

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: P893976

Luminaire Tested: 4MB-8HL-RND-UNV-L950

Issue Date: 11/11/2024

**Test Information**

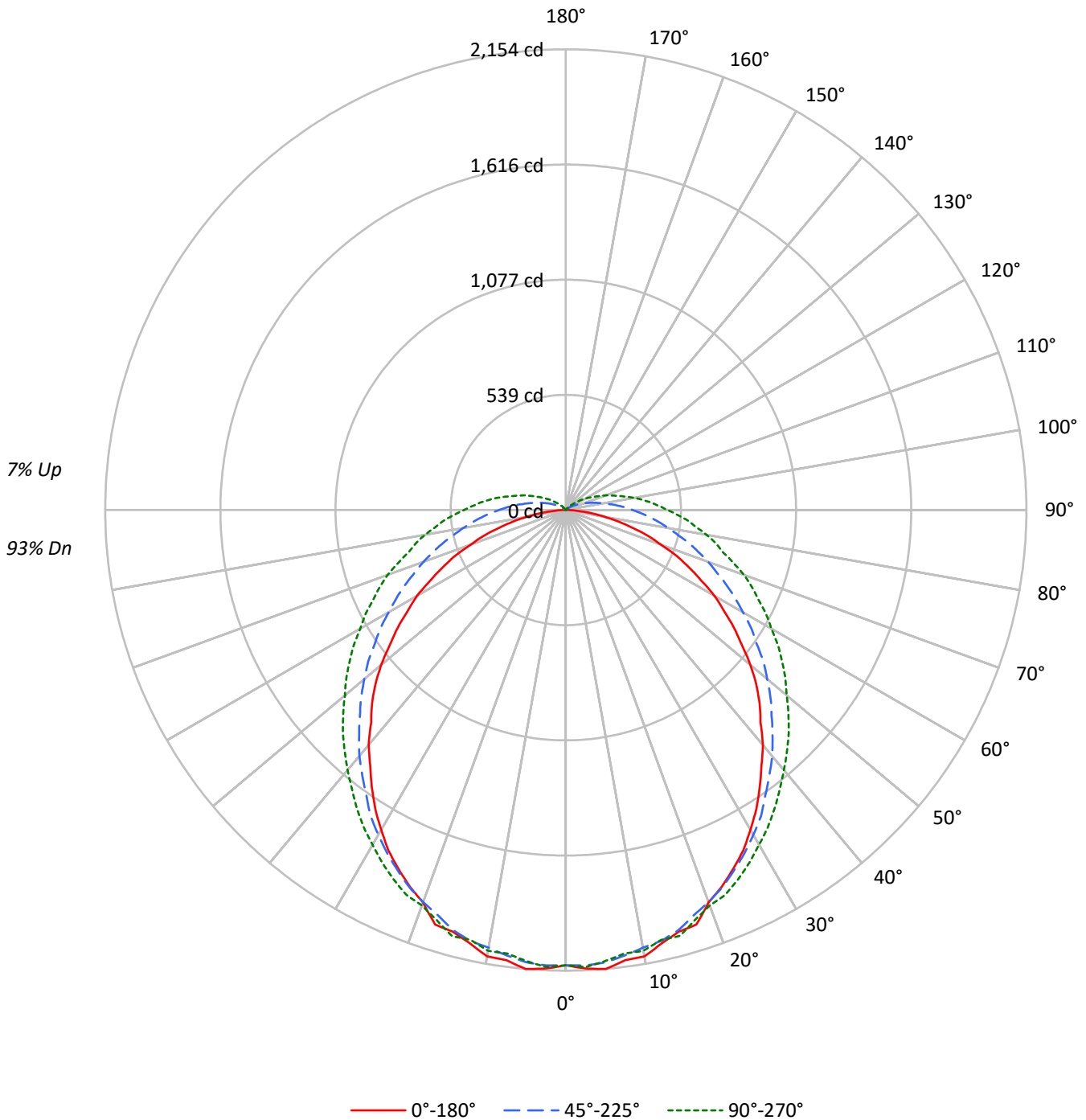
Test Method: LM-79-2019  
Report Number: P893976  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-RND-UNV-L950  
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7011.0 lumens  
Efficiency: N/A  
Efficacy: 121.1 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 (Ain): 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				
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°	15144	15144	15144
5°	15383	15160	15119
10°	15307	15012	15118
15°	15033	14982	15184
20°	14781	14767	14892
25°	14539	14600	14959
30°	14183	14407	14847
35°	13735	14132	14792
40°	13321	13945	14741
45°	12903	13697	14834
50°	12480	13613	14928
55°	11910	13516	15315
60°	11445	13607	15795
65°	10687	13967	16753
70°	9823	14745	18452
75°	8912	16326	20904
80°	7658	19946	27407
85°	6196	32270	46900

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 85130 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.8	2.9
10°-20°	574.5	8.2
20°-30°	860.9	12.3
30°-40°	1023.0	14.6
40°-50°	1059.1	15.1
50°-60°	981.5	14.0
60°-70°	817.1	11.7
70°-80°	606.5	8.7
80°-90°	401.1	5.7
90°-100°	244.1	3.5
100°-110°	136.8	2.0
110°-120°	67.4	1.0
120°-130°	27.4	0.4
130°-140°	8.0	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°	1637.2	23.4
0°-40°	2660.2	37.9
0°-60°	4700.8	67.0
0°-90°	6525.5	93.1
90°-120°	448.3	6.4
90°-150°	484.8	6.9
90°-180°	485.0	6.9
0°-180°	7011.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2128	2128	2128	2128	2128	
5°	2154	2130	2123	2133	2117	204
15°	2041	2033	2034	2037	2061	578
25°	1852	1850	1860	1896	1906	852
35°	1581	1593	1627	1679	1703	989
45°	1282	1301	1361	1446	1474	988
55°	960	1001	1090	1199	1235	859
65°	635	694	830	951	995	631
75°	324	423	594	722	760	347
85°	76	213	395	536	574	85
90°	4	138	313	437	476	6
95°	1	86	242	361	401	1
105°	1	28	131	223	254	1
115°	1	7	61	123	147	1
125°	1	2	22	56	72	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°	2128.5	2128.5	2128.5	2128.5	2128.5
2.5°	2146.0	2135.3	2131.4	2126.5	2138.2
5°	2153.8	2130.4	2122.6	2133.3	2116.8
7.5°	2123.6	2117.8	2101.2	2107.1	2091.5
10°	2118.7	2086.6	2077.8	2097.3	2092.5
12.5°	2074.9	2047.7	2063.2	2076.9	2058.4
15°	2040.8	2033.1	2034.0	2037.0	2061.3
17.5°	2032.1	1997.0	1987.3	2011.6	2009.7
20°	1952.2	1945.4	1950.3	1982.4	1966.8
22.5°	1905.5	1884.1	1910.4	1941.5	1948.3
25°	1852.0	1850.0	1859.7	1895.8	1905.5
27.5°	1795.5	1782.8	1809.1	1851.0	1858.8
30°	1726.3	1721.5	1753.6	1789.6	1807.2
32.5°	1658.2	1661.1	1698.1	1728.3	1758.5
35°	1581.3	1593.0	1627.0	1678.6	1703.0
37.5°	1503.4	1518.0	1563.7	1623.1	1643.6
40°	1434.2	1437.2	1501.4	1561.8	1587.1
42.5°	1347.6	1376.8	1431.3	1511.2	1530.6
45°	1282.3	1300.8	1361.2	1445.9	1474.2
47.5°	1208.3	1229.8	1298.9	1381.7	1411.8
50°	1127.5	1147.0	1229.8	1324.2	1348.6
52.5°	1038.0	1077.9	1164.5	1261.9	1294.0
55°	960.1	1001.0	1089.6	1198.6	1234.6
57.5°	876.3	917.2	1028.2	1129.5	1176.2
60°	804.3	843.2	956.2	1081.8	1110.0
62.5°	714.7	770.2	892.9	1016.5	1056.5
65°	634.8	694.2	829.6	951.3	995.1
67.5°	561.8	623.2	764.3	894.8	942.5
70°	472.2	553.1	708.8	837.4	887.0
72.5°	406.0	486.8	649.4	777.0	821.8
75°	324.2	422.6	593.9	721.5	760.4
77.5°	256.1	362.2	536.5	679.6	718.6
80°	186.9	307.7	486.8	624.1	668.9
82.5°	127.6	257.1	441.1	572.5	615.4
85°	75.9	213.2	395.3	535.5	574.5
87.5°	33.1	174.3	353.4	482.0	521.9
90°	3.9	138.3	312.6	437.2	476.1
92.5°	1.0	111.0	276.5	397.3	435.2
95°	1.0	85.7	242.4	361.2	401.2
97.5°	1.0	66.2	208.4	324.2	362.2
100°	1.0	50.6	180.1	285.3	326.2
102.5°	1.0	38.0	152.9	253.2	288.2
105°	1.0	28.2	131.4	223.0	254.1
107.5°	1.0	20.4	110.0	194.7	225.9
110°	1.0	14.6	92.5	168.4	199.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	10.7	75.0	145.1	171.4
115°	1.0	6.8	61.3	122.7	147.0
117.5°	1.0	4.9	48.7	103.2	126.6
120°	1.0	3.9	38.9	85.7	106.1
122.5°	1.0	2.9	30.2	70.1	89.6
125°	1.0	1.9	22.4	56.5	72.1
127.5°	1.0	1.9	16.6	44.8	58.4
130°	1.0	1.0	11.7	34.1	45.8
132.5°	1.0	1.0	7.8	25.3	34.1
135°	1.9	1.0	5.8	18.5	25.3
137.5°	1.9	1.0	3.9	12.7	17.5
140°	1.9	1.0	1.9	7.8	10.7
142.5°	1.9	1.0	1.0	3.9	5.8
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	19.67	21.21	20.14	21.66	22.15	21.24	22.78	21.71	23.24	23.72
	3H	21.43	22.84	21.92	23.30	23.83	23.83	25.23	24.31	25.70	26.22
	4H	22.09	23.42	22.59	23.90	24.44	25.09	26.42	25.59	26.90	27.44
	6H	22.57	23.81	23.08	24.31	24.86	26.47	27.71	26.99	28.21	28.76
	8H	22.72	23.91	23.25	24.43	24.99	27.20	28.39	27.73	28.91	29.47
	12H	22.82	23.96	23.35	24.47	25.06	28.04	29.18	28.58	29.70	30.29
4H	2H	20.63	21.96	21.13	22.44	22.98	21.82	23.15	22.32	23.63	24.17
	3H	22.67	23.80	23.18	24.33	24.89	24.68	25.82	25.20	26.35	26.91
	4H	23.48	24.52	24.01	25.06	25.65	26.16	27.20	26.70	27.74	28.33
	6H	24.13	25.05	24.68	25.61	26.22	27.78	28.70	28.34	29.26	29.87
	8H	24.36	25.22	24.92	25.79	26.40	28.64	29.50	29.20	30.07	30.69
	12H	24.53	25.31	25.11	25.90	26.53	29.63	30.42	30.21	31.01	31.63
8H	4H	24.33	25.19	24.89	25.76	26.37	26.53	27.40	27.09	27.96	28.58
	6H	25.25	25.99	25.84	26.59	27.22	28.41	29.15	29.00	29.75	30.38
	8H	25.63	26.30	26.24	26.91	27.55	29.47	30.14	30.08	30.75	31.39
	12H	25.96	26.55	26.56	27.15	27.86	30.73	31.32	31.33	31.93	32.63
12H	4H	24.59	25.38	25.17	25.97	26.59	26.58	27.36	27.16	27.95	28.58
	6H	25.68	26.34	26.28	26.96	27.59	28.52	29.19	29.13	29.80	30.44
	8H	26.22	26.81	26.82	27.41	28.12	29.70	30.29	30.30	30.89	31.60