

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: P893920

Luminaire Tested: 4MB-8HL-ASMF-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893920
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-8HL-ASMF-UNV-L950
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

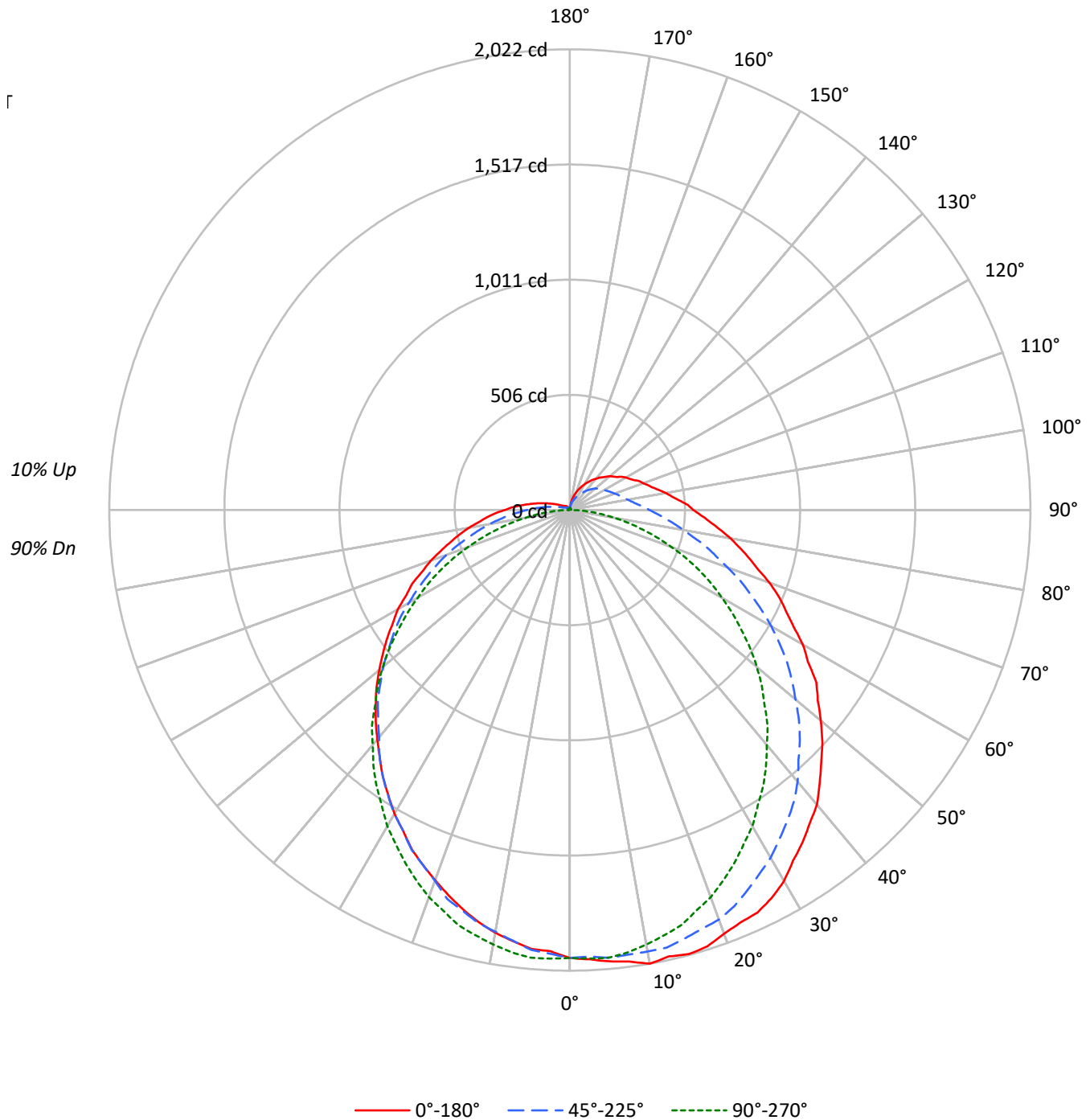
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6759.0 lumens
Efficiency: N/A
Efficacy: 116.7 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): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	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°	20021	20021	20021	20021	20021
5°	20273	19561	19371	19220	19712
10°	20794	19152	18491	18291	19379
15°	21099	18747	17671	17526	18971
20°	21202	18359	16735	16614	18527
25°	21587	17769	15752	15855	18190
30°	21719	17200	14816	15033	17779
35°	21667	16580	13833	14241	17398
40°	21861	15939	12826	13351	17023
45°	21796	15181	11831	12674	16814
50°	21963	14403	10876	11896	16679
55°	22450	13724	9780	11118	16619
60°	22823	12882	8659	10291	16843
65°	23613	11969	7521	9468	17222
70°	25541	11098	6166	8683	17809
75°	28700	10465	4715	7769	19040
80°	35672	9853	3159	6964	22361
85°	53324	9720	1585	6132	31356

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 175578 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.5	2.8
10°-20°	534.6	7.9
20°-30°	806.1	11.9
30°-40°	967.6	14.3
40°-50°	1007.5	14.9
50°-60°	934.0	13.8
60°-70°	769.1	11.4
70°-80°	554.8	8.2
80°-90°	352.2	5.2
90°-100°	217.2	3.2
100°-110°	144.8	2.1
110°-120°	103.1	1.5
120°-130°	75.5	1.1
130°-140°	52.0	0.8
140°-150°	31.6	0.5
150°-160°	15.7	0.2
160°-170°	5.7	0.1
170°-180°	1.0	0.0
0°-30°	1527.3	22.6
0°-40°	2494.8	36.9
0°-60°	4436.3	65.6
0°-90°	6112.5	90.4
90°-120°	465.0	6.9
90°-150°	624.1	9.2
90°-180°	647.0	9.6
0°-180°	6759.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1966	1966	1966	1966	1966	
5°	1988	1973	1973	1938	1934	191
15°	2018	1947	1887	1820	1814	569
25°	1949	1843	1709	1644	1642	896
35°	1781	1665	1479	1430	1430	1116
45°	1561	1428	1208	1192	1204	1208
55°	1321	1165	921	944	978	1174
65°	1046	875	627	692	763	1042
75°	815	618	330	459	541	863
85°	620	421	86	265	365	526
90°	542	350	8	189	284	299
95°	483	296	5	127	219	384
105°	378	232	5	52	115	404
115°	311	192	6	25	55	311
125°	253	160	7	20	32	230
135°	202	128	7	15	24	159
145°	155	90	7	11	17	98
155°	106	60	8	7	11	50
165°	62	34	8	5	6	18
175°	9	15	9	4	1	2
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1965.9	1965.9	1965.9	1965.9	1965.9	1965.9	1965.9	1965.9	1965.9
2.5°	1973.8	1979.7	1961.0	1972.8	1970.8	1972.8	1949.2	1968.9	1938.4
5°	1988.5	1991.5	1972.8	1979.7	1972.8	1956.1	1938.4	1931.5	1933.5
7.5°	1998.3	2014.1	1967.9	1969.8	1958.0	1940.3	1906.9	1912.8	1908.9
10°	2021.9	2004.2	1967.9	1959.0	1936.4	1917.7	1879.4	1882.4	1884.3
12.5°	2007.2	2003.3	1966.9	1934.5	1911.8	1896.1	1856.8	1847.0	1851.9
15°	2018.0	2001.3	1947.2	1921.7	1887.3	1859.7	1820.4	1813.5	1814.5
17.5°	2008.2	1994.4	1927.6	1892.2	1844.0	1827.3	1790.0	1778.2	1772.3
20°	1978.7	1971.8	1912.8	1851.9	1808.6	1776.2	1731.0	1724.1	1729.0
22.5°	1959.0	1942.3	1883.3	1822.4	1759.5	1731.0	1685.8	1684.8	1685.8
25°	1949.2	1927.6	1843.0	1779.1	1709.4	1683.8	1644.5	1629.7	1642.5
27.5°	1919.7	1900.0	1800.8	1731.0	1653.3	1618.9	1586.5	1583.5	1585.5
30°	1880.4	1842.1	1762.4	1676.9	1602.2	1566.8	1540.3	1520.6	1539.3
32.5°	1824.4	1802.7	1712.3	1618.9	1536.4	1511.8	1485.2	1483.3	1483.3
35°	1781.1	1765.4	1665.1	1567.8	1479.3	1445.9	1430.2	1423.3	1430.2
37.5°	1731.0	1707.4	1615.0	1505.9	1415.5	1386.9	1371.2	1365.3	1370.2
40°	1687.7	1644.5	1556.0	1442.0	1345.7	1320.1	1303.4	1309.3	1314.2
42.5°	1623.8	1599.3	1486.2	1377.1	1285.7	1258.2	1244.4	1249.3	1261.1
45°	1560.9	1538.3	1428.2	1309.3	1208.0	1193.3	1192.3	1189.4	1204.1
47.5°	1503.9	1471.5	1364.3	1242.5	1143.2	1126.5	1128.4	1138.3	1151.0
50°	1438.1	1399.7	1293.6	1170.7	1071.4	1060.6	1068.5	1075.4	1092.1
52.5°	1372.2	1341.7	1228.7	1102.9	998.7	990.8	1001.6	1024.2	1034.1
55°	1321.1	1266.0	1164.8	1023.3	921.0	922.0	943.6	956.4	978.0
57.5°	1239.5	1198.2	1092.1	952.5	848.3	855.2	884.7	906.3	920.0
60°	1181.5	1129.4	1021.3	876.8	771.6	782.4	815.9	848.3	871.9
62.5°	1106.8	1061.6	947.6	802.1	700.8	716.6	753.9	792.3	809.0
65°	1045.9	994.7	874.8	727.4	627.1	645.8	692.0	735.2	762.8
67.5°	993.8	940.7	810.0	658.6	552.4	579.9	634.0	676.3	697.9
70°	931.8	869.9	736.2	581.9	474.8	507.2	576.0	625.2	649.7
72.5°	866.0	815.9	672.3	511.1	403.0	442.3	518.0	569.1	592.7
75°	814.9	758.8	618.3	440.4	330.3	377.5	459.0	517.0	540.6
77.5°	762.8	711.7	557.3	375.5	265.4	318.5	406.9	470.8	495.4
80°	716.6	657.6	506.2	322.4	197.6	260.5	357.8	420.7	449.2
82.5°	665.5	614.3	462.0	266.4	140.6	207.4	309.6	378.4	402.0
85°	620.2	567.2	420.7	222.1	86.5	160.2	265.4	336.2	364.7
87.5°	579.0	534.7	382.4	188.7	43.2	121.9	223.1	294.9	327.3
90°	541.6	491.5	349.9	158.3	7.9	88.5	188.7	259.5	284.1
92.5°	518.0	458.1	323.4	138.6	4.9	62.9	157.3	227.1	255.6
95°	482.6	429.6	295.9	123.9	4.9	42.3	126.8	194.6	219.2
97.5°	452.2	403.0	276.2	115.0	3.9	28.5	104.2	163.2	188.7
100°	428.6	382.4	258.5	107.1	4.9	20.6	82.6	138.6	161.2
102.5°	402.0	359.8	244.8	102.2	4.9	14.7	64.9	117.0	137.6
105°	378.4	341.1	232.0	97.3	4.9	12.8	52.1	96.3	115.0
107.5°	360.7	321.4	221.2	94.4	4.9	12.8	41.3	78.6	94.4
110°	343.1	305.7	210.4	91.4	4.9	11.8	32.4	64.9	78.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	331.3	291.0	200.5	88.5	5.9	11.8	26.5	54.1	64.9
115°	310.6	278.2	191.7	87.5	5.9	10.8	24.6	44.2	55.0
117.5°	295.9	266.4	182.8	84.5	5.9	10.8	23.6	36.4	44.2
120°	285.1	252.6	175.0	81.6	5.9	9.8	21.6	32.4	37.4
122.5°	271.3	239.8	168.1	79.6	5.9	9.8	20.6	30.5	33.4
125°	252.6	228.0	160.2	75.7	6.9	9.8	19.7	28.5	31.5
127.5°	240.8	217.2	154.3	70.8	6.9	8.8	18.7	26.5	29.5
130°	231.0	205.4	147.4	65.9	6.9	8.8	17.7	24.6	27.5
132.5°	216.2	193.6	137.6	61.9	6.9	7.9	15.7	22.6	25.6
135°	202.5	183.8	127.8	58.0	6.9	7.9	14.7	21.6	23.6
137.5°	193.6	174.0	118.9	54.1	6.9	6.9	13.8	19.7	21.6
140°	178.9	163.2	109.1	50.1	6.9	6.9	12.8	18.7	19.7
142.5°	168.1	152.4	100.3	46.2	6.9	6.9	11.8	16.7	18.7
145°	155.3	141.5	90.4	42.3	6.9	5.9	10.8	15.7	16.7
147.5°	143.5	128.8	82.6	39.3	6.9	5.9	9.8	13.8	14.7
150°	131.7	116.0	74.7	36.4	6.9	5.9	8.8	11.8	13.8
152.5°	118.9	100.3	66.8	33.4	6.9	5.9	7.9	10.8	11.8
155°	106.2	87.5	60.0	30.5	7.9	5.9	6.9	8.8	10.8
157.5°	95.3	75.7	53.1	27.5	7.9	4.9	6.9	7.9	8.8
160°	82.6	64.9	47.2	24.6	7.9	4.9	5.9	6.9	7.9
162.5°	72.7	54.1	41.3	22.6	7.9	4.9	5.9	5.9	6.9
165°	61.9	45.2	34.4	20.6	7.9	4.9	4.9	4.9	5.9
167.5°	50.1	35.4	28.5	18.7	7.9	4.9	4.9	3.9	4.9
170°	37.4	26.5	23.6	16.7	7.9	4.9	3.9	2.9	3.9
172.5°	16.7	20.6	18.7	14.7	8.8	4.9	3.9	2.9	2.0
175°	8.8	14.7	14.7	12.8	8.8	4.9	3.9	2.9	1.0
177.5°	6.9	8.8	10.8	10.8	8.8	5.9	3.9	2.0	1.0
180°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9



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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	20.78	22.25	21.28	22.76	23.30	19.75	21.22	20.25	21.73	22.27
	3H	22.86	24.21	23.38	24.72	25.30	21.62	22.97	22.14	23.48	24.06
	4H	23.81	25.08	24.34	25.61	26.21	22.36	23.64	22.90	24.17	24.77
	6H	24.72	25.91	25.28	26.45	27.07	23.00	24.19	23.55	24.73	25.34
	8H	25.15	26.29	25.72	26.86	27.47	23.25	24.39	23.82	24.96	25.57
	12H	25.57	26.67	26.15	27.22	27.87	23.48	24.58	24.05	25.13	25.78
4H	2H	21.27	22.55	21.81	23.07	23.67	20.31	21.59	20.85	22.12	22.71
	3H	23.58	24.67	24.14	25.24	25.86	22.37	23.46	22.92	24.03	24.64
	4H	24.70	25.69	25.27	26.27	26.92	23.22	24.22	23.79	24.80	25.45
	6H	25.80	26.68	26.39	27.28	27.95	23.98	24.86	24.57	25.46	26.12
	8H	26.33	27.15	26.93	27.76	28.43	24.29	25.12	24.89	25.72	26.40
	12H	26.86	27.61	27.47	28.24	28.92	24.59	25.34	25.21	25.97	26.65
8H	4H	24.95	25.78	25.55	26.38	27.06	23.56	24.39	24.16	24.99	25.67
	6H	26.24	26.94	26.86	27.58	28.26	24.45	25.15	25.07	25.79	26.47
	8H	26.90	27.54	27.54	28.19	28.88	24.84	25.48	25.49	26.13	26.82
	12H	27.61	28.17	28.25	28.81	29.57	25.23	25.80	25.88	26.44	27.20
12H	4H	24.97	25.72	25.59	26.35	27.03	23.63	24.38	24.24	25.01	25.69
	6H	26.29	26.92	26.93	27.58	28.27	24.55	25.19	25.19	25.84	26.53
	8H	27.03	27.60	27.68	28.24	29.00	25.02	25.58	25.66	26.22	26.98