

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: P892820

Luminaire Tested: 2MB-5HL-ASMF-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892820
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-L950
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

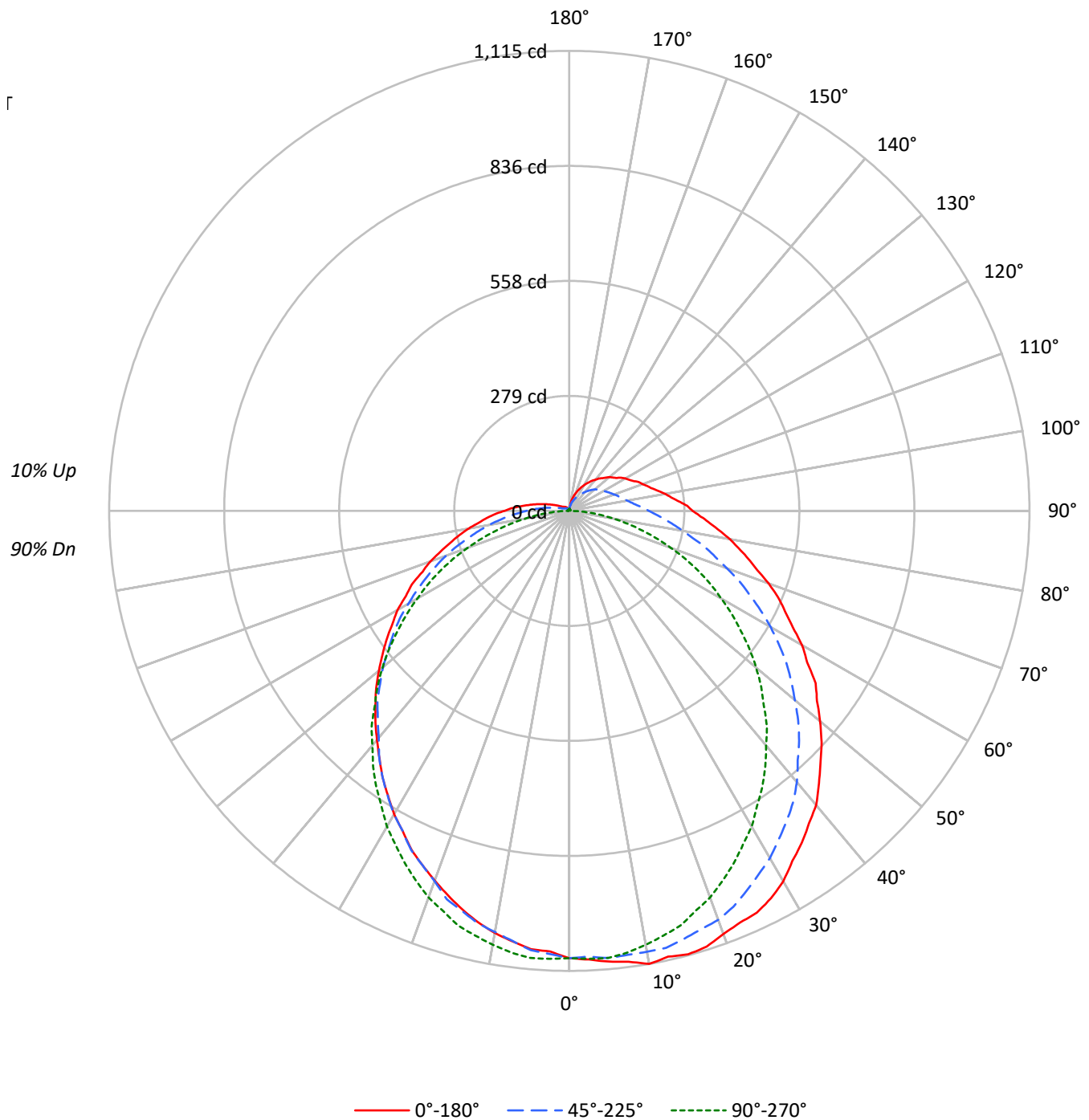
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3727.0 lumens
Efficiency: N/A
Efficacy: 110.6 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_{in}): 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°	22197	22197	22197	22197	22197
5°	22414	21645	21475	21267	21793
10°	22926	21154	20501	20203	21365
15°	23197	20671	19591	19325	20859
20°	23241	20209	18554	18287	20308
25°	23589	19525	17464	17422	19877
30°	23654	18866	16427	16488	19363
35°	23510	18155	15337	15592	18878
40°	23623	17418	14219	14590	18396
45°	23443	16556	13117	13823	18086
50°	23493	15673	12058	12946	17841
55°	23855	14899	10844	12069	17660
60°	24050	13947	9600	11141	17748
65°	24609	12918	8339	10218	17948
70°	26212	11933	6836	9335	18279
75°	28766	11198	5227	8314	19085
80°	34302	10480	3500	7408	21505
85°	46662	10257	1757	6468	27438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 96801 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	2.8
10°-20°	294.8	7.9
20°-30°	444.5	11.9
30°-40°	533.5	14.3
40°-50°	555.6	14.9
50°-60°	515.0	13.8
60°-70°	424.1	11.4
70°-80°	305.9	8.2
80°-90°	194.2	5.2
90°-100°	119.7	3.2
100°-110°	79.8	2.1
110°-120°	56.9	1.5
120°-130°	41.7	1.1
130°-140°	28.6	0.8
140°-150°	17.4	0.5
150°-160°	8.6	0.2
160°-170°	3.2	0.1
170°-180°	0.5	0.0
0°-30°	842.2	22.6
0°-40°	1375.7	36.9
0°-60°	2446.2	65.6
0°-90°	3370.5	90.4
90°-120°	256.4	6.9
90°-150°	344.2	9.2
90°-180°	357.0	9.6
0°-180°	3727.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1084	1084	1084	1084	1084	
5°	1096	1088	1088	1069	1066	105
15°	1113	1074	1041	1004	1001	314
25°	1075	1016	943	907	906	494
35°	982	918	816	789	789	615
45°	861	788	666	658	664	666
55°	728	642	508	520	539	647
65°	577	482	346	382	421	574
75°	449	341	182	253	298	476
85°	342	232	48	146	201	290
90°	299	193	4	104	157	165
95°	266	163	3	70	121	211
105°	209	128	3	29	63	223
115°	171	106	3	14	30	172
125°	139	88	4	11	17	127
135°	112	70	4	8	13	88
145°	86	50	4	6	9	54
155°	58	33	4	4	6	28
165°	34	19	4	3	3	10
175°	5	8	5	2	0	1
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1084.0	1084.0	1084.0	1084.0	1084.0	1084.0	1084.0	1084.0	1084.0
2.5°	1088.4	1091.6	1081.3	1087.8	1086.7	1087.8	1074.8	1085.7	1068.8
5°	1096.5	1098.1	1087.8	1091.6	1087.8	1078.6	1068.8	1065.1	1066.1
7.5°	1101.9	1110.6	1085.1	1086.2	1079.7	1069.9	1051.5	1054.8	1052.6
10°	1114.9	1105.2	1085.1	1080.2	1067.8	1057.5	1036.3	1038.0	1039.0
12.5°	1106.8	1104.6	1084.6	1066.7	1054.2	1045.5	1023.9	1018.4	1021.2
15°	1112.8	1103.5	1073.7	1059.6	1040.7	1025.5	1003.8	1000.0	1000.6
17.5°	1107.3	1099.7	1062.9	1043.4	1016.8	1007.6	987.0	980.5	977.2
20°	1091.1	1087.3	1054.8	1021.2	997.3	979.4	954.5	950.7	953.4
22.5°	1080.2	1071.0	1038.5	1004.9	970.2	954.5	929.6	929.0	929.6
25°	1074.8	1062.9	1016.3	981.0	942.6	928.5	906.8	898.7	905.7
27.5°	1058.6	1047.7	993.0	954.5	911.7	892.7	874.8	873.2	874.3
30°	1036.9	1015.7	971.8	924.7	883.5	864.0	849.3	838.5	848.8
32.5°	1006.0	994.1	944.2	892.7	847.2	833.6	819.0	817.9	817.9
35°	982.1	973.5	918.2	864.5	815.7	797.3	788.6	784.8	788.6
37.5°	954.5	941.5	890.5	830.4	780.5	764.8	756.1	752.9	755.6
40°	930.6	906.8	858.0	795.1	742.0	727.9	718.7	722.0	724.7
42.5°	895.4	881.9	819.5	759.4	709.0	693.8	686.2	688.9	695.4
45°	860.7	848.3	787.5	722.0	666.1	658.0	657.5	655.8	664.0
47.5°	829.3	811.4	752.3	685.1	630.4	621.1	622.2	627.7	634.7
50°	793.0	771.8	713.3	645.5	590.8	584.8	589.2	593.0	602.2
52.5°	756.6	739.8	677.5	608.1	550.7	546.3	552.3	564.8	570.2
55°	728.5	698.1	642.3	564.2	507.9	508.4	520.3	527.4	539.3
57.5°	683.5	660.7	602.2	525.2	467.8	471.6	487.8	499.7	507.3
60°	651.5	622.8	563.2	483.5	425.5	431.4	449.9	467.8	480.8
62.5°	610.3	585.4	522.5	442.3	386.5	395.1	415.7	436.9	446.1
65°	576.7	548.5	482.4	401.1	345.8	356.1	381.6	405.4	420.6
67.5°	548.0	518.7	446.6	363.1	304.6	319.8	349.6	372.9	384.8
70°	513.8	479.7	406.0	320.9	261.8	279.7	317.6	344.7	358.3
72.5°	477.5	449.9	370.7	281.8	222.2	243.9	285.6	313.8	326.8
75°	449.3	418.4	340.9	242.8	182.1	208.1	253.1	285.1	298.1
77.5°	420.6	392.4	307.3	207.0	146.3	175.6	224.4	259.6	273.2
80°	395.1	362.6	279.1	177.8	108.9	143.6	197.3	232.0	247.7
82.5°	366.9	338.8	254.7	146.9	77.5	114.4	170.7	208.7	221.7
85°	342.0	312.7	232.0	122.5	47.7	88.3	146.3	185.4	201.1
87.5°	319.2	294.9	210.8	104.1	23.8	67.2	123.0	162.6	180.5
90°	298.6	271.0	193.0	87.3	4.3	48.8	104.1	143.1	156.6
92.5°	285.6	252.6	178.3	76.4	2.7	34.7	86.7	125.2	140.9
95°	266.1	236.9	163.1	68.3	2.7	23.3	69.9	107.3	120.9
97.5°	249.3	222.2	152.3	63.4	2.2	15.7	57.5	90.0	104.1
100°	236.3	210.8	142.5	59.1	2.7	11.4	45.5	76.4	88.9
102.5°	221.7	198.4	135.0	56.4	2.7	8.1	35.8	64.5	75.9
105°	208.7	188.1	127.9	53.7	2.7	7.0	28.7	53.1	63.4
107.5°	198.9	177.2	122.0	52.0	2.7	7.0	22.8	43.4	52.0
110°	189.2	168.6	116.0	50.4	2.7	6.5	17.9	35.8	43.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	182.7	160.4	110.6	48.8	3.3	6.5	14.6	29.8	35.8
115°	171.3	153.4	105.7	48.2	3.3	6.0	13.6	24.4	30.4
117.5°	163.1	146.9	100.8	46.6	3.3	6.0	13.0	20.1	24.4
120°	157.2	139.3	96.5	45.0	3.3	5.4	11.9	17.9	20.6
122.5°	149.6	132.3	92.7	43.9	3.3	5.4	11.4	16.8	18.4
125°	139.3	125.7	88.3	41.7	3.8	5.4	10.8	15.7	17.3
127.5°	132.8	119.8	85.1	39.0	3.8	4.9	10.3	14.6	16.3
130°	127.4	113.3	81.3	36.3	3.8	4.9	9.8	13.6	15.2
132.5°	119.2	106.8	75.9	34.1	3.8	4.3	8.7	12.5	14.1
135°	111.7	101.4	70.5	32.0	3.8	4.3	8.1	11.9	13.0
137.5°	106.8	95.9	65.6	29.8	3.8	3.8	7.6	10.8	11.9
140°	98.6	90.0	60.2	27.6	3.8	3.8	7.0	10.3	10.8
142.5°	92.7	84.0	55.3	25.5	3.8	3.8	6.5	9.2	10.3
145°	85.6	78.0	49.9	23.3	3.8	3.3	6.0	8.7	9.2
147.5°	79.1	71.0	45.5	21.7	3.8	3.3	5.4	7.6	8.1
150°	72.6	64.0	41.2	20.1	3.8	3.3	4.9	6.5	7.6
152.5°	65.6	55.3	36.9	18.4	3.8	3.3	4.3	6.0	6.5
155°	58.5	48.2	33.1	16.8	4.3	3.3	3.8	4.9	6.0
157.5°	52.6	41.7	29.3	15.2	4.3	2.7	3.8	4.3	4.9
160°	45.5	35.8	26.0	13.6	4.3	2.7	3.3	3.8	4.3
162.5°	40.1	29.8	22.8	12.5	4.3	2.7	3.3	3.3	3.8
165°	34.1	24.9	19.0	11.4	4.3	2.7	2.7	2.7	3.3
167.5°	27.6	19.5	15.7	10.3	4.3	2.7	2.7	2.2	2.7
170°	20.6	14.6	13.0	9.2	4.3	2.7	2.2	1.6	2.2
172.5°	9.2	11.4	10.3	8.1	4.9	2.7	2.2	1.6	1.1
175°	4.9	8.1	8.1	7.0	4.9	2.7	2.2	1.6	0.5
177.5°	3.8	4.9	6.0	6.0	4.9	3.3	2.2	1.1	0.5
180°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3



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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	21.10	22.58	21.61	23.08	23.63	19.98	21.46	20.48	21.96	22.50
	3H	23.19	24.54	23.71	25.05	25.63	21.82	23.16	22.34	23.67	24.26
	4H	24.14	25.41	24.68	25.94	26.54	22.54	23.82	23.08	24.34	24.94
	6H	25.06	26.25	25.61	26.79	27.40	23.14	24.33	23.69	24.87	25.48
	8H	25.49	26.63	26.05	27.19	27.81	23.37	24.51	23.94	25.07	25.69
	12H	25.91	27.00	26.48	27.56	28.21	23.58	24.67	24.15	25.22	25.87
4H	2H	21.58	22.86	22.12	23.39	23.98	20.55	21.83	21.09	22.35	22.95
	3H	23.90	24.99	24.45	25.56	26.18	22.58	23.66	23.13	24.23	24.85
	4H	25.01	26.01	25.59	26.59	27.24	23.41	24.40	23.98	24.98	25.63
	6H	26.12	27.00	26.71	27.61	28.27	24.13	25.01	24.72	25.61	26.27
	8H	26.65	27.48	27.25	28.08	28.76	24.42	25.25	25.02	25.85	26.53
	12H	27.18	27.93	27.80	28.56	29.24	24.69	25.44	25.30	26.07	26.75
8H	4H	25.26	26.09	25.86	26.69	27.37	23.75	24.58	24.35	25.18	25.86
	6H	26.55	27.25	27.18	27.89	28.57	24.60	25.30	25.23	25.95	26.63
	8H	27.22	27.85	27.86	28.50	29.19	24.98	25.61	25.62	26.27	26.96
	12H	27.92	28.49	28.56	29.13	29.89	25.34	25.90	25.98	26.54	27.30
12H	4H	25.28	26.03	25.90	26.66	27.34	23.82	24.57	24.44	25.20	25.88
	6H	26.60	27.23	27.24	27.88	28.58	24.72	25.35	25.36	26.00	26.69
	8H	27.34	27.91	27.98	28.55	29.31	25.16	25.72	25.80	26.36	27.12