

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: P893274

Luminaire Tested: 4MB-2SL-ASYMR-UNV-L835

Issue Date: 11/11/2024

**Test Information**

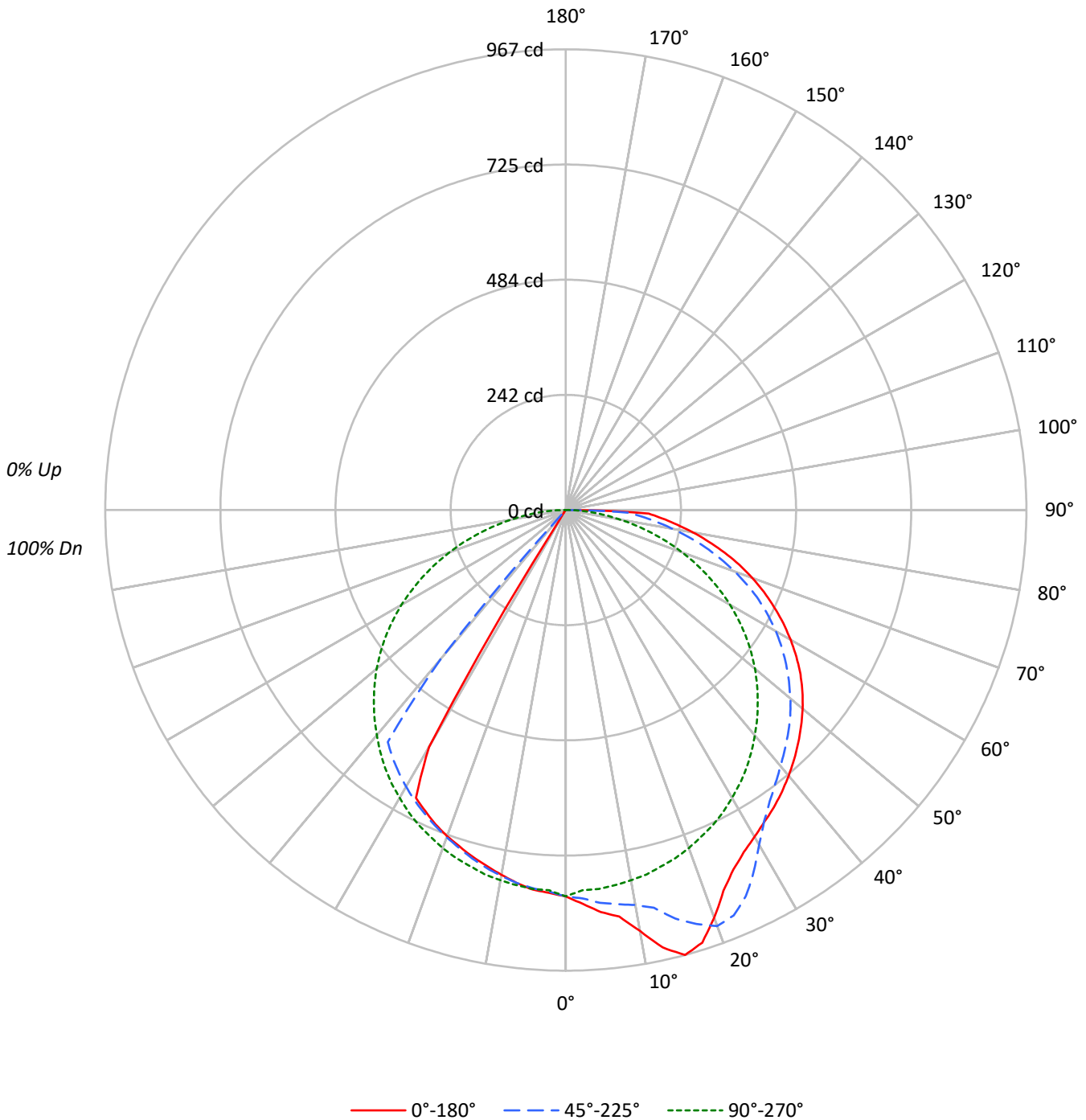
Test Method: LM-79-2019  
Report Number: P893274  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-ASYMR-UNV-L835  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 80CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2194.0 lumens  
Efficiency: N/A  
Efficacy: 159.0 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 (Ain): 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: P893274  
CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L835

### Luminous Intensity Polar Plot





TEST NUMBER: P893274

CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L835

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

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

	0°	45°	90°	135°	180°
0°	10530	10530	10530	10530	10530
5°	11042	10787	10407	10389	10425
10°	11831	11097	10405	10282	10252
15°	13000	11938	10408	10183	10133
20°	12586	12841	10436	10101	10069
25°	11925	12816	10460	10068	9995
30°	11874	12166	10460	10055	8606
35°	12074	11832	10476	10056	117
40°	12337	11888	10462	6936	78
45°	12675	12127	10465	129	51
50°	13117	12432	10470	93	18
55°	13615	12786	10441	63	11
60°	14159	13219	10349	23	13
65°	14828	13743	10161	28	28
70°	15817	14317	9841	34	34
75°	17314	15237	9412	95	45
80°	20317	17049	8719	142	67
85°	30244	23942	8164	209	134

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 51858 cd/sqm



TEST NUMBER: P893274  
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L835

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.7	3.5
10°-20°	232.0	10.6
20°-30°	356.6	16.3
30°-40°	382.2	17.4
40°-50°	347.1	15.8
50°-60°	316.6	14.4
60°-70°	235.5	10.7
70°-80°	165.8	7.6
80°-90°	80.3	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°	666.4	30.4
0°-40°	1048.6	47.8
0°-60°	1712.3	78.0
0°-90°	2194.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2194.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	811	811	811	811	811	
5°	847	828	798	797	800	82
15°	967	888	774	758	754	267
25°	832	894	730	703	698	387
35°	762	746	661	634	7	477
45°	690	660	570	7	3	533
55°	601	565	461	3	0	537
65°	483	447	331	1	1	478
75°	345	304	188	2	1	364
85°	203	161	55	1	1	204
90°	0	0	0	0	0	



TEST NUMBER: P893274

CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L835

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	810.9	810.9	810.9	810.9	810.9	810.9	810.9	810.9	810.9
2.5°	827.6	818.3	816.0	822.5	798.8	814.6	801.6	804.4	804.4
5°	847.1	834.1	827.6	825.8	798.4	809.0	797.0	797.0	799.8
7.5°	860.6	846.2	834.6	829.9	794.2	803.5	789.5	789.5	789.5
10°	897.3	870.4	841.6	833.2	789.1	796.0	779.8	780.7	777.5
12.5°	940.5	916.3	855.0	831.8	783.5	786.8	769.6	769.1	765.4
15°	967.0	948.8	888.0	829.9	774.2	777.0	757.5	756.1	753.8
17.5°	952.1	949.3	910.8	828.6	765.9	763.5	744.0	742.6	740.8
20°	910.8	917.7	929.3	825.8	755.2	750.5	731.0	730.1	728.7
22.5°	864.8	871.7	921.0	830.4	742.2	736.6	717.1	716.2	714.3
25°	832.3	832.3	894.5	841.6	730.1	719.9	702.7	701.3	697.6
27.5°	809.5	805.3	855.0	854.1	714.8	703.2	687.4	686.0	681.3
30°	791.9	784.9	811.4	860.1	697.6	685.0	670.6	669.3	574.0
32.5°	776.1	768.6	774.7	865.2	680.4	665.5	653.0	465.8	20.4
35°	761.7	753.3	746.4	861.5	660.9	646.0	634.4	13.5	7.4
37.5°	745.4	738.9	723.1	842.0	640.0	625.1	614.0	7.4	6.5
40°	727.8	721.7	701.3	813.2	617.2	604.7	409.2	6.5	4.6
42.5°	709.7	705.0	680.9	771.4	594.5	581.9	13.0	5.1	3.7
45°	690.2	686.0	660.4	720.8	569.9	558.3	7.0	3.7	2.8
47.5°	670.2	664.1	639.1	666.5	544.8	533.2	6.0	2.8	1.9
50°	649.3	642.8	615.4	618.6	518.3	506.7	4.6	1.9	0.9
52.5°	626.1	618.2	590.3	575.4	490.4	479.8	3.7	0.9	0.5
55°	601.4	592.6	564.8	537.8	461.2	449.1	2.8	0.9	0.5
57.5°	574.0	564.3	537.8	502.1	430.1	303.7	1.9	0.9	0.5
60°	545.2	535.5	509.0	468.6	398.5	20.9	0.9	0.9	0.5
62.5°	514.6	504.4	478.8	434.7	364.6	17.2	0.9	0.9	0.9
65°	482.6	470.5	447.3	399.9	330.7	14.4	0.9	0.9	0.9
67.5°	450.5	435.2	413.3	364.1	295.8	12.1	0.9	0.9	0.9
70°	416.6	399.9	377.1	327.9	259.2	9.8	0.9	0.9	0.9
72.5°	381.8	365.5	340.9	291.2	224.8	7.4	0.9	0.9	0.9
75°	345.1	330.2	303.7	254.5	187.6	5.6	1.9	0.9	0.9
77.5°	307.0	295.4	265.7	216.9	151.4	3.7	1.9	0.9	0.9
80°	271.7	258.7	228.0	178.8	116.6	2.8	1.9	1.4	0.9
82.5°	235.5	223.9	193.2	144.0	83.6	2.3	1.9	1.4	0.9
85°	203.0	191.8	160.7	112.4	54.8	1.9	1.4	1.4	0.9
87.5°	174.2	163.9	133.3	82.2	31.1	1.4	1.4	1.4	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P893274  
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L835

**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	22.71	24.33	23.08	24.64	24.95	18.14	19.76	18.51	20.07	20.39
	3H	25.16	26.62	25.53	26.95	27.31	18.79	20.25	19.16	20.58	20.94
	4H	26.28	27.66	26.68	28.01	28.39	18.93	20.31	19.33	20.66	21.04
	6H	27.37	28.66	27.79	29.02	29.41	18.97	20.26	19.38	20.62	21.01
	8H	27.90	29.13	28.33	29.52	29.92	18.96	20.19	19.38	20.58	20.98
	12H	28.47	29.65	28.90	30.03	30.46	18.94	20.12	19.37	20.50	20.93
4H	2H	23.37	24.75	23.77	25.10	25.47	19.27	20.65	19.67	21.00	21.38
	3H	26.06	27.22	26.47	27.62	28.02	20.61	21.78	21.02	22.18	22.58
	4H	27.35	28.41	27.78	28.83	29.26	21.15	22.21	21.58	22.62	23.06
	6H	28.63	29.57	29.09	30.01	30.46	21.42	22.36	21.88	22.80	23.25
	8H	29.26	30.14	29.72	30.58	31.04	21.46	22.34	21.92	22.78	23.24
	12H	29.95	30.74	30.43	31.21	31.68	21.47	22.26	21.95	22.74	23.21
8H	4H	27.72	28.59	28.18	29.03	29.50	22.10	22.97	22.55	23.41	23.88
	6H	29.20	29.94	29.69	30.42	30.90	22.69	23.42	23.18	23.91	24.38
	8H	29.98	30.65	30.49	31.15	31.64	22.86	23.53	23.37	24.03	24.52
	12H	30.87	31.46	31.38	31.95	32.51	22.97	23.56	23.47	24.05	24.61
12H	4H	27.76	28.55	28.24	29.02	29.49	22.31	23.10	22.79	23.58	24.05
	6H	29.29	29.95	29.79	30.46	30.94	23.04	23.70	23.54	24.21	24.69
	8H	30.17	30.76	30.67	31.25	31.81	23.35	23.94	23.85	24.43	24.99