

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: P893321

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893321
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-L830
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3000K
Light Source: -
Ballast/Driver: -

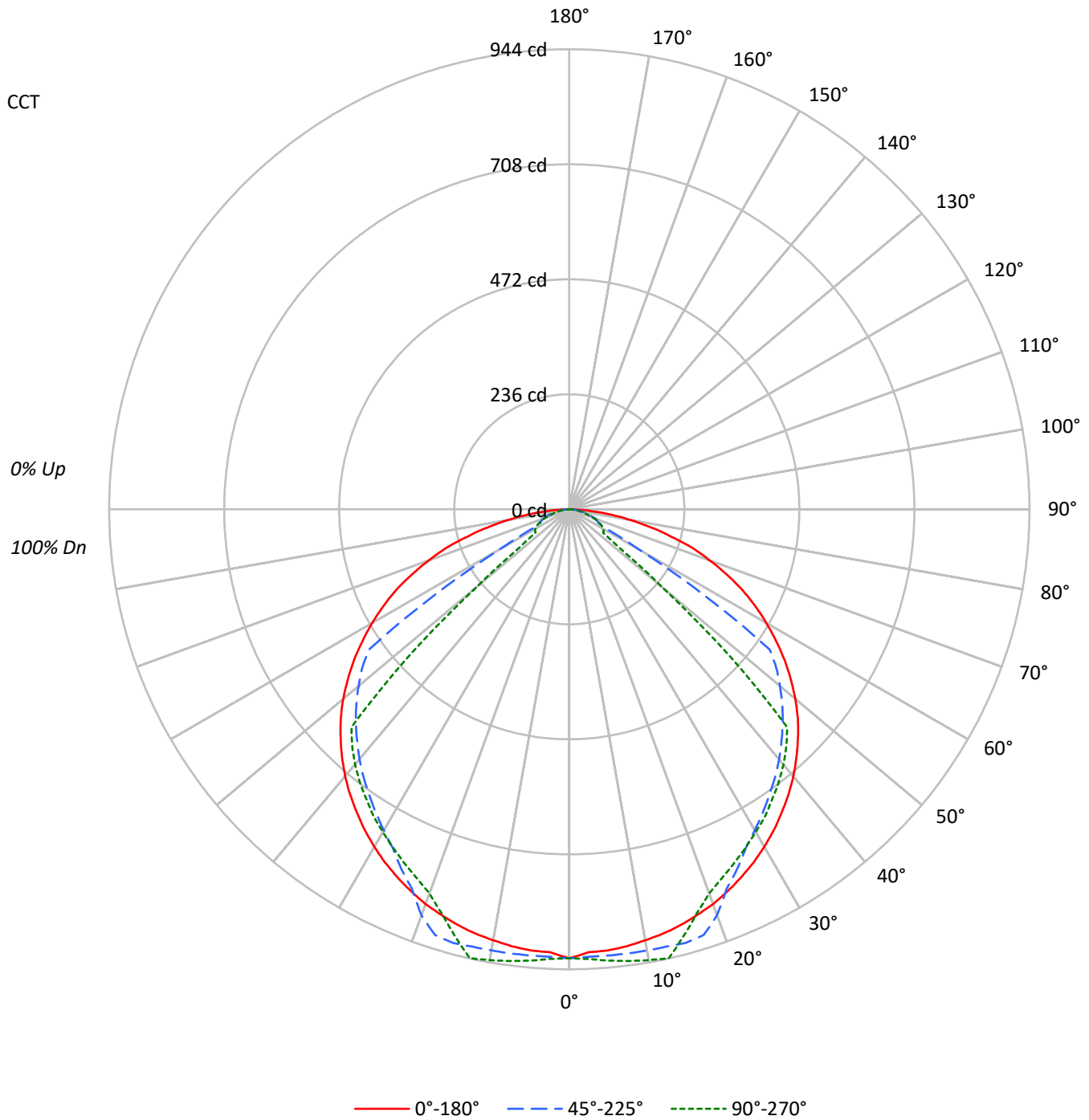
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2247.0 lumens
Efficiency: N/A
Efficacy: 162.8 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

TEST NUMBER: P893321
CATALOG NUMBER: 4MB-2SL-RFLW-UNV-L830

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°	11963	11963	11963
5°	11843	11981	12118
10°	11840	12120	12384
15°	11874	12385	12186
20°	11913	12249	11592
25°	11943	11671	11473
30°	11992	11406	11469
35°	12041	11339	11505
40°	12125	11354	11588
45°	12184	11369	11602
50°	12230	11398	5016
55°	12198	11360	1913
60°	12128	4334	2085
65°	12044	2013	2142
70°	11633	2168	2005
75°	10867	2067	1751
80°	9557	1817	1503
85°	7554	1579	1266

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 12230 cd/sqm



TEST NUMBER: P893321
 CATALOG NUMBER: 4MB-2SL-RFLW-UNV-L830

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.0	3.9
10°-20°	255.5	11.4
20°-30°	381.2	17.0
30°-40°	462.0	20.6
40°-50°	473.1	21.1
50°-60°	314.6	14.0
60°-70°	179.3	8.0
70°-80°	75.3	3.4
80°-90°	18.0	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°	724.6	32.2
0°-40°	1186.7	52.8
0°-60°	1974.4	87.9
0°-90°	2247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2247.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	921	921	921	921	921	
5°	909	927	919	921	930	86
15°	883	908	921	918	906	249
25°	834	874	815	797	801	385
35°	760	773	715	718	726	476
45°	664	623	619	626	632	512
55°	539	493	502	110	84	481
65°	392	351	66	70	70	386
75°	217	45	41	36	35	230
85°	51	13	11	8	8	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	921.3	921.3	921.3	921.3	921.3
2.5°	909.7	928.7	919.2	920.2	923.4
5°	908.6	926.6	919.2	921.3	929.7
7.5°	904.4	923.4	919.2	925.5	935.0
10°	898.0	920.2	919.2	929.7	939.2
12.5°	891.7	913.9	919.2	935.0	943.5
15°	883.3	907.6	921.3	918.1	906.5
17.5°	872.7	901.2	916.0	870.6	869.5
20°	862.1	892.8	886.4	843.1	838.9
22.5°	848.4	884.3	843.1	813.5	818.8
25°	833.6	873.7	814.6	796.6	800.8
27.5°	817.7	863.2	783.9	777.6	782.9
30°	799.8	848.4	760.7	758.6	764.9
32.5°	780.8	819.9	738.5	739.6	747.0
35°	759.6	773.4	715.3	718.4	725.8
37.5°	738.5	730.1	693.1	698.4	705.8
40°	715.3	696.2	669.8	675.1	683.6
42.5°	689.9	660.3	644.5	651.9	659.3
45°	663.5	623.3	619.1	626.5	631.8
47.5°	636.0	591.7	592.7	598.0	448.0
50°	605.4	560.0	564.2	390.9	248.3
52.5°	572.6	527.2	535.7	217.6	125.7
55°	538.8	493.4	501.8	109.9	84.5
57.5°	502.9	459.6	327.5	79.2	83.5
60°	467.0	423.7	166.9	78.2	80.3
62.5°	430.0	387.7	79.2	75.0	76.1
65°	392.0	350.8	65.5	69.7	69.7
67.5°	349.7	311.7	62.3	62.3	61.3
70°	306.4	258.8	57.1	53.9	52.8
72.5°	266.2	99.3	49.7	44.4	43.3
75°	216.6	45.4	41.2	35.9	34.9
77.5°	172.2	38.0	32.8	28.5	27.5
80°	127.8	29.6	24.3	21.1	20.1
82.5°	88.7	20.1	16.9	13.7	13.7
85°	50.7	12.7	10.6	8.5	8.5
87.5°	20.1	6.3	5.3	3.2	3.2
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	21.55	23.07	21.91	23.38	23.70	9.31	10.83	9.68	11.15	11.46
	3H	23.57	24.93	23.95	25.25	25.62	11.63	12.99	12.01	13.31	13.68
	4H	24.03	25.30	24.43	25.65	26.03	12.34	13.61	12.74	13.96	14.34
	6H	24.44	25.61	24.85	25.98	26.37	12.83	14.00	13.24	14.36	14.76
	8H	24.59	25.70	25.01	26.09	26.49	12.96	14.08	13.39	14.47	14.87
	12H	24.68	25.75	25.12	26.13	26.56	13.05	14.12	13.48	14.50	14.93
4H	2H	21.39	22.66	21.79	23.01	23.39	10.11	11.38	10.51	11.73	12.11
	3H	23.59	24.64	24.00	25.04	25.44	12.62	13.67	13.03	14.07	14.47
	4H	24.04	24.98	24.47	25.40	25.83	13.44	14.38	13.88	14.80	15.24
	6H	24.51	25.32	24.96	25.76	26.22	14.04	14.85	14.49	15.29	15.75
	8H	24.70	25.46	25.16	25.90	26.37	14.20	14.97	14.67	15.41	15.88
	12H	24.85	25.53	25.33	26.01	26.48	14.32	15.00	14.81	15.48	15.95
8H	4H	23.96	24.72	24.42	25.16	25.63	14.28	15.04	14.75	15.49	15.96
	6H	24.42	25.05	24.92	25.54	26.02	14.90	15.53	15.40	16.02	16.50
	8H	24.62	25.18	25.13	25.69	26.18	15.10	15.67	15.62	16.18	16.67
	12H	24.80	25.30	25.31	25.80	26.36	15.26	15.76	15.77	16.26	16.82
12H	4H	23.93	24.61	24.41	25.09	25.56	14.35	15.03	14.84	15.51	15.98
	6H	24.37	24.94	24.89	25.45	25.94	15.00	15.56	15.51	16.07	16.56
	8H	24.59	25.10	25.10	25.59	26.15	15.25	15.75	15.76	16.24	16.81