

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: P893873

Luminaire Tested: 4MB-7HL-RND-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893873
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-RND-UNV-L830
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

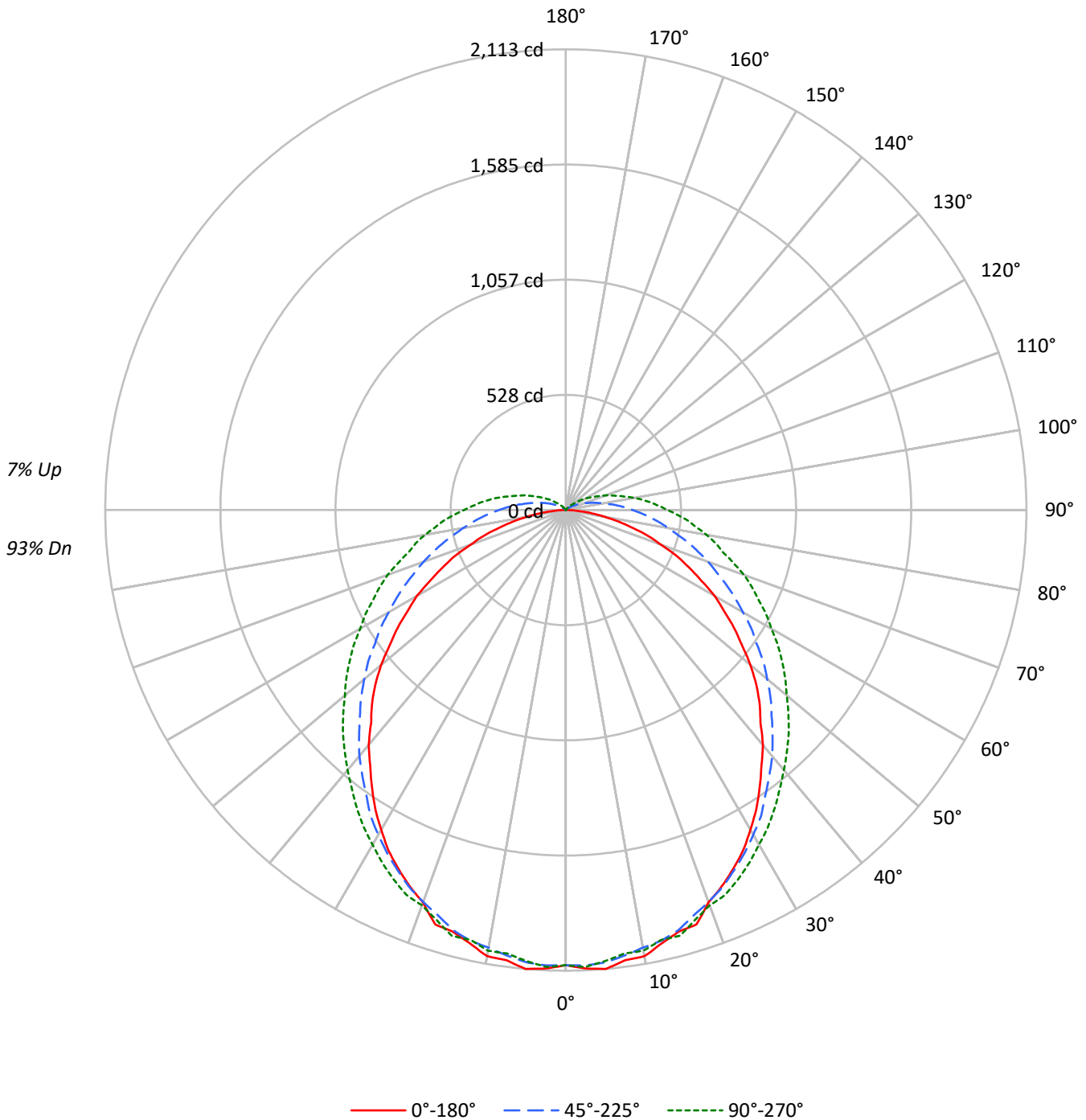
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6877.0 lumens
Efficiency: N/A
Efficacy: 132.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
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				
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	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	63	60
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14855	14855	14855
5°	15089	14871	14829
10°	15014	14725	14829
15°	14745	14697	14893
20°	14499	14485	14608
25°	14261	14321	14673
30°	13912	14132	14563
35°	13472	13862	14509
40°	13066	13678	14460
45°	12656	13435	14550
50°	12242	13352	14642
55°	11681	13257	15022
60°	11226	13346	15494
65°	10483	13699	16433
70°	9636	14464	18101
75°	8742	16016	20505
80°	7515	19565	26883
85°	6082	31658	46002

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 83499 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.9	2.9
10°-20°	563.5	8.2
20°-30°	844.4	12.3
30°-40°	1003.5	14.6
40°-50°	1038.9	15.1
50°-60°	962.7	14.0
60°-70°	801.5	11.7
70°-80°	594.9	8.7
80°-90°	393.5	5.7
90°-100°	239.4	3.5
100°-110°	134.2	2.0
110°-120°	66.1	1.0
120°-130°	26.9	0.4
130°-140°	7.8	0.1
140°-150°	1.1	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1605.9	23.4
0°-40°	2609.3	37.9
0°-60°	4611.0	67.0
0°-90°	6400.8	93.1
90°-120°	439.8	6.4
90°-150°	475.6	6.9
90°-180°	476.0	6.9
0°-180°	6877.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2088	2088	2088	2088	2088	
5°	2113	2090	2082	2093	2076	200
15°	2002	1994	1995	1998	2022	567
25°	1817	1815	1824	1860	1869	836
35°	1551	1562	1596	1647	1670	970
45°	1258	1276	1335	1418	1446	969
55°	942	982	1069	1176	1211	842
65°	623	681	814	933	976	619
75°	318	414	583	708	746	340
85°	74	209	388	525	564	84
90°	4	136	307	429	467	6
95°	1	84	238	354	394	1
105°	1	28	129	219	249	1
115°	1	7	60	120	144	1
125°	1	2	22	55	71	1
135°	2	1	6	18	25	1
145°	2	1	0	2	3	1
155°	2	2	0	0	0	1
165°	3	2	0	0	0	1
175°	3	2	0	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2087.8	2087.8	2087.8	2087.8	2087.8
2.5°	2105.0	2094.5	2090.7	2085.9	2097.4
5°	2112.6	2089.7	2082.1	2092.6	2076.3
7.5°	2083.0	2077.3	2061.1	2066.8	2051.5
10°	2078.2	2046.7	2038.1	2057.2	2052.5
12.5°	2035.3	2008.5	2023.8	2037.2	2019.0
15°	2001.8	1994.2	1995.2	1998.0	2021.9
17.5°	1993.2	1958.9	1949.3	1973.2	1971.3
20°	1914.9	1908.2	1913.0	1944.5	1929.3
22.5°	1869.1	1848.1	1873.9	1904.4	1911.1
25°	1816.6	1814.6	1824.2	1859.5	1869.1
27.5°	1761.2	1748.7	1774.5	1815.6	1823.2
30°	1693.4	1688.6	1720.1	1755.4	1772.6
32.5°	1626.5	1629.4	1665.7	1695.3	1724.9
35°	1551.0	1562.5	1595.9	1646.6	1670.4
37.5°	1474.6	1489.0	1533.9	1592.1	1612.2
40°	1406.8	1409.7	1472.7	1531.9	1556.8
42.5°	1321.8	1350.5	1404.0	1482.3	1501.4
45°	1257.8	1276.0	1335.2	1418.3	1446.0
47.5°	1185.3	1206.3	1274.1	1355.3	1384.9
50°	1106.0	1125.1	1206.3	1298.9	1322.8
52.5°	1018.1	1057.3	1142.3	1237.8	1269.3
55°	941.7	981.8	1068.7	1175.7	1211.0
57.5°	859.6	899.7	1008.6	1107.9	1153.7
60°	788.9	827.1	937.9	1061.1	1088.8
62.5°	701.0	755.5	875.8	997.1	1036.3
65°	622.7	681.0	813.7	933.1	976.1
67.5°	551.1	611.2	749.7	877.7	924.5
70°	463.2	542.5	695.3	821.4	870.1
72.5°	398.3	477.5	637.0	762.2	806.1
75°	318.0	414.5	582.6	707.7	745.9
77.5°	251.2	355.3	526.2	666.6	704.8
80°	183.4	301.8	477.5	612.2	656.1
82.5°	125.1	252.1	432.7	561.6	603.6
85°	74.5	209.2	387.8	525.3	563.5
87.5°	32.5	171.0	346.7	472.8	511.9
90°	3.8	135.6	306.6	428.8	467.0
92.5°	1.0	108.9	271.2	389.7	426.9
95°	1.0	84.0	237.8	354.3	393.5
97.5°	1.0	64.9	204.4	318.0	355.3
100°	1.0	49.7	176.7	279.8	320.0
102.5°	1.0	37.2	149.9	248.3	282.7
105°	1.0	27.7	128.9	218.7	249.3
107.5°	1.0	20.1	107.9	191.0	221.6
110°	1.0	14.3	90.7	165.2	195.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	10.5	73.5	142.3	168.1
115°	1.0	6.7	60.2	120.3	144.2
117.5°	1.0	4.8	47.8	101.2	124.2
120°	1.0	3.8	38.2	84.0	104.1
122.5°	1.0	2.9	29.6	68.8	87.9
125°	1.0	1.9	22.0	55.4	70.7
127.5°	1.0	1.9	16.2	43.9	57.3
130°	1.0	1.0	11.5	33.4	44.9
132.5°	1.0	1.0	7.6	24.8	33.4
135°	1.9	1.0	5.7	18.1	24.8
137.5°	1.9	1.0	3.8	12.4	17.2
140°	1.9	1.0	1.9	7.6	10.5
142.5°	1.9	1.0	1.0	3.8	5.7
145°	1.9	1.0	0.0	1.9	2.9
147.5°	1.9	1.0	0.0	1.0	1.0
150°	1.9	1.0	0.0	0.0	0.0
152.5°	1.9	1.0	0.0	0.0	0.0
155°	1.9	1.9	0.0	0.0	0.0
157.5°	1.9	1.9	0.0	0.0	0.0
160°	1.9	1.9	0.0	0.0	0.0
162.5°	1.9	1.9	0.0	0.0	0.0
165°	2.9	1.9	0.0	0.0	0.0
167.5°	2.9	1.9	0.0	0.0	0.0
170°	2.9	1.9	0.0	0.0	0.0
172.5°	2.9	1.9	0.0	0.0	0.0
175°	2.9	1.9	0.0	0.0	0.0
177.5°	2.9	1.9	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0



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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	19.60	21.14	20.07	21.60	22.08	21.18	22.72	21.65	23.17	23.65
	3H	21.37	22.77	21.85	23.24	23.76	23.76	25.17	24.24	25.63	26.16
	4H	22.02	23.36	22.53	23.84	24.37	25.02	26.35	25.52	26.83	27.37
	6H	22.50	23.74	23.02	24.24	24.79	26.40	27.64	26.92	28.14	28.69
	8H	22.65	23.84	23.18	24.36	24.92	27.13	28.32	27.66	28.84	29.40
	12H	22.75	23.89	23.28	24.40	24.99	27.98	29.12	28.51	29.63	30.22
4H	2H	20.56	21.89	21.06	22.37	22.91	21.75	23.08	22.25	23.56	24.10
	3H	22.60	23.74	23.11	24.26	24.82	24.62	25.75	25.13	26.28	26.84
	4H	23.41	24.45	23.95	24.99	25.58	26.10	27.14	26.63	27.67	28.26
	6H	24.06	24.98	24.62	25.55	26.15	27.72	28.64	28.27	29.20	29.80
	8H	24.29	25.16	24.85	25.72	26.34	28.57	29.44	29.13	30.00	30.62
	12H	24.46	25.25	25.04	25.84	26.46	29.56	30.35	30.14	30.94	31.56
8H	4H	24.26	25.13	24.82	25.69	26.31	26.47	27.33	27.03	27.89	28.51
	6H	25.19	25.92	25.78	26.52	27.15	28.34	29.08	28.94	29.68	30.31
	8H	25.57	26.23	26.17	26.85	27.48	29.41	30.07	30.01	30.68	31.32
	12H	25.89	26.48	26.49	27.09	27.79	30.66	31.26	31.27	31.86	32.56
12H	4H	24.52	25.31	25.11	25.90	26.52	26.51	27.30	27.09	27.89	28.51
	6H	25.61	26.28	26.21	26.89	27.53	28.46	29.12	29.06	29.74	30.37
	8H	26.15	26.74	26.75	27.35	28.05	29.63	30.22	30.24	30.83	31.53