

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: P893502

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893502
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-L935
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

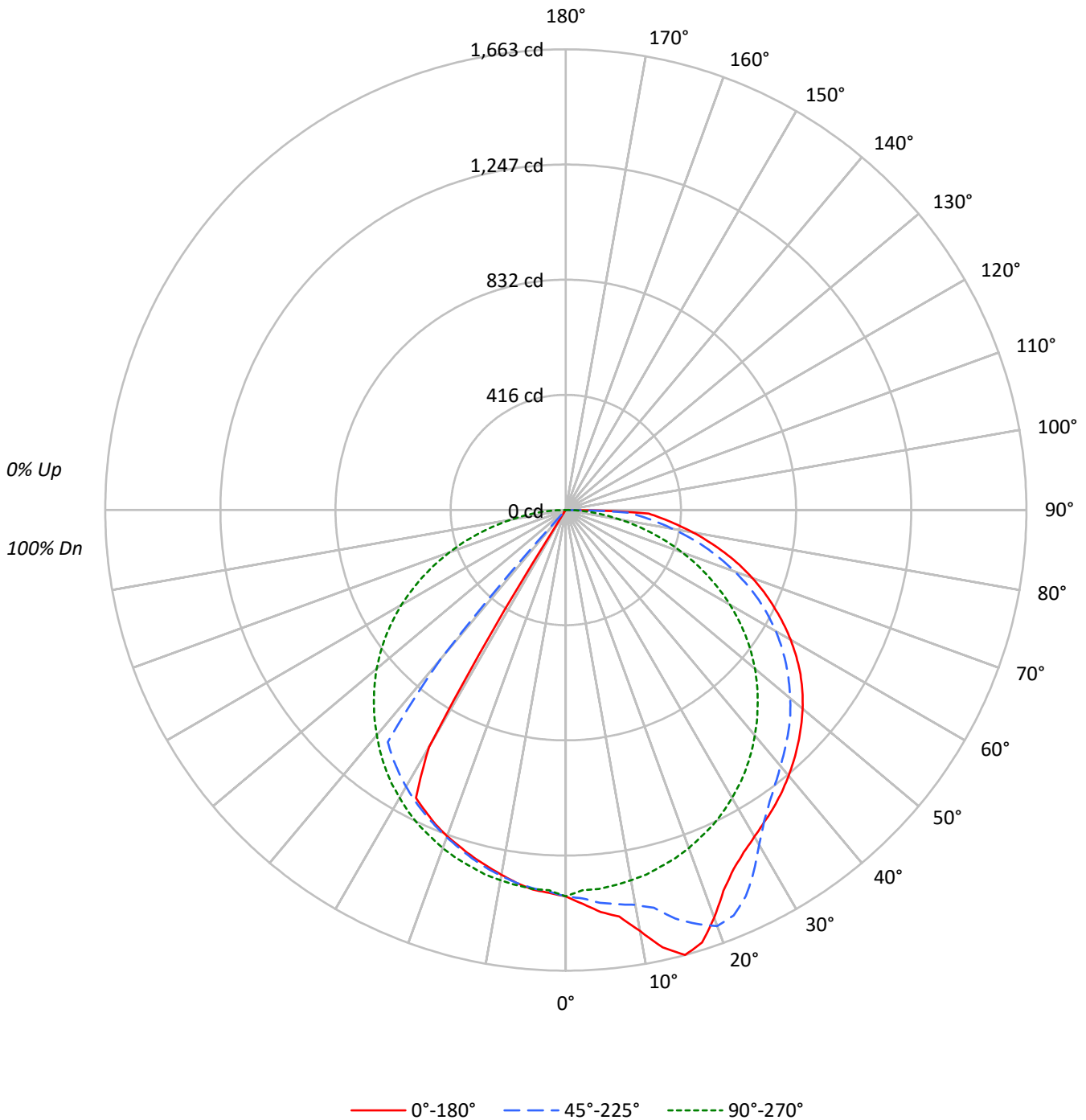
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3773.0 lumens
Efficiency: N/A
Efficacy: 126.6 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			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°	18108	18108	18108	18108	18108
5°	18989	18552	17895	17864	17927
10°	20346	19082	17893	17682	17629
15°	22355	20529	17898	17512	17426
20°	21642	22085	17946	17371	17316
25°	20505	22040	17988	17313	17187
30°	20419	20921	17987	17292	14802
35°	20763	20346	18016	17294	203
40°	21214	20443	17993	11927	136
45°	21796	20856	17996	220	88
50°	22557	21379	18005	162	32
55°	23415	21987	17955	109	18
60°	24352	22734	17797	42	21
65°	25496	23631	17473	49	49
70°	27199	24621	16921	61	61
75°	29771	26204	16190	161	80
80°	34936	29328	14993	239	120
85°	51996	41165	14035	358	238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 89158 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	3.5
10°-20°	399.0	10.6
20°-30°	613.3	16.3
30°-40°	657.3	17.4
40°-50°	597.0	15.8
50°-60°	544.5	14.4
60°-70°	405.1	10.7
70°-80°	285.1	7.6
80°-90°	138.1	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°	1145.9	30.4
0°-40°	1803.2	47.8
0°-60°	2944.7	78.0
0°-90°	3773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3773.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1394	1394	1394	1394	1394	
5°	1457	1423	1373	1370	1375	141
15°	1663	1527	1331	1303	1296	459
25°	1431	1538	1256	1208	1200	666
35°	1310	1284	1136	1091	13	821
45°	1187	1136	980	12	5	917
55°	1034	971	793	5	1	924
65°	830	769	569	2	2	822
75°	593	522	323	3	2	626
85°	349	276	94	2	2	351
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°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5
2.5°	1423.3	1407.3	1403.3	1414.5	1373.7	1400.9	1378.5	1383.3	1383.3
5°	1456.8	1434.4	1423.3	1420.1	1372.9	1391.3	1370.5	1370.5	1375.3
7.5°	1480.0	1455.2	1435.2	1427.3	1365.8	1381.7	1357.8	1357.8	1357.8
10°	1543.1	1496.7	1447.2	1432.8	1357.0	1369.0	1341.0	1342.6	1337.0
12.5°	1617.3	1575.8	1470.4	1430.5	1347.4	1353.0	1323.4	1322.6	1316.2
15°	1662.9	1631.7	1527.1	1427.3	1331.4	1336.2	1302.7	1300.3	1296.3
17.5°	1637.3	1632.5	1566.2	1424.9	1317.0	1313.0	1279.5	1277.1	1273.9
20°	1566.2	1578.2	1598.2	1420.1	1298.7	1290.7	1257.1	1255.5	1253.1
22.5°	1487.2	1499.1	1583.8	1428.1	1276.3	1266.7	1233.2	1231.6	1228.4
25°	1431.2	1431.2	1538.3	1447.2	1255.5	1238.0	1208.4	1206.0	1199.6
27.5°	1392.1	1384.9	1470.4	1468.8	1229.2	1209.2	1182.1	1179.7	1171.7
30°	1361.8	1349.8	1395.3	1479.2	1199.6	1178.1	1153.3	1150.9	987.2
32.5°	1334.6	1321.8	1332.2	1488.0	1170.1	1144.5	1123.0	801.1	35.1
35°	1309.8	1295.5	1283.5	1481.6	1136.5	1111.0	1091.0	23.2	12.8
37.5°	1281.9	1270.7	1243.6	1448.0	1100.6	1075.0	1055.9	12.8	11.2
40°	1251.5	1241.2	1206.0	1398.5	1061.5	1039.9	703.6	11.2	8.0
42.5°	1220.4	1212.4	1170.9	1326.6	1022.3	1000.8	22.4	8.8	6.4
45°	1186.9	1179.7	1135.7	1239.6	980.0	960.0	12.0	6.4	4.8
47.5°	1152.5	1142.1	1099.0	1146.1	936.9	916.9	10.4	4.8	3.2
50°	1116.6	1105.4	1058.3	1063.9	891.3	871.4	8.0	3.2	1.6
52.5°	1076.6	1063.1	1015.1	989.6	843.4	825.0	6.4	1.6	0.8
55°	1034.3	1019.1	971.2	924.9	793.1	772.3	4.8	1.6	0.8
57.5°	987.2	970.4	924.9	863.4	739.6	522.3	3.2	1.6	0.8
60°	937.7	920.9	875.4	805.9	685.3	35.9	1.6	1.6	0.8
62.5°	884.9	867.4	823.4	747.6	627.0	29.6	1.6	1.6	1.6
65°	829.8	809.1	769.1	687.7	568.7	24.8	1.6	1.6	1.6
67.5°	774.7	748.4	710.8	626.2	508.8	20.8	1.6	1.6	1.6
70°	716.4	687.7	648.5	563.9	445.7	16.8	1.6	1.6	1.6
72.5°	656.5	628.6	586.2	500.8	386.6	12.8	1.6	1.6	1.6
75°	593.4	567.9	522.3	437.7	322.7	9.6	3.2	1.6	1.6
77.5°	527.9	508.0	456.8	373.0	260.4	6.4	3.2	1.6	1.6
80°	467.2	444.9	392.2	307.5	200.5	4.8	3.2	2.4	1.6
82.5°	404.9	385.0	332.3	247.6	143.8	4.0	3.2	2.4	1.6
85°	349.0	329.9	276.3	193.3	94.2	3.2	2.4	2.4	1.6
87.5°	299.5	281.9	229.2	141.4	53.5	2.4	2.4	2.4	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	24.59	26.21	24.96	26.52	26.84	20.03	21.64	20.39	21.96	22.27
	3H	27.04	28.51	27.42	28.83	29.19	20.67	22.13	21.05	22.46	22.82
	4H	28.17	29.55	28.56	29.90	30.27	20.81	22.20	21.21	22.54	22.92
	6H	29.26	30.54	29.67	30.91	31.30	20.86	22.14	21.27	22.50	22.89
	8H	29.79	31.02	30.21	31.40	31.80	20.84	22.07	21.27	22.46	22.86
	12H	30.36	31.53	30.79	31.92	32.34	20.83	22.00	21.25	22.38	22.81
4H	2H	25.25	26.63	25.65	26.98	27.36	21.15	22.54	21.55	22.88	23.26
	3H	27.94	29.11	28.35	29.51	29.91	22.50	23.67	22.91	24.06	24.46
	4H	29.24	30.30	29.67	30.71	31.15	23.03	24.09	23.46	24.51	24.94
	6H	30.52	31.45	30.97	31.89	32.35	23.31	24.24	23.76	24.68	25.14
	8H	31.14	32.02	31.60	32.46	32.93	23.35	24.22	23.80	24.66	25.13
	12H	31.83	32.62	32.31	33.10	33.57	23.36	24.15	23.84	24.62	25.09
8H	4H	29.60	30.48	30.06	30.92	31.38	23.98	24.86	24.44	25.30	25.76
	6H	31.08	31.82	31.57	32.31	32.78	24.57	25.31	25.06	25.79	26.27
	8H	31.87	32.53	32.37	33.04	33.52	24.75	25.41	25.25	25.92	26.40
	12H	32.76	33.35	33.26	33.84	34.40	24.85	25.44	25.35	25.93	26.49
12H	4H	29.64	30.43	30.12	30.91	31.37	24.20	24.99	24.68	25.46	25.93
	6H	31.17	31.84	31.68	32.34	32.83	24.92	25.59	25.43	26.09	26.58
	8H	32.05	32.64	32.56	33.13	33.69	25.23	25.82	25.74	26.31	26.87