

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: P893305

Luminaire Tested: 4MB-2SL-LVRA-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893305
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-L830
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

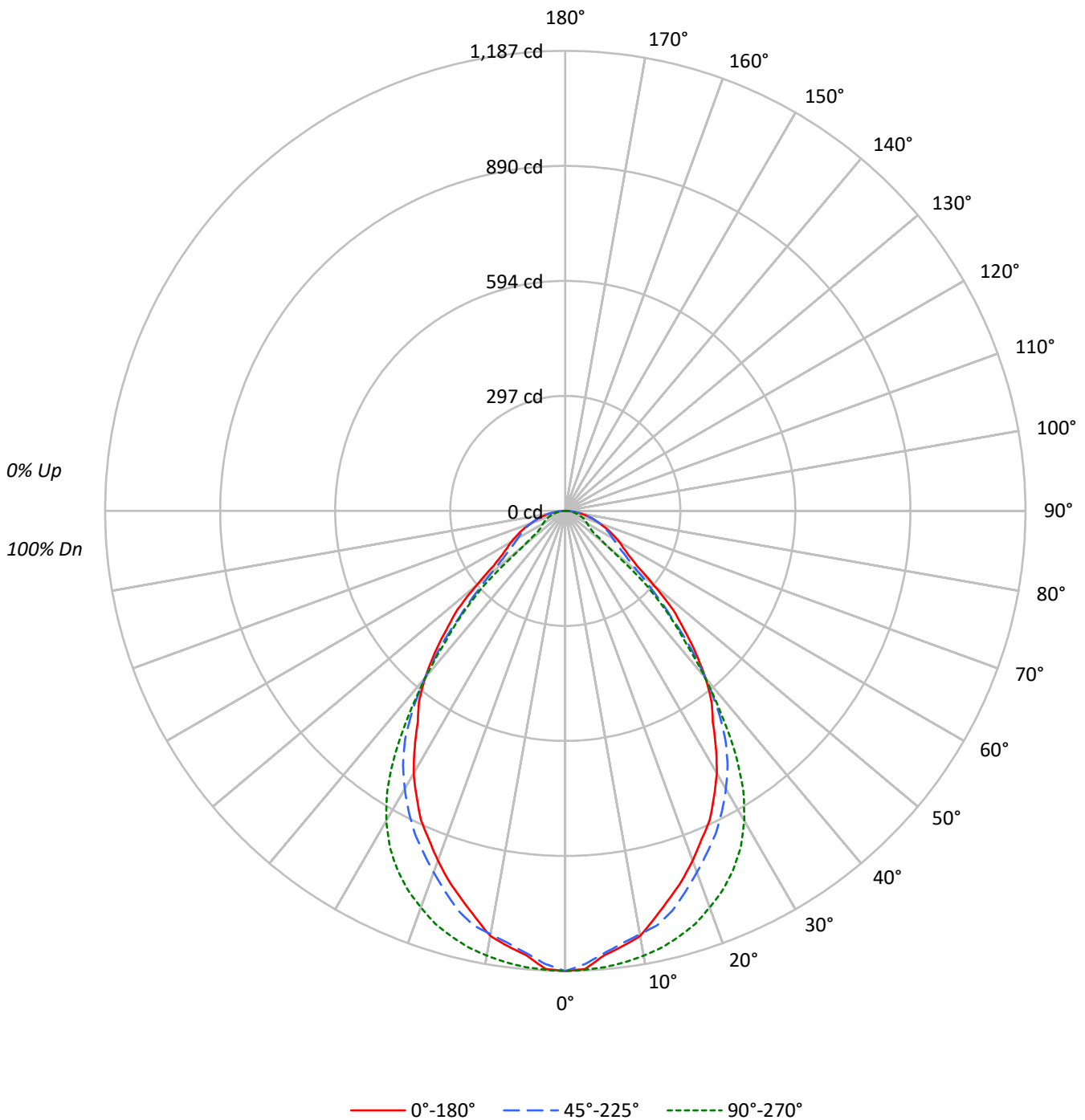
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1927.0 lumens
Efficiency: N/A
Efficacy: 139.6 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 (Ain): 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°	8448	8448	8448
5°	8220	8183	8438
10°	8045	8010	8419
15°	7630	7865	8371
20°	7269	7514	8244
25°	6914	7209	8033
30°	6424	6806	7585
35°	5760	6255	6653
40°	5218	5230	5201
45°	4363	3864	3769
50°	3296	2720	1541
55°	2478	2175	971
60°	2304	2004	936
65°	2143	1998	938
70°	1962	1962	924
75°	1858	1911	891
80°	1717	1807	914
85°	1502	1576	996

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 4465 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	5.7
10°-20°	302.2	15.7
20°-30°	428.5	22.2
30°-40°	441.5	22.9
40°-50°	308.4	16.0
50°-60°	148.0	7.7
60°-70°	103.8	5.4
70°-80°	64.9	3.4
80°-90°	20.1	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°	840.4	43.6
0°-40°	1281.9	66.5
0°-60°	1738.2	90.2
0°-90°	1927.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1151	1149	1146	1176	1182	109
15°	1036	1044	1068	1098	1136	292
25°	881	890	918	980	1023	403
35°	663	681	720	735	766	418
45°	434	444	384	364	375	334
55°	200	190	175	112	78	187
65°	127	119	119	90	56	126
75°	68	67	70	60	32	71
85°	18	18	19	19	12	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.3	1187.3	1187.3	1187.3	1187.3
2.5°	1182.7	1179.1	1170.2	1186.4	1185.2
5°	1150.9	1149.4	1145.7	1175.7	1181.5
7.5°	1132.9	1129.8	1125.5	1158.6	1174.8
10°	1113.6	1117.3	1108.7	1139.0	1165.3
12.5°	1073.8	1083.6	1095.2	1118.8	1153.7
15°	1035.9	1043.5	1067.7	1098.3	1136.5
17.5°	1000.4	1009.2	1030.0	1075.9	1116.6
20°	960.0	972.2	992.4	1051.2	1088.8
22.5°	918.3	929.7	955.1	1018.1	1060.0
25°	880.7	889.6	918.3	980.5	1023.3
27.5°	830.8	847.4	874.6	934.6	979.6
30°	781.9	795.9	828.4	878.9	923.2
32.5°	722.8	743.3	779.1	817.7	854.7
35°	663.1	681.2	720.1	735.0	766.0
37.5°	619.7	624.6	646.6	644.8	662.2
40°	561.8	571.6	563.1	540.1	560.0
42.5°	499.4	511.0	476.5	449.8	456.9
45°	433.6	443.7	384.0	364.5	374.6
47.5°	376.7	375.8	309.7	296.5	282.5
50°	297.8	307.5	245.7	221.2	139.2
52.5°	232.6	236.2	202.6	141.4	91.5
55°	199.8	190.0	175.3	112.3	78.3
57.5°	177.5	165.2	155.5	104.4	71.6
60°	161.9	148.1	140.8	99.1	65.8
62.5°	144.1	133.4	130.7	94.6	60.6
65°	127.3	119.0	118.7	90.3	55.7
67.5°	110.5	105.9	107.1	85.1	50.2
70°	94.3	93.3	94.3	78.3	44.4
72.5°	80.5	79.6	82.0	69.8	37.9
75°	67.6	66.7	69.5	60.0	32.4
77.5°	53.9	54.5	56.3	49.9	27.2
80°	41.9	41.9	44.1	39.2	22.3
82.5°	30.0	30.3	31.5	28.8	17.4
85°	18.4	18.4	19.3	19.0	12.2
87.5°	6.1	7.0	8.3	8.9	6.1
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	13.06	14.41	13.42	14.73	15.04	9.40	10.75	9.76	11.06	11.38
	3H	14.80	16.01	15.18	16.34	16.70	11.37	12.58	11.75	12.91	13.27
	4H	15.47	16.60	15.87	16.95	17.33	12.07	13.20	12.48	13.55	13.93
	6H	15.98	17.02	16.39	17.39	17.78	12.60	13.63	13.01	14.00	14.40
	8H	16.15	17.13	16.58	17.52	17.93	12.78	13.77	13.21	14.16	14.56
	12H	16.26	17.20	16.69	17.58	18.01	12.92	13.86	13.35	14.24	14.67
4H	2H	13.59	14.72	13.99	15.07	15.45	11.02	12.14	11.42	12.49	12.88
	3H	15.57	16.50	15.98	16.90	17.30	13.19	14.12	13.61	14.53	14.93
	4H	16.37	17.21	16.80	17.62	18.07	14.07	14.91	14.51	15.33	15.77
	6H	17.01	17.74	17.48	18.18	18.65	14.72	15.44	15.18	15.89	16.35
	8H	17.23	17.91	17.70	18.36	18.83	14.92	15.60	15.39	16.05	16.52
	12H	17.39	17.99	17.87	18.47	18.94	15.08	15.68	15.57	16.16	16.64
8H	4H	16.65	17.33	17.12	17.78	18.25	14.72	15.40	15.19	15.85	16.32
	6H	17.44	17.99	17.94	18.49	18.97	15.58	16.14	16.08	16.63	17.11
	8H	17.74	18.24	18.26	18.75	19.24	15.91	16.41	16.43	16.92	17.42
	12H	17.98	18.42	18.49	18.91	19.48	16.17	16.62	16.69	17.11	17.68
12H	4H	16.67	17.27	17.16	17.75	18.23	14.80	15.40	15.28	15.88	16.35
	6H	17.49	17.99	18.01	18.50	18.99	15.72	16.22	16.24	16.73	17.23
	8H	17.85	18.30	18.37	18.79	19.36	16.13	16.58	16.65	17.07	17.64