

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: P893279

Luminaire Tested: 4MB-2SL-ASYMR-UNV-L940

Issue Date: 11/11/2024

**Test Information**

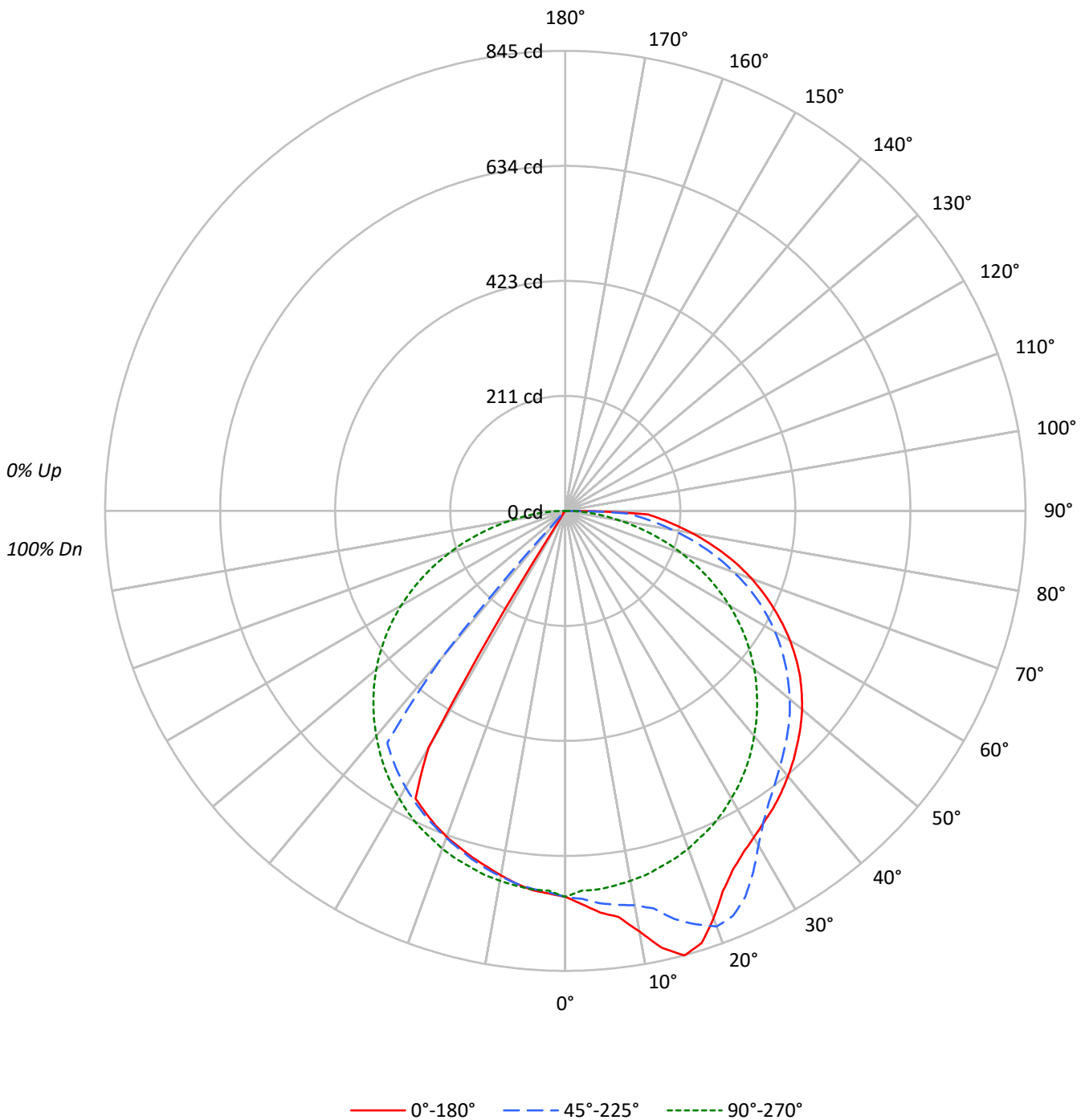
Test Method: LM-79-2019  
Report Number: P893279  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-ASYMR-UNV-L940  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1918.0 lumens  
Efficiency: N/A  
Efficacy: 139.0 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

TEST NUMBER: P893279  
CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L940

### Luminous Intensity Polar Plot





TEST NUMBER: P893279

CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L940

**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°	9205	9205	9205	9205	9205
5°	9653	9431	9097	9081	9114
10°	10343	9700	9095	8988	8962
15°	11363	10436	9098	8902	8859
20°	11002	11226	9123	8831	8802
25°	10425	11204	9145	8801	8737
30°	10380	10635	9143	8791	7524
35°	10556	10343	9159	8791	103
40°	10784	10393	9147	6063	69
45°	11079	10601	9149	112	44
50°	11466	10868	9153	83	16
55°	11903	11177	9128	54	9
60°	12380	11557	9048	21	10
65°	12960	12014	8883	25	25
70°	13827	12517	8603	30	30
75°	15136	13320	8228	80	40
80°	17760	14911	7620	120	60
85°	26430	20933	7136	179	119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 45338 cd/sqm



TEST NUMBER: P893279  
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L940

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.9	3.5
10°-20°	202.8	10.6
20°-30°	311.8	16.3
30°-40°	334.1	17.4
40°-50°	303.5	15.8
50°-60°	276.8	14.4
60°-70°	205.9	10.7
70°-80°	144.9	7.6
80°-90°	70.2	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°	582.5	30.4
0°-40°	916.7	47.8
0°-60°	1496.9	78.0
0°-90°	1918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1918.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	709	709	709	709	709	
5°	741	724	698	697	699	72
15°	845	776	677	662	659	233
25°	728	782	638	614	610	338
35°	666	652	578	555	6	417
45°	603	577	498	6	2	466
55°	526	494	403	2	0	470
65°	422	391	289	1	1	418
75°	302	266	164	2	1	318
85°	177	140	48	1	1	178
90°	0	0	0	0	0	



TEST NUMBER: P893279

CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L940

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9
2.5°	723.5	715.4	713.4	719.0	698.3	712.1	700.8	703.2	703.2
5°	740.6	729.2	723.5	721.9	697.9	707.3	696.7	696.7	699.2
7.5°	752.3	739.8	729.6	725.5	694.3	702.4	690.2	690.2	690.2
10°	784.4	760.9	735.7	728.4	689.8	695.9	681.7	682.5	679.7
12.5°	822.2	801.1	747.5	727.2	684.9	687.8	672.8	672.4	669.1
15°	845.3	829.5	776.3	725.5	676.8	679.3	662.2	661.0	659.0
17.5°	832.3	829.9	796.2	724.3	669.5	667.5	650.4	649.2	647.6
20°	796.2	802.3	812.4	721.9	660.2	656.1	639.1	638.3	637.0
22.5°	756.0	762.1	805.1	725.9	648.8	643.9	626.9	626.1	624.4
25°	727.6	727.6	782.0	735.7	638.3	629.3	614.3	613.1	609.8
27.5°	707.7	704.0	747.5	746.7	624.9	614.7	600.9	599.7	595.6
30°	692.3	686.2	709.3	751.9	609.8	598.9	586.3	585.1	501.8
32.5°	678.4	672.0	677.2	756.4	594.8	581.8	570.9	407.2	17.9
35°	665.9	658.6	652.5	753.2	577.8	564.8	554.6	11.8	6.5
37.5°	651.6	646.0	632.2	736.1	559.5	546.5	536.7	6.5	5.7
40°	636.2	630.9	613.1	710.9	539.6	528.6	357.7	5.7	4.1
42.5°	620.4	616.3	595.2	674.4	519.7	508.7	11.4	4.5	3.2
45°	603.3	599.7	577.3	630.1	498.2	488.0	6.1	3.2	2.4
47.5°	585.9	580.6	558.7	582.6	476.3	466.1	5.3	2.4	1.6
50°	567.6	561.9	538.0	540.8	453.1	443.0	4.1	1.6	0.8
52.5°	547.3	540.4	516.0	503.0	428.7	419.4	3.2	0.8	0.4
55°	525.8	518.1	493.7	470.2	403.2	392.6	2.4	0.8	0.4
57.5°	501.8	493.3	470.2	438.9	376.0	265.5	1.6	0.8	0.4
60°	476.7	468.1	445.0	409.7	348.4	18.3	0.8	0.8	0.4
62.5°	449.9	440.9	418.6	380.0	318.7	15.0	0.8	0.8	0.8
65°	421.8	411.3	391.0	349.6	289.1	12.6	0.8	0.8	0.8
67.5°	393.8	380.4	361.4	318.3	258.6	10.6	0.8	0.8	0.8
70°	364.2	349.6	329.7	286.6	226.6	8.5	0.8	0.8	0.8
72.5°	333.7	319.5	298.0	254.6	196.5	6.5	0.8	0.8	0.8
75°	301.7	288.7	265.5	222.5	164.0	4.9	1.6	0.8	0.8
77.5°	268.4	258.2	232.2	189.6	132.4	3.2	1.6	0.8	0.8
80°	237.5	226.1	199.4	156.3	101.9	2.4	1.6	1.2	0.8
82.5°	205.8	195.7	168.9	125.9	73.1	2.0	1.6	1.2	0.8
85°	177.4	167.7	140.5	98.3	47.9	1.6	1.2	1.2	0.8
87.5°	152.3	143.3	116.5	71.9	27.2	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



TEST NUMBER: P893279  
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L940

**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	22.24	23.86	22.61	24.17	24.49	17.68	19.29	18.04	19.61	19.92
	3H	24.69	26.15	25.07	26.48	26.84	18.32	19.78	18.70	20.11	20.47
	4H	25.82	27.20	26.21	27.55	27.92	18.46	19.85	18.86	20.19	20.57
	6H	26.91	28.19	27.32	28.56	28.95	18.50	19.79	18.92	20.15	20.54
	8H	27.44	28.67	27.86	29.05	29.45	18.49	19.72	18.92	20.11	20.51
	12H	28.01	29.18	28.43	29.57	29.99	18.47	19.65	18.90	20.03	20.46
4H	2H	22.90	24.28	23.30	24.63	25.01	18.80	20.19	19.20	20.53	20.91
	3H	25.59	26.76	26.00	27.16	27.55	20.15	21.31	20.56	21.71	22.11
	4H	26.89	27.95	27.32	28.36	28.80	20.68	21.74	21.11	22.16	22.59
	6H	28.17	29.10	28.62	29.54	30.00	20.96	21.89	21.41	22.33	22.79
	8H	28.79	29.67	29.25	30.11	30.58	20.99	21.87	21.45	22.31	22.78
	12H	29.48	30.27	29.96	30.75	31.21	21.01	21.80	21.48	22.27	22.74
8H	4H	27.25	28.13	27.71	28.57	29.03	21.63	22.51	22.09	22.95	23.41
	6H	28.73	29.47	29.22	29.96	30.43	22.22	22.96	22.71	23.44	23.92
	8H	29.51	30.18	30.02	30.68	31.17	22.40	23.06	22.90	23.57	24.05
	12H	30.41	31.00	30.91	31.49	32.05	22.50	23.09	23.00	23.58	24.14
12H	4H	27.29	28.08	27.77	28.56	29.02	21.85	22.64	22.33	23.11	23.58
	6H	28.82	29.49	29.33	29.99	30.48	22.57	23.23	23.08	23.74	24.22
	8H	29.70	30.29	30.20	30.78	31.34	22.88	23.47	23.39	23.96	24.52