

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: P893247

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893247
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-L940
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K (C)
Light Source: -
Ballast/Driver: -

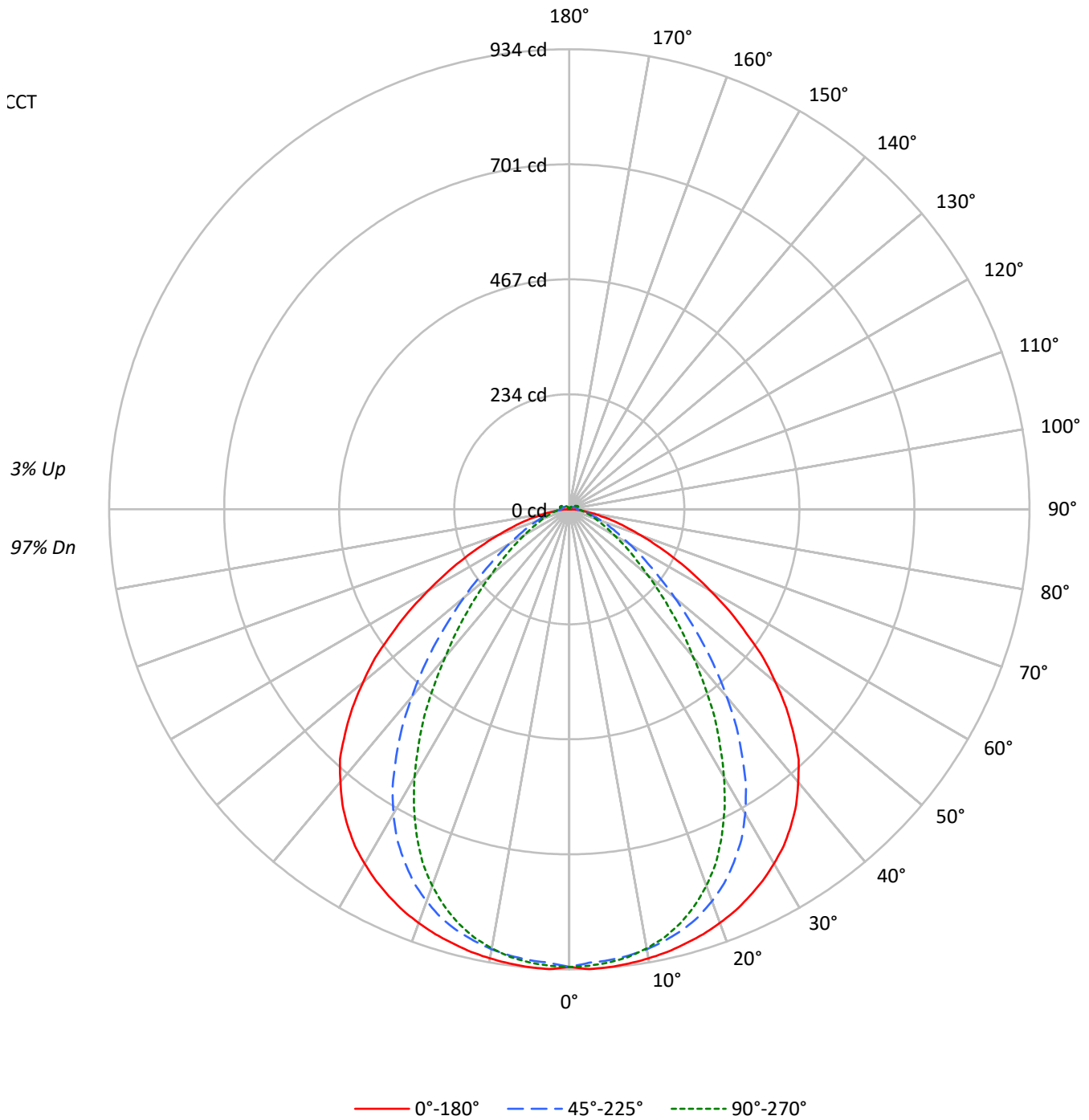
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1906.0 lumens
Efficiency: N/A
Efficacy: 138.1 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

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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	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°	9462	9462	9462
5°	9523	9206	9191
10°	9540	9006	8868
15°	9568	8772	8465
20°	9615	8449	7912
25°	9643	8001	7177
30°	9652	7386	6253
35°	9611	6528	5231
40°	9441	5514	4116
45°	9078	4452	3192
50°	8451	3453	2394
55°	7565	2644	1831
60°	6500	2033	1395
65°	5420	1604	1109
70°	4336	1287	905
75°	3453	1037	772
80°	2527	857	675
85°	1735	726	622

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9078 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.0	4.6
10°-20°	250.7	13.2
20°-30°	365.5	19.2
30°-40°	392.7	20.6
40°-50°	326.8	17.1
50°-60°	218.6	11.5
60°-70°	125.2	6.6
70°-80°	62.2	3.3
80°-90°	25.5	1.3
90°-100°	14.8	0.8
100°-110°	13.0	0.7
110°-120°	9.6	0.5
120°-130°	6.1	0.3
130°-140°	3.7	0.2
140°-150°	2.1	0.1
150°-160°	1.0	0.1
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	704.2	36.9
0°-40°	1096.9	57.6
0°-60°	1642.4	86.2
0°-90°	1855.2	97.3
90°-120°	37.4	2.0
90°-150°	49.2	2.6
90°-180°	51.0	2.7
0°-180°	1906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	929	929	929	929	929	
5°	933	930	919	927	924	89
15°	913	906	885	878	870	258
25°	866	846	791	751	732	400
35°	784	728	612	537	513	490
45°	644	535	382	309	291	495
55°	439	317	199	158	149	393
65°	235	159	100	81	77	235
75°	95	69	50	44	43	101
85°	18	21	23	24	24	22
90°	3	9	16	19	19	3
95°	4	9	15	19	19	3
105°	3	7	14	18	19	3
115°	1	4	11	15	16	1
125°	1	3	7	11	12	1
135°	0	2	5	7	8	0
145°	0	2	3	5	6	0
155°	0	1	2	3	4	0
165°	1	1	2	2	2	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°	929.1	929.1	929.1	929.1	929.1
2.5°	934.5	932.1	921.5	929.9	927.5
5°	933.2	930.2	919.1	926.7	923.7
7.5°	930.2	927.0	914.2	920.2	916.9
10°	925.9	921.8	907.2	910.2	905.0
12.5°	920.5	915.3	897.1	896.3	890.6
15°	912.6	906.4	884.7	878.2	870.3
17.5°	904.5	895.2	868.7	855.4	844.6
20°	893.9	881.7	846.7	826.9	813.4
22.5°	881.7	865.2	822.1	791.7	777.6
25°	866.5	845.9	790.6	750.8	732.1
27.5°	850.3	822.9	756.5	704.2	682.8
30°	830.7	796.9	713.9	651.0	628.0
32.5°	810.1	763.8	667.3	595.2	570.0
35°	784.4	727.5	612.0	536.7	513.1
37.5°	756.5	684.1	557.3	476.8	450.2
40°	722.6	638.3	497.1	417.4	391.1
42.5°	689.0	588.4	439.4	363.7	341.0
45°	643.5	534.8	382.2	309.3	291.1
47.5°	597.6	477.3	327.4	265.1	247.2
50°	546.7	420.9	279.4	222.5	207.6
52.5°	497.1	368.3	235.8	188.1	175.4
55°	438.8	316.6	199.2	157.5	149.3
57.5°	386.2	268.6	168.0	133.4	125.8
60°	330.7	227.7	140.7	112.8	105.7
62.5°	281.9	191.4	118.4	95.7	90.8
65°	235.0	159.4	100.3	81.3	77.0
67.5°	191.9	133.1	84.6	69.4	65.9
70°	154.0	107.9	71.3	59.1	56.6
72.5°	121.2	86.7	59.4	51.0	48.8
75°	94.6	68.8	49.6	43.9	42.6
77.5°	68.3	53.7	41.5	37.7	36.9
80°	48.2	40.7	34.2	32.5	32.0
82.5°	32.0	29.5	28.2	28.2	27.9
85°	18.4	20.6	23.0	24.1	24.4
87.5°	9.5	13.8	18.4	20.6	20.9
90°	2.7	8.7	15.7	18.7	19.2
92.5°	4.1	8.7	15.4	18.7	19.2
95°	4.1	8.7	15.4	18.7	19.2
97.5°	3.8	8.4	15.4	18.7	19.2
100°	3.5	7.9	15.2	18.7	19.2
102.5°	3.0	7.6	14.6	18.4	19.2
105°	2.7	7.0	13.8	18.2	19.0
107.5°	2.4	6.0	13.0	17.3	18.4
110°	1.9	5.1	12.5	16.5	17.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	4.6	11.7	15.7	17.1
115°	1.4	4.1	10.8	14.9	16.3
117.5°	1.1	3.8	9.8	13.8	15.2
120°	0.8	3.5	8.9	13.0	14.1
122.5°	0.8	3.3	7.9	11.9	13.0
125°	0.8	2.7	7.3	10.8	11.9
127.5°	0.5	2.4	6.5	9.8	10.8
130°	0.5	2.4	6.0	8.9	9.8
132.5°	0.5	2.2	5.4	8.1	8.9
135°	0.5	2.2	4.9	7.3	8.1
137.5°	0.5	1.9	4.3	6.8	7.6
140°	0.5	1.9	4.1	6.0	6.8
142.5°	0.5	1.6	3.5	5.7	6.2
145°	0.5	1.6	3.3	4.9	5.7
147.5°	0.5	1.6	3.0	4.6	5.1
150°	0.5	1.4	2.7	3.8	4.6
152.5°	0.5	1.4	2.4	3.5	4.3
155°	0.5	1.4	2.2	3.0	3.8
157.5°	0.5	1.4	2.2	2.7	3.3
160°	0.8	1.1	1.9	2.4	3.0
162.5°	0.8	1.1	1.6	2.2	2.7
165°	0.8	1.1	1.6	1.9	2.4
167.5°	0.8	1.1	1.4	1.6	1.9
170°	0.8	0.8	1.4	1.4	1.4
172.5°	0.8	0.8	1.1	1.4	1.1
175°	0.8	0.8	1.1	1.1	1.1
177.5°	0.8	0.8	1.1	1.1	1.1
180°	0.8	0.8	0.8	0.8	0.8



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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	16.54	17.93	16.95	18.31	18.69	11.84	13.23	12.25	13.60	13.99
	3H	17.64	18.88	18.06	19.27	19.69	12.98	14.22	13.40	14.61	15.04
	4H	17.94	19.11	18.39	19.51	19.96	13.48	14.64	13.93	15.05	15.50
	6H	18.09	19.16	18.55	19.58	20.04	13.98	15.05	14.44	15.48	15.94
	8H	18.11	19.13	18.58	19.57	20.04	14.24	15.26	14.71	15.71	16.17
	12H	18.10	19.08	18.58	19.51	20.01	14.54	15.51	15.01	15.95	16.44
4H	2H	16.52	17.69	16.97	18.09	18.54	12.34	13.50	12.78	13.91	14.35
	3H	17.76	18.72	18.22	19.18	19.64	13.65	14.61	14.11	15.07	15.53
	4H	18.15	19.01	18.62	19.48	19.98	14.24	15.11	14.72	15.58	16.08
	6H	18.38	19.13	18.88	19.62	20.15	14.87	15.62	15.37	16.11	16.63
	8H	18.42	19.12	18.93	19.61	20.15	15.19	15.89	15.70	16.38	16.91
	12H	18.43	19.06	18.96	19.58	20.12	15.56	16.19	16.09	16.71	17.25
8H	4H	18.13	18.83	18.64	19.33	19.86	14.48	15.19	14.99	15.68	16.21
	6H	18.41	18.99	18.95	19.53	20.07	15.21	15.79	15.75	16.33	16.87
	8H	18.48	19.00	19.04	19.56	20.11	15.61	16.13	16.17	16.69	17.24
	12H	18.53	18.99	19.08	19.53	20.16	16.10	16.57	16.66	17.11	17.73
12H	4H	18.11	18.74	18.64	19.26	19.80	14.50	15.12	15.03	15.65	16.19
	6H	18.39	18.91	18.95	19.47	20.02	15.24	15.77	15.80	16.32	16.88
	8H	18.50	18.96	19.05	19.50	20.12	15.71	16.17	16.26	16.71	17.33