

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: P892704

Luminaire Tested: 2MB-4HL-ACL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892704
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-ACL-UNV-L850
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K (C)
Light Source: -
Ballast/Driver: -

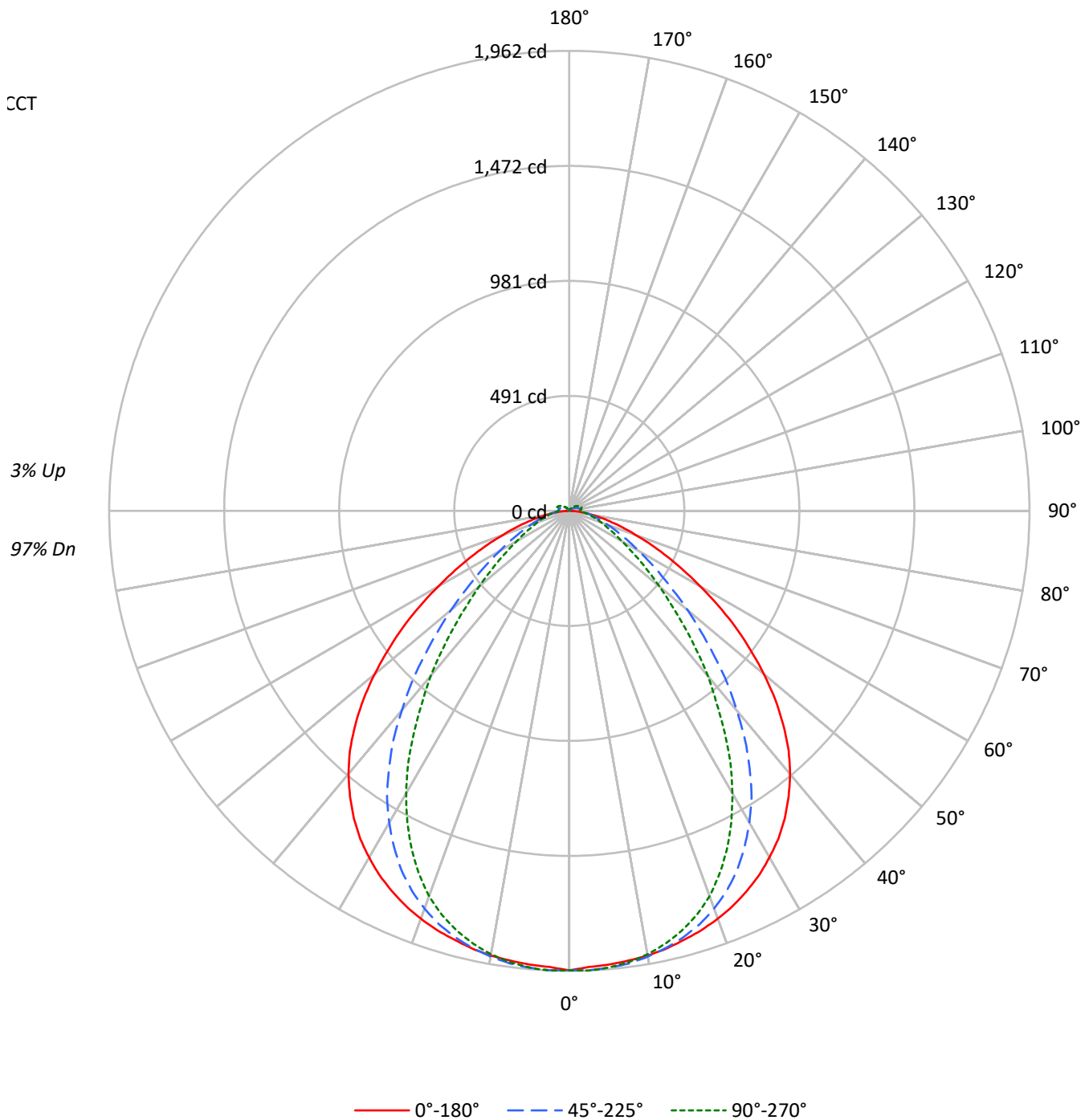
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4187.0 lumens
Efficiency: N/A
Efficacy: 151.7 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.09 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.08')
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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	89	88	86	89	88	86	84
2	101	94	88	83	98	92	86	82	88	83	79	84	80	77	81	77	75	81	77	75	73
3	93	84	77	71	90	82	75	70	79	73	68	76	71	67	73	69	65	73	69	65	63
4	86	75	68	62	84	74	67	61	71	65	60	68	63	59	66	61	58	66	61	58	56
5	80	68	60	54	78	67	59	54	65	58	53	62	57	52	60	55	51	60	55	51	49
6	74	62	54	48	72	61	53	48	59	52	47	57	51	46	55	50	46	55	50	46	44
7	69	57	49	43	67	56	48	43	54	47	42	52	46	42	51	45	41	51	45	41	39
8	65	52	44	39	63	51	44	39	50	43	38	48	42	38	47	42	37	47	42	37	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	38	34	44	38	34	32
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	41	35	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	40113	40113	40113
5°	39783	39333	39109
10°	39739	38431	37839
15°	39692	37377	36244
20°	39724	36035	34200
25°	39652	34217	31352
30°	39401	31708	27845
35°	38880	28483	23659
40°	37811	24502	19454
45°	35853	20211	15178
50°	32879	16132	11618
55°	29166	12578	8943
60°	24654	9762	6887
65°	20371	7730	5574
70°	16255	6231	4660
75°	12875	5146	3999
80°	9738	4374	3438
85°	7265	3771	3018

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 35853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.7	4.4
10°-20°	529.6	12.6
20°-30°	776.7	18.5
30°-40°	846.9	20.2
40°-50°	718.6	17.2
50°-60°	489.2	11.7
60°-70°	285.5	6.8
70°-80°	148.6	3.6
80°-90°	64.8	1.5
90°-100°	41.2	1.0
100°-110°	38.0	0.9
110°-120°	28.2	0.7
120°-130°	17.0	0.4
130°-140°	9.1	0.2
140°-150°	4.6	0.1
150°-160°	2.3	0.1
160°-170°	0.9	0.0
170°-180°	0.2	0.0
0°-30°	1491.9	35.6
0°-40°	2338.8	55.9
0°-60°	3546.7	84.7
0°-90°	4045.6	96.6
90°-120°	107.4	2.6
90°-150°	138.0	3.3
90°-180°	141.0	3.4
0°-180°	4187.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1959	1959	1959	1959	1959	
5°	1943	1952	1956	1957	1955	185
15°	1894	1898	1882	1865	1853	535
25°	1790	1764	1692	1626	1591	825
35°	1601	1519	1340	1206	1154	999
45°	1290	1130	874	736	688	991
55°	866	689	479	385	363	772
65°	458	362	246	203	192	459
75°	188	162	126	115	110	205
85°	46	55	62	61	59	49
90°	7	25	43	47	46	7
95°	14	27	45	49	48	10
105°	4	20	42	53	54	5
115°	3	12	32	45	48	3
125°	2	6	19	30	35	2
135°	2	5	12	18	21	1
145°	2	3	7	11	12	1
155°	2	2	5	7	7	1
165°	2	2	3	4	5	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°	1959.0	1959.0	1959.0	1959.0	1959.0
2.5°	1946.7	1955.7	1960.6	1963.9	1962.3
5°	1942.6	1951.6	1955.7	1957.4	1954.9
7.5°	1934.4	1944.3	1946.7	1945.1	1941.0
10°	1925.4	1933.6	1930.3	1926.2	1920.5
12.5°	1912.3	1918.1	1909.1	1900.0	1891.0
15°	1893.5	1898.4	1882.0	1864.8	1853.4
17.5°	1874.7	1873.0	1848.5	1820.6	1806.7
20°	1850.9	1841.9	1805.1	1765.0	1748.6
22.5°	1823.1	1807.5	1753.5	1699.5	1674.9
25°	1789.5	1764.2	1692.1	1625.8	1590.6
27.5°	1751.9	1715.9	1617.6	1534.9	1495.6
30°	1706.9	1657.7	1535.8	1434.2	1390.9
32.5°	1658.6	1595.5	1446.5	1319.6	1279.5
35°	1601.2	1519.4	1340.1	1205.8	1154.3
37.5°	1535.8	1431.8	1231.2	1083.9	1029.8
40°	1464.5	1339.3	1110.1	962.7	919.3
42.5°	1384.3	1241.0	997.1	842.4	799.0
45°	1290.2	1129.7	873.5	736.0	688.5
47.5°	1191.1	1020.0	759.7	625.4	586.1
50°	1083.9	904.6	658.2	535.4	501.0
52.5°	973.4	797.3	560.8	453.5	424.9
55°	866.1	689.3	478.9	384.8	362.7
57.5°	754.0	598.4	406.9	327.5	305.4
60°	645.9	506.7	342.2	276.7	259.5
62.5°	548.5	427.3	291.4	235.8	223.5
65°	458.4	361.8	245.6	203.0	192.4
67.5°	378.2	299.6	210.4	176.0	166.2
70°	302.9	244.8	176.0	151.4	144.9
72.5°	245.6	203.8	149.0	132.6	127.7
75°	188.3	162.1	126.1	114.6	109.7
77.5°	141.6	126.9	107.2	98.2	94.1
80°	102.3	98.2	90.0	85.1	81.0
82.5°	70.4	74.5	75.3	71.2	69.6
85°	45.8	54.8	62.2	60.6	58.9
87.5°	25.4	36.8	50.8	51.6	49.9
90°	7.4	24.6	43.4	46.7	45.8
92.5°	13.9	26.2	44.2	47.5	46.7
95°	13.9	27.0	45.0	49.1	48.3
97.5°	13.1	27.0	45.8	50.8	50.8
100°	6.5	26.2	45.8	52.4	52.4
102.5°	4.1	23.7	44.2	53.2	54.0
105°	4.1	20.5	41.8	53.2	54.0
107.5°	4.1	17.2	40.1	51.6	54.0
110°	3.3	14.7	37.7	49.1	52.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.3	13.1	35.2	47.5	50.8
115°	3.3	12.3	31.9	45.0	48.3
117.5°	2.5	10.6	27.8	41.8	45.8
120°	2.5	9.0	24.6	38.5	42.6
122.5°	1.6	8.2	21.3	34.4	39.3
125°	1.6	6.5	18.8	30.3	35.2
127.5°	1.6	6.5	17.2	27.0	31.1
130°	1.6	5.7	14.7	23.7	27.0
132.5°	1.6	5.7	13.1	20.5	23.7
135°	1.6	4.9	11.5	18.0	21.3
137.5°	1.6	4.9	10.6	15.6	18.8
140°	1.6	4.1	9.0	13.9	16.4
142.5°	1.6	4.1	8.2	12.3	13.9
145°	1.6	3.3	7.4	10.6	12.3
147.5°	1.6	3.3	6.5	9.0	10.6
150°	1.6	3.3	6.5	8.2	9.0
152.5°	1.6	2.5	5.7	7.4	8.2
155°	1.6	2.5	4.9	7.4	7.4
157.5°	1.6	2.5	4.1	6.5	7.4
160°	1.6	2.5	4.1	5.7	6.5
162.5°	1.6	2.5	3.3	4.1	5.7
165°	1.6	1.6	3.3	4.1	4.9
167.5°	1.6	1.6	2.5	3.3	4.1
170°	1.6	1.6	2.5	2.5	2.5
172.5°	1.6	1.6	2.5	2.5	1.6
175°	1.6	1.6	2.5	2.5	1.6
177.5°	1.6	1.6	2.5	2.5	1.6
180°	1.6	1.6	1.6	1.6	1.6



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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	21.52	22.91	21.94	23.30	23.70	17.62	19.01	18.04	19.40	19.80
	3H	22.54	23.79	22.98	24.19	24.64	18.82	20.07	19.26	20.47	20.92
	4H	22.84	24.01	23.29	24.43	24.89	19.36	20.53	19.82	20.95	21.41
	6H	22.99	24.07	23.46	24.50	24.98	19.86	20.94	20.33	21.38	21.85
	8H	23.01	24.04	23.50	24.49	24.98	20.11	21.13	20.59	21.59	22.07
	12H	23.01	23.99	23.50	24.44	24.96	20.36	21.34	20.85	21.79	22.30
4H	2H	21.55	22.72	22.01	23.14	23.60	18.12	19.29	18.58	19.71	20.17
	3H	22.74	23.71	23.21	24.18	24.66	19.50	20.47	19.97	20.94	21.42
	4H	23.13	24.00	23.62	24.49	25.01	20.14	21.01	20.63	21.49	22.01
	6H	23.38	24.14	23.89	24.64	25.18	20.77	21.53	21.29	22.04	22.58
	8H	23.43	24.14	23.95	24.64	25.19	21.08	21.79	21.60	22.29	22.84
	12H	23.45	24.09	23.99	24.63	25.18	21.41	22.04	21.94	22.58	23.13
8H	4H	23.16	23.87	23.68	24.37	24.92	20.38	21.09	20.90	21.60	22.14
	6H	23.47	24.05	24.02	24.61	25.16	21.13	21.72	21.68	22.27	22.83
	8H	23.56	24.09	24.13	24.65	25.22	21.52	22.05	22.09	22.61	23.18
	12H	23.63	24.10	24.19	24.65	25.29	21.96	22.43	22.52	22.98	23.62
12H	4H	23.14	23.77	23.68	24.31	24.87	20.40	21.03	20.94	21.57	22.12
	6H	23.46	23.99	24.03	24.56	25.12	21.17	21.70	21.74	22.27	22.83
	8H	23.59	24.06	24.16	24.61	25.25	21.62	22.09	22.18	22.64	23.28