

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: P893373

Luminaire Tested: 4MB-3SL-ASMF-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893373
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: 4MB-3SL-ASMF-UNV-L930
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

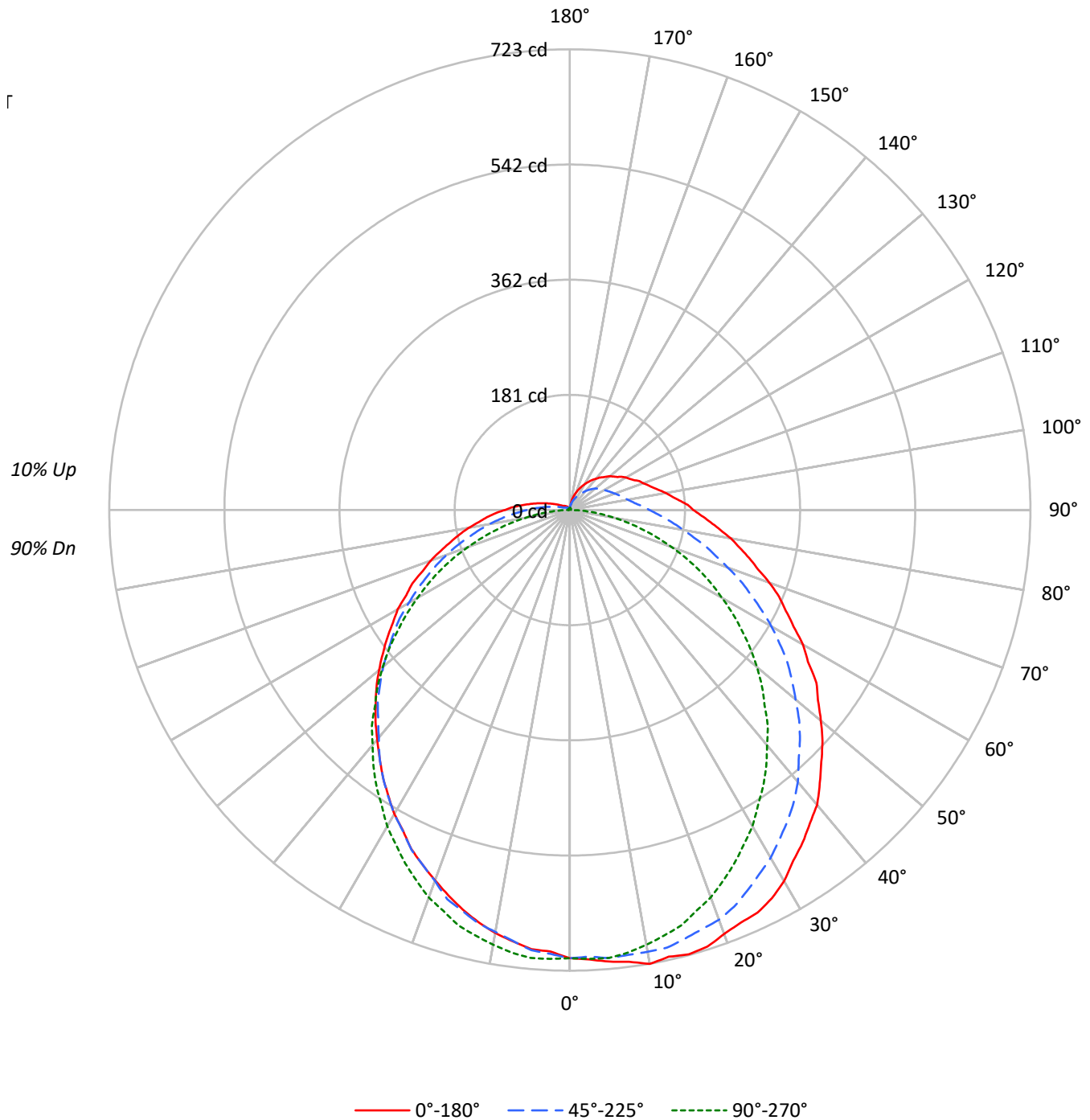
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2418.0 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')
CIE Type: Direct

Input Watts (W): 21.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.2
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°	7163	7163	7163	7163	7163
5°	7253	6998	6930	6875	7052
10°	7439	6851	6615	6543	6933
15°	7548	6707	6322	6270	6787
20°	7585	6568	5987	5943	6627
25°	7722	6356	5635	5672	6508
30°	7770	6153	5301	5378	6361
35°	7752	5932	4949	5094	6224
40°	7821	5703	4588	4777	6091
45°	7797	5431	4233	4533	6016
50°	7857	5153	3891	4255	5967
55°	8031	4910	3499	3978	5946
60°	8165	4609	3097	3682	6025
65°	8448	4283	2691	3388	6161
70°	9139	3971	2205	3107	6370
75°	10266	3744	1687	2779	6811
80°	12764	3525	1130	2491	8000
85°	19079	3477	566	2193	11220

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 62827 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	2.8
10°-20°	191.3	7.9
20°-30°	288.4	11.9
30°-40°	346.1	14.3
40°-50°	360.4	14.9
50°-60°	334.1	13.8
60°-70°	275.2	11.4
70°-80°	198.5	8.2
80°-90°	126.0	5.2
90°-100°	77.7	3.2
100°-110°	51.8	2.1
110°-120°	36.9	1.5
120°-130°	27.0	1.1
130°-140°	18.6	0.8
140°-150°	11.3	0.5
150°-160°	5.6	0.2
160°-170°	2.1	0.1
170°-180°	0.3	0.0
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0°-30°	546.4	22.6
0°-40°	892.5	36.9
0°-60°	1587.1	65.6
0°-90°	2186.7	90.4
90°-120°	166.4	6.9
90°-150°	223.3	9.2
90°-180°	231.0	9.6
0°-180°	2418.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	703	703	703	703	703	
5°	711	706	706	693	692	68
15°	722	697	675	651	649	204
25°	697	659	612	588	588	321
35°	637	596	529	512	512	399
45°	558	511	432	426	431	432
55°	473	417	330	338	350	420
65°	374	313	224	248	273	373
75°	292	221	118	164	193	309
85°	222	150	31	95	130	188
90°	194	125	3	68	102	107
95°	173	106	2	45	78	137
105°	135	83	2	19	41	145
115°	111	69	2	9	20	111
125°	90	57	2	7	11	82
135°	72	46	2	5	8	57
145°	56	32	2	4	6	35
155°	38	22	3	2	4	18
165°	22	12	3	2	2	6
175°	3	5	3	1	0	1
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	703.3	703.3	703.3	703.3	703.3	703.3	703.3	703.3	703.3
2.5°	706.1	708.2	701.5	705.8	705.1	705.8	697.3	704.3	693.4
5°	711.4	712.4	705.8	708.2	705.8	699.8	693.4	691.0	691.7
7.5°	714.9	720.5	704.0	704.7	700.5	694.2	682.2	684.3	682.9
10°	723.3	717.0	704.0	700.8	692.7	686.1	672.3	673.4	674.1
12.5°	718.1	716.7	703.6	692.0	684.0	678.3	664.3	660.7	662.5
15°	721.9	716.0	696.6	687.5	675.2	665.3	651.2	648.8	649.1
17.5°	718.4	713.5	689.6	676.9	659.7	653.7	640.3	636.1	634.0
20°	707.9	705.4	684.3	662.5	647.0	635.4	619.2	616.8	618.5
22.5°	700.8	694.9	673.8	652.0	629.4	619.2	603.1	602.7	603.1
25°	697.3	689.6	659.3	636.5	611.5	602.4	588.3	583.0	587.6
27.5°	686.8	679.7	644.2	619.2	591.5	579.2	567.6	566.5	567.2
30°	672.7	659.0	630.5	599.9	573.2	560.5	551.0	544.0	550.7
32.5°	652.7	644.9	612.6	579.2	549.6	540.8	531.3	530.6	530.6
35°	637.2	631.6	595.7	560.9	529.2	517.3	511.6	509.2	511.6
37.5°	619.2	610.8	577.8	538.7	506.4	496.2	490.5	488.4	490.2
40°	603.8	588.3	556.7	515.9	481.4	472.3	466.3	468.4	470.2
42.5°	580.9	572.1	531.7	492.7	460.0	450.1	445.2	446.9	451.2
45°	558.4	550.3	510.9	468.4	432.2	426.9	426.5	425.5	430.8
47.5°	538.0	526.4	488.1	444.5	409.0	403.0	403.7	407.2	411.8
50°	514.5	500.7	462.8	418.8	383.3	379.4	382.2	384.7	390.7
52.5°	490.9	480.0	439.6	394.5	357.3	354.5	358.3	366.4	369.9
55°	472.6	452.9	416.7	366.1	329.5	329.8	337.6	342.2	349.9
57.5°	443.4	428.7	390.7	340.7	303.5	305.9	316.5	324.2	329.1
60°	422.7	404.0	365.4	313.7	276.0	279.9	291.9	303.5	311.9
62.5°	396.0	379.8	339.0	286.9	250.7	256.4	269.7	283.4	289.4
65°	374.2	355.9	313.0	260.2	224.4	231.0	247.6	263.0	272.9
67.5°	355.5	336.5	289.8	235.6	197.6	207.5	226.8	241.9	249.7
70°	333.4	311.2	263.4	208.2	169.8	181.4	206.1	223.6	232.4
72.5°	309.8	291.9	240.5	182.9	144.2	158.2	185.3	203.6	212.0
75°	291.5	271.5	221.2	157.5	118.2	135.0	164.2	185.0	193.4
77.5°	272.9	254.6	199.4	134.3	94.9	113.9	145.6	168.4	177.2
80°	256.4	235.3	181.1	115.3	70.7	93.2	128.0	150.5	160.7
82.5°	238.1	219.8	165.3	95.3	50.3	74.2	110.8	135.4	143.8
85°	221.9	202.9	150.5	79.5	30.9	57.3	94.9	120.3	130.5
87.5°	207.1	191.3	136.8	67.5	15.5	43.6	79.8	105.5	117.1
90°	193.8	175.8	125.2	56.6	2.8	31.6	67.5	92.8	101.6
92.5°	185.3	163.9	115.7	49.6	1.8	22.5	56.3	81.2	91.4
95°	172.7	153.7	105.8	44.3	1.8	15.1	45.4	69.6	78.4
97.5°	161.8	144.2	98.8	41.1	1.4	10.2	37.3	58.4	67.5
100°	153.3	136.8	92.5	38.3	1.8	7.4	29.5	49.6	57.7
102.5°	143.8	128.7	87.6	36.6	1.8	5.3	23.2	41.8	49.2
105°	135.4	122.0	83.0	34.8	1.8	4.6	18.6	34.5	41.1
107.5°	129.1	115.0	79.1	33.8	1.8	4.6	14.8	28.1	33.8
110°	122.7	109.4	75.3	32.7	1.8	4.2	11.6	23.2	28.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	118.5	104.1	71.7	31.6	2.1	4.2	9.5	19.3	23.2
115°	111.1	99.5	68.6	31.3	2.1	3.9	8.8	15.8	19.7
117.5°	105.8	95.3	65.4	30.2	2.1	3.9	8.4	13.0	15.8
120°	102.0	90.4	62.6	29.2	2.1	3.5	7.7	11.6	13.4
122.5°	97.1	85.8	60.1	28.5	2.1	3.5	7.4	10.9	12.0
125°	90.4	81.6	57.3	27.1	2.5	3.5	7.0	10.2	11.3
127.5°	86.2	77.7	55.2	25.3	2.5	3.2	6.7	9.5	10.5
130°	82.6	73.5	52.7	23.6	2.5	3.2	6.3	8.8	9.8
132.5°	77.4	69.3	49.2	22.2	2.5	2.8	5.6	8.1	9.1
135°	72.4	65.8	45.7	20.7	2.5	2.8	5.3	7.7	8.4
137.5°	69.3	62.2	42.5	19.3	2.5	2.5	4.9	7.0	7.7
140°	64.0	58.4	39.0	17.9	2.5	2.5	4.6	6.7	7.0
142.5°	60.1	54.5	35.9	16.5	2.5	2.5	4.2	6.0	6.7
145°	55.6	50.6	32.4	15.1	2.5	2.1	3.9	5.6	6.0
147.5°	51.3	46.1	29.5	14.1	2.5	2.1	3.5	4.9	5.3
150°	47.1	41.5	26.7	13.0	2.5	2.1	3.2	4.2	4.9
152.5°	42.5	35.9	23.9	12.0	2.5	2.1	2.8	3.9	4.2
155°	38.0	31.3	21.5	10.9	2.8	2.1	2.5	3.2	3.9
157.5°	34.1	27.1	19.0	9.8	2.8	1.8	2.5	2.8	3.2
160°	29.5	23.2	16.9	8.8	2.8	1.8	2.1	2.5	2.8
162.5°	26.0	19.3	14.8	8.1	2.8	1.8	2.1	2.1	2.5
165°	22.2	16.2	12.3	7.4	2.8	1.8	1.8	1.8	2.1
167.5°	17.9	12.7	10.2	6.7	2.8	1.8	1.8	1.4	1.8
170°	13.4	9.5	8.4	6.0	2.8	1.8	1.4	1.1	1.4
172.5°	6.0	7.4	6.7	5.3	3.2	1.8	1.4	1.1	0.7
175°	3.2	5.3	5.3	4.6	3.2	1.8	1.4	1.1	0.4
177.5°	2.5	3.2	3.9	3.9	3.2	2.1	1.4	0.7	0.4
180°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1



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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	17.20	18.68	17.71	19.18	19.73	16.18	17.65	16.68	18.16	18.70
	3H	19.29	20.64	19.81	21.15	21.73	18.05	19.39	18.57	19.91	20.49
	4H	20.23	21.51	20.77	22.04	22.64	18.79	20.07	19.33	20.60	21.19
	6H	21.15	22.34	21.71	22.88	23.49	19.43	20.61	19.98	21.15	21.77
	8H	21.58	22.72	22.15	23.28	23.90	19.68	20.82	20.25	21.38	22.00
	12H	22.00	23.09	22.57	23.65	24.30	19.91	21.00	20.48	21.56	22.21
4H	2H	17.70	18.97	18.24	19.50	20.10	16.74	18.02	17.28	18.54	19.14
	3H	20.01	21.10	20.56	21.67	22.29	18.80	19.89	19.35	20.45	21.07
	4H	21.12	22.12	21.70	22.70	23.35	19.65	20.65	20.22	21.22	21.87
	6H	22.23	23.11	22.82	23.71	24.37	20.41	21.29	21.00	21.89	22.55
	8H	22.76	23.58	23.35	24.19	24.86	20.72	21.55	21.32	22.15	22.83
	12H	23.29	24.04	23.90	24.67	25.35	21.01	21.77	21.63	22.40	23.08
8H	4H	21.38	22.21	21.98	22.81	23.49	19.99	20.82	20.59	21.42	22.09
	6H	22.66	23.36	23.29	24.01	24.69	20.87	21.57	21.50	22.22	22.90
	8H	23.33	23.96	23.97	24.62	25.31	21.27	21.90	21.91	22.56	23.25
	12H	24.04	24.60	24.68	25.24	26.00	21.66	22.23	22.30	22.87	23.62
12H	4H	21.40	22.15	22.02	22.78	23.46	20.05	20.80	20.67	21.43	22.11
	6H	22.72	23.35	23.36	24.01	24.70	20.98	21.62	21.62	22.27	22.96
	8H	23.46	24.03	24.10	24.67	25.43	21.45	22.01	22.09	22.65	23.41