

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: P893264

Luminaire Tested: 4MB-2SL-ASMF-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893264
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-2SL-ASMF-UNV-L950
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

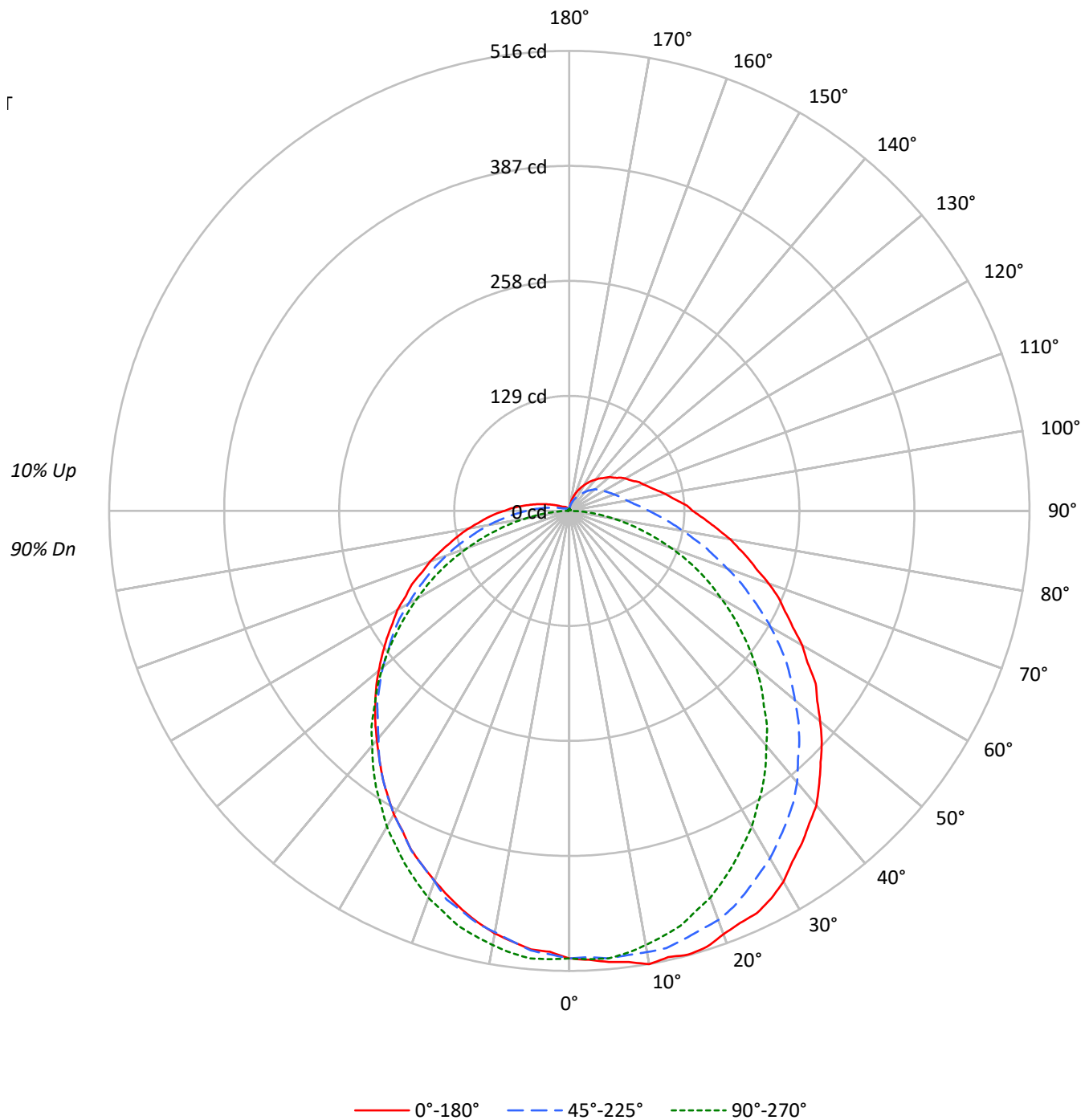
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1726.0 lumens
Efficiency: N/A
Efficacy: 125.1 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): 13.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.92
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893264
CATALOG NUMBER: 4MB-2SL-ASMF-UNV-L950

Luminous Intensity Polar Plot





TEST NUMBER: P893264

CATALOG NUMBER: 4MB-2SL-ASMF-UNV-L950

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	60	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°	5112	5112	5112	5112	5112
5°	5177	4995	4947	4908	5033
10°	5310	4890	4722	4670	4949
15°	5388	4788	4512	4476	4845
20°	5414	4689	4274	4242	4731
25°	5513	4537	4022	4048	4645
30°	5546	4393	3783	3838	4540
35°	5533	4234	3533	3637	4443
40°	5583	4070	3275	3409	4347
45°	5566	3877	3021	3237	4294
50°	5608	3677	2777	3037	4259
55°	5734	3504	2498	2840	4245
60°	5828	3290	2211	2627	4300
65°	6030	3057	1920	2418	4398
70°	6524	2834	1574	2217	4547
75°	7329	2673	1203	1984	4864
80°	9110	2517	807	1779	5710
85°	13619	2482	405	1567	8005

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 44835 cd/sqm



TEST NUMBER: P893264
 CATALOG NUMBER: 4MB-2SL-ASMF-UNV-L950

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.6	2.8
10°-20°	136.5	7.9
20°-30°	205.9	11.9
30°-40°	247.1	14.3
40°-50°	257.3	14.9
50°-60°	238.5	13.8
60°-70°	196.4	11.4
70°-80°	141.7	8.2
80°-90°	89.9	5.2
90°-100°	55.5	3.2
100°-110°	37.0	2.1
110°-120°	26.3	1.5
120°-130°	19.3	1.1
130°-140°	13.3	0.8
140°-150°	8.1	0.5
150°-160°	4.0	0.2
160°-170°	1.5	0.1
170°-180°	0.2	0.0
0°-30°	390.0	22.6
0°-40°	637.1	36.9
0°-60°	1132.9	65.6
0°-90°	1560.9	90.4
90°-120°	118.8	6.9
90°-150°	159.4	9.2
90°-180°	165.0	9.6
0°-180°	1726.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	502	502	502	502	502	
5°	508	504	504	495	494	49
15°	515	497	482	465	463	145
25°	498	471	436	420	419	229
35°	455	425	378	365	365	285
45°	399	365	308	304	308	308
55°	337	297	235	241	250	300
65°	267	223	160	177	195	266
75°	208	158	84	117	138	220
85°	158	107	22	68	93	134
90°	138	89	2	48	72	76
95°	123	76	1	32	56	98
105°	97	59	1	13	29	103
115°	79	49	2	6	14	79
125°	64	41	2	5	8	59
135°	52	33	2	4	6	41
145°	40	23	2	3	4	25
155°	27	15	2	2	3	13
165°	16	9	2	1	2	5
175°	2	4	2	1	0	0
180°	2	2	2	2	2	



TEST NUMBER: P893264

CATALOG NUMBER: 4MB-2SL-ASMF-UNV-L950

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0
2.5°	504.0	505.5	500.8	503.8	503.3	503.8	497.8	502.8	495.0
5°	507.8	508.5	503.8	505.5	503.8	499.5	495.0	493.2	493.7
7.5°	510.3	514.3	502.5	503.0	500.0	495.5	487.0	488.5	487.5
10°	516.3	511.8	502.5	500.3	494.5	489.7	479.9	480.7	481.2
12.5°	512.6	511.6	502.3	494.0	488.2	484.2	474.2	471.6	472.9
15°	515.3	511.1	497.3	490.7	481.9	474.9	464.9	463.1	463.4
17.5°	512.8	509.3	492.2	483.2	470.9	466.6	457.1	454.1	452.6
20°	505.3	503.5	488.5	472.9	461.9	453.6	442.0	440.3	441.5
22.5°	500.3	496.0	480.9	465.4	449.3	442.0	430.5	430.2	430.5
25°	497.8	492.2	470.6	454.3	436.5	430.0	419.9	416.2	419.4
27.5°	490.2	485.2	459.9	442.0	422.2	413.4	405.1	404.4	404.9
30°	480.2	470.4	450.1	428.2	409.1	400.1	393.3	388.3	393.1
32.5°	465.9	460.4	437.3	413.4	392.3	386.1	379.3	378.8	378.8
35°	454.8	450.8	425.2	400.4	377.8	369.2	365.2	363.5	365.2
37.5°	442.0	436.0	412.4	384.5	361.5	354.2	350.2	348.7	349.9
40°	431.0	419.9	397.3	368.2	343.6	337.1	332.8	334.3	335.6
42.5°	414.7	408.4	379.5	351.7	328.3	321.3	317.8	319.0	322.0
45°	398.6	392.8	364.7	334.3	308.5	304.7	304.5	303.7	307.5
47.5°	384.0	375.8	348.4	317.3	291.9	287.7	288.2	290.7	293.9
50°	367.2	357.4	330.3	299.0	273.6	270.8	272.8	274.6	278.9
52.5°	350.4	342.6	313.8	281.6	255.0	253.0	255.8	261.6	264.1
55°	337.4	323.3	297.4	261.3	235.2	235.4	241.0	244.2	249.8
57.5°	316.5	306.0	278.9	243.2	216.6	218.4	225.9	231.4	234.9
60°	301.7	288.4	260.8	223.9	197.0	199.8	208.3	216.6	222.6
62.5°	282.6	271.1	242.0	204.8	179.0	183.0	192.5	202.3	206.6
65°	267.1	254.0	223.4	185.7	160.1	164.9	176.7	187.8	194.8
67.5°	253.8	240.2	206.8	168.2	141.1	148.1	161.9	172.7	178.2
70°	238.0	222.1	188.0	148.6	121.2	129.5	147.1	159.6	165.9
72.5°	221.1	208.3	171.7	130.5	102.9	113.0	132.3	145.3	151.4
75°	208.1	193.8	157.9	112.5	84.3	96.4	117.2	132.0	138.1
77.5°	194.8	181.7	142.3	95.9	67.8	81.3	103.9	120.2	126.5
80°	183.0	167.9	129.3	82.3	50.5	66.5	91.4	107.4	114.7
82.5°	169.9	156.9	118.0	68.0	35.9	53.0	79.1	96.6	102.7
85°	158.4	144.8	107.4	56.7	22.1	40.9	67.8	85.8	93.1
87.5°	147.8	136.5	97.6	48.2	11.0	31.1	57.0	75.3	83.6
90°	138.3	125.5	89.4	40.4	2.0	22.6	48.2	66.3	72.5
92.5°	132.3	117.0	82.6	35.4	1.3	16.1	40.2	58.0	65.3
95°	123.2	109.7	75.6	31.6	1.3	10.8	32.4	49.7	56.0
97.5°	115.5	102.9	70.5	29.4	1.0	7.3	26.6	41.7	48.2
100°	109.4	97.6	66.0	27.4	1.3	5.3	21.1	35.4	41.2
102.5°	102.7	91.9	62.5	26.1	1.3	3.8	16.6	29.9	35.1
105°	96.6	87.1	59.2	24.8	1.3	3.3	13.3	24.6	29.4
107.5°	92.1	82.1	56.5	24.1	1.3	3.3	10.5	20.1	24.1
110°	87.6	78.1	53.7	23.3	1.3	3.0	8.3	16.6	20.1



TEST NUMBER: P893264
 CATALOG NUMBER: 4MB-2SL-ASMF-UNV-L950

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	84.6	74.3	51.2	22.6	1.5	3.0	6.8	13.8	16.6
115°	79.3	71.0	48.9	22.3	1.5	2.8	6.3	11.3	14.1
117.5°	75.6	68.0	46.7	21.6	1.5	2.8	6.0	9.3	11.3
120°	72.8	64.5	44.7	20.8	1.5	2.5	5.5	8.3	9.5
122.5°	69.3	61.2	42.9	20.3	1.5	2.5	5.3	7.8	8.5
125°	64.5	58.2	40.9	19.3	1.8	2.5	5.0	7.3	8.0
127.5°	61.5	55.5	39.4	18.1	1.8	2.3	4.8	6.8	7.5
130°	59.0	52.5	37.7	16.8	1.8	2.3	4.5	6.3	7.0
132.5°	55.2	49.4	35.1	15.8	1.8	2.0	4.0	5.8	6.5
135°	51.7	46.9	32.6	14.8	1.8	2.0	3.8	5.5	6.0
137.5°	49.4	44.4	30.4	13.8	1.8	1.8	3.5	5.0	5.5
140°	45.7	41.7	27.9	12.8	1.8	1.8	3.3	4.8	5.0
142.5°	42.9	38.9	25.6	11.8	1.8	1.8	3.0	4.3	4.8
145°	39.7	36.1	23.1	10.8	1.8	1.5	2.8	4.0	4.3
147.5°	36.6	32.9	21.1	10.0	1.8	1.5	2.5	3.5	3.8
150°	33.6	29.6	19.1	9.3	1.8	1.5	2.3	3.0	3.5
152.5°	30.4	25.6	17.1	8.5	1.8	1.5	2.0	2.8	3.0
155°	27.1	22.3	15.3	7.8	2.0	1.5	1.8	2.3	2.8
157.5°	24.3	19.3	13.6	7.0	2.0	1.3	1.8	2.0	2.3
160°	21.1	16.6	12.0	6.3	2.0	1.3	1.5	1.8	2.0
162.5°	18.6	13.8	10.5	5.8	2.0	1.3	1.5	1.5	1.8
165°	15.8	11.5	8.8	5.3	2.0	1.3	1.3	1.3	1.5
167.5°	12.8	9.0	7.3	4.8	2.0	1.3	1.3	1.0	1.3
170°	9.5	6.8	6.0	4.3	2.0	1.3	1.0	0.8	1.0
172.5°	4.3	5.3	4.8	3.8	2.3	1.3	1.0	0.8	0.5
175°	2.3	3.8	3.8	3.3	2.3	1.3	1.0	0.8	0.3
177.5°	1.8	2.3	2.8	2.8	2.3	1.5	1.0	0.5	0.3
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



TEST NUMBER: P893264
 CATALOG NUMBER: 4MB-2SL-ASMF-UNV-L950

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	16.03	17.51	16.54	18.01	18.56	15.00	16.48	15.51	16.98	17.53
	3H	18.12	19.47	18.64	19.98	20.56	16.88	18.22	17.39	18.73	19.32
	4H	19.06	20.34	19.60	20.87	21.46	17.62	18.90	18.16	19.43	20.02
	6H	19.98	21.17	20.53	21.71	22.32	18.25	19.44	18.81	19.98	20.60
	8H	20.41	21.55	20.98	22.11	22.73	18.51	19.65	19.07	20.21	20.83
	12H	20.83	21.92	21.40	22.48	23.13	18.74	19.83	19.31	20.39	21.04
4H	2H	16.53	17.80	17.07	18.33	18.93	15.57	16.84	16.11	17.37	17.97
	3H	18.84	19.93	19.39	20.50	21.12	17.63	18.71	18.18	19.28	19.90
	4H	19.95	20.95	20.53	21.53	22.18	18.48	19.48	19.05	20.05	20.70
	6H	21.06	21.94	21.65	22.54	23.20	19.24	20.11	19.83	20.72	21.38
	8H	21.59	22.41	22.18	23.01	23.69	19.55	20.38	20.15	20.98	21.66
	12H	22.11	22.86	22.73	23.49	24.17	19.84	20.59	20.46	21.22	21.90
8H	4H	20.21	21.04	20.81	21.64	22.31	18.82	19.64	19.41	20.25	20.92
	6H	21.49	22.19	22.12	22.84	23.52	19.70	20.40	20.33	21.05	21.73
	8H	22.16	22.79	22.80	23.45	24.14	20.10	20.73	20.74	21.39	22.08
	12H	22.86	23.43	23.51	24.07	24.83	20.49	21.05	21.13	21.70	22.45
12H	4H	20.23	20.98	20.85	21.61	22.29	18.88	19.63	19.50	20.26	20.94
	6H	21.55	22.18	22.19	22.83	23.53	19.81	20.44	20.45	21.10	21.79
	8H	22.29	22.85	22.93	23.50	24.25	20.27	20.84	20.92	21.48	22.24