

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: P893498

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893498
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-L835
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

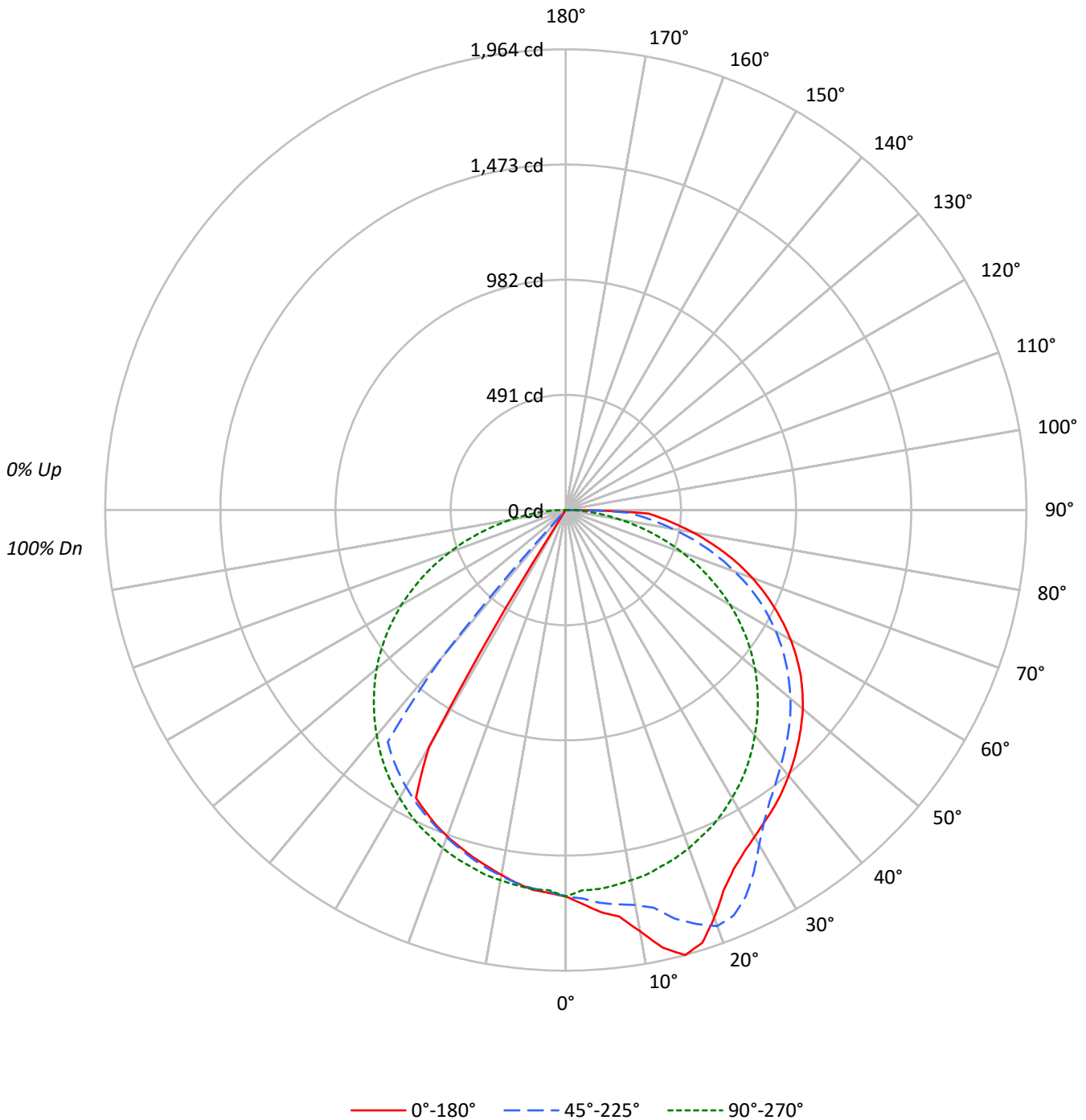
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4457.0 lumens
Efficiency: N/A
Efficacy: 149.6 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 (A_{in}): 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		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°	21390	21390	21390	21390	21390
5°	22431	21915	21140	21103	21177
10°	24034	22542	21136	20887	20825
15°	26406	24250	21143	20686	20585
20°	25567	26088	21199	20520	20455
25°	24223	26034	21250	20452	20303
30°	24119	24714	21248	20428	17484
35°	24528	24035	21283	20430	239
40°	25060	24150	21255	14090	159
45°	25746	24637	21260	261	105
50°	26645	25254	21270	190	38
55°	27660	25973	21210	129	20
60°	28765	26856	21023	49	23
65°	30120	27917	20641	58	58
70°	32130	29086	19989	72	72
75°	35170	30955	19125	191	95
80°	41270	34637	17707	284	142
85°	61427	48629	16582	417	283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 105323 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.9	3.5
10°-20°	471.3	10.6
20°-30°	724.5	16.3
30°-40°	776.4	17.4
40°-50°	705.2	15.8
50°-60°	643.2	14.4
60°-70°	478.5	10.7
70°-80°	336.8	7.6
80°-90°	163.2	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°	1353.7	30.4
0°-40°	2130.1	47.8
0°-60°	3478.5	78.0
0°-90°	4457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4457.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1647	1647	1647	1647	1647	
5°	1721	1681	1622	1619	1625	167
15°	1964	1804	1573	1539	1531	542
25°	1691	1817	1483	1428	1417	786
35°	1547	1516	1343	1289	15	969
45°	1402	1342	1158	14	6	1083
55°	1222	1147	937	6	1	1091
65°	980	909	672	2	2	971
75°	701	617	381	4	2	739
85°	412	326	111	3	2	414
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°	1647.3	1647.3	1647.3	1647.3	1647.3	1647.3	1647.3	1647.3	1647.3
2.5°	1681.3	1662.4	1657.7	1670.9	1622.8	1654.9	1628.4	1634.1	1634.1
5°	1720.9	1694.5	1681.3	1677.5	1621.8	1643.5	1619.0	1619.0	1624.7
7.5°	1748.3	1719.0	1695.4	1686.0	1613.4	1632.2	1603.9	1603.9	1603.9
10°	1822.8	1768.1	1709.6	1692.6	1603.0	1617.1	1584.1	1586.0	1579.4
12.5°	1910.5	1861.5	1736.9	1689.8	1591.7	1598.3	1563.3	1562.4	1554.9
15°	1964.3	1927.5	1803.9	1686.0	1572.8	1578.4	1538.8	1536.0	1531.3
17.5°	1934.1	1928.5	1850.2	1683.2	1555.8	1551.1	1511.5	1508.6	1504.9
20°	1850.2	1864.3	1887.9	1677.5	1534.1	1524.7	1485.0	1483.2	1480.3
22.5°	1756.8	1770.9	1870.9	1686.9	1507.7	1496.4	1456.7	1454.8	1451.1
25°	1690.7	1690.7	1817.1	1709.6	1483.2	1462.4	1427.5	1424.7	1417.1
27.5°	1644.5	1636.0	1736.9	1735.1	1452.0	1428.4	1396.4	1393.5	1384.1
30°	1608.6	1594.5	1648.3	1747.3	1417.1	1391.6	1362.4	1359.6	1166.1
32.5°	1576.6	1561.5	1573.7	1757.7	1382.2	1352.0	1326.5	946.3	41.5
35°	1547.3	1530.3	1516.2	1750.2	1342.6	1312.4	1288.8	27.4	15.1
37.5°	1514.3	1501.1	1469.0	1710.5	1300.1	1269.9	1247.3	15.1	13.2
40°	1478.4	1466.2	1424.7	1652.0	1253.9	1228.4	831.2	13.2	9.4
42.5°	1441.6	1432.2	1383.1	1567.1	1207.7	1182.2	26.4	10.4	7.5
45°	1402.0	1393.5	1341.6	1464.3	1157.7	1134.1	14.2	7.5	5.7
47.5°	1361.4	1349.2	1298.2	1353.9	1106.7	1083.1	12.3	5.7	3.8
50°	1319.0	1305.8	1250.1	1256.7	1052.9	1029.3	9.4	3.8	1.9
52.5°	1271.8	1255.8	1199.2	1169.0	996.3	974.6	7.5	1.9	0.9
55°	1221.8	1203.9	1147.3	1092.6	936.9	912.3	5.7	1.9	0.9
57.5°	1166.1	1146.3	1092.6	1019.9	873.7	617.0	3.8	1.9	0.9
60°	1107.6	1087.8	1034.1	952.0	809.5	42.5	1.9	1.9	0.9
62.5°	1045.4	1024.6	972.7	883.1	740.6	34.9	1.9	1.9	1.9
65°	980.3	955.7	908.6	812.3	671.8	29.2	1.9	1.9	1.9
67.5°	915.2	884.0	839.7	739.7	601.0	24.5	1.9	1.9	1.9
70°	846.3	812.3	766.1	666.1	526.5	19.8	1.9	1.9	1.9
72.5°	775.5	742.5	692.5	591.6	456.6	15.1	1.9	1.9	1.9
75°	701.0	670.8	617.0	517.0	381.2	11.3	3.8	1.9	1.9
77.5°	623.6	600.1	539.7	440.6	307.6	7.5	3.8	1.9	1.9
80°	551.9	525.5	463.2	363.2	236.8	5.7	3.8	2.8	1.9
82.5°	478.3	454.8	392.5	292.5	169.8	4.7	3.8	2.8	1.9
85°	412.3	389.7	326.4	228.3	111.3	3.8	2.8	2.8	1.9
87.5°	353.8	333.0	270.8	167.0	63.2	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



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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	25.17	26.79	25.54	27.10	27.42	20.61	22.22	20.97	22.53	22.85
	3H	27.62	29.08	28.00	29.41	29.77	21.25	22.71	21.63	23.04	23.40
	4H	28.74	30.13	29.14	30.47	30.85	21.39	22.78	21.79	23.12	23.50
	6H	29.84	31.12	30.25	31.49	31.88	21.43	22.72	21.84	23.08	23.47
	8H	30.37	31.59	30.79	31.98	32.38	21.42	22.65	21.85	23.04	23.44
	12H	30.94	32.11	31.36	32.49	32.92	21.40	22.58	21.83	22.96	23.39
4H	2H	25.83	27.21	26.23	27.56	27.94	21.73	23.12	22.13	23.46	23.84
	3H	28.52	29.69	28.93	30.08	30.48	23.08	24.24	23.48	24.64	25.04
	4H	29.82	30.88	30.25	31.29	31.73	23.61	24.67	24.04	25.09	25.52
	6H	31.10	32.03	31.55	32.47	32.92	23.89	24.82	24.34	25.26	25.72
	8H	31.72	32.60	32.18	33.04	33.51	23.92	24.80	24.38	25.24	25.71
	12H	32.41	33.20	32.89	33.68	34.14	23.93	24.73	24.41	25.20	25.67
8H	4H	30.18	31.06	30.64	31.50	31.96	24.56	25.43	25.02	25.88	26.34
	6H	31.66	32.40	32.15	32.88	33.36	25.15	25.89	25.64	26.37	26.85
	8H	32.44	33.11	32.95	33.61	34.10	25.33	25.99	25.83	26.50	26.98
	12H	33.34	33.93	33.84	34.42	34.98	25.43	26.02	25.93	26.51	27.07
12H	4H	30.22	31.01	30.70	31.48	31.95	24.78	25.57	25.25	26.04	26.51
	6H	31.75	32.41	32.26	32.92	33.40	25.50	26.16	26.01	26.67	27.15
	8H	32.63	33.22	33.13	33.71	34.27	25.81	26.40	26.32	26.89	27.45