

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: P893370

Luminaire Tested: 4MB-3SL-ASMF-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893370
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-L835
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

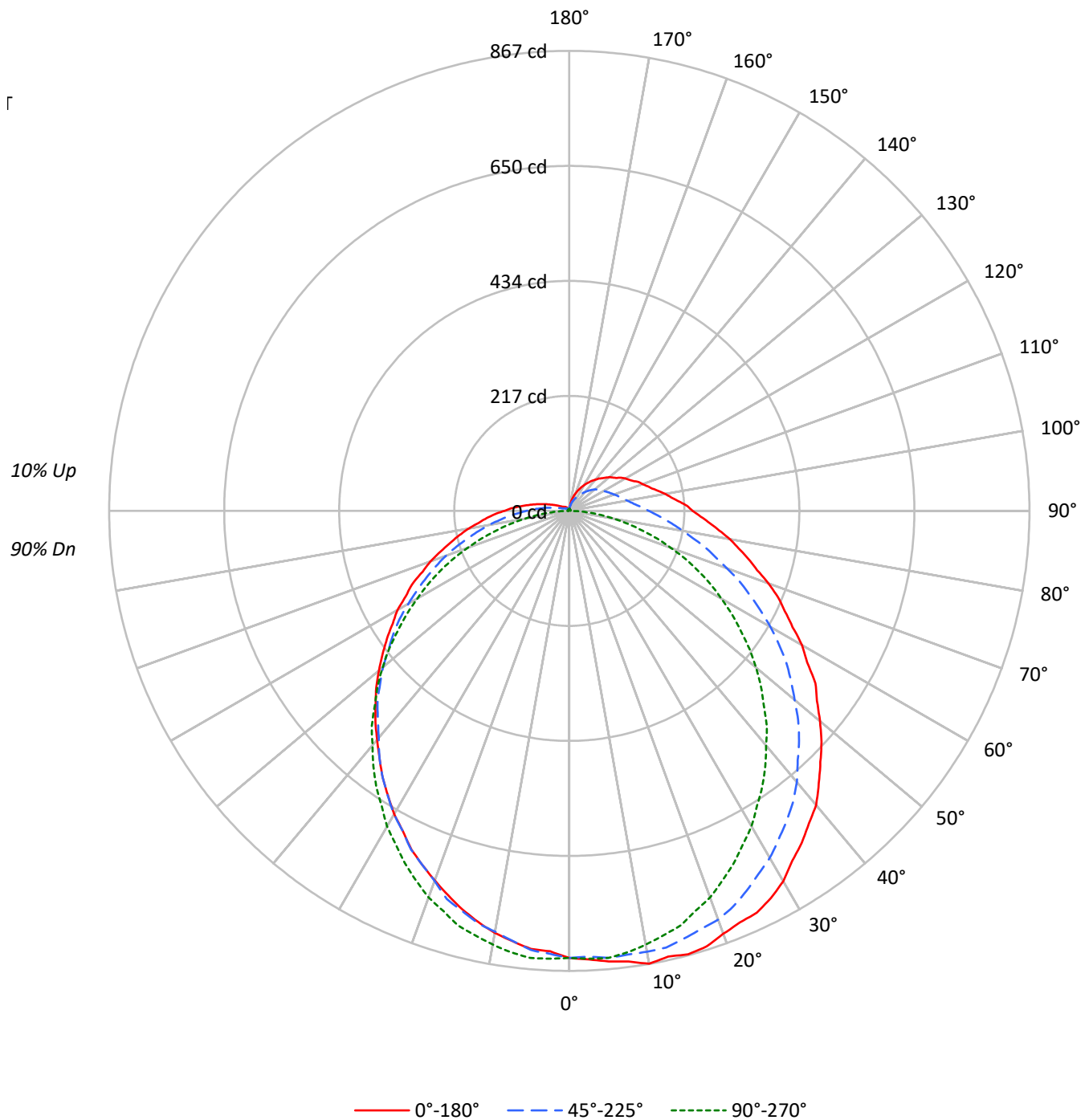
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2897.0 lumens
Efficiency: N/A
Efficacy: 137.3 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°	8581	8581	8581	8581	8581
5°	8689	8384	8303	8238	8449
10°	8912	8209	7926	7839	8306
15°	9043	8035	7574	7513	8131
20°	9088	7869	7173	7121	7941
25°	9253	7617	6752	6795	7797
30°	9309	7372	6350	6443	7621
35°	9287	7107	5930	6104	7457
40°	9370	6831	5497	5723	7296
45°	9342	6507	5071	5432	7207
50°	9414	6173	4661	5099	7149
55°	9622	5882	4192	4766	7124
60°	9782	5521	3711	4411	7219
65°	10121	5131	3224	4058	7380
70°	10948	4758	2643	3722	7634
75°	12302	4485	2022	3331	8160
80°	15287	4224	1354	2986	9583
85°	22853	4166	680	2629	13438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 75243 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.0	2.8
10°-20°	229.1	7.9
20°-30°	345.5	11.9
30°-40°	414.7	14.3
40°-50°	431.8	14.9
50°-60°	400.3	13.8
60°-70°	329.7	11.4
70°-80°	237.8	8.2
80°-90°	151.0	5.2
90°-100°	93.1	3.2
100°-110°	62.1	2.1
110°-120°	44.2	1.5
120°-130°	32.4	1.1
130°-140°	22.3	0.8
140°-150°	13.6	0.5
150°-160°	6.7	0.2
160°-170°	2.5	0.1
170°-180°	0.4	0.0
0°-30°	654.6	22.6
0°-40°	1069.3	36.9
0°-60°	1901.5	65.6
0°-90°	2619.9	90.4
90°-120°	199.3	6.9
90°-150°	267.5	9.2
90°-180°	277.0	9.6
0°-180°	2897.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	843	843	843	843	843	
5°	852	846	846	831	829	82
15°	865	835	809	780	778	244
25°	836	790	733	705	704	384
35°	763	714	634	613	613	478
45°	669	612	518	511	516	518
55°	566	499	395	404	419	503
65°	448	375	269	297	327	446
75°	349	265	142	197	232	370
85°	266	180	37	114	156	226
90°	232	150	3	81	122	128
95°	207	127	2	54	94	164
105°	162	99	2	22	49	173
115°	133	82	2	10	24	133
125°	108	69	3	8	14	99
135°	87	55	3	6	10	68
145°	67	39	3	5	7	42
155°	46	26	3	3	5	21
165°	26	15	3	2	2	8
175°	4	6	4	2	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°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6
2.5°	846.0	848.5	840.5	845.6	844.7	845.6	835.5	843.9	830.8
5°	852.3	853.6	845.6	848.5	845.6	838.4	830.8	827.9	828.7
7.5°	856.5	863.3	843.5	844.3	839.2	831.7	817.3	819.9	818.2
10°	866.6	859.0	843.5	839.7	830.0	822.0	805.5	806.8	807.6
12.5°	860.3	858.6	843.0	829.1	819.4	812.7	795.8	791.6	793.7
15°	864.9	857.8	834.6	823.7	808.9	797.1	780.3	777.3	777.7
17.5°	860.7	854.8	826.2	811.0	790.4	783.2	767.2	762.1	759.6
20°	848.1	845.1	819.9	793.7	775.2	761.3	741.9	739.0	741.1
22.5°	839.7	832.5	807.2	781.1	754.1	741.9	722.5	722.1	722.5
25°	835.5	826.2	790.0	762.6	732.7	721.7	704.8	698.5	704.0
27.5°	822.8	814.4	771.8	741.9	708.6	693.9	680.0	678.7	679.6
30°	806.0	789.5	755.4	718.7	686.7	671.6	660.2	651.8	659.8
32.5°	781.9	772.7	733.9	693.9	658.5	648.0	636.6	635.8	635.8
35°	763.4	756.7	713.7	672.0	634.1	619.7	613.0	610.1	613.0
37.5°	741.9	731.8	692.2	645.4	606.7	594.5	587.7	585.2	587.3
40°	723.4	704.8	666.9	618.1	576.8	565.8	558.7	561.2	563.3
42.5°	696.0	685.5	637.0	590.3	551.1	539.3	533.4	535.5	540.5
45°	669.0	659.3	612.2	561.2	517.8	511.5	511.0	509.8	516.1
47.5°	644.6	630.7	584.8	532.5	490.0	482.8	483.7	487.9	493.4
50°	616.4	599.9	554.4	501.8	459.2	454.6	458.0	460.9	468.1
52.5°	588.1	575.1	526.6	472.7	428.0	424.7	429.3	439.0	443.2
55°	566.2	542.6	499.2	438.6	394.8	395.2	404.5	409.9	419.2
57.5°	531.3	513.6	468.1	408.2	363.6	366.5	379.2	388.4	394.3
60°	506.4	484.1	437.7	375.8	330.7	335.4	349.7	363.6	373.7
62.5°	474.4	455.0	406.1	343.8	300.4	307.1	323.1	339.6	346.7
65°	448.3	426.4	375.0	311.8	268.8	276.8	296.6	315.1	326.9
67.5°	425.9	403.2	347.2	282.3	236.8	248.6	271.7	289.9	299.1
70°	399.4	372.9	315.6	249.4	203.5	217.4	246.9	268.0	278.5
72.5°	371.2	349.7	288.2	219.1	172.7	189.6	222.0	243.9	254.0
75°	349.3	325.2	265.0	188.7	141.6	161.8	196.8	221.6	231.7
77.5°	326.9	305.0	238.9	160.9	113.8	136.5	174.4	201.8	212.3
80°	307.1	281.9	217.0	138.2	84.7	111.6	153.4	180.3	192.5
82.5°	285.2	263.3	198.0	114.2	60.2	88.9	132.7	162.2	172.3
85°	265.8	243.1	180.3	95.2	37.1	68.7	113.8	144.1	156.3
87.5°	248.1	229.2	163.9	80.9	18.5	52.2	95.6	126.4	140.3
90°	232.1	210.7	150.0	67.8	3.4	37.9	80.9	111.2	121.8
92.5°	222.0	196.3	138.6	59.4	2.1	27.0	67.4	97.3	109.5
95°	206.9	184.1	126.8	53.1	2.1	18.1	54.3	83.4	94.0
97.5°	193.8	172.7	118.4	49.3	1.7	12.2	44.7	69.9	80.9
100°	183.7	163.9	110.8	45.9	2.1	8.8	35.4	59.4	69.1
102.5°	172.3	154.2	104.9	43.8	2.1	6.3	27.8	50.1	59.0
105°	162.2	146.2	99.4	41.7	2.1	5.5	22.3	41.3	49.3
107.5°	154.6	137.8	94.8	40.4	2.1	5.5	17.7	33.7	40.4
110°	147.0	131.0	90.2	39.2	2.1	5.1	13.9	27.8	33.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	142.0	124.7	85.9	37.9	2.5	5.1	11.4	23.2	27.8
115°	133.1	119.2	82.2	37.5	2.5	4.6	10.5	19.0	23.6
117.5°	126.8	114.2	78.4	36.2	2.5	4.6	10.1	15.6	19.0
120°	122.2	108.3	75.0	35.0	2.5	4.2	9.3	13.9	16.0
122.5°	116.3	102.8	72.0	34.1	2.5	4.2	8.8	13.1	14.3
125°	108.3	97.7	68.7	32.4	2.9	4.2	8.4	12.2	13.5
127.5°	103.2	93.1	66.1	30.3	2.9	3.8	8.0	11.4	12.6
130°	99.0	88.1	63.2	28.2	2.9	3.8	7.6	10.5	11.8
132.5°	92.7	83.0	59.0	26.5	2.9	3.4	6.7	9.7	11.0
135°	86.8	78.8	54.8	24.9	2.9	3.4	6.3	9.3	10.1
137.5°	83.0	74.6	51.0	23.2	2.9	2.9	5.9	8.4	9.3
140°	76.7	69.9	46.8	21.5	2.9	2.9	5.5	8.0	8.4
142.5°	72.0	65.3	43.0	19.8	2.9	2.9	5.1	7.2	8.0
145°	66.6	60.7	38.8	18.1	2.9	2.5	4.6	6.7	7.2
147.5°	61.5	55.2	35.4	16.9	2.9	2.5	4.2	5.9	6.3
150°	56.5	49.7	32.0	15.6	2.9	2.5	3.8	5.1	5.9
152.5°	51.0	43.0	28.6	14.3	2.9	2.5	3.4	4.6	5.1
155°	45.5	37.5	25.7	13.1	3.4	2.5	2.9	3.8	4.6
157.5°	40.9	32.4	22.8	11.8	3.4	2.1	2.9	3.4	3.8
160°	35.4	27.8	20.2	10.5	3.4	2.1	2.5	2.9	3.4
162.5°	31.2	23.2	17.7	9.7	3.4	2.1	2.5	2.5	2.9
165°	26.5	19.4	14.7	8.8	3.4	2.1	2.1	2.1	2.5
167.5°	21.5	15.2	12.2	8.0	3.4	2.1	2.1	1.7	2.1
170°	16.0	11.4	10.1	7.2	3.4	2.1	1.7	1.3	1.7
172.5°	7.2	8.8	8.0	6.3	3.8	2.1	1.7	1.3	0.8
175°	3.8	6.3	6.3	5.5	3.8	2.1	1.7	1.3	0.4
177.5°	2.9	3.8	4.6	4.6	3.8	2.5	1.7	0.8	0.4
180°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5



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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	17.83	19.31	18.34	19.81	20.36	16.80	18.28	17.31	18.78	19.33
	3H	19.92	21.27	20.44	21.78	22.36	18.68	20.02	19.19	20.53	21.12
	4H	20.86	22.14	21.40	22.67	23.26	19.42	20.70	19.96	21.23	21.82
	6H	21.78	22.97	22.33	23.51	24.12	20.05	21.24	20.61	21.78	22.40
	8H	22.21	23.35	22.77	23.91	24.53	20.31	21.45	20.87	22.01	22.63
	12H	22.63	23.72	23.20	24.28	24.93	20.54	21.63	21.11	22.19	22.84
4H	2H	18.33	19.60	18.87	20.13	20.73	17.37	18.64	17.91	19.17	19.77
	3H	20.64	21.73	21.19	22.30	22.91	19.43	20.51	19.98	21.08	21.70
	4H	21.75	22.75	22.32	23.33	23.98	20.28	21.28	20.85	21.85	22.50
	6H	22.86	23.74	23.45	24.34	25.00	21.04	21.91	21.63	22.52	23.18
	8H	23.38	24.21	23.98	24.81	25.49	21.35	22.18	21.95	22.78	23.45
	12H	23.91	24.66	24.53	25.29	25.97	21.64	22.39	22.26	23.02	23.70
8H	4H	22.01	22.84	22.61	23.44	24.11	20.62	21.44	21.21	22.05	22.72
	6H	23.29	23.99	23.92	24.64	25.32	21.50	22.20	22.13	22.85	23.53
	8H	23.96	24.59	24.60	25.25	25.94	21.90	22.53	22.54	23.19	23.88
	12H	24.66	25.23	25.31	25.87	26.63	22.29	22.85	22.93	23.50	24.25
12H	4H	22.03	22.78	22.65	23.41	24.09	20.68	21.43	21.30	22.06	22.74
	6H	23.35	23.98	23.99	24.63	25.33	21.61	22.24	22.25	22.90	23.59
	8H	24.09	24.65	24.73	25.30	26.05	22.07	22.64	22.72	23.28	24.04