

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: P893459

Luminaire Tested: 4MB-4SL-A-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893459
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-16)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-A-UNV-L840
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

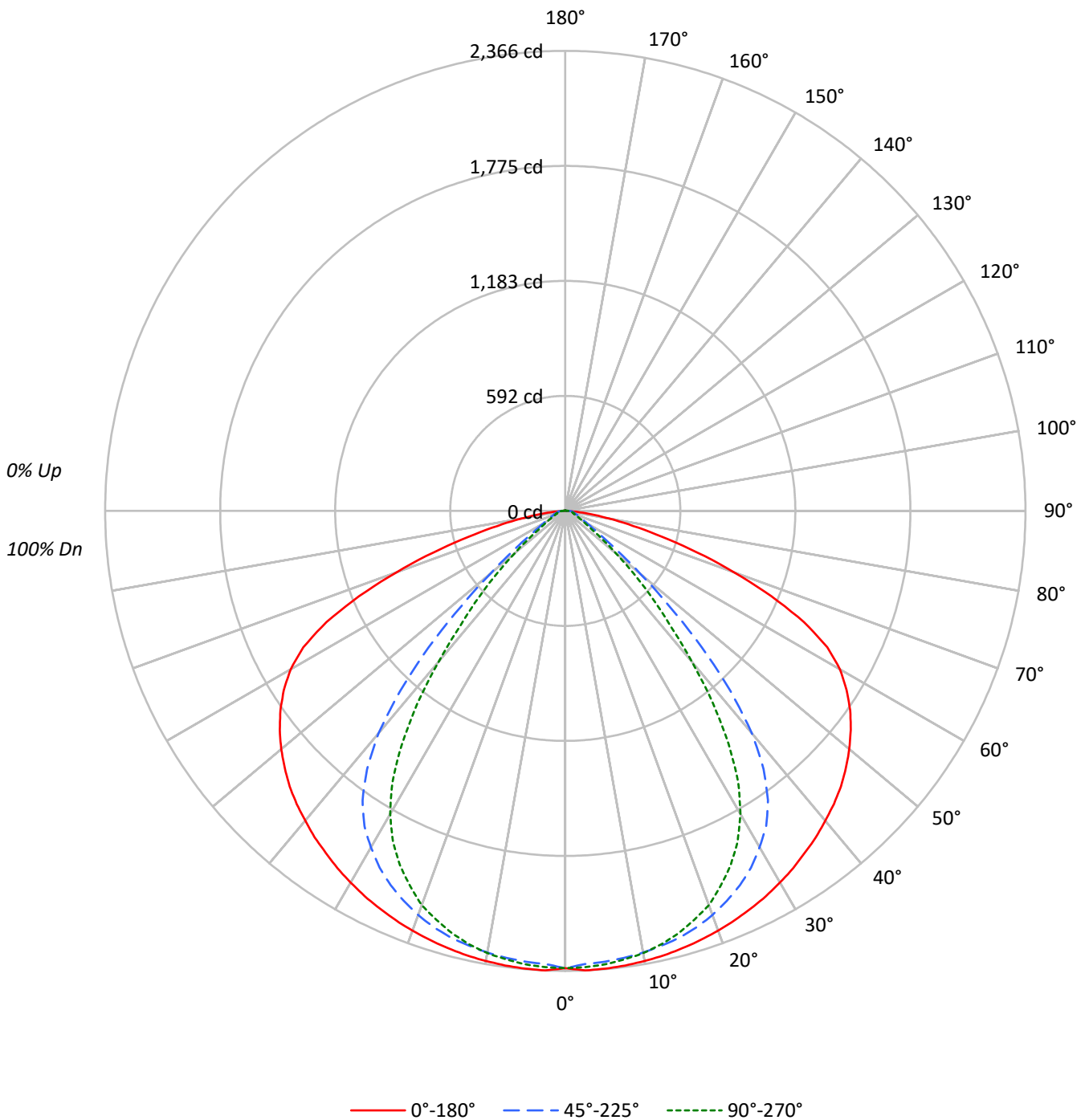
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4820.1 lumens
Efficiency: N/A
Efficacy: 161.7 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.15 / 1.23
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
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			
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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	111	107	103	100	108	105	102	99	100	98	96	97	95	93	93	91	90	90	90	88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	79	79	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	69	69	67
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	62	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	55	64	59	55	55	55	53
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	49	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	45	45	43
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	40	40	39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	37	37	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23946	23946	23946
5°	24157	23798	23937
10°	24308	23851	23884
15°	24550	23954	23707
20°	24898	23974	23389
25°	25361	23870	22598
30°	25953	23496	21178
35°	26693	22591	18208
40°	27643	19842	13458
45°	28861	14318	9052
50°	30203	8000	5401
55°	31745	4135	2958
60°	33209	2691	2094
65°	32643	2210	1663
70°	27529	2034	1548
75°	20249	2074	1664
80°	13507	2440	2100
85°	7373	3950	3190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 62.5°
 Luminance: 33492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.3	4.6
10°-20°	645.2	13.4
20°-30°	981.4	20.4
30°-40°	1120.9	23.3
40°-50°	904.2	18.8
50°-60°	495.0	10.3
60°-70°	261.0	5.4
70°-80°	127.9	2.7
80°-90°	45.1	0.9
90°-100°	9.7	0.2
100°-110°	1.4	0.0
110°-120°	0.8	0.0
120°-130°	0.8	0.0
130°-140°	0.8	0.0
140°-150°	0.9	0.0
150°-160°	0.9	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	1849.9	38.4
0°-40°	2970.7	61.6
0°-60°	4369.9	90.7
0°-90°	4803.9	99.7
90°-120°	11.9	0.2
90°-150°	14.4	0.3
90°-180°	16.0	0.3
0°-180°	4820.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2351	2351	2351	2351	2351	
5°	2363	2356	2328	2349	2342	225
15°	2328	2314	2272	2268	2248	659
25°	2257	2224	2124	2052	2011	1043
35°	2147	2057	1817	1570	1464	1347
45°	2004	1722	994	679	628	1547
55°	1788	736	233	180	167	1595
65°	1355	170	92	74	69	1310
75°	515	96	53	44	42	568
85°	63	50	34	31	27	87
90°	3	26	21	18	17	4
95°	2	3	7	11	10	2
105°	1	0	1	1	1	1
115°	1	1	1	1	1	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	2	1	1
155°	1	1	2	3	2	1
165°	1	2	3	3	3	0
175°	2	2	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2351.3	2351.3	2351.3	2351.3	2351.3
2.5°	2365.6	2359.1	2332.4	2355.2	2348.7
5°	2363.0	2355.8	2327.9	2348.7	2341.5
7.5°	2358.4	2349.3	2318.8	2337.6	2326.6
10°	2350.6	2341.5	2306.4	2321.4	2309.6
12.5°	2341.5	2329.2	2290.1	2297.9	2283.0
15°	2328.5	2314.2	2271.9	2268.0	2248.5
17.5°	2314.2	2296.6	2245.2	2228.3	2204.9
20°	2297.3	2275.8	2212.1	2178.9	2158.1
22.5°	2278.4	2250.4	2170.4	2119.7	2087.1
25°	2256.9	2224.4	2124.2	2052.0	2011.0
27.5°	2234.2	2189.9	2068.3	1973.3	1918.0
30°	2206.9	2153.5	1998.0	1869.8	1800.9
32.5°	2179.5	2108.0	1922.5	1736.5	1654.5
35°	2147.0	2056.6	1817.1	1569.9	1464.5
37.5°	2116.4	1994.8	1674.7	1361.1	1247.9
40°	2079.3	1921.9	1492.5	1121.0	1012.3
42.5°	2044.2	1837.3	1256.3	889.4	795.0
45°	2003.9	1721.5	994.1	679.2	628.5
47.5°	1957.0	1563.4	722.8	505.5	473.6
50°	1906.3	1346.1	504.9	366.9	340.9
52.5°	1850.3	1052.7	340.3	255.0	240.7
55°	1787.9	735.8	232.9	180.2	166.6
57.5°	1715.6	478.8	169.2	136.0	126.9
60°	1630.4	305.8	132.1	108.0	102.8
62.5°	1518.5	214.7	108.7	89.1	84.6
65°	1354.6	169.8	91.7	74.2	69.0
67.5°	1147.0	143.8	78.7	62.5	59.2
70°	924.5	124.9	68.3	54.0	52.0
72.5°	710.5	109.3	59.2	48.1	46.8
75°	514.6	95.6	52.7	44.2	42.3
77.5°	356.5	82.6	46.8	39.7	38.4
80°	230.3	71.6	41.6	36.4	35.8
82.5°	132.1	59.9	37.7	35.1	34.5
85°	63.1	50.1	33.8	30.6	27.3
87.5°	20.2	37.1	26.7	23.4	20.8
90°	2.6	26.0	20.8	18.2	16.9
92.5°	2.6	14.3	15.0	15.0	14.3
95°	2.0	3.3	7.2	11.1	10.4
97.5°	2.0	1.3	4.6	7.8	7.8
100°	1.3	0.7	2.0	5.2	5.2
102.5°	1.3	0.7	0.7	3.3	3.3
105°	0.7	0.0	0.7	1.3	1.3
107.5°	0.7	0.7	0.7	1.3	0.7
110°	0.7	0.7	0.7	1.3	0.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	0.7	0.7	1.3	0.7
115°	0.7	0.7	0.7	1.3	0.7
117.5°	0.7	0.7	0.7	1.3	0.7
120°	0.7	0.7	0.7	1.3	0.7
122.5°	0.7	0.7	0.7	1.3	0.7
125°	0.7	0.7	0.7	1.3	0.7
127.5°	0.7	0.7	0.7	1.3	0.7
130°	0.7	0.7	1.3	1.3	0.7
132.5°	0.7	0.7	1.3	1.3	0.7
135°	0.7	0.7	1.3	1.3	0.7
137.5°	0.7	0.7	1.3	1.3	1.3
140°	1.3	0.7	1.3	1.3	1.3
142.5°	1.3	1.3	1.3	2.0	1.3
145°	1.3	1.3	1.3	2.0	1.3
147.5°	1.3	1.3	2.0	2.0	1.3
150°	1.3	1.3	2.0	2.0	1.3
152.5°	1.3	1.3	2.0	2.0	2.0
155°	1.3	1.3	2.0	2.6	2.0
157.5°	1.3	1.3	2.0	2.6	2.0
160°	1.3	2.0	2.6	2.6	2.0
162.5°	1.3	2.0	2.6	2.6	2.6
165°	1.3	2.0	2.6	2.6	2.6
167.5°	2.0	2.0	2.6	3.3	2.6
170°	2.0	2.0	2.6	3.3	2.6
172.5°	2.0	2.0	2.6	3.3	2.6
175°	2.0	2.0	2.6	3.3	2.6
177.5°	2.0	2.0	2.6	3.3	3.3
180°	2.6	2.6	2.6	2.6	2.6



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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	20.94	22.34	21.31	22.66	22.98	9.45	10.85	9.83	11.18	11.50
	3H	23.85	25.09	24.23	25.43	25.80	10.39	11.63	10.77	11.97	12.34
	4H	24.74	25.91	25.15	26.26	26.65	10.91	12.07	11.32	12.43	12.82
	6H	25.24	26.31	25.66	26.69	27.09	11.54	12.61	11.96	12.99	13.39
	8H	25.35	26.37	25.79	26.77	27.18	11.96	12.98	12.40	13.37	13.79
	12H	25.40	26.37	25.83	26.76	27.20	12.41	13.38	12.85	13.77	14.21
4H	2H	20.75	21.92	21.16	22.27	22.66	9.97	11.14	10.38	11.49	11.88
	3H	23.68	24.64	24.10	25.05	25.46	11.17	12.12	11.58	12.53	12.94
	4H	24.59	25.44	25.03	25.87	26.31	11.83	12.69	12.27	13.11	13.56
	6H	25.18	25.92	25.65	26.37	26.84	12.66	13.40	13.12	13.85	14.32
	8H	25.34	26.03	25.81	26.49	26.96	13.19	13.88	13.66	14.33	14.81
	12H	25.43	26.05	25.92	26.53	27.02	13.77	14.38	14.26	14.87	15.35
8H	4H	24.48	25.17	24.95	25.62	26.10	12.42	13.11	12.90	13.57	14.04
	6H	25.08	25.65	25.58	26.15	26.63	13.43	14.00	13.93	14.50	14.99
	8H	25.26	25.78	25.79	26.30	26.79	14.10	14.62	14.63	15.13	15.63
	12H	25.41	25.87	25.93	26.36	26.94	14.87	15.32	15.39	15.82	16.40
12H	4H	24.44	25.05	24.93	25.54	26.02	12.68	13.30	13.17	13.79	14.27
	6H	25.02	25.54	25.55	26.06	26.56	13.74	14.25	14.26	14.77	15.27
	8H	25.24	25.70	25.76	26.20	26.77	14.50	14.96	15.02	15.46	16.03