

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: P893468

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893468
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-ACL-UNV-L850
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K (C)
Light Source: -
Ballast/Driver: -

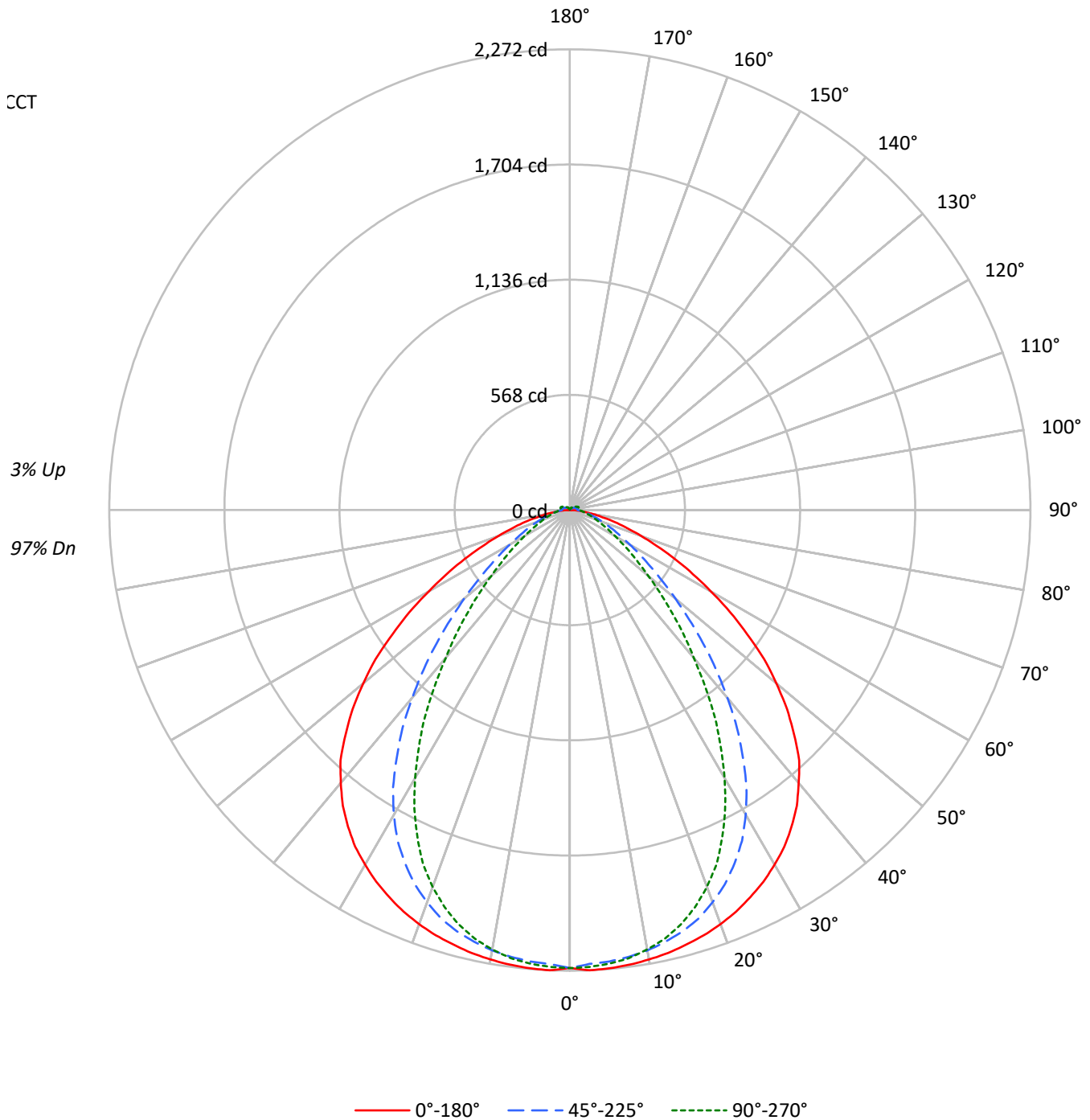
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4634.0 lumens
Efficiency: N/A
Efficacy: 155.5 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
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				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	110	110	110	104	104	104	100	100	100	97			97			
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85			85			
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74			74			
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64			64			
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57			57			
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50			50			
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45			45			
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40			40			
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37			37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33			33			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31			31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23006	23006	23006
5°	23152	22381	22346
10°	23193	21896	21562
15°	23263	21326	20581
20°	23376	20542	19237
25°	23444	19454	17449
30°	23469	17959	15202
35°	23368	15871	12716
40°	22953	13407	10008
45°	22069	10823	7759
50°	20545	8397	5822
55°	18394	6428	4453
60°	15801	4941	3392
65°	13176	3898	2696
70°	10539	3128	2203
75°	8394	2520	1876
80°	6149	2079	1642
85°	4224	1767	1511

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 22069 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.0	4.6
10°-20°	609.5	13.2
20°-30°	888.7	19.2
30°-40°	954.8	20.6
40°-50°	794.6	17.1
50°-60°	531.5	11.5
60°-70°	304.2	6.6
70°-80°	151.3	3.3
80°-90°	61.9	1.3
90°-100°	35.9	0.8
100°-110°	31.7	0.7
110°-120°	23.3	0.5
120°-130°	15.0	0.3
130°-140°	8.9	0.2
140°-150°	5.0	0.1
150°-160°	2.5	0.1
160°-170°	1.1	0.0
170°-180°	0.2	0.0
0°-30°	1712.2	36.9
0°-40°	2666.9	57.6
0°-60°	3993.0	86.2
0°-90°	4510.4	97.3
90°-120°	90.9	2.0
90°-150°	119.8	2.6
90°-180°	124.0	2.7
0°-180°	4634.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2259	2259	2259	2259	2259	
5°	2269	2262	2235	2253	2246	216
15°	2219	2204	2151	2135	2116	627
25°	2107	2057	1922	1825	1780	972
35°	1907	1769	1488	1305	1247	1191
45°	1564	1300	929	752	708	1203
55°	1067	770	484	383	363	956
65°	571	388	244	198	187	571
75°	230	167	121	107	104	247
85°	45	50	56	59	59	52
90°	7	21	38	46	47	6
95°	10	21	38	46	47	8
105°	7	17	34	44	46	7
115°	3	10	26	36	40	3
125°	2	7	18	26	29	2
135°	1	5	12	18	20	1
145°	1	4	8	12	14	1
155°	1	3	5	7	9	1
165°	2	3	4	5	6	1
175°	2	2	3	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2259.0	2259.0	2259.0	2259.0	2259.0
2.5°	2272.1	2266.2	2240.5	2260.9	2255.0
5°	2268.8	2261.6	2234.6	2253.0	2245.8
7.5°	2261.6	2253.7	2222.7	2237.2	2229.3
10°	2251.0	2241.2	2205.6	2212.8	2200.3
12.5°	2237.9	2225.3	2181.2	2179.2	2165.4
15°	2218.8	2203.6	2150.9	2135.1	2116.0
17.5°	2199.0	2176.6	2112.0	2079.7	2053.4
20°	2173.3	2143.6	2058.6	2010.5	1977.6
22.5°	2143.6	2103.4	1998.7	1924.9	1890.6
25°	2106.7	2056.7	1922.2	1825.4	1779.9
27.5°	2067.2	2000.6	1839.2	1712.0	1660.0
30°	2019.8	1937.4	1735.7	1582.9	1526.8
32.5°	1969.7	1857.0	1622.4	1447.1	1385.8
35°	1907.1	1768.7	1488.0	1304.8	1247.4
37.5°	1839.2	1663.2	1354.8	1159.1	1094.6
40°	1756.8	1551.9	1208.6	1014.8	950.9
42.5°	1675.1	1430.6	1068.2	884.3	829.0
45°	1564.4	1300.2	929.2	751.9	707.7
47.5°	1453.0	1160.5	796.0	644.5	601.0
50°	1329.1	1023.4	679.4	541.0	504.8
52.5°	1208.6	895.5	573.3	457.3	426.4
55°	1066.9	769.7	484.3	382.9	363.1
57.5°	939.0	653.0	408.6	324.2	305.8
60°	803.9	553.5	342.0	274.1	257.0
62.5°	685.3	465.2	288.0	232.6	220.8
65°	571.3	387.5	243.8	197.7	187.1
67.5°	466.6	323.6	205.6	168.7	160.1
70°	374.3	262.3	173.3	143.7	137.7
72.5°	294.6	210.9	144.3	123.9	118.6
75°	230.0	167.4	120.6	106.8	103.5
77.5°	166.1	130.5	100.8	91.6	89.6
80°	117.3	98.8	83.0	79.1	77.8
82.5°	77.8	71.8	68.5	68.5	67.9
85°	44.8	50.1	56.0	58.6	59.3
87.5°	23.1	33.6	44.8	50.1	50.7
90°	6.6	21.1	38.2	45.5	46.8
92.5°	9.9	21.1	37.6	45.5	46.8
95°	9.9	21.1	37.6	45.5	46.8
97.5°	9.2	20.4	37.6	45.5	46.8
100°	8.6	19.1	36.9	45.5	46.8
102.5°	7.2	18.5	35.6	44.8	46.8
105°	6.6	17.1	33.6	44.2	46.1
107.5°	5.9	14.5	31.6	42.2	44.8
110°	4.6	12.5	30.3	40.2	43.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.0	11.2	28.3	38.2	41.5
115°	3.3	9.9	26.4	36.2	39.5
117.5°	2.6	9.2	23.7	33.6	36.9
120°	2.0	8.6	21.7	31.6	34.3
122.5°	2.0	7.9	19.1	29.0	31.6
125°	2.0	6.6	17.8	26.4	29.0
127.5°	1.3	5.9	15.8	23.7	26.4
130°	1.3	5.9	14.5	21.7	23.7
132.5°	1.3	5.3	13.2	19.8	21.7
135°	1.3	5.3	11.9	17.8	19.8
137.5°	1.3	4.6	10.5	16.5	18.5
140°	1.3	4.6	9.9	14.5	16.5
142.5°	1.3	4.0	8.6	13.8	15.2
145°	1.3	4.0	7.9	11.9	13.8
147.5°	1.3	4.0	7.2	11.2	12.5
150°	1.3	3.3	6.6	9.2	11.2
152.5°	1.3	3.3	5.9	8.6	10.5
155°	1.3	3.3	5.3	7.2	9.2
157.5°	1.3	3.3	5.3	6.6	7.9
160°	2.0	2.6	4.6	5.9	7.2
162.5°	2.0	2.6	4.0	5.3	6.6
165°	2.0	2.6	4.0	4.6	5.9
167.5°	2.0	2.6	3.3	4.0	4.6
170°	2.0	2.0	3.3	3.3	3.3
172.5°	2.0	2.0	2.6	3.3	2.6
175°	2.0	2.0	2.6	2.6	2.6
177.5°	2.0	2.0	2.6	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	19.63	21.02	20.04	21.39	21.78	14.92	16.32	15.33	16.69	17.07
	3H	20.72	21.97	21.15	22.35	22.78	16.06	17.31	16.49	17.69	18.12
	4H	21.03	22.19	21.48	22.60	23.04	16.56	17.73	17.01	18.13	18.58
	6H	21.18	22.25	21.63	22.67	23.13	17.07	18.14	17.52	18.56	19.02
	8H	21.19	22.21	21.67	22.66	23.13	17.33	18.35	17.80	18.79	19.26
	12H	21.19	22.16	21.66	22.60	23.09	17.62	18.60	18.10	19.03	19.53
4H	2H	19.61	20.77	20.06	21.18	21.63	15.42	16.58	15.87	16.99	17.44
	3H	20.85	21.81	21.31	22.26	22.73	16.74	17.70	17.19	18.15	18.62
	4H	21.23	22.10	21.71	22.57	23.07	17.33	18.19	17.81	18.66	19.17
	6H	21.46	22.21	21.97	22.71	23.23	17.95	18.70	18.45	19.20	19.72
	8H	21.50	22.21	22.01	22.70	23.23	18.27	18.97	18.78	19.47	20.00
	12H	21.52	22.14	22.05	22.67	23.21	18.65	19.27	19.17	19.80	20.33
8H	4H	21.22	21.92	21.73	22.42	22.95	17.57	18.27	18.08	18.77	19.30
	6H	21.50	22.08	22.04	22.62	23.16	18.29	18.87	18.84	19.41	19.95
	8H	21.57	22.09	22.13	22.65	23.20	18.70	19.22	19.26	19.78	20.33
	12H	21.62	22.08	22.17	22.62	23.24	19.19	19.65	19.74	20.19	20.82
12H	4H	21.20	21.82	21.73	22.35	22.89	17.58	18.21	18.11	18.74	19.27
	6H	21.48	22.00	22.04	22.56	23.11	18.33	18.85	18.89	19.41	19.96
	8H	21.58	22.04	22.14	22.58	23.21	18.79	19.25	19.35	19.79	20.42