

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: P893707

Luminaire Tested: 4MB-6SL-ASMF-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893707
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-185-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-6SL-ASMF-UNV-L840
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

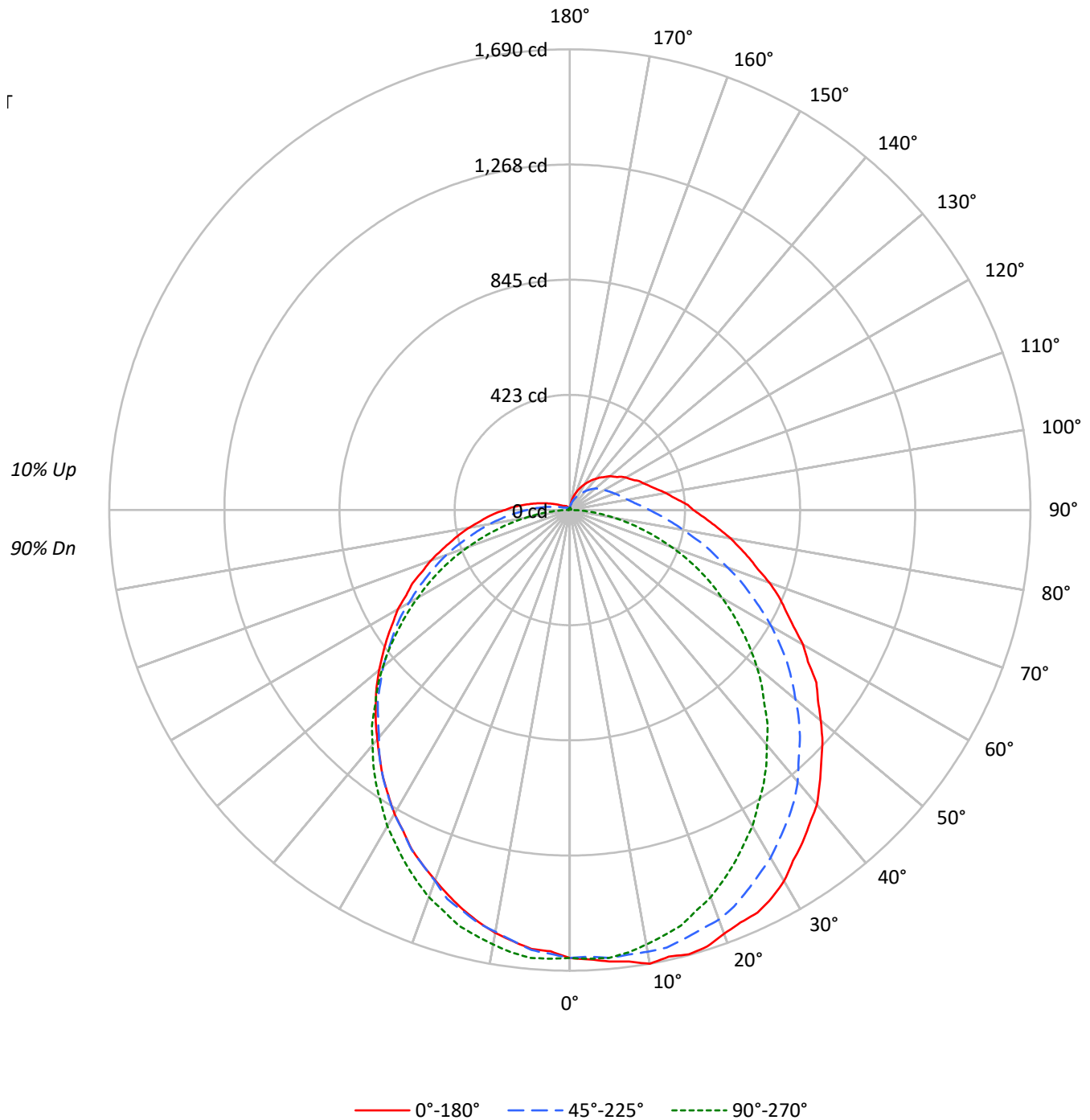
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5650.0 lumens
Efficiency: N/A
Efficacy: 127.3 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')
CIE Type: Direct

Input Watts (W): 44.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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	50	30	10	0
RCR																					
0	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	93	93	93	90
1	105	99	95	90	101	96	92	88	90	87	83	85	82	79	79	77	75	75	75	75	72
2	95	86	79	72	91	83	76	71	78	72	68	73	69	65	69	65	62	62	62	62	59
3	86	75	66	60	83	73	65	58	68	62	56	64	59	54	60	56	52	52	52	52	49
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	44	44	44	44	42
5	72	59	50	43	69	57	49	42	54	47	41	51	45	40	48	43	38	38	38	38	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	34	34	34	31
7	62	48	39	33	59	47	38	32	44	37	32	42	36	31	40	34	30	30	30	30	28
8	57	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22
10	50	37	29	24	49	36	29	23	34	28	23	33	27	22	31	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	16736	16736	16736	16736	16736
5°	16946	16351	16192	16066	16477
10°	17383	16009	15457	15289	16199
15°	17637	15671	14771	14651	15859
20°	17723	15347	13990	13888	15487
25°	18045	14853	13167	13254	15206
30°	18156	14379	12385	12566	14862
35°	18113	13860	11564	11904	14543
40°	18274	13324	10721	11160	14230
45°	18220	12691	9890	10594	14055
50°	18359	12039	9091	9945	13942
55°	18766	11473	8176	9294	13894
60°	19080	10768	7238	8602	14078
65°	19739	10006	6287	7915	14395
70°	21350	9277	5154	7258	14887
75°	23992	8747	3942	6494	15916
80°	29818	8237	2641	5822	18692
85°	44580	8126	1324	5127	26206

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 146758 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.9	2.8
10°-20°	446.9	7.9
20°-30°	673.9	11.9
30°-40°	808.8	14.3
40°-50°	842.2	14.9
50°-60°	780.7	13.8
60°-70°	642.9	11.4
70°-80°	463.8	8.2
80°-90°	294.4	5.2
90°-100°	181.5	3.2
100°-110°	121.0	2.1
110°-120°	86.2	1.5
120°-130°	63.1	1.1
130°-140°	43.4	0.8
140°-150°	26.4	0.5
150°-160°	13.1	0.2
160°-170°	4.8	0.1
170°-180°	0.8	0.0
0°-30°	1276.7	22.6
0°-40°	2085.5	36.9
0°-60°	3708.4	65.6
0°-90°	5109.6	90.4
90°-120°	388.7	6.9
90°-150°	521.7	9.2
90°-180°	540.0	9.6
0°-180°	5650.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1643	1643	1643	1643	1643	
5°	1662	1649	1649	1620	1616	159
15°	1687	1628	1578	1522	1517	476
25°	1629	1541	1429	1375	1373	749
35°	1489	1392	1237	1196	1196	933
45°	1305	1194	1010	997	1006	1010
55°	1104	974	770	789	818	981
65°	874	731	524	578	638	871
75°	681	517	276	384	452	722
85°	518	352	72	222	305	440
90°	453	292	7	158	238	250
95°	403	247	4	106	183	321
105°	316	194	4	44	96	338
115°	260	160	5	20	46	260
125°	211	134	6	16	26	192
135°	169	107	6	12	20	133
145°	130	76	6	9	14	82
155°	89	50	7	6	9	42
165°	52	29	7	4	5	15
175°	7	12	7	3	1	1
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1643.3	1643.3	1643.3	1643.3	1643.3	1643.3	1643.3	1643.3	1643.3
2.5°	1649.9	1654.8	1639.2	1649.1	1647.5	1649.1	1629.4	1645.8	1620.3
5°	1662.2	1664.7	1649.1	1654.8	1649.1	1635.1	1620.3	1614.6	1616.2
7.5°	1670.5	1683.6	1645.0	1646.6	1636.8	1622.0	1594.0	1599.0	1595.7
10°	1690.2	1675.4	1645.0	1637.6	1618.7	1603.1	1571.0	1573.5	1575.1
12.5°	1677.9	1674.6	1644.2	1617.1	1598.2	1585.0	1552.1	1543.9	1548.0
15°	1686.9	1672.9	1627.7	1606.4	1577.6	1554.6	1521.7	1516.0	1516.8
17.5°	1678.7	1667.2	1611.3	1581.7	1541.5	1527.5	1496.3	1486.4	1481.5
20°	1654.0	1648.3	1599.0	1548.0	1511.9	1484.8	1447.0	1441.2	1445.3
22.5°	1637.6	1623.6	1574.3	1523.4	1470.8	1447.0	1409.2	1408.3	1409.2
25°	1629.4	1611.3	1540.6	1487.2	1428.9	1407.5	1374.7	1362.3	1373.0
27.5°	1604.7	1588.3	1505.3	1447.0	1382.1	1353.3	1326.2	1323.7	1325.4
30°	1571.9	1539.8	1473.3	1401.8	1339.3	1309.7	1287.6	1271.1	1286.7
32.5°	1525.0	1506.9	1431.4	1353.3	1284.3	1263.7	1241.5	1239.9	1239.9
35°	1488.9	1475.7	1391.9	1310.6	1236.6	1208.7	1195.5	1189.8	1195.5
37.5°	1447.0	1427.2	1350.0	1258.8	1183.2	1159.4	1146.2	1141.3	1145.4
40°	1410.8	1374.7	1300.7	1205.4	1124.9	1103.5	1089.5	1094.5	1098.6
42.5°	1357.4	1336.9	1242.4	1151.2	1074.7	1051.7	1040.2	1044.3	1054.2
45°	1304.8	1285.9	1193.9	1094.5	1009.8	997.5	996.7	994.2	1006.5
47.5°	1257.2	1230.0	1140.5	1038.6	955.6	941.6	943.3	951.5	962.2
50°	1202.1	1170.1	1081.3	978.6	895.6	886.6	893.2	898.9	912.9
52.5°	1147.1	1121.6	1027.1	921.9	834.8	828.2	837.3	856.2	864.4
55°	1104.3	1058.3	973.7	855.4	769.9	770.7	788.8	799.5	817.6
57.5°	1036.1	1001.6	912.9	796.2	709.1	714.9	739.5	757.6	769.1
60°	987.7	944.1	853.7	732.9	645.0	654.1	682.0	709.1	728.8
62.5°	925.2	887.4	792.1	670.5	585.9	599.0	630.2	662.3	676.2
65°	874.3	831.5	731.3	608.0	524.2	539.8	578.5	614.6	637.6
67.5°	830.7	786.3	677.1	550.5	461.8	484.8	530.0	565.3	583.4
70°	778.9	727.2	615.4	486.4	396.9	424.0	481.5	522.6	543.1
72.5°	723.9	682.0	562.0	427.3	336.9	369.8	433.0	475.7	495.5
75°	681.2	634.3	516.8	368.1	276.1	315.5	383.7	432.2	451.9
77.5°	637.6	594.9	465.9	313.9	221.9	266.2	340.2	393.6	414.1
80°	599.0	549.7	423.2	269.5	165.2	217.7	299.1	351.7	375.5
82.5°	556.3	513.5	386.2	222.7	117.5	173.4	258.8	316.3	336.1
85°	518.5	474.1	351.7	185.7	72.3	133.9	221.9	281.0	304.8
87.5°	484.0	447.0	319.6	157.8	36.2	101.9	186.5	246.5	273.6
90°	452.7	410.8	292.5	132.3	6.6	74.0	157.8	216.9	237.5
92.5°	433.0	382.9	270.3	115.9	4.1	52.6	131.5	189.8	213.6
95°	403.4	359.1	247.3	103.5	4.1	35.3	106.0	162.7	183.2
97.5°	378.0	336.9	230.9	96.1	3.3	23.8	87.1	136.4	157.8
100°	358.2	319.6	216.1	89.6	4.1	17.3	69.0	115.9	134.8
102.5°	336.1	300.7	204.6	85.5	4.1	12.3	54.2	97.8	115.0
105°	316.3	285.1	193.9	81.3	4.1	10.7	43.5	80.5	96.1
107.5°	301.6	268.7	184.9	78.9	4.1	10.7	34.5	65.7	78.9
110°	286.8	255.5	175.8	76.4	4.1	9.9	27.1	54.2	65.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	276.9	243.2	167.6	74.0	4.9	9.9	22.2	45.2	54.2
115°	259.6	232.5	160.2	73.1	4.9	9.0	20.5	37.0	46.0
117.5°	247.3	222.7	152.8	70.7	4.9	9.0	19.7	30.4	37.0
120°	238.3	211.2	146.3	68.2	4.9	8.2	18.1	27.1	31.2
122.5°	226.8	200.5	140.5	66.6	4.9	8.2	17.3	25.5	27.9
125°	211.2	190.6	133.9	63.3	5.8	8.2	16.4	23.8	26.3
127.5°	201.3	181.6	129.0	59.2	5.8	7.4	15.6	22.2	24.7
130°	193.1	171.7	123.3	55.1	5.8	7.4	14.8	20.5	23.0
132.5°	180.8	161.9	115.0	51.8	5.8	6.6	13.1	18.9	21.4
135°	169.3	153.7	106.8	48.5	5.8	6.6	12.3	18.1	19.7
137.5°	161.9	145.4	99.4	45.2	5.8	5.8	11.5	16.4	18.1
140°	149.5	136.4	91.2	41.9	5.8	5.8	10.7	15.6	16.4
142.5°	140.5	127.4	83.8	38.6	5.8	5.8	9.9	14.0	15.6
145°	129.8	118.3	75.6	35.3	5.8	4.9	9.0	13.1	14.0
147.5°	120.0	107.6	69.0	32.9	5.8	4.9	8.2	11.5	12.3
150°	110.1	97.0	62.4	30.4	5.8	4.9	7.4	9.9	11.5
152.5°	99.4	83.8	55.9	27.9	5.8	4.9	6.6	9.0	9.9
155°	88.7	73.1	50.1	25.5	6.6	4.9	5.8	7.4	9.0
157.5°	79.7	63.3	44.4	23.0	6.6	4.1	5.8	6.6	7.4
160°	69.0	54.2	39.4	20.5	6.6	4.1	4.9	5.8	6.6
162.5°	60.8	45.2	34.5	18.9	6.6	4.1	4.9	4.9	5.8
165°	51.8	37.8	28.8	17.3	6.6	4.1	4.1	4.1	4.9
167.5°	41.9	29.6	23.8	15.6	6.6	4.1	4.1	3.3	4.1
170°	31.2	22.2	19.7	14.0	6.6	4.1	3.3	2.5	3.3
172.5°	14.0	17.3	15.6	12.3	7.4	4.1	3.3	2.5	1.6
175°	7.4	12.3	12.3	10.7	7.4	4.1	3.3	2.5	0.8
177.5°	5.8	7.4	9.0	9.0	7.4	4.9	3.3	1.6	0.8
180°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9



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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	20.15	21.63	20.66	22.13	22.68	19.12	20.60	19.63	21.10	21.65
	3H	22.24	23.59	22.76	24.10	24.68	21.00	22.34	21.51	22.85	23.44
	4H	23.18	24.46	23.72	24.99	25.58	21.74	23.02	22.28	23.55	24.14
	6H	24.10	25.29	24.65	25.83	26.44	22.37	23.56	22.93	24.10	24.72
	8H	24.53	25.67	25.10	26.23	26.85	22.63	23.77	23.19	24.33	24.95
	12H	24.95	26.04	25.52	26.60	27.25	22.86	23.95	23.43	24.51	25.16
4H	2H	20.65	21.92	21.19	22.45	23.05	19.69	20.96	20.23	21.49	22.09
	3H	22.96	24.05	23.51	24.62	25.24	21.75	22.83	22.30	23.40	24.02
	4H	24.07	25.07	24.65	25.65	26.30	22.60	23.60	23.17	24.17	24.82
	6H	25.18	26.06	25.77	26.66	27.32	23.36	24.23	23.95	24.84	25.50
	8H	25.71	26.53	26.30	27.14	27.81	23.67	24.50	24.27	25.10	25.78
	12H	26.23	26.98	26.85	27.61	28.29	23.96	24.71	24.58	25.34	26.02
8H	4H	24.33	25.16	24.93	25.76	26.43	22.94	23.76	23.54	24.37	25.04
	6H	25.61	26.31	26.24	26.96	27.64	23.82	24.52	24.45	25.17	25.85
	8H	26.28	26.91	26.92	27.57	28.26	24.22	24.85	24.86	25.51	26.20
	12H	26.98	27.55	27.63	28.19	28.95	24.61	25.17	25.25	25.82	26.57
12H	4H	24.35	25.10	24.97	25.73	26.41	23.00	23.75	23.62	24.38	25.06
	6H	25.67	26.30	26.31	26.95	27.65	23.93	24.56	24.57	25.22	25.91
	8H	26.41	26.97	27.05	27.62	28.37	24.40	24.96	25.04	25.60	26.36