

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: P893307

Luminaire Tested: 4MB-2SL-LVRA-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893307
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-2SL-LVRA-UNV-L840
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

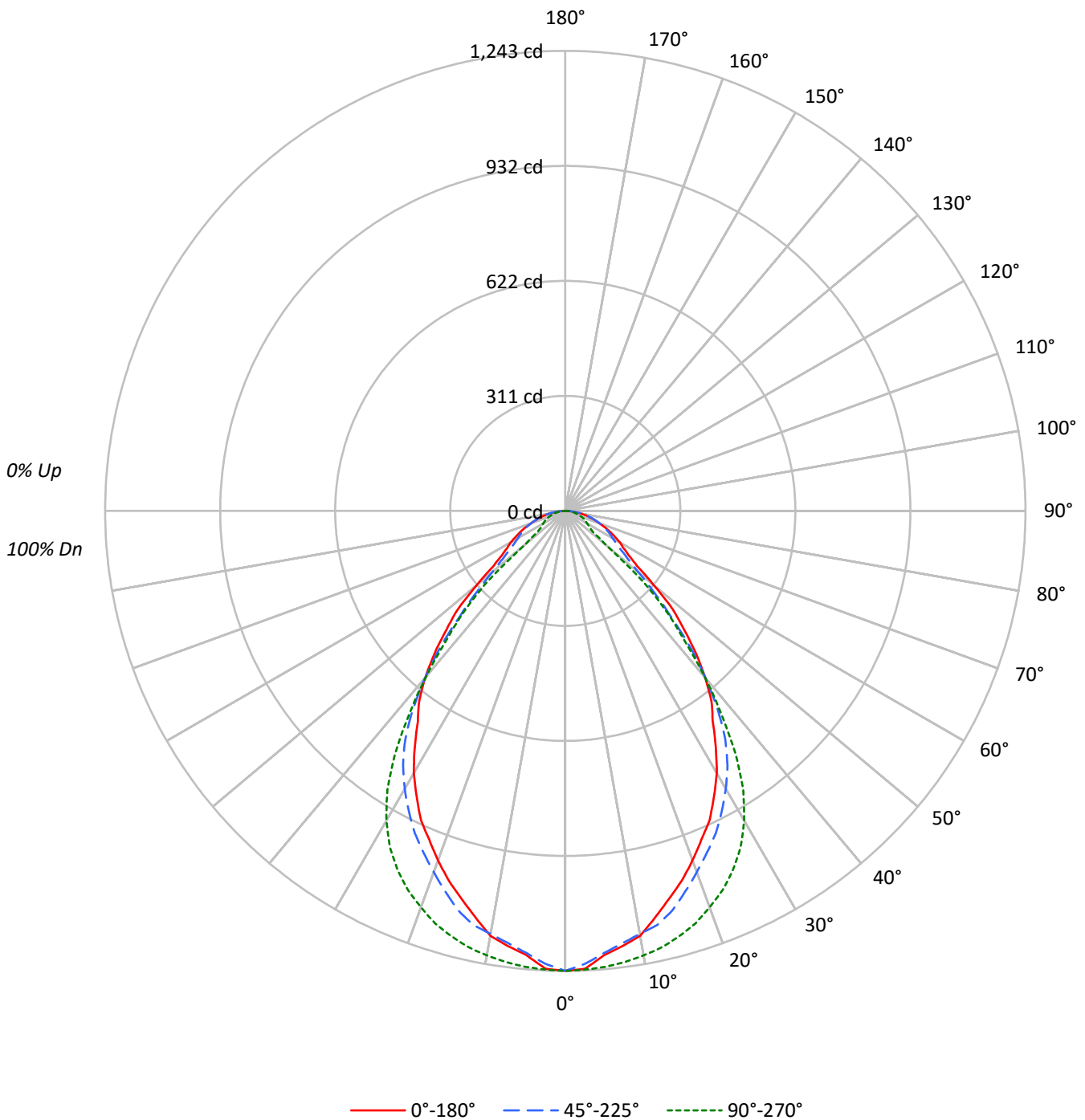
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2017.0 lumens
Efficiency: N/A
Efficacy: 146.2 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
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			
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	100	100	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78	78	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69	69	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62	62	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55	55	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50	50	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45	45	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	41	41	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38	38	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	35	35	35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8843	8843	8843
5°	8604	8565	8833
10°	8421	8384	8812
15°	7986	8231	8763
20°	7608	7865	8629
25°	7237	7546	8409
30°	6724	7124	7940
35°	6029	6546	6963
40°	5462	5474	5445
45°	4567	4045	3945
50°	3450	2847	1613
55°	2595	2276	1017
60°	2411	2096	980
65°	2242	2093	982
70°	2053	2053	965
75°	1946	1999	935
80°	1799	1889	959
85°	1567	1649	1045

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 4673 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	5.7
10°-20°	316.3	15.7
20°-30°	448.5	22.2
30°-40°	462.1	22.9
40°-50°	322.8	16.0
50°-60°	154.9	7.7
60°-70°	108.7	5.4
70°-80°	67.9	3.4
80°-90°	21.0	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	879.7	43.6
0°-40°	1341.8	66.5
0°-60°	1819.4	90.2
0°-90°	2017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2017.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1205	1203	1199	1231	1237	114
15°	1084	1092	1118	1150	1190	305
25°	922	931	961	1026	1071	422
35°	694	713	754	769	802	437
45°	454	464	402	382	392	350
55°	209	199	184	118	82	196
65°	133	125	124	94	58	132
75°	71	70	73	63	34	75
85°	19	19	20	20	13	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.8	1242.8	1242.8	1242.8	1242.8
2.5°	1238.0	1234.1	1224.9	1241.8	1240.5
5°	1204.7	1203.1	1199.2	1230.6	1236.7
7.5°	1185.8	1182.6	1178.1	1212.7	1229.7
10°	1165.6	1169.4	1160.5	1192.2	1219.7
12.5°	1124.0	1134.2	1146.4	1171.0	1207.6
15°	1084.2	1092.2	1117.5	1149.6	1189.6
17.5°	1047.1	1056.4	1078.2	1126.2	1168.8
20°	1004.8	1017.6	1038.8	1100.3	1139.7
22.5°	961.2	973.1	999.7	1065.7	1109.5
25°	921.8	931.1	961.2	1026.3	1071.1
27.5°	869.6	886.9	915.4	978.2	1025.3
30°	818.4	833.1	867.1	919.9	966.4
32.5°	756.6	778.0	815.5	855.9	894.6
35°	694.1	713.0	753.7	769.4	801.7
37.5°	648.6	653.7	676.8	674.9	693.1
40°	588.1	598.3	589.4	565.3	586.2
42.5°	522.7	534.9	498.7	470.9	478.2
45°	453.9	464.4	402.0	381.5	392.1
47.5°	394.3	393.3	324.2	310.4	295.6
50°	311.7	321.9	257.2	231.6	145.7
52.5°	243.4	247.3	212.0	148.0	95.8
55°	209.2	198.9	183.5	117.6	82.0
57.5°	185.8	173.0	162.7	109.2	75.0
60°	169.4	155.0	147.3	103.8	68.9
62.5°	150.9	139.7	136.8	99.0	63.4
65°	133.2	124.6	124.3	94.5	58.3
67.5°	115.6	110.8	112.1	89.0	52.5
70°	98.7	97.7	98.7	82.0	46.4
72.5°	84.2	83.3	85.8	73.0	39.7
75°	70.8	69.8	72.7	62.8	34.0
77.5°	56.4	57.0	58.9	52.2	28.5
80°	43.9	43.9	46.1	41.0	23.4
82.5°	31.4	31.7	33.0	30.1	18.3
85°	19.2	19.2	20.2	19.9	12.8
87.5°	6.4	7.4	8.6	9.3	6.4
90°	0.0	0.0	0.0	0.0	0.0



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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	13.22	14.57	13.59	14.89	15.20	9.55	10.90	9.92	11.22	11.53
	3H	14.96	16.17	15.34	16.49	16.86	11.53	12.73	11.91	13.06	13.43
	4H	15.63	16.76	16.03	17.11	17.49	12.23	13.36	12.63	13.71	14.09
	6H	16.14	17.18	16.55	17.54	17.94	12.75	13.79	13.17	14.16	14.56
	8H	16.31	17.29	16.74	17.68	18.09	12.94	13.93	13.37	14.32	14.72
	12H	16.42	17.36	16.85	17.74	18.17	13.08	14.02	13.51	14.40	14.83
4H	2H	13.75	14.88	14.15	15.23	15.61	11.17	12.30	11.58	12.65	13.03
	3H	15.73	16.66	16.14	17.06	17.46	13.35	14.28	13.76	14.68	15.09
	4H	16.53	17.36	16.96	17.78	18.23	14.23	15.07	14.67	15.49	15.93
	6H	17.17	17.90	17.63	18.34	18.81	14.87	15.60	15.34	16.04	16.51
	8H	17.39	18.07	17.86	18.52	18.99	15.08	15.76	15.55	16.21	16.68
	12H	17.55	18.15	18.03	18.63	19.10	15.24	15.84	15.73	16.32	16.80
8H	4H	16.81	17.49	17.28	17.94	18.41	14.88	15.56	15.35	16.00	16.47
	6H	17.60	18.15	18.10	18.65	19.13	15.74	16.30	16.24	16.79	17.27
	8H	17.90	18.40	18.42	18.91	19.40	16.07	16.57	16.59	17.08	17.57
	12H	18.13	18.57	18.65	19.07	19.64	16.33	16.77	16.85	17.27	17.84
12H	4H	16.83	17.43	17.32	17.91	18.39	14.95	15.55	15.44	16.03	16.51
	6H	17.65	18.15	18.17	18.66	19.15	15.88	16.38	16.40	16.89	17.38
	8H	18.01	18.45	18.53	18.95	19.52	16.29	16.73	16.81	17.23	17.80