

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: P893879

Luminaire Tested: 4MB-7HL-RND-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893879
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-L940
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

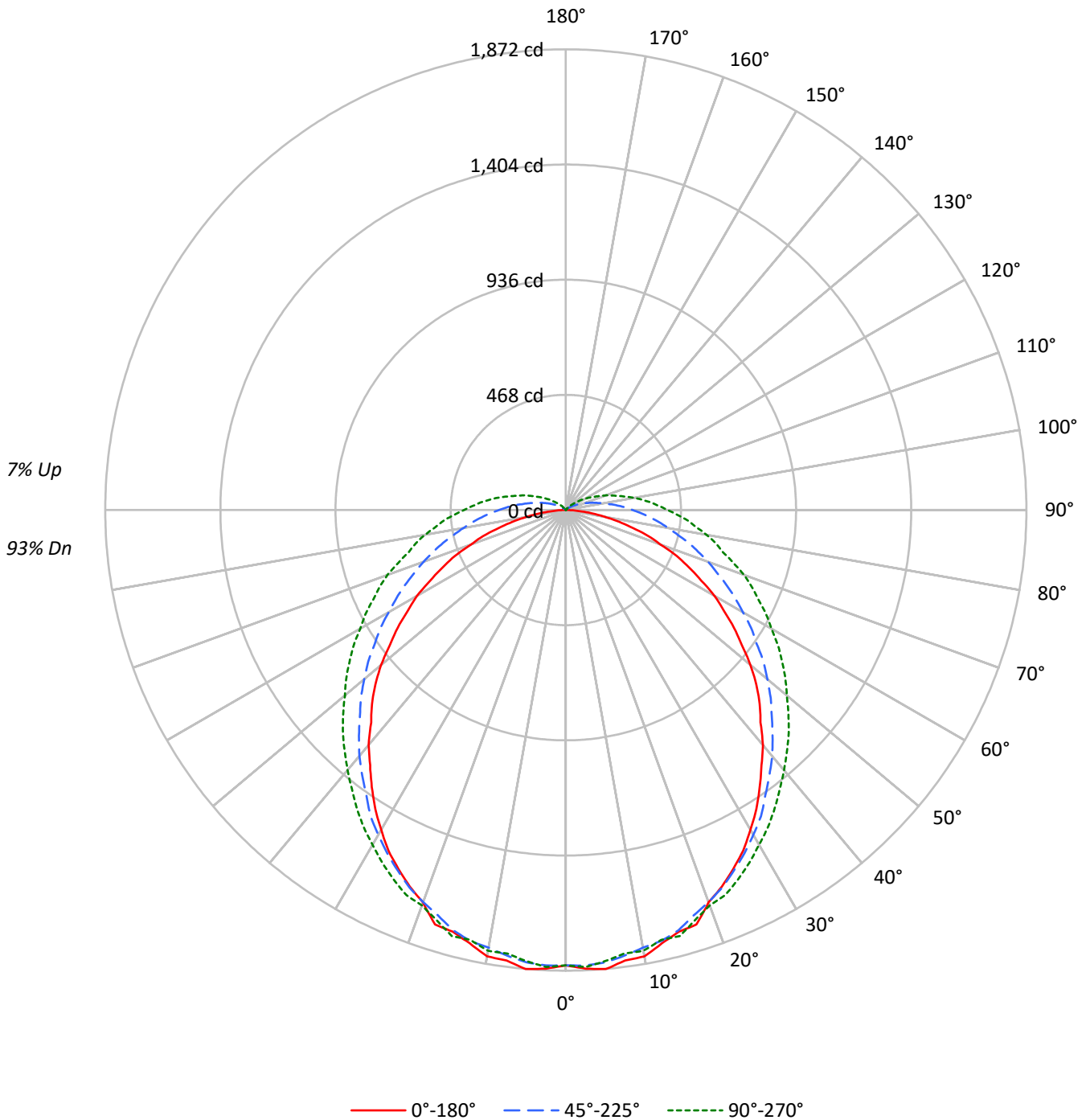
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6093.9 lumens
Efficiency: N/A
Efficacy: 117.6 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°	13163	13163	13163
5°	13371	13177	13141
10°	13305	13049	13140
15°	13067	13023	13198
20°	12848	12835	12944
25°	12637	12690	13003
30°	12328	12522	12905
35°	11938	12283	12857
40°	11579	12121	12813
45°	11215	11906	12894
50°	10849	11832	12975
55°	10352	11747	13313
60°	9948	11827	13729
65°	9290	12140	14563
70°	8540	12817	16039
75°	7747	14193	18171
80°	6658	17340	23822
85°	5388	28050	40761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 73989 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.4	2.9
10°-20°	499.3	8.2
20°-30°	748.3	12.3
30°-40°	889.2	14.6
40°-50°	920.6	15.1
50°-60°	853.1	14.0
60°-70°	710.3	11.7
70°-80°	527.1	8.7
80°-90°	348.7	5.7
90°-100°	212.2	3.5
100°-110°	118.9	2.0
110°-120°	58.6	1.0
120°-130°	23.8	0.4
130°-140°	6.9	0.1
140°-150°	1.0	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1423.0	23.4
0°-40°	2312.2	37.9
0°-60°	4085.9	67.0
0°-90°	5672.0	93.1
90°-120°	389.7	6.4
90°-150°	421.4	6.9
90°-180°	422.0	6.9
0°-180°	6093.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1872	1852	1845	1854	1840	177
15°	1774	1767	1768	1770	1792	502
25°	1610	1608	1616	1648	1656	741
35°	1374	1385	1414	1459	1480	860
45°	1115	1131	1183	1257	1281	859
55°	834	870	947	1042	1073	746
65°	552	603	721	827	865	548
75°	282	367	516	627	661	302
85°	66	185	344	466	499	74
90°	3	120	272	380	414	5
95°	1	74	211	314	349	1
105°	1	24	114	194	221	1
115°	1	6	53	107	128	1
125°	1	2	20	49	63	1
135°	2	1	5	16	22	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°	1850.1	1850.1	1850.1	1850.1	1850.1
2.5°	1865.3	1856.0	1852.6	1848.4	1858.6
5°	1872.1	1851.8	1845.0	1854.3	1839.9
7.5°	1845.9	1840.8	1826.4	1831.5	1817.9
10°	1841.6	1813.7	1806.1	1823.0	1818.8
12.5°	1803.5	1779.8	1793.4	1805.2	1789.2
15°	1773.9	1767.1	1768.0	1770.5	1791.7
17.5°	1766.3	1735.8	1727.4	1748.5	1746.8
20°	1696.9	1691.0	1695.2	1723.1	1709.6
22.5°	1656.3	1637.7	1660.5	1687.6	1693.5
25°	1609.7	1608.0	1616.5	1647.8	1656.3
27.5°	1560.6	1549.6	1572.5	1608.9	1615.7
30°	1500.6	1496.3	1524.2	1555.6	1570.8
32.5°	1441.3	1443.8	1476.0	1502.2	1528.5
35°	1374.4	1384.6	1414.2	1459.1	1480.2
37.5°	1306.7	1319.4	1359.2	1410.8	1428.6
40°	1246.7	1249.2	1305.0	1357.5	1379.5
42.5°	1171.3	1196.7	1244.1	1313.5	1330.4
45°	1114.6	1130.7	1183.2	1256.8	1281.4
47.5°	1050.3	1068.9	1129.0	1200.9	1227.2
50°	980.1	997.0	1068.9	1151.0	1172.2
52.5°	902.2	936.9	1012.2	1096.8	1124.8
55°	834.5	870.0	947.0	1041.8	1073.2
57.5°	761.7	797.2	893.7	981.7	1022.4
60°	699.1	732.9	831.1	940.3	964.8
62.5°	621.2	669.5	776.1	883.6	918.3
65°	551.8	603.4	721.1	826.9	865.0
67.5°	488.3	541.7	664.4	777.8	819.3
70°	410.5	480.7	616.1	727.8	771.0
72.5°	352.9	423.2	564.5	675.4	714.3
75°	281.8	367.3	516.3	627.1	661.0
77.5°	222.6	314.8	466.3	590.7	624.6
80°	162.5	267.4	423.2	542.5	581.4
82.5°	110.9	223.4	383.4	497.6	534.9
85°	66.0	185.3	343.6	465.5	499.3
87.5°	28.8	151.5	307.2	418.9	453.6
90°	3.4	120.2	271.7	380.0	413.9
92.5°	0.8	96.5	240.4	345.3	378.3
95°	0.8	74.5	210.7	314.0	348.7
97.5°	0.8	57.6	181.1	281.8	314.8
100°	0.8	44.0	156.6	248.0	283.5
102.5°	0.8	33.0	132.9	220.0	250.5
105°	0.8	24.5	114.3	193.8	220.9
107.5°	0.8	17.8	95.6	169.3	196.3
110°	0.8	12.7	80.4	146.4	173.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	9.3	65.2	126.1	149.0
115°	0.8	5.9	53.3	106.6	127.8
117.5°	0.8	4.2	42.3	89.7	110.0
120°	0.8	3.4	33.9	74.5	92.3
122.5°	0.8	2.5	26.2	60.9	77.9
125°	0.8	1.7	19.5	49.1	62.6
127.5°	0.8	1.7	14.4	38.9	50.8
130°	0.8	0.8	10.2	29.6	39.8
132.5°	0.8	0.8	6.8	22.0	29.6
135°	1.7	0.8	5.1	16.1	22.0
137.5°	1.7	0.8	3.4	11.0	15.2
140°	1.7	0.8	1.7	6.8	9.3
142.5°	1.7	0.8	0.8	3.4	5.1
145°	1.7	0.8	0.0	1.7	2.5
147.5°	1.7	0.8	0.0	0.8	0.8
150°	1.7	0.8	0.0	0.0	0.0
152.5°	1.7	0.8	0.0	0.0	0.0
155°	1.7	1.7	0.0	0.0	0.0
157.5°	1.7	1.7	0.0	0.0	0.0
160°	1.7	1.7	0.0	0.0	0.0
162.5°	1.7	1.7	0.0	0.0	0.0
165°	2.5	1.7	0.0	0.0	0.0
167.5°	2.5	1.7	0.0	0.0	0.0
170°	2.5	1.7	0.0	0.0	0.0
172.5°	2.5	1.7	0.0	0.0	0.0
175°	2.5	1.7	0.0	0.0	0.0
177.5°	2.5	1.7	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	19.18	20.72	19.65	21.18	21.66	20.76	22.30	21.23	22.75	23.23
	3H	20.95	22.35	21.43	22.82	23.34	23.34	24.75	23.82	25.21	25.74
	4H	21.60	22.94	22.11	23.42	23.95	24.60	25.93	25.10	26.41	26.95
	6H	22.08	23.32	22.60	23.82	24.37	25.98	27.22	26.50	27.72	28.27
	8H	22.23	23.42	22.76	23.94	24.50	26.71	27.90	27.24	28.42	28.98
	12H	22.33	23.47	22.86	23.98	24.57	27.56	28.70	28.09	29.21	29.80
4H	2H	20.14	21.47	20.64	21.95	22.49	21.33	22.66	21.83	23.14	23.68
	3H	22.18	23.32	22.69	23.84	24.40	24.20	25.33	24.71	25.86	26.42
	4H	22.99	24.03	23.53	24.57	25.16	25.68	26.72	26.21	27.25	27.84
	6H	23.64	24.56	24.20	25.13	25.73	27.30	28.22	27.85	28.78	29.38
	8H	23.87	24.74	24.43	25.30	25.92	28.15	29.02	28.71	29.58	30.20
	12H	24.04	24.83	24.62	25.42	26.04	29.14	29.93	29.72	30.52	31.14
8H	4H	23.84	24.71	24.40	25.27	25.89	26.05	26.91	26.61	27.47	28.09
	6H	24.77	25.50	25.36	26.10	26.73	27.92	28.66	28.52	29.26	29.89
	8H	25.15	25.81	25.75	26.43	27.06	28.99	29.65	29.59	30.26	30.90
	12H	25.47	26.06	26.07	26.67	27.37	30.24	30.84	30.85	31.44	32.14
12H	4H	24.10	24.89	24.69	25.48	26.10	26.09	26.88	26.67	27.47	28.09
	6H	25.19	25.86	25.79	26.47	27.11	28.04	28.70	28.64	29.32	29.95
	8H	25.73	26.32	26.33	26.93	27.63	29.21	29.80	29.82	30.41	31.11