

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: P893499

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893499
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-L840
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

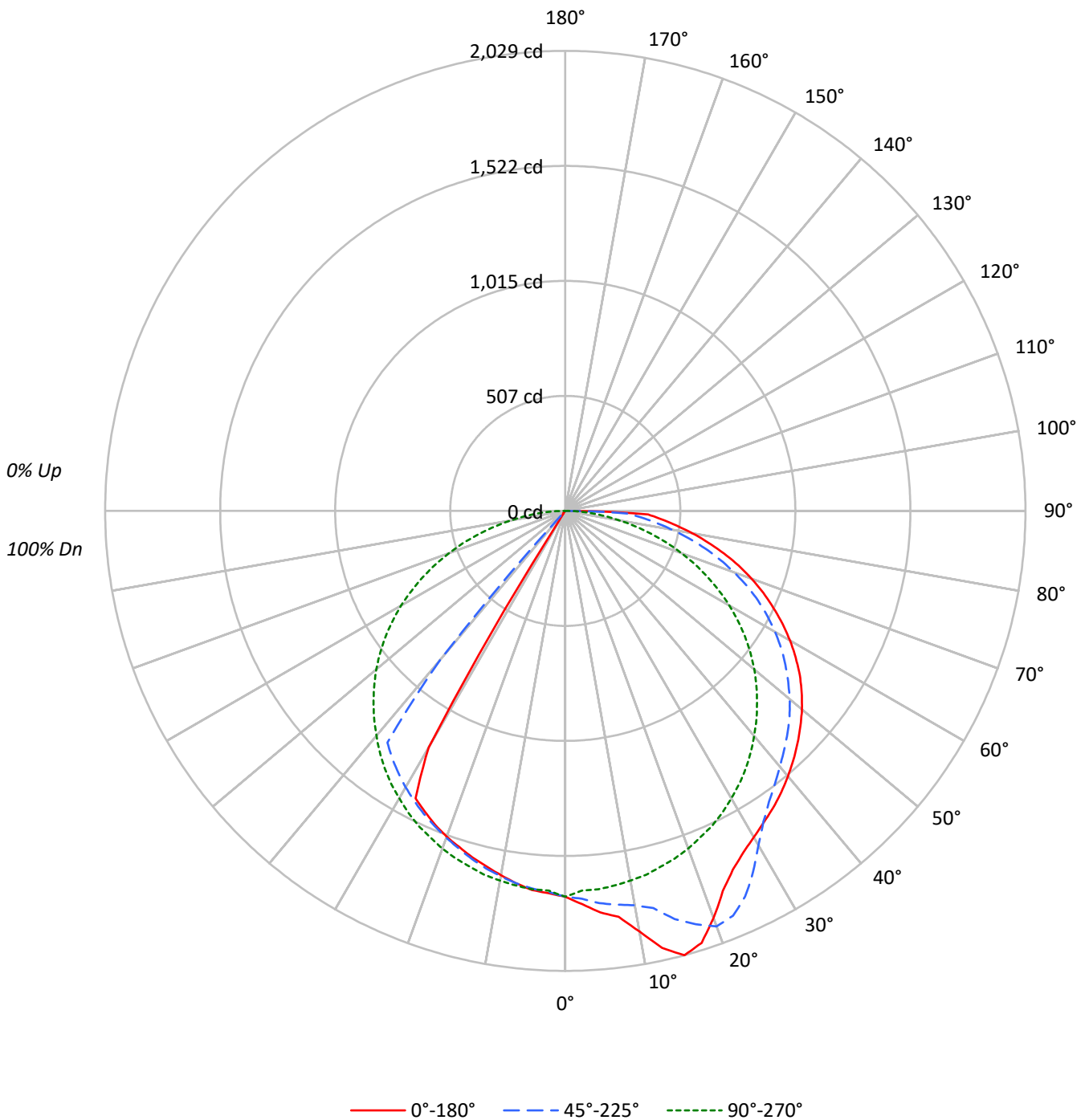
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4603.9 lumens
Efficiency: N/A
Efficacy: 154.5 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 (Ain): 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				
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	85	85	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	71	71	71	69
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	53	53	53	50
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	41	41	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	22095	22095	22095	22095	22095
5°	23172	22637	21837	21799	21876
10°	24827	23285	21832	21577	21512
15°	27277	25050	21841	21369	21264
20°	26410	26949	21898	21197	21130
25°	25023	26894	21951	21127	20973
30°	24915	25529	21948	21101	18062
35°	25336	24827	21985	21104	247
40°	25887	24945	21955	14554	164
45°	26596	25450	21959	268	107
50°	27524	26086	21973	196	38
55°	28572	26829	21910	131	23
60°	29715	27741	21716	49	26
65°	31112	28836	21320	58	58
70°	33190	30046	20646	72	72
75°	36328	31979	19752	196	95
80°	42631	35781	18291	292	142
85°	63454	50238	17134	432	283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 108806 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.1	3.5
10°-20°	486.9	10.6
20°-30°	748.4	16.3
30°-40°	802.1	17.4
40°-50°	728.4	15.8
50°-60°	664.4	14.4
60°-70°	494.3	10.7
70°-80°	347.9	7.6
80°-90°	168.5	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°	1398.3	30.4
0°-40°	2200.4	47.8
0°-60°	3593.2	78.0
0°-90°	4603.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4603.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1702	1702	1702	1702	1702	
5°	1778	1737	1675	1672	1678	172
15°	2029	1863	1625	1590	1582	560
25°	1746	1877	1532	1475	1464	812
35°	1598	1566	1387	1331	16	1001
45°	1448	1386	1196	15	6	1119
55°	1262	1185	968	6	1	1127
65°	1013	938	694	2	2	1003
75°	724	637	394	4	2	764
85°	426	337	115	3	2	428
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°	1701.6	1701.6	1701.6	1701.6	1701.6	1701.6	1701.6	1701.6	1701.6
2.5°	1736.7	1717.2	1712.4	1726.0	1676.3	1709.4	1682.2	1688.0	1688.0
5°	1777.7	1750.4	1736.7	1732.8	1675.3	1697.8	1672.4	1672.4	1678.3
7.5°	1805.9	1775.7	1751.4	1741.6	1666.6	1686.1	1656.8	1656.8	1656.8
10°	1882.9	1826.4	1766.0	1748.4	1655.8	1670.5	1636.4	1638.3	1631.5
12.5°	1973.6	1922.9	1794.2	1745.5	1644.1	1651.0	1614.9	1613.9	1606.1
15°	2029.1	1991.1	1863.4	1741.6	1624.7	1630.5	1589.6	1586.6	1581.8
17.5°	1997.9	1992.1	1911.2	1738.7	1607.1	1602.2	1561.3	1558.4	1554.5
20°	1911.2	1925.8	1950.2	1732.8	1584.7	1575.0	1534.0	1532.1	1529.1
22.5°	1814.7	1829.3	1932.6	1742.6	1557.4	1545.7	1504.8	1502.8	1498.9
25°	1746.5	1746.5	1877.1	1766.0	1532.1	1510.6	1474.6	1471.6	1463.8
27.5°	1698.7	1690.0	1794.2	1792.3	1499.9	1475.5	1442.4	1439.5	1429.7
30°	1661.7	1647.1	1702.6	1805.0	1463.8	1437.5	1407.3	1404.4	1204.6
32.5°	1628.6	1613.0	1625.6	1815.7	1427.8	1396.6	1370.3	977.5	42.9
35°	1598.3	1580.8	1566.2	1807.9	1386.9	1355.7	1331.3	28.3	15.6
37.5°	1564.2	1550.6	1517.4	1766.9	1343.0	1311.8	1288.4	15.6	13.6
40°	1527.2	1514.5	1471.6	1706.5	1295.2	1268.9	858.6	13.6	9.7
42.5°	1489.2	1479.4	1428.8	1618.8	1247.5	1221.2	27.3	10.7	7.8
45°	1448.3	1439.5	1385.9	1512.6	1195.8	1171.5	14.6	7.8	5.8
47.5°	1406.3	1393.7	1341.0	1398.5	1143.2	1118.8	12.7	5.8	3.9
50°	1362.5	1348.8	1291.3	1298.2	1087.7	1063.3	9.7	3.9	1.9
52.5°	1313.8	1297.2	1238.7	1207.5	1029.2	1006.8	7.8	1.9	1.0
55°	1262.1	1243.6	1185.1	1128.6	967.8	942.4	5.8	1.9	1.0
57.5°	1204.6	1184.1	1128.6	1053.5	902.5	637.4	3.9	1.9	1.0
60°	1144.2	1123.7	1068.2	983.4	836.2	43.9	1.9	1.9	1.0
62.5°	1079.9	1058.4	1004.8	912.2	765.1	36.1	1.9	1.9	1.9
65°	1012.6	987.3	938.5	839.1	693.9	30.2	1.9	1.9	1.9
67.5°	945.4	913.2	867.4	764.1	620.8	25.3	1.9	1.9	1.9
70°	874.2	839.1	791.4	688.1	543.8	20.5	1.9	1.9	1.9
72.5°	801.1	767.0	715.4	611.1	471.7	15.6	1.9	1.9	1.9
75°	724.1	692.9	637.4	534.1	393.7	11.7	3.9	1.9	1.9
77.5°	644.2	619.8	557.5	455.1	317.7	7.8	3.9	1.9	1.9
80°	570.1	542.9	478.5	375.2	244.6	5.8	3.9	2.9	1.9
82.5°	494.1	469.8	405.4	302.1	175.4	4.9	3.9	2.9	1.9
85°	425.9	402.5	337.2	235.9	115.0	3.9	2.9	2.9	1.9
87.5°	365.5	344.0	279.7	172.5	65.3	2.9	2.9	2.9	1.9
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	25.29	26.90	25.65	27.21	27.53	20.72	22.33	21.08	22.65	22.96
	3H	27.73	29.20	28.11	29.52	29.88	21.36	22.83	21.74	23.15	23.51
	4H	28.86	30.24	29.26	30.59	30.96	21.51	22.89	21.90	23.24	23.61
	6H	29.95	31.23	30.36	31.60	31.99	21.55	22.83	21.96	23.20	23.59
	8H	30.48	31.71	30.90	32.10	32.50	21.53	22.76	21.96	23.15	23.55
	12H	31.05	32.23	31.48	32.61	33.04	21.52	22.69	21.95	23.08	23.50
4H	2H	25.94	27.33	26.34	27.67	28.05	21.85	23.23	22.24	23.58	23.95
	3H	28.63	29.80	29.04	30.20	30.60	23.19	24.36	23.60	24.75	25.15
	4H	29.93	30.99	30.36	31.40	31.84	23.72	24.79	24.15	25.20	25.63
	6H	31.21	32.14	31.66	32.58	33.04	24.00	24.93	24.45	25.37	25.83
	8H	31.84	32.71	32.30	33.15	33.62	24.04	24.91	24.50	25.36	25.82
	12H	32.52	33.31	33.00	33.79	34.26	24.05	24.84	24.53	25.31	25.78
8H	4H	30.29	31.17	30.75	31.61	32.07	24.67	25.55	25.13	25.99	26.45
	6H	31.77	32.51	32.27	33.00	33.47	25.26	26.00	25.75	26.48	26.96
	8H	32.56	33.22	33.06	33.73	34.21	25.44	26.10	25.95	26.61	27.09
	12H	33.45	34.04	33.95	34.53	35.09	25.54	26.13	26.05	26.62	27.18
12H	4H	30.33	31.12	30.81	31.60	32.07	24.89	25.68	25.37	26.15	26.62
	6H	31.86	32.53	32.37	33.03	33.52	25.61	26.28	26.12	26.78	27.27
	8H	32.74	33.33	33.25	33.82	34.38	25.92	26.51	26.43	27.00	27.56