

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: P892813

Luminaire Tested: 2MB-5HL-ASMF-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892813
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-L830
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

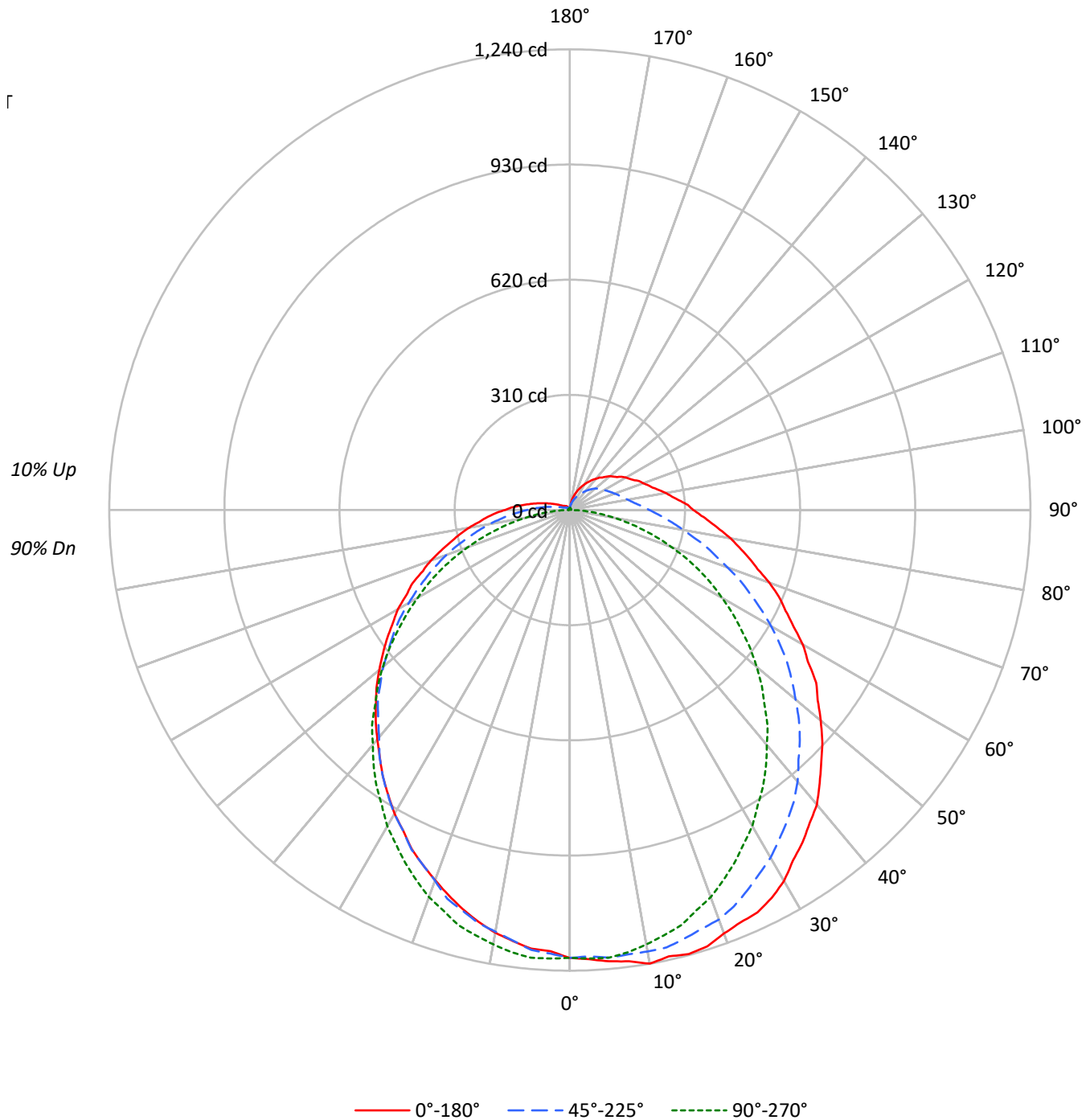
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4144.0 lumens
Efficiency: N/A
Efficacy: 123.0 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°	24680	24680	24680	24680	24680
5°	24923	24066	23878	23646	24232
10°	25492	23521	22793	22464	23757
15°	25793	22985	21783	21487	23191
20°	25840	22469	20630	20333	22581
25°	26229	21710	19417	19370	22101
30°	26300	20979	18264	18334	21530
35°	26141	20185	17053	17338	20992
40°	26268	19367	15810	16223	20455
45°	26066	18410	14586	15368	20110
50°	26121	17427	13407	14394	19837
55°	26524	16565	12057	13421	19634
60°	26741	15507	10674	12387	19734
65°	27361	14364	9272	11362	19957
70°	29145	13267	7601	10381	20325
75°	31986	12453	5813	9243	21224
80°	38140	11655	3892	8238	23910
85°	51888	11402	1952	7193	30508

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 107661 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.4	2.8
10°-20°	327.8	7.9
20°-30°	494.3	11.9
30°-40°	593.2	14.3
40°-50°	617.7	14.9
50°-60°	572.6	13.8
60°-70°	471.6	11.4
70°-80°	340.2	8.2
80°-90°	215.9	5.2
90°-100°	133.1	3.2
100°-110°	88.8	2.1
110°-120°	63.2	1.5
120°-130°	46.3	1.1
130°-140°	31.8	0.8
140°-150°	19.4	0.5
150°-160°	9.6	0.2
160°-170°	3.5	0.1
170°-180°	0.6	0.0
0°-30°	936.4	22.6
0°-40°	1529.6	36.9
0°-60°	2719.9	65.6
0°-90°	3747.6	90.4
90°-120°	285.1	6.9
90°-150°	382.6	9.2
90°-180°	396.0	9.6
0°-180°	4144.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1205	1205	1205	1205	1205	
5°	1219	1210	1210	1188	1185	117
15°	1237	1194	1157	1116	1112	349
25°	1195	1130	1048	1008	1007	550
35°	1092	1021	907	877	877	684
45°	957	876	741	731	738	741
55°	810	714	565	579	600	720
65°	641	536	384	424	468	639
75°	500	379	202	281	332	529
85°	380	258	53	163	224	323
90°	332	214	5	116	174	183
95°	296	181	3	78	134	235
105°	232	142	3	32	70	248
115°	190	118	4	15	34	191
125°	155	98	4	12	19	141
135°	124	78	4	9	14	97
145°	95	55	4	7	10	60
155°	65	37	5	4	7	31
165°	38	21	5	3	4	11
175°	5	9	5	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°	1205.3	1205.3	1205.3	1205.3	1205.3	1205.3	1205.3	1205.3	1205.3
2.5°	1210.1	1213.8	1202.3	1209.5	1208.3	1209.5	1195.1	1207.1	1188.4
5°	1219.2	1221.0	1209.5	1213.8	1209.5	1199.3	1188.4	1184.2	1185.4
7.5°	1225.2	1234.8	1206.5	1207.7	1200.5	1189.6	1169.2	1172.8	1170.4
10°	1239.7	1228.8	1206.5	1201.1	1187.2	1175.8	1152.3	1154.1	1155.3
12.5°	1230.6	1228.2	1205.9	1186.0	1172.2	1162.5	1138.4	1132.4	1135.4
15°	1237.3	1227.0	1193.9	1178.2	1157.1	1140.2	1116.1	1111.9	1112.5
17.5°	1231.2	1222.8	1181.8	1160.1	1130.6	1120.3	1097.4	1090.2	1086.6
20°	1213.1	1208.9	1172.8	1135.4	1108.9	1089.0	1061.3	1057.1	1060.1
22.5°	1201.1	1190.8	1154.7	1117.3	1078.8	1061.3	1033.6	1033.0	1033.6
25°	1195.1	1181.8	1130.0	1090.8	1048.0	1032.4	1008.2	999.2	1007.0
27.5°	1177.0	1164.9	1104.1	1061.3	1013.7	992.6	972.7	970.9	972.1
30°	1152.9	1129.4	1080.6	1028.1	982.3	960.6	944.4	932.3	943.8
32.5°	1118.5	1105.3	1049.8	992.6	942.0	926.9	910.6	909.4	909.4
35°	1092.0	1082.4	1020.9	961.2	907.0	886.5	876.9	872.6	876.9
37.5°	1061.3	1046.8	990.2	923.3	867.8	850.3	840.7	837.1	840.1
40°	1034.8	1008.2	954.0	884.1	825.0	809.4	799.1	802.7	805.8
42.5°	995.6	980.5	911.2	844.3	788.3	771.4	763.0	766.0	773.2
45°	957.0	943.2	875.7	802.7	740.7	731.6	731.0	729.2	738.3
47.5°	922.1	902.2	836.5	761.8	700.9	690.6	691.8	697.9	705.7
50°	881.7	858.2	793.1	717.8	656.9	650.3	655.1	659.3	669.6
52.5°	841.3	822.6	753.3	676.2	612.3	607.5	614.1	628.0	634.0
55°	810.0	776.2	714.1	627.4	564.7	565.3	578.6	586.4	599.6
57.5°	760.0	734.6	669.6	584.0	520.1	524.3	542.4	555.6	564.1
60°	724.4	692.5	626.2	537.6	473.1	479.7	500.2	520.1	534.6
62.5°	678.6	650.9	581.0	491.8	429.7	439.3	462.2	485.7	496.0
65°	641.2	609.9	536.4	446.0	384.5	395.9	424.3	450.8	467.7
67.5°	609.3	576.7	496.6	403.8	338.7	355.6	388.7	414.6	427.9
70°	571.3	533.4	451.4	356.8	291.1	311.0	353.2	383.3	398.4
72.5°	530.9	500.2	412.2	313.4	247.1	271.2	317.6	348.9	363.4
75°	499.6	465.3	379.1	270.0	202.5	231.4	281.4	317.0	331.5
77.5°	467.7	436.3	341.7	230.2	162.7	195.3	249.5	288.7	303.7
80°	439.3	403.2	310.4	197.7	121.1	159.7	219.4	257.9	275.4
82.5°	408.0	376.7	283.2	163.3	86.2	127.2	189.8	232.0	246.5
85°	380.3	347.7	257.9	136.2	53.0	98.2	162.7	206.1	223.6
87.5°	355.0	327.8	234.4	115.7	26.5	74.7	136.8	180.8	200.7
90°	332.1	301.3	214.5	97.0	4.8	54.2	115.7	159.1	174.2
92.5°	317.6	280.8	198.3	85.0	3.0	38.6	96.4	139.2	156.7
95°	295.9	263.4	181.4	75.9	3.0	25.9	77.7	119.3	134.4
97.5°	277.2	247.1	169.3	70.5	2.4	17.5	63.9	100.0	115.7
100°	262.8	234.4	158.5	65.7	3.0	12.7	50.6	85.0	98.8
102.5°	246.5	220.6	150.1	62.7	3.0	9.0	39.8	71.7	84.4
105°	232.0	209.1	142.2	59.7	3.0	7.8	31.9	59.1	70.5
107.5°	221.2	197.1	135.6	57.9	3.0	7.8	25.3	48.2	57.9
110°	210.3	187.4	129.0	56.0	3.0	7.2	19.9	39.8	48.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	203.1	178.4	122.9	54.2	3.6	7.2	16.3	33.1	39.8
115°	190.4	170.6	117.5	53.6	3.6	6.6	15.1	27.1	33.7
117.5°	181.4	163.3	112.1	51.8	3.6	6.6	14.5	22.3	27.1
120°	174.8	154.9	107.3	50.0	3.6	6.0	13.3	19.9	22.9
122.5°	166.3	147.0	103.1	48.8	3.6	6.0	12.7	18.7	20.5
125°	154.9	139.8	98.2	46.4	4.2	6.0	12.1	17.5	19.3
127.5°	147.7	133.2	94.6	43.4	4.2	5.4	11.5	16.3	18.1
130°	141.6	126.0	90.4	40.4	4.2	5.4	10.8	15.1	16.9
132.5°	132.6	118.7	84.4	38.0	4.2	4.8	9.6	13.9	15.7
135°	124.1	112.7	78.3	35.6	4.2	4.8	9.0	13.3	14.5
137.5°	118.7	106.7	72.9	33.1	4.2	4.2	8.4	12.1	13.3
140°	109.7	100.0	66.9	30.7	4.2	4.2	7.8	11.5	12.1
142.5°	103.1	93.4	61.5	28.3	4.2	4.2	7.2	10.2	11.5
145°	95.2	86.8	55.4	25.9	4.2	3.6	6.6	9.6	10.2
147.5°	88.0	78.9	50.6	24.1	4.2	3.6	6.0	8.4	9.0
150°	80.8	71.1	45.8	22.3	4.2	3.6	5.4	7.2	8.4
152.5°	72.9	61.5	41.0	20.5	4.2	3.6	4.8	6.6	7.2
155°	65.1	53.6	36.8	18.7	4.8	3.6	4.2	5.4	6.6
157.5°	58.5	46.4	32.5	16.9	4.8	3.0	4.2	4.8	5.4
160°	50.6	39.8	28.9	15.1	4.8	3.0	3.6	4.2	4.8
162.5°	44.6	33.1	25.3	13.9	4.8	3.0	3.6	3.6	4.2
165°	38.0	27.7	21.1	12.7	4.8	3.0	3.0	3.0	3.6
167.5°	30.7	21.7	17.5	11.5	4.8	3.0	3.0	2.4	3.0
170°	22.9	16.3	14.5	10.2	4.8	3.0	2.4	1.8	2.4
172.5°	10.2	12.7	11.5	9.0	5.4	3.0	2.4	1.8	1.2
175°	5.4	9.0	9.0	7.8	5.4	3.0	2.4	1.8	0.6
177.5°	4.2	5.4	6.6	6.6	5.4	3.6	2.4	1.2	0.6
180°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6



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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	21.47	22.95	21.98	23.45	23.99	20.35	21.82	20.85	22.33	22.87
	3H	23.56	24.91	24.08	25.42	26.00	22.19	23.53	22.70	24.04	24.63
	4H	24.51	25.78	25.04	26.31	26.91	22.91	24.18	23.45	24.71	25.31
	6H	25.43	26.62	25.98	27.16	27.77	23.51	24.70	24.06	25.24	25.85
	8H	25.86	27.00	26.42	27.56	28.18	23.74	24.88	24.31	25.44	26.06
	12H	26.28	27.37	26.85	27.93	28.58	23.94	25.04	24.52	25.59	26.24
4H	2H	21.95	23.23	22.49	23.76	24.35	20.92	22.19	21.46	22.72	23.32
	3H	24.27	25.36	24.82	25.93	26.54	22.94	24.03	23.50	24.60	25.22
	4H	25.38	26.38	25.96	26.96	27.61	23.77	24.77	24.35	25.35	26.00
	6H	26.49	27.37	27.08	27.97	28.64	24.50	25.38	25.09	25.98	26.64
	8H	27.02	27.85	27.62	28.45	29.13	24.79	25.62	25.39	26.22	26.90
	12H	27.55	28.30	28.17	28.93	29.61	25.05	25.80	25.67	26.44	27.12
8H	4H	25.63	26.46	26.23	27.06	27.74	24.12	24.95	24.72	25.55	26.22
	6H	26.92	27.62	27.54	28.26	28.94	24.97	25.67	25.60	26.32	27.00
	8H	27.59	28.22	28.23	28.87	29.56	25.35	25.98	25.99	26.63	27.33
	12H	28.29	28.85	28.93	29.50	30.25	25.71	26.27	26.35	26.91	27.67
12H	4H	25.65	26.40	26.27	27.03	27.71	24.19	24.94	24.80	25.57	26.25
	6H	26.97	27.60	27.61	28.25	28.95	25.08	25.72	25.72	26.37	27.06
	8H	27.71	28.27	28.35	28.92	29.67	25.53	26.09	26.17	26.73	27.49