

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: P893501

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893501
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-L930
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

Summary

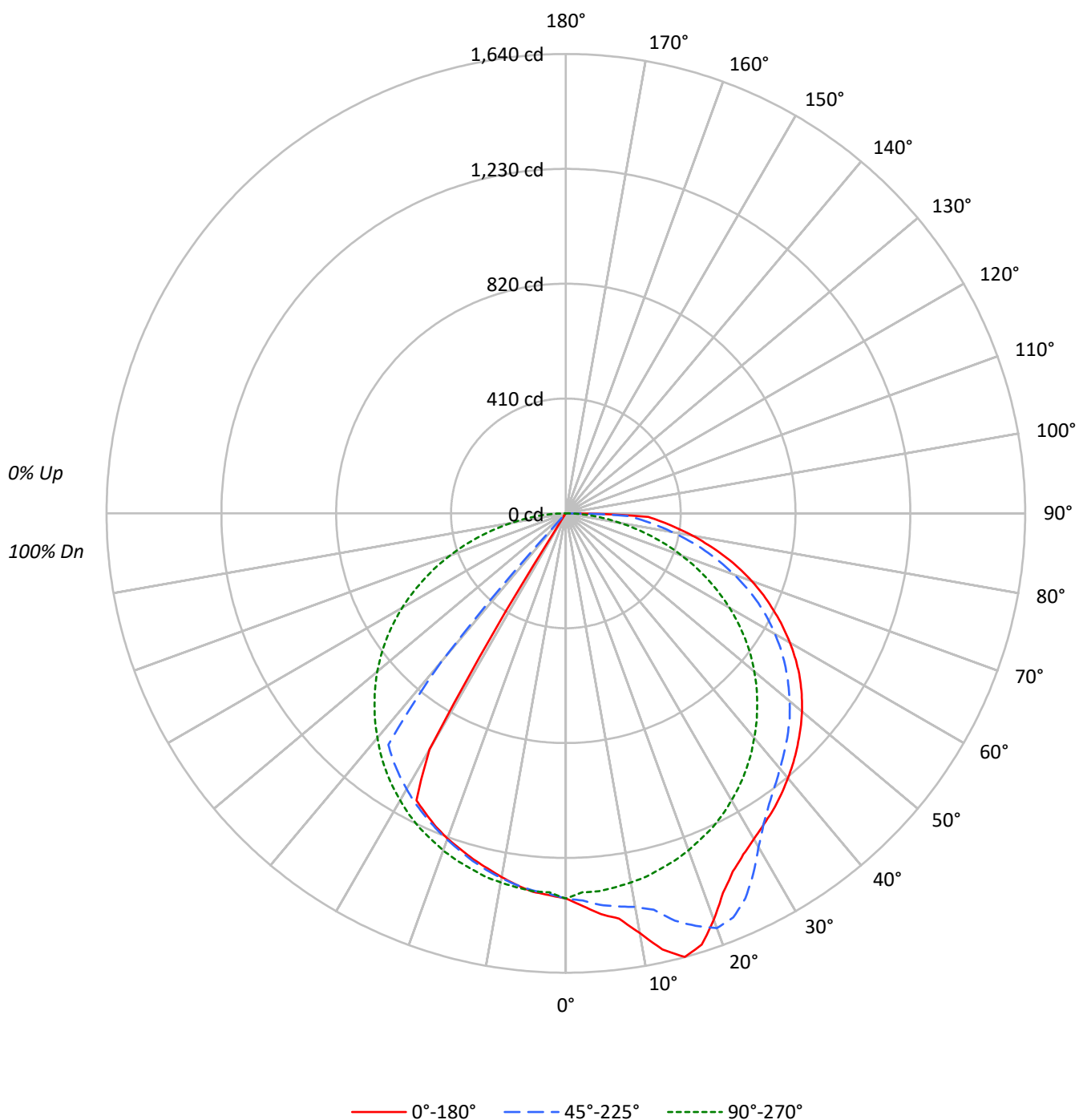
Lumens per Lamp: N/A
Luminaire Lumens: 3720.0 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.28 / 1.25
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V):
Input Current (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
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°	17853	17853	17853	17853	17853
5°	18722	18292	17645	17614	17675
10°	20060	18814	17641	17434	17381
15°	22040	20240	17647	17266	17182
20°	21338	21774	17693	17128	17073
25°	20217	21730	17736	17070	16947
30°	20131	20627	17735	17050	14594
35°	20471	20061	17764	17052	200
40°	20917	20156	17739	11760	134
45°	21489	20564	17743	217	86
50°	22239	21078	17753	160	32
55°	23087	21679	17704	106	18
60°	24009	22415	17545	42	21
65°	25139	23299	17228	49	49
70°	26819	24275	16682	61	61
75°	29355	25838	15959	156	80
80°	34450	28909	14784	232	120
85°	51266	40599	13841	358	238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 87.5°

Luminance: 87908 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.8	3.5
10°-20°	393.4	10.6
20°-30°	604.7	16.3
30°-40°	648.1	17.4
40°-50°	588.6	15.8
50°-60°	536.9	14.4
60°-70°	399.4	10.7
70°-80°	281.1	7.6
80°-90°	136.2	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°	1129.8	30.4
0°-40°	1777.9	47.8
0°-60°	2903.3	78.0
0°-90°	3720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3720.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1375	1375	1375	1375	1375	
5°	1436	1403	1354	1351	1356	139
15°	1640	1506	1313	1284	1278	453
25°	1411	1517	1238	1191	1183	656
35°	1291	1266	1121	1076	13	809
45°	1170	1120	966	12	5	904
55°	1020	958	782	5	1	911
65°	818	758	561	2	2	810
75°	585	515	318	3	2	617
85°	344	272	93	2	2	346
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°	1374.9	1374.9	1374.9	1374.9	1374.9	1374.9	1374.9	1374.9	1374.9
2.5°	1403.3	1387.5	1383.6	1394.6	1354.4	1381.2	1359.2	1363.9	1363.9
5°	1436.3	1414.3	1403.3	1400.1	1353.7	1371.8	1351.3	1351.3	1356.0
7.5°	1459.2	1434.8	1415.1	1407.2	1346.6	1362.3	1338.7	1338.7	1338.7
10°	1521.4	1475.7	1426.9	1412.7	1337.9	1349.7	1322.2	1323.7	1318.2
12.5°	1594.6	1553.7	1449.7	1410.4	1328.5	1334.0	1304.8	1304.0	1297.7
15°	1639.5	1608.8	1505.6	1407.2	1312.7	1317.4	1284.4	1282.0	1278.1
17.5°	1614.3	1609.6	1544.2	1404.8	1298.5	1294.6	1261.5	1259.2	1256.0
20°	1544.2	1556.0	1575.7	1400.1	1280.4	1272.5	1239.5	1237.9	1235.5
22.5°	1466.3	1478.1	1561.6	1408.0	1258.4	1248.9	1215.9	1214.3	1211.1
25°	1411.1	1411.1	1516.7	1426.9	1237.9	1220.6	1191.4	1189.1	1182.8
27.5°	1372.6	1365.5	1449.7	1448.2	1211.9	1192.2	1165.5	1163.1	1155.2
30°	1342.6	1330.8	1375.7	1458.4	1182.8	1161.5	1137.1	1134.7	973.3
32.5°	1315.9	1303.3	1313.5	1467.1	1153.6	1128.4	1107.2	789.8	34.6
35°	1291.4	1277.3	1265.5	1460.8	1120.6	1095.4	1075.7	22.8	12.6
37.5°	1263.9	1252.9	1226.1	1427.7	1085.1	1059.9	1041.0	12.6	11.0
40°	1234.0	1223.7	1189.1	1378.9	1046.5	1025.3	693.8	11.0	7.9
42.5°	1203.3	1195.4	1154.4	1308.0	1008.0	986.7	22.0	8.7	6.3
45°	1170.2	1163.1	1119.8	1222.2	966.2	946.5	11.8	6.3	4.7
47.5°	1136.3	1126.1	1083.6	1130.0	923.7	904.0	10.2	4.7	3.1
50°	1100.9	1089.9	1043.4	1048.9	878.8	859.1	7.9	3.1	1.6
52.5°	1061.5	1048.1	1000.9	975.7	831.6	813.5	6.3	1.6	0.8
55°	1019.8	1004.8	957.6	911.9	782.0	761.5	4.7	1.6	0.8
57.5°	973.3	956.8	911.9	851.3	729.2	515.0	3.1	1.6	0.8
60°	924.5	908.0	863.1	794.6	675.6	35.4	1.6	1.6	0.8
62.5°	872.5	855.2	811.9	737.1	618.2	29.1	1.6	1.6	1.6
65°	818.2	797.7	758.3	678.0	560.7	24.4	1.6	1.6	1.6
67.5°	763.8	737.9	700.8	617.4	501.6	20.5	1.6	1.6	1.6
70°	706.4	678.0	639.4	556.0	439.4	16.5	1.6	1.6	1.6
72.5°	647.3	619.7	578.0	493.7	381.1	12.6	1.6	1.6	1.6
75°	585.1	559.9	515.0	431.5	318.1	9.4	3.1	1.6	1.6
77.5°	520.5	500.8	450.4	367.7	256.7	6.3	3.1	1.6	1.6
80°	460.7	438.6	386.6	303.2	197.7	4.7	3.1	2.4	1.6
82.5°	399.2	379.6	327.6	244.1	141.7	3.9	3.1	2.4	1.6
85°	344.1	325.2	272.5	190.6	92.9	3.1	2.4	2.4	1.6
87.5°	295.3	278.0	226.0	139.4	52.8	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	24.55	26.16	24.91	26.47	26.79	19.98	21.59	20.34	21.91	22.22
	3H	26.99	28.46	27.37	28.78	29.14	20.62	22.08	21.00	22.41	22.77
	4H	28.12	29.50	28.51	29.85	30.22	20.76	22.15	21.16	22.49	22.87
	6H	29.21	30.49	29.62	30.86	31.25	20.81	22.09	21.22	22.45	22.85
	8H	29.74	30.97	30.16	31.36	31.75	20.79	22.02	21.22	22.41	22.81
	12H	30.31	31.49	30.74	31.87	32.30	20.78	21.95	21.20	22.33	22.76
4H	2H	25.20	26.59	25.60	26.93	27.31	21.11	22.49	21.50	22.84	23.21
	3H	27.89	29.06	28.30	29.46	29.86	22.45	23.62	22.86	24.01	24.41
	4H	29.19	30.25	29.62	30.66	31.10	22.98	24.05	23.41	24.46	24.89
	6H	30.47	31.40	30.92	31.84	32.30	23.26	24.19	23.71	24.63	25.09
	8H	31.10	31.97	31.55	32.41	32.88	23.30	24.17	23.75	24.61	25.08
	12H	31.78	32.57	32.26	33.05	33.52	23.31	24.10	23.79	24.57	25.04
8H	4H	29.55	30.43	30.01	30.87	31.33	23.93	24.81	24.39	25.25	25.71
	6H	31.03	31.77	31.53	32.26	32.73	24.52	25.26	25.01	25.74	26.22
	8H	31.82	32.48	32.32	32.99	33.47	24.70	25.36	25.20	25.87	26.35
	12H	32.71	33.30	33.21	33.79	34.35	24.80	25.39	25.30	25.88	26.44
12H	4H	29.59	30.38	30.07	30.86	31.33	24.15	24.94	24.63	25.41	25.88
	6H	31.12	31.79	31.63	32.29	32.78	24.87	25.54	25.38	26.04	26.53
	8H	32.00	32.59	32.51	33.08	33.64	25.18	25.77	25.69	26.26	26.82