

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: P893877

Luminaire Tested: 4MB-7HL-RND-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893877
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-L930
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

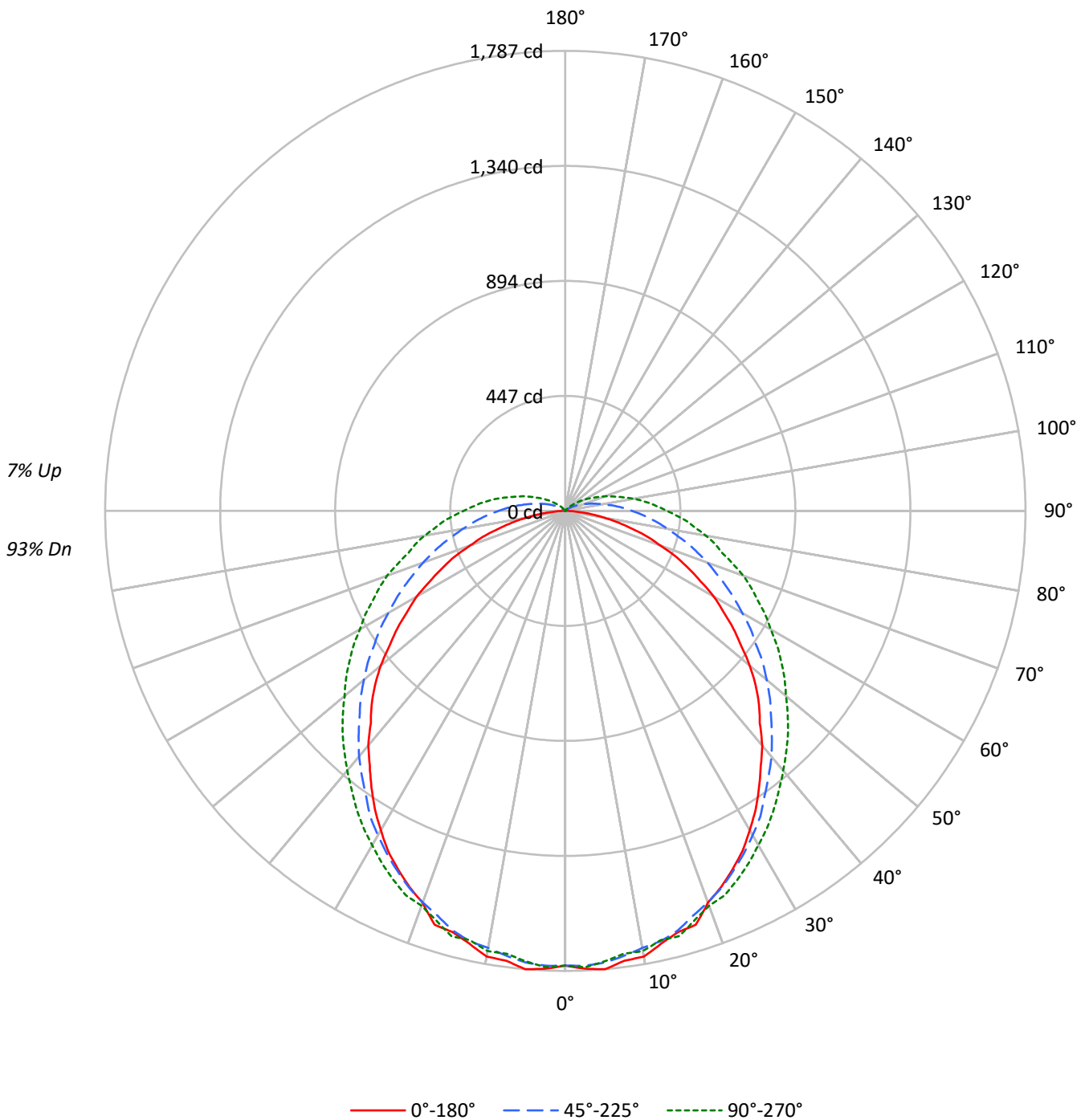
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5817.0 lumens
Efficiency: N/A
Efficacy: 112.3 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°	12565	12565	12565
5°	12763	12578	12544
10°	12700	12455	12543
15°	12473	12431	12597
20°	12265	12252	12356
25°	12063	12113	12412
30°	11767	11954	12319
35°	11396	11725	12273
40°	11053	11570	12230
45°	10706	11364	12307
50°	10355	11294	12385
55°	9882	11214	12707
60°	9496	11289	13106
65°	8867	11588	13899
70°	8151	12234	15311
75°	7395	13547	17344
80°	6355	16549	22740
85°	5143	26776	38907

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 70629 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.4	2.9
10°-20°	476.6	8.2
20°-30°	714.3	12.3
30°-40°	848.8	14.6
40°-50°	878.8	15.1
50°-60°	814.3	14.0
60°-70°	678.0	11.7
70°-80°	503.2	8.7
80°-90°	332.8	5.7
90°-100°	202.5	3.5
100°-110°	113.5	2.0
110°-120°	55.9	1.0
120°-130°	22.8	0.4
130°-140°	6.6	0.1
140°-150°	0.9	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1358.3	23.4
0°-40°	2207.2	37.9
0°-60°	3900.3	67.0
0°-90°	5414.2	93.1
90°-120°	372.0	6.4
90°-150°	402.3	6.9
90°-180°	403.0	6.9
0°-180°	5817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1766	1766	1766	1766	1766	
5°	1787	1768	1761	1770	1756	169
15°	1693	1687	1688	1690	1710	480
25°	1537	1535	1543	1573	1581	707
35°	1312	1322	1350	1393	1413	821
45°	1064	1079	1129	1200	1223	820
55°	797	830	904	994	1024	712
65°	527	576	688	789	826	523
75°	269	351	493	599	631	288
85°	63	177	328	444	477	71
90°	3	115	259	363	395	5
95°	1	71	201	300	333	1
105°	1	23	109	185	211	1
115°	1	6	51	102	122	1
125°	1	2	19	47	60	1
135°	2	1	5	15	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°	1766.0	1766.0	1766.0	1766.0	1766.0
2.5°	1780.5	1771.6	1768.4	1764.4	1774.1
5°	1787.0	1767.6	1761.1	1770.0	1756.3
7.5°	1762.0	1757.1	1743.4	1748.2	1735.3
10°	1757.9	1731.3	1724.0	1740.1	1736.1
12.5°	1721.6	1698.9	1711.9	1723.2	1707.8
15°	1693.3	1686.8	1687.6	1690.1	1710.2
17.5°	1686.0	1656.9	1648.9	1669.0	1667.4
20°	1619.8	1614.1	1618.2	1644.8	1631.9
22.5°	1581.0	1563.2	1585.0	1610.9	1616.5
25°	1536.6	1534.9	1543.0	1572.9	1581.0
27.5°	1489.7	1479.2	1501.0	1535.8	1542.2
30°	1432.3	1428.3	1455.0	1484.9	1499.4
32.5°	1375.8	1378.2	1408.9	1434.0	1459.0
35°	1312.0	1321.7	1349.9	1392.8	1413.0
37.5°	1247.3	1259.5	1297.4	1346.7	1363.7
40°	1190.0	1192.4	1245.7	1295.8	1316.8
42.5°	1118.1	1142.3	1187.6	1253.8	1270.0
45°	1064.0	1079.3	1129.4	1199.7	1223.1
47.5°	1002.6	1020.3	1077.7	1146.4	1171.4
50°	935.5	951.7	1020.3	1098.7	1118.9
52.5°	861.2	894.3	966.2	1047.0	1073.7
55°	796.6	830.5	904.0	994.5	1024.4
57.5°	727.1	761.0	853.1	937.1	975.9
60°	667.3	699.6	793.3	897.5	921.0
62.5°	593.0	639.0	740.8	843.4	876.5
65°	526.7	576.0	688.3	789.3	825.6
67.5°	466.1	517.0	634.2	742.4	782.0
70°	391.8	458.9	588.1	694.8	736.0
72.5°	336.9	403.9	538.8	644.7	681.8
75°	269.0	350.6	492.8	598.6	630.9
77.5°	212.5	300.5	445.1	563.9	596.2
80°	155.1	255.3	403.9	517.8	555.0
82.5°	105.8	213.3	366.0	475.0	510.6
85°	63.0	176.9	328.0	444.3	476.6
87.5°	27.5	144.6	293.3	399.9	433.0
90°	3.2	114.7	259.3	362.7	395.0
92.5°	0.8	92.1	229.4	329.6	361.1
95°	0.8	71.1	201.2	299.7	332.8
97.5°	0.8	54.9	172.9	269.0	300.5
100°	0.8	42.0	149.5	236.7	270.6
102.5°	0.8	31.5	126.8	210.0	239.1
105°	0.8	23.4	109.1	185.0	210.9
107.5°	0.8	17.0	91.3	161.6	187.4
110°	0.8	12.1	76.7	139.8	165.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	8.9	62.2	120.4	142.2
115°	0.8	5.7	50.9	101.8	122.0
117.5°	0.8	4.0	40.4	85.6	105.0
120°	0.8	3.2	32.3	71.1	88.1
122.5°	0.8	2.4	25.0	58.2	74.3
125°	0.8	1.6	18.6	46.9	59.8
127.5°	0.8	1.6	13.7	37.2	48.5
130°	0.8	0.8	9.7	28.3	38.0
132.5°	0.8	0.8	6.5	21.0	28.3
135°	1.6	0.8	4.8	15.3	21.0
137.5°	1.6	0.8	3.2	10.5	14.5
140°	1.6	0.8	1.6	6.5	8.9
142.5°	1.6	0.8	0.8	3.2	4.8
145°	1.6	0.8	0.0	1.6	2.4
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°	2.4	1.6	0.0	0.0	0.0
167.5°	2.4	1.6	0.0	0.0	0.0
170°	2.4	1.6	0.0	0.0	0.0
172.5°	2.4	1.6	0.0	0.0	0.0
175°	2.4	1.6	0.0	0.0	0.0
177.5°	2.4	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	19.02	20.56	19.49	21.01	21.50	20.60	22.13	21.06	22.59	23.07
	3H	20.79	22.19	21.27	22.65	23.18	23.18	24.59	23.66	25.05	25.57
	4H	21.44	22.77	21.94	23.26	23.79	24.44	25.77	24.94	26.25	26.79
	6H	21.92	23.16	22.44	23.66	24.21	25.82	27.06	26.34	27.56	28.11
	8H	22.07	23.26	22.60	23.78	24.34	26.55	27.74	27.08	28.26	28.82
	12H	22.17	23.31	22.70	23.82	24.41	27.39	28.53	27.93	29.05	29.64
4H	2H	19.98	21.31	20.48	21.79	22.33	21.17	22.50	21.67	22.98	23.52
	3H	22.02	23.15	22.53	23.68	24.24	24.04	25.17	24.55	25.70	26.26
	4H	22.83	23.87	23.37	24.41	25.00	25.51	26.55	26.05	27.09	27.68
	6H	23.48	24.40	24.04	24.96	25.57	27.13	28.05	27.69	28.62	29.22
	8H	23.71	24.57	24.27	25.14	25.75	27.99	28.86	28.55	29.42	30.04
	12H	23.88	24.66	24.46	25.25	25.88	28.98	29.77	29.56	30.36	30.98
8H	4H	23.68	24.55	24.24	25.11	25.73	25.88	26.75	26.44	27.31	27.93
	6H	24.60	25.34	25.20	25.94	26.57	27.76	28.50	28.35	29.10	29.73
	8H	24.99	25.65	25.59	26.27	26.90	28.82	29.49	29.43	30.10	30.74
	12H	25.31	25.90	25.91	26.50	27.21	30.08	30.67	30.69	31.28	31.98
12H	4H	23.94	24.73	24.52	25.32	25.94	25.93	26.72	26.51	27.31	27.93
	6H	25.03	25.69	25.63	26.31	26.94	27.87	28.54	28.48	29.15	29.79
	8H	25.57	26.16	26.17	26.76	27.47	29.05	29.64	29.65	30.25	30.95