

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: P893222

Luminaire Tested: 4MB-10HL-RND-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893222
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-10HL-RND-UNV-L935
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

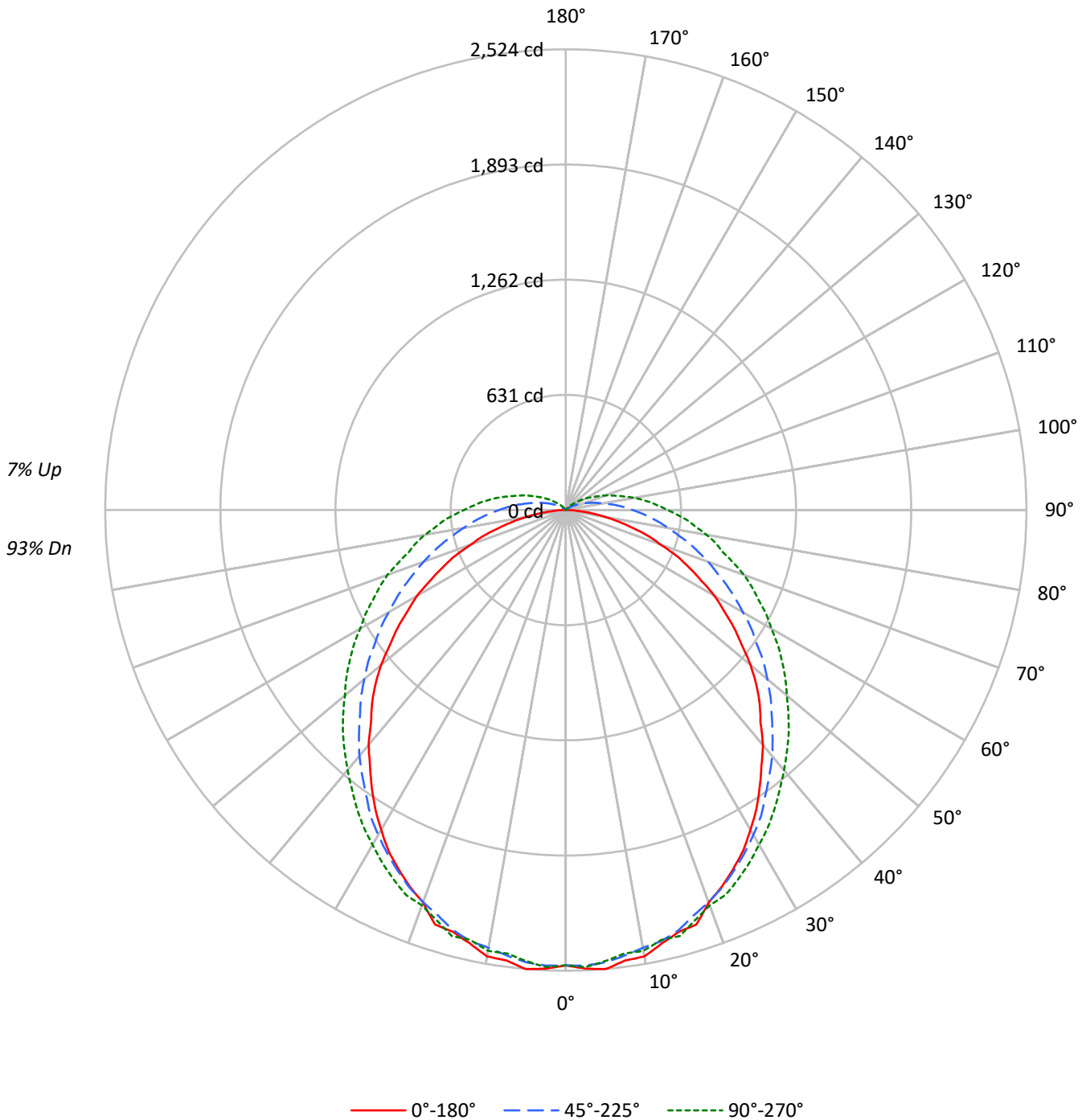
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8217.0 lumens
Efficiency: N/A
Efficacy: 108.8 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): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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°	17749	17749	17749
5°	18029	17768	17719
10°	17941	17594	17718
15°	17619	17560	17795
20°	17325	17307	17454
25°	17040	17111	17533
30°	16623	16886	17401
35°	16097	16563	17336
40°	15613	16344	17277
45°	15122	16053	17384
50°	14628	15954	17495
55°	13958	15841	17949
60°	13413	15946	18512
65°	12526	16369	19635
70°	11514	17283	21627
75°	10446	19136	24502
80°	8977	23380	32123
85°	7266	37822	54965

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 99778 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.5	2.9
10°-20°	673.3	8.2
20°-30°	1009.0	12.3
30°-40°	1199.0	14.6
40°-50°	1241.3	15.1
50°-60°	1150.3	14.0
60°-70°	957.7	11.7
70°-80°	710.8	8.7
80°-90°	470.1	5.7
90°-100°	286.1	3.5
100°-110°	160.4	2.0
110°-120°	79.0	1.0
120°-130°	32.1	0.4
130°-140°	9.3	0.1
140°-150°	1.3	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1918.8	23.4
0°-40°	3117.8	37.9
0°-60°	5509.4	67.0
0°-90°	7648.1	93.1
90°-120°	525.4	6.4
90°-150°	568.2	6.9
90°-180°	569.0	6.9
0°-180°	8217.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2495	2495	2495	2495	2495	
5°	2524	2497	2488	2500	2481	239
15°	2392	2383	2384	2387	2416	677
25°	2170	2168	2180	2222	2233	999
35°	1853	1867	1907	1967	1996	1160
45°	1503	1525	1595	1695	1728	1158
55°	1125	1173	1277	1405	1447	1006
65°	744	814	972	1115	1166	739
75°	380	495	696	846	891	407
85°	89	250	463	628	673	100
90°	5	162	366	512	558	7
95°	1	100	284	423	470	1
105°	1	33	154	261	298	1
115°	1	8	72	144	172	1
125°	1	2	26	66	84	1
135°	2	1	7	22	30	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°	2494.6	2494.6	2494.6	2494.6	2494.6
2.5°	2515.2	2502.6	2498.0	2492.3	2506.0
5°	2524.3	2496.9	2487.8	2500.3	2480.9
7.5°	2488.9	2482.1	2462.7	2469.5	2451.2
10°	2483.2	2445.5	2435.3	2458.1	2452.4
12.5°	2431.8	2399.9	2418.2	2434.1	2412.4
15°	2391.9	2382.8	2383.9	2387.3	2415.9
17.5°	2381.6	2340.6	2329.1	2357.7	2355.4
20°	2288.1	2280.1	2285.8	2323.4	2305.2
22.5°	2233.3	2208.2	2239.0	2275.5	2283.5
25°	2170.5	2168.2	2179.6	2221.9	2233.3
27.5°	2104.3	2089.5	2120.3	2169.4	2178.5
30°	2023.3	2017.6	2055.3	2097.5	2118.0
32.5°	1943.4	1946.8	1990.2	2025.6	2061.0
35°	1853.3	1867.0	1906.9	1967.4	1995.9
37.5°	1762.0	1779.1	1832.7	1902.3	1926.3
40°	1681.0	1684.4	1759.7	1830.4	1860.1
42.5°	1579.4	1613.6	1677.5	1771.1	1793.9
45°	1502.9	1524.6	1595.4	1694.6	1727.7
47.5°	1416.2	1441.3	1522.3	1619.3	1654.7
50°	1321.5	1344.3	1441.3	1552.0	1580.5
52.5°	1216.5	1263.3	1364.8	1479.0	1516.6
55°	1125.2	1173.1	1277.0	1404.8	1447.0
57.5°	1027.1	1075.0	1205.1	1323.8	1378.5
60°	942.6	988.3	1120.6	1267.8	1300.9
62.5°	837.6	902.7	1046.5	1191.4	1238.2
65°	744.0	813.7	972.3	1114.9	1166.3
67.5°	658.5	730.4	895.8	1048.7	1104.7
70°	553.5	648.2	830.8	981.4	1039.6
72.5°	475.9	570.6	761.2	910.7	963.2
75°	380.0	495.3	696.1	845.6	891.3
77.5°	300.1	424.5	628.8	796.5	842.2
80°	219.1	360.6	570.6	731.5	784.0
82.5°	149.5	301.3	517.0	671.0	721.2
85°	89.0	249.9	463.3	627.6	673.3
87.5°	38.8	204.3	414.2	564.9	611.7
90°	4.6	162.0	366.3	512.4	558.0
92.5°	1.1	130.1	324.1	465.6	510.1
95°	1.1	100.4	284.2	423.4	470.2
97.5°	1.1	77.6	244.2	380.0	424.5
100°	1.1	59.3	211.1	334.4	382.3
102.5°	1.1	44.5	179.2	296.7	337.8
105°	1.1	33.1	154.1	261.3	297.8
107.5°	1.1	24.0	129.0	228.2	264.8
110°	1.1	17.1	108.4	197.4	233.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	12.6	87.9	170.0	200.8
115°	1.1	8.0	71.9	143.8	172.3
117.5°	1.1	5.7	57.1	121.0	148.4
120°	1.1	4.6	45.6	100.4	124.4
122.5°	1.1	3.4	35.4	82.2	105.0
125°	1.1	2.3	26.2	66.2	84.4
127.5°	1.1	2.3	19.4	52.5	68.5
130°	1.1	1.1	13.7	39.9	53.6
132.5°	1.1	1.1	9.1	29.7	39.9
135°	2.3	1.1	6.8	21.7	29.7
137.5°	2.3	1.1	4.6	14.8	20.5
140°	2.3	1.1	2.3	9.1	12.6
142.5°	2.3	1.1	1.1	4.6	6.8
145°	2.3	1.1	0.0	2.3	3.4
147.5°	2.3	1.1	0.0	1.1	1.1
150°	2.3	1.1	0.0	0.0	0.0
152.5°	2.3	1.1	0.0	0.0	0.0
155°	2.3	2.3	0.0	0.0	0.0
157.5°	2.3	2.3	0.0	0.0	0.0
160°	2.3	2.3	0.0	0.0	0.0
162.5°	2.3	2.3	0.0	0.0	0.0
165°	3.4	2.3	0.0	0.0	0.0
167.5°	3.4	2.3	0.0	0.0	0.0
170°	3.4	2.3	0.0	0.0	0.0
172.5°	3.4	2.3	0.0	0.0	0.0
175°	3.4	2.3	0.0	0.0	0.0
177.5°	3.4	2.3	0.0	0.0	0.0
180°	1.1	1.1	1.1	1.1	1.1



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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	20.22	21.76	20.69	22.21	22.70	21.80	23.33	22.26	23.79	24.27
	3H	21.99	23.39	22.47	23.85	24.38	24.38	25.79	24.86	26.25	26.77
	4H	22.64	23.97	23.14	24.46	24.99	25.64	26.97	26.14	27.45	27.99
	6H	23.12	24.36	23.64	24.86	25.41	27.02	28.26	27.54	28.76	29.31
	8H	23.27	24.46	23.80	24.98	25.54	27.75	28.94	28.28	29.46	30.02
	12H	23.37	24.51	23.90	25.02	25.61	28.59	29.74	29.13	30.25	30.84
4H	2H	21.18	22.51	21.68	22.99	23.53	22.37	23.70	22.87	24.18	24.72
	3H	23.22	24.36	23.73	24.88	25.44	25.24	26.37	25.75	26.90	27.46
	4H	24.03	25.07	24.57	25.61	26.20	26.71	27.76	27.25	28.29	28.88
	6H	24.68	25.60	25.24	26.16	26.77	28.33	29.25	28.89	29.82	30.42
	8H	24.91	25.77	25.47	26.34	26.96	29.19	30.06	29.75	30.62	31.24
	12H	25.08	25.87	25.66	26.45	27.08	30.18	30.97	30.76	31.56	32.18
8H	4H	24.88	25.75	25.44	26.31	26.93	27.08	27.95	27.64	28.51	29.13
	6H	25.80	26.54	26.40	27.14	27.77	28.96	29.70	29.55	30.30	30.93
	8H	26.19	26.85	26.79	27.47	28.10	30.02	30.69	30.63	31.30	31.94
	12H	26.51	27.10	27.11	27.70	28.41	31.28	31.87	31.89	32.48	33.18
12H	4H	25.14	25.93	25.72	26.52	27.14	27.13	27.92	27.71	28.51	29.13
	6H	26.23	26.89	26.83	27.51	28.14	29.07	29.74	29.68	30.35	30.99
	8H	26.77	27.36	27.37	27.96	28.67	30.25	30.84	30.85	31.45	32.15