

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: P893242

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-2SL-ACL-UNV-L835
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3500K (C)
Light Source: -
Ballast/Driver: -

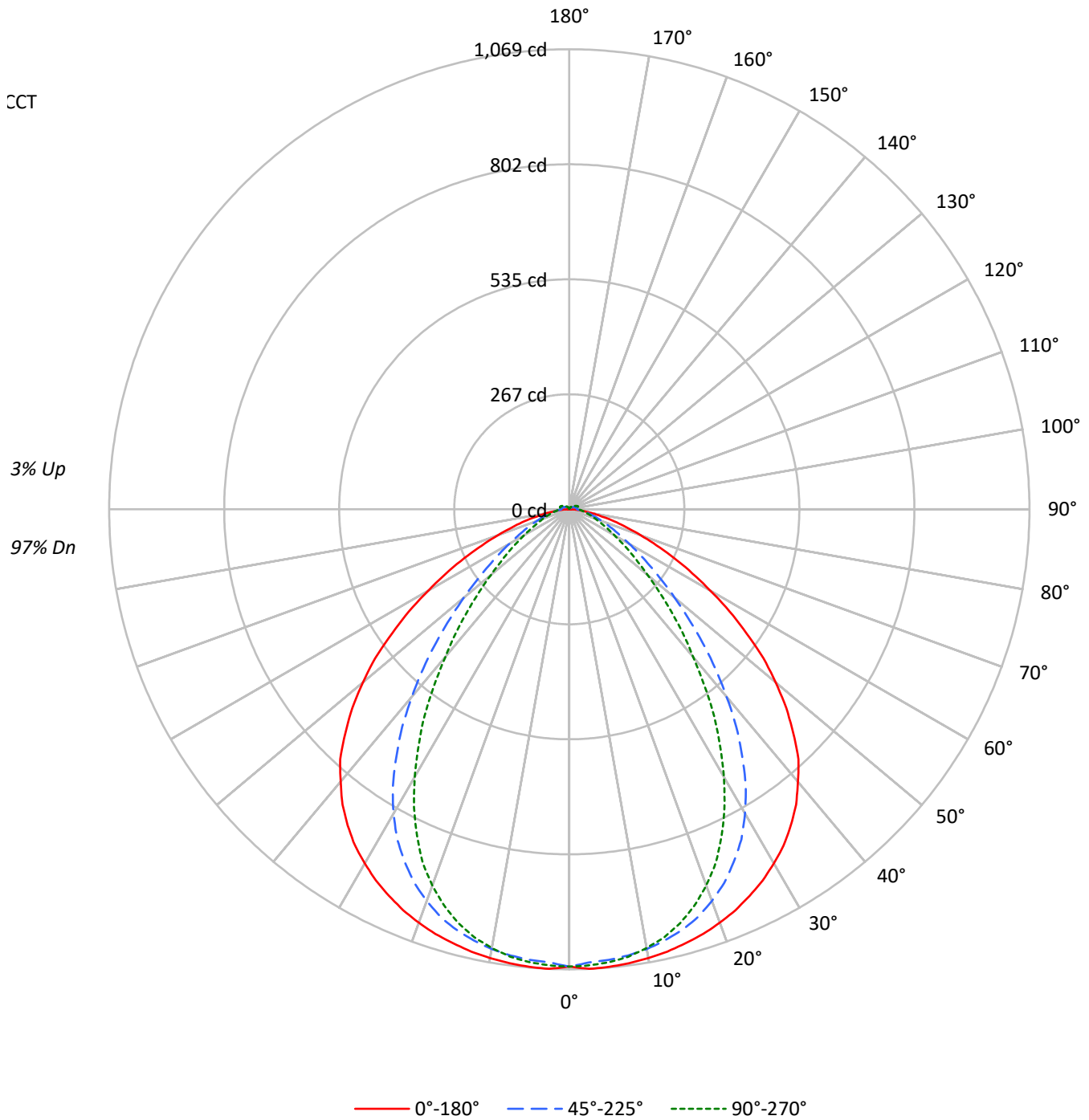
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2180.0 lumens
Efficiency: N/A
Efficacy: 158.0 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
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: P893242
CATALOG NUMBER: 4MB-2SL-ACL-UNV-L835

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	50	30	10	0
RCR																					
0	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	87	87	87	85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	76	76	76	74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	66	66	66	64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	59	59	59	57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	52	52	52	50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	47	47	47	45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	42	42	42	40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	38	38	38	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	35	35	35	33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	32	32	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10823	10823	10823
5°	10891	10529	10512
10°	10911	10301	10143
15°	10944	10033	9681
20°	10997	9664	9049
25°	11029	9152	8208
30°	11041	8449	7152
35°	10993	7466	5982
40°	10798	6306	4708
45°	10383	5091	3650
50°	9666	3950	2739
55°	8653	3025	2095
60°	7434	2325	1596
65°	6199	1834	1268
70°	4958	1471	1036
75°	3949	1185	883
80°	2894	979	773
85°	1989	833	711

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10383 cd/sqm



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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.7	4.6
10°-20°	286.8	13.2
20°-30°	418.1	19.2
30°-40°	449.2	20.6
40°-50°	373.8	17.1
50°-60°	250.0	11.5
60°-70°	143.1	6.6
70°-80°	71.2	3.3
80°-90°	29.1	1.3
90°-100°	16.9	0.8
100°-110°	14.9	0.7
110°-120°	11.0	0.5
120°-130°	7.0	0.3
130°-140°	4.2	0.2
140°-150°	2.4	0.1
150°-160°	1.2	0.1
160°-170°	0.5	0.0
170°-180°	0.1	0.0
0°-30°	805.5	36.9
0°-40°	1254.6	57.6
0°-60°	1878.5	86.2
0°-90°	2121.9	97.3
90°-120°	42.8	2.0
90°-150°	56.4	2.6
90°-180°	58.0	2.7
0°-180°	2180.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1067	1064	1051	1060	1056	102
15°	1044	1037	1012	1004	995	295
25°	991	968	904	859	837	457
35°	897	832	700	614	587	560
45°	736	612	437	354	333	566
55°	502	362	228	180	171	450
65°	269	182	115	93	88	269
75°	108	79	57	50	49	116
85°	21	24	26	28	28	25
90°	3	10	18	21	22	3
95°	5	10	18	21	22	4
105°	3	8	16	21	22	3
115°	2	5	12	17	19	2
125°	1	3	8	12	14	1
135°	1	2	6	8	9	0
145°	1	2	4	6	6	0
155°	1	2	2	3	4	0
165°	1	1	2	2	3	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1062.7	1062.7	1062.7	1062.7	1062.7
2.5°	1068.9	1066.1	1054.0	1063.6	1060.8
5°	1067.3	1063.9	1051.2	1059.9	1056.5
7.5°	1063.9	1060.2	1045.6	1052.5	1048.7
10°	1059.0	1054.3	1037.6	1041.0	1035.1
12.5°	1052.8	1046.9	1026.1	1025.2	1018.7
15°	1043.8	1036.7	1011.9	1004.4	995.4
17.5°	1034.5	1023.9	993.6	978.4	966.0
20°	1022.4	1008.4	968.5	945.8	930.3
22.5°	1008.4	989.5	940.2	905.5	889.4
25°	991.1	967.5	904.3	858.7	837.3
27.5°	972.5	941.2	865.2	805.4	780.9
30°	950.2	911.4	816.6	744.6	718.3
32.5°	926.6	873.6	763.2	680.8	651.9
35°	897.2	832.1	700.0	613.8	586.8
37.5°	865.2	782.5	637.4	545.3	514.9
40°	826.5	730.1	568.5	477.4	447.3
42.5°	788.0	673.0	502.5	416.0	390.0
45°	736.0	611.6	437.1	353.7	332.9
47.5°	683.6	545.9	374.5	303.2	282.7
50°	625.3	481.4	319.6	254.5	237.5
52.5°	568.5	421.3	269.7	215.1	200.6
55°	501.9	362.1	227.9	180.1	170.8
57.5°	441.8	307.2	192.2	152.5	143.8
60°	378.2	260.4	160.9	129.0	120.9
62.5°	322.4	218.9	135.5	109.4	103.9
65°	268.8	182.3	114.7	93.0	88.0
67.5°	219.5	152.2	96.7	79.4	75.3
70°	176.1	123.4	81.5	67.6	64.8
72.5°	138.6	99.2	67.9	58.3	55.8
75°	108.2	78.7	56.7	50.2	48.7
77.5°	78.1	61.4	47.4	43.1	42.2
80°	55.2	46.5	39.1	37.2	36.6
82.5°	36.6	33.8	32.2	32.2	31.9
85°	21.1	23.6	26.4	27.6	27.9
87.5°	10.9	15.8	21.1	23.6	23.9
90°	3.1	9.9	18.0	21.4	22.0
92.5°	4.7	9.9	17.7	21.4	22.0
95°	4.7	9.9	17.7	21.4	22.0
97.5°	4.3	9.6	17.7	21.4	22.0
100°	4.0	9.0	17.4	21.4	22.0
102.5°	3.4	8.7	16.7	21.1	22.0
105°	3.1	8.1	15.8	20.8	21.7
107.5°	2.8	6.8	14.9	19.8	21.1
110°	2.2	5.9	14.3	18.9	20.5



TEST NUMBER: P893242

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	5.3	13.3	18.0	19.5
115°	1.6	4.7	12.4	17.1	18.6
117.5°	1.2	4.3	11.2	15.8	17.4
120°	0.9	4.0	10.2	14.9	16.1
122.5°	0.9	3.7	9.0	13.6	14.9
125°	0.9	3.1	8.4	12.4	13.6
127.5°	0.6	2.8	7.4	11.2	12.4
130°	0.6	2.8	6.8	10.2	11.2
132.5°	0.6	2.5	6.2	9.3	10.2
135°	0.6	2.5	5.6	8.4	9.3
137.5°	0.6	2.2	5.0	7.8	8.7
140°	0.6	2.2	4.7	6.8	7.8
142.5°	0.6	1.9	4.0	6.5	7.1
145°	0.6	1.9	3.7	5.6	6.5
147.5°	0.6	1.9	3.4	5.3	5.9
150°	0.6	1.6	3.1	4.3	5.3
152.5°	0.6	1.6	2.8	4.0	5.0
155°	0.6	1.6	2.5	3.4	4.3
157.5°	0.6	1.6	2.5	3.1	3.7
160°	0.9	1.2	2.2	2.8	3.4
162.5°	0.9	1.2	1.9	2.5	3.1
165°	0.9	1.2	1.9	2.2	2.8
167.5°	0.9	1.2	1.6	1.9	2.2
170°	0.9	0.9	1.6	1.6	1.6
172.5°	0.9	0.9	1.2	1.6	1.2
175°	0.9	0.9	1.2	1.2	1.2
177.5°	0.9	0.9	1.2	1.2	1.2
180°	0.9	0.9	0.9	0.9	0.9



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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	17.01	18.40	17.42	18.77	19.16	12.30	13.70	12.71	14.07	14.45
	3H	18.10	19.35	18.53	19.73	20.16	13.44	14.69	13.87	15.07	15.50
	4H	18.41	19.57	18.86	19.98	20.42	13.94	15.11	14.39	15.51	15.96
	6H	18.55	19.63	19.01	20.05	20.51	14.45	15.52	14.90	15.94	16.40
	8H	18.57	19.59	19.05	20.04	20.51	14.71	15.73	15.18	16.17	16.64
	12H	18.57	19.54	19.04	19.98	20.47	15.00	15.98	15.48	16.41	16.91
4H	2H	16.99	18.15	17.44	18.56	19.01	12.80	13.96	13.25	14.37	14.82
	3H	18.23	19.19	18.69	19.64	20.11	14.12	15.08	14.57	15.53	16.00
	4H	18.61	19.48	19.09	19.94	20.45	14.71	15.57	15.19	16.04	16.55
	6H	18.84	19.59	19.35	20.09	20.61	15.33	16.08	15.83	16.58	17.10
	8H	18.88	19.59	19.39	20.08	20.61	15.65	16.35	16.16	16.85	17.38
	12H	18.90	19.52	19.43	20.05	20.59	16.02	16.65	16.55	17.18	17.71
8H	4H	18.60	19.30	19.11	19.80	20.33	14.95	15.65	15.46	16.14	16.68
	6H	18.88	19.46	19.42	20.00	20.54	15.67	16.25	16.22	16.79	17.33
	8H	18.95	19.47	19.51	20.03	20.58	16.08	16.60	16.64	17.16	17.71
	12H	19.00	19.46	19.55	20.00	20.62	16.57	17.03	17.12	17.57	18.20
12H	4H	18.58	19.20	19.10	19.73	20.27	14.96	15.59	15.49	16.12	16.65
	6H	18.86	19.38	19.42	19.94	20.49	15.71	16.23	16.27	16.79	17.34
	8H	18.96	19.42	19.52	19.96	20.59	16.17	16.63	16.72	17.17	17.80