

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: P893374

Luminaire Tested: 4MB-3SL-ASMF-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893374
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-L935
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

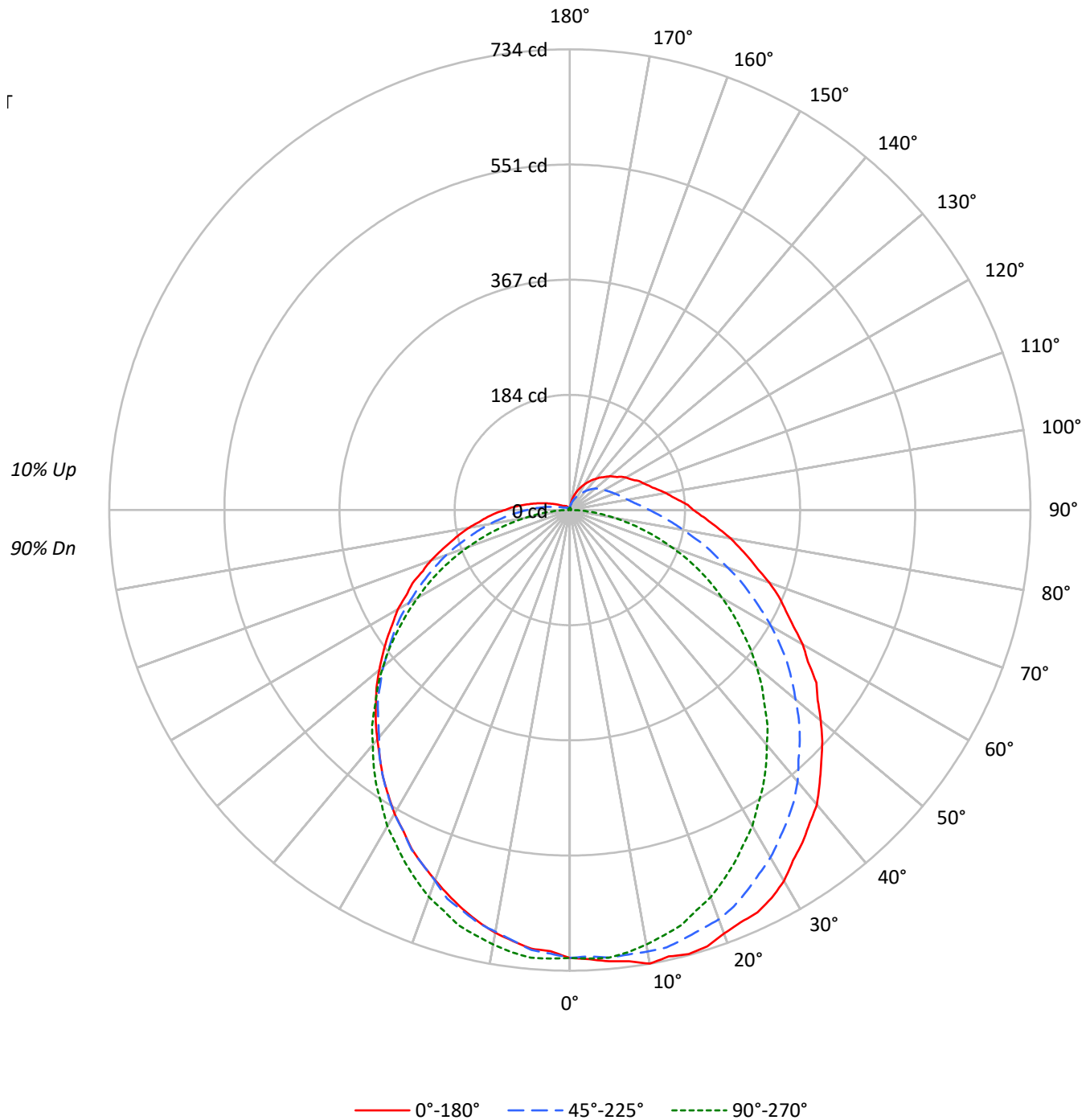
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2453.0 lumens
Efficiency: N/A
Efficacy: 116.3 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 (Ain): 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				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°	7266	7266	7266	7266	7266
5°	7358	7099	7030	6975	7154
10°	7547	6951	6711	6638	7033
15°	7658	6804	6413	6361	6885
20°	7695	6663	6074	6029	6724
25°	7834	6449	5717	5754	6602
30°	7882	6242	5377	5456	6452
35°	7863	6017	5021	5169	6315
40°	7934	5784	4655	4845	6179
45°	7911	5509	4294	4599	6102
50°	7970	5227	3947	4318	6052
55°	8148	4980	3550	4036	6033
60°	8283	4675	3142	3735	6112
65°	8570	4344	2730	3436	6249
70°	9270	4028	2238	3151	6463
75°	10414	3798	1712	2820	6910
80°	12948	3576	1146	2528	8114
85°	19354	3528	575	2225	11375

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 63735 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.7	2.8
10°-20°	194.0	7.9
20°-30°	292.6	11.9
30°-40°	351.2	14.3
40°-50°	365.6	14.9
50°-60°	339.0	13.8
60°-70°	279.1	11.4
70°-80°	201.4	8.2
80°-90°	127.8	5.2
90°-100°	78.8	3.2
100°-110°	52.5	2.1
110°-120°	37.4	1.5
120°-130°	27.4	1.1
130°-140°	18.9	0.8
140°-150°	11.5	0.5
150°-160°	5.7	0.2
160°-170°	2.1	0.1
170°-180°	0.3	0.0
0°-30°	554.3	22.6
0°-40°	905.4	36.9
0°-60°	1610.0	65.6
0°-90°	2218.4	90.4
90°-120°	168.8	6.9
90°-150°	226.5	9.2
90°-180°	235.0	9.6
0°-180°	2453.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	714	714	714	714	714	
5°	722	716	716	704	702	69
15°	732	707	685	661	658	206
25°	707	669	620	597	596	325
35°	646	604	537	519	519	405
45°	566	518	438	433	437	438
55°	480	423	334	342	355	426
65°	380	318	228	251	277	378
75°	296	224	120	167	196	313
85°	225	153	31	96	132	191
90°	197	127	3	68	103	108
95°	175	107	2	46	80	139
105°	137	84	2	19	42	147
115°	113	70	2	9	20	113
125°	92	58	2	7	11	83
135°	74	46	2	5	9	58
145°	56	33	2	4	6	36
155°	38	22	3	2	4	18
165°	22	12	3	2	2	7
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°	713.5	713.5	713.5	713.5	713.5	713.5	713.5	713.5	713.5
2.5°	716.3	718.5	711.7	716.0	715.3	716.0	707.4	714.5	703.5
5°	721.7	722.7	716.0	718.5	716.0	709.9	703.5	701.0	701.7
7.5°	725.2	731.0	714.2	714.9	710.6	704.2	692.1	694.2	692.8
10°	733.8	727.4	714.2	711.0	702.8	696.0	682.1	683.2	683.9
12.5°	728.5	727.0	713.8	702.1	693.9	688.1	673.9	670.3	672.1
15°	732.4	726.3	706.7	697.4	684.9	674.9	660.7	658.2	658.5
17.5°	728.8	723.8	699.6	686.7	669.2	663.2	649.6	645.3	643.2
20°	718.1	715.6	694.2	672.1	656.4	644.6	628.2	625.7	627.5
22.5°	711.0	704.9	683.5	661.4	638.6	628.2	611.8	611.4	611.8
25°	707.4	699.6	668.9	645.7	620.4	611.1	596.8	591.5	596.1
27.5°	696.7	689.6	653.5	628.2	600.0	587.5	575.8	574.7	575.4
30°	682.4	668.5	639.6	608.6	581.5	568.6	559.0	551.9	558.6
32.5°	662.1	654.3	621.4	587.5	557.6	548.7	539.0	538.3	538.3
35°	646.4	640.7	604.3	569.0	536.9	524.8	519.1	516.6	519.1
37.5°	628.2	619.7	586.1	546.5	513.7	503.4	497.6	495.5	497.3
40°	612.5	596.8	564.7	523.3	488.4	479.1	473.0	475.2	477.0
42.5°	589.3	580.4	539.4	499.8	466.6	456.6	451.6	453.4	457.7
45°	566.5	558.3	518.3	475.2	438.4	433.1	432.7	431.7	437.0
47.5°	545.8	534.0	495.2	450.9	414.9	408.8	409.5	413.1	417.7
50°	521.9	508.0	469.5	424.9	388.8	384.9	387.8	390.3	396.3
52.5°	498.0	486.9	445.9	400.3	362.4	359.6	363.5	371.7	375.3
55°	479.5	459.5	422.7	371.4	334.3	334.6	342.5	347.1	355.0
57.5°	449.8	434.9	396.3	345.7	307.9	310.4	321.1	328.9	333.9
60°	428.8	409.9	370.6	318.2	280.0	284.0	296.1	307.9	316.4
62.5°	401.7	385.3	343.9	291.1	254.4	260.1	273.6	287.5	293.6
65°	379.6	361.0	317.5	264.0	227.6	234.4	251.1	266.8	276.8
67.5°	360.7	341.4	294.0	239.0	200.5	210.5	230.1	245.4	253.3
70°	338.2	315.7	267.2	211.2	172.3	184.1	209.0	226.9	235.8
72.5°	314.3	296.1	244.0	185.5	146.3	160.5	188.0	206.6	215.1
75°	295.7	275.4	224.4	159.8	119.9	137.0	166.6	187.6	196.2
77.5°	276.8	258.3	202.3	136.3	96.3	115.6	147.7	170.9	179.8
80°	260.1	238.7	183.7	117.0	71.7	94.5	129.9	152.7	163.0
82.5°	241.5	223.0	167.7	96.7	51.0	75.3	112.4	137.3	145.9
85°	225.1	205.8	152.7	80.6	31.4	58.1	96.3	122.0	132.3
87.5°	210.1	194.1	138.8	68.5	15.7	44.2	81.0	107.0	118.8
90°	196.6	178.4	127.0	57.4	2.9	32.1	68.5	94.2	103.1
92.5°	188.0	166.2	117.4	50.3	1.8	22.8	57.1	82.4	92.8
95°	175.2	155.9	107.4	44.9	1.8	15.3	46.0	70.6	79.6
97.5°	164.1	146.3	100.2	41.7	1.4	10.3	37.8	59.2	68.5
100°	155.5	138.8	93.8	38.9	1.8	7.5	30.0	50.3	58.5
102.5°	145.9	130.6	88.8	37.1	1.8	5.4	23.5	42.5	49.9
105°	137.3	123.8	84.2	35.3	1.8	4.6	18.9	35.0	41.7
107.5°	130.9	116.7	80.3	34.2	1.8	4.6	15.0	28.5	34.2
110°	124.5	110.9	76.3	33.2	1.8	4.3	11.8	23.5	28.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	120.2	105.6	72.8	32.1	2.1	4.3	9.6	19.6	23.5
115°	112.7	101.0	69.6	31.7	2.1	3.9	8.9	16.1	20.0
117.5°	107.4	96.7	66.4	30.7	2.1	3.9	8.6	13.2	16.1
120°	103.5	91.7	63.5	29.6	2.1	3.6	7.8	11.8	13.6
122.5°	98.5	87.0	61.0	28.9	2.1	3.6	7.5	11.1	12.1
125°	91.7	82.8	58.1	27.5	2.5	3.6	7.1	10.3	11.4
127.5°	87.4	78.8	56.0	25.7	2.5	3.2	6.8	9.6	10.7
130°	83.8	74.6	53.5	23.9	2.5	3.2	6.4	8.9	10.0
132.5°	78.5	70.3	49.9	22.5	2.5	2.9	5.7	8.2	9.3
135°	73.5	66.7	46.4	21.0	2.5	2.9	5.4	7.8	8.6
137.5°	70.3	63.1	43.2	19.6	2.5	2.5	5.0	7.1	7.8
140°	64.9	59.2	39.6	18.2	2.5	2.5	4.6	6.8	7.1
142.5°	61.0	55.3	36.4	16.8	2.5	2.5	4.3	6.1	6.8
145°	56.4	51.4	32.8	15.3	2.5	2.1	3.9	5.7	6.1
147.5°	52.1	46.7	30.0	14.3	2.5	2.1	3.6	5.0	5.4
150°	47.8	42.1	27.1	13.2	2.5	2.1	3.2	4.3	5.0
152.5°	43.2	36.4	24.3	12.1	2.5	2.1	2.9	3.9	4.3
155°	38.5	31.7	21.8	11.1	2.9	2.1	2.5	3.2	3.9
157.5°	34.6	27.5	19.3	10.0	2.9	1.8	2.5	2.9	3.2
160°	30.0	23.5	17.1	8.9	2.9	1.8	2.1	2.5	2.9
162.5°	26.4	19.6	15.0	8.2	2.9	1.8	2.1	2.1	2.5
165°	22.5	16.4	12.5	7.5	2.9	1.8	1.8	1.8	2.1
167.5°	18.2	12.8	10.3	6.8	2.9	1.8	1.8	1.4	1.8
170°	13.6	9.6	8.6	6.1	2.9	1.8	1.4	1.1	1.4
172.5°	6.1	7.5	6.8	5.4	3.2	1.8	1.4	1.1	0.7
175°	3.2	5.4	5.4	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	17.25	18.73	17.76	19.23	19.78	16.23	17.70	16.73	18.21	18.75
	3H	19.34	20.69	19.86	21.20	21.78	18.10	19.44	18.62	19.96	20.54
	4H	20.28	21.56	20.82	22.09	22.68	18.84	20.12	19.38	20.65	21.24
	6H	21.20	22.39	21.76	22.93	23.54	19.48	20.67	20.03	21.21	21.82
	8H	21.63	22.77	22.20	23.33	23.95	19.73	20.87	20.30	21.43	22.05
	12H	22.05	23.14	22.62	23.70	24.35	19.96	21.05	20.53	21.61	22.26
4H	2H	17.75	19.02	18.29	19.55	20.15	16.79	18.07	17.33	18.59	19.19
	3H	20.06	21.15	20.61	21.72	22.34	18.85	19.94	19.40	20.51	21.12
	4H	21.17	22.17	21.75	22.75	23.40	19.70	20.70	20.27	21.28	21.93
	6H	22.28	23.16	22.87	23.76	24.42	20.46	21.34	21.05	21.94	22.60
	8H	22.81	23.63	23.40	24.24	24.91	20.77	21.60	21.37	22.20	22.88
	12H	23.33	24.09	23.95	24.72	25.40	21.07	21.82	21.68	22.45	23.13
8H	4H	21.43	22.26	22.03	22.86	23.54	20.04	20.87	20.64	21.47	22.14
	6H	22.71	23.41	23.34	24.06	24.74	20.92	21.63	21.55	22.27	22.95
	8H	23.38	24.01	24.02	24.67	25.36	21.32	21.96	21.96	22.61	23.30
	12H	24.09	24.65	24.73	25.29	26.05	21.71	22.28	22.35	22.92	23.68
12H	4H	21.45	22.20	22.07	22.83	23.51	20.10	20.85	20.72	21.48	22.17
	6H	22.77	23.40	23.41	24.06	24.75	21.03	21.67	21.67	22.32	23.01
	8H	23.51	24.08	24.15	24.72	25.48	21.50	22.06	22.14	22.70	23.46