

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: P893150

Luminaire Tested: 4MB-10HL-ACL-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893150
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-10HL-ACL-UNV-L935
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3500K
Light Source: -
Ballast/Driver: -

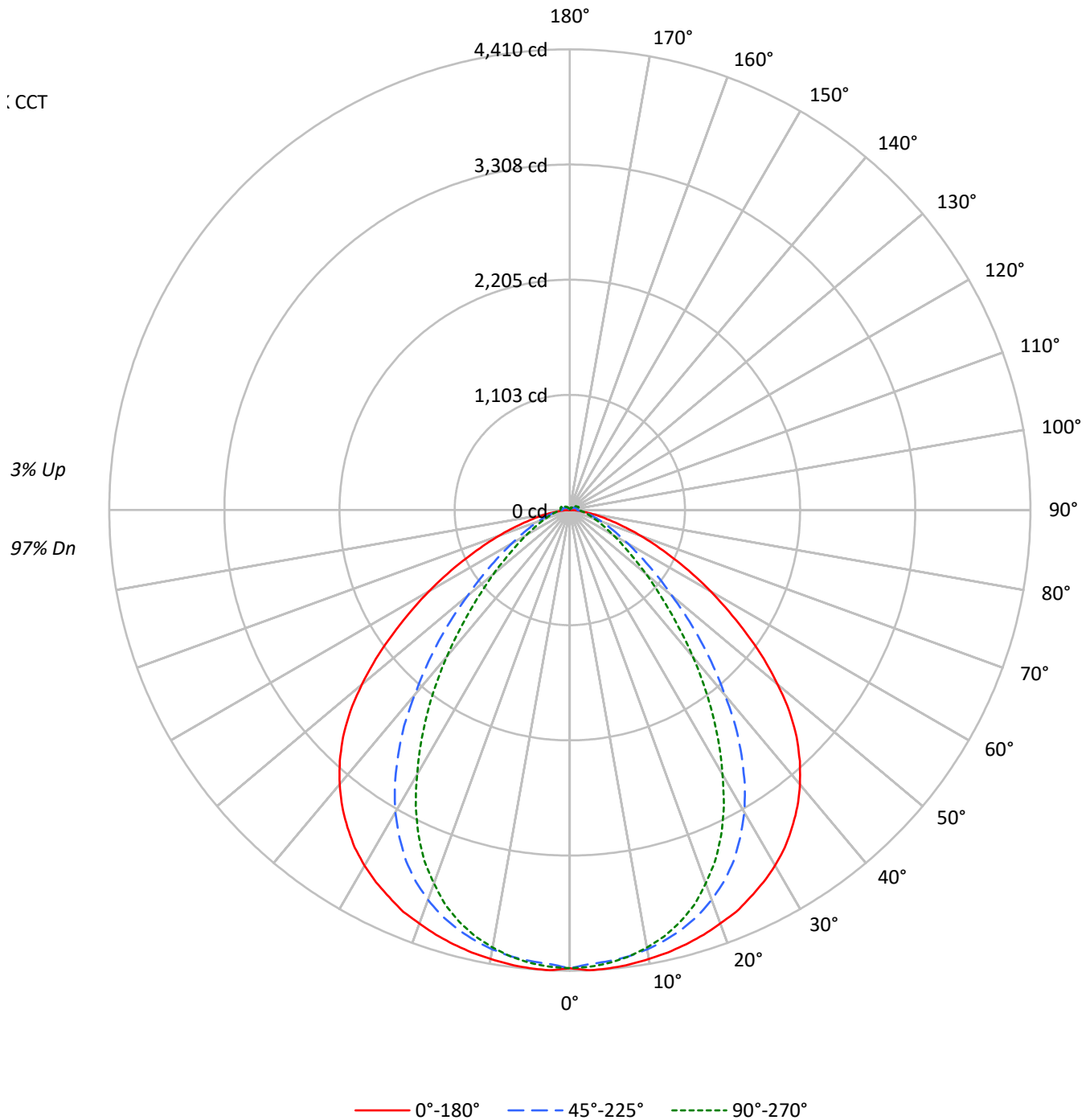
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8895.0 lumens
Efficiency: N/A
Efficacy: 117.8 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): 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				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°	44659	44659	44659
5°	44927	43417	43299
10°	44963	42393	41675
15°	45117	41178	39708
20°	45306	39629	37002
25°	45511	37533	33616
30°	45674	34566	29120
35°	45464	30563	24275
40°	44790	25632	19299
45°	43311	20647	14592
50°	40163	15784	11006
55°	35656	12092	8198
60°	30596	9302	6345
65°	25242	7290	5020
70°	20389	5842	4104
75°	15515	4773	3501
80°	11607	3910	3090
85°	7901	3313	2809

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 43311 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.8	4.7
10°-20°	1177.9	13.2
20°-30°	1714.5	19.3
30°-40°	1839.9	20.7
40°-50°	1522.4	17.1
50°-60°	1009.1	11.3
60°-70°	574.9	6.5
70°-80°	285.1	3.2
80°-90°	115.3	1.3
90°-100°	67.7	0.8
100°-110°	60.3	0.7
110°-120°	45.5	0.5
120°-130°	30.2	0.3
130°-140°	18.6	0.2
140°-150°	10.6	0.1
150°-160°	5.4	0.1
160°-170°	2.3	0.0
170°-180°	0.6	0.0
0°-30°	3307.2	37.2
0°-40°	5147.1	57.9
0°-60°	7678.6	86.3
0°-90°	8653.9	97.3
90°-120°	173.4	1.9
90°-150°	232.8	2.6
90°-180°	241.0	2.7
0°-180°	8895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4385	4385	4385	4385	4385	
5°	4403	4391	4335	4367	4352	419
15°	4303	4269	4153	4115	4083	1216
25°	4090	3983	3709	3507	3429	1887
35°	3710	3416	2866	2491	2381	2318
45°	3070	2493	1773	1428	1331	2352
55°	2068	1462	911	721	668	1850
65°	1094	734	456	368	348	1099
75°	425	317	228	199	193	469
85°	84	90	105	111	110	97
90°	12	37	71	87	90	10
95°	13	39	72	87	90	11
105°	11	29	65	84	88	11
115°	6	19	50	71	78	6
125°	4	13	36	53	59	3
135°	3	11	25	37	42	2
145°	4	8	17	26	29	2
155°	4	7	12	16	20	2
165°	4	5	8	10	12	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°	4385.1	4385.1	4385.1	4385.1	4385.1
2.5°	4409.8	4400.1	4349.8	4387.7	4376.3
5°	4402.7	4391.2	4334.8	4367.4	4351.6
7.5°	4387.7	4373.6	4310.1	4332.2	4312.8
10°	4363.9	4346.3	4270.4	4274.8	4252.8
12.5°	4338.3	4311.0	4218.4	4206.0	4178.7
15°	4303.1	4268.7	4153.1	4115.2	4082.6
17.5°	4262.5	4214.9	4072.0	4005.0	3962.6
20°	4212.2	4148.7	3971.4	3869.1	3803.9
22.5°	4163.7	4070.2	3851.5	3705.1	3636.3
25°	4089.6	3982.9	3708.6	3506.6	3429.0
27.5°	4016.4	3872.7	3533.1	3285.3	3195.3
30°	3930.9	3742.1	3340.8	3035.7	2924.6
32.5°	3832.1	3599.3	3117.7	2776.4	2658.2
35°	3710.4	3415.8	2865.5	2490.6	2381.3
37.5°	3579.9	3213.8	2605.3	2219.0	2106.1
40°	3428.2	2999.5	2310.7	1936.8	1833.6
42.5°	3259.7	2754.3	2037.3	1671.3	1568.1
45°	3070.1	2493.3	1772.7	1427.9	1330.9
47.5°	2852.2	2226.1	1517.0	1208.3	1127.1
50°	2598.2	1958.8	1277.1	1014.2	954.3
52.5°	2342.5	1707.5	1083.9	859.9	795.5
55°	2068.2	1462.3	911.1	720.6	668.5
57.5°	1802.7	1245.3	761.1	604.1	568.0
60°	1556.6	1051.3	643.8	509.8	480.7
62.5°	1320.3	886.4	538.9	431.3	405.7
65°	1094.5	733.8	456.0	367.8	348.4
67.5°	896.1	613.0	384.5	314.0	299.0
70°	724.1	495.7	323.7	269.0	256.6
72.5°	563.6	397.8	271.6	232.8	222.3
75°	425.1	316.6	228.4	199.3	193.1
77.5°	320.1	246.1	188.7	172.0	167.6
80°	221.4	183.4	156.1	149.1	146.4
82.5°	141.1	131.4	127.9	127.9	127.9
85°	83.8	90.0	105.0	111.1	110.2
87.5°	39.7	59.1	84.7	96.1	97.9
90°	11.5	37.0	71.4	87.3	90.0
92.5°	13.2	37.9	71.4	87.3	90.0
95°	13.2	38.8	72.3	87.3	90.0
97.5°	13.2	37.0	71.4	88.2	90.8
100°	13.2	36.2	70.6	87.3	90.8
102.5°	11.5	33.5	67.9	86.4	90.0
105°	10.6	29.1	65.3	83.8	88.2
107.5°	8.8	26.5	62.6	81.1	86.4
110°	7.9	23.8	59.1	78.5	84.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.1	21.2	54.7	75.8	81.1
115°	6.2	19.4	50.3	71.4	77.6
117.5°	5.3	17.6	45.9	67.0	74.1
120°	4.4	15.9	42.3	62.6	68.8
122.5°	4.4	15.0	38.8	57.3	64.4
125°	3.5	13.2	36.2	52.9	59.1
127.5°	3.5	12.3	32.6	48.5	53.8
130°	2.6	12.3	30.0	45.0	50.3
132.5°	2.6	11.5	26.5	40.6	45.9
135°	2.6	10.6	24.7	37.0	41.5
137.5°	2.6	10.6	22.0	34.4	38.8
140°	3.5	9.7	19.4	30.9	35.3
142.5°	3.5	8.8	18.5	28.2	31.8
145°	3.5	7.9	16.8	25.6	29.1
147.5°	3.5	7.9	15.0	22.9	26.5
150°	3.5	7.1	14.1	20.3	23.8
152.5°	3.5	7.1	13.2	17.6	22.0
155°	3.5	7.1	11.5	15.9	20.3
157.5°	3.5	6.2	10.6	14.1	17.6
160°	4.4	6.2	9.7	12.3	15.9
162.5°	4.4	6.2	8.8	11.5	14.1
165°	4.4	5.3	7.9	9.7	12.3
167.5°	4.4	5.3	7.9	8.8	10.6
170°	4.4	5.3	7.1	7.1	7.9
172.5°	4.4	5.3	6.2	7.1	5.3
175°	4.4	5.3	6.2	6.2	5.3
177.5°	4.4	5.3	5.3	6.2	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	21.86	23.25	22.28	23.62	24.01	16.98	18.37	17.39	18.74	19.13
	3H	22.96	24.20	23.38	24.58	25.02	18.13	19.37	18.55	19.75	20.18
	4H	23.25	24.41	23.70	24.82	25.27	18.63	19.79	19.08	20.20	20.64
	6H	23.40	24.47	23.86	24.89	25.35	19.14	20.21	19.60	20.63	21.09
	8H	23.41	24.43	23.89	24.87	25.34	19.40	20.42	19.88	20.86	21.33
	12H	23.40	24.38	23.88	24.81	25.31	19.70	20.67	20.18	21.11	21.60
4H	2H	21.84	23.00	22.28	23.40	23.85	17.49	18.64	17.93	19.05	19.50
	3H	23.07	24.03	23.53	24.49	24.95	18.80	19.76	19.26	20.22	20.69
	4H	23.45	24.31	23.93	24.77	25.28	19.40	20.26	19.88	20.73	21.24
	6H	23.67	24.42	24.18	24.92	25.44	20.03	20.78	20.53	21.27	21.80
	8H	23.71	24.41	24.22	24.90	25.44	20.35	21.05	20.87	21.55	22.08
	12H	23.72	24.34	24.25	24.87	25.40	20.73	21.35	21.26	21.88	22.42
8H	4H	23.43	24.13	23.94	24.62	25.15	19.65	20.34	20.16	20.84	21.37
	6H	23.70	24.28	24.24	24.82	25.36	20.38	20.95	20.92	21.50	22.04
	8H	23.76	24.28	24.33	24.84	25.39	20.79	21.30	21.35	21.86	22.42
	12H	23.80	24.26	24.36	24.80	25.43	21.28	21.74	21.84	22.28	22.91
12H	4H	23.41	24.03	23.93	24.56	25.09	19.66	20.28	20.19	20.81	21.35
	6H	23.68	24.20	24.24	24.76	25.31	20.41	20.93	20.97	21.49	22.04
	8H	23.78	24.24	24.33	24.78	25.40	20.88	21.34	21.43	21.88	22.51