

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: P893325

Luminaire Tested: 4MB-2SL-RFLW-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893325
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-L930
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 3000K
Light Source: -
Ballast/Driver: -

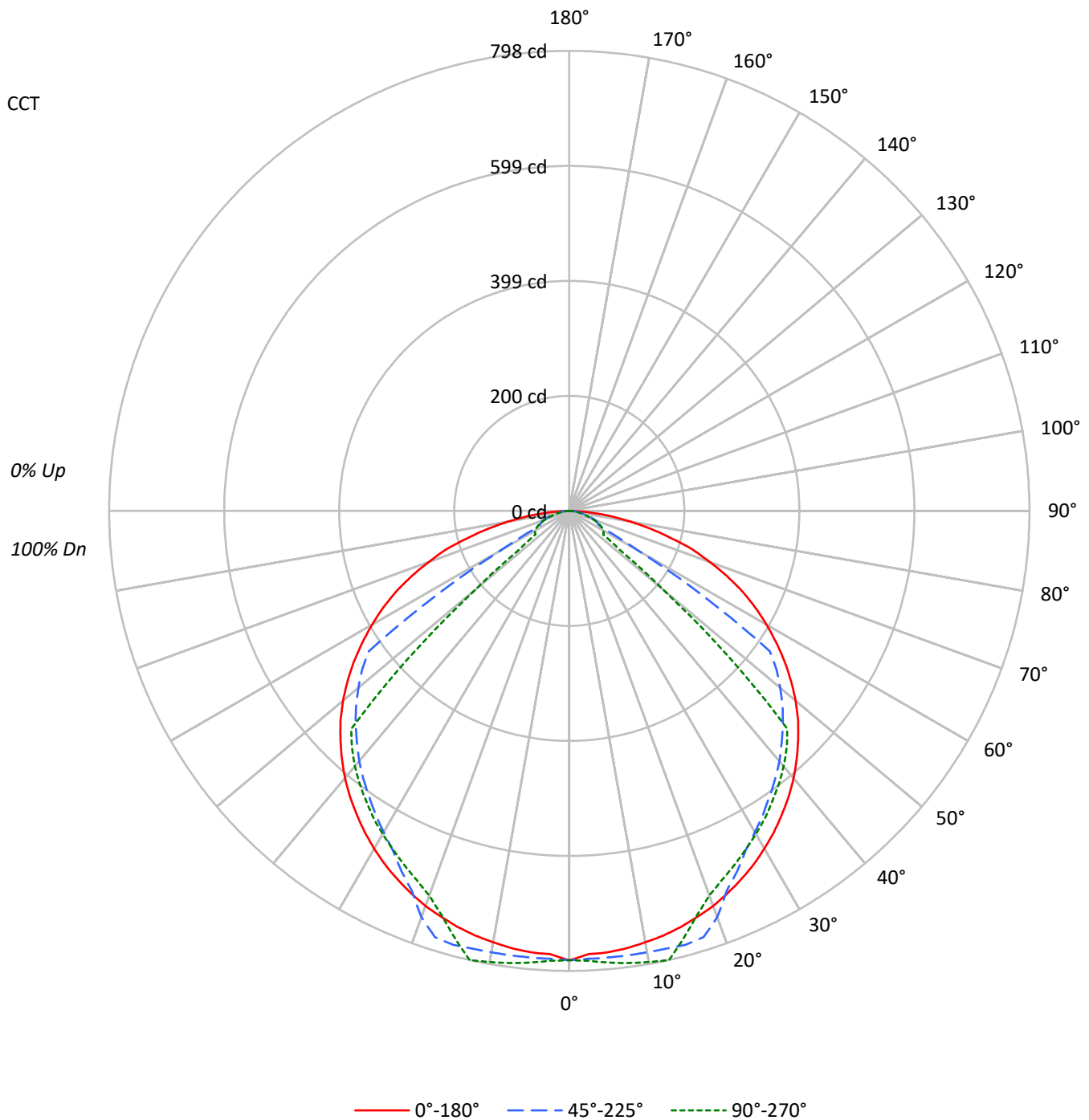
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1901.0 lumens
Efficiency: N/A
Efficacy: 137.8 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

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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°	10121	10121	10121
5°	10020	10136	10253
10°	10018	10253	10477
15°	10045	10478	10310
20°	10079	10362	9807
25°	10104	9873	9707
30°	10145	9650	9703
35°	10188	9592	9735
40°	10257	9606	9803
45°	10308	9619	9815
50°	10347	9642	4244
55°	10321	9612	1619
60°	10261	3667	1763
65°	10189	1702	1813
70°	9841	1834	1697
75°	9191	1751	1480
80°	8091	1540	1271
85°	6392	1326	1073

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 10347 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	3.9
10°-20°	216.1	11.4
20°-30°	322.5	17.0
30°-40°	390.9	20.6
40°-50°	400.2	21.1
50°-60°	266.2	14.0
60°-70°	151.7	8.0
70°-80°	63.7	3.4
80°-90°	15.2	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°	613.1	32.2
0°-40°	1003.9	52.8
0°-60°	1670.3	87.9
0°-90°	1901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	769	784	778	779	787	73
15°	747	768	779	777	767	211
25°	705	739	689	674	678	325
35°	643	654	605	608	614	403
45°	561	527	524	530	534	433
55°	456	417	425	93	72	407
65°	332	297	55	59	59	326
75°	183	38	35	30	30	195
85°	43	11	9	7	7	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.4	779.4	779.4	779.4	779.4
2.5°	769.6	785.7	777.6	778.5	781.2
5°	768.7	783.9	777.6	779.4	786.6
7.5°	765.1	781.2	777.6	783.0	791.0
10°	759.8	778.5	777.6	786.6	794.6
12.5°	754.4	773.2	777.6	791.0	798.2
15°	747.2	767.8	779.4	776.7	766.9
17.5°	738.3	762.4	775.0	736.5	735.6
20°	729.4	755.3	749.9	713.3	709.7
22.5°	717.7	748.1	713.3	688.3	692.7
25°	705.2	739.2	689.1	674.0	677.5
27.5°	691.8	730.3	663.2	657.9	662.3
30°	676.6	717.7	643.6	641.8	647.1
32.5°	660.5	693.6	624.8	625.7	631.9
35°	642.7	654.3	605.1	607.8	614.1
37.5°	624.8	617.6	586.4	590.8	597.1
40°	605.1	589.0	566.7	571.2	578.3
42.5°	583.7	558.6	545.2	551.5	557.8
45°	561.3	527.4	523.8	530.0	534.5
47.5°	538.1	500.5	501.4	505.9	379.0
50°	512.2	473.7	477.3	330.7	210.1
52.5°	484.5	446.0	453.2	184.1	106.4
55°	455.9	417.4	424.6	93.0	71.5
57.5°	425.5	388.8	277.1	67.0	70.6
60°	395.1	358.4	141.2	66.1	67.9
62.5°	363.8	328.0	67.0	63.5	64.4
65°	331.6	296.8	55.4	59.0	59.0
67.5°	295.9	263.7	52.7	52.7	51.8
70°	259.2	219.0	48.3	45.6	44.7
72.5°	225.2	84.0	42.0	37.5	36.6
75°	183.2	38.4	34.9	30.4	29.5
77.5°	145.7	32.2	27.7	24.1	23.2
80°	108.2	25.0	20.6	17.9	17.0
82.5°	75.1	17.0	14.3	11.6	11.6
85°	42.9	10.7	8.9	7.2	7.2
87.5°	17.0	5.4	4.5	2.7	2.7
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	20.97	22.49	21.33	22.80	23.12	8.73	10.25	9.09	10.56	10.88
	3H	22.99	24.35	23.37	24.67	25.04	11.04	12.40	11.42	12.73	13.09
	4H	23.45	24.72	23.85	25.07	25.45	11.76	13.03	12.16	13.38	13.76
	6H	23.86	25.03	24.27	25.40	25.79	12.24	13.41	12.65	13.78	14.17
	8H	24.01	25.12	24.43	25.51	25.91	12.38	13.49	12.81	13.88	14.29
	12H	24.10	25.17	24.53	25.55	25.98	12.47	13.53	12.90	13.92	14.35
4H	2H	20.81	22.08	21.21	22.43	22.81	9.53	10.80	9.93	11.15	11.53
	3H	23.01	24.06	23.42	24.46	24.86	12.04	13.09	12.45	13.49	13.89
	4H	23.46	24.40	23.89	24.81	25.25	12.86	13.80	13.29	14.22	14.65
	6H	23.93	24.74	24.38	25.18	25.64	13.45	14.27	13.91	14.71	15.17
	8H	24.12	24.88	24.58	25.32	25.79	13.62	14.38	14.09	14.83	15.30
	12H	24.27	24.95	24.75	25.43	25.90	13.74	14.42	14.22	14.90	15.37
8H	4H	23.38	24.14	23.84	24.58	25.05	13.70	14.46	14.16	14.91	15.37
	6H	23.84	24.47	24.34	24.96	25.44	14.32	14.95	14.82	15.44	15.92
	8H	24.04	24.60	24.55	25.11	25.60	14.52	15.09	15.04	15.60	16.09
	12H	24.22	24.72	24.73	25.22	25.78	14.68	15.18	15.19	15.67	16.24
12H	4H	23.35	24.03	23.83	24.51	24.98	13.77	14.45	14.25	14.93	15.40
	6H	23.79	24.36	24.31	24.87	25.36	14.42	14.98	14.93	15.49	15.98
	8H	24.01	24.52	24.52	25.01	25.57	14.67	15.17	15.18	15.66	16.23