

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: P893900

Luminaire Tested: 4MB-8HL-ACL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893900
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-ACL-UNV-L850
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K (C)
Light Source: -
Ballast/Driver: -

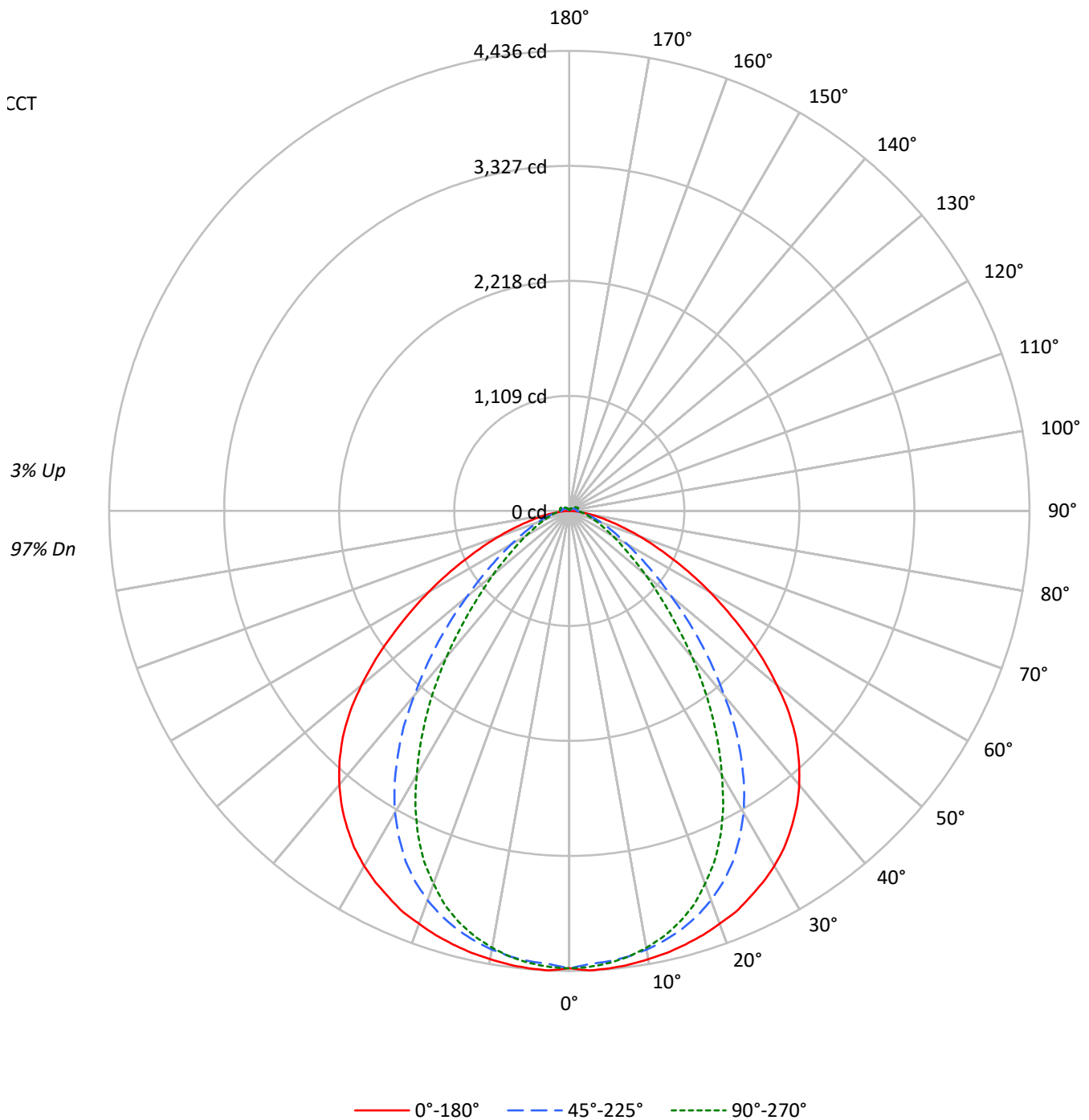
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8947.0 lumens
Efficiency: N/A
Efficacy: 154.5 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	94	94	92	90	90	89	87	85				85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	74				74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	65				65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	57				57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	45				45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	41				41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	44919	44919	44919
5°	45190	43670	43552
10°	45225	42642	41918
15°	45380	41419	39940
20°	45570	39862	37218
25°	45777	37753	33813
30°	45940	34769	29290
35°	45729	30741	24417
40°	45051	25782	19411
45°	43563	20769	14677
50°	40398	15876	11071
55°	35865	12162	8246
60°	30775	9357	6382
65°	25390	7332	5049
70°	20507	5876	4128
75°	15606	4803	3523
80°	11675	3932	3109
85°	7949	3332	2827

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 43563 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.2	4.7
10°-20°	1184.8	13.2
20°-30°	1724.5	19.3
30°-40°	1850.7	20.7
40°-50°	1531.3	17.1
50°-60°	1015.0	11.3
60°-70°	578.3	6.5
70°-80°	286.8	3.2
80°-90°	116.0	1.3
90°-100°	68.1	0.8
100°-110°	60.6	0.7
110°-120°	45.7	0.5
120°-130°	30.4	0.3
130°-140°	18.7	0.2
140°-150°	10.7	0.1
150°-160°	5.4	0.1
160°-170°	2.3	0.0
170°-180°	0.6	0.0
0°-30°	3326.5	37.2
0°-40°	5177.2	57.9
0°-60°	7723.5	86.3
0°-90°	8704.5	97.3
90°-120°	174.5	2.0
90°-150°	234.2	2.6
90°-180°	243.0	2.7
0°-180°	8947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4411	4411	4411	4411	4411	
5°	4428	4417	4360	4393	4377	421
15°	4328	4294	4177	4139	4106	1223
25°	4114	4006	3730	3527	3449	1898
35°	3732	3436	2882	2505	2395	2332
45°	3088	2508	1783	1436	1339	2366
55°	2080	1471	916	725	672	1861
65°	1101	738	459	370	350	1106
75°	428	318	230	200	194	472
85°	84	90	106	112	111	97
90°	12	37	72	88	90	10
95°	13	39	73	88	90	11
105°	11	29	66	84	89	11
115°	6	20	51	72	78	6
125°	4	13	36	53	59	3
135°	3	11	25	37	42	2
145°	4	8	17	26	29	2
155°	4	7	12	16	20	2
165°	4	5	8	10	12	1
175°	4	5	6	6	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4410.7	4410.7	4410.7	4410.7	4410.7
2.5°	4435.6	4425.8	4375.2	4413.4	4401.8
5°	4428.5	4416.9	4360.1	4393.0	4377.0
7.5°	4413.4	4399.2	4335.3	4357.5	4338.0
10°	4389.4	4371.7	4295.4	4299.8	4277.6
12.5°	4363.7	4336.2	4243.0	4230.6	4203.1
15°	4328.2	4293.6	4177.4	4139.3	4106.4
17.5°	4287.4	4239.5	4095.8	4028.4	3985.8
20°	4236.8	4173.0	3994.7	3891.8	3826.1
22.5°	4188.0	4094.0	3874.0	3726.7	3657.6
25°	4113.5	4006.2	3730.3	3527.1	3449.1
27.5°	4039.9	3895.3	3553.8	3304.5	3214.0
30°	3953.8	3764.0	3360.4	3053.4	2941.7
32.5°	3854.5	3620.3	3135.9	2792.6	2673.7
35°	3732.1	3435.8	2882.2	2505.2	2395.2
37.5°	3600.8	3232.6	2620.5	2232.0	2118.4
40°	3448.2	3017.1	2324.2	1948.1	1844.3
42.5°	3278.8	2770.4	2049.2	1681.1	1577.3
45°	3088.0	2507.9	1783.1	1436.2	1338.6
47.5°	2868.9	2239.1	1525.8	1215.3	1133.7
50°	2613.4	1970.3	1284.5	1020.2	959.9
52.5°	2356.2	1717.4	1090.3	864.9	800.2
55°	2080.3	1470.8	916.4	724.8	672.4
57.5°	1813.3	1252.6	765.6	607.7	571.3
60°	1565.7	1057.4	647.6	512.7	483.5
62.5°	1328.0	891.5	542.0	433.8	408.1
65°	1100.9	738.1	458.6	369.9	350.4
67.5°	901.3	616.5	386.8	315.8	300.7
70°	728.3	498.6	325.6	270.6	258.1
72.5°	566.9	400.1	273.2	234.2	223.6
75°	427.6	318.5	229.8	200.5	194.3
77.5°	322.0	247.5	189.8	173.0	168.6
80°	222.7	184.5	157.0	149.9	147.3
82.5°	141.9	132.2	128.6	128.6	128.6
85°	84.3	90.5	105.6	111.8	110.9
87.5°	39.9	59.4	85.2	96.7	98.5
90°	11.5	37.3	71.9	87.8	90.5
92.5°	13.3	38.1	71.9	87.8	90.5
95°	13.3	39.0	72.7	87.8	90.5
97.5°	13.3	37.3	71.9	88.7	91.4
100°	13.3	36.4	71.0	87.8	91.4
102.5°	11.5	33.7	68.3	86.9	90.5
105°	10.6	29.3	65.6	84.3	88.7
107.5°	8.9	26.6	63.0	81.6	86.9
110°	8.0	24.0	59.4	79.0	85.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.1	21.3	55.0	76.3	81.6
115°	6.2	19.5	50.6	71.9	78.1
117.5°	5.3	17.7	46.1	67.4	74.5
120°	4.4	16.0	42.6	63.0	69.2
122.5°	4.4	15.1	39.0	57.7	64.8
125°	3.5	13.3	36.4	53.2	59.4
127.5°	3.5	12.4	32.8	48.8	54.1
130°	2.7	12.4	30.2	45.2	50.6
132.5°	2.7	11.5	26.6	40.8	46.1
135°	2.7	10.6	24.8	37.3	41.7
137.5°	2.7	10.6	22.2	34.6	39.0
140°	3.5	9.8	19.5	31.0	35.5
142.5°	3.5	8.9	18.6	28.4	31.9
145°	3.5	8.0	16.9	25.7	29.3
147.5°	3.5	8.0	15.1	23.1	26.6
150°	3.5	7.1	14.2	20.4	24.0
152.5°	3.5	7.1	13.3	17.7	22.2
155°	3.5	7.1	11.5	16.0	20.4
157.5°	3.5	6.2	10.6	14.2	17.7
160°	4.4	6.2	9.8	12.4	16.0
162.5°	4.4	6.2	8.9	11.5	14.2
165°	4.4	5.3	8.0	9.8	12.4
167.5°	4.4	5.3	8.0	8.9	10.6
170°	4.4	5.3	7.1	7.1	8.0
172.5°	4.4	5.3	6.2	7.1	5.3
175°	4.4	5.3	6.2	6.2	5.3
177.5°	4.4	5.3	5.3	6.2	5.3
180°	5.3	5.3	5.3	5.3	5.3



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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	21.88	23.27	22.30	23.64	24.03	17.00	18.39	17.42	18.76	19.15
	3H	22.98	24.22	23.40	24.60	25.04	18.15	19.39	18.57	19.77	20.20
	4H	23.27	24.43	23.72	24.84	25.29	18.65	19.81	19.10	20.22	20.66
	6H	23.42	24.49	23.88	24.91	25.37	19.16	20.23	19.62	20.65	21.11
	8H	23.43	24.45	23.91	24.89	25.36	19.42	20.44	19.90	20.88	21.35
	12H	23.42	24.40	23.90	24.83	25.33	19.72	20.69	20.20	21.13	21.62
4H	2H	21.86	23.02	22.30	23.42	23.87	17.51	18.66	17.95	19.07	19.52
	3H	23.09	24.05	23.55	24.51	24.97	18.83	19.78	19.28	20.24	20.71
	4H	23.47	24.33	23.95	24.79	25.30	19.42	20.28	19.90	20.75	21.26
	6H	23.69	24.44	24.20	24.94	25.46	20.05	20.80	20.55	21.29	21.82
	8H	23.73	24.43	24.24	24.92	25.46	20.37	21.07	20.89	21.57	22.10
	12H	23.74	24.36	24.27	24.89	25.42	20.75	21.37	21.28	21.90	22.44
8H	4H	23.45	24.15	23.96	24.64	25.18	19.67	20.36	20.18	20.86	21.39
	6H	23.72	24.30	24.26	24.84	25.38	20.40	20.98	20.94	21.52	22.06
	8H	23.79	24.30	24.35	24.86	25.41	20.81	21.32	21.37	21.88	22.44
	12H	23.82	24.28	24.38	24.82	25.45	21.30	21.76	21.86	22.30	22.93
12H	4H	23.43	24.05	23.95	24.58	25.11	19.68	20.30	20.21	20.83	21.37
	6H	23.70	24.22	24.26	24.78	25.33	20.43	20.95	21.00	21.51	22.06
	8H	23.80	24.26	24.35	24.80	25.42	20.90	21.36	21.45	21.90	22.53