

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: P893327

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893327
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-L940
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 4000K
Light Source: -
Ballast/Driver: -

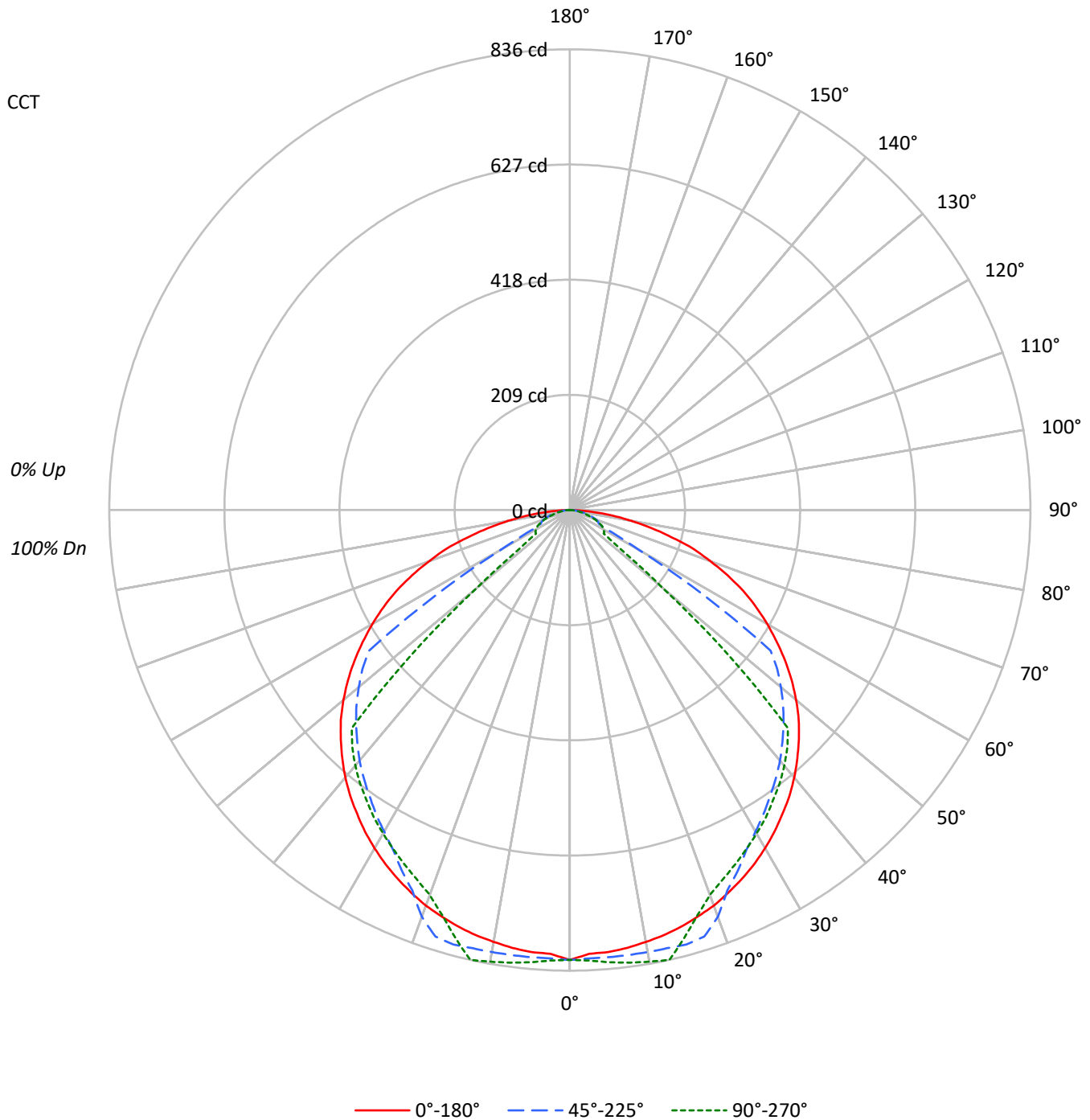
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1991.0 lumens
Efficiency: N/A
Efficacy: 144.3 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				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°	10600	10600	10600
5°	10494	10617	10738
10°	10492	10740	10973
15°	10521	10974	10798
20°	10556	10853	10271
25°	10582	10342	10167
30°	10626	10106	10163
35°	10670	10047	10194
40°	10743	10060	10267
45°	10796	10074	10280
50°	10836	10099	4444
55°	10808	10067	1696
60°	10746	3841	1846
65°	10671	1782	1899
70°	10308	1921	1777
75°	9628	1831	1550
80°	8472	1608	1331
85°	6690	1400	1117

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 10836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	3.9
10°-20°	226.4	11.4
20°-30°	337.8	17.0
30°-40°	409.4	20.6
40°-50°	419.2	21.1
50°-60°	278.8	14.0
60°-70°	158.9	8.0
70°-80°	66.8	3.4
80°-90°	15.9	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°	642.1	32.2
0°-40°	1051.5	52.8
0°-60°	1749.4	87.9
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	805	821	814	816	824	77
15°	783	804	816	814	803	221
25°	739	774	722	706	710	341
35°	673	685	634	637	643	422
45°	588	552	549	555	560	454
55°	477	437	445	97	75	426
65°	347	311	58	62	62	342
75°	192	40	36	32	31	204
85°	45	11	9	8	8	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	816.3	816.3	816.3	816.3	816.3
2.5°	806.0	822.9	814.5	815.4	818.2
5°	805.1	821.0	814.5	816.3	823.8
7.5°	801.3	818.2	814.5	820.1	828.5
10°	795.7	815.4	814.5	823.8	832.2
12.5°	790.1	809.8	814.5	828.5	836.0
15°	782.6	804.2	816.3	813.5	803.2
17.5°	773.3	798.5	811.6	771.4	770.5
20°	763.9	791.0	785.4	747.0	743.3
22.5°	751.7	783.6	747.0	720.8	725.5
25°	738.6	774.2	721.8	705.9	709.6
27.5°	724.6	764.8	694.6	689.0	693.7
30°	708.7	751.7	674.0	672.2	677.8
32.5°	691.8	726.5	654.4	655.3	661.9
35°	673.1	685.3	633.8	636.6	643.1
37.5°	654.4	646.9	614.1	618.8	625.4
40°	633.8	616.9	593.5	598.2	605.7
42.5°	611.3	585.1	571.1	577.6	584.2
45°	587.9	552.3	548.6	555.1	559.8
47.5°	563.6	524.2	525.2	529.9	396.9
50°	536.4	496.2	499.9	346.4	220.0
52.5°	507.4	467.1	474.6	192.8	111.4
55°	477.4	437.2	444.7	97.4	74.9
57.5°	445.6	407.2	290.2	70.2	74.0
60°	413.8	375.4	147.9	69.3	71.1
62.5°	381.0	343.6	70.2	66.5	67.4
65°	347.3	310.8	58.0	61.8	61.8
67.5°	309.9	276.2	55.2	55.2	54.3
70°	271.5	229.4	50.6	47.7	46.8
72.5°	235.9	88.0	44.0	39.3	38.4
75°	191.9	40.3	36.5	31.8	30.9
77.5°	152.6	33.7	29.0	25.3	24.3
80°	113.3	26.2	21.5	18.7	17.8
82.5°	78.6	17.8	15.0	12.2	12.2
85°	44.9	11.2	9.4	7.5	7.5
87.5°	17.8	5.6	4.7	2.8	2.8
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	21.13	22.65	21.49	22.96	23.28	8.89	10.41	9.26	10.73	11.04
	3H	23.15	24.51	23.53	24.83	25.20	11.21	12.57	11.59	12.89	13.26
	4H	23.61	24.88	24.01	25.23	25.61	11.92	13.19	12.32	13.54	13.92
	6H	24.02	25.19	24.43	25.56	25.95	12.40	13.58	12.82	13.94	14.34
	8H	24.17	25.28	24.59	25.67	26.07	12.54	13.66	12.97	14.05	14.45
	12H	24.26	25.33	24.70	25.71	26.14	12.63	13.70	13.06	14.08	14.51
4H	2H	20.97	22.24	21.37	22.59	22.97	9.69	10.96	10.09	11.31	11.69
	3H	23.17	24.22	23.58	24.62	25.02	12.20	13.25	12.61	13.65	14.05
	4H	23.62	24.56	24.05	24.98	25.41	13.02	13.96	13.45	14.38	14.82
	6H	24.09	24.90	24.54	25.34	25.80	13.61	14.43	14.07	14.87	15.33
	8H	24.28	25.04	24.74	25.48	25.95	13.78	14.54	14.25	14.99	15.46
	12H	24.43	25.11	24.91	25.59	26.06	13.90	14.58	14.38	15.06	15.53
8H	4H	23.54	24.30	24.00	24.74	25.21	13.86	14.62	14.32	15.07	15.53
	6H	24.00	24.63	24.50	25.12	25.60	14.48	15.11	14.98	15.60	16.08
	8H	24.20	24.76	24.71	25.27	25.76	14.68	15.25	15.20	15.76	16.25
	12H	24.38	24.88	24.89	25.38	25.94	14.84	15.34	15.35	15.84	16.40
12H	4H	23.51	24.19	23.99	24.67	25.14	13.93	14.61	14.41	15.09	15.56
	6H	23.95	24.52	24.47	25.03	25.52	14.58	15.14	15.09	15.65	16.14
	8H	24.17	24.68	24.68	25.17	25.73	14.83	15.33	15.34	15.82	16.39