

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: P893503

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893503
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-L940
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

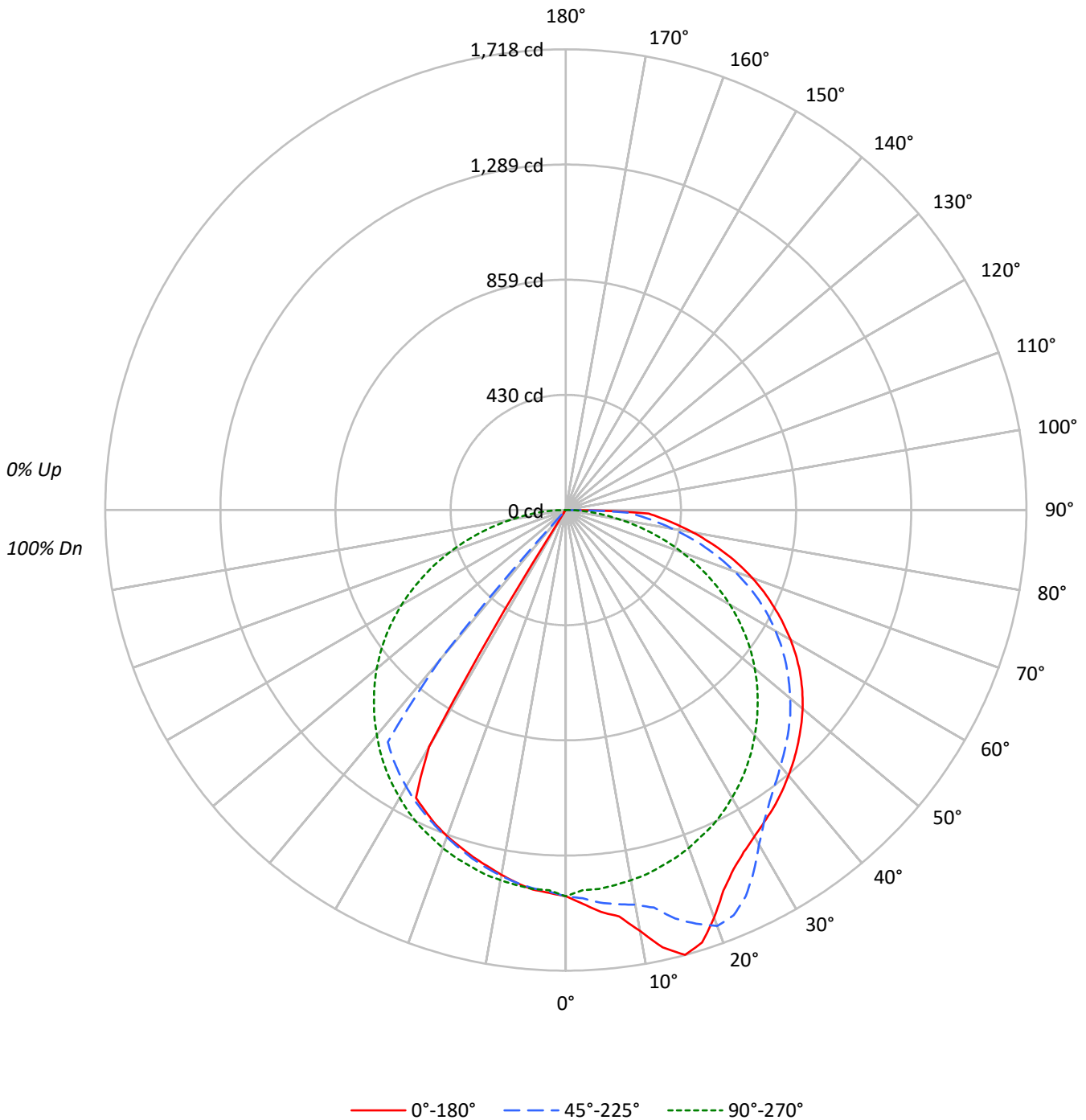
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3897.0 lumens
Efficiency: N/A
Efficacy: 130.8 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			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°	18702	18702	18702	18702	18702
5°	19613	19161	18484	18452	18516
10°	21015	19710	18481	18263	18208
15°	23089	21204	18487	18088	17999
20°	22354	22810	18535	17943	17885
25°	21180	22763	18580	17882	17753
30°	21089	21609	18579	17861	15288
35°	21446	21015	18608	17863	209
40°	21912	21116	18583	12320	139
45°	22512	21542	18588	228	90
50°	23298	22080	18597	166	32
55°	24185	22709	18546	111	18
60°	25152	23480	18382	42	21
65°	26335	24408	18048	49	49
70°	28095	25430	17476	61	61
75°	30749	27067	16722	166	80
80°	36088	30285	15487	247	120
85°	53710	42521	14496	372	238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 92105 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.0	3.5
10°-20°	412.1	10.6
20°-30°	633.5	16.3
30°-40°	678.9	17.4
40°-50°	616.6	15.8
50°-60°	562.4	14.4
60°-70°	418.4	10.7
70°-80°	294.5	7.6
80°-90°	142.7	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°	1183.6	30.4
0°-40°	1862.5	47.8
0°-60°	3041.5	78.0
0°-90°	3897.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3897.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1440	1440	1440	1440	1440	
5°	1505	1470	1418	1416	1420	146
15°	1718	1577	1375	1346	1339	474
25°	1478	1589	1297	1248	1239	687
35°	1353	1326	1174	1127	13	847
45°	1226	1173	1012	12	5	947
55°	1068	1003	819	5	1	954
65°	857	794	587	2	2	849
75°	613	540	333	3	2	646
85°	360	285	97	2	2	362
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°	1440.3	1440.3	1440.3	1440.3	1440.3	1440.3	1440.3	1440.3	1440.3
2.5°	1470.0	1453.5	1449.4	1461.0	1418.9	1446.9	1423.8	1428.8	1428.8
5°	1504.7	1481.6	1470.0	1466.7	1418.1	1437.0	1415.6	1415.6	1420.5
7.5°	1528.6	1503.0	1482.4	1474.2	1410.6	1427.1	1402.4	1402.4	1402.4
10°	1593.8	1545.9	1494.8	1479.9	1401.6	1413.9	1385.1	1386.7	1380.9
12.5°	1670.5	1627.6	1518.7	1477.5	1391.7	1397.4	1366.9	1366.1	1359.5
15°	1717.5	1685.3	1577.3	1474.2	1375.2	1380.1	1345.5	1343.0	1338.9
17.5°	1691.1	1686.2	1617.7	1471.7	1360.3	1356.2	1321.5	1319.1	1315.8
20°	1617.7	1630.1	1650.7	1466.7	1341.3	1333.1	1298.5	1296.8	1294.3
22.5°	1536.0	1548.4	1635.9	1475.0	1318.2	1308.4	1273.7	1272.1	1268.8
25°	1478.3	1478.3	1588.8	1494.8	1296.8	1278.7	1248.1	1245.7	1239.1
27.5°	1437.9	1430.4	1518.7	1517.1	1269.6	1249.0	1220.9	1218.4	1210.2
30°	1406.5	1394.1	1441.2	1527.8	1239.1	1216.8	1191.2	1188.7	1019.6
32.5°	1378.5	1365.3	1376.0	1536.9	1208.5	1182.1	1159.9	827.4	36.3
35°	1352.9	1338.0	1325.7	1530.3	1173.9	1147.5	1126.9	23.9	13.2
37.5°	1324.0	1312.5	1284.4	1495.6	1136.8	1110.4	1090.6	13.2	11.5
40°	1292.7	1282.0	1245.7	1444.5	1096.3	1074.1	726.8	11.5	8.2
42.5°	1260.5	1252.3	1209.4	1370.2	1055.9	1033.6	23.1	9.1	6.6
45°	1225.9	1218.4	1173.1	1280.3	1012.2	991.6	12.4	6.6	4.9
47.5°	1190.4	1179.7	1135.1	1183.8	967.7	947.0	10.7	4.9	3.3
50°	1153.3	1141.7	1093.0	1098.8	920.6	900.0	8.2	3.3	1.6
52.5°	1112.0	1098.0	1048.5	1022.1	871.1	852.2	6.6	1.6	0.8
55°	1068.3	1052.6	1003.1	955.3	819.2	797.7	4.9	1.6	0.8
57.5°	1019.6	1002.3	955.3	891.8	763.9	539.5	3.3	1.6	0.8
60°	968.5	951.2	904.1	832.4	707.8	37.1	1.6	1.6	0.8
62.5°	914.0	895.9	850.5	772.1	647.6	30.5	1.6	1.6	1.6
65°	857.1	835.7	794.4	710.3	587.4	25.6	1.6	1.6	1.6
67.5°	800.2	773.0	734.2	646.8	525.5	21.4	1.6	1.6	1.6
70°	740.0	710.3	669.8	582.4	460.3	17.3	1.6	1.6	1.6
72.5°	678.1	649.2	605.5	517.2	399.3	13.2	1.6	1.6	1.6
75°	612.9	586.5	539.5	452.1	333.3	9.9	3.3	1.6	1.6
77.5°	545.3	524.7	471.9	385.2	268.9	6.6	3.3	1.6	1.6
80°	482.6	459.5	405.0	317.6	207.1	4.9	3.3	2.5	1.6
82.5°	418.2	397.6	343.2	255.7	148.5	4.1	3.3	2.5	1.6
85°	360.5	340.7	285.4	199.6	97.3	3.3	2.5	2.5	1.6
87.5°	309.4	291.2	236.8	146.0	55.3	2.5	2.5	2.5	1.6
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	24.71	26.32	25.07	26.64	26.95	20.14	21.75	20.50	22.07	22.38
	3H	27.15	28.62	27.53	28.94	29.30	20.78	22.25	21.16	22.57	22.93
	4H	28.28	29.66	28.68	30.01	30.38	20.93	22.31	21.32	22.66	23.03
	6H	29.37	30.66	29.78	31.02	31.41	20.97	22.25	21.38	22.62	23.01
	8H	29.90	31.13	30.32	31.52	31.92	20.96	22.18	21.38	22.57	22.97
	12H	30.47	31.65	30.90	32.03	32.46	20.94	22.12	21.37	22.50	22.93
4H	2H	25.36	26.75	25.76	27.09	27.47	21.27	22.65	21.67	23.00	23.37
	3H	28.05	29.22	28.46	29.62	30.02	22.61	23.78	23.02	24.17	24.57
	4H	29.35	30.41	29.78	30.82	31.26	23.14	24.21	23.58	24.62	25.06
	6H	30.63	31.56	31.08	32.00	32.46	23.42	24.35	23.87	24.79	25.25
	8H	31.26	32.13	31.72	32.58	33.04	23.46	24.33	23.92	24.78	25.24
	12H	31.94	32.73	32.42	33.21	33.68	23.47	24.26	23.95	24.73	25.20
8H	4H	29.71	30.59	30.17	31.03	31.50	24.09	24.97	24.55	25.41	25.87
	6H	31.19	31.93	31.69	32.42	32.89	24.68	25.42	25.17	25.91	26.38
	8H	31.98	32.64	32.49	33.15	33.63	24.86	25.52	25.37	26.03	26.51
	12H	32.87	33.46	33.37	33.95	34.51	24.96	25.55	25.47	26.04	26.60
12H	4H	29.75	30.54	30.23	31.02	31.49	24.31	25.10	24.79	25.57	26.04
	6H	31.28	31.95	31.79	32.45	32.94	25.03	25.70	25.54	26.20	26.69
	8H	32.16	32.75	32.67	33.24	33.80	25.34	25.94	25.85	26.42	26.98