

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: P893580

Luminaire Tested: 4MB-5SL-ACL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893580
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-5SL-ACL-UNV-L850
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K (C)
Light Source: -
Ballast/Driver: -

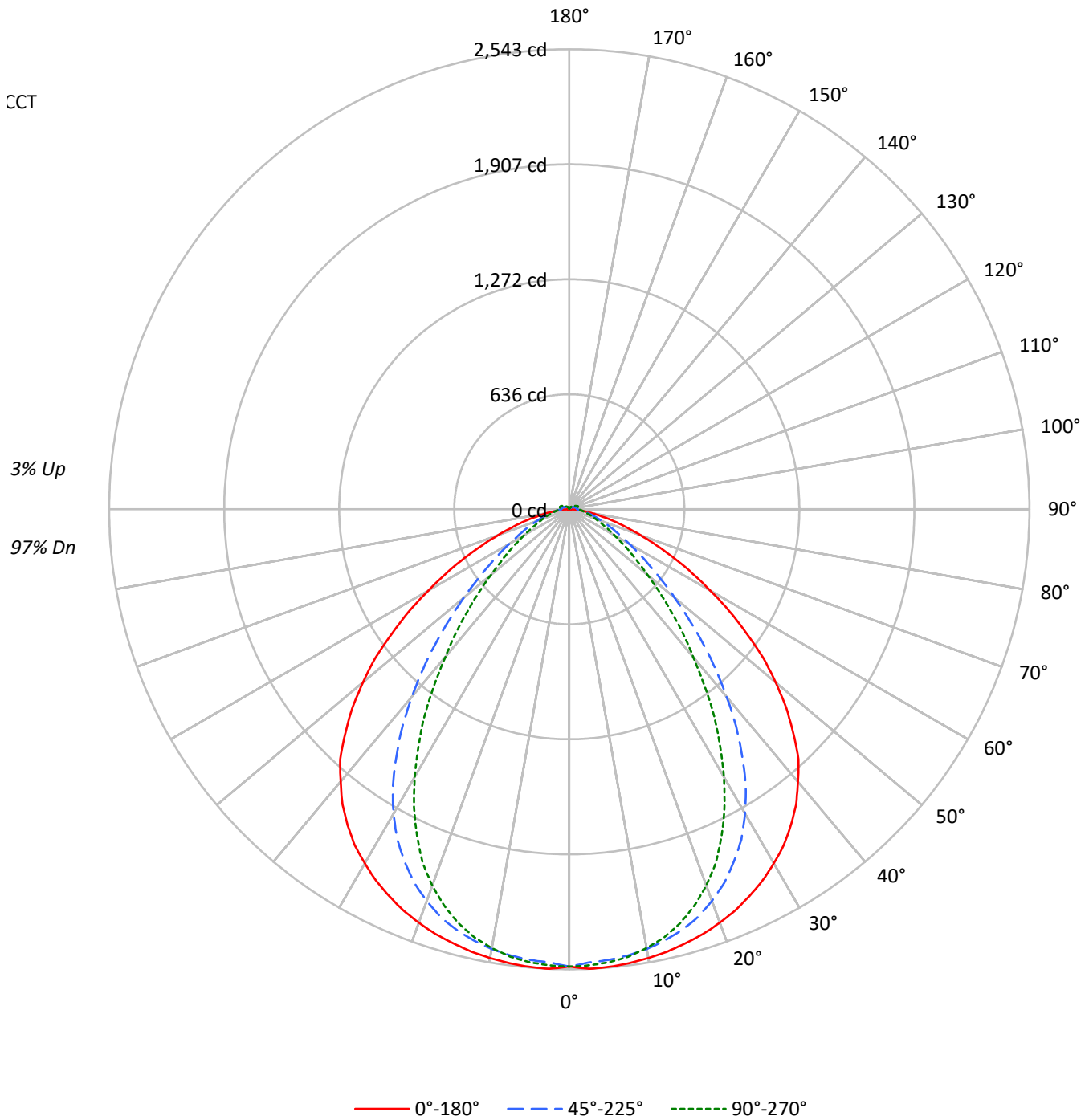
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5185.9 lumens
Efficiency: N/A
Efficacy: 148.2 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): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 9.55
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°	25746	25746	25746
5°	25910	25048	25008
10°	25956	24503	24130
15°	26034	23866	23032
20°	26160	22990	21528
25°	26237	21772	19527
30°	26263	20098	17013
35°	26150	17761	14231
40°	25687	15003	11201
45°	24699	12111	8684
50°	22994	9397	6515
55°	20585	7193	4983
60°	17684	5529	3796
65°	14746	4363	3017
70°	11795	3501	2465
75°	9394	2821	2099
80°	6883	2327	1836
85°	4724	1978	1692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24699 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.5	4.6
10°-20°	682.2	13.2
20°-30°	994.5	19.2
30°-40°	1068.5	20.6
40°-50°	889.3	17.1
50°-60°	594.8	11.5
60°-70°	340.5	6.6
70°-80°	169.3	3.3
80°-90°	69.3	1.3
90°-100°	40.2	0.8
100°-110°	35.5	0.7
110°-120°	26.0	0.5
120°-130°	16.7	0.3
130°-140°	10.0	0.2
140°-150°	5.6	0.1
150°-160°	2.8	0.1
160°-170°	1.2	0.0
170°-180°	0.3	0.0
0°-30°	1916.1	36.9
0°-40°	2984.6	57.6
0°-60°	4468.7	86.2
0°-90°	5047.7	97.3
90°-120°	101.7	2.0
90°-150°	134.0	2.6
90°-180°	138.0	2.7
0°-180°	5185.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2528	2528	2528	2528	2528	
5°	2539	2531	2501	2521	2513	242
15°	2483	2466	2407	2389	2368	702
25°	2358	2302	2151	2043	1992	1087
35°	2134	1979	1665	1460	1396	1333
45°	1751	1455	1040	842	792	1346
55°	1194	861	542	428	406	1069
65°	639	434	273	221	209	639
75°	257	187	135	120	116	276
85°	50	56	63	66	66	59
90°	7	24	43	51	52	7
95°	11	24	42	51	52	9
105°	7	19	38	49	52	8
115°	4	11	30	41	44	4
125°	2	7	20	30	32	2
135°	2	6	13	20	22	1
145°	2	4	9	13	16	1
155°	2	4	6	8	10	1
165°	2	3	4	5	7	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°	2528.0	2528.0	2528.0	2528.0	2528.0
2.5°	2542.8	2536.2	2507.4	2530.3	2523.6
5°	2539.1	2531.0	2500.8	2521.4	2513.3
7.5°	2531.0	2522.1	2487.5	2503.7	2494.9
10°	2519.2	2508.1	2468.3	2476.4	2462.4
12.5°	2504.4	2490.4	2441.0	2438.8	2423.3
15°	2483.1	2466.1	2407.1	2389.4	2368.0
17.5°	2460.9	2435.9	2363.6	2327.5	2298.0
20°	2432.2	2399.0	2303.9	2250.0	2213.1
22.5°	2399.0	2354.0	2236.7	2154.1	2115.8
25°	2357.7	2301.6	2151.2	2042.8	1991.9
27.5°	2313.4	2239.0	2058.3	1915.9	1857.7
30°	2260.3	2168.2	1942.5	1771.4	1708.7
32.5°	2204.3	2078.2	1815.6	1619.5	1550.9
35°	2134.2	1979.4	1665.2	1460.2	1396.0
37.5°	2058.3	1861.4	1516.2	1297.2	1224.9
40°	1966.1	1736.7	1352.5	1135.7	1064.2
42.5°	1874.6	1601.0	1195.4	989.7	927.7
45°	1750.8	1455.0	1039.8	841.5	792.0
47.5°	1626.1	1298.7	890.9	721.2	672.6
50°	1487.5	1145.3	760.3	605.5	564.9
52.5°	1352.5	1002.2	641.6	511.8	477.1
55°	1194.0	861.4	542.0	428.5	406.3
57.5°	1050.9	730.8	457.2	362.8	342.2
60°	899.7	619.5	382.7	306.8	287.6
62.5°	767.0	520.7	322.3	260.3	247.1
65°	639.4	433.6	272.9	221.2	209.4
67.5°	522.1	362.1	230.1	188.8	179.2
70°	418.9	293.5	194.0	160.8	154.1
72.5°	329.6	236.0	161.5	138.6	132.7
75°	257.4	187.3	135.0	119.5	115.8
77.5°	185.8	146.0	112.8	102.5	100.3
80°	131.3	110.6	92.9	88.5	87.0
82.5°	87.0	80.4	76.7	76.7	76.0
85°	50.1	56.0	62.7	65.6	66.4
87.5°	25.8	37.6	50.1	56.0	56.8
90°	7.4	23.6	42.8	50.9	52.4
92.5°	11.1	23.6	42.0	50.9	52.4
95°	11.1	23.6	42.0	50.9	52.4
97.5°	10.3	22.9	42.0	50.9	52.4
100°	9.6	21.4	41.3	50.9	52.4
102.5°	8.1	20.6	39.8	50.1	52.4
105°	7.4	19.2	37.6	49.4	51.6
107.5°	6.6	16.2	35.4	47.2	50.1
110°	5.2	14.0	33.9	45.0	48.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	12.5	31.7	42.8	46.5
115°	3.7	11.1	29.5	40.6	44.2
117.5°	2.9	10.3	26.5	37.6	41.3
120°	2.2	9.6	24.3	35.4	38.3
122.5°	2.2	8.8	21.4	32.4	35.4
125°	2.2	7.4	19.9	29.5	32.4
127.5°	1.5	6.6	17.7	26.5	29.5
130°	1.5	6.6	16.2	24.3	26.5
132.5°	1.5	5.9	14.7	22.1	24.3
135°	1.5	5.9	13.3	19.9	22.1
137.5°	1.5	5.2	11.8	18.4	20.6
140°	1.5	5.2	11.1	16.2	18.4
142.5°	1.5	4.4	9.6	15.5	17.0
145°	1.5	4.4	8.8	13.3	15.5
147.5°	1.5	4.4	8.1	12.5	14.0
150°	1.5	3.7	7.4	10.3	12.5
152.5°	1.5	3.7	6.6	9.6	11.8
155°	1.5	3.7	5.9	8.1	10.3
157.5°	1.5	3.7	5.9	7.4	8.8
160°	2.2	2.9	5.2	6.6	8.1
162.5°	2.2	2.9	4.4	5.9	7.4
165°	2.2	2.9	4.4	5.2	6.6
167.5°	2.2	2.9	3.7	4.4	5.2
170°	2.2	2.2	3.7	3.7	3.7
172.5°	2.2	2.2	2.9	3.7	2.9
175°	2.2	2.2	2.9	2.9	2.9
177.5°	2.2	2.2	2.9	2.9	2.9
180°	2.2	2.2	2.2	2.2	2.2



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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	20.02	21.41	20.43	21.78	22.17	15.31	16.71	15.73	17.08	17.46
	3H	21.11	22.36	21.54	22.74	23.17	16.46	17.70	16.88	18.08	18.51
	4H	21.42	22.58	21.87	22.99	23.44	16.96	18.12	17.40	18.52	18.97
	6H	21.57	22.64	22.02	23.06	23.52	17.46	18.53	17.92	18.95	19.41
	8H	21.58	22.60	22.06	23.05	23.52	17.72	18.74	18.19	19.18	19.65
	12H	21.58	22.55	22.05	22.99	23.48	18.01	18.99	18.49	19.42	19.92
4H	2H	20.00	21.17	20.45	21.57	22.02	15.81	16.98	16.26	17.38	17.83
	3H	21.24	22.20	21.70	22.65	23.12	17.13	18.09	17.58	18.54	19.01
	4H	21.62	22.49	22.10	22.96	23.46	17.72	18.58	18.20	19.05	19.56
	6H	21.86	22.61	22.36	23.10	23.62	18.34	19.09	18.84	19.59	20.11
	8H	21.90	22.60	22.41	23.09	23.62	18.66	19.36	19.17	19.86	20.39
	12H	21.91	22.53	22.44	23.06	23.60	19.04	19.66	19.56	20.19	20.73
8H	4H	21.61	22.31	22.12	22.81	23.34	17.96	18.66	18.47	19.16	19.69
	6H	21.89	22.47	22.43	23.01	23.55	18.68	19.26	19.23	19.81	20.35
	8H	21.96	22.48	22.52	23.04	23.59	19.09	19.61	19.65	20.17	20.72
	12H	22.01	22.47	22.56	23.01	23.63	19.58	20.04	20.14	20.58	21.21
12H	4H	21.59	22.21	22.12	22.74	23.28	17.97	18.60	18.50	19.13	19.66
	6H	21.87	22.39	22.43	22.95	23.50	18.72	19.24	19.28	19.80	20.35
	8H	21.97	22.44	22.53	22.98	23.60	19.18	19.64	19.74	20.18	20.81