

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: P893246

Luminaire Tested: 4MB-2SL-ACL-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893246
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-L935
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3500K (C)
Light Source: -
Ballast/Driver: -

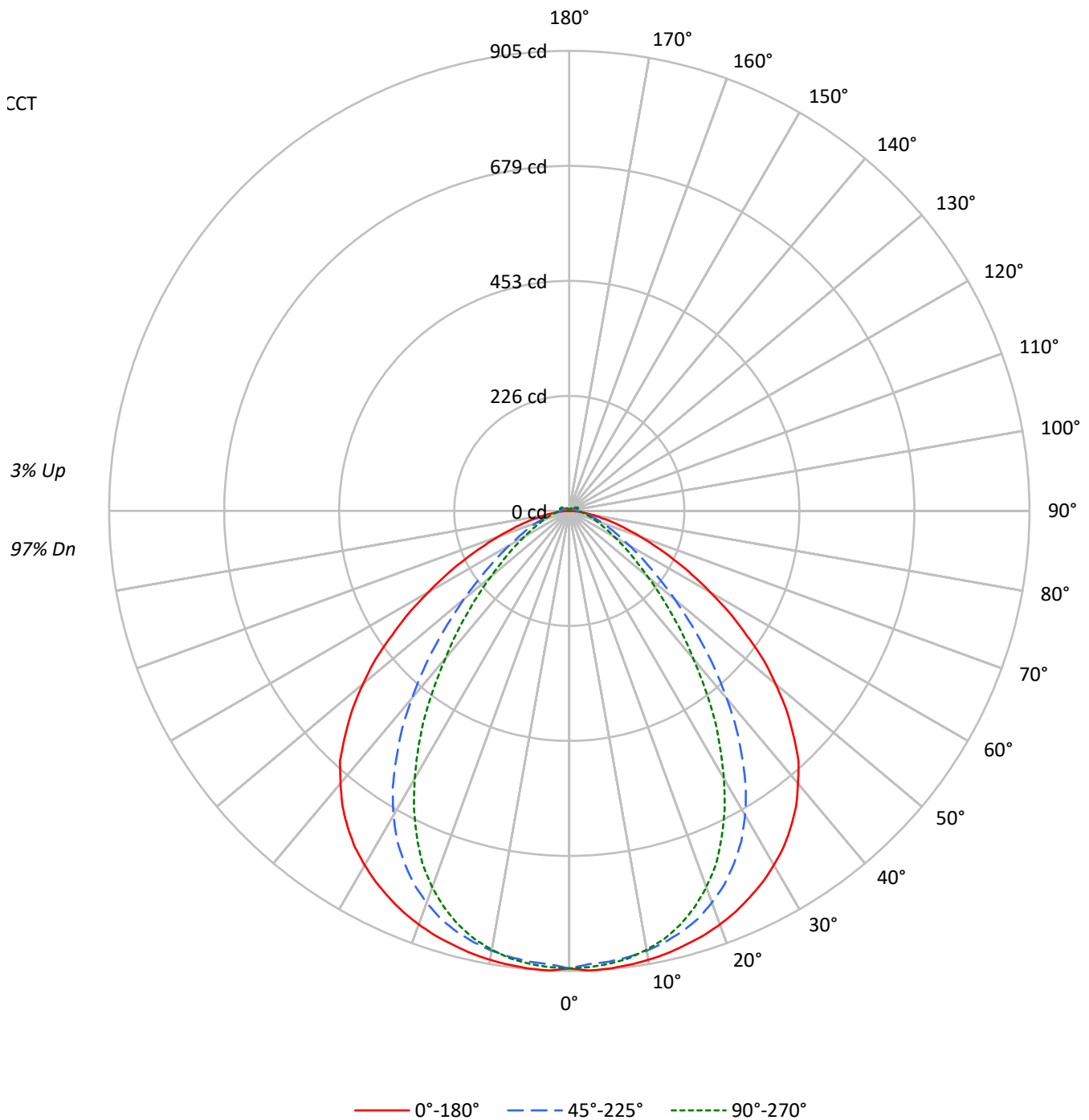
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1846.0 lumens
Efficiency: N/A
Efficacy: 133.8 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°	9165	9165	9165
5°	9223	8916	8901
10°	9239	8722	8589
15°	9267	8495	8198
20°	9312	8184	7663
25°	9339	7749	6951
30°	9349	7154	6056
35°	9309	6322	5065
40°	9143	5340	3987
45°	8792	4311	3091
50°	8185	3344	2319
55°	7327	2560	1773
60°	6296	1968	1352
65°	5249	1552	1075
70°	4198	1245	878
75°	3343	1003	747
80°	2448	829	654
85°	1688	704	602

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8792 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	4.6
10°-20°	242.8	13.2
20°-30°	354.0	19.2
30°-40°	380.3	20.6
40°-50°	316.5	17.1
50°-60°	211.7	11.5
60°-70°	121.2	6.6
70°-80°	60.3	3.3
80°-90°	24.7	1.3
90°-100°	14.3	0.8
100°-110°	12.6	0.7
110°-120°	9.3	0.5
120°-130°	6.0	0.3
130°-140°	3.6	0.2
140°-150°	2.0	0.1
150°-160°	1.0	0.1
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	682.1	36.9
0°-40°	1062.4	57.6
0°-60°	1590.6	86.2
0°-90°	1796.8	97.3
90°-120°	36.2	2.0
90°-150°	47.7	2.6
90°-180°	49.0	2.7
0°-180°	1846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	904	901	890	898	895	86
15°	884	878	857	850	843	250
25°	839	819	766	727	709	387
35°	760	705	593	520	497	474
45°	623	518	370	300	282	479
55°	425	307	193	152	145	381
65°	228	154	97	79	75	228
75°	92	67	48	42	41	98
85°	18	20	22	23	24	21
90°	3	8	15	18	19	3
95°	4	8	15	18	19	3
105°	3	7	13	18	18	3
115°	1	4	10	14	16	1
125°	1	3	7	10	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°	899.9	899.9	899.9	899.9	899.9
2.5°	905.1	902.8	892.5	900.7	898.3
5°	903.8	900.9	890.2	897.5	894.6
7.5°	900.9	897.8	885.4	891.2	888.1
10°	896.7	892.8	878.6	881.5	876.5
12.5°	891.5	886.5	868.9	868.1	862.6
15°	883.9	877.8	856.8	850.5	842.9
17.5°	876.0	867.1	841.3	828.5	818.0
20°	865.8	853.9	820.1	800.9	787.8
22.5°	853.9	837.9	796.2	766.8	753.1
25°	839.2	819.3	765.7	727.1	709.0
27.5°	823.5	797.0	732.7	682.0	661.3
30°	804.6	771.8	691.4	630.5	608.2
32.5°	784.6	739.7	646.3	576.5	552.1
35°	759.7	704.6	592.7	519.8	496.9
37.5°	732.7	662.6	539.7	461.8	436.0
40°	699.8	618.2	481.4	404.3	378.8
42.5°	667.3	569.9	425.5	352.3	330.2
45°	623.2	517.9	370.1	299.5	281.9
47.5°	578.8	462.3	317.1	256.7	239.4
50°	529.5	407.7	270.6	215.5	201.1
52.5°	481.4	356.7	228.4	182.2	169.8
55°	425.0	306.6	192.9	152.5	144.6
57.5°	374.1	260.1	162.8	129.2	121.8
60°	320.3	220.5	136.2	109.2	102.4
62.5°	273.0	185.3	114.7	92.7	87.9
65°	227.6	154.4	97.1	78.8	74.6
67.5°	185.9	128.9	81.9	67.2	63.8
70°	149.1	104.5	69.0	57.2	54.9
72.5°	117.3	84.0	57.5	49.4	47.3
75°	91.6	66.7	48.0	42.5	41.2
77.5°	66.2	52.0	40.2	36.5	35.7
80°	46.7	39.4	33.1	31.5	31.0
82.5°	31.0	28.6	27.3	27.3	27.0
85°	17.9	20.0	22.3	23.4	23.6
87.5°	9.2	13.4	17.9	20.0	20.2
90°	2.6	8.4	15.2	18.1	18.6
92.5°	3.9	8.4	15.0	18.1	18.6
95°	3.9	8.4	15.0	18.1	18.6
97.5°	3.7	8.1	15.0	18.1	18.6
100°	3.4	7.6	14.7	18.1	18.6
102.5°	2.9	7.4	14.2	17.9	18.6
105°	2.6	6.8	13.4	17.6	18.4
107.5°	2.4	5.8	12.6	16.8	17.9
110°	1.8	5.0	12.1	16.0	17.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	4.5	11.3	15.2	16.5
115°	1.3	3.9	10.5	14.4	15.8
117.5°	1.1	3.7	9.5	13.4	14.7
120°	0.8	3.4	8.7	12.6	13.7
122.5°	0.8	3.2	7.6	11.6	12.6
125°	0.8	2.6	7.1	10.5	11.6
127.5°	0.5	2.4	6.3	9.5	10.5
130°	0.5	2.4	5.8	8.7	9.5
132.5°	0.5	2.1	5.3	7.9	8.7
135°	0.5	2.1	4.7	7.1	7.9
137.5°	0.5	1.8	4.2	6.6	7.4
140°	0.5	1.8	3.9	5.8	6.6
142.5°	0.5	1.6	3.4	5.5	6.0
145°	0.5	1.6	3.2	4.7	5.5
147.5°	0.5	1.6	2.9	4.5	5.0
150°	0.5	1.3	2.6	3.7	4.5
152.5°	0.5	1.3	2.4	3.4	4.2
155°	0.5	1.3	2.1	2.9	3.7
157.5°	0.5	1.3	2.1	2.6	3.2
160°	0.8	1.1	1.8	2.4	2.9
162.5°	0.8	1.1	1.6	2.1	2.6
165°	0.8	1.1	1.6	1.8	2.4
167.5°	0.8	1.1	1.3	1.6	1.8
170°	0.8	0.8	1.3	1.3	1.3
172.5°	0.8	0.8	1.1	1.3	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	16.43	17.82	16.84	18.19	18.58	11.73	13.12	12.14	13.49	13.87
	3H	17.52	18.77	17.95	19.15	19.58	12.87	14.11	13.29	14.50	14.93
	4H	17.83	18.99	18.28	19.40	19.85	13.37	14.53	13.81	14.94	15.38
	6H	17.98	19.05	18.44	19.47	19.93	13.87	14.94	14.33	15.36	15.82
	8H	18.00	19.02	18.47	19.46	19.93	14.13	15.15	14.60	15.59	16.06
	12H	17.99	18.96	18.47	19.40	19.90	14.42	15.40	14.90	15.83	16.33
4H	2H	16.41	17.58	16.86	17.98	18.43	12.22	13.39	12.67	13.79	14.24
	3H	17.65	18.61	18.11	19.07	19.53	13.54	14.50	14.00	14.95	15.42
	4H	18.03	18.90	18.51	19.37	19.87	14.13	15.00	14.61	15.46	15.97
	6H	18.27	19.02	18.77	19.51	20.04	14.75	15.50	15.26	16.00	16.52
	8H	18.31	19.01	18.82	19.50	20.03	15.07	15.77	15.58	16.27	16.80
	12H	18.32	18.94	18.85	19.47	20.01	15.45	16.07	15.98	16.60	17.14
8H	4H	18.02	18.72	18.53	19.22	19.75	14.37	15.07	14.88	15.57	16.10
	6H	18.30	18.88	18.84	19.42	19.96	15.10	15.68	15.64	16.22	16.76
	8H	18.37	18.89	18.93	19.45	20.00	15.50	16.02	16.06	16.58	17.13
	12H	18.42	18.88	18.97	19.42	20.05	15.99	16.45	16.55	16.99	17.62
12H	4H	18.00	18.62	18.53	19.15	19.69	14.39	15.01	14.91	15.54	16.07
	6H	18.28	18.80	18.84	19.36	19.91	15.13	15.65	15.69	16.21	16.76
	8H	18.38	18.85	18.94	19.39	20.01	15.59	16.05	16.15	16.59	17.22