

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: P892814

Luminaire Tested: 2MB-5HL-ASMF-UNV-L835

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P892814  
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: 2MB-5HL-ASMF-UNV-L835  
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

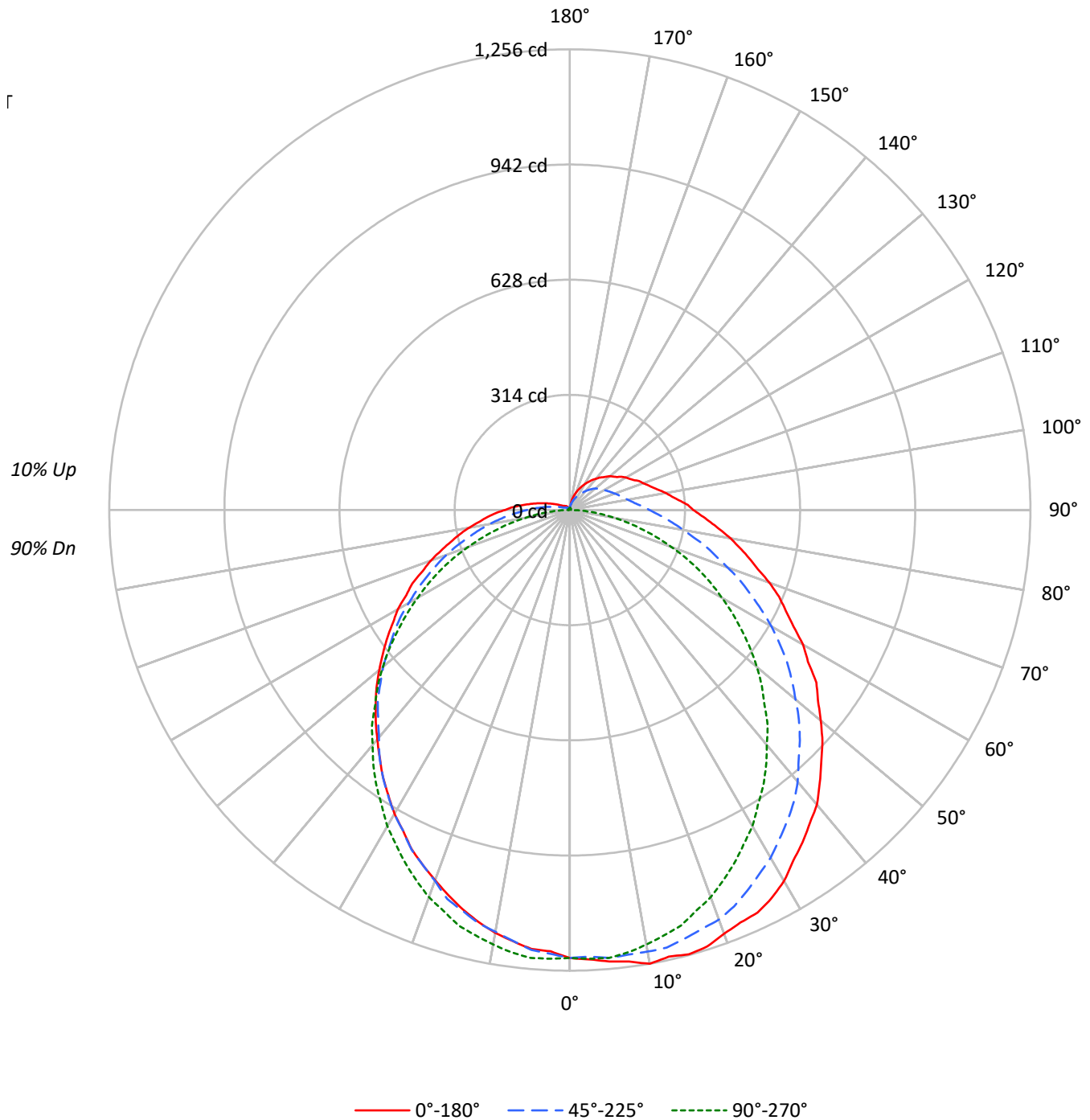
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4199.0 lumens  
Efficiency: N/A  
Efficacy: 124.6 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.12')  
CIE Type: Direct

Input Watts (W): 33.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 4.5  
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°	25008	25008	25008	25008	25008
5°	25254	24387	24196	23961	24555
10°	25830	23833	23097	22762	24071
15°	26135	23289	22072	21772	23500
20°	26183	22766	20904	20603	22879
25°	26575	21998	19674	19627	22395
30°	26649	21256	18507	18577	21815
35°	26488	20452	17279	17567	21269
40°	26616	19625	16020	16438	20724
45°	26412	18654	14778	15572	20377
50°	26468	17657	13585	14585	20098
55°	26874	16785	12217	13598	19896
60°	27095	15713	10817	12551	19997
65°	27724	14554	9395	11512	20222
70°	29533	13444	7700	10516	20590
75°	32408	12617	5890	9368	21505
80°	38652	11809	3944	8347	24231
85°	52570	11557	1978	7291	30917

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 109088 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.9	2.8
10°-20°	332.1	7.9
20°-30°	500.8	11.9
30°-40°	601.1	14.3
40°-50°	625.9	14.9
50°-60°	580.2	13.8
60°-70°	477.8	11.4
70°-80°	344.7	8.2
80°-90°	218.8	5.2
90°-100°	134.9	3.2
100°-110°	90.0	2.1
110°-120°	64.1	1.5
120°-130°	46.9	1.1
130°-140°	32.3	0.8
140°-150°	19.6	0.5
150°-160°	9.7	0.2
160°-170°	3.6	0.1
170°-180°	0.6	0.0
0°-30°	948.8	22.6
0°-40°	1549.9	36.9
0°-60°	2756.0	65.6
0°-90°	3797.4	90.4
90°-120°	288.9	6.9
90°-150°	387.8	9.2
90°-180°	402.0	9.6
0°-180°	4199.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1221	1221	1221	1221	1221	
5°	1235	1226	1226	1204	1201	118
15°	1254	1210	1172	1131	1127	353
25°	1211	1145	1062	1022	1020	557
35°	1106	1034	919	888	888	693
45°	970	887	750	741	748	750
55°	821	724	572	586	608	729
65°	650	544	390	430	474	647
75°	506	384	205	285	336	536
85°	385	261	54	165	227	327
90°	336	217	5	117	176	186
95°	300	184	3	79	136	238
105°	235	144	3	32	71	251
115°	193	119	4	15	34	193
125°	157	100	4	12	20	143
135°	126	79	4	9	15	99
145°	96	56	4	7	10	61
155°	66	37	5	4	7	31
165°	38	21	5	3	4	11
175°	6	9	6	2	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°	1221.3	1221.3	1221.3	1221.3	1221.3	1221.3	1221.3	1221.3	1221.3
2.5°	1226.2	1229.9	1218.3	1225.6	1224.4	1225.6	1210.9	1223.1	1204.2
5°	1235.4	1237.2	1225.6	1229.9	1225.6	1215.2	1204.2	1199.9	1201.2
7.5°	1241.5	1251.2	1222.5	1223.8	1216.4	1205.4	1184.7	1188.3	1185.9
10°	1256.1	1245.1	1222.5	1217.0	1203.0	1191.4	1167.6	1169.4	1170.6
12.5°	1247.0	1244.5	1221.9	1201.8	1187.7	1178.0	1153.5	1147.4	1150.5
15°	1253.7	1243.3	1209.7	1193.8	1172.5	1155.4	1130.9	1126.7	1127.3
17.5°	1247.6	1239.0	1197.5	1175.5	1145.6	1135.2	1112.0	1104.7	1101.0
20°	1229.2	1225.0	1188.3	1150.5	1123.6	1103.5	1075.4	1071.1	1074.1
22.5°	1217.0	1206.7	1170.0	1132.2	1093.1	1075.4	1047.3	1046.7	1047.3
25°	1210.9	1197.5	1145.0	1105.3	1061.9	1046.1	1021.6	1012.5	1020.4
27.5°	1192.6	1180.4	1118.7	1075.4	1027.1	1005.7	985.6	983.8	985.0
30°	1168.2	1144.4	1094.9	1041.8	995.4	973.4	956.9	944.7	956.3
32.5°	1133.4	1119.9	1063.8	1005.7	954.5	939.2	922.7	921.5	921.5
35°	1106.5	1096.7	1034.4	974.0	919.0	898.3	888.5	884.2	888.5
37.5°	1075.4	1060.7	1003.3	935.5	879.3	861.6	851.9	848.2	851.3
40°	1048.5	1021.6	966.7	895.8	836.0	820.1	809.7	813.4	816.4
42.5°	1008.8	993.5	923.3	855.5	798.7	781.6	773.1	776.1	783.5
45°	969.7	955.7	887.3	813.4	750.5	741.3	740.7	738.9	748.1
47.5°	934.3	914.2	847.6	771.9	710.2	699.8	701.0	707.1	715.1
50°	893.4	869.6	803.6	727.3	665.6	658.9	663.8	668.1	678.4
52.5°	852.5	833.5	763.3	685.2	620.4	615.5	622.3	636.3	642.4
55°	820.7	786.5	723.6	635.7	572.2	572.8	586.2	594.2	607.6
57.5°	770.0	744.4	678.4	591.7	527.0	531.3	549.6	563.0	571.6
60°	734.0	701.6	634.5	544.7	479.4	486.1	506.8	527.0	541.7
62.5°	687.6	659.5	588.7	498.3	435.4	445.2	468.4	492.2	502.6
65°	649.7	618.0	543.5	451.9	389.6	401.2	429.9	456.8	473.9
67.5°	617.4	584.4	503.2	409.1	343.2	360.3	393.9	420.1	433.6
70°	578.9	540.4	457.4	361.5	294.9	315.1	357.8	388.4	403.6
72.5°	538.0	506.8	417.7	317.5	250.4	274.8	321.8	353.6	368.2
75°	506.2	471.4	384.1	273.6	205.2	234.5	285.2	321.2	335.9
77.5°	473.9	442.1	346.2	233.3	164.9	197.9	252.8	292.5	307.8
80°	445.2	408.5	314.5	200.3	122.7	161.8	222.3	261.4	279.1
82.5°	413.4	381.7	287.0	165.5	87.3	128.8	192.4	235.1	249.8
85°	385.3	352.3	261.4	138.0	53.7	99.5	164.9	208.8	226.6
87.5°	359.7	332.2	237.5	117.2	26.9	75.7	138.6	183.2	203.3
90°	336.5	305.3	217.4	98.3	4.9	55.0	117.2	161.2	176.5
92.5°	321.8	284.6	200.9	86.1	3.1	39.1	97.7	141.1	158.8
95°	299.8	266.9	183.8	76.9	3.1	26.3	78.8	120.9	136.2
97.5°	280.9	250.4	171.6	71.4	2.4	17.7	64.7	101.4	117.2
100°	266.2	237.5	160.6	66.6	3.1	12.8	51.3	86.1	100.1
102.5°	249.8	223.5	152.1	63.5	3.1	9.2	40.3	72.7	85.5
105°	235.1	211.9	144.1	60.5	3.1	7.9	32.4	59.8	71.4
107.5°	224.1	199.7	137.4	58.6	3.1	7.9	25.6	48.9	58.6
110°	213.1	189.9	130.7	56.8	3.1	7.3	20.2	40.3	48.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	205.8	180.8	124.6	55.0	3.7	7.3	16.5	33.6	40.3
115°	193.0	172.8	119.1	54.3	3.7	6.7	15.3	27.5	34.2
117.5°	183.8	165.5	113.6	52.5	3.7	6.7	14.7	22.6	27.5
120°	177.1	156.9	108.7	50.7	3.7	6.1	13.4	20.2	23.2
122.5°	168.5	149.0	104.4	49.5	3.7	6.1	12.8	18.9	20.8
125°	156.9	141.7	99.5	47.0	4.3	6.1	12.2	17.7	19.5
127.5°	149.6	135.0	95.9	44.0	4.3	5.5	11.6	16.5	18.3
130°	143.5	127.6	91.6	40.9	4.3	5.5	11.0	15.3	17.1
132.5°	134.3	120.3	85.5	38.5	4.3	4.9	9.8	14.0	15.9
135°	125.8	114.2	79.4	36.0	4.3	4.9	9.2	13.4	14.7
137.5°	120.3	108.1	73.9	33.6	4.3	4.3	8.5	12.2	13.4
140°	111.1	101.4	67.8	31.1	4.3	4.3	7.9	11.6	12.2
142.5°	104.4	94.7	62.3	28.7	4.3	4.3	7.3	10.4	11.6
145°	96.5	87.9	56.2	26.3	4.3	3.7	6.7	9.8	10.4
147.5°	89.2	80.0	51.3	24.4	4.3	3.7	6.1	8.5	9.2
150°	81.8	72.1	46.4	22.6	4.3	3.7	5.5	7.3	8.5
152.5°	73.9	62.3	41.5	20.8	4.3	3.7	4.9	6.7	7.3
155°	66.0	54.3	37.2	18.9	4.9	3.7	4.3	5.5	6.7
157.5°	59.2	47.0	33.0	17.1	4.9	3.1	4.3	4.9	5.5
160°	51.3	40.3	29.3	15.3	4.9	3.1	3.7	4.3	4.9
162.5°	45.2	33.6	25.6	14.0	4.9	3.1	3.7	3.7	4.3
165°	38.5	28.1	21.4	12.8	4.9	3.1	3.1	3.1	3.7
167.5°	31.1	22.0	17.7	11.6	4.9	3.1	3.1	2.4	3.1
170°	23.2	16.5	14.7	10.4	4.9	3.1	2.4	1.8	2.4
172.5°	10.4	12.8	11.6	9.2	5.5	3.1	2.4	1.8	1.2
175°	5.5	9.2	9.2	7.9	5.5	3.1	2.4	1.8	0.6
177.5°	4.3	5.5	6.7	6.7	5.5	3.7	2.4	1.2	0.6
180°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7



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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	21.52	22.99	22.02	23.50	24.04	20.39	21.87	20.90	22.37	22.92
	3H	23.61	24.95	24.13	25.47	26.05	22.23	23.58	22.75	24.09	24.67
	4H	24.55	25.83	25.09	26.36	26.95	22.95	24.23	23.49	24.76	25.35
	6H	25.47	26.66	26.03	27.20	27.81	23.55	24.74	24.11	25.28	25.89
	8H	25.90	27.04	26.47	27.61	28.22	23.79	24.93	24.35	25.49	26.11
	12H	26.33	27.42	26.90	27.97	28.62	23.99	25.08	24.56	25.64	26.29
4H	2H	22.00	23.27	22.54	23.80	24.40	20.96	22.24	21.50	22.77	23.36
	3H	24.31	25.40	24.87	25.97	26.59	22.99	24.08	23.54	24.65	25.27
	4H	25.43	26.42	26.00	27.00	27.65	23.82	24.82	24.39	25.39	26.04
	6H	26.54	27.42	27.13	28.02	28.68	24.54	25.42	25.13	26.03	26.69
	8H	27.07	27.89	27.66	28.50	29.17	24.84	25.66	25.43	26.27	26.94
	12H	27.60	28.35	28.22	28.98	29.66	25.10	25.85	25.72	26.48	27.16
8H	4H	25.68	26.50	26.27	27.11	27.78	24.17	24.99	24.76	25.59	26.27
	6H	26.96	27.66	27.59	28.31	28.99	25.02	25.72	25.65	26.36	27.04
	8H	27.63	28.26	28.27	28.92	29.61	25.39	26.03	26.04	26.68	27.37
	12H	28.34	28.90	28.98	29.54	30.30	25.75	26.32	26.40	26.96	27.72
12H	4H	25.69	26.44	26.31	27.07	27.75	24.23	24.98	24.85	25.61	26.29
	6H	27.01	27.65	27.65	28.30	28.99	25.13	25.76	25.77	26.42	27.11
	8H	27.76	28.32	28.40	28.96	29.72	25.57	26.14	26.21	26.78	27.54