

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: P893177

Luminaire Tested: 4MB-10HL-FLTU-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893177
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-L830
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 30
Light Source: -
Ballast/Driver: -

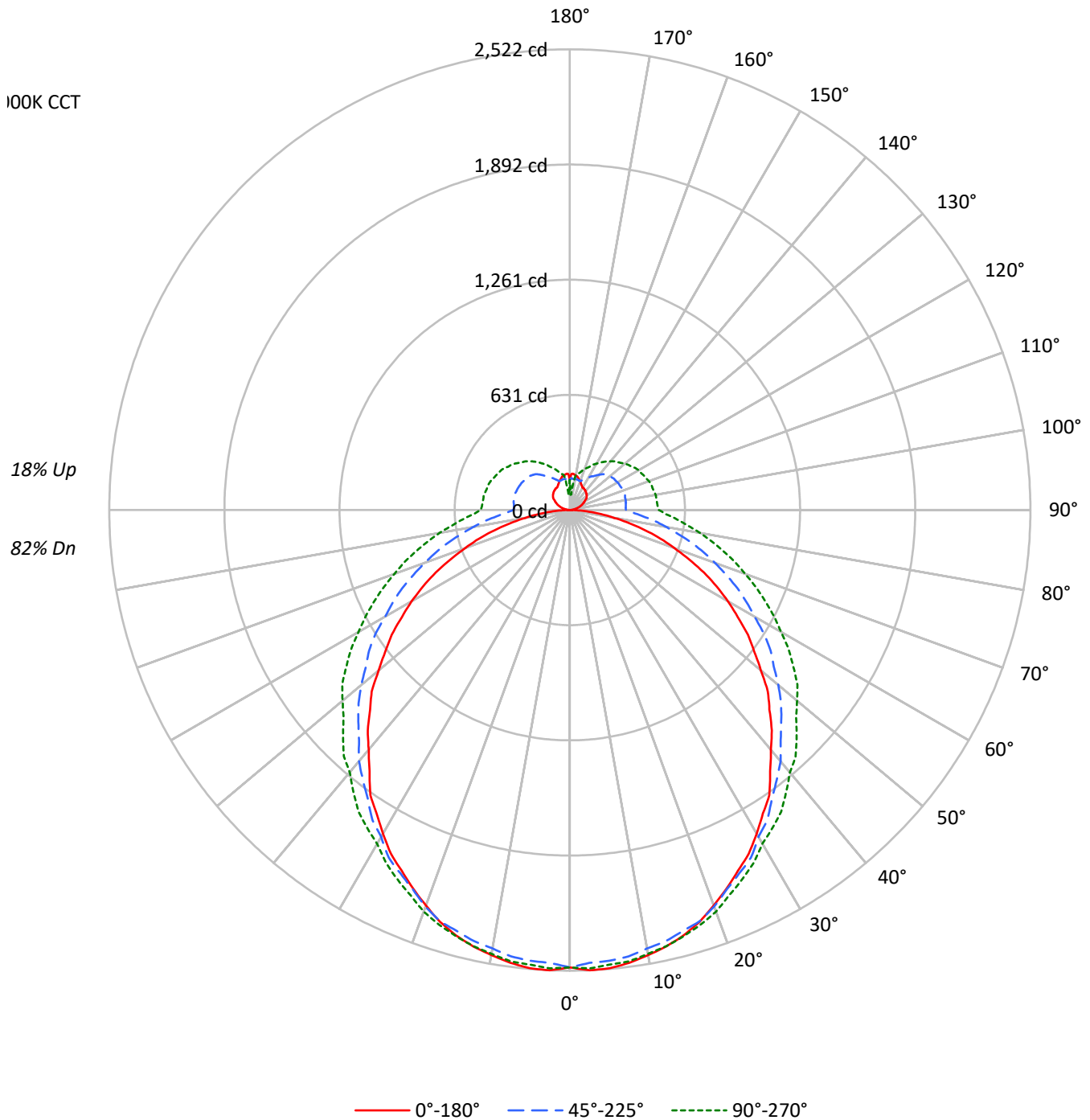
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9412.0 lumens
Efficiency: N/A
Efficacy: 124.7 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
RCR																				
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	82	
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	66	
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	54	
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	45	
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	38	
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	33	
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	28	
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	25	
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	22	
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	20	
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	18	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17812	17812	17812
5°	17903	17057	17026
10°	17712	16381	16249
15°	17509	15783	15508
20°	17119	15154	14771
25°	16698	14384	13957
30°	16315	13632	13168
35°	15960	12915	12659
40°	15243	12299	11925
45°	14779	11567	11414
50°	14234	10952	10876
55°	13741	10366	10396
60°	13051	9567	9751
65°	12262	8922	9144
70°	11079	8124	8482
75°	9820	7331	7855
80°	7775	6462	7218
85°	5368	5624	6624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14779 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.1	2.5
10°-20°	677.2	7.2
20°-30°	1017.2	10.8
30°-40°	1219.2	13.0
40°-50°	1278.2	13.6
50°-60°	1199.0	12.7
60°-70°	995.9	10.6
70°-80°	712.1	7.6
80°-90°	422.3	4.5
90°-100°	309.8	3.3
100°-110°	305.2	3.2
110°-120°	284.7	3.0
120°-130°	249.8	2.7
130°-140°	201.2	2.1
140°-150°	144.4	1.5
150°-160°	91.8	1.0
160°-170°	50.9	0.5
170°-180°	16.0	0.2
0°-30°	1931.5	20.5
0°-40°	3150.7	33.5
0°-60°	5627.9	59.8
0°-90°	7758.2	82.4
90°-120°	899.7	9.6
90°-150°	1495.2	15.9
90°-180°	1654.0	17.6
0°-180°	9412.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2504	2504	2504	2504	2504	
5°	2518	2513	2477	2489	2498	239
15°	2410	2396	2386	2404	2414	679
25°	2179	2199	2195	2220	2232	1005
35°	1905	1912	1929	1985	2017	1182
45°	1546	1590	1638	1745	1756	1196
55°	1191	1229	1342	1451	1494	1059
65°	810	871	1012	1148	1181	798
75°	427	525	689	831	870	451
85°	105	230	403	539	589	115
90°	4	140	307	439	487	9
95°	12	146	307	434	479	12
105°	43	161	313	428	468	45
115°	77	174	306	407	447	76
125°	110	180	297	378	412	97
135°	128	173	275	342	370	99
145°	138	160	226	301	322	87
155°	152	160	185	233	263	70
165°	181	176	170	169	212	51
175°	200	192	172	142	86	19
180°	165	165	165	165	165	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2503.5	2503.5	2503.5	2503.5	2503.5
2.5°	2522.1	2502.2	2480.9	2512.8	2511.5
5°	2518.1	2512.8	2476.9	2488.9	2498.2
7.5°	2499.5	2486.2	2464.9	2494.2	2491.5
10°	2474.2	2458.3	2437.0	2454.3	2466.3
12.5°	2446.3	2433.0	2418.4	2437.0	2445.0
15°	2410.4	2395.8	2386.4	2403.7	2414.4
17.5°	2363.8	2359.8	2361.2	2362.5	2379.8
20°	2304.0	2306.6	2310.6	2334.6	2339.9
22.5°	2242.8	2257.4	2246.8	2284.0	2281.4
25°	2178.9	2198.9	2194.9	2220.2	2232.1
27.5°	2121.7	2123.1	2147.0	2182.9	2178.9
30°	2045.9	2068.5	2065.9	2109.8	2109.8
32.5°	1968.8	2002.0	2012.7	2051.2	2064.5
35°	1904.9	1911.6	1928.8	1984.7	2016.6
37.5°	1801.1	1833.1	1861.0	1934.2	1946.1
40°	1713.3	1745.3	1795.8	1881.0	1874.3
42.5°	1637.5	1670.8	1708.0	1806.5	1830.4
45°	1545.7	1589.6	1637.5	1745.3	1755.9
47.5°	1471.2	1505.8	1568.4	1666.8	1680.1
50°	1366.2	1422.0	1489.9	1604.3	1624.2
52.5°	1273.0	1320.9	1407.4	1525.8	1571.0
55°	1190.6	1229.1	1342.2	1451.3	1493.9
57.5°	1089.5	1142.7	1261.1	1382.1	1420.7
60°	1000.3	1052.2	1166.6	1305.0	1335.6
62.5°	905.9	967.1	1090.8	1225.1	1259.7
65°	810.1	871.3	1012.3	1148.0	1181.3
67.5°	706.4	782.2	925.8	1066.9	1101.4
70°	609.2	691.7	846.0	987.0	1021.6
72.5°	521.5	610.6	767.5	912.5	949.8
75°	427.0	525.4	689.1	831.4	870.0
77.5°	335.2	441.6	607.9	751.6	796.8
80°	246.1	363.2	537.4	675.8	723.6
82.5°	172.9	292.7	472.2	607.9	651.8
85°	105.1	230.1	403.1	538.7	589.3
87.5°	46.6	178.3	348.5	482.9	528.1
90°	4.0	139.7	307.3	439.0	486.9
92.5°	8.0	142.3	306.0	433.7	481.5
95°	12.0	146.3	307.3	433.7	478.9
97.5°	17.3	151.6	309.9	433.7	477.6
100°	25.3	154.3	311.3	433.7	477.6
102.5°	33.3	158.3	309.9	427.0	472.2
105°	42.6	161.0	312.6	428.3	468.2
107.5°	51.9	163.6	312.6	421.7	466.9
110°	61.2	167.6	309.9	417.7	461.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	69.2	171.6	308.6	409.7	452.3
115°	77.2	174.3	306.0	407.1	447.0
117.5°	85.1	175.6	304.6	400.4	439.0
120°	91.8	178.3	302.0	392.4	435.0
122.5°	99.8	179.6	298.0	384.4	427.0
125°	110.4	179.6	296.6	377.8	412.4
127.5°	115.7	180.9	291.3	369.8	405.7
130°	121.1	176.9	288.7	360.5	395.1
132.5°	125.0	175.6	282.0	351.2	381.8
135°	127.7	172.9	275.4	341.9	369.8
137.5°	131.7	168.9	266.0	335.2	361.8
140°	134.4	166.3	252.7	321.9	348.5
142.5°	137.0	162.3	239.4	309.9	335.2
145°	138.3	159.6	226.1	300.6	321.9
147.5°	142.3	155.6	218.2	288.7	307.3
150°	141.0	153.0	206.2	274.0	292.7
152.5°	145.0	157.0	195.5	254.1	280.7
155°	151.6	159.6	184.9	232.8	263.4
157.5°	158.3	164.9	176.9	214.2	250.1
160°	167.6	167.6	167.6	199.5	239.4
162.5°	172.9	172.9	168.9	182.2	224.8
165°	180.9	175.6	170.3	168.9	211.5
167.5°	188.9	178.3	172.9	163.6	202.2
170°	190.2	182.2	171.6	154.3	195.5
172.5°	195.5	186.2	170.3	146.3	151.6
175°	199.5	191.6	171.6	142.3	86.5
177.5°	198.2	191.6	175.6	142.3	83.8
180°	164.9	164.9	164.9	164.9	164.9



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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	17.73	19.05	18.34	19.68	20.40	20.24	21.57	20.85	22.19	22.91
	3H	19.16	20.37	19.79	21.00	21.75	22.61	23.81	23.23	24.45	25.20
	4H	19.63	20.77	20.27	21.42	22.18	23.72	24.86	24.37	25.51	26.28
	6H	19.89	20.96	20.55	21.62	22.39	24.84	25.90	25.49	26.56	27.34
	8H	19.95	20.96	20.62	21.64	22.43	25.39	26.40	26.05	27.08	27.87
	12H	19.96	20.93	20.64	21.61	22.42	25.97	26.94	26.64	27.62	28.43
4H	2H	18.60	19.74	19.25	20.39	21.16	20.59	21.73	21.23	22.38	23.14
	3H	20.26	21.23	20.91	21.91	22.70	23.17	24.14	23.83	24.82	25.61
	4H	20.84	21.73	21.51	22.42	23.23	24.44	25.33	25.12	26.02	26.84
	6H	21.21	22.00	21.91	22.71	23.53	25.73	26.51	26.42	27.23	28.05
	8H	21.31	22.04	22.00	22.75	23.59	26.37	27.11	27.07	27.82	28.66
	12H	21.35	22.01	22.07	22.75	23.59	27.07	27.73	27.79	28.47	29.31
8H	4H	21.46	22.20	22.16	22.91	23.75	24.60	25.33	25.30	26.05	26.88
	6H	22.00	22.62	22.73	23.37	24.21	26.03	26.65	26.76	27.41	28.24
	8H	22.17	22.72	22.91	23.48	24.33	26.80	27.36	27.54	28.11	28.96
	12H	22.27	22.77	23.02	23.52	24.43	27.65	28.14	28.39	28.89	29.80
12H	4H	21.62	22.29	22.34	23.03	23.87	24.59	25.25	25.31	25.99	26.83
	6H	22.24	22.80	22.98	23.56	24.41	26.05	26.61	26.79	27.37	28.22
	8H	22.49	22.99	23.23	23.74	24.65	26.87	27.37	27.61	28.11	29.03