

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: P893817

Luminaire Tested: 4MB-7HL-ASMF-UNV-L830

Issue Date: 11/11/2024

**Test Information**

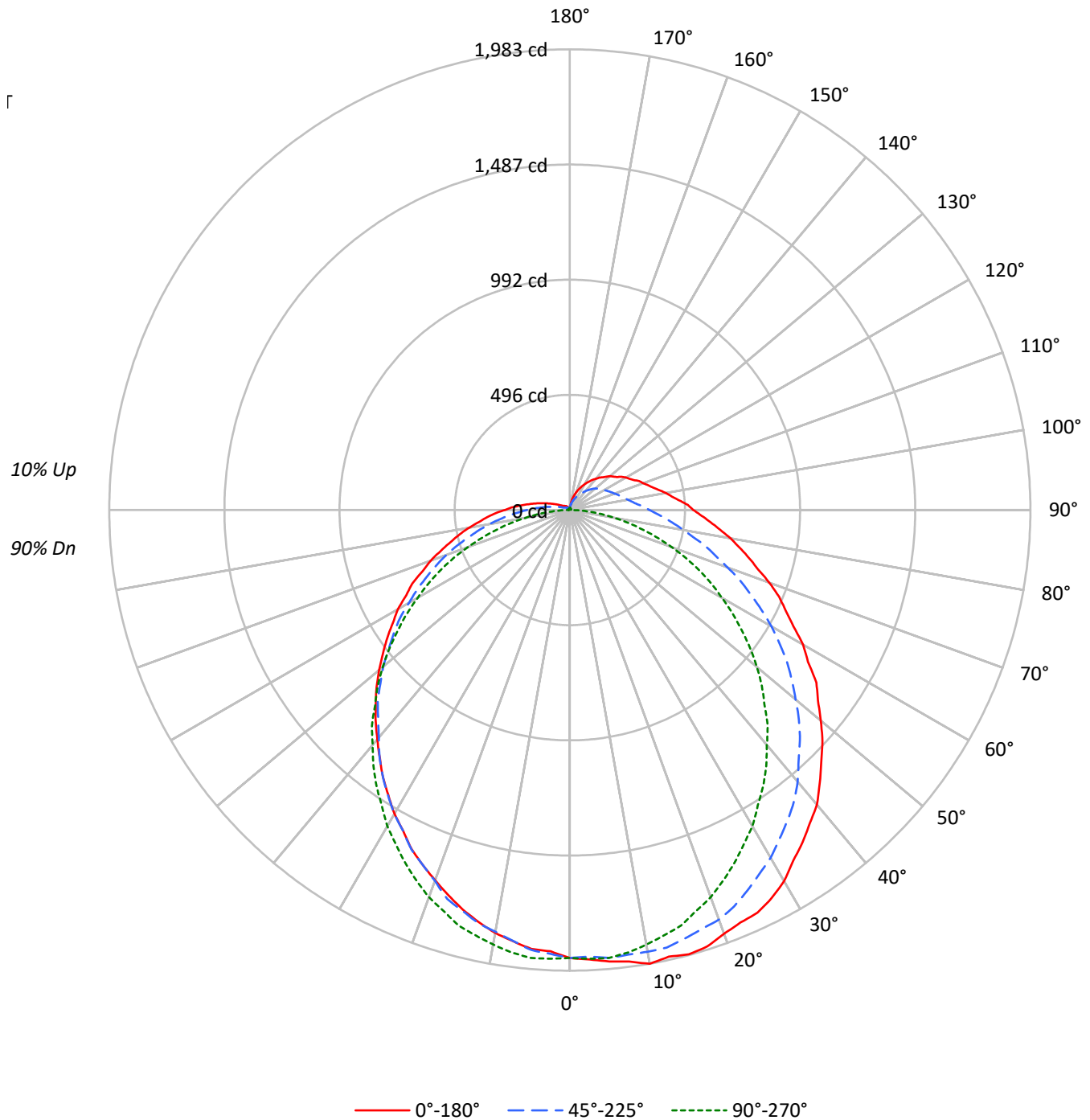
Test Method: LM-79-2019  
Report Number: P893817  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-185-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-7HL-ASMF-UNV-L830  
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6630.0 lumens  
Efficiency: N/A  
Efficacy: 128.0 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): 51.8  
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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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.0	2.8
10°-20°	524.4	7.9
20°-30°	790.7	11.9
30°-40°	949.1	14.3
40°-50°	988.3	14.9
50°-60°	916.1	13.8
60°-70°	754.5	11.4
70°-80°	544.2	8.2
80°-90°	345.5	5.2
90°-100°	213.0	3.2
100°-110°	142.0	2.1
110°-120°	101.1	1.5
120°-130°	74.1	1.1
130°-140°	50.9	0.8
140°-150°	31.0	0.5
150°-160°	15.4	0.2
160°-170°	5.6	0.1
170°-180°	0.9	0.0
0°-30°	1498.1	22.6
0°-40°	2447.2	36.9
0°-60°	4351.6	65.6
0°-90°	5995.8	90.4
90°-120°	456.1	6.9
90°-150°	612.2	9.2
90°-180°	634.0	9.6
0°-180°	6630.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1928	1928	1928	1928	1928	
5°	1951	1935	1935	1901	1897	187
15°	1980	1910	1851	1786	1780	558
25°	1912	1808	1677	1613	1611	879
35°	1747	1633	1451	1403	1403	1095
45°	1531	1401	1185	1170	1181	1185
55°	1296	1143	903	926	959	1151
65°	1026	858	615	679	748	1022
75°	799	606	324	450	530	847
85°	608	413	85	260	358	516
90°	531	343	8	185	279	293
95°	473	290	5	124	215	376
105°	371	228	5	51	113	396
115°	305	188	6	24	54	305
125°	248	157	7	19	31	225
135°	199	125	7	14	23	156
145°	152	89	7	11	16	96
155°	104	59	8	7	11	49
165°	61	34	8	5	6	18
175°	9	14	9	4	1	2
180°	6	6	6	6	6	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1928.4	1928.4	1928.4	1928.4	1928.4	1928.4	1928.4	1928.4	1928.4
2.5°	1936.1	1941.9	1923.6	1935.1	1933.2	1935.1	1912.0	1931.3	1901.4
5°	1950.6	1953.5	1935.1	1941.9	1935.1	1918.7	1901.4	1894.6	1896.6
7.5°	1960.2	1975.6	1930.3	1932.2	1920.7	1903.3	1870.5	1876.3	1872.5
10°	1983.3	1966.0	1930.3	1921.6	1899.5	1881.1	1843.5	1846.4	1848.4
12.5°	1968.9	1965.0	1929.3	1897.5	1875.4	1859.9	1821.4	1811.7	1816.5
15°	1979.5	1963.1	1910.1	1885.0	1851.2	1824.3	1785.7	1778.9	1779.9
17.5°	1969.8	1956.3	1890.8	1856.1	1808.8	1792.4	1755.8	1744.2	1738.4
20°	1940.9	1934.2	1876.3	1816.5	1774.1	1742.3	1697.9	1691.2	1696.0
22.5°	1921.6	1905.2	1847.4	1787.6	1725.9	1697.9	1653.6	1652.6	1653.6
25°	1912.0	1890.8	1807.9	1745.2	1676.7	1651.7	1613.1	1598.6	1611.2
27.5°	1883.1	1863.8	1766.4	1697.9	1621.8	1588.0	1556.2	1553.3	1555.2
30°	1844.5	1806.9	1728.8	1644.9	1571.6	1536.9	1510.9	1491.6	1509.9
32.5°	1789.5	1768.3	1679.6	1588.0	1507.0	1482.9	1456.9	1455.0	1455.0
35°	1747.1	1731.7	1633.3	1537.9	1451.1	1418.3	1402.9	1396.2	1402.9
37.5°	1697.9	1674.8	1584.2	1477.1	1388.4	1360.5	1345.0	1339.3	1344.1
40°	1655.5	1613.1	1526.3	1414.5	1320.0	1294.9	1278.5	1284.3	1289.1
42.5°	1592.8	1568.7	1457.9	1350.8	1261.2	1234.2	1220.7	1225.5	1237.1
45°	1531.1	1509.0	1401.0	1284.3	1185.0	1170.5	1169.6	1166.7	1181.1
47.5°	1475.2	1443.4	1338.3	1218.7	1121.4	1105.0	1106.9	1116.5	1129.1
50°	1410.6	1373.0	1268.9	1148.4	1051.0	1040.4	1048.1	1054.8	1071.2
52.5°	1346.0	1316.1	1205.2	1081.8	979.6	971.9	982.5	1004.7	1014.3
55°	1295.9	1241.9	1142.6	1003.7	903.4	904.4	925.6	938.2	959.4
57.5°	1215.8	1175.4	1071.2	934.3	832.1	838.8	867.8	889.0	902.5
60°	1159.0	1107.9	1001.8	860.1	756.9	767.5	800.3	832.1	855.2
62.5°	1085.7	1041.3	929.5	786.8	687.5	702.9	739.5	777.1	793.5
65°	1025.9	975.8	858.1	713.5	615.2	633.5	678.8	721.2	748.2
67.5°	974.8	922.7	794.5	646.0	541.9	568.9	621.9	663.4	684.6
70°	914.1	853.3	722.2	570.8	465.7	497.5	565.0	613.2	637.3
72.5°	849.5	800.3	659.5	501.4	395.3	433.9	508.1	558.3	581.4
75°	799.3	744.4	606.5	432.0	324.0	370.2	450.3	507.2	530.3
77.5°	748.2	698.1	546.7	368.3	260.3	312.4	399.2	461.8	486.0
80°	702.9	645.0	496.6	316.3	193.8	255.5	351.0	412.7	440.6
82.5°	652.8	602.6	453.2	261.3	137.9	203.4	303.7	371.2	394.4
85°	608.4	556.3	412.7	217.9	84.8	157.2	260.3	329.8	357.7
87.5°	567.9	524.5	375.1	185.1	42.4	119.6	218.9	289.3	321.1
90°	531.3	482.1	343.3	155.2	7.7	86.8	185.1	254.5	278.7
92.5°	508.1	449.3	317.2	136.0	4.8	61.7	154.3	222.7	250.7
95°	473.4	421.4	290.2	121.5	4.8	41.5	124.4	190.9	215.0
97.5°	443.5	395.3	270.9	112.8	3.9	28.0	102.2	160.1	185.1
100°	420.4	375.1	253.6	105.1	4.8	20.2	81.0	136.0	158.1
102.5°	394.4	352.9	240.1	100.3	4.8	14.5	63.6	114.7	135.0
105°	371.2	334.6	227.5	95.5	4.8	12.5	51.1	94.5	112.8
107.5°	353.9	315.3	216.9	92.6	4.8	12.5	40.5	77.1	92.6
110°	336.5	299.9	206.3	89.7	4.8	11.6	31.8	63.6	77.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	324.9	285.4	196.7	86.8	5.8	11.6	26.0	53.0	63.6
115°	304.7	272.9	188.0	85.8	5.8	10.6	24.1	43.4	54.0
117.5°	290.2	261.3	179.3	82.9	5.8	10.6	23.1	35.7	43.4
120°	279.6	247.8	171.6	80.0	5.8	9.6	21.2	31.8	36.6
122.5°	266.1	235.3	164.9	78.1	5.8	9.6	20.2	29.9	32.8
125°	247.8	223.7	157.2	74.2	6.7	9.6	19.3	28.0	30.9
127.5°	236.2	213.1	151.4	69.4	6.7	8.7	18.3	26.0	28.9
130°	226.6	201.5	144.6	64.6	6.7	8.7	17.4	24.1	27.0
132.5°	212.1	189.9	135.0	60.7	6.7	7.7	15.4	22.2	25.1
135°	198.6	180.3	125.3	56.9	6.7	7.7	14.5	21.2	23.1
137.5°	189.9	170.7	116.7	53.0	6.7	6.7	13.5	19.3	21.2
140°	175.5	160.1	107.0	49.2	6.7	6.7	12.5	18.3	19.3
142.5°	164.9	149.4	98.3	45.3	6.7	6.7	11.6	16.4	18.3
145°	152.3	138.8	88.7	41.5	6.7	5.8	10.6	15.4	16.4
147.5°	140.8	126.3	81.0	38.6	6.7	5.8	9.6	13.5	14.5
150°	129.2	113.8	73.3	35.7	6.7	5.8	8.7	11.6	13.5
152.5°	116.7	98.3	65.6	32.8	6.7	5.8	7.7	10.6	11.6
155°	104.1	85.8	58.8	29.9	7.7	5.8	6.7	8.7	10.6
157.5°	93.5	74.2	52.1	27.0	7.7	4.8	6.7	7.7	8.7
160°	81.0	63.6	46.3	24.1	7.7	4.8	5.8	6.7	7.7
162.5°	71.4	53.0	40.5	22.2	7.7	4.8	5.8	5.8	6.7
165°	60.7	44.4	33.7	20.2	7.7	4.8	4.8	4.8	5.8
167.5°	49.2	34.7	28.0	18.3	7.7	4.8	4.8	3.9	4.8
170°	36.6	26.0	23.1	16.4	7.7	4.8	3.9	2.9	3.9
172.5°	16.4	20.2	18.3	14.5	8.7	4.8	3.9	2.9	1.9
175°	8.7	14.5	14.5	12.5	8.7	4.8	3.9	2.9	1.0
177.5°	6.7	8.7	10.6	10.6	8.7	5.8	3.9	1.9	1.0
180°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8



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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	20.71	22.19	21.21	22.69	23.23	19.68	21.16	20.19	21.66	22.20
	3H	22.80	24.14	23.31	24.65	25.24	21.55	22.90	22.07	23.41	23.99
	4H	23.74	25.02	24.28	25.54	26.14	22.30	23.57	22.84	24.10	24.70
	6H	24.66	25.85	25.21	26.39	27.00	22.93	24.12	23.48	24.66	25.27
	8H	25.09	26.23	25.65	26.79	27.41	23.19	24.32	23.75	24.89	25.51
	12H	25.51	26.60	26.08	27.16	27.80	23.42	24.51	23.99	25.07	25.71
4H	2H	21.20	22.48	21.74	23.01	23.60	20.24	21.52	20.78	22.05	22.64
	3H	23.52	24.60	24.07	25.17	25.79	22.30	23.39	22.86	23.96	24.58
	4H	24.63	25.62	25.20	26.20	26.85	23.16	24.15	23.73	24.73	25.38
	6H	25.73	26.61	26.33	27.22	27.88	23.91	24.79	24.50	25.39	26.06
	8H	26.26	27.09	26.86	27.69	28.37	24.23	25.05	24.82	25.66	26.33
	12H	26.79	27.54	27.41	28.17	28.85	24.52	25.27	25.14	25.90	26.58
8H	4H	24.89	25.71	25.48	26.32	26.99	23.49	24.32	24.09	24.92	25.60
	6H	26.17	26.87	26.80	27.51	28.19	24.38	25.08	25.01	25.72	26.40
	8H	26.84	27.47	27.48	28.12	28.81	24.78	25.41	25.42	26.06	26.76
	12H	27.54	28.10	28.18	28.75	29.50	25.17	25.73	25.81	26.37	27.13
12H	4H	24.90	25.65	25.52	26.28	26.96	23.56	24.31	24.18	24.94	25.62
	6H	26.22	26.86	26.86	27.51	28.20	24.49	25.12	25.13	25.77	26.47
	8H	26.97	27.53	27.61	28.17	28.93	24.95	25.51	25.59	26.16	26.91