

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: P893804

Luminaire Tested: 4MB-7HL-ACL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893804
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-7HL-ACL-UNV-L850
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K (C)
Light Source: -
Ballast/Driver: -

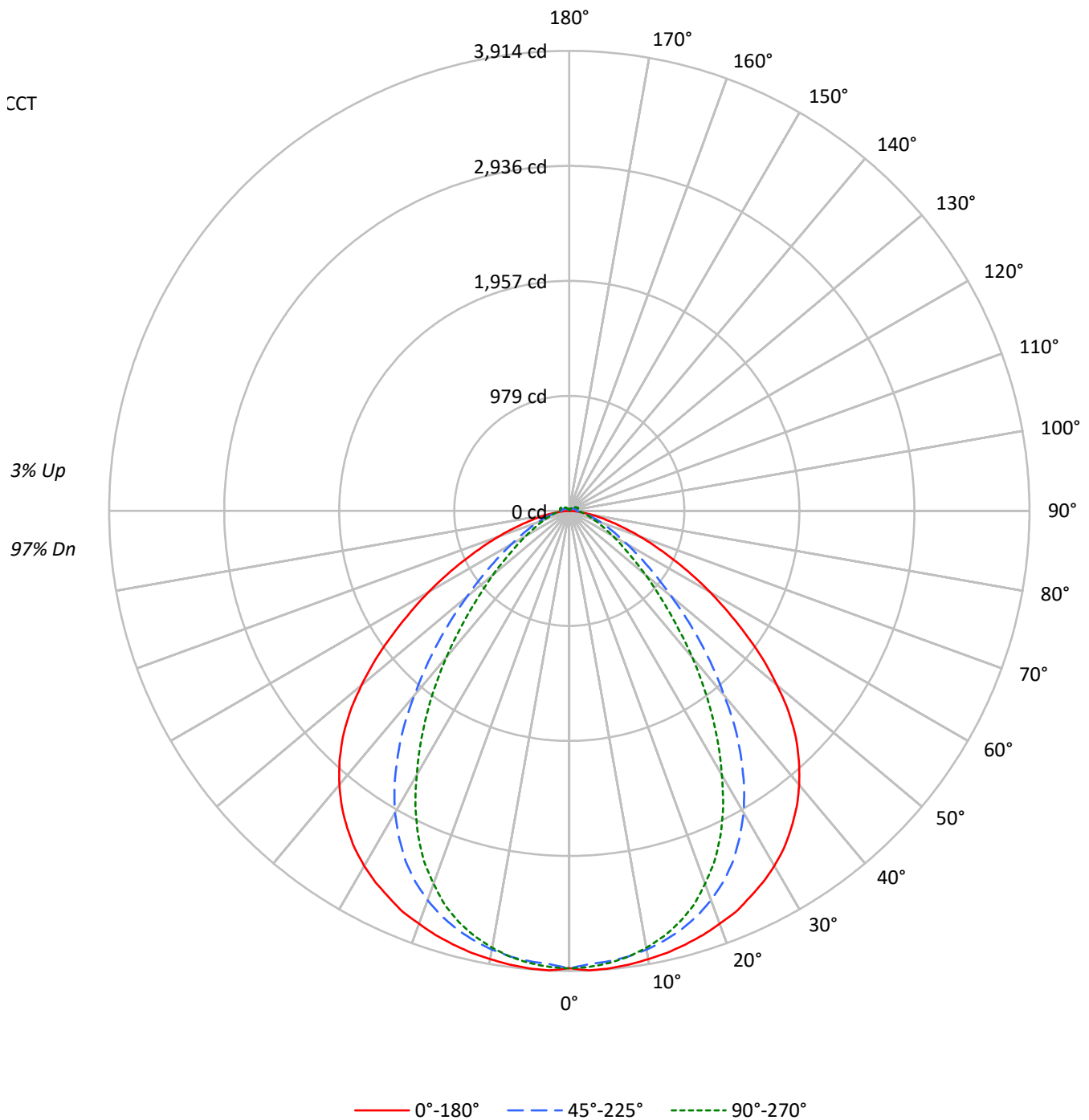
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7894.0 lumens
Efficiency: N/A
Efficacy: 152.4 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): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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	100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	87	87	87	85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	76	76	76	74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	67	67	67	65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	59	59	59	57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	52	52	52	50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	47	47	47	45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	42	42	42	41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	39	39	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	35	35	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	32	32	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39633	39633	39633
5°	39872	38531	38426
10°	39903	37622	36985
15°	40039	36545	35239
20°	40208	35170	32838
25°	40389	33310	29834
30°	40534	30677	25842
35°	40347	27124	21543
40°	39749	22748	17126
45°	38437	18324	12950
50°	35643	14008	9768
55°	31643	10730	7276
60°	27154	8256	5631
65°	22401	6470	4455
70°	18094	5185	3644
75°	13770	4236	3107
80°	10301	3469	2742
85°	7015	2937	2493

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 38437 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.1	4.7
10°-20°	1045.3	13.2
20°-30°	1521.6	19.3
30°-40°	1632.9	20.7
40°-50°	1351.1	17.1
50°-60°	895.5	11.3
60°-70°	510.2	6.5
70°-80°	253.0	3.2
80°-90°	102.3	1.3
90°-100°	60.1	0.8
100°-110°	53.5	0.7
110°-120°	40.4	0.5
120°-130°	26.8	0.3
130°-140°	16.5	0.2
140°-150°	9.4	0.1
150°-160°	4.8	0.1
160°-170°	2.1	0.0
170°-180°	0.5	0.0
0°-30°	2935.0	37.2
0°-40°	4567.9	57.9
0°-60°	6814.5	86.3
0°-90°	7680.0	97.3
90°-120°	153.9	2.0
90°-150°	206.6	2.6
90°-180°	214.0	2.7
0°-180°	7894.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3892	3892	3892	3892	3892	
5°	3907	3897	3847	3876	3862	372
15°	3819	3788	3686	3652	3623	1079
25°	3629	3535	3291	3112	3043	1675
35°	3293	3031	2543	2210	2113	2058
45°	2725	2213	1573	1267	1181	2088
55°	1835	1298	808	640	593	1642
65°	971	651	405	326	309	976
75°	377	281	203	177	171	416
85°	74	80	93	99	98	86
90°	10	33	63	78	80	9
95°	12	34	64	78	80	10
105°	9	26	58	74	78	10
115°	6	17	45	63	69	5
125°	3	12	32	47	52	3
135°	2	9	22	33	37	2
145°	3	7	15	23	26	2
155°	3	6	10	14	18	1
165°	4	5	7	9	11	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°	3891.6	3891.6	3891.6	3891.6	3891.6
2.5°	3913.5	3904.9	3860.3	3893.9	3883.8
5°	3907.3	3897.1	3847.0	3875.9	3861.9
7.5°	3893.9	3881.4	3825.1	3844.6	3827.4
10°	3872.8	3857.2	3789.8	3793.8	3774.2
12.5°	3850.1	3825.9	3743.7	3732.7	3708.4
15°	3818.8	3788.3	3685.8	3652.1	3623.1
17.5°	3782.8	3740.5	3613.7	3554.3	3516.7
20°	3738.2	3681.8	3524.5	3433.7	3375.8
22.5°	3695.1	3612.2	3418.1	3288.1	3227.1
25°	3629.4	3534.7	3291.3	3112.0	3043.2
27.5°	3564.4	3436.9	3135.5	2915.6	2835.7
30°	3488.5	3321.0	2964.9	2694.1	2595.4
32.5°	3400.8	3194.2	2766.9	2464.0	2359.1
35°	3292.8	3031.4	2543.0	2210.4	2113.3
37.5°	3177.0	2852.2	2312.1	1969.3	1869.1
40°	3042.4	2662.0	2050.7	1718.8	1627.2
42.5°	2892.9	2444.4	1808.0	1483.2	1391.6
45°	2724.6	2212.7	1573.2	1267.2	1181.1
47.5°	2531.3	1975.5	1346.2	1072.3	1000.3
50°	2305.8	1738.4	1133.4	900.1	846.9
52.5°	2078.9	1515.3	961.9	763.1	706.0
55°	1835.4	1297.7	808.5	639.5	593.3
57.5°	1599.8	1105.2	675.5	536.2	504.1
60°	1381.5	933.0	571.4	452.4	426.6
62.5°	1171.7	786.6	478.2	382.7	360.0
65°	971.3	651.2	404.7	326.4	309.2
67.5°	795.2	544.0	341.3	278.6	265.3
70°	642.6	439.9	287.3	238.7	227.8
72.5°	500.1	353.0	241.1	206.6	197.2
75°	377.3	281.0	202.7	176.9	171.4
77.5°	284.1	218.4	167.5	152.6	148.7
80°	196.5	162.8	138.5	132.3	129.9
82.5°	125.2	116.6	113.5	113.5	113.5
85°	74.4	79.8	93.1	98.6	97.8
87.5°	35.2	52.4	75.1	85.3	86.9
90°	10.2	32.9	63.4	77.5	79.8
92.5°	11.7	33.7	63.4	77.5	79.8
95°	11.7	34.4	64.2	77.5	79.8
97.5°	11.7	32.9	63.4	78.3	80.6
100°	11.7	32.1	62.6	77.5	80.6
102.5°	10.2	29.7	60.3	76.7	79.8
105°	9.4	25.8	57.9	74.4	78.3
107.5°	7.8	23.5	55.6	72.0	76.7
110°	7.0	21.1	52.4	69.7	75.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.3	18.8	48.5	67.3	72.0
115°	5.5	17.2	44.6	63.4	68.9
117.5°	4.7	15.7	40.7	59.5	65.7
120°	3.9	14.1	37.6	55.6	61.1
122.5°	3.9	13.3	34.4	50.9	57.1
125°	3.1	11.7	32.1	47.0	52.4
127.5°	3.1	11.0	29.0	43.0	47.7
130°	2.3	11.0	26.6	39.9	44.6
132.5°	2.3	10.2	23.5	36.0	40.7
135°	2.3	9.4	21.9	32.9	36.8
137.5°	2.3	9.4	19.6	30.5	34.4
140°	3.1	8.6	17.2	27.4	31.3
142.5°	3.1	7.8	16.4	25.0	28.2
145°	3.1	7.0	14.9	22.7	25.8
147.5°	3.1	7.0	13.3	20.4	23.5
150°	3.1	6.3	12.5	18.0	21.1
152.5°	3.1	6.3	11.7	15.7	19.6
155°	3.1	6.3	10.2	14.1	18.0
157.5°	3.1	5.5	9.4	12.5	15.7
160°	3.9	5.5	8.6	11.0	14.1
162.5°	3.9	5.5	7.8	10.2	12.5
165°	3.9	4.7	7.0	8.6	11.0
167.5°	3.9	4.7	7.0	7.8	9.4
170°	3.9	4.7	6.3	6.3	7.0
172.5°	3.9	4.7	5.5	6.3	4.7
175°	3.9	4.7	5.5	5.5	4.7
177.5°	3.9	4.7	4.7	5.5	4.7
180°	4.7	4.7	4.7	4.7	4.7



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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	21.45	22.84	21.86	23.21	23.59	16.57	17.96	16.98	18.33	18.71
	3H	22.54	23.78	22.97	24.17	24.60	17.71	18.95	18.14	19.34	19.77
	4H	22.84	24.00	23.29	24.40	24.85	18.22	19.38	18.66	19.78	20.23
	6H	22.98	24.05	23.44	24.48	24.94	18.72	19.79	19.18	20.22	20.68
	8H	23.00	24.01	23.47	24.46	24.93	18.99	20.00	19.46	20.45	20.92
	12H	22.99	23.96	23.47	24.40	24.89	19.28	20.25	19.76	20.69	21.19
4H	2H	21.42	22.58	21.87	22.99	23.43	17.07	18.23	17.52	18.64	19.08
	3H	22.66	23.61	23.12	24.07	24.54	18.39	19.35	18.85	19.80	20.27
	4H	23.03	23.89	23.51	24.36	24.87	18.99	19.85	19.47	20.32	20.82
	6H	23.26	24.01	23.76	24.50	25.03	19.61	20.36	20.12	20.86	21.38
	8H	23.29	23.99	23.81	24.49	25.02	19.94	20.64	20.45	21.13	21.67
	12H	23.30	23.92	23.83	24.45	24.99	20.31	20.94	20.84	21.47	22.00
8H	4H	23.01	23.71	23.52	24.21	24.74	19.23	19.93	19.74	20.43	20.96
	6H	23.29	23.86	23.83	24.41	24.95	19.96	20.54	20.51	21.08	21.62
	8H	23.35	23.87	23.91	24.43	24.98	20.37	20.89	20.93	21.45	22.00
	12H	23.39	23.85	23.95	24.39	25.02	20.86	21.32	21.42	21.86	22.49
12H	4H	22.99	23.61	23.52	24.14	24.68	19.25	19.87	19.78	20.40	20.93
	6H	23.26	23.78	23.82	24.34	24.89	20.00	20.52	20.56	21.08	21.63
	8H	23.36	23.82	23.92	24.36	24.99	20.46	20.92	21.02	21.46	22.09