

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: P894032

Luminaire Tested: 4MB-9HL-FLTU-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894032
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-FLTU-UNV-L950
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 90CRI, 500
Light Source: -
Ballast/Driver: -

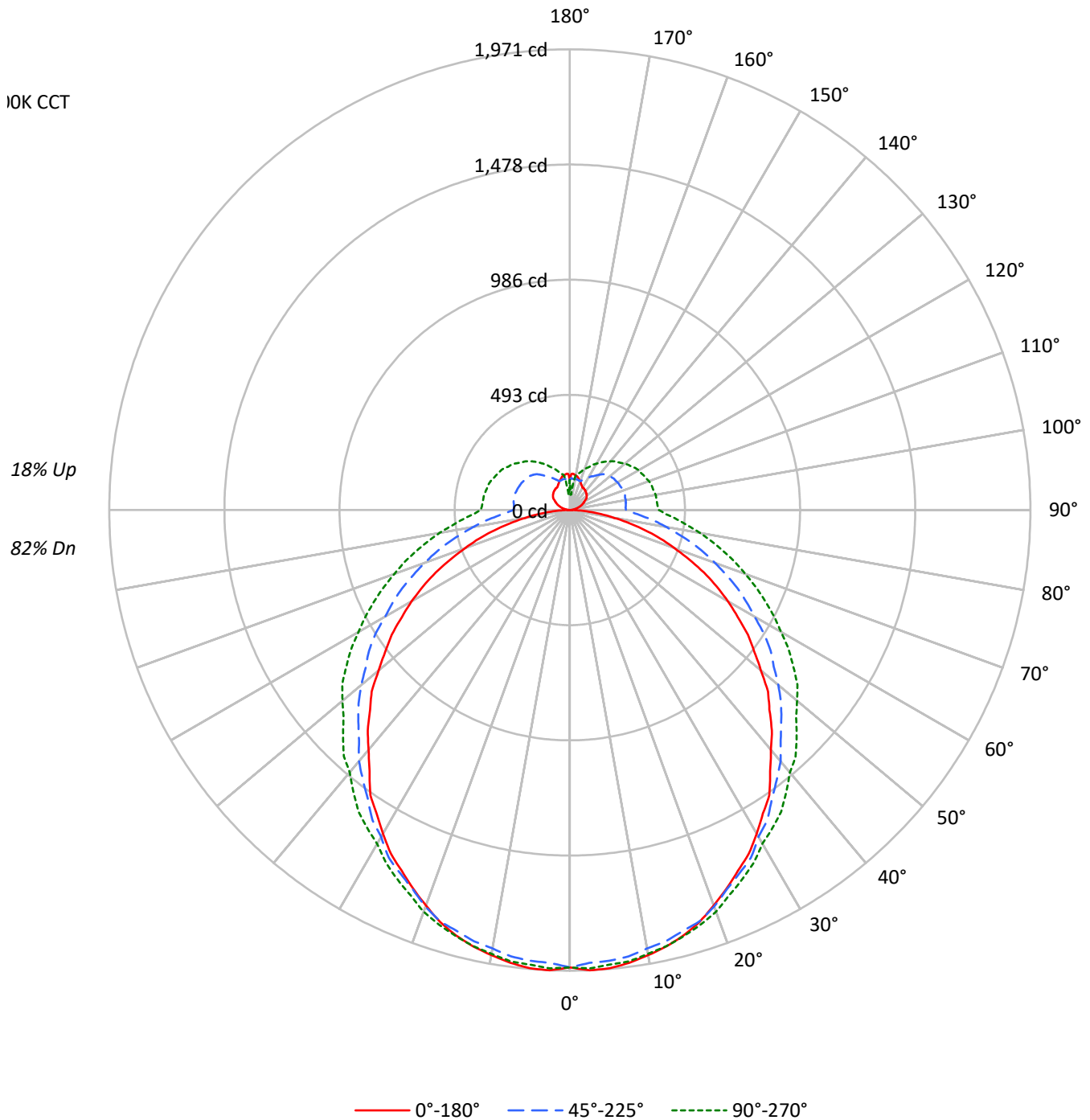
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7356.0 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	69	69	66
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	57	57	54
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	48	48	45
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	41	41	38
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	35	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	31	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	27	27	25
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	24	24	22
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	22	22	20
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	20	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13921	13921	13921
5°	13992	13331	13307
10°	13843	12802	12699
15°	13685	12335	12120
20°	13379	11844	11545
25°	13051	11242	10908
30°	12751	10654	10291
35°	12474	10094	9894
40°	11914	9612	9321
45°	11551	9040	8920
50°	11124	8559	8500
55°	10739	8101	8125
60°	10200	7477	7621
65°	9584	6973	7146
70°	8661	6350	6630
75°	7674	5729	6138
80°	6075	5051	5642
85°	4193	4394	5177

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11551 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.3	2.5
10°-20°	529.2	7.2
20°-30°	795.0	10.8
30°-40°	952.8	13.0
40°-50°	999.0	13.6
50°-60°	937.1	12.7
60°-70°	778.4	10.6
70°-80°	556.5	7.6
80°-90°	330.1	4.5
90°-100°	242.1	3.3
100°-110°	238.5	3.2
110°-120°	222.5	3.0
120°-130°	195.3	2.7
130°-140°	157.2	2.1
140°-150°	112.9	1.5
150°-160°	71.7	1.0
160°-170°	39.7	0.5
170°-180°	12.5	0.2
0°-30°	1509.6	20.5
0°-40°	2462.4	33.5
0°-60°	4398.5	59.8
0°-90°	6063.5	82.4
90°-120°	703.2	9.6
90°-150°	1168.5	15.9
90°-180°	1293.0	17.6
0°-180°	7356.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1957	1957	1957	1957	1957	
5°	1968	1964	1936	1945	1952	187
15°	1884	1872	1865	1879	1887	530
25°	1703	1719	1715	1735	1744	786
35°	1489	1494	1508	1551	1576	924
45°	1208	1242	1280	1364	1372	934
55°	930	961	1049	1134	1168	828
65°	633	681	791	897	923	624
75°	334	411	538	650	680	353
85°	82	180	315	421	461	90
90°	3	109	240	343	380	7
95°	9	114	240	339	374	10
105°	33	126	244	335	366	35
115°	60	136	239	318	349	60
125°	86	140	232	295	322	76
135°	100	135	215	267	289	77
145°	108	125	177	235	252	68
155°	118	125	144	182	206	55
165°	141	137	133	132	165	40
175°	156	150	134	111	68	15
180°	129	129	129	129	129	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1956.6	1956.6	1956.6	1956.6	1956.6
2.5°	1971.2	1955.6	1939.0	1963.9	1962.9
5°	1968.1	1963.9	1935.8	1945.2	1952.5
7.5°	1953.5	1943.1	1926.5	1949.4	1947.3
10°	1933.8	1921.3	1904.6	1918.2	1927.5
12.5°	1911.9	1901.5	1890.1	1904.6	1910.9
15°	1883.9	1872.4	1865.1	1878.7	1887.0
17.5°	1847.5	1844.3	1845.4	1846.4	1859.9
20°	1800.7	1802.8	1805.9	1824.6	1828.8
22.5°	1752.9	1764.3	1756.0	1785.1	1783.0
25°	1703.0	1718.6	1715.4	1735.2	1744.5
27.5°	1658.3	1659.3	1678.0	1706.1	1703.0
30°	1599.0	1616.7	1614.6	1648.9	1648.9
32.5°	1538.7	1564.7	1573.0	1603.1	1613.5
35°	1488.8	1494.0	1507.5	1551.2	1576.1
37.5°	1407.7	1432.6	1454.5	1511.7	1521.0
40°	1339.1	1364.0	1403.5	1470.1	1464.9
42.5°	1279.8	1305.8	1334.9	1411.9	1430.6
45°	1208.1	1242.4	1279.8	1364.0	1372.3
47.5°	1149.9	1176.9	1225.8	1302.7	1313.1
50°	1067.7	1111.4	1164.4	1253.8	1269.4
52.5°	995.0	1032.4	1100.0	1192.5	1227.8
55°	930.5	960.6	1049.0	1134.3	1167.5
57.5°	851.5	893.1	985.6	1080.2	1110.4
60°	781.8	822.4	911.8	1019.9	1043.8
62.5°	708.0	755.8	852.5	957.5	984.6
65°	633.2	681.0	791.2	897.2	923.2
67.5°	552.1	611.3	723.6	833.8	860.8
70°	476.2	540.6	661.2	771.4	798.5
72.5°	407.5	477.2	599.9	713.2	742.3
75°	333.7	410.7	538.5	649.8	679.9
77.5°	262.0	345.2	475.1	587.4	622.8
80°	192.3	283.8	420.0	528.1	565.6
82.5°	135.2	228.7	369.1	475.1	509.4
85°	82.1	179.9	315.0	421.1	460.6
87.5°	36.4	139.3	272.4	377.4	412.7
90°	3.1	109.2	240.2	343.1	380.5
92.5°	6.2	111.2	239.1	338.9	376.4
95°	9.4	114.4	240.2	338.9	374.3
97.5°	13.5	118.5	242.2	338.9	373.2
100°	19.8	120.6	243.3	338.9	373.2
102.5°	26.0	123.7	242.2	333.7	369.1
105°	33.3	125.8	244.3	334.8	366.0
107.5°	40.5	127.9	244.3	329.6	364.9
110°	47.8	131.0	242.2	326.5	360.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	54.1	134.1	241.2	320.2	353.5
115°	60.3	136.2	239.1	318.1	349.3
117.5°	66.5	137.2	238.1	312.9	343.1
120°	71.7	139.3	236.0	306.7	340.0
122.5°	78.0	140.4	232.9	300.5	333.7
125°	86.3	140.4	231.8	295.3	322.3
127.5°	90.5	141.4	227.7	289.0	317.1
130°	94.6	138.3	225.6	281.7	308.8
132.5°	97.7	137.2	220.4	274.5	298.4
135°	99.8	135.2	215.2	267.2	289.0
137.5°	102.9	132.0	207.9	262.0	282.8
140°	105.0	130.0	197.5	251.6	272.4
142.5°	107.1	126.8	187.1	242.2	262.0
145°	108.1	124.8	176.7	235.0	251.6
147.5°	111.2	121.6	170.5	225.6	240.2
150°	110.2	119.6	161.1	214.2	228.7
152.5°	113.3	122.7	152.8	198.6	219.4
155°	118.5	124.8	144.5	181.9	205.9
157.5°	123.7	128.9	138.3	167.4	195.5
160°	131.0	131.0	131.0	155.9	187.1
162.5°	135.2	135.2	132.0	142.4	175.7
165°	141.4	137.2	133.1	132.0	165.3
167.5°	147.6	139.3	135.2	127.9	158.0
170°	148.7	142.4	134.1	120.6	152.8
172.5°	152.8	145.6	133.1	114.4	118.5
175°	155.9	149.7	134.1	111.2	67.6
177.5°	154.9	149.7	137.2	111.2	65.5
180°	128.9	128.9	128.9	128.9	128.9



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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	16.87	18.20	17.48	18.83	19.54	19.39	20.71	20.00	21.34	22.05
	3H	18.31	19.51	18.93	20.15	20.90	21.75	22.96	22.38	23.59	24.34
	4H	18.77	19.91	19.42	20.56	21.33	22.87	24.01	23.51	24.66	25.42
	6H	19.04	20.10	19.70	20.76	21.54	23.98	25.04	24.64	25.70	26.48
	8H	19.09	20.11	19.76	20.79	21.57	24.53	25.55	25.20	26.23	27.01
	12H	19.11	20.08	19.78	20.75	21.57	25.11	26.08	25.79	26.76	27.57
4H	2H	17.75	18.89	18.39	19.54	20.30	19.73	20.87	20.38	21.52	22.29
	3H	19.40	20.37	20.06	21.06	21.84	22.31	23.28	22.97	23.97	24.75
	4H	19.98	20.87	20.66	21.56	22.37	23.59	24.48	24.26	25.17	25.98
	6H	20.36	21.14	21.05	21.86	22.68	24.87	25.66	25.57	26.37	27.19
	8H	20.45	21.18	21.15	21.90	22.73	25.52	26.25	26.22	26.97	27.80
	12H	20.49	21.16	21.21	21.90	22.74	26.21	26.88	26.93	27.61	28.45
8H	4H	20.61	21.34	21.31	22.06	22.89	23.74	24.47	24.44	25.19	26.02
	6H	21.14	21.76	21.87	22.52	23.35	25.17	25.79	25.90	26.55	27.39
	8H	21.31	21.87	22.05	22.63	23.48	25.94	26.50	26.68	27.26	28.11
	12H	21.42	21.91	22.16	22.66	23.57	26.79	27.29	27.54	28.04	28.95
12H	4H	20.76	21.43	21.49	22.17	23.01	23.73	24.40	24.45	25.14	25.98
	6H	21.39	21.95	22.13	22.70	23.56	25.19	25.75	25.93	26.51	27.36
	8H	21.63	22.13	22.38	22.88	23.79	26.01	26.51	26.76	27.26	28.17