

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: P893705

Luminaire Tested: 4MB-6SL-ASMF-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893705
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-L830
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

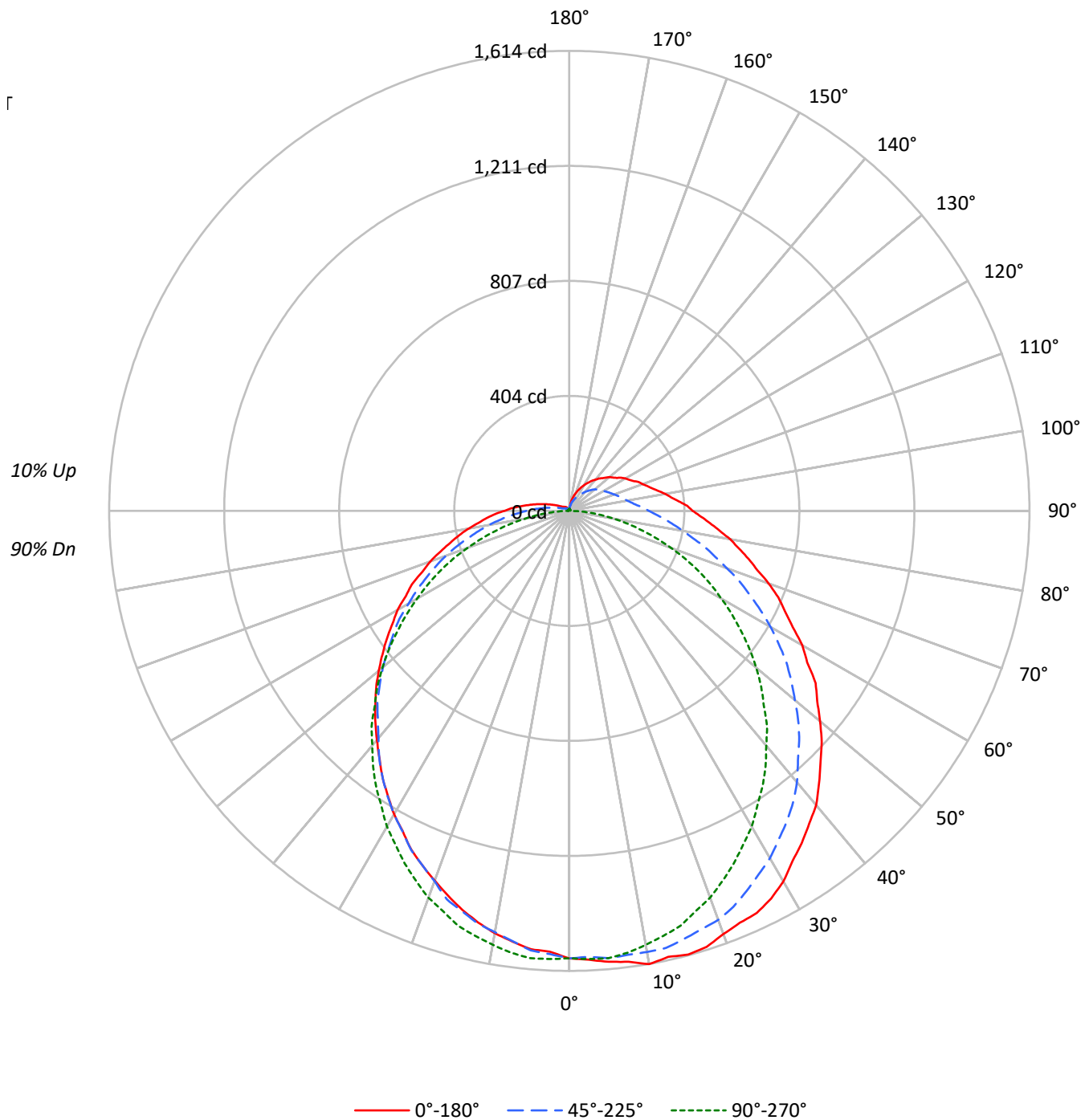
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5397.0 lumens
Efficiency: N/A
Efficacy: 121.6 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_{in}): 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°	15987	15987	15987	15987	15987
5°	16188	15619	15468	15347	15740
10°	16604	15292	14765	14605	15474
15°	16848	14969	14110	13995	15149
20°	16930	14660	13363	13266	14794
25°	17237	14188	12577	12660	14525
30°	17343	13735	11831	12003	14196
35°	17301	13240	11046	11372	13892
40°	17456	12728	10241	10660	13593
45°	17405	12122	9447	10120	13426
50°	17537	11500	8684	9499	13317
55°	17926	10959	7809	8878	13272
60°	18224	10286	6914	8216	13449
65°	18854	9557	6007	7561	13752
70°	20396	8862	4923	6933	14221
75°	22917	8356	3765	6203	15204
80°	28484	7867	2523	5561	17856
85°	42585	7761	1266	4896	25037

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 140209 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.9	2.8
10°-20°	426.9	7.9
20°-30°	643.7	11.9
30°-40°	772.6	14.3
40°-50°	804.5	14.9
50°-60°	745.8	13.8
60°-70°	614.2	11.4
70°-80°	443.0	8.2
80°-90°	281.2	5.2
90°-100°	173.4	3.2
100°-110°	115.6	2.1
110°-120°	82.3	1.5
120°-130°	60.3	1.1
130°-140°	41.5	0.8
140°-150°	25.2	0.5
150°-160°	12.5	0.2
160°-170°	4.6	0.1
170°-180°	0.8	0.0
0°-30°	1219.5	22.6
0°-40°	1992.1	36.9
0°-60°	3542.4	65.6
0°-90°	4880.8	90.4
90°-120°	371.3	6.9
90°-150°	498.3	9.2
90°-180°	516.0	9.6
0°-180°	5397.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1570	1570	1570	1570	1570	
5°	1588	1575	1575	1548	1544	152
15°	1611	1555	1507	1454	1449	454
25°	1556	1472	1365	1313	1312	716
35°	1422	1330	1181	1142	1142	891
45°	1246	1140	965	952	962	964
55°	1055	930	735	754	781	937
65°	835	698	501	553	609	832
75°	651	494	264	366	432	689
85°	495	336	69	212	291	420
90°	432	279	6	151	227	239
95°	385	236	4	101	175	306
105°	302	185	4	42	92	323
115°	248	153	5	20	44	248
125°	202	128	6	16	25	184
135°	162	102	6	12	19	127
145°	124	72	6	9	13	78
155°	85	48	6	6	9	40
165°	49	28	6	4	5	14
175°	7	12	7	3	1	1
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1569.8	1569.8	1569.8	1569.8	1569.8	1569.8	1569.8	1569.8	1569.8
2.5°	1576.0	1580.7	1565.8	1575.3	1573.7	1575.3	1556.4	1572.1	1547.8
5°	1587.8	1590.2	1575.3	1580.7	1575.3	1561.9	1547.8	1542.3	1543.9
7.5°	1595.7	1608.2	1571.3	1572.9	1563.5	1549.4	1522.7	1527.4	1524.2
10°	1614.5	1600.4	1571.3	1564.3	1546.2	1531.3	1500.7	1503.0	1504.6
12.5°	1602.7	1599.6	1570.5	1544.6	1526.6	1514.0	1482.6	1474.8	1478.7
15°	1611.4	1598.0	1554.8	1534.4	1507.0	1485.0	1453.6	1448.1	1448.9
17.5°	1603.5	1592.5	1539.1	1510.9	1472.4	1459.1	1429.3	1419.8	1415.1
20°	1580.0	1574.5	1527.4	1478.7	1444.2	1418.3	1382.2	1376.7	1380.6
22.5°	1564.3	1550.9	1503.8	1455.2	1404.9	1382.2	1346.1	1345.3	1346.1
25°	1556.4	1539.1	1471.6	1420.6	1364.9	1344.5	1313.1	1301.3	1311.5
27.5°	1532.9	1517.2	1437.9	1382.2	1320.2	1292.7	1266.8	1264.4	1266.0
30°	1501.5	1470.9	1407.3	1339.0	1279.4	1251.1	1229.9	1214.2	1229.1
32.5°	1456.7	1439.5	1367.3	1292.7	1226.8	1207.1	1186.0	1184.4	1184.4
35°	1422.2	1409.6	1329.6	1251.9	1181.2	1154.6	1142.0	1136.5	1142.0
37.5°	1382.2	1363.3	1289.6	1202.4	1130.2	1107.5	1094.9	1090.2	1094.1
40°	1347.6	1313.1	1242.5	1151.4	1074.5	1054.1	1040.7	1045.5	1049.4
42.5°	1296.6	1277.0	1186.7	1099.6	1026.6	1004.6	993.7	997.6	1007.0
45°	1246.4	1228.3	1140.4	1045.5	964.6	952.8	952.1	949.7	961.5
47.5°	1200.9	1175.0	1089.4	992.1	912.8	899.5	901.0	908.9	919.1
50°	1148.3	1117.7	1032.9	934.8	855.5	846.9	853.2	858.7	872.0
52.5°	1095.7	1071.4	981.1	880.6	797.4	791.2	799.8	817.8	825.7
55°	1054.9	1010.9	930.1	817.1	735.4	736.2	753.5	763.7	781.0
57.5°	989.7	956.8	872.0	760.5	677.4	682.8	706.4	723.7	734.6
60°	943.4	901.8	815.5	700.1	616.1	624.8	651.4	677.4	696.2
62.5°	883.8	847.7	756.6	640.5	559.6	572.2	602.0	632.6	646.0
65°	835.1	794.3	698.5	580.8	500.8	515.7	552.6	587.1	609.1
67.5°	793.5	751.1	646.7	525.9	441.1	463.1	506.2	540.0	557.3
70°	744.1	694.6	587.9	464.6	379.1	405.0	459.9	499.2	518.8
72.5°	691.5	651.4	536.9	408.1	321.8	353.2	413.6	454.4	473.3
75°	650.7	605.9	493.7	351.6	263.7	301.4	366.5	412.8	431.7
77.5°	609.1	568.3	445.0	299.8	211.9	254.3	324.9	376.0	395.6
80°	572.2	525.1	404.2	257.4	157.8	208.0	285.7	335.9	358.7
82.5°	531.4	490.5	368.9	212.7	112.2	165.6	247.2	302.2	321.0
85°	495.3	452.9	335.9	177.4	69.1	127.9	211.9	268.4	291.2
87.5°	462.3	427.0	305.3	150.7	34.5	97.3	178.2	235.5	261.4
90°	432.5	392.4	279.4	126.4	6.3	70.6	150.7	207.2	226.8
92.5°	413.6	365.8	258.2	110.7	3.9	50.2	125.6	181.3	204.1
95°	385.4	343.0	236.2	98.9	3.9	33.7	101.2	155.4	175.0
97.5°	361.0	321.8	220.6	91.8	3.1	22.8	83.2	130.3	150.7
100°	342.2	305.3	206.4	85.6	3.9	16.5	65.9	110.7	128.7
102.5°	321.0	287.3	195.4	81.6	3.9	11.8	51.8	93.4	109.9
105°	302.2	272.4	185.2	77.7	3.9	10.2	41.6	76.9	91.8
107.5°	288.1	256.7	176.6	75.3	3.9	10.2	33.0	62.8	75.3
110°	273.9	244.1	168.0	73.0	3.9	9.4	25.9	51.8	62.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	264.5	232.3	160.1	70.6	4.7	9.4	21.2	43.2	51.8
115°	248.0	222.1	153.1	69.9	4.7	8.6	19.6	35.3	44.0
117.5°	236.2	212.7	146.0	67.5	4.7	8.6	18.8	29.0	35.3
120°	227.6	201.7	139.7	65.1	4.7	7.8	17.3	25.9	29.8
122.5°	216.6	191.5	134.2	63.6	4.7	7.8	16.5	24.3	26.7
125°	201.7	182.1	127.9	60.4	5.5	7.8	15.7	22.8	25.1
127.5°	192.3	173.5	123.2	56.5	5.5	7.1	14.9	21.2	23.5
130°	184.4	164.0	117.7	52.6	5.5	7.1	14.1	19.6	22.0
132.5°	172.7	154.6	109.9	49.4	5.5	6.3	12.6	18.1	20.4
135°	161.7	146.8	102.0	46.3	5.5	6.3	11.8	17.3	18.8
137.5°	154.6	138.9	95.0	43.2	5.5	5.5	11.0	15.7	17.3
140°	142.8	130.3	87.1	40.0	5.5	5.5	10.2	14.9	15.7
142.5°	134.2	121.7	80.1	36.9	5.5	5.5	9.4	13.3	14.9
145°	124.0	113.0	72.2	33.7	5.5	4.7	8.6	12.6	13.3
147.5°	114.6	102.8	65.9	31.4	5.5	4.7	7.8	11.0	11.8
150°	105.2	92.6	59.7	29.0	5.5	4.7	7.1	9.4	11.0
152.5°	95.0	80.1	53.4	26.7	5.5	4.7	6.3	8.6	9.4
155°	84.8	69.9	47.9	24.3	6.3	4.7	5.5	7.1	8.6
157.5°	76.1	60.4	42.4	22.0	6.3	3.9	5.5	6.3	7.1
160°	65.9	51.8	37.7	19.6	6.3	3.9	4.7	5.5	6.3
162.5°	58.1	43.2	33.0	18.1	6.3	3.9	4.7	4.7	5.5
165°	49.4	36.1	27.5	16.5	6.3	3.9	3.9	3.9	4.7
167.5°	40.0	28.3	22.8	14.9	6.3	3.9	3.9	3.1	3.9
170°	29.8	21.2	18.8	13.3	6.3	3.9	3.1	2.4	3.1
172.5°	13.3	16.5	14.9	11.8	7.1	3.9	3.1	2.4	1.6
175°	7.1	11.8	11.8	10.2	7.1	3.9	3.1	2.4	0.8
177.5°	5.5	7.1	8.6	8.6	7.1	4.7	3.1	1.6	0.8
180°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7



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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	19.99	21.47	20.50	21.97	22.52	18.96	20.44	19.47	20.94	21.49
	3H	22.08	23.43	22.60	23.94	24.52	20.84	22.18	21.36	22.69	23.28
	4H	23.02	24.30	23.56	24.83	25.42	21.58	22.86	22.12	23.39	23.98
	6H	23.94	25.13	24.49	25.67	26.28	22.22	23.40	22.77	23.94	24.56
	8H	24.37	25.51	24.94	26.07	26.69	22.47	23.61	23.04	24.17	24.79
	12H	24.79	25.88	25.36	26.44	27.09	22.70	23.79	23.27	24.35	25.00
4H	2H	20.49	21.76	21.03	22.29	22.89	19.53	20.81	20.07	21.33	21.93
	3H	22.80	23.89	23.35	24.46	25.08	21.59	22.68	22.14	23.24	23.86
	4H	23.91	24.91	24.49	25.49	26.14	22.44	23.44	23.01	24.01	24.66
	6H	25.02	25.90	25.61	26.50	27.16	23.20	24.08	23.79	24.68	25.34
	8H	25.55	26.37	26.14	26.98	27.65	23.51	24.34	24.11	24.94	25.62
	12H	26.07	26.82	26.69	27.46	28.14	23.80	24.55	24.42	25.19	25.87
8H	4H	24.17	25.00	24.77	25.60	26.28	22.78	23.61	23.38	24.21	24.88
	6H	25.45	26.15	26.08	26.80	27.48	23.66	24.36	24.29	25.01	25.69
	8H	26.12	26.75	26.76	27.41	28.10	24.06	24.69	24.70	25.35	26.04
	12H	26.83	27.39	27.47	28.03	28.79	24.45	25.01	25.09	25.66	26.41
12H	4H	24.19	24.94	24.81	25.57	26.25	22.84	23.59	23.46	24.22	24.90
	6H	25.51	26.14	26.15	26.79	27.49	23.77	24.41	24.41	25.06	25.75
	8H	26.25	26.81	26.89	27.46	28.21	24.24	24.80	24.88	25.44	26.20