

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: P893139

Luminaire Tested: 4MB-10HL-A-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893139
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-10HL-A-UNV-L840
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

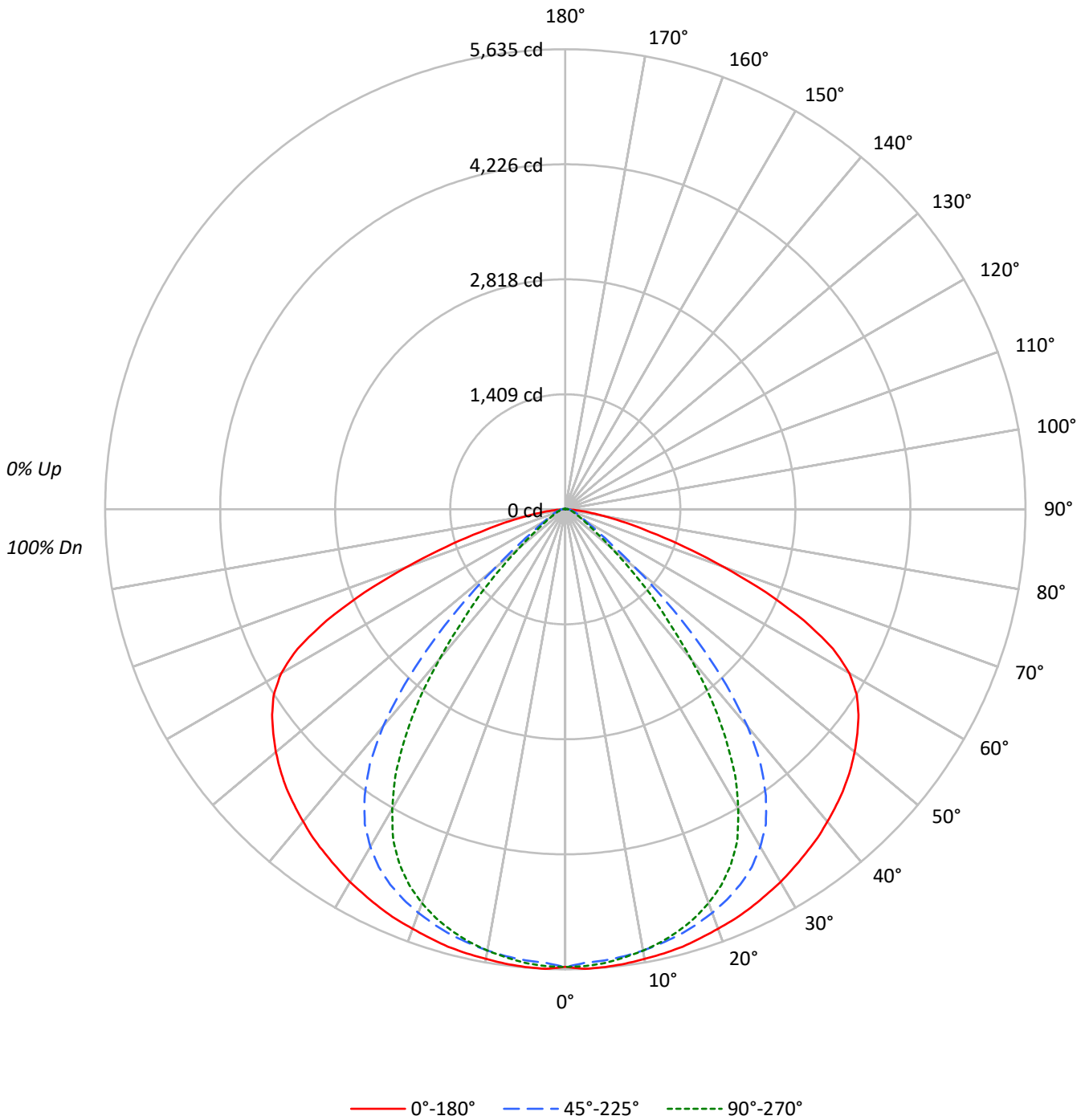
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11352.0 lumens
Efficiency: N/A
Efficacy: 150.4 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): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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°	57093	57093	57093
5°	57539	56715	57040
10°	57842	56757	56769
15°	58481	56895	56403
20°	59252	57001	55635
25°	60459	56982	53921
30°	61987	56130	49812
35°	63888	53241	42517
40°	66386	46112	31798
45°	69553	33182	21170
50°	73290	18184	11602
55°	77825	8938	6680
60°	81851	5893	4620
65°	77684	4827	3651
70°	61155	4386	3377
75°	42410	4336	3211
80°	27905	4352	3976
85°	15973	6684	6812

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 81851 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.7	4.7
10°-20°	1534.5	13.5
20°-30°	2337.7	20.6
30°-40°	2654.9	23.4
40°-50°	2131.8	18.8
50°-60°	1143.5	10.1
60°-70°	604.8	5.3
70°-80°	274.2	2.4
80°-90°	87.3	0.8
90°-100°	27.0	0.2
100°-110°	9.7	0.1
110°-120°	3.0	0.0
120°-130°	2.2	0.0
130°-140°	2.4	0.0
140°-150°	2.5	0.0
150°-160°	2.3	0.0
160°-170°	1.7	0.0
170°-180°	0.7	0.0
0°-30°	4403.9	38.8
0°-40°	7058.8	62.2
0°-60°	10334.1	91.0
0°-90°	11300.5	99.5
90°-120°	39.7	0.4
90°-150°	46.8	0.4
90°-180°	52.0	0.5
0°-180°	11352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5606	5606	5606	5606	5606	
5°	5628	5617	5548	5594	5580	536
15°	5547	5512	5396	5381	5350	1568
25°	5380	5294	5071	4894	4798	2486
35°	5139	4920	4282	3661	3420	3224
45°	4829	4086	2304	1602	1470	3730
55°	4383	1635	503	393	376	3908
65°	3224	380	200	162	152	3118
75°	1078	217	110	87	82	1219
85°	137	82	57	57	58	186
90°	5	37	41	48	46	8
95°	5	15	33	29	28	4
105°	3	2	6	15	18	4
115°	2	2	2	4	4	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	4	4	4	2
155°	4	4	5	6	5	2
165°	4	5	6	7	6	1
175°	5	5	7	8	7	0
180°	7	7	7	7	7	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5606.0	5606.0	5606.0	5606.0	5606.0
2.5°	5634.6	5624.0	5560.5	5613.4	5599.7
5°	5628.3	5616.6	5547.7	5594.4	5579.5
7.5°	5614.5	5599.7	5522.3	5560.5	5537.1
10°	5593.3	5578.5	5488.4	5514.9	5489.5
12.5°	5572.1	5546.7	5443.9	5452.4	5428.0
15°	5546.7	5511.7	5396.2	5381.4	5349.6
17.5°	5507.5	5468.3	5333.7	5298.7	5254.2
20°	5467.2	5414.2	5259.5	5188.5	5133.4
22.5°	5430.1	5357.0	5174.7	5061.3	4987.1
25°	5380.3	5294.5	5070.9	4893.9	4798.5
27.5°	5326.3	5221.3	4942.6	4677.7	4564.3
30°	5271.1	5133.4	4773.1	4406.4	4235.8
32.5°	5206.5	5036.9	4569.6	4077.9	3876.5
35°	5138.7	4920.4	4282.4	3661.4	3419.8
37.5°	5074.0	4785.8	3928.5	3155.9	2941.8
40°	4993.5	4628.9	3468.5	2613.3	2391.8
42.5°	4914.0	4387.3	2917.5	2093.0	1881.0
45°	4829.2	4086.4	2303.9	1602.3	1469.9
47.5°	4732.8	3674.1	1686.0	1166.8	1052.3
50°	4625.8	3080.7	1147.7	794.8	732.3
52.5°	4508.1	2386.5	746.1	547.9	511.9
55°	4383.1	1635.2	503.4	393.2	376.2
57.5°	4232.6	1024.8	373.0	295.7	286.1
60°	4018.5	664.5	289.3	238.4	226.8
62.5°	3696.4	475.8	242.7	195.0	185.5
65°	3223.7	380.4	200.3	162.1	151.5
67.5°	2657.8	325.3	171.7	138.8	131.4
70°	2053.8	286.1	147.3	120.8	113.4
72.5°	1532.4	250.1	127.2	104.9	95.4
75°	1077.8	217.2	110.2	86.9	81.6
77.5°	757.7	187.6	91.1	74.2	73.1
80°	475.8	155.8	74.2	68.9	67.8
82.5°	289.3	122.9	64.6	63.6	62.5
85°	136.7	81.6	57.2	57.2	58.3
87.5°	44.5	54.0	48.7	50.9	50.9
90°	5.3	37.1	41.3	47.7	45.6
92.5°	5.3	26.5	38.2	38.2	30.7
95°	5.3	14.8	32.9	28.6	27.6
97.5°	5.3	7.4	24.4	27.6	26.5
100°	5.3	4.2	18.0	24.4	26.5
102.5°	4.2	3.2	11.7	20.1	22.3
105°	3.2	2.1	6.4	14.8	18.0
107.5°	2.1	2.1	4.2	10.6	12.7
110°	2.1	1.1	3.2	7.4	8.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	1.1	3.2	5.3	5.3
115°	2.1	2.1	2.1	4.2	4.2
117.5°	2.1	2.1	2.1	3.2	3.2
120°	2.1	2.1	2.1	3.2	2.1
122.5°	2.1	2.1	2.1	3.2	2.1
125°	2.1	2.1	2.1	3.2	2.1
127.5°	2.1	2.1	3.2	3.2	2.1
130°	2.1	2.1	3.2	3.2	2.1
132.5°	2.1	2.1	3.2	3.2	3.2
135°	3.2	2.1	3.2	3.2	3.2
137.5°	3.2	3.2	3.2	4.2	3.2
140°	3.2	3.2	4.2	4.2	3.2
142.5°	3.2	3.2	4.2	4.2	4.2
145°	3.2	3.2	4.2	4.2	4.2
147.5°	3.2	3.2	4.2	5.3	4.2
150°	3.2	4.2	5.3	5.3	4.2
152.5°	3.2	4.2	5.3	5.3	5.3
155°	4.2	4.2	5.3	6.4	5.3
157.5°	4.2	4.2	5.3	6.4	5.3
160°	4.2	4.2	6.4	6.4	6.4
162.5°	4.2	5.3	6.4	7.4	6.4
165°	4.2	5.3	6.4	7.4	6.4
167.5°	4.2	5.3	6.4	7.4	7.4
170°	4.2	5.3	7.4	7.4	7.4
172.5°	5.3	5.3	7.4	8.5	7.4
175°	5.3	5.3	7.4	8.5	7.4
177.5°	5.3	5.3	7.4	8.5	7.4
180°	7.4	7.4	7.4	7.4	7.4



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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	23.72	25.11	24.09	25.43	25.76	11.93	13.32	12.30	13.64	13.97
	3H	26.62	27.85	27.00	28.19	28.56	12.89	14.12	13.27	14.46	14.84
	4H	27.40	28.55	27.81	28.91	29.30	13.31	14.46	13.72	14.82	15.21
	6H	27.84	28.90	28.26	29.28	29.68	13.79	14.85	14.21	15.22	15.63
	8H	27.94	28.94	28.37	29.34	29.76	14.10	15.10	14.53	15.50	15.92
	12H	27.98	28.94	28.41	29.33	29.77	14.50	15.46	14.94	15.85	16.29
4H	2H	23.53	24.68	23.94	25.04	25.43	12.45	13.60	12.86	13.96	14.35
	3H	26.45	27.39	26.87	27.80	28.22	13.66	14.60	14.08	15.01	15.43
	4H	27.24	28.09	27.68	28.51	28.97	14.19	15.04	14.64	15.47	15.92
	6H	27.77	28.50	28.24	28.95	29.43	14.83	15.56	15.30	16.01	16.49
	8H	27.91	28.60	28.39	29.05	29.53	15.23	15.91	15.71	16.37	16.85
	12H	27.99	28.60	28.49	29.09	29.57	15.76	16.37	16.25	16.86	17.34
8H	4H	27.13	27.81	27.60	28.27	28.75	14.76	15.44	15.23	15.89	16.37
	6H	27.66	28.22	28.17	28.72	29.22	15.53	16.09	16.04	16.59	17.08
	8H	27.83	28.33	28.35	28.85	29.35	16.05	16.56	16.58	17.08	17.58
	12H	27.94	28.39	28.47	28.89	29.47	16.75	17.20	17.27	17.70	18.28
12H	4H	27.09	27.70	27.58	28.19	28.67	15.00	15.61	15.50	16.10	16.58
	6H	27.61	28.11	28.13	28.63	29.13	15.80	16.31	16.33	16.83	17.33
	8H	27.80	28.24	28.32	28.75	29.33	16.40	16.85	16.92	17.35	17.93