

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: P893807

Luminaire Tested: 4MB-7HL-ACL-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893807
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-L940
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K (C)
Light Source: -
Ballast/Driver: -

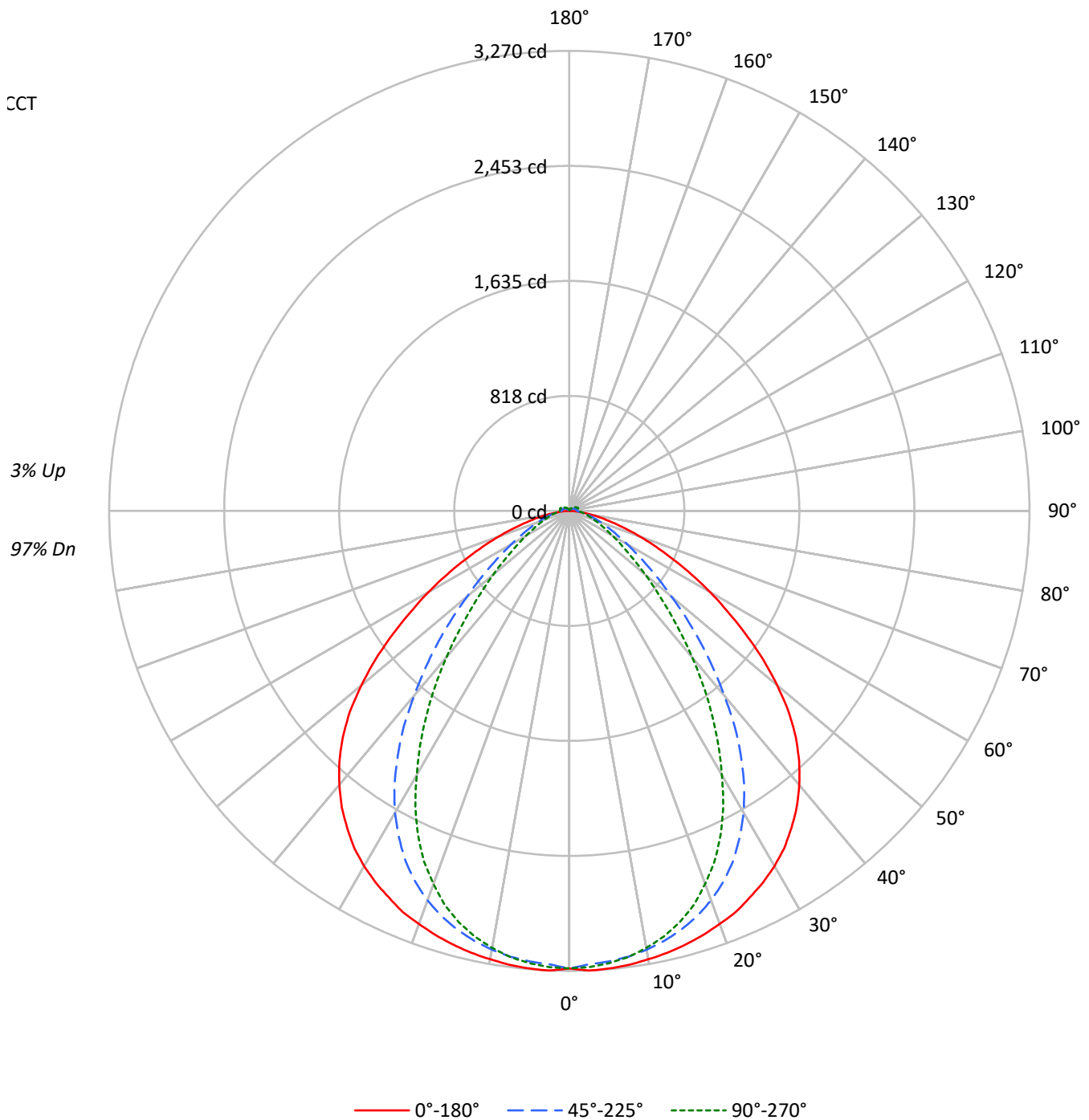
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6597.0 lumens
Efficiency: N/A
Efficacy: 127.4 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°	33121	33121	33121
5°	33321	32200	32112
10°	33347	31442	30908
15°	33461	30540	29449
20°	33601	29391	27442
25°	33754	27837	24932
30°	33874	25636	21597
35°	33718	22667	18004
40°	33218	19011	14313
45°	32121	15313	10822
50°	29788	11706	8162
55°	26445	8968	6080
60°	22693	6899	4705
65°	18720	5407	3723
70°	15120	4333	3044
75°	11508	3540	2596
80°	8608	2900	2292
85°	5855	2455	2085

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 32121 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	307.6	4.7
10°-20°	873.6	13.2
20°-30°	1271.6	19.3
30°-40°	1364.6	20.7
40°-50°	1129.1	17.1
50°-60°	748.4	11.3
60°-70°	426.4	6.5
70°-80°	211.4	3.2
80°-90°	85.5	1.3
90°-100°	50.2	0.8
100°-110°	44.7	0.7
110°-120°	33.7	0.5
120°-130°	22.4	0.3
130°-140°	13.8	0.2
140°-150°	7.8	0.1
150°-160°	4.0	0.1
160°-170°	1.7	0.0
170°-180°	0.4	0.0
0°-30°	2452.8	37.2
0°-40°	3817.4	57.9
0°-60°	5694.9	86.3
0°-90°	6418.2	97.3
90°-120°	128.7	2.0
90°-150°	172.7	2.6
90°-180°	179.0	2.7
0°-180°	6597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3252	3252	3252	3252	3252	
5°	3265	3257	3215	3239	3227	311
15°	3191	3166	3080	3052	3028	902
25°	3033	2954	2750	2601	2543	1400
35°	2752	2533	2125	1847	1766	1719
45°	2277	1849	1315	1059	987	1745
55°	1534	1084	676	534	496	1372
65°	812	544	338	273	258	815
75°	315	235	169	148	143	348
85°	62	67	78	82	82	72
90°	8	28	53	65	67	8
95°	10	29	54	65	67	8
105°	8	22	48	62	65	8
115°	5	14	37	53	58	5
125°	3	10	27	39	44	3
135°	2	8	18	28	31	2
145°	3	6	12	19	22	2
155°	3	5	8	12	15	1
165°	3	4	6	7	9	1
175°	3	4	5	5	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3252.2	3252.2	3252.2	3252.2	3252.2
2.5°	3270.5	3263.3	3226.0	3254.2	3245.7
5°	3265.3	3256.8	3214.9	3239.1	3227.3
7.5°	3254.2	3243.7	3196.6	3213.0	3198.6
10°	3236.5	3223.4	3167.2	3170.4	3154.1
12.5°	3217.5	3197.3	3128.6	3119.4	3099.1
15°	3191.4	3165.9	3080.2	3052.0	3027.8
17.5°	3161.3	3126.0	3020.0	2970.3	2938.9
20°	3124.0	3076.9	2945.4	2869.6	2821.1
22.5°	3088.0	3018.7	2856.5	2747.9	2696.9
25°	3033.1	2953.9	2750.5	2600.7	2543.2
27.5°	2978.8	2872.2	2620.3	2436.5	2369.8
30°	2915.3	2775.4	2477.7	2251.4	2169.0
32.5°	2842.1	2669.4	2312.3	2059.1	1971.5
35°	2751.8	2533.3	2125.2	1847.2	1766.1
37.5°	2655.0	2383.6	1932.2	1645.7	1562.0
40°	2542.5	2224.6	1713.8	1436.4	1359.9
42.5°	2417.6	2042.8	1511.0	1239.5	1163.0
45°	2276.9	1849.2	1314.7	1059.0	987.0
47.5°	2115.4	1651.0	1125.1	896.1	835.9
50°	1927.0	1452.8	947.1	752.2	707.7
52.5°	1737.3	1266.3	803.9	637.8	590.0
55°	1533.9	1084.5	675.7	534.4	495.8
57.5°	1337.0	923.6	564.5	448.1	421.2
60°	1154.5	779.7	477.5	378.1	356.5
62.5°	979.2	657.4	399.7	319.9	300.9
65°	811.7	544.2	338.2	272.8	258.4
67.5°	664.6	454.6	285.2	232.9	221.7
70°	537.0	367.6	240.1	199.5	190.3
72.5°	418.0	295.0	201.5	172.7	164.8
75°	315.3	234.8	169.4	147.8	143.2
77.5°	237.4	182.5	140.0	127.6	124.3
80°	164.2	136.1	115.8	110.5	108.6
82.5°	104.7	97.5	94.8	94.8	94.8
85°	62.1	66.7	77.8	82.4	81.8
87.5°	29.4	43.8	62.8	71.3	72.6
90°	8.5	27.5	53.0	64.8	66.7
92.5°	9.8	28.1	53.0	64.8	66.7
95°	9.8	28.8	53.6	64.8	66.7
97.5°	9.8	27.5	53.0	65.4	67.4
100°	9.8	26.8	52.3	64.8	67.4
102.5°	8.5	24.9	50.4	64.1	66.7
105°	7.8	21.6	48.4	62.1	65.4
107.5°	6.5	19.6	46.4	60.2	64.1
110°	5.9	17.7	43.8	58.2	62.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	15.7	40.6	56.3	60.2
115°	4.6	14.4	37.3	53.0	57.6
117.5°	3.9	13.1	34.0	49.7	54.9
120°	3.3	11.8	31.4	46.4	51.0
122.5°	3.3	11.1	28.8	42.5	47.7
125°	2.6	9.8	26.8	39.2	43.8
127.5°	2.6	9.2	24.2	36.0	39.9
130°	2.0	9.2	22.2	33.4	37.3
132.5°	2.0	8.5	19.6	30.1	34.0
135°	2.0	7.8	18.3	27.5	30.7
137.5°	2.0	7.8	16.4	25.5	28.8
140°	2.6	7.2	14.4	22.9	26.2
142.5°	2.6	6.5	13.7	20.9	23.5
145°	2.6	5.9	12.4	19.0	21.6
147.5°	2.6	5.9	11.1	17.0	19.6
150°	2.6	5.2	10.5	15.0	17.7
152.5°	2.6	5.2	9.8	13.1	16.4
155°	2.6	5.2	8.5	11.8	15.0
157.5°	2.6	4.6	7.8	10.5	13.1
160°	3.3	4.6	7.2	9.2	11.8
162.5°	3.3	4.6	6.5	8.5	10.5
165°	3.3	3.9	5.9	7.2	9.2
167.5°	3.3	3.9	5.9	6.5	7.8
170°	3.3	3.9	5.2	5.2	5.9
172.5°	3.3	3.9	4.6	5.2	3.9
175°	3.3	3.9	4.6	4.6	3.9
177.5°	3.3	3.9	3.9	4.6	3.9
180°	3.9	3.9	3.9	3.9	3.9



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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	20.83	22.21	21.24	22.58	22.97	15.95	17.33	16.36	17.70	18.09
	3H	21.92	23.16	22.35	23.55	23.98	17.09	18.33	17.51	18.71	19.14
	4H	22.22	23.37	22.66	23.78	24.23	17.59	18.75	18.04	19.16	19.61
	6H	22.36	23.43	22.82	23.85	24.31	18.10	19.17	18.56	19.59	20.05
	8H	22.37	23.39	22.85	23.84	24.30	18.36	19.38	18.84	19.82	20.29
	12H	22.37	23.34	22.84	23.77	24.27	18.66	19.63	19.14	20.07	20.56
4H	2H	20.80	21.96	21.25	22.36	22.81	16.45	17.61	16.90	18.01	18.46
	3H	22.03	22.99	22.49	23.45	23.91	17.77	18.72	18.23	19.18	19.65
	4H	22.41	23.27	22.89	23.74	24.24	18.36	19.22	18.84	19.69	20.20
	6H	22.64	23.38	23.14	23.88	24.40	18.99	19.74	19.50	20.23	20.76
	8H	22.67	23.37	23.18	23.86	24.40	19.32	20.01	19.83	20.51	21.04
	12H	22.68	23.30	23.21	23.83	24.37	19.69	20.31	20.22	20.84	21.38
8H	4H	22.39	23.09	22.90	23.58	24.12	18.61	19.31	19.12	19.80	20.33
	6H	22.66	23.24	23.21	23.78	24.32	19.34	19.92	19.88	20.46	21.00
	8H	22.73	23.25	23.29	23.80	24.36	19.75	20.27	20.31	20.82	21.38
	12H	22.77	23.23	23.32	23.77	24.39	20.24	20.70	20.80	21.24	21.87
12H	4H	22.37	22.99	22.90	23.52	24.05	18.62	19.24	19.15	19.77	20.31
	6H	22.64	23.16	23.20	23.72	24.27	19.38	19.89	19.94	20.45	21.01
	8H	22.74	23.20	23.29	23.74	24.37	19.84	20.30	20.40	20.84	21.47