

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: P892694

Luminaire Tested: 2MB-4HL-A-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892694
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-8)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-A-UNV-L835
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

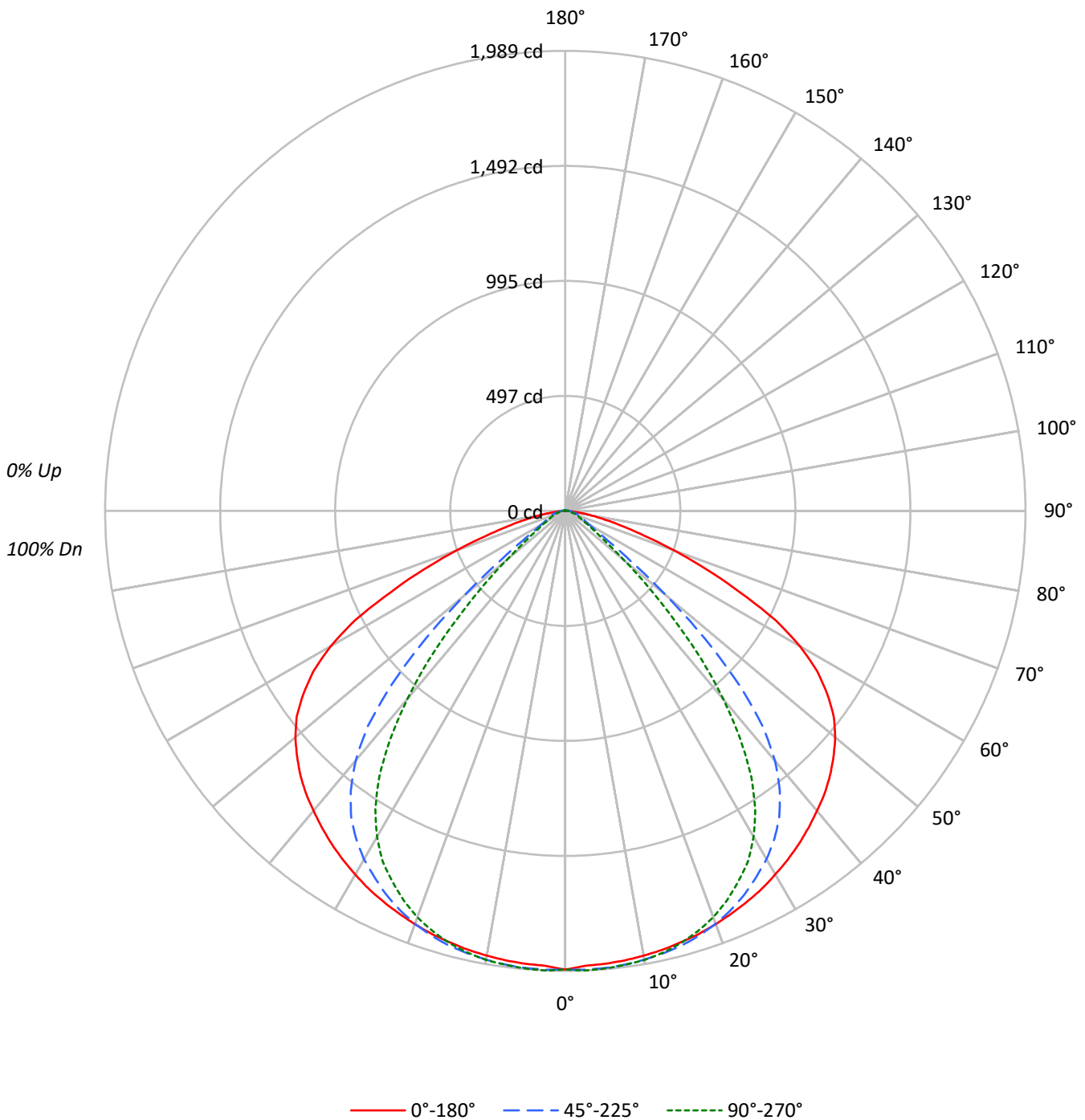
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4217.1 lumens
Efficiency: N/A
Efficacy: 152.8 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.21 / 1.29
Luminous Opening: Rectangular (W 0.27' x L: 1.98' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	78	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	62	62	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	55	64	59	55	55	55	55	53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	49	49	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	48	44	44	44	44	43
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	40	40	40	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	37	37	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	33	33	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	40601	40601	40601
5°	40402	40772	40820
10°	40593	40967	40984
15°	40939	41238	41005
20°	41433	41400	40735
25°	42094	41368	39954
30°	42924	41129	38483
35°	43970	40333	35031
40°	45241	37690	28382
45°	46860	30748	19214
50°	48507	18123	10446
55°	49362	8072	5669
60°	48005	4935	4038
65°	40413	4133	3450
70°	30120	3981	3137
75°	20364	4146	2658
80°	13844	3785	3042
85°	8458	5521	5333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 55°
 Luminance: 49362 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.7	4.5
10°-20°	547.9	13.0
20°-30°	840.8	19.9
30°-40°	990.5	23.5
40°-50°	844.7	20.0
50°-60°	461.5	10.9
60°-70°	204.5	4.9
70°-80°	89.8	2.1
80°-90°	32.1	0.8
90°-100°	9.9	0.2
100°-110°	2.5	0.1
110°-120°	0.7	0.0
120°-130°	0.7	0.0
130°-140°	0.6	0.0
140°-150°	0.7	0.0
150°-160°	0.7	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1577.4	37.4
0°-40°	2567.9	60.9
0°-60°	3874.0	91.9
0°-90°	4200.4	99.6
90°-120°	13.1	0.3
90°-150°	15.2	0.4
90°-180°	17.0	0.4
0°-180°	4217.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1983	1983	1983	1983	1983	
5°	1966	1977	1984	1988	1986	187
15°	1931	1942	1945	1940	1934	546
25°	1863	1863	1831	1794	1768	860
35°	1759	1726	1614	1466	1401	1102
45°	1618	1485	1062	739	664	1248
55°	1383	847	226	166	159	1227
65°	834	180	85	76	71	829
75°	257	91	52	40	34	290
85°	36	33	24	23	23	47
90°	3	13	18	18	15	3
95°	3	6	12	10	10	2
105°	1	1	2	4	5	1
115°	1	1	1	1	1	0
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	2	2	2	1
155°	1	2	2	2	2	0
165°	2	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1982.8	1982.8	1982.8	1982.8	1982.8
2.5°	1968.7	1978.9	1985.2	1989.9	1989.1
5°	1965.6	1976.6	1983.6	1988.3	1985.9
7.5°	1960.1	1971.9	1978.9	1983.6	1979.7
10°	1952.3	1964.0	1970.3	1973.4	1971.1
12.5°	1943.7	1954.6	1959.3	1960.9	1956.2
15°	1931.2	1942.1	1945.3	1939.8	1934.3
17.5°	1917.9	1927.3	1925.7	1915.5	1905.4
20°	1901.4	1909.3	1899.9	1880.3	1869.4
22.5°	1882.7	1888.1	1868.6	1839.6	1824.0
25°	1863.1	1863.1	1831.0	1793.5	1768.4
27.5°	1841.2	1835.7	1785.6	1735.6	1709.7
30°	1815.4	1802.8	1739.5	1668.3	1627.6
32.5°	1788.8	1768.4	1682.3	1580.6	1528.2
35°	1759.0	1726.2	1613.5	1466.4	1401.4
37.5°	1726.9	1680.8	1523.5	1321.6	1241.8
40°	1692.5	1625.2	1410.0	1150.3	1061.8
42.5°	1658.9	1561.8	1262.9	953.1	871.7
45°	1618.2	1485.2	1061.8	739.4	663.5
47.5°	1572.8	1390.5	820.0	532.9	486.7
50°	1522.7	1261.4	568.9	367.0	327.9
52.5°	1463.2	1086.1	358.4	244.1	225.4
55°	1382.7	847.4	226.1	165.9	158.8
57.5°	1291.1	592.3	154.1	126.0	121.3
60°	1172.2	379.5	120.5	103.3	98.6
62.5°	1025.1	252.0	100.2	87.6	82.9
65°	834.1	180.0	85.3	75.9	71.2
67.5°	661.2	144.0	75.1	66.5	60.3
70°	503.1	120.5	66.5	58.7	52.4
72.5°	358.4	104.9	59.5	50.1	43.8
75°	257.4	90.8	52.4	39.9	33.6
77.5°	177.6	79.0	43.8	30.5	29.0
80°	117.4	68.9	32.1	27.4	25.8
82.5°	71.2	55.6	27.4	23.5	25.0
85°	36.0	32.9	23.5	22.7	22.7
87.5°	14.1	19.6	19.6	21.9	21.9
90°	3.1	13.3	18.0	18.0	14.9
92.5°	3.1	10.2	16.4	12.5	11.0
95°	3.1	5.5	12.5	10.2	10.2
97.5°	2.3	2.3	8.6	8.6	8.6
100°	0.8	1.6	5.5	7.8	7.8
102.5°	0.8	0.8	3.1	5.5	6.3
105°	0.8	0.8	1.6	3.9	4.7
107.5°	0.0	0.0	0.8	2.3	3.1
110°	0.0	0.0	0.8	1.6	1.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.8	0.8	0.8
115°	0.8	0.8	0.8	0.8	0.8
117.5°	0.8	0.8	0.8	0.8	0.8
120°	0.8	0.8	0.8	0.8	0.8
122.5°	0.8	0.8	0.8	0.8	0.8
125°	0.8	0.8	0.8	0.8	0.8
127.5°	0.8	0.8	0.8	0.8	0.8
130°	0.8	0.8	0.8	0.8	0.8
132.5°	0.8	0.8	0.8	0.8	0.8
135°	0.8	0.8	0.8	0.8	0.8
137.5°	0.8	0.8	0.8	0.8	0.8
140°	0.8	0.8	0.8	0.8	0.8
142.5°	0.8	0.8	0.8	1.6	0.8
145°	0.8	0.8	1.6	1.6	1.6
147.5°	0.8	0.8	1.6	1.6	1.6
150°	0.8	0.8	1.6	1.6	1.6
152.5°	0.8	1.6	1.6	1.6	1.6
155°	0.8	1.6	1.6	1.6	1.6
157.5°	0.8	1.6	1.6	2.3	1.6
160°	1.6	1.6	1.6	2.3	1.6
162.5°	1.6	1.6	2.3	2.3	2.3
165°	1.6	1.6	2.3	2.3	2.3
167.5°	1.6	1.6	2.3	2.3	2.3
170°	1.6	1.6	2.3	2.3	2.3
172.5°	1.6	1.6	2.3	2.3	2.3
175°	1.6	1.6	2.3	2.3	2.3
177.5°	1.6	1.6	2.3	3.1	2.3
180°	2.3	2.3	2.3	2.3	2.3



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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	23.95	25.36	24.33	25.68	26.00	11.86	13.26	12.23	13.58	13.91
	3H	25.25	26.49	25.63	26.83	27.20	13.02	14.27	13.41	14.61	14.98
	4H	25.65	26.81	26.05	27.16	27.56	13.45	14.61	13.86	14.97	15.36
	6H	25.88	26.94	26.30	27.32	27.72	13.83	14.90	14.25	15.28	15.68
	8H	25.93	26.94	26.36	27.34	27.75	14.08	15.09	14.52	15.49	15.90
	12H	25.94	26.91	26.38	27.30	27.74	14.42	15.38	14.85	15.77	16.21
4H	2H	23.77	24.93	24.18	25.29	25.68	12.38	13.54	12.78	13.89	14.29
	3H	25.11	26.06	25.53	26.47	26.88	13.83	14.78	14.25	15.19	15.61
	4H	25.53	26.38	25.98	26.81	27.26	14.39	15.24	14.83	15.66	16.12
	6H	25.86	26.59	26.33	27.05	27.52	14.90	15.63	15.36	16.08	16.56
	8H	25.95	26.64	26.43	27.09	27.57	15.21	15.90	15.69	16.35	16.83
	12H	26.00	26.61	26.49	27.10	27.58	15.65	16.26	16.15	16.75	17.23
8H	4H	25.44	26.12	25.91	26.57	27.05	14.97	15.65	15.44	16.11	16.59
	6H	25.78	26.35	26.29	26.85	27.34	15.60	16.16	16.10	16.66	17.15
	8H	25.91	26.42	26.44	26.94	27.44	16.00	16.51	16.53	17.03	17.53
	12H	26.01	26.46	26.53	26.96	27.54	16.59	17.05	17.11	17.55	18.12
12H	4H	25.40	26.01	25.89	26.49	26.98	15.17	15.78	15.66	16.27	16.75
	6H	25.73	26.24	26.26	26.76	27.26	15.84	16.35	16.36	16.87	17.37
	8H	25.89	26.35	26.41	26.85	27.42	16.32	16.77	16.84	17.27	17.85