.6	22.6
125°	170.6	154.0	108.2	51.1	4.6	6.6	13.3	19.3	21.2
127.5°	162.7	146.7	104.2	47.8	4.6	6.0	12.6	17.9	19.9
130°	156.0	138.8	99.6	44.5	4.6	6.0	11.9	16.6	18.6
132.5°	146.1	130.8	92.9	41.8	4.6	5.3	10.6	15.3	17.3
135°	136.8	124.1	86.3	39.2	4.6	5.3	10.0	14.6	15.9
137.5°	130.8	117.5	80.3	36.5	4.6	4.6	9.3	13.3	14.6
140°	120.8	110.2	73.7	33.9	4.6	4.6	8.6	12.6	13.3
142.5°	113.5	102.9	67.7	31.2	4.6	4.6	8.0	11.3	12.6
145°	104.9	95.6	61.1	28.5	4.6	4.0	7.3	10.6	11.3
147.5°	96.9	87.0	55.8	26.6	4.6	4.0	6.6	9.3	10.0
150°	89.0	78.3	50.5	24.6	4.6	4.0	6.0	8.0	9.3
152.5°	80.3	67.7	45.1	22.6	4.6	4.0	5.3	7.3	8.0
155°	71.7	59.1	40.5	20.6	5.3	4.0	4.6	6.0	7.3
157.5°	64.4	51.1	35.8	18.6	5.3	3.3	4.6	5.3	6.0
160°	55.8	43.8	31.9	16.6	5.3	3.3	4.0	4.6	5.3
162.5°	49.1	36.5	27.9	15.3	5.3	3.3	4.0	4.0	4.6
165°	41.8	30.5	23.2	13.9	5.3	3.3	3.3	3.3	4.0
167.5°	33.9	23.9	19.3	12.6	5.3	3.3	3.3	2.7	3.3
170°	25.2	17.9	15.9	11.3	5.3	3.3	2.7	2.0	2.7
172.5°	11.3	13.9	12.6	10.0	6.0	3.3	2.7	2.0	1.3
175°	6.0	10.0	10.0	8.6	6.0	3.3	2.7	2.0	0.7
177.5°	4.6	6.0	7.3	7.3	6.0	4.0	2.7	1.3	0.7
180°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0



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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	19.41	20.89	19.92	21.39	21.94	18.38	19.86	18.89	20.36	20.91
	3H	21.50	22.85	22.02	23.36	23.94	20.25	21.60	20.77	22.11	22.70
	4H	22.44	23.72	22.98	24.25	24.84	21.00	22.28	21.54	22.81	23.40
	6H	23.36	24.55	23.91	25.09	25.70	21.63	22.82	22.19	23.36	23.97
	8H	23.79	24.93	24.35	25.49	26.11	21.89	23.03	22.45	23.59	24.21
	12H	24.21	25.30	24.78	25.86	26.51	22.12	23.21	22.69	23.77	24.42
4H	2H	19.91	21.18	20.45	21.71	22.31	18.95	20.22	19.49	20.75	21.35
	3H	22.22	23.31	22.77	23.88	24.49	21.01	22.09	21.56	22.66	23.28
	4H	23.33	24.33	23.90	24.91	25.56	21.86	22.85	22.43	23.43	24.08
	6H	24.44	25.32	25.03	25.92	26.58	22.62	23.49	23.21	24.10	24.76
	8H	24.96	25.79	25.56	26.39	27.07	22.93	23.76	23.53	24.36	25.03
	12H	25.49	26.24	26.11	26.87	27.55	23.22	23.97	23.84	24.60	25.28
8H	4H	23.59	24.42	24.19	25.02	25.69	22.20	23.02	22.79	23.63	24.30
	6H	24.87	25.57	25.50	26.22	26.90	23.08	23.78	23.71	24.43	25.11
	8H	25.54	26.17	26.18	26.83	27.52	23.48	24.11	24.12	24.77	25.46
	12H	26.24	26.81	26.89	27.45	28.21	23.87	24.43	24.51	25.08	25.83
12H	4H	23.61	24.36	24.23	24.99	25.67	22.26	23.01	22.88	23.64	24.32
	6H	24.93	25.56	25.57	26.21	26.91	23.19	23.82	23.83	24.48	25.17
	8H	25.67	26.23	26.31	26.88	27.63	23.65	24.22	24.30	24.86	25.62