

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: P893457

Luminaire Tested: 4MB-4SL-A-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893457
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-L830
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

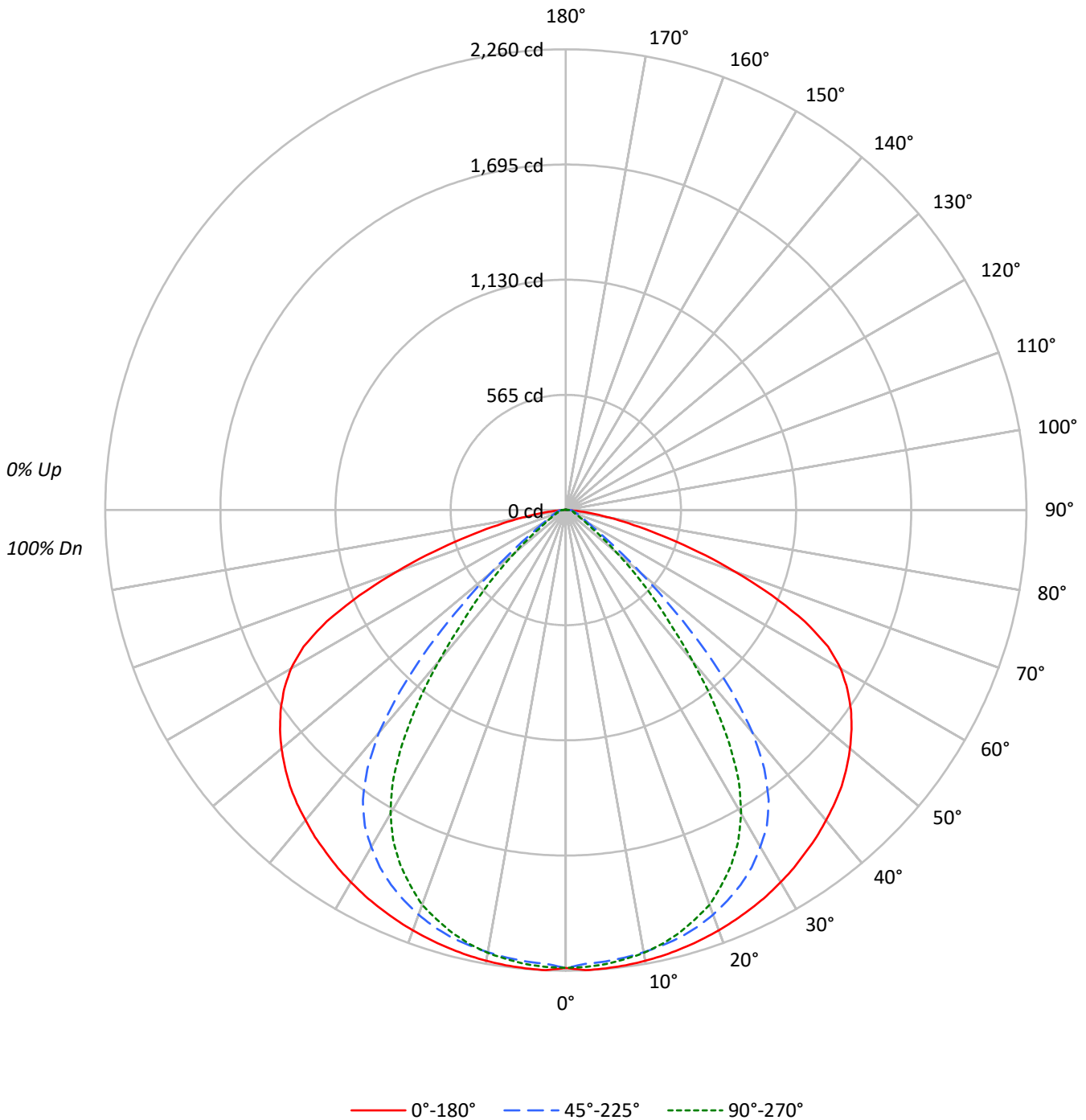
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4604.0 lumens
Efficiency: N/A
Efficacy: 154.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 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 (A_{in}): 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°	22873	22873	22873
5°	23075	22731	22865
10°	23219	22782	22814
15°	23451	22880	22644
20°	23781	22899	22340
25°	24225	22800	21585
30°	24789	22443	20229
35°	25497	21579	17392
40°	26406	18953	12856
45°	27568	13677	8646
50°	28848	7640	5159
55°	30321	3951	2825
60°	31722	2570	2000
65°	31180	2111	1588
70°	26296	1944	1480
75°	19344	1979	1590
80°	12903	2334	2006
85°	7046	3774	3050

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 62.5°
 Luminance: 31992 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.3	4.6
10°-20°	616.3	13.4
20°-30°	937.5	20.4
30°-40°	1070.6	23.3
40°-50°	863.7	18.8
50°-60°	472.8	10.3
60°-70°	249.3	5.4
70°-80°	122.2	2.7
80°-90°	43.1	0.9
90°-100°	9.3	0.2
100°-110°	1.3	0.0
110°-120°	0.7	0.0
120°-130°	0.7	0.0
130°-140°	0.7	0.0
140°-150°	0.9	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1767.0	38.4
0°-40°	2837.6	61.6
0°-60°	4174.1	90.7
0°-90°	4588.7	99.7
90°-120°	11.3	0.2
90°-150°	13.6	0.3
90°-180°	15.0	0.3
0°-180°	4604.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2246	2246	2246	2246	2246	
5°	2257	2250	2224	2243	2237	215
15°	2224	2210	2170	2166	2148	629
25°	2156	2125	2029	1960	1921	996
35°	2051	1964	1736	1500	1399	1287
45°	1914	1644	950	649	600	1477
55°	1708	703	222	172	159	1524
65°	1294	162	88	71	66	1251
75°	492	91	50	42	40	543
85°	60	48	32	29	26	83
90°	2	25	20	17	16	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	2	2	1
165°	1	2	2	2	2	0
175°	2	2	2	3	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2245.9	2245.9	2245.9	2245.9	2245.9
2.5°	2259.6	2253.4	2227.9	2249.6	2243.4
5°	2257.1	2250.3	2223.5	2243.4	2236.6
7.5°	2252.8	2244.1	2214.8	2232.9	2222.3
10°	2245.3	2236.6	2203.0	2217.3	2206.1
12.5°	2236.6	2224.8	2187.5	2195.0	2180.7
15°	2224.2	2210.5	2170.1	2166.4	2147.7
17.5°	2210.5	2193.7	2144.6	2128.5	2106.1
20°	2194.3	2173.8	2112.9	2081.2	2061.3
22.5°	2176.3	2149.6	2073.2	2024.7	1993.6
25°	2155.8	2124.7	2029.0	1960.1	1920.9
27.5°	2134.1	2091.8	1975.6	1884.9	1832.0
30°	2108.0	2057.0	1908.5	1786.0	1720.2
32.5°	2081.9	2013.5	1836.4	1658.6	1580.3
35°	2050.8	1964.4	1735.7	1499.6	1398.9
37.5°	2021.6	1905.4	1599.6	1300.1	1191.9
40°	1986.2	1835.8	1425.6	1070.8	967.0
42.5°	1952.6	1755.0	1200.0	849.5	759.4
45°	1914.1	1644.4	949.6	648.8	600.3
47.5°	1869.3	1493.3	690.4	482.9	452.4
50°	1820.8	1285.8	482.2	350.5	325.6
52.5°	1767.4	1005.5	325.0	243.6	229.9
55°	1707.7	702.9	222.5	172.1	159.1
57.5°	1638.8	457.4	161.6	129.9	121.2
60°	1557.4	292.1	126.2	103.2	98.2
62.5°	1450.5	205.1	103.8	85.1	80.8
65°	1293.9	162.2	87.6	70.8	65.9
67.5°	1095.6	137.3	75.2	59.7	56.6
70°	883.1	119.3	65.3	51.6	49.7
72.5°	678.6	104.4	56.6	46.0	44.7
75°	491.6	91.4	50.3	42.3	40.4
77.5°	340.6	78.9	44.7	37.9	36.7
80°	220.0	68.4	39.8	34.8	34.2
82.5°	126.2	57.2	36.0	33.6	32.9
85°	60.3	47.9	32.3	29.2	26.1
87.5°	19.3	35.4	25.5	22.4	19.9
90°	2.5	24.9	19.9	17.4	16.2
92.5°	2.5	13.7	14.3	14.3	13.7
95°	1.9	3.1	6.8	10.6	9.9
97.5°	1.9	1.2	4.4	7.5	7.5
100°	1.2	0.6	1.9	5.0	5.0
102.5°	1.2	0.6	0.6	3.1	3.1
105°	0.6	0.0	0.6	1.2	1.2
107.5°	0.6	0.6	0.6	1.2	0.6
110°	0.6	0.6	0.6	1.2	0.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	0.6	0.6	1.2	0.6
115°	0.6	0.6	0.6	1.2	0.6
117.5°	0.6	0.6	0.6	1.2	0.6
120°	0.6	0.6	0.6	1.2	0.6
122.5°	0.6	0.6	0.6	1.2	0.6
125°	0.6	0.6	0.6	1.2	0.6
127.5°	0.6	0.6	0.6	1.2	0.6
130°	0.6	0.6	1.2	1.2	0.6
132.5°	0.6	0.6	1.2	1.2	0.6
135°	0.6	0.6	1.2	1.2	0.6
137.5°	0.6	0.6	1.2	1.2	1.2
140°	1.2	0.6	1.2	1.2	1.2
142.5°	1.2	1.2	1.2	1.9	1.2
145°	1.2	1.2	1.2	1.9	1.2
147.5°	1.2	1.2	1.9	1.9	1.2
150°	1.2	1.2	1.9	1.9	1.2
152.5°	1.2	1.2	1.9	1.9	1.9
155°	1.2	1.2	1.9	2.5	1.9
157.5°	1.2	1.2	1.9	2.5	1.9
160°	1.2	1.9	2.5	2.5	1.9
162.5°	1.2	1.9	2.5	2.5	2.5
165°	1.2	1.9	2.5	2.5	2.5
167.5°	1.9	1.9	2.5	3.1	2.5
170°	1.9	1.9	2.5	3.1	2.5
172.5°	1.9	1.9	2.5	3.1	2.5
175°	1.9	1.9	2.5	3.1	2.5
177.5°	1.9	1.9	2.5	3.1	3.1
180°	2.5	2.5	2.5	2.5	2.5



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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	20.78	22.18	21.15	22.50	22.82	9.30	10.70	9.67	11.02	11.34
	3H	23.69	24.94	24.08	25.27	25.64	10.23	11.48	10.62	11.81	12.19
	4H	24.58	25.75	24.99	26.10	26.49	10.75	11.91	11.16	12.27	12.66
	6H	25.08	26.15	25.50	26.53	26.93	11.38	12.46	11.80	12.83	13.23
	8H	25.19	26.21	25.63	26.61	27.02	11.80	12.82	12.24	13.22	13.63
	12H	25.24	26.21	25.67	26.60	27.04	12.25	13.22	12.69	13.61	14.05
4H	2H	20.60	21.76	21.00	22.11	22.50	9.81	10.98	10.22	11.33	11.72
	3H	23.53	24.48	23.94	24.89	25.30	11.01	11.96	11.43	12.37	12.78
	4H	24.43	25.28	24.87	25.71	26.16	11.68	12.53	12.12	12.95	13.40
	6H	25.02	25.76	25.49	26.21	26.68	12.50	13.24	12.96	13.69	14.16
	8H	25.18	25.87	25.65	26.33	26.80	13.03	13.72	13.50	14.17	14.65
	12H	25.27	25.89	25.76	26.38	26.86	13.61	14.22	14.10	14.71	15.19
8H	4H	24.32	25.01	24.79	25.46	25.94	12.27	12.96	12.74	13.41	13.89
	6H	24.92	25.49	25.42	25.99	26.48	13.27	13.84	13.78	14.34	14.83
	8H	25.11	25.62	25.63	26.14	26.64	13.95	14.46	14.47	14.98	15.48
	12H	25.25	25.71	25.77	26.21	26.78	14.71	15.17	15.23	15.67	16.24
12H	4H	24.28	24.89	24.77	25.38	25.86	12.53	13.14	13.02	13.63	14.11
	6H	24.87	25.38	25.39	25.90	26.40	13.58	14.09	14.10	14.61	15.11
	8H	25.08	25.54	25.60	26.04	26.61	14.34	14.80	14.86	15.30	15.87