

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: P893973

Luminaire Tested: 4MB-8HL-RND-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893973
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-8HL-RND-UNV-L930
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

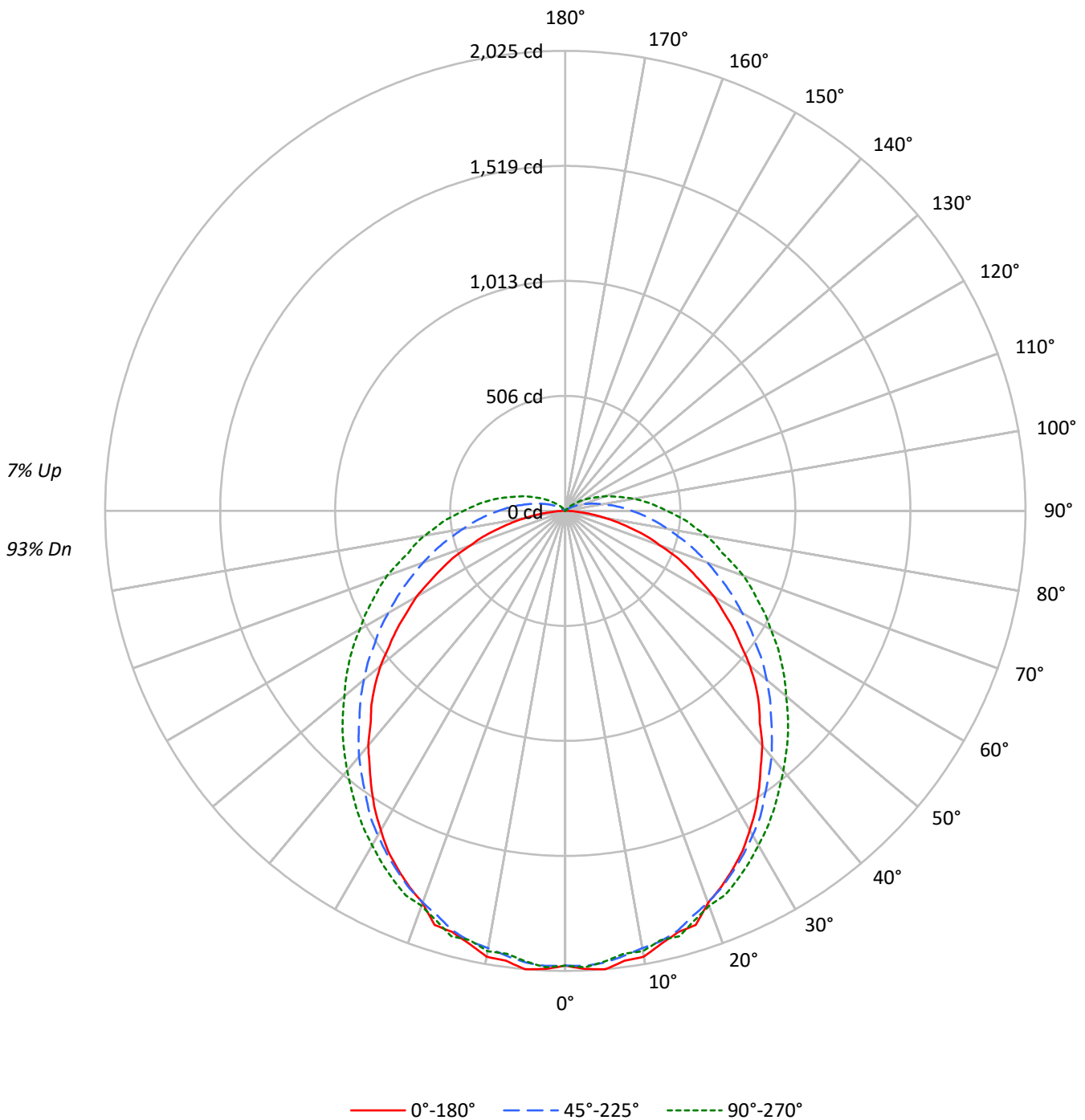
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6592.9 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): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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°	14241	14241	14241
5°	14466	14256	14217
10°	14395	14117	14216
15°	14137	14090	14278
20°	13900	13886	14004
25°	13672	13730	14067
30°	13337	13548	13962
35°	12916	13289	13909
40°	12527	13114	13862
45°	12134	12881	13949
50°	11736	12800	14038
55°	11199	12710	14402
60°	10762	12796	14853
65°	10051	13133	15755
70°	9239	13867	17352
75°	8382	15353	19658
80°	7203	18758	25772
85°	5829	30344	44099

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 80057 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.8	2.9
10°-20°	540.2	8.2
20°-30°	809.6	12.3
30°-40°	962.0	14.6
40°-50°	996.0	15.1
50°-60°	923.0	14.0
60°-70°	768.4	11.7
70°-80°	570.3	8.7
80°-90°	377.2	5.7
90°-100°	229.5	3.5
100°-110°	128.7	2.0
110°-120°	63.4	1.0
120°-130°	25.8	0.4
130°-140°	7.5	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°	1539.5	23.4
0°-40°	2501.6	37.9
0°-60°	4420.5	67.0
0°-90°	6136.5	93.1
90°-120°	421.6	6.4
90°-150°	455.9	6.9
90°-180°	456.0	6.9
0°-180°	6592.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	2025	2003	1996	2006	1991	191
15°	1919	1912	1913	1916	1938	544
25°	1742	1740	1749	1783	1792	802
35°	1487	1498	1530	1579	1601	930
45°	1206	1223	1280	1360	1386	929
55°	903	941	1025	1127	1161	807
65°	597	653	780	895	936	593
75°	305	397	558	678	715	326
85°	71	200	372	504	540	80
90°	4	130	294	411	448	5
95°	1	81	228	340	377	1
105°	1	27	124	210	239	1
115°	1	6	58	115	138	1
125°	1	2	21	53	68	1
135°	2	1	6	17	24	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°	2001.6	2001.6	2001.6	2001.6	2001.6
2.5°	2018.1	2008.0	2004.3	1999.7	2010.7
5°	2025.4	2003.4	1996.1	2006.2	1990.6
7.5°	1997.0	1991.5	1975.9	1981.4	1966.8
10°	1992.4	1962.2	1954.0	1972.3	1967.7
12.5°	1951.2	1925.6	1940.2	1953.1	1935.7
15°	1919.2	1911.8	1912.8	1915.5	1938.4
17.5°	1910.9	1878.0	1868.8	1891.7	1889.9
20°	1835.8	1829.4	1834.0	1864.2	1849.6
22.5°	1791.9	1771.8	1796.5	1825.8	1832.2
25°	1741.5	1739.7	1748.9	1782.7	1791.9
27.5°	1688.4	1676.5	1701.3	1740.6	1747.9
30°	1623.4	1618.8	1649.1	1682.9	1699.4
32.5°	1559.3	1562.1	1596.9	1625.3	1653.6
35°	1487.0	1498.0	1530.0	1578.6	1601.4
37.5°	1413.7	1427.5	1470.5	1526.4	1545.6
40°	1348.7	1351.5	1411.9	1468.7	1492.5
42.5°	1267.2	1294.7	1346.0	1421.1	1439.4
45°	1205.9	1223.3	1280.1	1359.7	1386.3
47.5°	1136.3	1156.4	1221.5	1299.3	1327.7
50°	1060.3	1078.6	1156.4	1245.3	1268.2
52.5°	976.1	1013.6	1095.1	1186.7	1216.9
55°	902.8	941.3	1024.6	1127.1	1161.0
57.5°	824.1	862.5	966.9	1062.1	1106.1
60°	756.3	792.9	899.2	1017.3	1043.8
62.5°	672.1	724.3	839.6	955.9	993.5
65°	597.0	652.8	780.1	894.6	935.8
67.5°	528.3	586.0	718.8	841.5	886.3
70°	444.1	520.1	666.6	787.4	834.1
72.5°	381.8	457.8	610.7	730.7	772.8
75°	304.9	397.4	558.5	678.5	715.1
77.5°	240.8	340.6	504.5	639.1	675.7
80°	175.8	289.3	457.8	586.9	629.0
82.5°	119.9	241.7	414.8	538.4	578.7
85°	71.4	200.5	371.7	503.6	540.2
87.5°	31.1	163.9	332.4	453.2	490.8
90°	3.7	130.0	293.9	411.1	447.7
92.5°	0.9	104.4	260.0	373.6	409.3
95°	0.9	80.6	228.0	339.7	377.2
97.5°	0.9	62.3	195.9	304.9	340.6
100°	0.9	47.6	169.4	268.3	306.7
102.5°	0.9	35.7	143.8	238.1	271.0
105°	0.9	26.6	123.6	209.7	239.0
107.5°	0.9	19.2	103.5	183.1	212.4
110°	0.9	13.7	87.0	158.4	187.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.9	10.1	70.5	136.4	161.2
115°	0.9	6.4	57.7	115.4	138.3
117.5°	0.9	4.6	45.8	97.1	119.0
120°	0.9	3.7	36.6	80.6	99.8
122.5°	0.9	2.7	28.4	65.9	84.2
125°	0.9	1.8	21.1	53.1	67.8
127.5°	0.9	1.8	15.6	42.1	54.9
130°	0.9	0.9	11.0	32.0	43.0
132.5°	0.9	0.9	7.3	23.8	32.0
135°	1.8	0.9	5.5	17.4	23.8
137.5°	1.8	0.9	3.7	11.9	16.5
140°	1.8	0.9	1.8	7.3	10.1
142.5°	1.8	0.9	0.9	3.7	5.5
145°	1.8	0.9	0.0	1.8	2.7
147.5°	1.8	0.9	0.0	0.9	0.9
150°	1.8	0.9	0.0	0.0	0.0
152.5°	1.8	0.9	0.0	0.0	0.0
155°	1.8	1.8	0.0	0.0	0.0
157.5°	1.8	1.8	0.0	0.0	0.0
160°	1.8	1.8	0.0	0.0	0.0
162.5°	1.8	1.8	0.0	0.0	0.0
165°	2.7	1.8	0.0	0.0	0.0
167.5°	2.7	1.8	0.0	0.0	0.0
170°	2.7	1.8	0.0	0.0	0.0
172.5°	2.7	1.8	0.0	0.0	0.0
175°	2.7	1.8	0.0	0.0	0.0
177.5°	2.7	1.8	0.0	0.0	0.0
180°	0.9	0.9	0.9	0.9	0.9



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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	19.46	20.99	19.93	21.45	21.93	21.03	22.57	21.50	23.02	23.51
	3H	21.22	22.62	21.70	23.09	23.61	23.62	25.02	24.10	25.48	26.01
	4H	21.88	23.21	22.38	23.69	24.23	24.87	26.21	25.38	26.69	27.23
	6H	22.36	23.60	22.87	24.09	24.65	26.26	27.50	26.77	27.99	28.55
	8H	22.50	23.69	23.03	24.21	24.77	26.99	28.18	27.51	28.69	29.25
	12H	22.60	23.74	23.14	24.26	24.85	27.83	28.97	28.36	29.48	30.07
4H	2H	20.41	21.74	20.92	22.23	22.76	21.60	22.93	22.11	23.42	23.95
	3H	22.45	23.59	22.97	24.11	24.67	24.47	25.61	24.99	26.13	26.69
	4H	23.27	24.31	23.80	24.84	25.44	25.95	26.99	26.48	27.53	28.12
	6H	23.92	24.84	24.47	25.40	26.00	27.57	28.49	28.12	29.05	29.66
	8H	24.14	25.01	24.70	25.57	26.19	28.42	29.29	28.98	29.85	30.47
	12H	24.31	25.10	24.89	25.69	26.31	29.42	30.20	30.00	30.79	31.42
8H	4H	24.11	24.98	24.67	25.54	26.16	26.32	27.19	26.88	27.75	28.37
	6H	25.04	25.77	25.63	26.38	27.00	28.20	28.93	28.79	29.54	30.16
	8H	25.42	26.09	26.02	26.70	27.34	29.26	29.92	29.86	30.54	31.17
	12H	25.74	26.34	26.35	26.94	27.64	30.52	31.11	31.12	31.71	32.42
12H	4H	24.38	25.16	24.96	25.75	26.38	26.36	27.15	26.94	27.74	28.36
	6H	25.46	26.13	26.07	26.74	27.38	28.31	28.97	28.91	29.59	30.23
	8H	26.00	26.60	26.61	27.20	27.90	29.48	30.08	30.09	30.68	31.38