

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: P893476

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893476
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-AOL-UNV-L850
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
5000K CCT
Light Source: -
Ballast/Driver: -

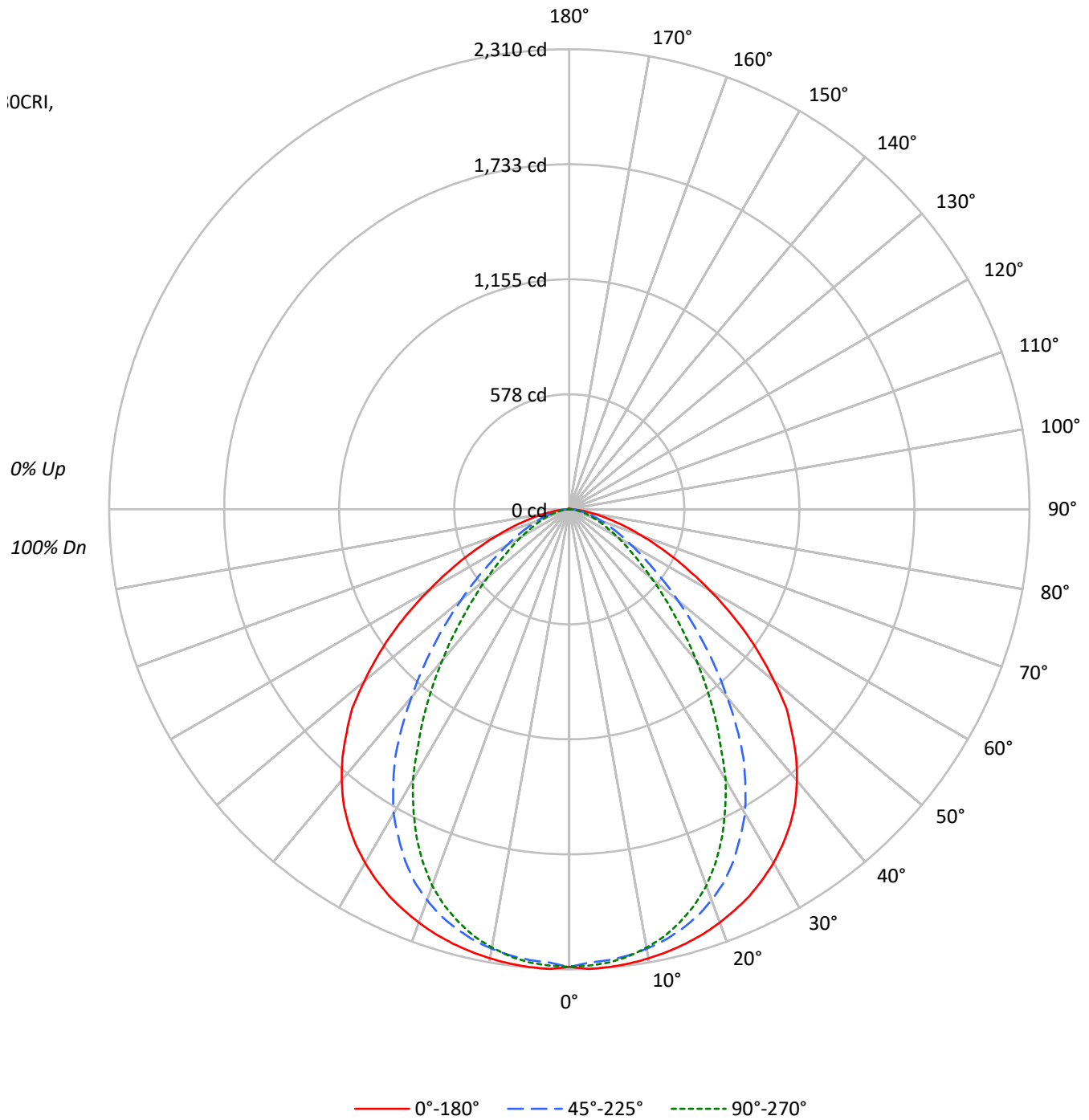
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4589.0 lumens
Efficiency: N/A
Efficacy: 154.0 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
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				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	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	78	78	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	68	68	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	60	60	60	58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	54	54	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	43	43	43	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	39	39	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	36	36	36	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23396	23396	23396
5°	23586	23229	23351
10°	23682	23171	23110
15°	23804	23005	22623
20°	23933	22634	21798
25°	24066	21896	20386
30°	24109	20745	18459
35°	24030	18951	15878
40°	23628	16400	13194
45°	22750	13782	10678
50°	21289	11224	8551
55°	19236	9022	6857
60°	16590	7343	5679
65°	14039	6114	4668
70°	11461	5199	3963
75°	9180	4383	3372
80°	7149	3748	2897
85°	5539	3307	2617

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22750 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.5	4.7
10°-20°	619.0	13.5
20°-30°	902.3	19.7
30°-40°	972.6	21.2
40°-50°	815.3	17.8
50°-60°	552.0	12.0
60°-70°	314.8	6.9
70°-80°	144.0	3.1
80°-90°	37.7	0.8
90°-100°	4.6	0.1
100°-110°	3.2	0.1
110°-120°	1.7	0.0
120°-130°	1.0	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1738.9	37.9
0°-40°	2711.5	59.1
0°-60°	4078.8	88.9
0°-90°	4575.3	99.7
90°-120°	9.5	0.2
90°-150°	12.3	0.3
90°-180°	14.0	0.3
0°-180°	4589.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2297	2297	2297	2297	2297	
5°	2307	2300	2272	2291	2284	220
15°	2258	2238	2182	2167	2146	638
25°	2142	2085	1949	1859	1814	987
35°	1933	1787	1524	1338	1277	1207
45°	1580	1318	957	789	741	1216
55°	1083	793	508	412	386	965
65°	583	405	254	206	194	581
75°	233	171	111	91	86	254
85°	47	40	28	24	22	55
90°	7	7	4	3	3	7
95°	10	6	3	2	2	8
105°	7	5	2	1	1	7
115°	3	3	1	1	1	3
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	1	1	1
155°	1	1	1	2	2	1
165°	1	2	2	2	2	0
175°	2	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2297.3	2297.3	2297.3	2297.3	2297.3
2.5°	2310.4	2304.5	2278.1	2299.9	2293.3
5°	2307.1	2299.9	2272.2	2290.7	2284.1
7.5°	2300.6	2291.3	2260.4	2274.2	2265.6
10°	2290.0	2278.8	2240.6	2248.5	2234.7
12.5°	2275.5	2261.7	2216.2	2214.2	2197.7
15°	2257.7	2237.9	2181.9	2167.4	2145.7
17.5°	2236.0	2210.9	2141.1	2112.1	2085.7
20°	2208.3	2176.0	2088.4	2042.2	2011.3
22.5°	2176.7	2133.2	2027.1	1953.3	1919.7
25°	2141.7	2085.1	1948.6	1859.0	1814.2
27.5°	2098.2	2027.1	1857.7	1741.7	1695.6
30°	2050.1	1959.9	1764.1	1615.9	1569.7
32.5°	1995.4	1882.7	1644.9	1480.1	1415.5
35°	1932.8	1787.2	1524.3	1337.8	1277.1
37.5°	1862.3	1687.7	1379.9	1194.1	1132.8
40°	1777.3	1569.7	1233.6	1049.8	992.4
42.5°	1685.7	1449.8	1093.3	912.7	863.3
45°	1579.6	1318.0	956.9	788.8	741.4
47.5°	1477.5	1184.9	829.0	675.5	636.6
50°	1343.7	1043.2	708.4	572.0	539.7
52.5°	1213.2	912.0	605.6	489.0	458.7
55°	1083.4	792.8	508.1	411.9	386.2
57.5°	946.3	676.1	427.7	348.6	331.5
60°	814.5	575.3	360.5	292.6	278.8
62.5°	693.9	482.4	305.1	247.1	233.9
65°	582.6	405.3	253.7	205.6	193.7
67.5°	477.1	333.5	211.5	171.3	162.8
70°	384.9	270.2	174.6	141.0	133.1
72.5°	305.1	216.2	139.7	115.3	106.8
75°	233.3	171.3	111.4	90.9	85.7
77.5°	174.0	129.2	85.7	69.9	65.9
80°	121.9	93.6	63.9	52.7	49.4
82.5°	83.0	64.6	44.8	36.9	34.9
85°	47.4	40.2	28.3	23.7	22.4
87.5°	24.4	21.1	15.2	11.2	9.9
90°	6.6	6.6	4.0	3.3	2.6
92.5°	10.5	5.9	4.0	2.6	2.0
95°	9.9	5.9	3.3	2.0	2.0
97.5°	9.2	5.9	2.6	2.0	1.3
100°	8.6	5.3	2.6	1.3	1.3
102.5°	7.9	5.3	2.6	1.3	1.3
105°	6.6	4.6	2.0	1.3	0.7
107.5°	5.9	4.0	2.0	1.3	0.7
110°	4.6	3.3	2.0	1.3	0.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	3.3	1.3	1.3	0.7
115°	3.3	2.6	1.3	0.7	0.7
117.5°	2.6	2.0	1.3	0.7	0.7
120°	2.0	2.0	1.3	0.7	0.7
122.5°	2.0	1.3	1.3	0.7	0.7
125°	1.3	1.3	1.3	0.7	0.7
127.5°	1.3	1.3	1.3	0.7	0.7
130°	1.3	1.3	1.3	0.7	0.7
132.5°	1.3	1.3	1.3	1.3	0.7
135°	0.7	1.3	1.3	1.3	0.7
137.5°	1.3	1.3	1.3	1.3	1.3
140°	1.3	1.3	1.3	1.3	1.3
142.5°	1.3	1.3	1.3	1.3	1.3
145°	1.3	1.3	1.3	1.3	1.3
147.5°	1.3	1.3	1.3	1.3	1.3
150°	1.3	1.3	1.3	1.3	1.3
152.5°	1.3	1.3	1.3	1.3	1.3
155°	1.3	1.3	1.3	2.0	2.0
157.5°	1.3	1.3	2.0	2.0	2.0
160°	1.3	1.3	2.0	2.0	2.0
162.5°	1.3	1.3	2.0	2.0	2.0
165°	1.3	2.0	2.0	2.0	2.0
167.5°	1.3	2.0	2.0	2.0	2.6
170°	1.3	2.0	2.0	2.6	2.6
172.5°	1.3	2.0	2.0	2.6	2.6
175°	2.0	2.0	2.0	2.6	2.6
177.5°	2.0	2.0	2.0	2.6	2.6
180°	2.0	2.0	2.0	2.0	2.0



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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	21.32	22.76	21.69	23.08	23.40	16.17	17.60	16.54	17.92	18.25
	3H	22.63	23.91	23.01	24.25	24.62	17.18	18.46	17.56	18.79	19.17
	4H	23.05	24.25	23.46	24.61	25.00	17.51	18.71	17.92	19.07	19.46
	6H	23.32	24.43	23.74	24.80	25.20	17.74	18.84	18.16	19.22	19.62
	8H	23.39	24.44	23.83	24.84	25.25	17.80	18.85	18.24	19.25	19.66
	12H	23.43	24.44	23.87	24.82	25.26	17.85	18.85	18.28	19.24	19.68
4H	2H	21.32	22.52	21.73	22.87	23.26	16.79	17.99	17.19	18.34	18.73
	3H	22.79	23.77	23.20	24.18	24.59	17.99	18.97	18.40	19.38	19.79
	4H	23.31	24.20	23.75	24.62	25.07	18.40	19.29	18.84	19.71	20.16
	6H	23.69	24.46	24.15	24.91	25.37	18.71	19.48	19.18	19.93	20.40
	8H	23.80	24.52	24.27	24.97	25.44	18.80	19.52	19.28	19.97	20.45
	12H	23.88	24.51	24.36	25.00	25.48	18.88	19.51	19.36	20.00	20.48
8H	4H	23.29	24.01	23.76	24.46	24.94	18.73	19.45	19.21	19.90	20.38
	6H	23.72	24.31	24.23	24.81	25.30	19.13	19.72	19.63	20.22	20.70
	8H	23.88	24.41	24.40	24.93	25.42	19.27	19.80	19.79	20.32	20.81
	12H	24.01	24.48	24.53	24.98	25.55	19.39	19.86	19.91	20.36	20.93
12H	4H	23.26	23.90	23.75	24.39	24.87	18.78	19.42	19.27	19.90	20.38
	6H	23.69	24.22	24.21	24.74	25.24	19.19	19.73	19.72	20.24	20.74
	8H	23.88	24.35	24.40	24.85	25.42	19.39	19.85	19.90	20.35	20.93