

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: P893878

Luminaire Tested: 4MB-7HL-RND-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893878
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-L935
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

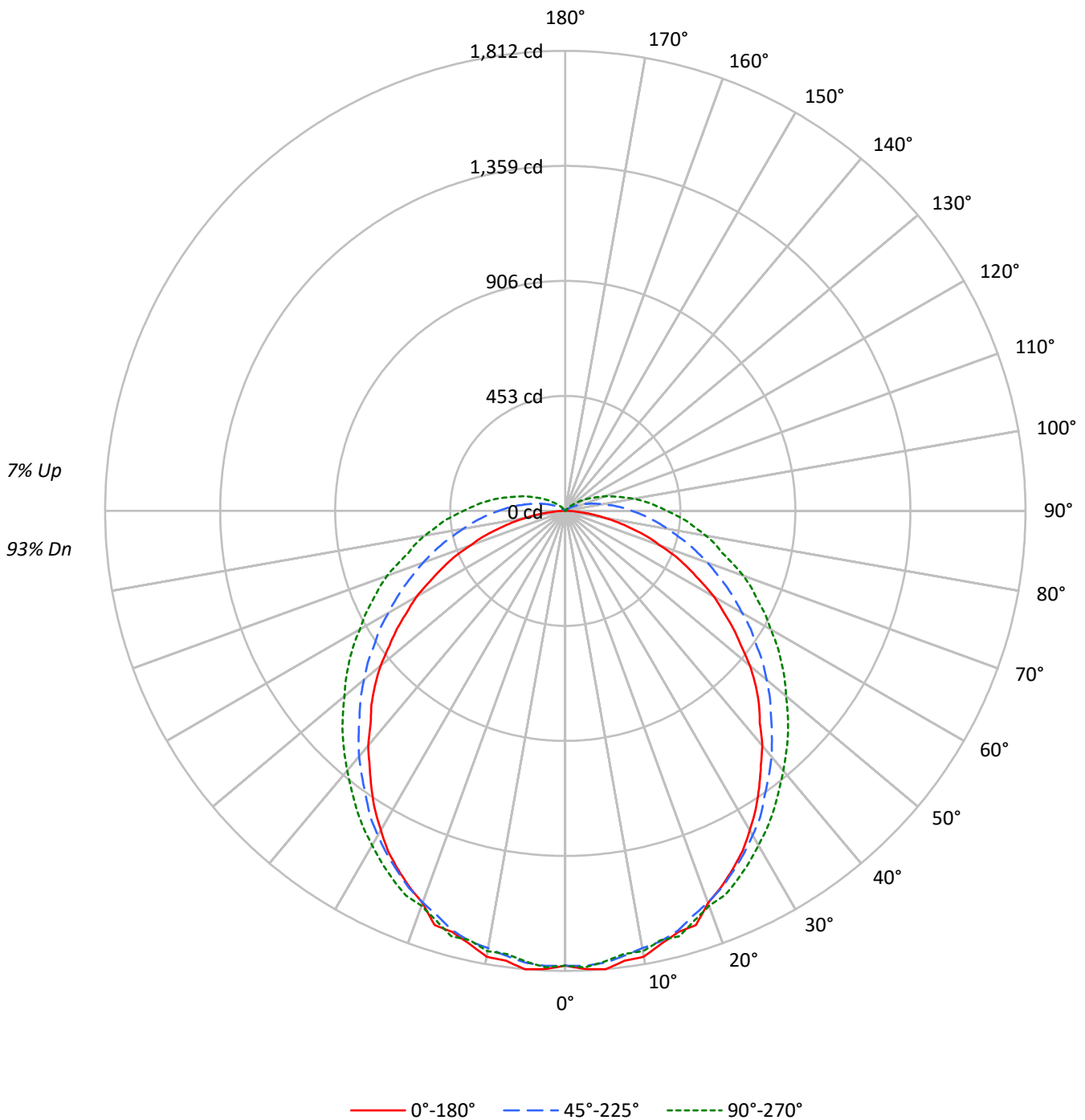
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5899.9 lumens
Efficiency: N/A
Efficacy: 113.9 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				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°	12744	12744	12744
5°	12945	12758	12723
10°	12882	12633	12722
15°	12650	12608	12778
20°	12439	12427	12533
25°	12235	12286	12588
30°	11936	12124	12494
35°	11558	11893	12448
40°	11211	11735	12405
45°	10858	11526	12483
50°	10503	11455	12562
55°	10022	11374	12888
60°	9631	11449	13292
65°	8994	11753	14098
70°	8267	12409	15529
75°	7502	13740	17591
80°	6445	16787	23064
85°	5217	27160	39463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 71640 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.8	2.9
10°-20°	483.4	8.2
20°-30°	724.5	12.3
30°-40°	860.9	14.6
40°-50°	891.3	15.1
50°-60°	826.0	14.0
60°-70°	687.6	11.7
70°-80°	510.4	8.7
80°-90°	337.6	5.7
90°-100°	205.4	3.5
100°-110°	115.2	2.0
110°-120°	56.7	1.0
120°-130°	23.1	0.4
130°-140°	6.7	0.1
140°-150°	1.0	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1377.7	23.4
0°-40°	2238.6	37.9
0°-60°	3955.9	67.0
0°-90°	5491.4	93.1
90°-120°	377.3	6.4
90°-150°	408.0	6.9
90°-180°	408.0	6.9
0°-180°	5899.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1791	1791	1791	1791	1791	
5°	1812	1793	1786	1795	1781	171
15°	1717	1711	1712	1714	1735	486
25°	1558	1557	1565	1595	1604	717
35°	1331	1340	1369	1413	1433	833
45°	1079	1095	1146	1217	1241	831
55°	808	842	917	1009	1039	723
65°	534	584	698	800	837	531
75°	273	356	500	607	640	292
85°	64	179	333	451	483	72
90°	3	116	263	368	401	5
95°	1	72	204	304	338	1
105°	1	24	111	188	214	1
115°	1	6	52	103	124	1
125°	1	2	19	48	61	1
135°	2	1	5	16	21	1
145°	2	1	0	2	2	1
155°	2	2	0	0	0	1
165°	2	2	0	0	0	1
175°	2	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°	1791.2	1791.2	1791.2	1791.2	1791.2
2.5°	1805.9	1796.9	1793.6	1789.6	1799.4
5°	1812.5	1792.8	1786.3	1795.3	1781.4
7.5°	1787.1	1782.2	1768.2	1773.2	1760.1
10°	1783.0	1756.0	1748.6	1765.0	1760.9
12.5°	1746.1	1723.2	1736.3	1747.8	1732.2
15°	1717.4	1710.9	1711.7	1714.2	1734.7
17.5°	1710.1	1680.6	1672.4	1692.9	1691.2
20°	1642.9	1637.1	1641.2	1668.3	1655.2
22.5°	1603.5	1585.5	1607.6	1633.9	1639.6
25°	1558.5	1556.8	1565.0	1595.4	1603.5
27.5°	1511.0	1500.3	1522.4	1557.7	1564.2
30°	1452.8	1448.7	1475.7	1506.0	1520.8
32.5°	1395.4	1397.9	1429.0	1454.4	1479.8
35°	1330.7	1340.5	1369.2	1412.6	1433.1
37.5°	1265.1	1277.4	1315.9	1365.9	1383.1
40°	1207.0	1209.4	1263.5	1314.3	1335.6
42.5°	1134.0	1158.6	1204.5	1271.7	1288.1
45°	1079.1	1094.7	1145.5	1216.8	1240.6
47.5°	1016.9	1034.9	1093.1	1162.7	1188.1
50°	948.9	965.2	1034.9	1114.4	1134.9
52.5°	873.5	907.1	980.0	1061.9	1089.0
55°	807.9	842.3	916.9	1008.7	1039.0
57.5°	737.5	771.9	865.3	950.5	989.8
60°	676.8	709.6	804.6	910.3	934.1
62.5°	601.4	648.1	751.4	855.4	889.0
65°	534.2	584.2	698.1	800.5	837.4
67.5°	472.8	524.4	643.2	753.0	793.2
70°	397.4	465.4	596.5	704.7	746.5
72.5°	341.7	409.7	546.5	653.9	691.6
75°	272.9	355.6	499.8	607.2	639.9
77.5°	215.5	304.8	451.5	571.9	604.7
80°	157.3	258.9	409.7	525.2	562.9
82.5°	107.3	216.3	371.2	481.8	517.9
85°	63.9	179.4	332.7	450.7	483.4
87.5°	27.9	146.7	297.4	405.6	439.2
90°	3.3	116.4	263.0	367.9	400.7
92.5°	0.8	93.4	232.7	334.3	366.3
95°	0.8	72.1	204.0	304.0	337.6
97.5°	0.8	55.7	175.3	272.9	304.8
100°	0.8	42.6	151.6	240.1	274.5
102.5°	0.8	32.0	128.6	213.0	242.5
105°	0.8	23.8	110.6	187.6	213.9
107.5°	0.8	17.2	92.6	163.9	190.1
110°	0.8	12.3	77.8	141.8	168.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	9.0	63.1	122.1	144.2
115°	0.8	5.7	51.6	103.2	123.7
117.5°	0.8	4.1	41.0	86.9	106.5
120°	0.8	3.3	32.8	72.1	89.3
122.5°	0.8	2.5	25.4	59.0	75.4
125°	0.8	1.6	18.8	47.5	60.6
127.5°	0.8	1.6	13.9	37.7	49.2
130°	0.8	0.8	9.8	28.7	38.5
132.5°	0.8	0.8	6.6	21.3	28.7
135°	1.6	0.8	4.9	15.6	21.3
137.5°	1.6	0.8	3.3	10.7	14.7
140°	1.6	0.8	1.6	6.6	9.0
142.5°	1.6	0.8	0.8	3.3	4.9
145°	1.6	0.8	0.0	1.6	2.5
147.5°	1.6	0.8	0.0	0.8	0.8
150°	1.6	0.8	0.0	0.0	0.0
152.5°	1.6	0.8	0.0	0.0	0.0
155°	1.6	1.6	0.0	0.0	0.0
157.5°	1.6	1.6	0.0	0.0	0.0
160°	1.6	1.6	0.0	0.0	0.0
162.5°	1.6	1.6	0.0	0.0	0.0
165°	2.5	1.6	0.0	0.0	0.0
167.5°	2.5	1.6	0.0	0.0	0.0
170°	2.5	1.6	0.0	0.0	0.0
172.5°	2.5	1.6	0.0	0.0	0.0
175°	2.5	1.6	0.0	0.0	0.0
177.5°	2.5	1.6	0.0	0.0	0.0
180°	0.8	0.8	0.8	0.8	0.8



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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	19.07	20.61	19.54	21.06	21.55	20.64	22.18	21.11	22.64	23.12
	3H	20.84	22.24	21.32	22.70	23.23	23.23	24.63	23.71	25.10	25.62
	4H	21.49	22.82	21.99	23.31	23.84	24.49	25.82	24.99	26.30	26.84
	6H	21.97	23.21	22.49	23.71	24.26	25.87	27.11	26.39	27.61	28.16
	8H	22.12	23.31	22.65	23.83	24.39	26.60	27.79	27.13	28.31	28.87
	12H	22.22	23.36	22.75	23.87	24.46	27.44	28.58	27.98	29.10	29.69
4H	2H	20.03	21.36	20.53	21.84	22.38	21.22	22.55	21.72	23.03	23.57
	3H	22.07	23.20	22.58	23.73	24.29	24.08	25.22	24.60	25.75	26.31
	4H	22.88	23.92	23.42	24.46	25.05	25.56	26.60	26.10	27.14	27.73
	6H	23.53	24.45	24.08	25.01	25.62	27.18	28.10	27.74	28.66	29.27
	8H	23.76	24.62	24.32	25.19	25.80	28.04	28.91	28.60	29.47	30.09
	12H	23.93	24.71	24.51	25.30	25.93	29.03	29.82	29.61	30.41	31.03
8H	4H	23.73	24.60	24.29	25.16	25.78	25.93	26.80	26.49	27.36	27.98
	6H	24.65	25.39	25.24	25.99	26.62	27.81	28.55	28.40	29.15	29.78
	8H	25.03	25.70	25.64	26.31	26.95	28.87	29.54	29.48	30.15	30.79
	12H	25.36	25.95	25.96	26.55	27.26	30.13	30.72	30.73	31.33	32.03
12H	4H	23.99	24.78	24.57	25.37	25.99	25.98	26.76	26.56	27.35	27.98
	6H	25.08	25.74	25.68	26.36	26.99	27.92	28.59	28.53	29.20	29.84
	8H	25.62	26.21	26.22	26.81	27.52	29.10	29.69	29.70	30.29	31.00