

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: P893280

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

Issue Date: 11/11/2024

**Test Information**

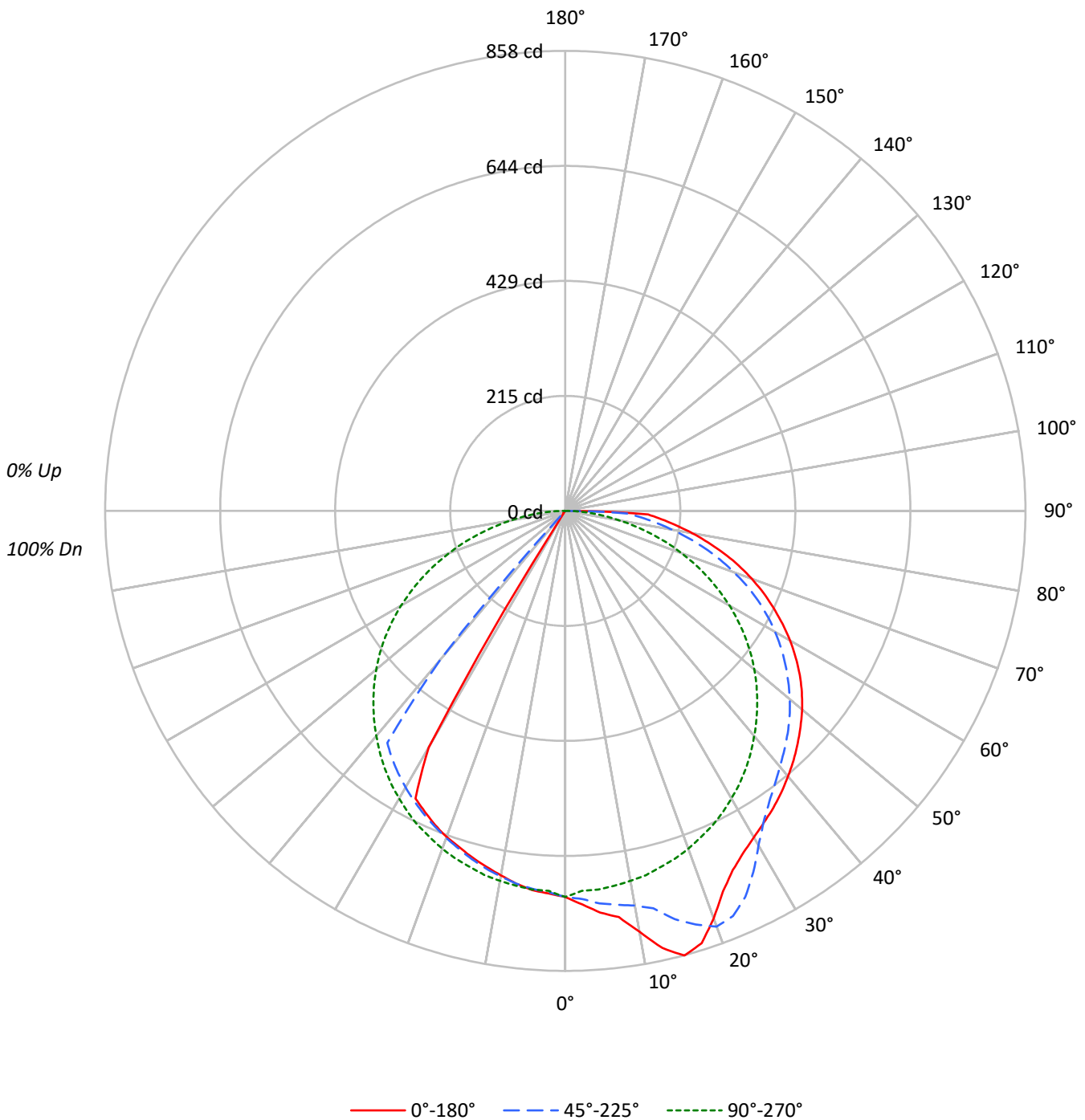
Test Method: LM-79-2019  
Report Number: P893280  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-ASYMR-UNV-L950  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1948.0 lumens  
Efficiency: N/A  
Efficacy: 141.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.28 / 1.25  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 13.8  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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

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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	50
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26

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

	0°	45°	90°	135°	180°
0°	9349	9349	9349	9349	9349
5°	9803	9578	9240	9223	9256
10°	10505	9852	9238	9130	9102
15°	11541	10599	9241	9042	8997
20°	11174	11402	9265	8970	8941
25°	10588	11379	9287	8939	8874
30°	10542	10802	9287	8929	7642
35°	10721	10505	9302	8929	105
40°	10954	10555	9289	6158	69
45°	11253	10768	9292	114	46
50°	11646	11038	9297	83	16
55°	12089	11351	9271	57	9
60°	12572	11736	9188	21	10
65°	13163	12201	9021	25	25
70°	14044	12711	8736	30	30
75°	15372	13531	8358	80	40
80°	18036	15143	7740	120	60
85°	26847	21260	7256	179	119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 46023 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.0	3.5
10°-20°	206.0	10.6
20°-30°	316.7	16.3
30°-40°	339.4	17.4
40°-50°	308.2	15.8
50°-60°	281.1	14.4
60°-70°	209.1	10.7
70°-80°	147.2	7.6
80°-90°	71.3	3.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	591.6	30.4
0°-40°	931.0	47.8
0°-60°	1520.3	78.0
0°-90°	1948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1948.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	720	720	720	720	720	
5°	752	735	709	708	710	73
15°	858	788	687	673	669	237
25°	739	794	648	624	619	344
35°	676	663	587	563	7	424
45°	613	586	506	6	2	473
55°	534	501	410	2	0	477
65°	428	397	294	1	1	424
75°	306	270	167	2	1	323
85°	180	143	49	1	1	181
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0
2.5°	734.8	726.6	724.5	730.3	709.3	723.3	711.7	714.2	714.2
5°	752.1	740.6	734.8	733.2	708.9	718.3	707.6	707.6	710.1
7.5°	764.1	751.3	741.0	736.9	705.1	713.4	701.0	701.0	701.0
10°	796.7	772.8	747.2	739.8	700.6	706.8	692.4	693.2	690.3
12.5°	835.0	813.6	759.2	738.5	695.7	698.5	683.3	682.9	679.6
15°	858.5	842.5	788.4	736.9	687.4	689.9	672.6	671.3	669.3
17.5°	845.3	842.9	808.6	735.7	680.0	677.9	660.6	659.4	657.7
20°	808.6	814.8	825.1	733.2	670.5	666.4	649.1	648.2	647.0
22.5°	767.8	774.0	817.7	737.3	659.0	654.0	636.7	635.9	634.2
25°	739.0	739.0	794.2	747.2	648.2	639.2	623.9	622.7	619.4
27.5°	718.7	715.0	759.2	758.3	634.6	624.3	610.3	609.1	604.9
30°	703.1	696.9	720.4	763.7	619.4	608.2	595.5	594.2	509.7
32.5°	689.1	682.5	687.8	768.2	604.1	590.9	579.8	413.6	18.1
35°	676.3	668.9	662.7	764.9	586.8	573.6	563.3	12.0	6.6
37.5°	661.8	656.1	642.0	747.6	568.2	555.0	545.1	6.6	5.8
40°	646.2	640.8	622.7	722.0	548.0	536.9	363.3	5.8	4.1
42.5°	630.1	626.0	604.5	684.9	527.8	516.7	11.5	4.5	3.3
45°	612.8	609.1	586.4	640.0	506.0	495.7	6.2	3.3	2.5
47.5°	595.0	589.7	567.4	591.7	483.7	473.4	5.4	2.5	1.6
50°	576.5	570.7	546.4	549.3	460.2	449.9	4.1	1.6	0.8
52.5°	555.9	548.9	524.1	510.9	435.5	426.0	3.3	0.8	0.4
55°	534.0	526.2	501.4	477.5	409.5	398.8	2.5	0.8	0.4
57.5°	509.7	501.0	477.5	445.8	381.8	269.7	1.6	0.8	0.4
60°	484.1	475.5	451.9	416.1	353.8	18.6	0.8	0.8	0.4
62.5°	456.9	447.8	425.1	386.0	323.7	15.3	0.8	0.8	0.8
65°	428.4	417.7	397.1	355.0	293.6	12.8	0.8	0.8	0.8
67.5°	400.0	386.4	367.0	323.3	262.7	10.7	0.8	0.8	0.8
70°	369.9	355.0	334.8	291.1	230.1	8.7	0.8	0.8	0.8
72.5°	339.0	324.5	302.7	258.6	199.6	6.6	0.8	0.8	0.8
75°	306.4	293.2	269.7	226.0	166.6	4.9	1.6	0.8	0.8
77.5°	272.6	262.3	235.9	192.6	134.4	3.3	1.6	0.8	0.8
80°	241.2	229.7	202.5	158.8	103.5	2.5	1.6	1.2	0.8
82.5°	209.1	198.8	171.5	127.8	74.2	2.1	1.6	1.2	0.8
85°	180.2	170.3	142.7	99.8	48.7	1.6	1.2	1.2	0.8
87.5°	154.6	145.6	118.3	73.0	27.6	1.2	1.2	1.2	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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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	22.30	23.91	22.66	24.23	24.54	17.73	19.34	18.10	19.66	19.97
	3H	24.74	26.21	25.12	26.53	26.90	18.37	19.84	18.75	20.16	20.52
	4H	25.87	27.25	26.27	27.60	27.97	18.52	19.90	18.92	20.25	20.62
	6H	26.96	28.25	27.37	28.61	29.00	18.56	19.84	18.97	20.21	20.60
	8H	27.49	28.72	27.92	29.11	29.51	18.55	19.77	18.97	20.16	20.56
	12H	28.06	29.24	28.49	29.62	30.05	18.53	19.71	18.96	20.09	20.52
4H	2H	22.96	24.34	23.35	24.69	25.06	18.86	20.24	19.26	20.59	20.96
	3H	25.64	26.81	26.05	27.21	27.61	20.20	21.37	20.61	21.76	22.16
	4H	26.94	28.00	27.37	28.41	28.85	20.74	21.80	21.17	22.21	22.65
	6H	28.22	29.15	28.67	29.59	30.05	21.01	21.94	21.46	22.38	22.84
	8H	28.85	29.73	29.31	30.17	30.63	21.05	21.92	21.51	22.37	22.83
	12H	29.53	30.33	30.01	30.80	31.27	21.06	21.85	21.54	22.32	22.79
8H	4H	27.30	28.18	27.76	28.62	29.09	21.68	22.56	22.14	23.00	23.47
	6H	28.79	29.52	29.28	30.01	30.48	22.27	23.01	22.76	23.50	23.97
	8H	29.57	30.23	30.08	30.74	31.22	22.45	23.11	22.96	23.62	24.10
	12H	30.46	31.05	30.97	31.54	32.10	22.55	23.14	23.06	23.63	24.19
12H	4H	27.34	28.13	27.82	28.61	29.08	21.90	22.69	22.38	23.17	23.63
	6H	28.87	29.54	29.38	30.04	30.53	22.62	23.29	23.13	23.79	24.28
	8H	29.75	30.35	30.26	30.83	31.39	22.93	23.53	23.44	24.02	24.57