

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: P893500

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L850

Issue Date: 11/11/2024

**Test Information**

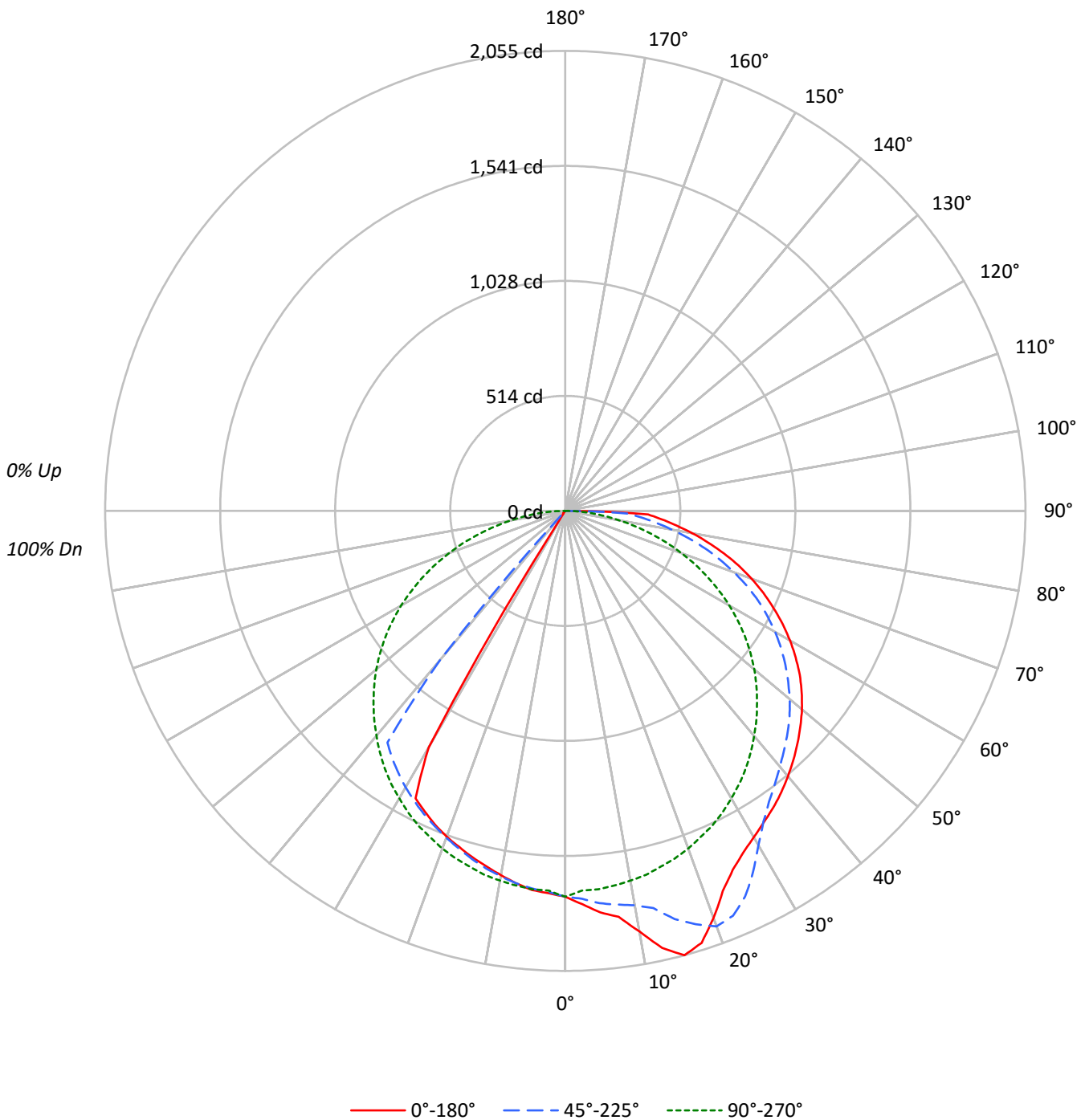
Test Method: LM-79-2019  
Report Number: P893500  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-ASYMR-UNV-L850  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4663.0 lumens  
Efficiency: N/A  
Efficacy: 156.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.28 / 1.25  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.8  
Input Voltage (V):  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 5.5  
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			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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	50
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	22380	22380	22380	22380	22380
5°	23468	22928	22117	22078	22156
10°	25146	23583	22113	21852	21788
15°	27627	25371	22121	21642	21536
20°	26748	27294	22179	21470	21401
25°	25344	27238	22232	21398	21242
30°	25235	25855	22230	21372	18293
35°	25661	25146	22266	21375	250
40°	26220	25265	22236	14740	168
45°	26936	25775	22242	272	108
50°	27876	26421	22254	200	40
55°	28939	27173	22191	134	23
60°	30094	28095	21994	52	26
65°	31512	29207	21594	61	61
70°	33615	30430	20912	76	76
75°	36795	32390	20008	196	100
80°	43177	36245	18530	292	150
85°	64273	50879	17357	447	298

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 110205 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.2	3.5
10°-20°	493.1	10.6
20°-30°	758.0	16.3
30°-40°	812.3	17.4
40°-50°	737.8	15.8
50°-60°	672.9	14.4
60°-70°	500.6	10.7
70°-80°	352.4	7.6
80°-90°	170.7	3.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1416.2	30.4
0°-40°	2228.6	47.8
0°-60°	3639.3	78.0
0°-90°	4663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4663.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1724	1724	1724	1724	1724	
5°	1800	1759	1697	1694	1700	174
15°	2055	1887	1646	1610	1602	567
25°	1769	1901	1552	1494	1483	823
35°	1619	1586	1405	1348	16	1014
45°	1467	1404	1211	15	6	1133
55°	1278	1200	980	6	1	1142
65°	1026	951	703	2	2	1015
75°	733	646	399	4	2	773
85°	431	342	116	3	2	433
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1723.5	1723.5	1723.5	1723.5	1723.5	1723.5	1723.5	1723.5	1723.5
2.5°	1759.0	1739.2	1734.3	1748.1	1697.8	1731.4	1703.7	1709.6	1709.6
5°	1800.4	1772.8	1759.0	1755.0	1696.8	1719.5	1693.8	1693.8	1699.8
7.5°	1829.1	1798.5	1773.8	1763.9	1687.9	1707.7	1678.0	1678.0	1678.0
10°	1907.1	1849.8	1788.6	1770.8	1677.1	1691.9	1657.3	1659.3	1652.4
12.5°	1998.9	1947.5	1817.2	1767.9	1665.2	1672.1	1635.6	1634.6	1626.7
15°	2055.1	2016.6	1887.3	1763.9	1645.5	1651.4	1609.9	1607.0	1602.0
17.5°	2023.5	2017.6	1935.7	1761.0	1627.7	1622.8	1581.3	1578.4	1574.4
20°	1935.7	1950.5	1975.2	1755.0	1605.0	1595.1	1553.7	1551.7	1548.7
22.5°	1838.0	1852.8	1957.4	1764.9	1577.4	1565.5	1524.1	1522.1	1518.1
25°	1768.9	1768.9	1901.1	1788.6	1551.7	1530.0	1493.5	1490.5	1482.6
27.5°	1720.5	1711.6	1817.2	1815.3	1519.1	1494.5	1460.9	1457.9	1448.1
30°	1683.0	1668.2	1724.4	1828.1	1482.6	1456.0	1425.4	1422.4	1220.0
32.5°	1649.4	1633.6	1646.5	1838.9	1446.1	1414.5	1387.8	990.0	43.4
35°	1618.8	1601.1	1586.3	1831.0	1404.6	1373.0	1348.4	28.6	15.8
37.5°	1584.3	1570.5	1536.9	1789.6	1360.2	1328.6	1304.9	15.8	13.8
40°	1546.8	1533.9	1490.5	1728.4	1311.8	1285.2	869.6	13.8	9.9
42.5°	1508.3	1498.4	1447.1	1639.6	1263.5	1236.8	27.6	10.9	7.9
45°	1466.8	1457.9	1403.6	1532.0	1211.2	1186.5	14.8	7.9	5.9
47.5°	1424.4	1411.5	1358.2	1416.5	1157.9	1133.2	12.8	5.9	3.9
50°	1379.9	1366.1	1307.9	1314.8	1101.6	1076.9	9.9	3.9	2.0
52.5°	1330.6	1313.8	1254.6	1223.0	1042.4	1019.7	7.9	2.0	1.0
55°	1278.3	1259.5	1200.3	1143.0	980.2	954.5	5.9	2.0	1.0
57.5°	1220.0	1199.3	1143.0	1067.0	914.0	645.6	3.9	2.0	1.0
60°	1158.8	1138.1	1081.8	996.0	846.9	44.4	2.0	2.0	1.0
62.5°	1093.7	1072.0	1017.7	923.9	774.9	36.5	2.0	2.0	2.0
65°	1025.6	999.9	950.6	849.9	702.8	30.6	2.0	2.0	2.0
67.5°	957.5	924.9	878.5	773.9	628.8	25.7	2.0	2.0	2.0
70°	885.4	849.9	801.5	696.9	550.8	20.7	2.0	2.0	2.0
72.5°	811.4	776.8	724.5	618.9	477.8	15.8	2.0	2.0	2.0
75°	733.4	701.8	645.6	540.9	398.8	11.8	3.9	2.0	2.0
77.5°	652.5	627.8	564.6	461.0	321.8	7.9	3.9	2.0	2.0
80°	577.4	549.8	484.7	380.0	247.8	5.9	3.9	3.0	2.0
82.5°	500.5	475.8	410.6	306.0	177.7	4.9	3.9	3.0	2.0
85°	431.4	407.7	341.5	238.9	116.5	3.9	3.0	3.0	2.0
87.5°	370.2	348.4	283.3	174.7	66.1	3.0	3.0	3.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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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	25.33	26.94	25.70	27.26	27.57	20.76	22.38	21.13	22.69	23.01
	3H	27.78	29.24	28.15	29.57	29.93	21.41	22.87	21.78	23.20	23.56
	4H	28.90	30.28	29.30	30.63	31.01	21.55	22.93	21.95	23.28	23.66
	6H	29.99	31.28	30.41	31.64	32.03	21.59	22.88	22.00	23.24	23.63
	8H	30.52	31.75	30.95	32.14	32.54	21.58	22.81	22.00	23.20	23.59
	12H	31.09	32.27	31.52	32.65	33.08	21.56	22.74	21.99	23.12	23.55
4H	2H	25.99	27.37	26.39	27.72	28.09	21.89	23.27	22.29	23.62	24.00
	3H	28.68	29.84	29.09	30.24	30.64	23.23	24.40	23.64	24.80	25.20
	4H	29.97	31.03	30.40	31.45	31.88	23.77	24.83	24.20	25.24	25.68
	6H	31.25	32.19	31.71	32.63	33.08	24.04	24.98	24.50	25.42	25.87
	8H	31.88	32.76	32.34	33.20	33.66	24.08	24.96	24.54	25.40	25.86
	12H	32.57	33.36	33.05	33.83	34.30	24.09	24.88	24.57	25.36	25.83
8H	4H	30.34	31.21	30.79	31.65	32.12	24.71	25.59	25.17	26.03	26.50
	6H	31.82	32.56	32.31	33.04	33.52	25.31	26.04	25.80	26.53	27.00
	8H	32.60	33.27	33.11	33.77	34.26	25.48	26.15	25.99	26.65	27.14
	12H	33.49	34.08	34.00	34.57	35.13	25.59	26.18	26.09	26.67	27.23
12H	4H	30.38	31.17	30.86	31.64	32.11	24.93	25.72	25.41	26.20	26.67
	6H	31.91	32.57	32.41	33.08	33.56	25.66	26.32	26.16	26.83	27.31
	8H	32.79	33.38	33.29	33.87	34.43	25.97	26.56	26.47	27.05	27.61