

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: P893324

Luminaire Tested: 4MB-2SL-RFLW-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893324
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-2SL-RFLW-UNV-L850
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 5000K
Light Source: -
Ballast/Driver: -

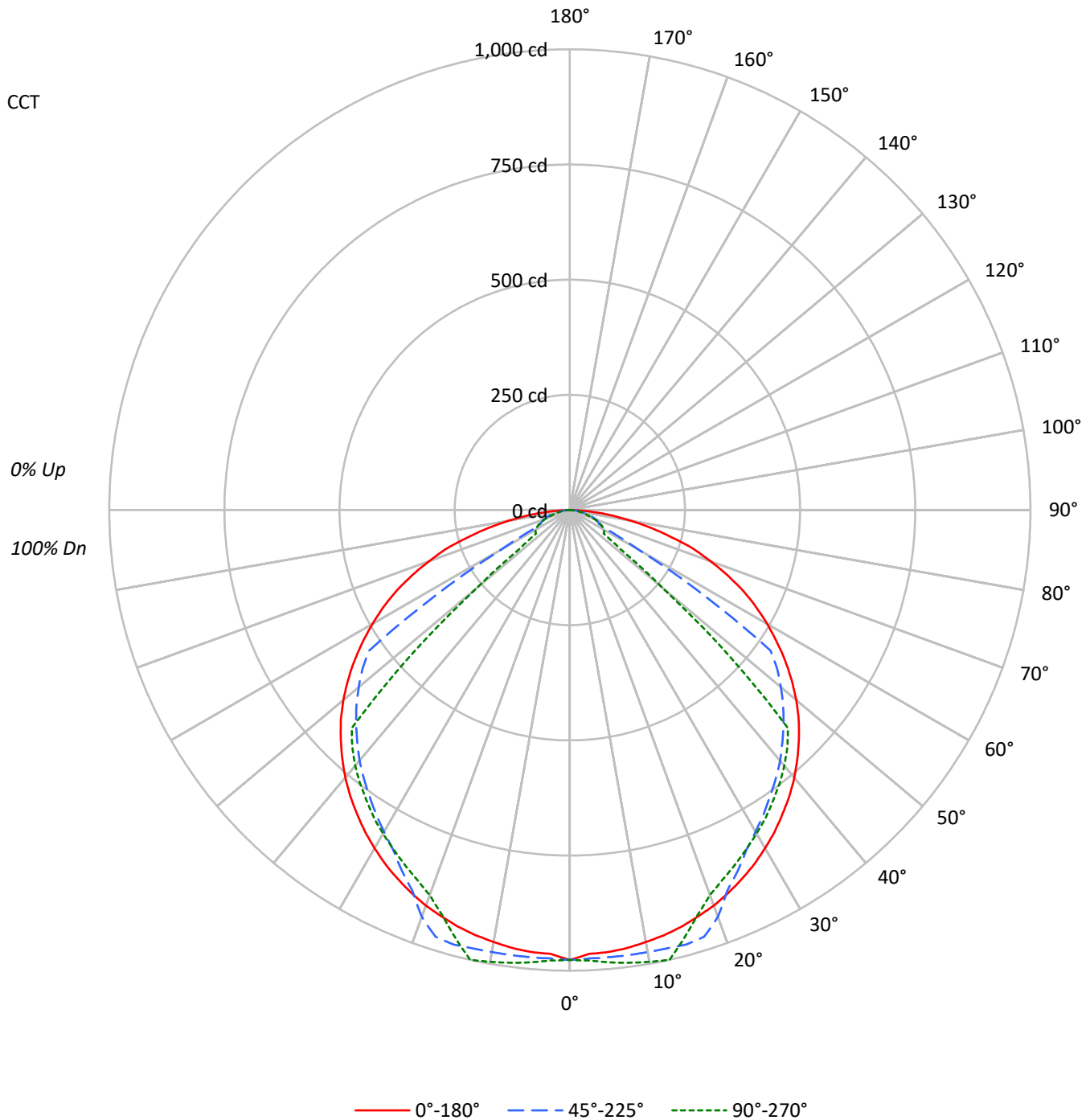
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2382.0 lumens
Efficiency: N/A
Efficacy: 172.6 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38
Luminous Opening: Rectangular (W 0.21' 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	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	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	89	89	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	66	66	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	61	55	51	51	51	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	40	40	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	36	36	36	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	33	33	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12681	12681	12681
5°	12555	12701	12847
10°	12552	12848	13129
15°	12587	13129	12919
20°	12629	12985	12289
25°	12661	12372	12164
30°	12712	12091	12159
35°	12765	12019	12196
40°	12852	12037	12283
45°	12917	12052	12300
50°	12965	12082	5317
55°	12931	12044	2028
60°	12855	4597	2210
65°	12766	2132	2271
70°	12331	2297	2126
75°	11519	2192	1856
80°	10132	1929	1593
85°	8016	1669	1341

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 12965 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.3	3.9
10°-20°	270.8	11.4
20°-30°	404.1	17.0
30°-40°	489.8	20.6
40°-50°	501.5	21.1
50°-60°	333.5	14.0
60°-70°	190.1	8.0
70°-80°	79.9	3.4
80°-90°	19.1	0.8
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°	768.2	32.2
0°-40°	1258.0	52.8
0°-60°	2093.0	87.9
0°-90°	2382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2382.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	977	977	977	977	977	
5°	963	982	974	977	986	92
15°	936	962	977	973	961	264
25°	884	926	864	844	849	408
35°	805	820	758	762	769	504
45°	703	661	656	664	670	543
55°	571	523	532	116	90	510
65°	416	372	69	74	74	409
75°	230	48	44	38	37	244
85°	54	13	11	9	9	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	976.6	976.6	976.6	976.6	976.6
2.5°	964.3	984.5	974.4	975.5	978.9
5°	963.2	982.2	974.4	976.6	985.6
7.5°	958.7	978.9	974.4	981.1	991.2
10°	952.0	975.5	974.4	985.6	995.7
12.5°	945.3	968.8	974.4	991.2	1000.2
15°	936.3	962.1	976.6	973.3	961.0
17.5°	925.1	955.4	971.0	922.9	921.8
20°	913.9	946.4	939.7	893.8	889.3
22.5°	899.4	937.4	893.8	862.4	868.0
25°	883.7	926.2	863.5	844.5	849.0
27.5°	866.9	915.0	831.0	824.3	829.9
30°	847.8	899.4	806.4	804.2	810.9
32.5°	827.7	869.1	782.9	784.0	791.8
35°	805.3	819.8	758.2	761.6	769.4
37.5°	782.9	773.9	734.7	740.3	748.2
40°	758.2	738.1	710.1	715.7	724.6
42.5°	731.4	700.0	683.2	691.0	698.9
45°	703.4	660.8	656.3	664.2	669.8
47.5°	674.2	627.2	628.3	633.9	474.9
50°	641.8	593.6	598.1	414.4	263.2
52.5°	607.0	558.9	567.8	230.7	133.3
55°	571.2	523.0	532.0	116.5	89.6
57.5°	533.1	487.2	347.2	84.0	88.5
60°	495.0	449.1	177.0	82.9	85.1
62.5°	455.8	411.0	84.0	79.5	80.6
65°	415.5	371.8	69.4	73.9	73.9
67.5°	370.7	330.4	66.1	66.1	65.0
70°	324.8	274.4	60.5	57.1	56.0
72.5°	282.2	105.3	52.6	47.0	45.9
75°	229.6	48.2	43.7	38.1	37.0
77.5°	182.6	40.3	34.7	30.2	29.1
80°	135.5	31.4	25.8	22.4	21.3
82.5°	94.1	21.3	17.9	14.6	14.6
85°	53.8	13.4	11.2	9.0	9.0
87.5°	21.3	6.7	5.6	3.4	3.4
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	21.75	23.27	22.12	23.59	23.90	9.52	11.04	9.88	11.35	11.67
	3H	23.77	25.13	24.15	25.46	25.82	11.83	13.19	12.21	13.52	13.88
	4H	24.23	25.51	24.63	25.85	26.23	12.55	13.82	12.95	14.17	14.54
	6H	24.64	25.81	25.05	26.18	26.57	13.03	14.20	13.44	14.57	14.96
	8H	24.79	25.91	25.22	26.29	26.70	13.17	14.28	13.59	14.67	15.07
	12H	24.89	25.96	25.32	26.34	26.77	13.25	14.32	13.69	14.70	15.13
4H	2H	21.59	22.86	21.99	23.21	23.59	10.31	11.59	10.71	11.93	12.31
	3H	23.80	24.84	24.21	25.24	25.64	12.83	13.87	13.24	14.27	14.67
	4H	24.24	25.18	24.68	25.60	26.04	13.65	14.59	14.08	15.00	15.44
	6H	24.71	25.52	25.17	25.97	26.43	14.24	15.05	14.70	15.50	15.96
	8H	24.90	25.66	25.36	26.11	26.57	14.41	15.17	14.87	15.61	16.08
	12H	25.05	25.73	25.54	26.21	26.68	14.53	15.21	15.01	15.69	16.16
8H	4H	24.16	24.92	24.63	25.37	25.84	14.48	15.25	14.95	15.69	16.16
	6H	24.62	25.25	25.12	25.74	26.22	15.11	15.74	15.60	16.23	16.71
	8H	24.82	25.39	25.34	25.90	26.39	15.31	15.87	15.82	16.38	16.87
	12H	25.01	25.51	25.52	26.00	26.57	15.47	15.97	15.98	16.46	17.03
12H	4H	24.13	24.81	24.61	25.29	25.76	14.56	15.24	15.04	15.71	16.19
	6H	24.57	25.14	25.09	25.65	26.14	15.20	15.77	15.71	16.28	16.76
	8H	24.80	25.30	25.31	25.79	26.36	15.45	15.96	15.96	16.45	17.01