

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: P893497

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L830

Issue Date: 11/11/2024

**Test Information**

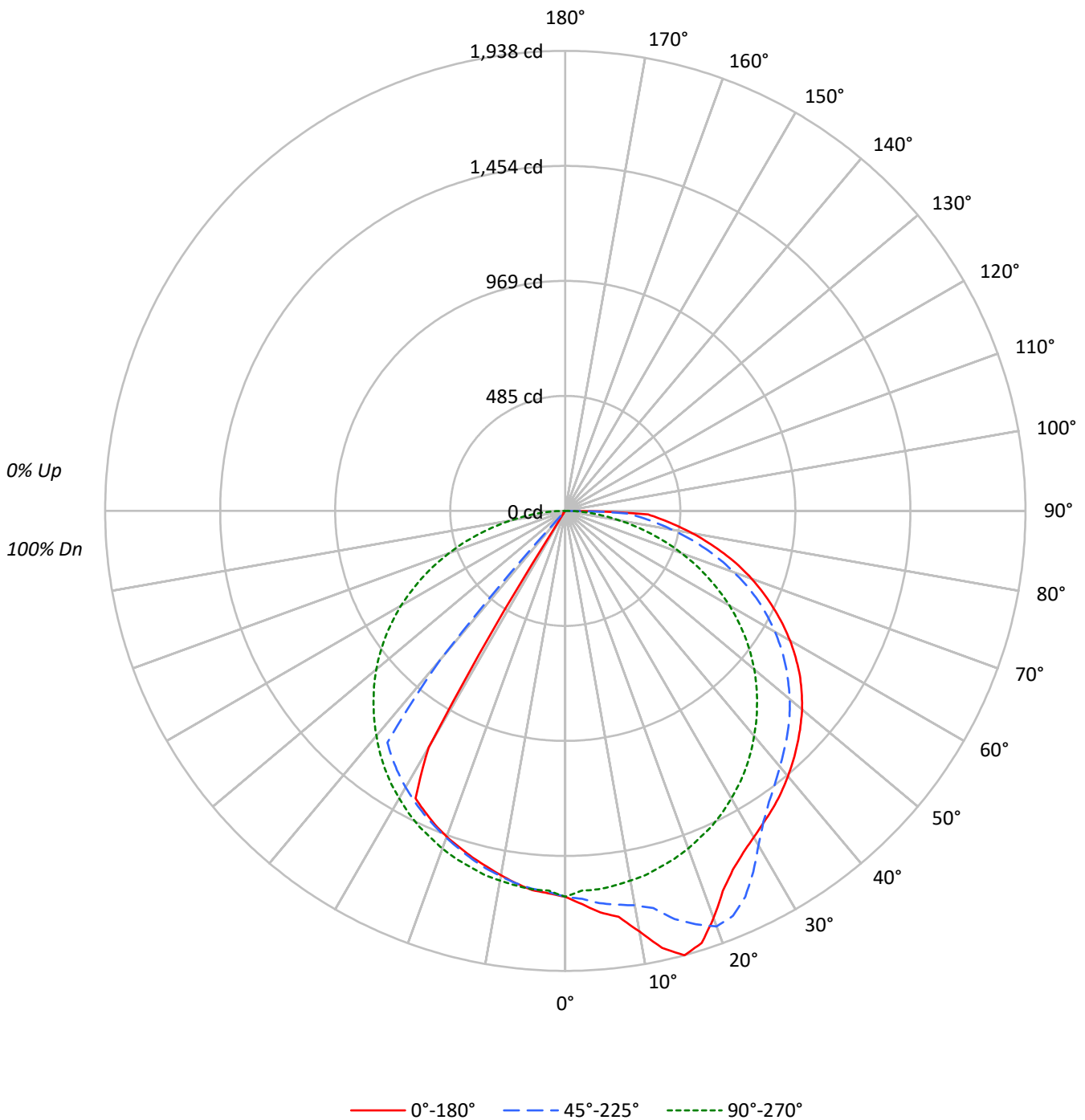
Test Method: LM-79-2019  
Report Number: P893497  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-ASYMR-UNV-L830  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 80CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4398.0 lumens  
Efficiency: N/A  
Efficacy: 147.6 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

TEST NUMBER: P893497  
CATALOG NUMBER: 4MB-4SL-ASYMR-UNV-L830

### Luminous Intensity Polar Plot





TEST NUMBER: P893497  
 CATALOG NUMBER: 4MB-4SL-ASYMR-UNV-L830

**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	100			100	
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83			83	
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69			69	
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59			59	
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	50			50	
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44			44	
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39			39	
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	35			35	
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31			31	
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28			28	
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26			26	

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

	0°	45°	90°	135°	180°
0°	21107	21107	21107	21107	21107
5°	22134	21625	20861	20824	20897
10°	23717	22244	20857	20610	20549
15°	26057	23930	20864	20412	20313
20°	25228	25742	20918	20250	20185
25°	23902	25691	20968	20182	20034
30°	23800	24386	20966	20158	17253
35°	24203	23716	21001	20159	236
40°	24730	23829	20973	13903	158
45°	25406	24312	20977	257	103
50°	26292	24920	20989	188	38
55°	27293	25629	20930	127	20
60°	28385	26500	20745	49	23
65°	29721	27545	20368	58	58
70°	31705	28702	19723	72	72
75°	34703	30549	18869	186	95
80°	40724	34181	17476	277	142
85°	60608	47989	16374	417	283

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 103924 cd/sqm



TEST NUMBER: P893497  
 CATALOG NUMBER: 4MB-4SL-ASYMR-UNV-L830

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.8	3.5
10°-20°	465.1	10.6
20°-30°	714.9	16.3
30°-40°	766.2	17.4
40°-50°	695.8	15.8
50°-60°	634.7	14.4
60°-70°	472.2	10.7
70°-80°	332.4	7.6
80°-90°	161.0	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°	1335.8	30.4
0°-40°	2101.9	47.8
0°-60°	3432.5	78.0
0°-90°	4398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4398.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1626	1626	1626	1626	1626	
5°	1698	1659	1600	1598	1603	164
15°	1938	1780	1552	1518	1511	535
25°	1668	1793	1464	1409	1398	776
35°	1527	1496	1325	1272	15	956
45°	1384	1324	1142	14	6	1069
55°	1206	1132	924	6	1	1077
65°	967	896	663	2	2	958
75°	692	609	376	4	2	729
85°	407	322	110	3	2	409
90°	0	0	0	0	0	



TEST NUMBER: P893497

CATALOG NUMBER: 4MB-4SL-ASYMR-UNV-L830

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1625.5	1625.5	1625.5	1625.5	1625.5	1625.5	1625.5	1625.5	1625.5
2.5°	1659.0	1640.4	1635.8	1648.8	1601.3	1633.0	1606.9	1612.5	1612.5
5°	1698.1	1672.1	1659.0	1655.3	1600.4	1621.8	1597.6	1597.6	1603.2
7.5°	1725.1	1696.3	1673.0	1663.7	1592.0	1610.6	1582.7	1582.7	1582.7
10°	1798.7	1744.7	1687.0	1670.2	1581.8	1595.7	1563.1	1565.0	1558.5
12.5°	1885.3	1836.8	1714.0	1667.4	1570.6	1577.1	1542.7	1541.7	1534.3
15°	1938.3	1902.0	1780.1	1663.7	1552.0	1557.5	1518.4	1515.7	1511.0
17.5°	1908.5	1902.9	1825.7	1660.9	1535.2	1530.5	1491.4	1488.7	1484.9
20°	1825.7	1839.6	1862.9	1655.3	1513.8	1504.5	1465.4	1463.5	1460.7
22.5°	1733.5	1747.5	1846.2	1664.6	1487.7	1476.6	1437.5	1435.6	1431.9
25°	1668.3	1668.3	1793.1	1687.0	1463.5	1443.0	1408.6	1405.8	1398.3
27.5°	1622.7	1614.3	1714.0	1712.1	1432.8	1409.5	1377.9	1375.1	1365.8
30°	1587.3	1573.4	1626.4	1724.2	1398.3	1373.2	1344.4	1341.6	1150.7
32.5°	1555.7	1540.8	1552.9	1734.4	1363.9	1334.1	1309.0	933.8	41.0
35°	1526.8	1510.1	1496.1	1727.0	1324.8	1295.0	1271.7	27.0	14.9
37.5°	1494.2	1481.2	1449.6	1687.9	1282.9	1253.1	1230.8	14.9	13.0
40°	1458.9	1446.8	1405.8	1630.2	1237.3	1212.2	820.2	13.0	9.3
42.5°	1422.6	1413.2	1364.8	1546.4	1191.7	1166.5	26.1	10.2	7.4
45°	1383.5	1375.1	1323.9	1444.9	1142.3	1119.1	14.0	7.4	5.6
47.5°	1343.4	1331.3	1281.0	1336.0	1092.1	1068.8	12.1	5.6	3.7
50°	1301.5	1288.5	1233.6	1240.1	1039.0	1015.7	9.3	3.7	1.9
52.5°	1255.0	1239.1	1183.3	1153.5	983.1	961.7	7.4	1.9	0.9
55°	1205.6	1187.9	1132.1	1078.1	924.5	900.3	5.6	1.9	0.9
57.5°	1150.7	1131.2	1078.1	1006.4	862.1	608.9	3.7	1.9	0.9
60°	1093.0	1073.4	1020.4	939.4	798.8	41.9	1.9	1.9	0.9
62.5°	1031.5	1011.1	959.9	871.4	730.8	34.4	1.9	1.9	1.9
65°	967.3	943.1	896.5	801.6	662.9	28.9	1.9	1.9	1.9
67.5°	903.1	872.3	828.6	729.9	593.0	24.2	1.9	1.9	1.9
70°	835.1	801.6	756.0	657.3	519.5	19.6	1.9	1.9	1.9
72.5°	765.3	732.7	683.3	583.7	450.6	14.9	1.9	1.9	1.9
75°	691.7	661.9	608.9	510.2	376.1	11.2	3.7	1.9	1.9
77.5°	615.4	592.1	532.5	434.8	303.5	7.4	3.7	1.9	1.9
80°	544.6	518.6	457.1	358.4	233.7	5.6	3.7	2.8	1.9
82.5°	472.0	448.7	387.3	288.6	167.6	4.7	3.7	2.8	1.9
85°	406.8	384.5	322.1	225.3	109.9	3.7	2.8	2.8	1.9
87.5°	349.1	328.6	267.2	164.8	62.4	2.8	2.8	2.8	1.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P893497  
 CATALOG NUMBER: 4MB-4SL-ASYMR-UNV-L830

**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	25.13	26.74	25.49	27.06	27.37	20.56	22.17	20.93	22.49	22.80
	3H	27.57	29.04	27.95	29.36	29.72	21.20	22.67	21.58	22.99	23.35
	4H	28.70	30.08	29.10	30.43	30.80	21.35	22.73	21.75	23.08	23.45
	6H	29.79	31.08	30.20	31.44	31.83	21.39	22.67	21.80	23.04	23.43
	8H	30.32	31.55	30.74	31.94	32.34	21.38	22.60	21.80	22.99	23.39
	12H	30.89	32.07	31.32	32.45	32.88	21.36	22.54	21.79	22.92	23.35
4H	2H	25.78	27.17	26.18	27.51	27.89	21.69	23.07	22.09	23.42	23.79
	3H	28.47	29.64	28.88	30.04	30.44	23.03	24.20	23.44	24.59	24.99
	4H	29.77	30.83	30.20	31.24	31.68	23.56	24.63	24.00	25.04	25.48
	6H	31.05	31.98	31.50	32.42	32.88	23.84	24.77	24.29	25.21	25.67
	8H	31.68	32.55	32.14	33.00	33.46	23.88	24.75	24.34	25.20	25.66
	12H	32.36	33.16	32.84	33.63	34.10	23.89	24.68	24.37	25.15	25.62
8H	4H	30.13	31.01	30.59	31.45	31.92	24.51	25.39	24.97	25.83	26.29
	6H	31.61	32.35	32.11	32.84	33.31	25.10	25.84	25.59	26.33	26.80
	8H	32.40	33.06	32.91	33.57	34.05	25.28	25.94	25.79	26.45	26.93
	12H	33.29	33.88	33.79	34.37	34.93	25.38	25.97	25.89	26.46	27.02
12H	4H	30.17	30.96	30.65	31.44	31.91	24.73	25.52	25.21	25.99	26.46
	6H	31.70	32.37	32.21	32.87	33.36	25.45	26.12	25.96	26.62	27.11
	8H	32.58	33.17	33.09	33.66	34.22	25.76	26.36	26.27	26.85	27.40