

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: P892722

Luminaire Tested: 2MB-4HL-ASMF-UNV-L935

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P892722  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-185-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-4HL-ASMF-UNV-L935  
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

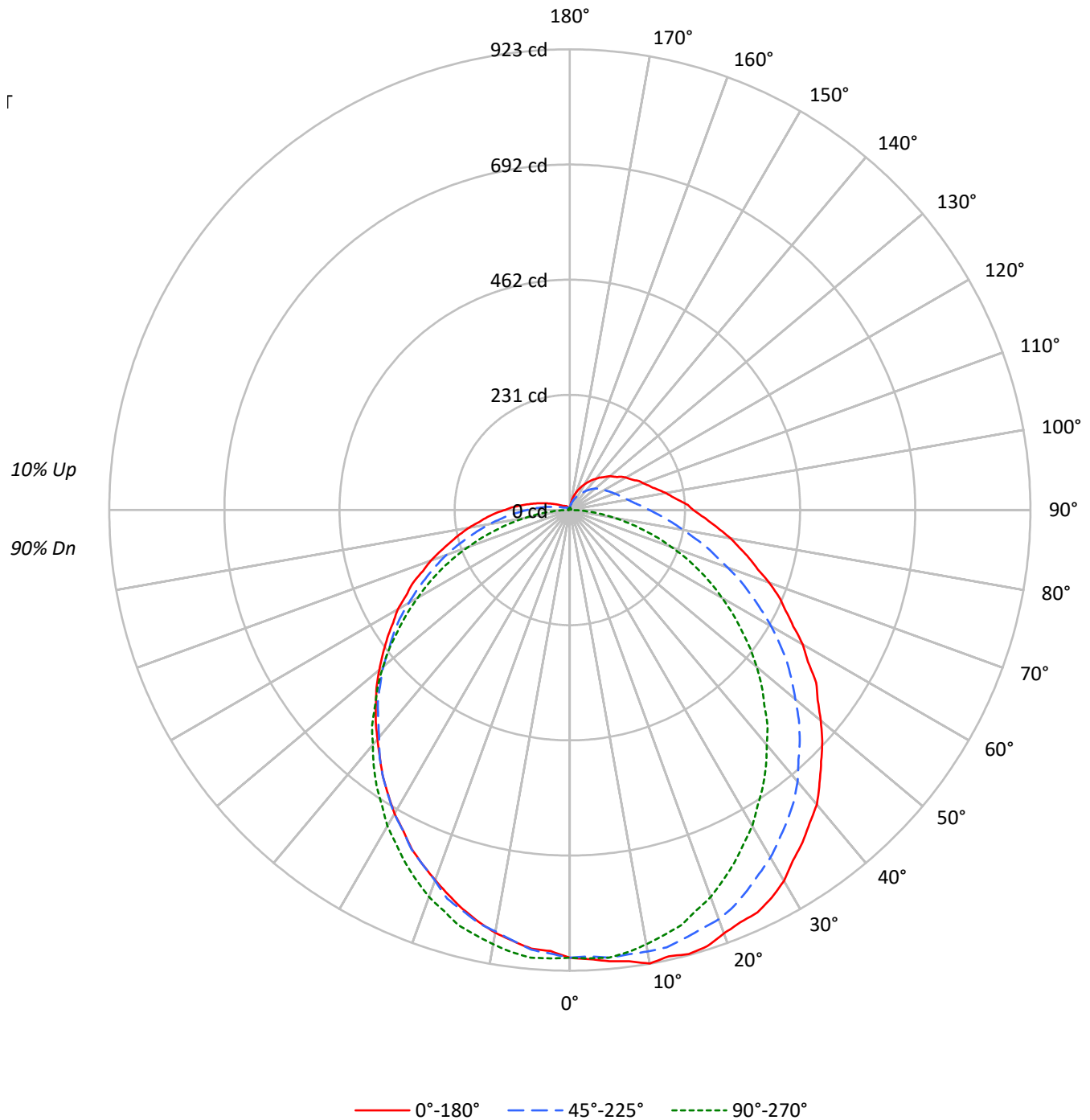
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3084.0 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.12')  
CIE Type: Direct

Input Watts (W): 27.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 6.5  
Total Harmonic Distortion (THDi): 0.99  
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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	93	93	93	90
1	105	99	95	90	101	96	92	88	90	87	83	85	82	79	79	77	75	75	75	75	72
2	95	86	79	72	91	83	76	71	78	72	68	73	69	65	69	65	62	62	62	62	59
3	86	75	66	60	83	73	65	58	68	62	56	64	59	54	60	56	52	52	52	52	49
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	44	44	44	44	42
5	72	59	50	43	69	57	49	42	54	47	41	51	45	40	48	43	38	38	38	38	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	34	34	34	31
7	62	48	39	33	59	47	38	32	44	37	32	42	36	31	40	34	30	30	30	30	28
8	57	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22
10	50	37	29	24	49	36	29	23	34	28	23	33	27	22	31	26	22	22	22	22	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	18367	18367	18367	18367	18367
5°	18547	17910	17770	17598	18034
10°	18972	17505	16963	16717	17680
15°	19195	17105	16210	15991	17258
20°	19230	16722	15352	15132	16804
25°	19520	16155	14450	14415	16447
30°	19573	15613	13593	13644	16023
35°	19455	15023	12691	12903	15622
40°	19549	14414	11766	12073	15221
45°	19399	13701	10854	11437	14964
50°	19440	12968	9978	10712	14762
55°	19739	12329	8972	9988	14614
60°	19901	11540	7944	9220	14685
65°	20363	10690	6899	8454	14850
70°	21692	9873	5656	7724	15126
75°	23804	9266	4326	6882	15794
80°	28390	8674	2896	6132	17798
85°	38612	8489	1455	5354	22703

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 80106 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.1	2.8
10°-20°	243.9	7.9
20°-30°	367.8	11.9
30°-40°	441.5	14.3
40°-50°	459.7	14.9
50°-60°	426.2	13.8
60°-70°	351.0	11.4
70°-80°	253.1	8.2
80°-90°	160.7	5.2
90°-100°	99.1	3.2
100°-110°	66.1	2.1
110°-120°	47.0	1.5
120°-130°	34.5	1.1
130°-140°	23.7	0.8
140°-150°	14.4	0.5
150°-160°	7.1	0.2
160°-170°	2.6	0.1
170°-180°	0.4	0.0
0°-30°	696.9	22.6
0°-40°	1138.3	36.9
0°-60°	2024.2	65.6
0°-90°	2789.0	90.4
90°-120°	212.2	6.9
90°-150°	284.8	9.2
90°-180°	295.0	9.6
0°-180°	3084.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	897	897	897	897	897	
5°	907	900	900	884	882	87
15°	921	888	861	831	828	260
25°	889	841	780	750	749	409
35°	813	760	675	653	653	509
45°	712	652	551	544	549	551
55°	603	532	420	431	446	536
65°	477	399	286	316	348	475
75°	372	282	151	210	247	394
85°	283	192	40	121	166	240
90°	247	160	4	86	130	136
95°	220	135	2	58	100	175
105°	173	106	2	24	52	184
115°	142	88	3	11	25	142
125°	115	73	3	9	14	105
135°	92	58	3	7	11	72
145°	71	41	3	5	8	45
155°	48	27	4	3	5	23
165°	28	16	4	2	3	8
175°	4	7	4	2	0	1
180°	3	3	3	3	3	



TEST NUMBER: P892722  
 CATALOG NUMBER: 2MB-4HL-ASMF-UNV-L935

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0
2.5°	900.6	903.3	894.8	900.1	899.2	900.1	889.4	898.3	884.4
5°	907.3	908.7	900.1	903.3	900.1	892.5	884.4	881.3	882.2
7.5°	911.8	919.0	897.9	898.8	893.4	885.3	870.1	872.8	871.0
10°	922.6	914.5	897.9	893.9	883.5	875.0	857.5	858.9	859.8
12.5°	915.8	914.0	897.5	882.7	872.3	865.2	847.2	842.7	845.0
15°	920.8	913.2	888.5	876.8	861.1	848.6	830.6	827.5	827.9
17.5°	916.3	910.0	879.5	863.4	841.4	833.8	816.7	811.3	808.6
20°	902.8	899.7	872.8	845.0	825.2	810.4	789.8	786.7	788.9
22.5°	893.9	886.2	859.3	831.5	802.8	789.8	769.2	768.7	769.2
25°	889.4	879.5	840.9	811.8	779.9	768.3	750.3	743.6	749.4
27.5°	875.9	867.0	821.7	789.8	754.4	738.7	723.9	722.5	723.4
30°	858.0	840.5	804.2	765.1	731.1	714.9	702.8	693.8	702.4
32.5°	832.4	822.6	781.3	738.7	701.0	689.8	677.7	676.8	676.8
35°	812.7	805.5	759.8	715.4	675.0	659.7	652.6	649.4	652.6
37.5°	789.8	779.0	736.9	687.1	645.8	632.8	625.7	623.0	625.2
40°	770.1	750.3	710.0	658.0	614.0	602.3	594.7	597.4	599.6
42.5°	740.9	729.7	678.1	628.4	586.6	574.1	567.8	570.0	575.4
45°	712.2	701.9	651.7	597.4	551.2	544.5	544.0	542.7	549.4
47.5°	686.2	671.4	622.5	566.9	521.6	514.0	514.9	519.4	525.2
50°	656.2	638.7	590.2	534.2	488.9	483.9	487.5	490.7	498.3
52.5°	626.1	612.2	560.6	503.2	455.7	452.1	457.0	467.3	471.8
55°	602.8	577.7	531.5	466.9	420.2	420.7	430.6	436.4	446.3
57.5°	565.6	546.7	498.3	434.6	387.1	390.2	403.7	413.5	419.8
60°	539.1	515.3	466.0	400.1	352.1	357.0	372.3	387.1	397.8
62.5°	505.0	484.4	432.4	366.0	319.8	327.0	344.0	361.5	369.1
65°	477.2	453.9	399.2	331.9	286.1	294.7	315.7	335.5	348.0
67.5°	453.4	429.2	369.6	300.5	252.1	264.6	289.3	308.6	318.4
70°	425.2	396.9	335.9	265.5	216.6	231.4	262.8	285.2	296.5
72.5°	395.1	372.3	306.8	233.2	183.9	201.8	236.4	259.7	270.4
75°	371.8	346.2	282.1	200.9	150.7	172.2	209.5	235.9	246.7
77.5°	348.0	324.7	254.3	171.3	121.1	145.3	185.7	214.8	226.0
80°	327.0	300.0	231.0	147.1	90.1	118.9	163.3	192.0	205.0
82.5°	303.6	280.3	210.8	121.5	64.1	94.6	141.3	172.7	183.4
85°	283.0	258.8	192.0	101.4	39.5	73.1	121.1	153.4	166.4
87.5°	264.2	244.0	174.5	86.1	19.7	55.6	101.8	134.6	149.4
90°	247.1	224.3	159.7	72.2	3.6	40.4	86.1	118.4	129.6
92.5°	236.4	209.0	147.6	63.2	2.2	28.7	71.8	103.6	116.6
95°	220.2	196.0	135.0	56.5	2.2	19.3	57.9	88.8	100.0
97.5°	206.3	183.9	126.0	52.5	1.8	13.0	47.5	74.5	86.1
100°	195.5	174.5	118.0	48.9	2.2	9.4	37.7	63.2	73.6
102.5°	183.4	164.2	111.7	46.6	2.2	6.7	29.6	53.4	62.8
105°	172.7	155.6	105.8	44.4	2.2	5.8	23.8	44.0	52.5
107.5°	164.6	146.7	100.9	43.1	2.2	5.8	18.8	35.9	43.1
110°	156.5	139.5	96.0	41.7	2.2	5.4	14.8	29.6	35.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	151.1	132.8	91.5	40.4	2.7	5.4	12.1	24.7	29.6
115°	141.7	126.9	87.5	39.9	2.7	4.9	11.2	20.2	25.1
117.5°	135.0	121.5	83.4	38.6	2.7	4.9	10.8	16.6	20.2
120°	130.1	115.3	79.8	37.2	2.7	4.5	9.9	14.8	17.0
122.5°	123.8	109.4	76.7	36.3	2.7	4.5	9.4	13.9	15.2
125°	115.3	104.1	73.1	34.5	3.1	4.5	9.0	13.0	14.4
127.5°	109.9	99.1	70.4	32.3	3.1	4.0	8.5	12.1	13.5
130°	105.4	93.7	67.3	30.0	3.1	4.0	8.1	11.2	12.6
132.5°	98.7	88.4	62.8	28.3	3.1	3.6	7.2	10.3	11.7
135°	92.4	83.9	58.3	26.5	3.1	3.6	6.7	9.9	10.8
137.5°	88.4	79.4	54.3	24.7	3.1	3.1	6.3	9.0	9.9
140°	81.6	74.5	49.8	22.9	3.1	3.1	5.8	8.5	9.0
142.5°	76.7	69.5	45.7	21.1	3.1	3.1	5.4	7.6	8.5
145°	70.9	64.6	41.3	19.3	3.1	2.7	4.9	7.2	7.6
147.5°	65.5	58.8	37.7	17.9	3.1	2.7	4.5	6.3	6.7
150°	60.1	52.9	34.1	16.6	3.1	2.7	4.0	5.4	6.3
152.5°	54.3	45.7	30.5	15.2	3.1	2.7	3.6	4.9	5.4
155°	48.4	39.9	27.4	13.9	3.6	2.7	3.1	4.0	4.9
157.5°	43.5	34.5	24.2	12.6	3.6	2.2	3.1	3.6	4.0
160°	37.7	29.6	21.5	11.2	3.6	2.2	2.7	3.1	3.6
162.5°	33.2	24.7	18.8	10.3	3.6	2.2	2.7	2.7	3.1
165°	28.3	20.6	15.7	9.4	3.6	2.2	2.2	2.2	2.7
167.5°	22.9	16.1	13.0	8.5	3.6	2.2	2.2	1.8	2.2
170°	17.0	12.1	10.8	7.6	3.6	2.2	1.8	1.3	1.8
172.5°	7.6	9.4	8.5	6.7	4.0	2.2	1.8	1.3	0.9
175°	4.0	6.7	6.7	5.8	4.0	2.2	1.8	1.3	0.4
177.5°	3.1	4.0	4.9	4.9	4.0	2.7	1.8	0.9	0.4
180°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7



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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	20.44	21.92	20.95	22.42	22.97	19.32	20.80	19.83	21.30	21.84
	3H	22.53	23.88	23.05	24.39	24.98	21.16	22.51	21.68	23.02	23.60
	4H	23.48	24.76	24.02	25.28	25.88	21.88	23.16	22.42	23.69	24.28
	6H	24.40	25.59	24.95	26.13	26.74	22.48	23.67	23.03	24.21	24.82
	8H	24.83	25.97	25.40	26.53	27.15	22.71	23.85	23.28	24.42	25.03
	12H	25.25	26.35	25.82	26.90	27.55	22.92	24.01	23.49	24.57	25.21
4H	2H	20.93	22.20	21.47	22.73	23.33	19.89	21.17	20.43	21.70	22.29
	3H	23.24	24.33	23.80	24.90	25.52	21.92	23.01	22.47	23.58	24.19
	4H	24.36	25.35	24.93	25.93	26.58	22.75	23.74	23.32	24.32	24.97
	6H	25.46	26.34	26.06	26.95	27.61	23.47	24.35	24.06	24.95	25.62
	8H	25.99	26.82	26.59	27.42	28.10	23.76	24.59	24.36	25.19	25.87
	12H	26.52	27.27	27.14	27.91	28.59	24.03	24.78	24.65	25.41	26.09
8H	4H	24.60	25.43	25.20	26.03	26.71	23.09	23.92	23.69	24.52	25.20
	6H	25.89	26.59	26.52	27.23	27.91	23.95	24.65	24.57	25.29	25.97
	8H	26.56	27.19	27.20	27.84	28.54	24.32	24.95	24.96	25.61	26.30
	12H	27.26	27.83	27.91	28.47	29.23	24.68	25.24	25.32	25.89	26.64
12H	4H	24.62	25.37	25.24	26.00	26.68	23.16	23.91	23.78	24.54	25.22
	6H	25.94	26.57	26.58	27.23	27.92	24.06	24.69	24.70	25.34	26.04
	8H	26.68	27.25	27.33	27.89	28.65	24.50	25.06	25.14	25.71	26.46