

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: P893140

Luminaire Tested: 4MB-10HL-A-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893140
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-L850
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

Summary

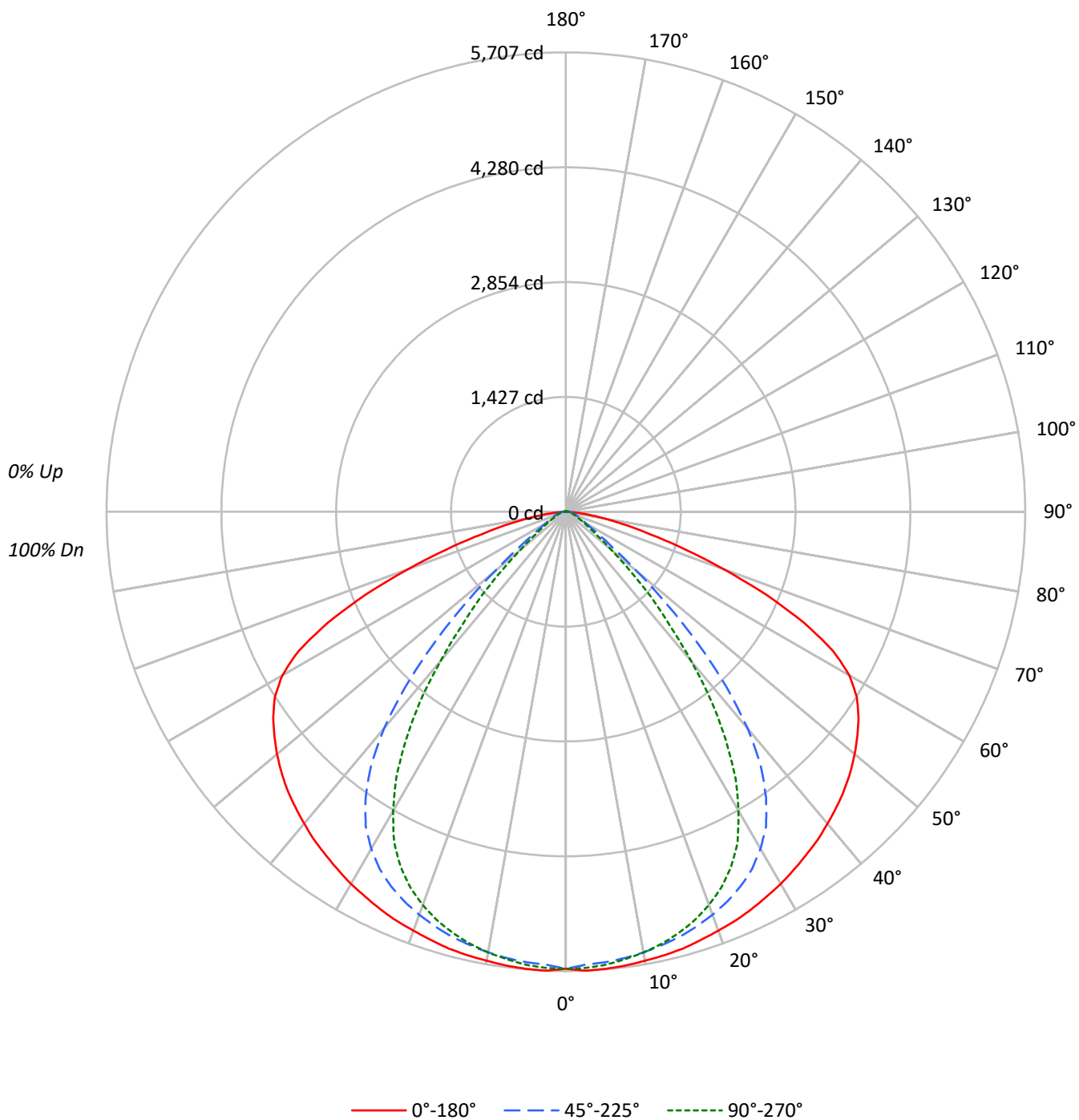
Lumens per Lamp: N/A
Luminaire Lumens: 11496.9 lumens
Efficiency: N/A
Efficacy: 152.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 75.5
Input Voltage (V): 120
Input Current (Ain): 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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	111	107	104	101	108	105	102	99	101	98	96		97	95	93		93
2	103	96	90	86	100	94	89	85	91	86	83		88	84	81		85
3	95	86	80	74	93	85	79	74	82	77	72		79	75	71		77
4	88	78	71	65	86	77	70	64	74	68	64		72	67	63		70
5	82	71	63	57	80	70	63	57	68	61	56		66	60	56		64
6	76	65	57	51	75	64	56	51	62	55	50		60	55	50		59
7	71	59	51	46	70	58	51	46	57	50	45		56	50	45		54
8	67	55	47	42	65	54	47	41	53	46	41		51	45	41		50
9	63	50	43	38	61	50	43	38	49	42	38		48	42	37		47
10	59	47	39	35	58	46	39	35	45	39	34		44	38	34		43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	57822	57822	57822
5°	58274	57440	57769
10°	58580	57482	57494
15°	59228	57621	57123
20°	60009	57730	56345
25°	61231	57709	54610
30°	62779	56846	50448
35°	64703	53922	43060
40°	67234	46701	32205
45°	70442	33606	21440
50°	74225	18417	11750
55°	78819	9052	6765
60°	82897	5968	4679
65°	78677	4887	3699
70°	61935	4443	3418
75°	42949	4391	3250
80°	28263	4405	4029
85°	16184	6777	6894

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 60°

Luminance: 82897 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	538.5	4.7
10°-20°	1554.1	13.5
20°-30°	2367.6	20.6
30°-40°	2688.8	23.4
40°-50°	2159.0	18.8
50°-60°	1158.1	10.1
60°-70°	612.6	5.3
70°-80°	277.7	2.4
80°-90°	88.5	0.8
90°-100°	27.4	0.2
100°-110°	9.8	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°	2.4	0.0
160°-170°	1.7	0.0
170°-180°	0.7	0.0
0°-30°	4460.2	38.8
0°-40°	7148.9	62.2
0°-60°	10466.1	91.0
0°-90°	11444.8	99.5
90°-120°	40.2	0.3
90°-150°	47.3	0.4
90°-180°	52.0	0.5
0°-180°	11496.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5678	5678	5678	5678	5678	
5°	5700	5688	5619	5666	5651	543
15°	5618	5582	5465	5450	5418	1588
25°	5449	5362	5136	4956	4860	2518
35°	5204	4983	4337	3708	3464	3265
45°	4891	4139	2333	1623	1489	3778
55°	4439	1656	510	398	381	3958
65°	3265	385	203	164	154	3157
75°	1092	220	112	88	83	1235
85°	138	83	58	58	59	189
90°	5	38	42	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	8	6	1
175°	5	5	8	9	8	0
180°	8	8	8	8	8	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5677.6	5677.6	5677.6	5677.6	5677.6
2.5°	5706.6	5695.9	5631.5	5685.1	5671.2
5°	5700.2	5688.4	5618.6	5665.8	5650.8
7.5°	5686.2	5671.2	5592.8	5631.5	5607.9
10°	5664.7	5649.7	5558.5	5585.3	5559.6
12.5°	5643.3	5617.5	5513.4	5522.0	5497.3
15°	5617.5	5582.1	5465.1	5450.1	5417.9
17.5°	5577.8	5538.1	5401.8	5366.4	5321.3
20°	5537.0	5483.4	5326.7	5254.8	5198.9
22.5°	5499.5	5425.4	5240.8	5126.0	5050.8
25°	5449.0	5362.1	5135.6	4956.4	4859.8
27.5°	5394.3	5288.0	5005.8	4737.4	4622.6
30°	5338.5	5198.9	4834.0	4462.7	4289.9
32.5°	5273.0	5101.3	4628.0	4130.0	3926.0
35°	5204.3	4983.2	4337.1	3708.2	3463.5
37.5°	5138.8	4846.9	3978.6	3196.2	2979.4
40°	5057.3	4688.1	3512.8	2646.7	2422.4
42.5°	4976.8	4443.4	2954.7	2119.7	1905.1
45°	4890.9	4138.6	2333.3	1622.8	1488.6
47.5°	4793.2	3721.0	1707.6	1181.7	1065.8
50°	4684.8	3120.0	1162.4	805.0	741.6
52.5°	4565.7	2417.0	755.6	554.9	518.4
55°	4439.1	1656.1	509.8	398.2	381.0
57.5°	4286.7	1037.9	377.8	299.4	289.8
60°	4069.9	672.9	293.0	241.5	229.7
62.5°	3743.6	481.9	245.8	197.5	187.8
65°	3264.9	385.3	202.8	164.2	153.5
67.5°	2691.8	329.5	173.9	140.6	133.1
70°	2080.0	289.8	149.2	122.4	114.8
72.5°	1552.0	253.3	128.8	106.3	96.6
75°	1091.5	220.0	111.6	88.0	82.6
77.5°	767.4	190.0	92.3	75.1	74.1
80°	481.9	157.8	75.1	69.8	68.7
82.5°	293.0	124.5	65.5	64.4	63.3
85°	138.5	82.6	58.0	58.0	59.0
87.5°	45.1	54.7	49.4	51.5	51.5
90°	5.4	37.6	41.9	48.3	46.2
92.5°	5.4	26.8	38.6	38.6	31.1
95°	5.4	15.0	33.3	29.0	27.9
97.5°	5.4	7.5	24.7	27.9	26.8
100°	5.4	4.3	18.2	24.7	26.8
102.5°	4.3	3.2	11.8	20.4	22.5
105°	3.2	2.1	6.4	15.0	18.2
107.5°	2.1	2.1	4.3	10.7	12.9
110°	2.1	1.1	3.2	7.5	8.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	1.1	3.2	5.4	5.4
115°	2.1	2.1	2.1	4.3	4.3
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	4.3	3.2
140°	3.2	3.2	4.3	4.3	3.2
142.5°	3.2	3.2	4.3	4.3	4.3
145°	3.2	3.2	4.3	4.3	4.3
147.5°	3.2	3.2	4.3	5.4	4.3
150°	3.2	4.3	5.4	5.4	4.3
152.5°	3.2	4.3	5.4	5.4	5.4
155°	4.3	4.3	5.4	6.4	5.4
157.5°	4.3	4.3	5.4	6.4	5.4
160°	4.3	4.3	6.4	6.4	6.4
162.5°	4.3	5.4	6.4	7.5	6.4
165°	4.3	5.4	6.4	7.5	6.4
167.5°	4.3	5.4	6.4	7.5	7.5
170°	4.3	5.4	7.5	7.5	7.5
172.5°	5.4	5.4	7.5	8.6	7.5
175°	5.4	5.4	7.5	8.6	7.5
177.5°	5.4	5.4	7.5	8.6	7.5
180°	7.5	7.5	7.5	7.5	7.5

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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	23.76	25.15	24.14	25.47	25.80	11.97	13.36	12.35	13.68	14.01
	3H	26.66	27.89	27.05	28.23	28.61	12.93	14.16	13.32	14.50	14.88
	4H	27.44	28.60	27.85	28.96	29.35	13.35	14.50	13.76	14.86	15.26
	6H	27.88	28.94	28.30	29.32	29.72	13.83	14.89	14.25	15.27	15.67
	8H	27.98	28.99	28.42	29.39	29.80	14.14	15.14	14.58	15.54	15.96
	12H	28.02	28.98	28.46	29.37	29.81	14.54	15.51	14.98	15.90	16.34
4H	2H	23.58	24.73	23.99	25.09	25.48	12.49	13.64	12.90	14.00	14.39
	3H	26.49	27.44	26.91	27.85	28.26	13.70	14.64	14.12	15.06	15.47
	4H	27.29	28.13	27.73	28.56	29.01	14.24	15.08	14.68	15.51	15.96
	6H	27.81	28.54	28.28	29.00	29.47	14.87	15.60	15.34	16.06	16.53
	8H	27.96	28.64	28.43	29.10	29.58	15.28	15.96	15.75	16.41	16.89
	12H	28.04	28.64	28.53	29.13	29.62	15.80	16.41	16.30	16.90	17.38
8H	4H	27.17	27.86	27.65	28.31	28.79	14.80	15.48	15.28	15.94	16.42
	6H	27.70	28.27	28.21	28.77	29.26	15.57	16.13	16.08	16.64	17.13
	8H	27.87	28.38	28.40	28.90	29.40	16.09	16.60	16.62	17.12	17.62
	12H	27.99	28.44	28.51	28.94	29.52	16.80	17.24	17.32	17.75	18.33
12H	4H	27.13	27.74	27.63	28.23	28.71	15.05	15.65	15.54	16.14	16.63
	6H	27.65	28.16	28.18	28.68	29.18	15.85	16.35	16.37	16.87	17.38
	8H	27.84	28.29	28.36	28.79	29.37	16.44	16.89	16.96	17.39	17.97