

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: P893276

Luminaire Tested: 4MB-2SL-ASYMR-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893276
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-L850
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

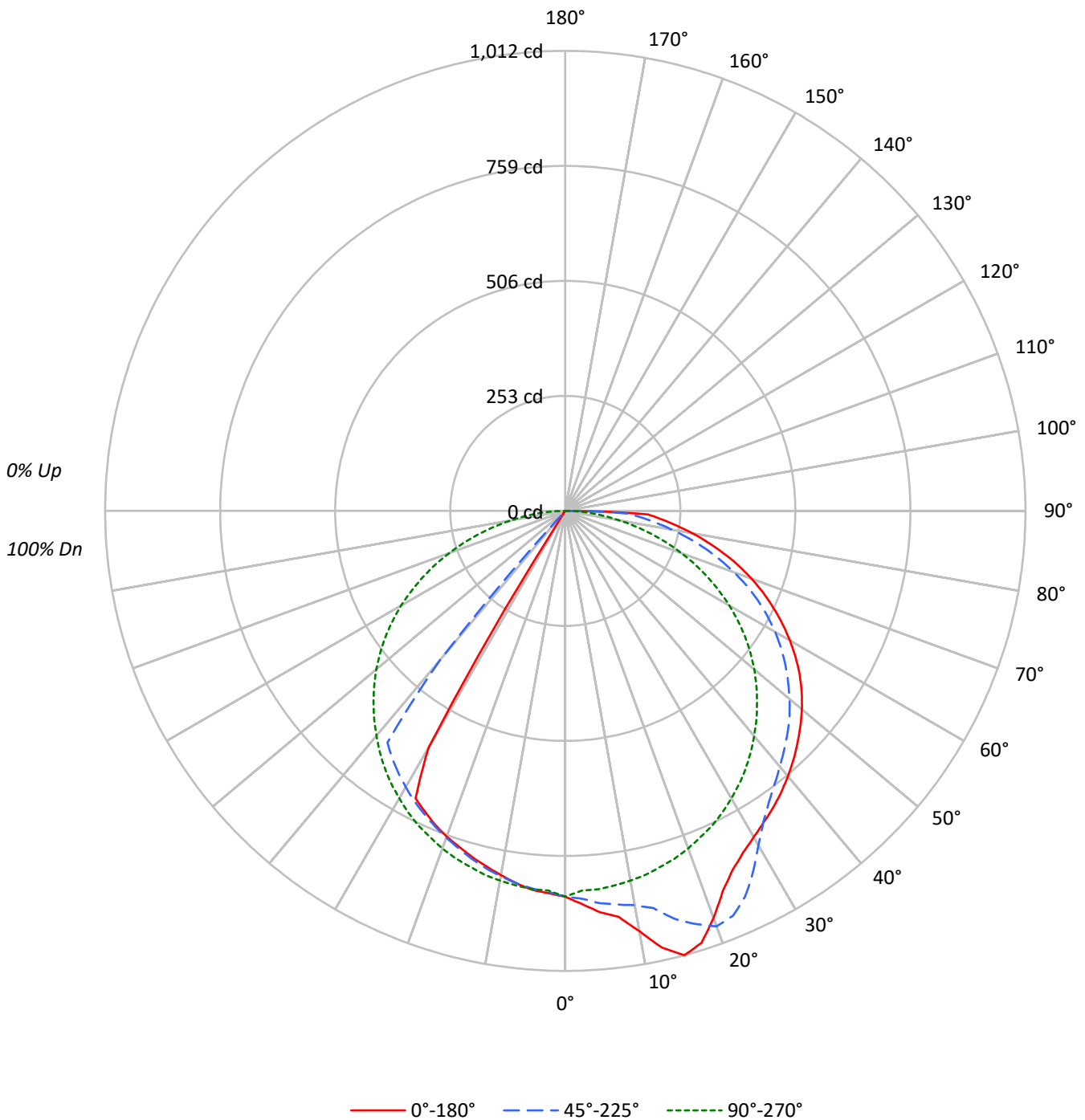
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2296.0 lumens
Efficiency: N/A
Efficacy: 166.4 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_{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: P893276
CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L850

Luminous Intensity Polar Plot





TEST NUMBER: P893276
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L850

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	11019	11019	11019	11019	11019
5°	11555	11289	10890	10871	10909
10°	12381	11612	10888	10759	10728
15°	13603	12493	10892	10656	10604
20°	13170	13438	10921	10571	10538
25°	12479	13412	10946	10536	10459
30°	12425	12731	10946	10523	9007
35°	12636	12380	10963	10524	124
40°	12910	12440	10949	7258	83
45°	13262	12691	10952	134	53
50°	13727	13010	10957	99	20
55°	14249	13380	10925	66	11
60°	14819	13834	10830	26	13
65°	15516	14379	10634	31	31
70°	16553	14985	10296	38	38
75°	18117	15949	9853	95	50
80°	21259	17842	9123	142	75
85°	31645	25060	8552	223	149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 54269 cd/sqm



TEST NUMBER: P893276
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	3.5
10°-20°	242.8	10.6
20°-30°	373.2	16.3
30°-40°	400.0	17.4
40°-50°	363.3	15.8
50°-60°	331.4	14.4
60°-70°	246.5	10.7
70°-80°	173.5	7.6
80°-90°	84.1	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°	697.3	30.4
0°-40°	1097.3	47.8
0°-60°	1791.9	78.0
0°-90°	2296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2296.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	849	849	849	849	849	
5°	886	866	836	834	837	86
15°	1012	929	810	793	789	279
25°	871	936	764	735	730	405
35°	797	781	692	664	8	499
45°	722	691	596	7	3	558
55°	629	591	483	3	0	562
65°	505	468	346	1	1	500
75°	361	318	196	2	1	381
85°	212	168	57	2	1	213
90°	0	0	0	0	0	



TEST NUMBER: P893276

CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L850

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	848.6	848.6	848.6	848.6	848.6	848.6	848.6	848.6	848.6
2.5°	866.1	856.4	854.0	860.8	836.0	852.5	838.9	841.8	841.8
5°	886.5	872.9	866.1	864.2	835.5	846.7	834.0	834.0	836.9
7.5°	900.6	885.5	873.4	868.5	831.1	840.8	826.2	826.2	826.2
10°	939.0	910.8	880.7	871.9	825.8	833.1	816.0	817.0	813.6
12.5°	984.2	958.9	894.8	870.5	819.9	823.3	805.4	804.9	801.0
15°	1011.9	993.0	929.3	868.5	810.2	813.1	792.7	791.3	788.8
17.5°	996.4	993.4	953.1	867.1	801.5	799.0	778.6	777.2	775.2
20°	953.1	960.4	972.5	864.2	790.3	785.4	765.0	764.0	762.6
22.5°	905.0	912.3	963.8	869.0	776.7	770.8	750.4	749.5	747.5
25°	871.0	871.0	936.1	880.7	764.0	753.3	735.4	733.9	730.0
27.5°	847.1	842.8	894.8	893.8	748.0	735.8	719.3	717.9	713.0
30°	828.7	821.4	849.1	900.1	730.0	716.9	701.8	700.4	600.7
32.5°	812.2	804.4	810.7	905.5	712.0	696.5	683.4	487.5	21.4
35°	797.1	788.3	781.0	901.6	691.6	676.1	663.9	14.1	7.8
37.5°	780.1	773.3	756.7	881.2	669.7	654.2	642.5	7.8	6.8
40°	761.6	755.3	733.9	851.0	645.9	632.8	428.2	6.8	4.9
42.5°	742.7	737.8	712.5	807.3	622.1	609.0	13.6	5.3	3.9
45°	722.2	717.9	691.1	754.3	596.4	584.2	7.3	3.9	2.9
47.5°	701.3	695.0	668.8	697.5	570.1	558.0	6.3	2.9	1.9
50°	679.5	672.7	644.0	647.4	542.4	530.3	4.9	1.9	1.0
52.5°	655.2	646.9	617.7	602.2	513.2	502.1	3.9	1.0	0.5
55°	629.4	620.2	591.0	562.8	482.6	470.0	2.9	1.0	0.5
57.5°	600.7	590.5	562.8	525.4	450.1	317.9	1.9	1.0	0.5
60°	570.6	560.4	532.7	490.4	417.0	21.9	1.0	1.0	0.5
62.5°	538.5	527.8	501.1	454.9	381.5	18.0	1.0	1.0	1.0
65°	505.0	492.3	468.0	418.5	346.1	15.1	1.0	1.0	1.0
67.5°	471.4	455.4	432.6	381.0	309.6	12.6	1.0	1.0	1.0
70°	436.0	418.5	394.7	343.1	271.2	10.2	1.0	1.0	1.0
72.5°	399.5	382.5	356.7	304.7	235.2	7.8	1.0	1.0	1.0
75°	361.1	345.6	317.9	266.3	196.4	5.8	1.9	1.0	1.0
77.5°	321.3	309.1	278.0	227.0	158.4	3.9	1.9	1.0	1.0
80°	284.3	270.7	238.6	187.1	122.0	2.9	1.9	1.5	1.0
82.5°	246.4	234.3	202.2	150.7	87.5	2.4	1.9	1.5	1.0
85°	212.4	200.7	168.2	117.6	57.4	1.9	1.5	1.5	1.0
87.5°	182.3	171.6	139.5	86.0	32.6	1.5	1.5	1.5	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P893276
 CATALOG NUMBER: 4MB-2SL-ASYMR-UNV-L850

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	22.87	24.48	23.23	24.80	25.11	18.30	19.92	18.67	20.23	20.54
	3H	25.32	26.78	25.69	27.11	27.47	18.94	20.41	19.32	20.74	21.10
	4H	26.44	27.82	26.84	28.17	28.55	19.09	20.47	19.49	20.82	21.19
	6H	27.53	28.82	27.94	29.18	29.57	19.13	20.41	19.54	20.78	21.17
	8H	28.06	29.29	28.49	29.68	30.08	19.12	20.35	19.54	20.73	21.13
	12H	28.63	29.81	29.06	30.19	30.62	19.10	20.28	19.53	20.66	21.09
4H	2H	23.53	24.91	23.92	25.26	25.63	19.43	20.81	19.83	21.16	21.53
	3H	26.21	27.38	26.62	27.78	28.18	20.77	21.94	21.18	22.34	22.74
	4H	27.51	28.57	27.94	28.99	29.42	21.31	22.37	21.74	22.78	23.22
	6H	28.79	29.73	29.24	30.17	30.62	21.58	22.52	22.03	22.96	23.41
	8H	29.42	30.30	29.88	30.74	31.20	21.62	22.50	22.08	22.94	23.40
	12H	30.11	30.90	30.58	31.37	31.84	21.63	22.42	22.11	22.90	23.36
8H	4H	27.87	28.75	28.33	29.19	29.66	22.25	23.13	22.71	23.57	24.04
	6H	29.36	30.09	29.85	30.58	31.05	22.84	23.58	23.34	24.07	24.54
	8H	30.14	30.80	30.65	31.31	31.79	23.02	23.69	23.53	24.19	24.68
	12H	31.03	31.62	31.54	32.11	32.67	23.12	23.72	23.63	24.20	24.76
12H	4H	27.91	28.71	28.39	29.18	29.65	22.47	23.26	22.95	23.74	24.21
	6H	29.44	30.11	29.95	30.62	31.10	23.19	23.86	23.70	24.36	24.85
	8H	30.32	30.92	30.83	31.41	31.96	23.51	24.10	24.01	24.59	25.15