

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: P893795

Luminaire Tested: 4MB-7HL-A-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893795
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-A-UNV-L840
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

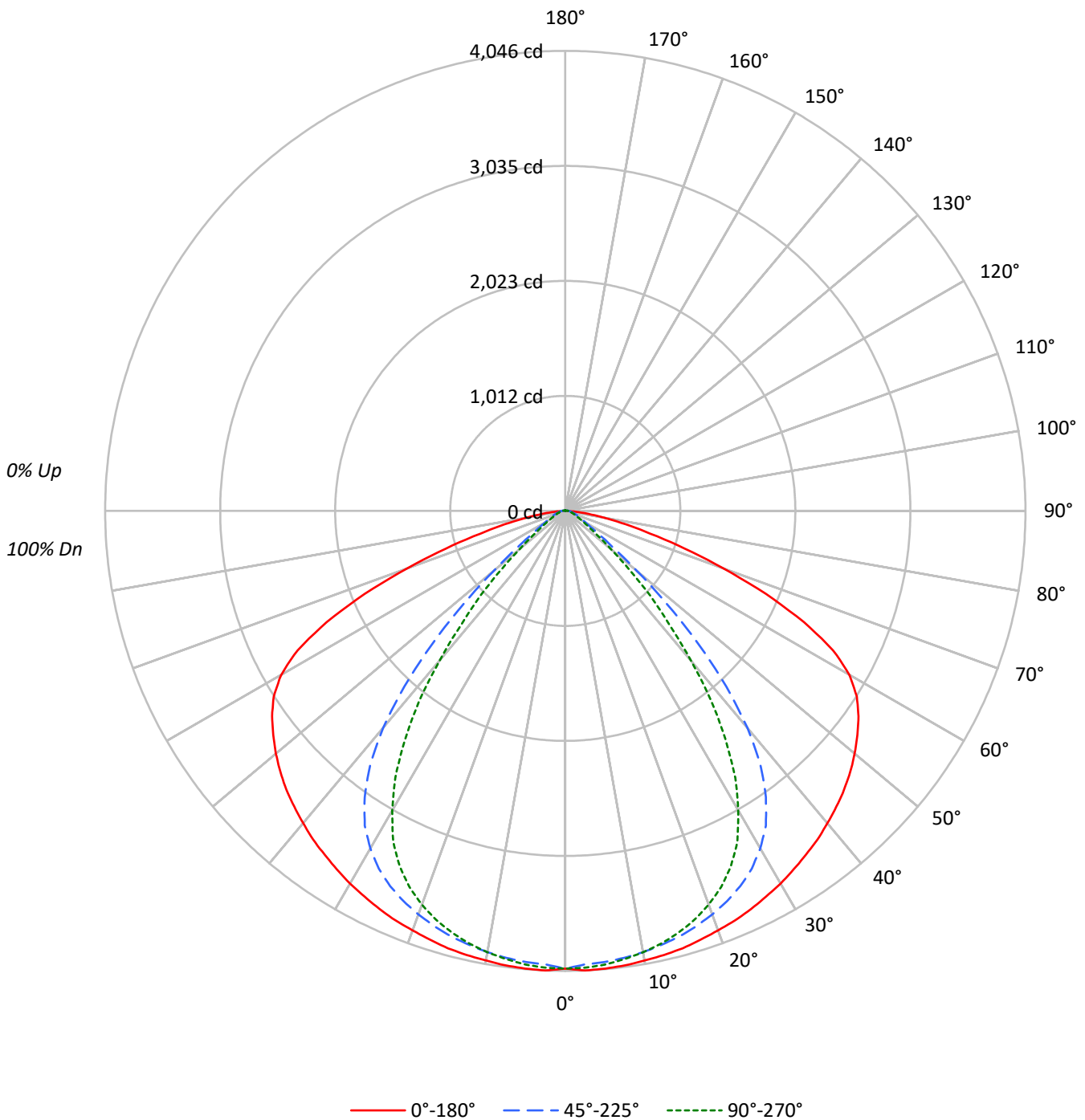
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8151.0 lumens
Efficiency: N/A
Efficacy: 157.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
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				
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	40995	40995	40995
5°	41314	40723	40956
10°	41532	40753	40761
15°	41990	40852	40499
20°	42545	40928	39947
25°	43411	40914	38716
30°	44508	40303	35766
35°	45873	38229	30528
40°	47666	33110	22832
45°	49941	23825	15201
50°	52624	13057	8331
55°	55881	6417	4796
60°	58771	4231	3316
65°	55779	3465	2622
70°	43912	3150	2424
75°	30452	3112	2306
80°	20040	3126	2856
85°	11475	4803	4896

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 58771 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.8	4.7
10°-20°	1101.8	13.5
20°-30°	1678.6	20.6
30°-40°	1906.2	23.4
40°-50°	1530.7	18.8
50°-60°	821.1	10.1
60°-70°	434.3	5.3
70°-80°	196.9	2.4
80°-90°	62.7	0.8
90°-100°	19.4	0.2
100°-110°	7.0	0.1
110°-120°	2.1	0.0
120°-130°	1.6	0.0
130°-140°	1.7	0.0
140°-150°	1.8	0.0
150°-160°	1.7	0.0
160°-170°	1.2	0.0
170°-180°	0.5	0.0
0°-30°	3162.1	38.8
0°-40°	5068.3	62.2
0°-60°	7420.1	91.0
0°-90°	8114.0	99.5
90°-120°	28.5	0.3
90°-150°	33.6	0.4
90°-180°	37.0	0.5
0°-180°	8151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4025	4025	4025	4025	4025	
5°	4041	4033	3983	4017	4006	385
15°	3983	3958	3875	3864	3841	1126
25°	3863	3802	3641	3514	3445	1785
35°	3690	3533	3075	2629	2456	2315
45°	3468	2934	1654	1150	1055	2678
55°	3147	1174	361	282	270	2806
65°	2315	273	144	116	109	2239
75°	774	156	79	62	59	875
85°	98	59	41	41	42	134
90°	4	27	30	34	33	6
95°	4	11	24	20	20	3
105°	2	2	5	11	13	3
115°	2	2	2	3	3	1
125°	2	2	2	2	2	1
135°	2	2	2	2	2	2
145°	2	2	3	3	3	1
155°	3	3	4	5	4	1
165°	3	4	5	5	5	1
175°	4	4	5	6	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4025.3	4025.3	4025.3	4025.3	4025.3
2.5°	4045.8	4038.2	3992.5	4030.6	4020.7
5°	4041.2	4032.9	3983.4	4016.9	4006.2
7.5°	4031.3	4020.7	3965.1	3992.5	3975.8
10°	4016.1	4005.5	3940.8	3959.8	3941.6
12.5°	4000.9	3982.6	3908.8	3914.9	3897.4
15°	3982.6	3957.5	3874.6	3863.9	3841.1
17.5°	3954.5	3926.3	3829.7	3804.6	3772.6
20°	3925.6	3887.5	3776.4	3725.5	3685.9
22.5°	3898.9	3846.4	3715.6	3634.1	3580.9
25°	3863.2	3801.5	3641.0	3513.9	3445.4
27.5°	3824.4	3749.0	3548.9	3358.7	3277.3
30°	3784.8	3685.9	3427.2	3163.9	3041.4
32.5°	3738.4	3616.6	3281.1	2928.0	2783.4
35°	3689.7	3532.9	3074.9	2629.0	2455.5
37.5°	3643.3	3436.3	2820.7	2266.0	2112.3
40°	3585.4	3323.7	2490.5	1876.4	1717.4
42.5°	3528.4	3150.2	2094.8	1502.8	1350.6
45°	3467.5	2934.1	1654.2	1150.5	1055.4
47.5°	3398.3	2638.1	1210.6	837.8	755.6
50°	3321.4	2212.0	824.1	570.7	525.8
52.5°	3236.9	1713.6	535.7	393.4	367.5
55°	3147.2	1174.1	361.4	282.3	270.1
57.5°	3039.1	735.8	267.8	212.3	205.4
60°	2885.4	477.1	207.7	171.2	162.8
62.5°	2654.1	341.7	174.3	140.0	133.2
65°	2314.7	273.2	143.8	116.4	108.8
67.5°	1908.4	233.6	123.3	99.7	94.4
70°	1474.7	205.4	105.8	86.7	81.4
72.5°	1100.3	179.6	91.3	75.3	68.5
75°	773.9	156.0	79.1	62.4	58.6
77.5°	544.1	134.7	65.4	53.3	52.5
80°	341.7	111.9	53.3	49.5	48.7
82.5°	207.7	88.3	46.4	45.7	44.9
85°	98.2	58.6	41.1	41.1	41.9
87.5°	32.0	38.8	35.0	36.5	36.5
90°	3.8	26.6	29.7	34.2	32.7
92.5°	3.8	19.0	27.4	27.4	22.1
95°	3.8	10.7	23.6	20.5	19.8
97.5°	3.8	5.3	17.5	19.8	19.0
100°	3.8	3.0	12.9	17.5	19.0
102.5°	3.0	2.3	8.4	14.5	16.0
105°	2.3	1.5	4.6	10.7	12.9
107.5°	1.5	1.5	3.0	7.6	9.1
110°	1.5	0.8	2.3	5.3	6.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.5	0.8	2.3	3.8	3.8
115°	1.5	1.5	1.5	3.0	3.0
117.5°	1.5	1.5	1.5	2.3	2.3
120°	1.5	1.5	1.5	2.3	1.5
122.5°	1.5	1.5	1.5	2.3	1.5
125°	1.5	1.5	1.5	2.3	1.5
127.5°	1.5	1.5	2.3	2.3	1.5
130°	1.5	1.5	2.3	2.3	1.5
132.5°	1.5	1.5	2.3	2.3	2.3
135°	2.3	1.5	2.3	2.3	2.3
137.5°	2.3	2.3	2.3	3.0	2.3
140°	2.3	2.3	3.0	3.0	2.3
142.5°	2.3	2.3	3.0	3.0	3.0
145°	2.3	2.3	3.0	3.0	3.0
147.5°	2.3	2.3	3.0	3.8	3.0
150°	2.3	3.0	3.8	3.8	3.0
152.5°	2.3	3.0	3.8	3.8	3.8
155°	3.0	3.0	3.8	4.6	3.8
157.5°	3.0	3.0	3.8	4.6	3.8
160°	3.0	3.0	4.6	4.6	4.6
162.5°	3.0	3.8	4.6	5.3	4.6
165°	3.0	3.8	4.6	5.3	4.6
167.5°	3.0	3.8	4.6	5.3	5.3
170°	3.0	3.8	5.3	5.3	5.3
172.5°	3.8	3.8	5.3	6.1	5.3
175°	3.8	3.8	5.3	6.1	5.3
177.5°	3.8	3.8	5.3	6.1	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	22.57	23.96	22.94	24.28	24.61	10.78	12.17	11.15	12.49	12.82
	3H	25.47	26.70	25.85	27.04	27.41	11.74	12.97	12.12	13.31	13.68
	4H	26.25	27.40	26.66	27.76	28.15	12.16	13.31	12.57	13.67	14.06
	6H	26.69	27.75	27.11	28.12	28.53	12.64	13.70	13.06	14.07	14.48
	8H	26.79	27.79	27.22	28.19	28.61	12.95	13.95	13.38	14.35	14.77
	12H	26.82	27.79	27.26	28.18	28.62	13.35	14.31	13.79	14.70	15.14
4H	2H	22.38	23.53	22.79	23.89	24.28	11.30	12.45	11.71	12.81	13.20
	3H	25.30	26.24	25.72	26.65	27.07	12.51	13.45	12.93	13.86	14.27
	4H	26.09	26.94	26.53	27.36	27.82	13.04	13.89	13.48	14.31	14.77
	6H	26.62	27.35	27.09	27.80	28.28	13.68	14.41	14.15	14.86	15.34
	8H	26.76	27.45	27.24	27.90	28.38	14.08	14.76	14.56	15.22	15.70
	12H	26.84	27.45	27.33	27.94	28.42	14.61	15.22	15.10	15.71	16.19
8H	4H	25.98	26.66	26.45	27.12	27.60	13.61	14.29	14.08	14.74	15.22
	6H	26.51	27.07	27.02	27.57	28.06	14.38	14.94	14.89	15.44	15.93
	8H	26.68	27.18	27.20	27.70	28.20	14.90	15.41	15.43	15.93	16.43
	12H	26.79	27.24	27.31	27.74	28.32	15.60	16.05	16.12	16.55	17.13
12H	4H	25.94	26.54	26.43	27.03	27.52	13.85	14.46	14.35	14.95	15.43
	6H	26.46	26.96	26.98	27.48	27.98	14.65	15.16	15.18	15.68	16.18
	8H	26.65	27.09	27.17	27.60	28.17	15.25	15.70	15.77	16.20	16.78