

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: P893311

Luminaire Tested: 4MB-2SL-LVRA-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893311
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-L940
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

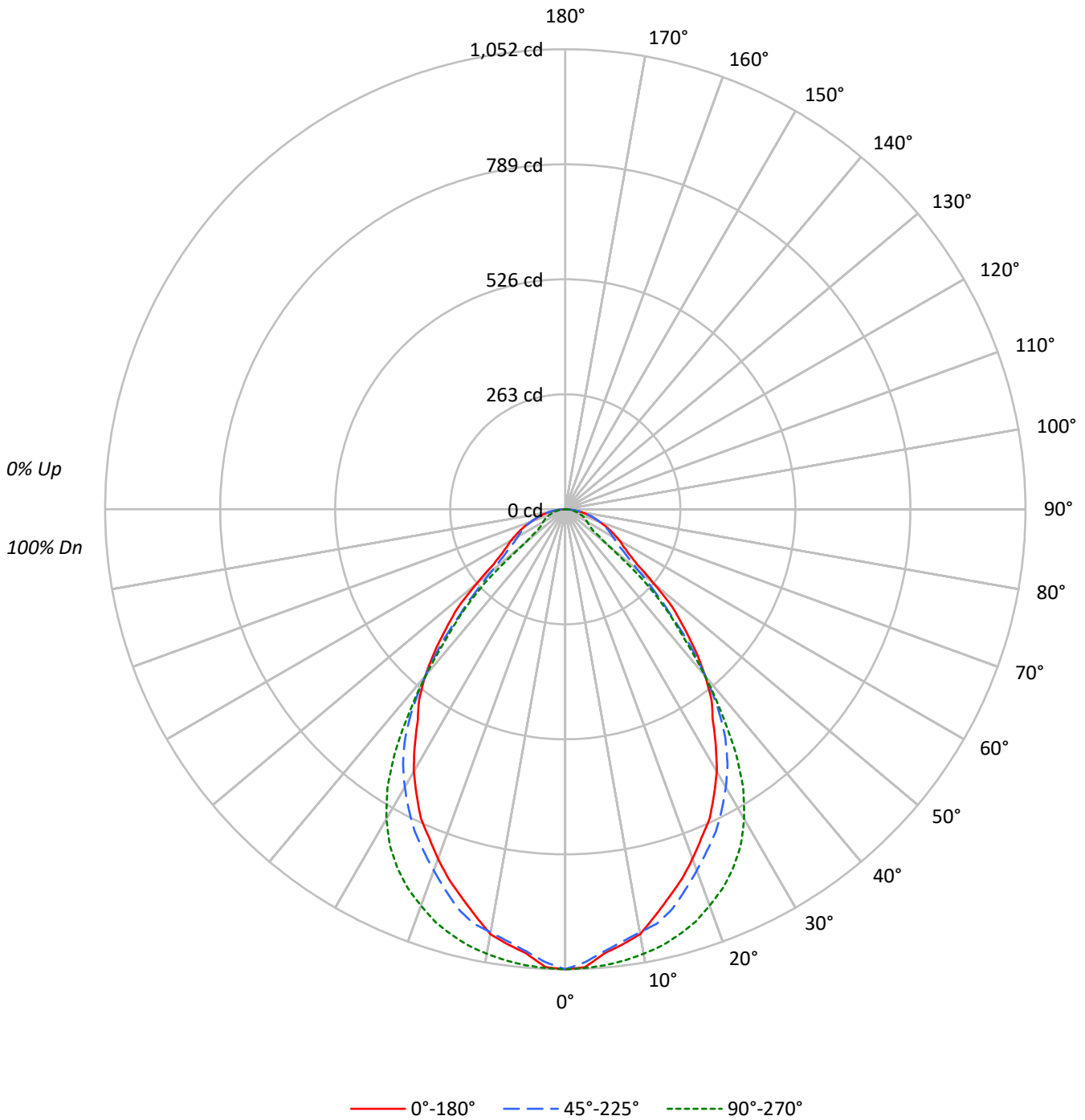
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1707.0 lumens
Efficiency: N/A
Efficacy: 123.7 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		
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88		
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78		
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69		
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62		
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55		
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50		
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45		
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	41		
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38		
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7484	7484	7484
5°	7281	7249	7475
10°	7127	7095	7458
15°	6759	6967	7416
20°	6439	6656	7303
25°	6125	6386	7117
30°	5690	6029	6719
35°	5102	5540	5893
40°	4623	4633	4608
45°	3865	3423	3339
50°	2920	2410	1365
55°	2196	1926	861
60°	2041	1774	830
65°	1899	1771	830
70°	1737	1737	818
75°	1647	1691	789
80°	1520	1598	811
85°	1331	1396	882

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 3955 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	5.7
10°-20°	267.7	15.7
20°-30°	379.6	22.2
30°-40°	391.1	22.9
40°-50°	273.2	16.0
50°-60°	131.1	7.7
60°-70°	92.0	5.4
70°-80°	57.5	3.4
80°-90°	17.8	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°	744.5	43.6
0°-40°	1135.5	66.5
0°-60°	1539.8	90.2
0°-90°	1707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1020	1018	1015	1042	1047	96
15°	918	924	946	973	1007	258
25°	780	788	814	868	906	357
35°	587	603	638	651	678	370
45°	384	393	340	323	332	296
55°	177	168	155	100	69	166
65°	113	105	105	80	49	112
75°	60	59	62	53	29	63
85°	16	16	17	17	11	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1051.8	1051.8	1051.8	1051.8	1051.8
2.5°	1047.7	1044.5	1036.6	1051.0	1049.9
5°	1019.5	1018.2	1014.9	1041.5	1046.6
7.5°	1003.5	1000.8	997.0	1026.3	1040.7
10°	986.5	989.7	982.1	1009.0	1032.3
12.5°	951.2	959.9	970.2	991.1	1022.0
15°	917.6	924.4	945.8	972.9	1006.8
17.5°	886.2	894.0	912.4	953.1	989.2
20°	850.4	861.2	879.1	931.2	964.5
22.5°	813.5	823.5	846.0	901.9	939.0
25°	780.2	788.0	813.5	868.5	906.5
27.5°	736.0	750.6	774.7	827.9	867.7
30°	692.6	705.1	733.8	778.5	817.8
32.5°	640.3	658.4	690.2	724.3	757.1
35°	587.4	603.4	637.8	651.1	678.5
37.5°	548.9	553.3	572.8	571.2	586.6
40°	497.7	506.4	498.8	478.5	496.1
42.5°	442.4	452.7	422.1	398.5	404.7
45°	384.1	393.1	340.2	322.9	331.8
47.5°	333.7	332.9	274.3	262.7	250.2
50°	263.8	272.4	217.7	196.0	123.3
52.5°	206.0	209.3	179.5	125.2	81.1
55°	177.0	168.3	155.3	99.5	69.4
57.5°	157.2	146.4	137.7	92.4	63.4
60°	143.4	131.2	124.7	87.8	58.3
62.5°	127.7	118.2	115.8	83.8	53.7
65°	112.8	105.4	105.2	80.0	49.3
67.5°	97.9	93.8	94.9	75.4	44.5
70°	83.5	82.7	83.5	69.4	39.3
72.5°	71.3	70.5	72.6	61.8	33.6
75°	59.9	59.1	61.5	53.1	28.7
77.5°	47.7	48.3	49.9	44.2	24.1
80°	37.1	37.1	39.0	34.7	19.8
82.5°	26.6	26.8	27.9	25.5	15.5
85°	16.3	16.3	17.1	16.8	10.8
87.5°	5.4	6.2	7.3	7.9	5.4
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	12.64	13.99	13.01	14.31	14.62	8.97	10.32	9.33	10.64	10.95
	3H	14.38	15.59	14.76	15.92	16.28	10.95	12.15	11.33	12.48	12.85
	4H	15.05	16.18	15.45	16.53	16.91	11.65	12.78	12.05	13.13	13.51
	6H	15.56	16.60	15.97	16.96	17.36	12.17	13.21	12.59	13.58	13.98
	8H	15.73	16.71	16.16	17.10	17.51	12.36	13.35	12.79	13.74	14.14
	12H	15.84	16.78	16.27	17.16	17.59	12.50	13.44	12.93	13.82	14.25
4H	2H	13.17	14.30	13.57	14.65	15.03	10.59	11.72	10.99	12.07	12.45
	3H	15.15	16.08	15.56	16.48	16.88	12.77	13.70	13.18	14.11	14.51
	4H	15.95	16.79	16.38	17.20	17.65	13.65	14.49	14.09	14.90	15.35
	6H	16.59	17.32	17.05	17.76	18.23	14.29	15.02	14.76	15.46	15.93
	8H	16.81	17.49	17.28	17.94	18.41	14.50	15.18	14.97	15.63	16.10
	12H	16.97	17.57	17.45	18.05	18.52	14.66	15.26	15.15	15.74	16.22
8H	4H	16.23	16.91	16.70	17.36	17.83	14.30	14.98	14.77	15.42	15.89
	6H	17.02	17.57	17.52	18.07	18.55	15.16	15.72	15.66	16.21	16.69
	8H	17.32	17.82	17.84	18.33	18.82	15.49	15.99	16.01	16.50	16.99
	12H	17.55	17.99	18.07	18.49	19.06	15.75	16.19	16.27	16.69	17.26
12H	4H	16.25	16.85	16.74	17.33	17.81	14.37	14.97	14.86	15.45	15.93
	6H	17.07	17.57	17.59	18.08	18.57	15.30	15.80	15.82	16.31	16.80
	8H	17.43	17.87	17.95	18.37	18.94	15.71	16.15	16.23	16.65	17.22