

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: P893158

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893158
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-19)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-AOL-UNV-L935
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 3500K CCT
Light Source: -
Ballast/Driver: -

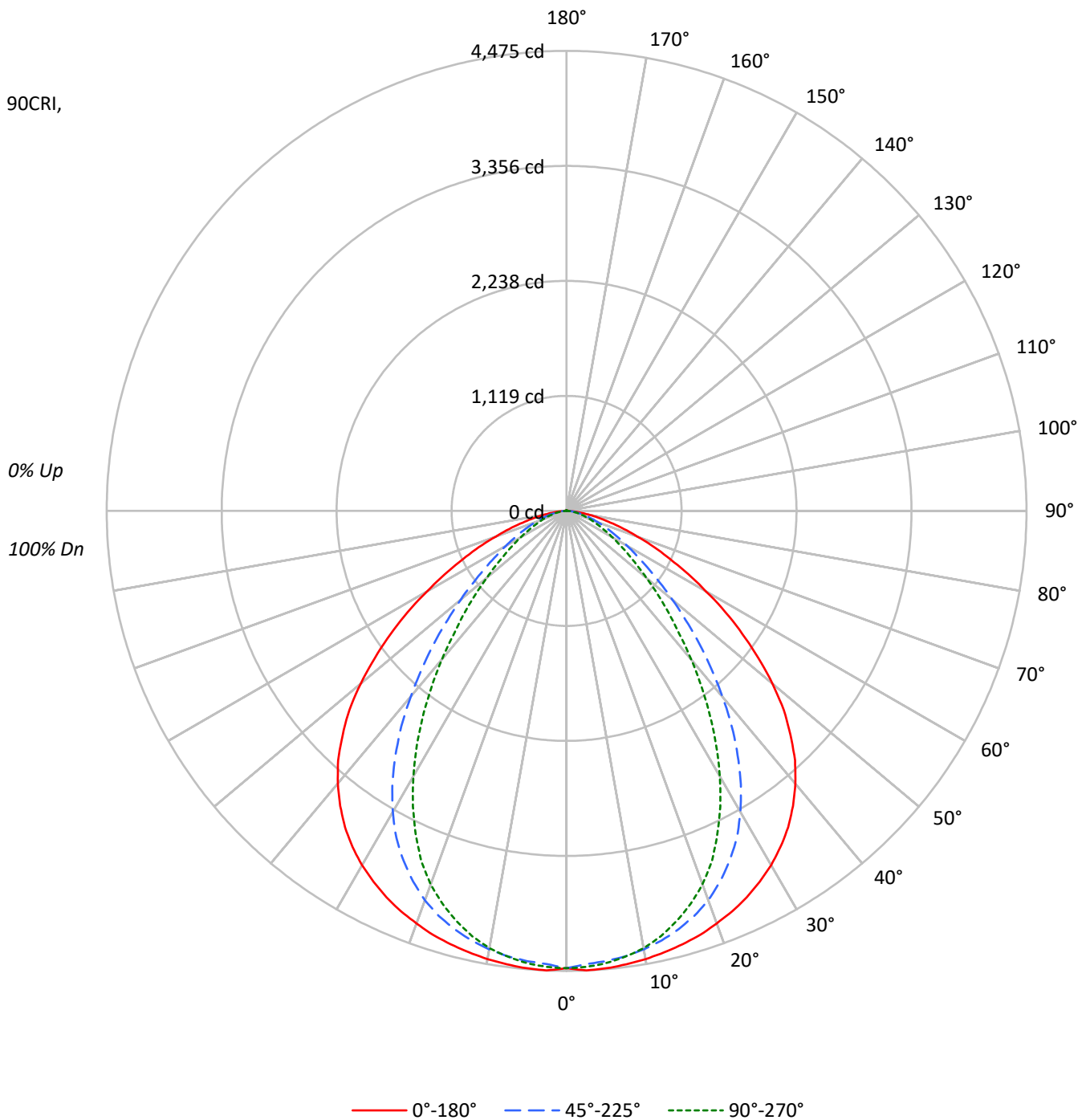
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8792.9 lumens
Efficiency: N/A
Efficacy: 116.5 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.16
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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CATALOG NUMBER: 4MB-10HL-AOL-UNV-L935

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	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	88
2	102	95	90	85	100	93	88	84	90	86	82	87	83	80	84	81	78	78	78	78	76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	68	68	68	67
4	87	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	61	61	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	54	54	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	45	56	49	44	55	48	44	53	48	44	44	44	44	42
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	40	40	40	38
9	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	36	36	36	34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	33	33	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	45303	45303	45303
5°	45656	44944	45142
10°	45783	44789	44670
15°	46009	44409	43572
20°	46280	43689	41902
25°	46607	42187	39016
30°	46805	39762	35075
35°	46731	36084	30283
40°	46043	31351	25115
45°	44367	26305	20221
50°	41430	21337	16055
55°	37111	17037	12855
60°	31921	13903	10508
65°	26799	11562	8692
70°	21874	9716	7459
75°	17353	8224	6351
80°	13501	7032	5484
85°	10411	6287	4744

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 44367 cd/sqm



TEST NUMBER: P893158
 CATALOG NUMBER: 4MB-10HL-AOL-UNV-L935

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	420.8	4.8
10°-20°	1194.5	13.6
20°-30°	1738.2	19.8
30°-40°	1868.6	21.3
40°-50°	1560.6	17.7
50°-60°	1048.2	11.9
60°-70°	595.5	6.8
70°-80°	271.3	3.1
80°-90°	69.3	0.8
90°-100°	7.7	0.1
100°-110°	5.6	0.1
110°-120°	3.3	0.0
120°-130°	2.2	0.0
130°-140°	2.0	0.0
140°-150°	1.9	0.0
150°-160°	1.6	0.0
160°-170°	1.2	0.0
170°-180°	0.5	0.0
0°-30°	3353.5	38.1
0°-40°	5222.1	59.4
0°-60°	7830.9	89.1
0°-90°	8766.9	99.7
90°-120°	16.6	0.2
90°-150°	22.7	0.3
90°-180°	26.0	0.3
0°-180°	8792.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4448	4448	4448	4448	4448	
5°	4466	4454	4396	4432	4416	425
15°	4364	4328	4212	4178	4133	1233
25°	4148	4028	3754	3559	3472	1912
35°	3759	3457	2902	2555	2436	2345
45°	3080	2541	1826	1494	1404	2368
55°	2090	1503	960	769	724	1868
65°	1112	765	480	384	361	1117
75°	441	318	209	170	161	485
85°	89	72	54	43	41	101
90°	12	10	7	6	5	11
95°	14	10	6	4	4	11
105°	11	8	4	3	2	11
115°	5	4	3	2	2	5
125°	4	3	3	2	2	3
135°	3	3	3	3	3	2
145°	3	3	4	4	3	2
155°	3	4	4	4	4	1
165°	4	4	4	5	5	1
175°	4	4	5	5	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4448.4	4448.4	4448.4	4448.4	4448.4
2.5°	4474.8	4462.5	4412.2	4451.0	4440.4
5°	4466.0	4453.7	4396.3	4431.6	4415.7
7.5°	4449.2	4436.9	4369.9	4395.4	4374.3
10°	4427.2	4409.6	4331.1	4338.1	4319.6
12.5°	4398.1	4371.6	4279.0	4266.7	4237.6
15°	4363.7	4328.4	4212.0	4178.5	4132.6
17.5°	4324.0	4272.9	4130.9	4060.3	4010.1
20°	4270.2	4205.0	4031.2	3919.2	3866.3
22.5°	4214.7	4125.6	3902.5	3754.3	3690.8
25°	4147.6	4027.7	3754.3	3559.4	3472.1
27.5°	4067.4	3917.5	3587.6	3342.4	3238.4
30°	3980.1	3787.8	3381.2	3099.0	2982.6
32.5°	3875.1	3635.2	3155.5	2832.7	2711.9
35°	3758.7	3457.1	2902.4	2554.9	2435.8
37.5°	3617.6	3250.7	2639.6	2270.9	2156.3
40°	3463.3	3038.2	2358.2	1988.7	1889.1
42.5°	3289.5	2793.0	2084.8	1729.4	1621.8
45°	3080.5	2540.8	1826.4	1494.0	1404.0
47.5°	2867.1	2262.1	1568.9	1267.3	1202.9
50°	2614.9	2000.2	1346.7	1079.5	1013.3
52.5°	2352.9	1742.7	1139.4	916.3	857.2
55°	2090.1	1502.8	959.5	769.0	724.0
57.5°	1834.4	1282.3	806.9	650.0	611.2
60°	1567.2	1088.3	682.6	547.7	515.9
62.5°	1337.9	919.8	573.2	461.2	434.8
65°	1112.1	764.6	479.8	384.5	360.7
67.5°	922.5	631.4	397.7	319.3	299.0
70°	734.6	514.2	326.3	263.7	250.5
72.5°	585.6	410.1	264.6	214.3	201.1
75°	441.0	318.4	209.0	170.2	161.4
77.5°	331.6	241.6	161.4	132.3	122.6
80°	230.2	172.9	119.9	97.9	93.5
82.5°	147.3	119.1	82.9	69.7	64.4
85°	89.1	72.3	53.8	43.2	40.6
87.5°	42.3	35.3	27.3	21.2	19.4
90°	11.5	9.7	7.1	6.2	5.3
92.5°	13.2	9.7	6.2	4.4	3.5
95°	14.1	9.7	6.2	3.5	3.5
97.5°	14.1	10.6	5.3	3.5	2.6
100°	13.2	9.7	5.3	3.5	2.6
102.5°	11.5	8.8	4.4	2.6	2.6
105°	10.6	7.9	4.4	2.6	1.8
107.5°	8.8	7.1	3.5	2.6	1.8
110°	7.9	6.2	3.5	2.6	1.8



TEST NUMBER: P893158
CATALOG NUMBER: 4MB-10HL-AOL-UNV-L935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	5.3	3.5	2.6	1.8
115°	5.3	4.4	2.6	1.8	1.8
117.5°	4.4	3.5	2.6	1.8	1.8
120°	4.4	3.5	2.6	1.8	1.8
122.5°	3.5	3.5	2.6	1.8	1.8
125°	3.5	2.6	2.6	1.8	1.8
127.5°	2.6	2.6	2.6	1.8	1.8
130°	2.6	2.6	2.6	2.6	1.8
132.5°	2.6	2.6	2.6	2.6	1.8
135°	2.6	2.6	2.6	2.6	2.6
137.5°	2.6	2.6	2.6	2.6	2.6
140°	2.6	2.6	2.6	2.6	2.6
142.5°	2.6	2.6	3.5	2.6	2.6
145°	2.6	2.6	3.5	3.5	2.6
147.5°	2.6	2.6	3.5	3.5	3.5
150°	2.6	2.6	3.5	3.5	3.5
152.5°	2.6	3.5	3.5	3.5	3.5
155°	2.6	3.5	3.5	3.5	3.5
157.5°	3.5	3.5	3.5	4.4	4.4
160°	3.5	3.5	4.4	4.4	4.4
162.5°	3.5	3.5	4.4	4.4	4.4
165°	3.5	3.5	4.4	5.3	5.3
167.5°	3.5	4.4	4.4	5.3	5.3
170°	3.5	4.4	4.4	5.3	5.3
172.5°	3.5	4.4	5.3	5.3	5.3
175°	3.5	4.4	5.3	5.3	5.3
177.5°	4.4	4.4	5.3	5.3	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	23.55	24.98	23.92	25.30	25.63	18.23	19.66	18.60	19.98	20.31
	3H	24.87	26.14	25.25	26.48	26.85	19.24	20.52	19.62	20.85	21.22
	4H	25.28	26.48	25.69	26.83	27.22	19.58	20.78	19.99	21.13	21.52
	6H	25.54	26.65	25.96	27.02	27.42	19.81	20.91	20.23	21.28	21.69
	8H	25.61	26.65	26.04	27.05	27.46	19.88	20.92	20.31	21.32	21.73
	12H	25.64	26.64	26.08	27.03	27.47	19.92	20.92	20.35	21.31	21.74
4H	2H	23.54	24.74	23.95	25.09	25.48	18.87	20.07	19.28	20.43	20.81
	3H	25.02	26.00	25.43	26.41	26.82	20.07	21.05	20.48	21.46	21.87
	4H	25.53	26.41	25.97	26.83	27.28	20.49	21.37	20.93	21.79	22.24
	6H	25.90	26.66	26.36	27.11	27.58	20.80	21.56	21.26	22.01	22.48
	8H	25.99	26.71	26.47	27.16	27.64	20.89	21.61	21.36	22.06	22.53
	12H	26.06	26.70	26.55	27.18	27.66	20.96	21.59	21.45	22.08	22.56
8H	4H	25.51	26.22	25.98	26.67	27.15	20.83	21.54	21.30	21.99	22.47
	6H	25.93	26.51	26.43	27.01	27.50	21.22	21.81	21.73	22.31	22.79
	8H	26.07	26.59	26.59	27.11	27.61	21.36	21.89	21.89	22.41	22.90
	12H	26.18	26.65	26.70	27.15	27.72	21.48	21.95	22.00	22.45	23.02
12H	4H	25.48	26.11	25.97	26.60	27.08	20.87	21.51	21.36	21.99	22.47
	6H	25.89	26.42	26.41	26.94	27.43	21.29	21.82	21.81	22.33	22.83
	8H	26.07	26.53	26.58	27.03	27.60	21.48	21.94	21.99	22.44	23.02