

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: P893460

Luminaire Tested: 4MB-4SL-A-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893460
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-16)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-A-UNV-L850
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

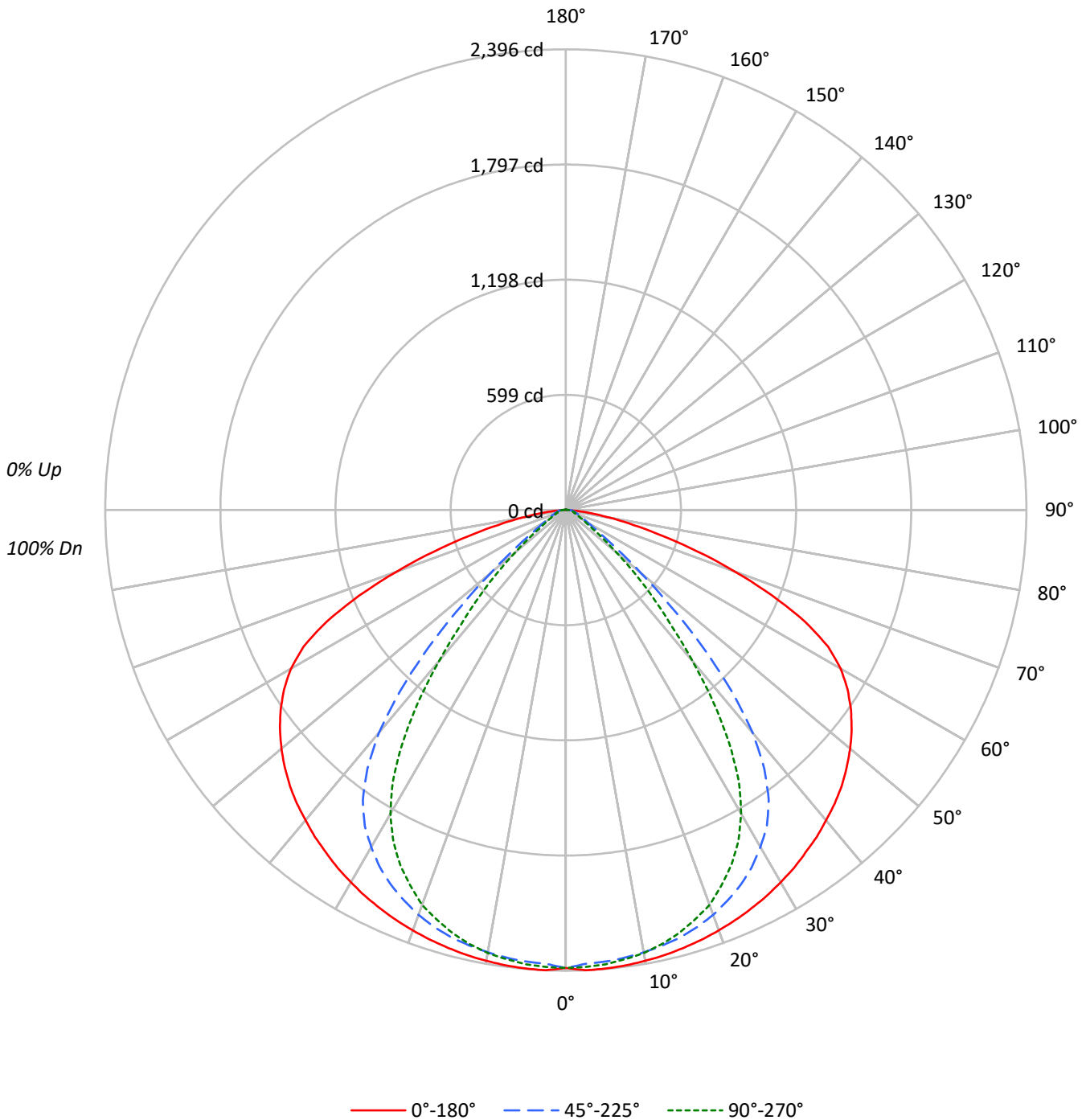
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4882.1 lumens
Efficiency: N/A
Efficacy: 163.8 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.15 / 1.23
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	103	100	108	105	102	99	100	98	96	97	95	93	93	91	90	93	91	90	88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	84	81	79	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	77	73	69	67
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	70	65	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	55	64	59	55	64	59	55	53
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	59	53	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	54	49	45	43
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	50	44	40	39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	46	41	37	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24254	24254	24254
5°	24468	24104	24245
10°	24622	24158	24192
15°	24867	24262	24012
20°	25217	24282	23689
25°	25688	24176	22889
30°	26285	23798	21450
35°	27036	22882	18441
40°	28000	20097	13632
45°	29232	14502	9169
50°	30591	8103	5471
55°	32154	4189	2995
60°	33636	2725	2120
65°	33062	2239	1684
70°	27883	2061	1569
75°	20509	2101	1684
80°	13683	2475	2123
85°	7467	4008	3237

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 62.5°
 Luminance: 33922 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.1	4.6
10°-20°	653.5	13.4
20°-30°	994.1	20.4
30°-40°	1135.3	23.3
40°-50°	915.9	18.8
50°-60°	501.3	10.3
60°-70°	264.3	5.4
70°-80°	129.6	2.7
80°-90°	45.7	0.9
90°-100°	9.8	0.2
100°-110°	1.4	0.0
110°-120°	0.8	0.0
120°-130°	0.8	0.0
130°-140°	0.8	0.0
140°-150°	0.9	0.0
150°-160°	0.9	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	1873.7	38.4
0°-40°	3008.9	61.6
0°-60°	4426.1	90.7
0°-90°	4865.7	99.7
90°-120°	12.0	0.2
90°-150°	14.6	0.3
90°-180°	16.0	0.3
0°-180°	4882.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2382	2382	2382	2382	2382	
5°	2393	2386	2358	2379	2372	228
15°	2358	2344	2301	2297	2277	667
25°	2286	2253	2152	2078	2037	1056
35°	2175	2083	1840	1590	1483	1364
45°	2030	1744	1007	688	637	1567
55°	1811	745	236	182	169	1616
65°	1372	172	93	75	70	1327
75°	521	97	53	45	43	576
85°	64	51	34	31	28	88
90°	3	26	21	18	17	4
95°	2	3	7	11	10	2
105°	1	0	1	1	1	1
115°	1	1	1	1	1	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	2	1	1
155°	1	1	2	3	2	1
165°	1	2	3	3	3	0
175°	2	2	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2381.5	2381.5	2381.5	2381.5	2381.5
2.5°	2396.0	2389.4	2362.4	2385.5	2378.9
5°	2393.4	2386.1	2357.8	2378.9	2371.6
7.5°	2388.8	2379.6	2348.6	2367.7	2356.5
10°	2380.9	2371.6	2336.1	2351.2	2339.4
12.5°	2371.6	2359.1	2319.6	2327.5	2312.3
15°	2358.5	2344.0	2301.1	2297.2	2277.4
17.5°	2344.0	2326.2	2274.1	2257.0	2233.3
20°	2326.8	2305.1	2240.5	2206.9	2185.8
22.5°	2307.7	2279.4	2198.3	2146.9	2114.0
25°	2286.0	2253.0	2151.5	2078.4	2036.9
27.5°	2262.9	2218.1	2094.9	1998.7	1942.7
30°	2235.2	2181.2	2023.7	1893.9	1824.0
32.5°	2207.6	2135.1	1947.3	1758.8	1675.8
35°	2174.6	2083.0	1840.5	1590.1	1483.3
37.5°	2143.6	2020.4	1696.2	1378.6	1263.9
40°	2106.1	1946.6	1511.7	1135.4	1025.4
42.5°	2070.5	1860.9	1272.5	900.8	805.3
45°	2029.6	1743.6	1006.9	688.0	636.6
47.5°	1982.2	1583.5	732.1	512.0	479.7
50°	1930.8	1363.4	511.4	371.7	345.3
52.5°	1874.1	1066.2	344.6	258.3	243.8
55°	1810.9	745.3	235.9	182.5	168.7
57.5°	1737.7	485.0	171.3	137.7	128.5
60°	1651.4	309.7	133.8	109.4	104.1
62.5°	1538.0	217.5	110.0	90.3	85.7
65°	1372.0	172.0	92.9	75.1	69.9
67.5°	1161.8	145.6	79.7	63.3	60.0
70°	936.4	126.5	69.2	54.7	52.7
72.5°	719.6	110.7	60.0	48.8	47.4
75°	521.2	96.9	53.4	44.8	42.8
77.5°	361.1	83.7	47.4	40.2	38.9
80°	233.3	72.5	42.2	36.9	36.2
82.5°	133.8	60.6	38.2	35.6	34.9
85°	63.9	50.7	34.3	31.0	27.7
87.5°	20.4	37.6	27.0	23.7	21.1
90°	2.6	26.4	21.1	18.5	17.1
92.5°	2.6	14.5	15.2	15.2	14.5
95°	2.0	3.3	7.2	11.2	10.5
97.5°	2.0	1.3	4.6	7.9	7.9
100°	1.3	0.7	2.0	5.3	5.3
102.5°	1.3	0.7	0.7	3.3	3.3
105°	0.7	0.0	0.7	1.3	1.3
107.5°	0.7	0.7	0.7	1.3	0.7
110°	0.7	0.7	0.7	1.3	0.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	0.7	0.7	1.3	0.7
115°	0.7	0.7	0.7	1.3	0.7
117.5°	0.7	0.7	0.7	1.3	0.7
120°	0.7	0.7	0.7	1.3	0.7
122.5°	0.7	0.7	0.7	1.3	0.7
125°	0.7	0.7	0.7	1.3	0.7
127.5°	0.7	0.7	0.7	1.3	0.7
130°	0.7	0.7	1.3	1.3	0.7
132.5°	0.7	0.7	1.3	1.3	0.7
135°	0.7	0.7	1.3	1.3	0.7
137.5°	0.7	0.7	1.3	1.3	1.3
140°	1.3	0.7	1.3	1.3	1.3
142.5°	1.3	1.3	1.3	2.0	1.3
145°	1.3	1.3	1.3	2.0	1.3
147.5°	1.3	1.3	2.0	2.0	1.3
150°	1.3	1.3	2.0	2.0	1.3
152.5°	1.3	1.3	2.0	2.0	2.0
155°	1.3	1.3	2.0	2.6	2.0
157.5°	1.3	1.3	2.0	2.6	2.0
160°	1.3	2.0	2.6	2.6	2.0
162.5°	1.3	2.0	2.6	2.6	2.6
165°	1.3	2.0	2.6	2.6	2.6
167.5°	2.0	2.0	2.6	3.3	2.6
170°	2.0	2.0	2.6	3.3	2.6
172.5°	2.0	2.0	2.6	3.3	2.6
175°	2.0	2.0	2.6	3.3	2.6
177.5°	2.0	2.0	2.6	3.3	3.3
180°	2.6	2.6	2.6	2.6	2.6



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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	20.98	22.38	21.35	22.70	23.03	9.50	10.90	9.87	11.22	11.54
	3H	23.89	25.14	24.28	25.48	25.85	10.43	11.68	10.82	12.02	12.39
	4H	24.79	25.95	25.19	26.31	26.70	10.95	12.11	11.36	12.47	12.86
	6H	25.28	26.35	25.70	26.73	27.13	11.59	12.66	12.01	13.03	13.43
	8H	25.40	26.41	25.83	26.81	27.22	12.00	13.02	12.44	13.42	13.83
	12H	25.44	26.41	25.88	26.80	27.24	12.45	13.42	12.89	13.81	14.25
4H	2H	20.80	21.96	21.21	22.32	22.71	10.02	11.18	10.42	11.54	11.93
	3H	23.73	24.68	24.15	25.09	25.50	11.21	12.16	11.63	12.57	12.98
	4H	24.63	25.49	25.07	25.91	26.36	11.88	12.73	12.32	13.16	13.61
	6H	25.22	25.96	25.69	26.42	26.89	12.70	13.44	13.17	13.89	14.36
	8H	25.39	26.08	25.86	26.53	27.01	13.23	13.92	13.70	14.38	14.85
	12H	25.48	26.09	25.97	26.58	27.06	13.81	14.43	14.30	14.91	15.39
8H	4H	24.52	25.21	24.99	25.67	26.14	12.47	13.16	12.94	13.61	14.09
	6H	25.12	25.69	25.63	26.19	26.68	13.47	14.04	13.98	14.54	15.03
	8H	25.31	25.82	25.83	26.34	26.84	14.15	14.66	14.67	15.18	15.68
	12H	25.45	25.91	25.97	26.41	26.99	14.91	15.37	15.43	15.87	16.44
12H	4H	24.48	25.10	24.97	25.58	26.07	12.73	13.34	13.22	13.83	14.31
	6H	25.07	25.58	25.59	26.10	26.60	13.78	14.30	14.31	14.81	15.31
	8H	25.29	25.74	25.80	26.24	26.82	14.55	15.00	15.06	15.50	16.08