

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: P893181

Luminaire Tested: 4MB-10HL-FLTU-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893181
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-10HL-FLTU-UNV-L930
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 90CRI, 30
Light Source: -
Ballast/Driver: -

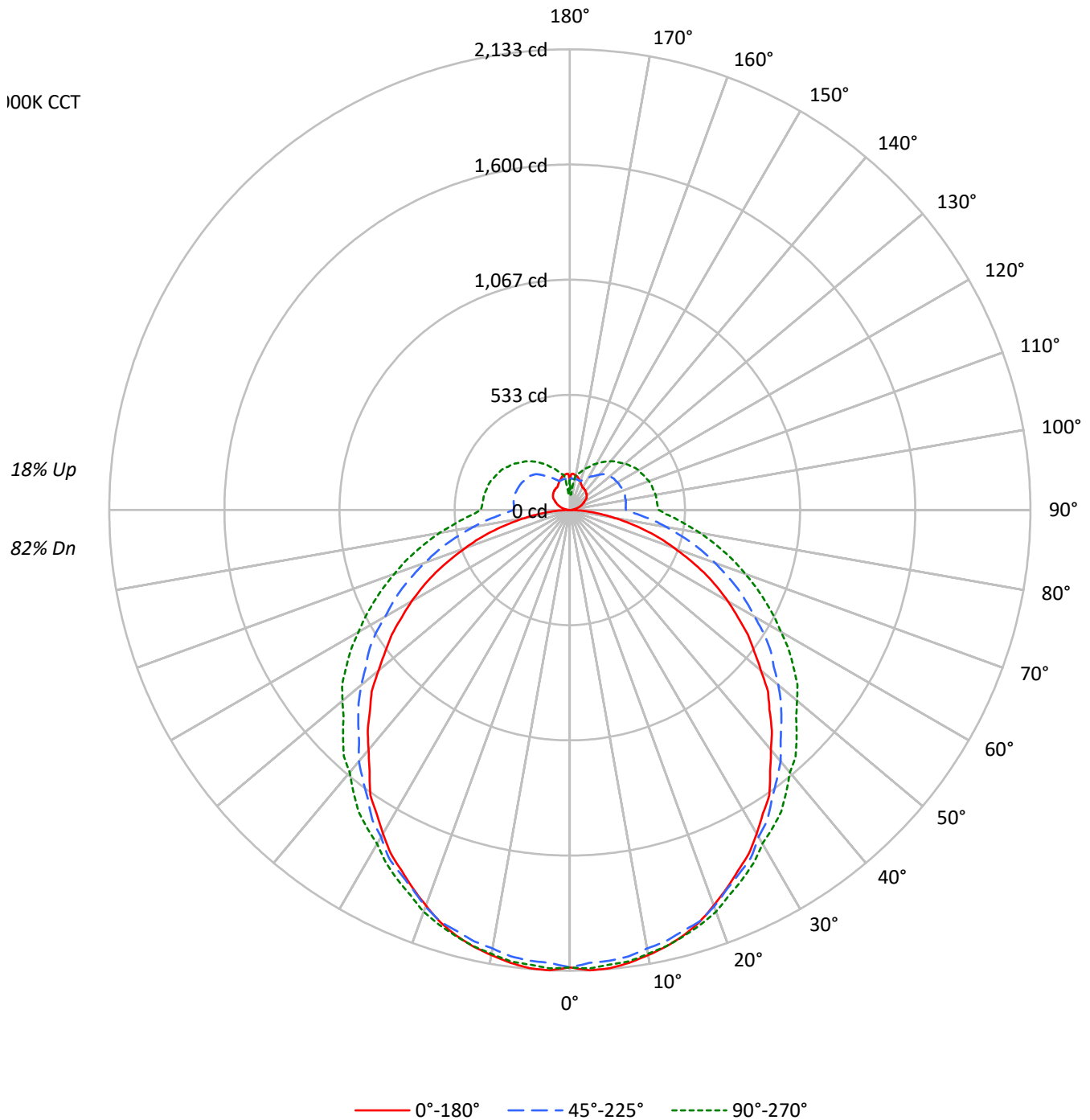
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7961.0 lumens
Efficiency: N/A
Efficacy: 105.4 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): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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°	15067	15067	15067
5°	15143	14428	14402
10°	14982	13855	13744
15°	14810	13350	13117
20°	14480	12818	12494
25°	14124	12166	11805
30°	13800	11530	11138
35°	13500	10924	10707
40°	12894	10403	10087
45°	12501	9784	9654
50°	12039	9263	9199
55°	11622	8768	8793
60°	11039	8092	8248
65°	10371	7546	7733
70°	9372	6872	7175
75°	8306	6200	6644
80°	6578	5467	6106
85°	4540	4756	5602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12501 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.6	2.5
10°-20°	572.8	7.2
20°-30°	860.4	10.8
30°-40°	1031.2	13.0
40°-50°	1081.1	13.6
50°-60°	1014.2	12.7
60°-70°	842.4	10.6
70°-80°	602.3	7.6
80°-90°	357.2	4.5
90°-100°	262.0	3.3
100°-110°	258.2	3.2
110°-120°	240.8	3.0
120°-130°	211.3	2.7
130°-140°	170.2	2.1
140°-150°	122.1	1.5
150°-160°	77.6	1.0
160°-170°	43.0	0.5
170°-180°	13.5	0.2
0°-30°	1633.8	20.5
0°-40°	2665.0	33.5
0°-60°	4760.3	59.8
0°-90°	6562.2	82.4
90°-120°	761.0	9.6
90°-150°	1264.7	15.9
90°-180°	1399.0	17.6
0°-180°	7961.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2118	2118	2118	2118	2118	
5°	2130	2125	2095	2105	2113	202
15°	2039	2026	2018	2033	2042	574
25°	1843	1860	1856	1878	1888	850
35°	1611	1617	1632	1679	1706	1000
45°	1307	1345	1385	1476	1485	1011
55°	1007	1040	1135	1228	1264	896
65°	685	737	856	971	999	675
75°	361	444	583	703	736	382
85°	89	195	341	456	498	98
90°	3	118	260	371	412	7
95°	10	124	260	367	405	11
105°	36	136	264	362	396	38
115°	65	147	259	344	378	64
125°	93	152	251	320	349	82
135°	108	146	233	289	313	84
145°	117	135	191	254	272	74
155°	128	135	156	197	223	59
165°	153	148	144	143	179	43
175°	169	162	145	120	73	16
180°	140	140	140	140	140	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2117.6	2117.6	2117.6	2117.6	2117.6
2.5°	2133.3	2116.4	2098.4	2125.4	2124.3
5°	2129.9	2125.4	2095.1	2105.2	2113.1
7.5°	2114.2	2102.9	2084.9	2109.7	2107.4
10°	2092.8	2079.3	2061.3	2075.9	2086.1
12.5°	2069.2	2057.9	2045.5	2061.3	2068.0
15°	2038.8	2026.4	2018.5	2033.2	2042.2
17.5°	1999.4	1996.0	1997.2	1998.3	2012.9
20°	1948.8	1951.0	1954.4	1974.7	1979.2
22.5°	1897.0	1909.4	1900.4	1931.9	1929.7
25°	1843.0	1859.9	1856.5	1877.9	1888.0
27.5°	1794.6	1795.8	1816.0	1846.4	1843.0
30°	1730.5	1749.6	1747.4	1784.5	1784.5
32.5°	1665.2	1693.4	1702.4	1735.0	1746.3
35°	1611.2	1616.9	1631.5	1678.7	1705.7
37.5°	1523.5	1550.5	1574.1	1636.0	1646.1
40°	1449.2	1476.2	1519.0	1591.0	1585.4
42.5°	1385.1	1413.2	1444.7	1528.0	1548.2
45°	1307.4	1344.6	1385.1	1476.2	1485.2
47.5°	1244.4	1273.7	1326.6	1409.8	1421.1
50°	1155.5	1202.8	1260.2	1356.9	1373.8
52.5°	1076.8	1117.3	1190.4	1290.6	1328.8
55°	1007.0	1039.7	1135.3	1227.6	1263.6
57.5°	921.5	966.5	1066.7	1169.0	1201.7
60°	846.1	890.0	986.8	1103.8	1129.7
62.5°	766.2	818.0	922.6	1036.3	1065.5
65°	685.2	737.0	856.2	971.0	999.1
67.5°	597.5	661.6	783.1	902.4	931.6
70°	515.3	585.1	715.6	834.9	864.1
72.5°	441.1	516.4	649.2	771.9	803.4
75°	361.2	444.4	582.8	703.2	735.9
77.5°	283.5	373.6	514.2	635.7	674.0
80°	208.2	307.2	454.6	571.6	612.1
82.5°	146.3	247.5	399.4	514.2	551.3
85°	88.9	194.7	340.9	455.7	498.4
87.5°	39.4	150.8	294.8	408.4	446.7
90°	3.4	118.1	259.9	371.3	411.8
92.5°	6.8	120.4	258.8	366.8	407.3
95°	10.1	123.8	259.9	366.8	405.1
97.5°	14.6	128.3	262.2	366.8	403.9
100°	21.4	130.5	263.3	366.8	403.9
102.5°	28.1	133.9	262.2	361.2	399.4
105°	36.0	136.1	264.4	362.3	396.1
107.5°	43.9	138.4	264.4	356.7	394.9
110°	51.8	141.8	262.2	353.3	390.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	58.5	145.1	261.0	346.6	382.6
115°	65.3	147.4	258.8	344.3	378.1
117.5°	72.0	148.5	257.7	338.7	371.3
120°	77.6	150.8	255.4	331.9	367.9
122.5°	84.4	151.9	252.0	325.2	361.2
125°	93.4	151.9	250.9	319.5	348.8
127.5°	97.9	153.0	246.4	312.8	343.2
130°	102.4	149.6	244.2	304.9	334.2
132.5°	105.8	148.5	238.5	297.0	322.9
135°	108.0	146.3	232.9	289.2	312.8
137.5°	111.4	142.9	225.0	283.5	306.0
140°	113.6	140.6	213.8	272.3	294.8
142.5°	115.9	137.3	202.5	262.2	283.5
145°	117.0	135.0	191.3	254.3	272.3
147.5°	120.4	131.6	184.5	244.2	259.9
150°	119.3	129.4	174.4	231.8	247.5
152.5°	122.6	132.8	165.4	214.9	237.4
155°	128.3	135.0	156.4	196.9	222.8
157.5°	133.9	139.5	149.6	181.2	211.5
160°	141.8	141.8	141.8	168.8	202.5
162.5°	146.3	146.3	142.9	154.1	190.2
165°	153.0	148.5	144.0	142.9	178.9
167.5°	159.8	150.8	146.3	138.4	171.0
170°	160.9	154.1	145.1	130.5	165.4
172.5°	165.4	157.5	144.0	123.8	128.3
175°	168.8	162.0	145.1	120.4	73.1
177.5°	167.6	162.0	148.5	120.4	70.9
180°	139.5	139.5	139.5	139.5	139.5



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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	17.15	18.47	17.76	19.10	19.82	19.66	20.98	20.27	21.61	22.33
	3H	18.58	19.78	19.20	20.42	21.17	22.03	23.23	22.65	23.87	24.62
	4H	19.05	20.19	19.69	20.84	21.60	23.14	24.28	23.78	24.93	25.70
	6H	19.31	20.37	19.97	21.03	21.81	24.26	25.32	24.91	25.98	26.76
	8H	19.37	20.38	20.03	21.06	21.84	24.80	25.82	25.47	26.50	27.28
	12H	19.38	20.35	20.06	21.03	21.84	25.39	26.36	26.06	27.04	27.85
4H	2H	18.02	19.16	18.67	19.81	20.57	20.01	21.15	20.65	21.80	22.56
	3H	19.67	20.64	20.33	21.33	22.11	22.58	23.55	23.24	24.24	25.02
	4H	20.26	21.15	20.93	21.84	22.65	23.86	24.75	24.54	25.44	26.25
	6H	20.63	21.41	21.33	22.13	22.95	25.15	25.93	25.84	26.65	27.47
	8H	20.72	21.46	21.42	22.17	23.01	25.79	26.53	26.49	27.24	28.08
	12H	20.77	21.43	21.49	22.17	23.01	26.48	27.15	27.21	27.89	28.73
8H	4H	20.88	21.62	21.58	22.33	23.16	24.02	24.75	24.71	25.46	26.30
	6H	21.42	22.04	22.15	22.79	23.63	25.45	26.07	26.18	26.82	27.66
	8H	21.59	22.14	22.33	22.90	23.75	26.22	26.77	26.96	27.53	28.38
	12H	21.69	22.19	22.43	22.93	23.85	27.07	27.56	27.81	28.31	29.22
12H	4H	21.04	21.70	21.76	22.44	23.28	24.01	24.67	24.73	25.41	26.25
	6H	21.66	22.22	22.40	22.98	23.83	25.47	26.03	26.21	26.78	27.64
	8H	21.91	22.41	22.65	23.15	24.06	26.29	26.78	27.03	27.53	28.44