

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: P893587

Luminaire Tested: 4MB-5SL-AOL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-5SL-AOL-UNV-L840
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
4000K CCT
Light Source: -
Ballast/Driver: -

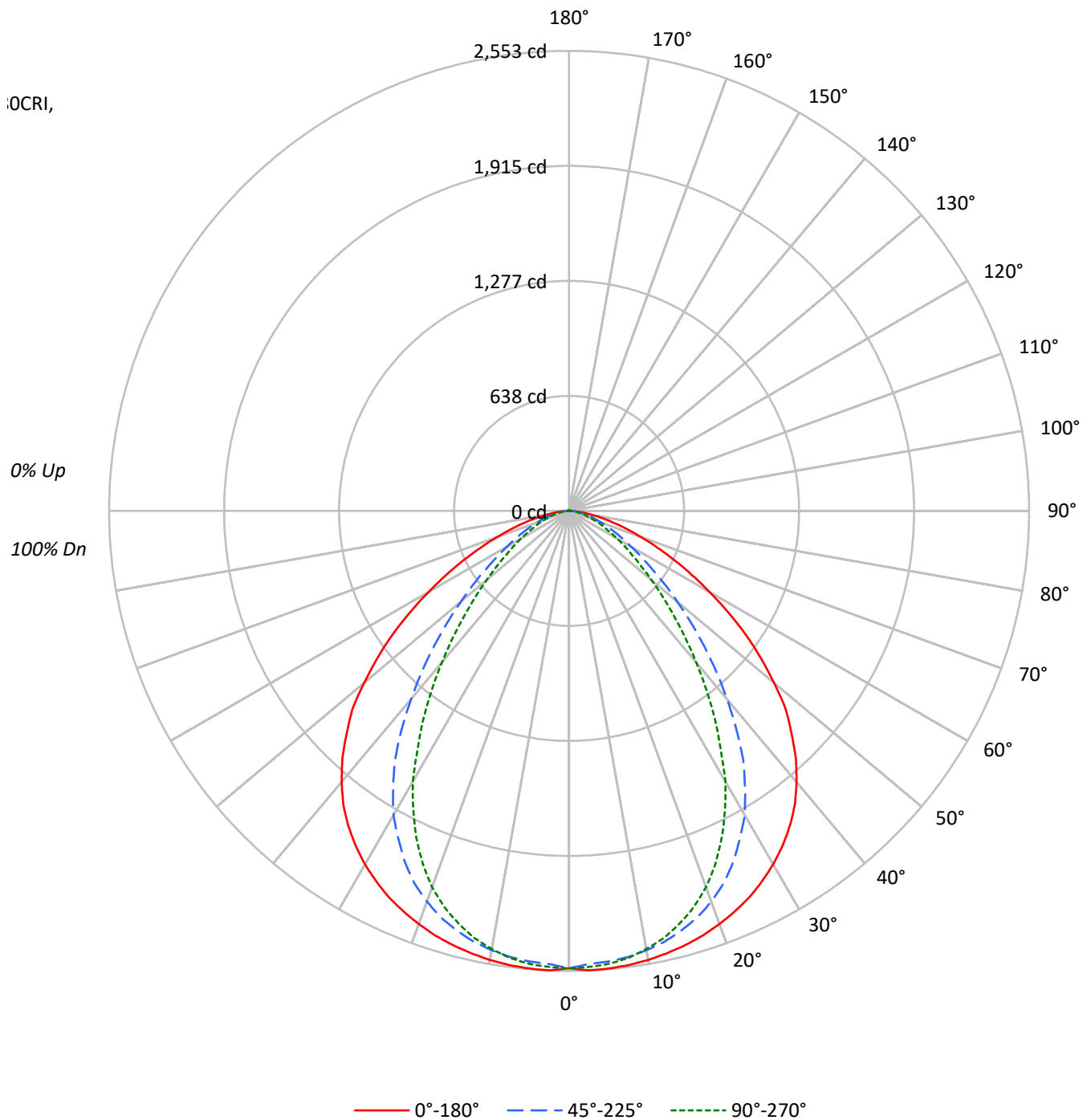
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5070.1 lumens
Efficiency: N/A
Efficacy: 144.9 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 9.55
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	78	78	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	68	68	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	60	60	60	58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	54	54	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	43	43	43	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	39	39	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	36	36	36	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25848	25848	25848
5°	26059	25664	25798
10°	26164	25599	25532
15°	26300	25416	24994
20°	26442	25005	24083
25°	26589	24192	22524
30°	26636	22920	20395
35°	26549	20937	17542
40°	26105	18119	14577
45°	25136	15226	11797
50°	23520	12401	9448
55°	21252	9966	7575
60°	18330	8113	6273
65°	15509	6755	5159
70°	12661	5744	4380
75°	10140	4840	3722
80°	7900	4141	3202
85°	6123	3657	2898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25136 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.3	4.7
10°-20°	683.9	13.5
20°-30°	996.9	19.7
30°-40°	1074.5	21.2
40°-50°	900.8	17.8
50°-60°	609.8	12.0
60°-70°	347.8	6.9
70°-80°	159.0	3.1
80°-90°	41.6	0.8
90°-100°	5.1	0.1
100°-110°	3.5	0.1
110°-120°	1.9	0.0
120°-130°	1.1	0.0
130°-140°	1.1	0.0
140°-150°	0.9	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1921.2	37.9
0°-40°	2995.7	59.1
0°-60°	4506.4	88.9
0°-90°	5054.8	99.7
90°-120°	10.5	0.2
90°-150°	13.7	0.3
90°-180°	15.0	0.3
0°-180°	5070.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2538	2538	2538	2538	2538	
5°	2549	2541	2510	2531	2524	243
15°	2494	2472	2411	2395	2371	705
25°	2366	2304	2153	2054	2004	1090
35°	2135	1974	1684	1478	1411	1333
45°	1745	1456	1057	872	819	1343
55°	1197	876	561	455	427	1066
65°	644	448	280	227	214	642
75°	258	189	123	100	95	281
85°	52	44	31	26	25	61
90°	7	7	4	4	3	7
95°	11	7	4	2	2	9
105°	7	5	2	2	1	8
115°	4	3	2	1	1	4
125°	2	2	2	1	1	2
135°	1	2	2	2	1	1
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	0
175°	2	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2538.0	2538.0	2538.0	2538.0	2538.0
2.5°	2552.6	2546.1	2516.9	2541.0	2533.7
5°	2549.0	2541.0	2510.4	2530.8	2523.5
7.5°	2541.7	2531.5	2497.3	2512.6	2503.1
10°	2530.0	2517.7	2475.4	2484.2	2468.9
12.5°	2514.0	2498.7	2448.5	2446.3	2428.1
15°	2494.4	2472.5	2410.6	2394.6	2370.6
17.5°	2470.3	2442.7	2365.5	2333.5	2304.3
20°	2439.8	2404.1	2307.2	2256.3	2222.1
22.5°	2404.8	2356.8	2239.5	2158.0	2120.9
25°	2366.2	2303.6	2152.9	2053.9	2004.4
27.5°	2318.2	2239.5	2052.4	1924.3	1873.3
30°	2265.0	2165.3	1949.0	1785.2	1734.3
32.5°	2204.6	2080.1	1817.3	1635.2	1563.9
35°	2135.4	1974.5	1684.0	1478.0	1411.0
37.5°	2057.5	1864.6	1524.6	1319.3	1251.5
40°	1963.6	1734.3	1362.9	1159.8	1096.5
42.5°	1862.4	1601.7	1207.9	1008.4	953.8
45°	1745.2	1456.1	1057.2	871.5	819.1
47.5°	1632.3	1309.1	915.9	746.3	703.3
50°	1484.5	1152.5	782.7	632.0	596.3
52.5°	1340.4	1007.6	669.1	540.2	506.7
55°	1196.9	875.9	561.3	455.0	426.6
57.5°	1045.5	747.0	472.5	385.1	366.2
60°	899.9	635.6	398.3	323.3	308.0
62.5°	766.7	532.9	337.1	273.0	258.5
65°	643.6	447.8	280.3	227.2	214.1
67.5°	527.1	368.4	233.7	189.3	179.8
70°	425.2	298.5	192.9	155.8	147.1
72.5°	337.1	238.8	154.4	127.4	117.9
75°	257.7	189.3	123.0	100.5	94.6
77.5°	192.2	142.7	94.6	77.2	72.8
80°	134.7	103.4	70.6	58.2	54.6
82.5°	91.7	71.4	49.5	40.8	38.6
85°	52.4	44.4	31.3	26.2	24.8
87.5°	26.9	23.3	16.7	12.4	10.9
90°	7.3	7.3	4.4	3.6	2.9
92.5°	11.6	6.6	4.4	2.9	2.2
95°	10.9	6.6	3.6	2.2	2.2
97.5°	10.2	6.6	2.9	2.2	1.5
100°	9.5	5.8	2.9	1.5	1.5
102.5°	8.7	5.8	2.9	1.5	1.5
105°	7.3	5.1	2.2	1.5	0.7
107.5°	6.6	4.4	2.2	1.5	0.7
110°	5.1	3.6	2.2	1.5	0.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	3.6	1.5	1.5	0.7
115°	3.6	2.9	1.5	0.7	0.7
117.5°	2.9	2.2	1.5	0.7	0.7
120°	2.2	2.2	1.5	0.7	0.7
122.5°	2.2	1.5	1.5	0.7	0.7
125°	1.5	1.5	1.5	0.7	0.7
127.5°	1.5	1.5	1.5	0.7	0.7
130°	1.5	1.5	1.5	0.7	0.7
132.5°	1.5	1.5	1.5	1.5	0.7
135°	0.7	1.5	1.5	1.5	0.7
137.5°	1.5	1.5	1.5	1.5	1.5
140°	1.5	1.5	1.5	1.5	1.5
142.5°	1.5	1.5	1.5	1.5	1.5
145°	1.5	1.5	1.5	1.5	1.5
147.5°	1.5	1.5	1.5	1.5	1.5
150°	1.5	1.5	1.5	1.5	1.5
152.5°	1.5	1.5	1.5	1.5	1.5
155°	1.5	1.5	1.5	2.2	2.2
157.5°	1.5	1.5	2.2	2.2	2.2
160°	1.5	1.5	2.2	2.2	2.2
162.5°	1.5	1.5	2.2	2.2	2.2
165°	1.5	2.2	2.2	2.2	2.2
167.5°	1.5	2.2	2.2	2.2	2.9
170°	1.5	2.2	2.2	2.9	2.9
172.5°	1.5	2.2	2.2	2.9	2.9
175°	2.2	2.2	2.2	2.9	2.9
177.5°	2.2	2.2	2.2	2.9	2.9
180°	2.2	2.2	2.2	2.2	2.2



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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	21.67	23.11	22.04	23.43	23.75	16.51	17.95	16.88	18.27	18.59
	3H	22.98	24.26	23.36	24.59	24.96	17.52	18.80	17.91	19.14	19.51
	4H	23.40	24.60	23.81	24.96	25.34	17.86	19.06	18.26	19.41	19.80
	6H	23.67	24.77	24.09	25.15	25.55	18.08	19.19	18.50	19.56	19.96
	8H	23.74	24.79	24.17	25.19	25.60	18.15	19.20	18.58	19.60	20.01
	12H	23.78	24.78	24.21	25.17	25.61	18.19	19.20	18.63	19.59	20.02
4H	2H	21.67	22.86	22.07	23.22	23.61	17.13	18.33	17.54	18.69	19.08
	3H	23.13	24.12	23.55	24.53	24.94	18.33	19.32	18.75	19.73	20.14
	4H	23.66	24.54	24.10	24.96	25.41	18.75	19.63	19.19	20.05	20.50
	6H	24.03	24.80	24.50	25.25	25.72	19.06	19.82	19.52	20.27	20.74
	8H	24.15	24.86	24.62	25.31	25.79	19.15	19.87	19.62	20.32	20.79
	12H	24.22	24.86	24.71	25.34	25.82	19.22	19.86	19.71	20.35	20.83
8H	4H	23.64	24.35	24.11	24.81	25.28	19.08	19.80	19.55	20.25	20.72
	6H	24.07	24.66	24.57	25.16	25.64	19.47	20.06	19.98	20.56	21.05
	8H	24.23	24.76	24.75	25.27	25.77	19.61	20.14	20.14	20.66	21.16
	12H	24.36	24.82	24.87	25.32	25.90	19.74	20.21	20.25	20.71	21.28
12H	4H	23.61	24.25	24.10	24.73	25.21	19.13	19.76	19.62	20.25	20.73
	6H	24.04	24.57	24.56	25.08	25.58	19.54	20.07	20.06	20.59	21.09
	8H	24.23	24.70	24.74	25.19	25.77	19.73	20.20	20.25	20.70	21.27