

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: P893437

Luminaire Tested: 4MB-3SL-RFLW-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893437
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-3SL-RFLW-UNV-L930
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 3000K
Light Source: -
Ballast/Driver: -

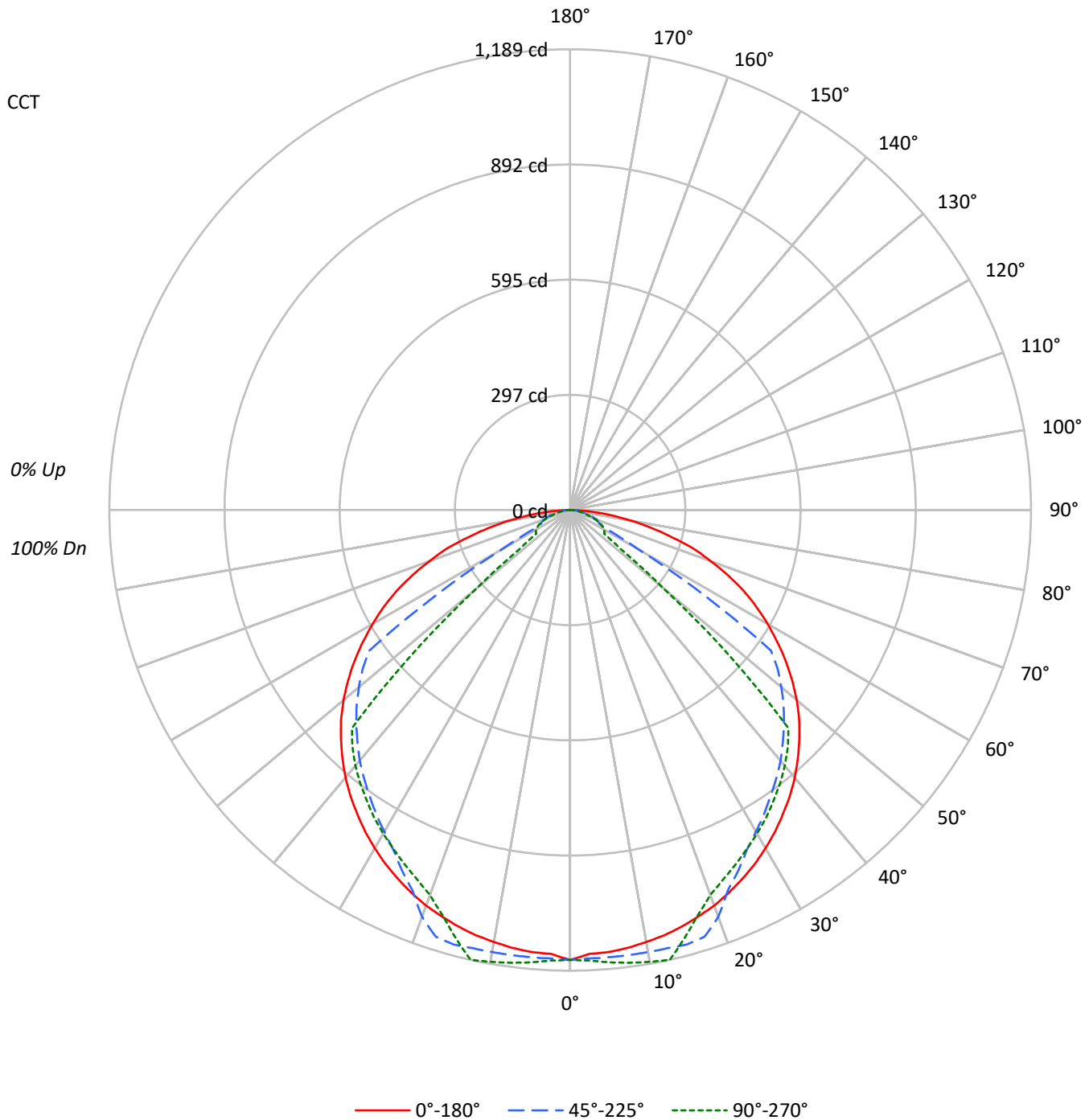
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2832.0 lumens
Efficiency: N/A
Efficacy: 134.2 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): 21.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.2
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°	15077	15077	15077
5°	14927	15101	15274
10°	14923	15275	15609
15°	14965	15609	15359
20°	15015	15438	14610
25°	15052	14710	14461
30°	15114	14375	14456
35°	15177	14290	14501
40°	15281	14310	14603
45°	15356	14329	14623
50°	15414	14365	6321
55°	15374	14319	2411
60°	15286	5464	2628
65°	15178	2538	2701
70°	14662	2730	2529
75°	13697	2604	2202
80°	12047	2288	1892
85°	9520	1982	1594

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 15414 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	3.9
10°-20°	322.0	11.4
20°-30°	480.4	17.0
30°-40°	582.3	20.6
40°-50°	596.3	21.1
50°-60°	396.5	14.0
60°-70°	226.0	8.0
70°-80°	95.0	3.4
80°-90°	22.6	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°	913.3	32.2
0°-40°	1495.6	52.8
0°-60°	2488.4	87.9
0°-90°	2832.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2832.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1161	1161	1161	1161	1161	
5°	1145	1168	1158	1161	1172	109
15°	1113	1144	1161	1157	1142	314
25°	1051	1101	1027	1004	1009	485
35°	957	975	902	906	915	600
45°	836	786	780	790	796	645
55°	679	622	632	138	106	606
65°	494	442	83	88	88	486
75°	273	57	52	45	44	290
85°	64	16	13	11	11	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1161.1	1161.1	1161.1	1161.1	1161.1
2.5°	1146.5	1170.5	1158.5	1159.8	1163.8
5°	1145.2	1167.8	1158.5	1161.1	1171.8
7.5°	1139.8	1163.8	1158.5	1166.5	1178.5
10°	1131.8	1159.8	1158.5	1171.8	1183.8
12.5°	1123.9	1151.8	1158.5	1178.5	1189.1
15°	1113.2	1143.8	1161.1	1157.1	1142.5
17.5°	1099.9	1135.8	1154.5	1097.2	1095.9
20°	1086.6	1125.2	1117.2	1062.6	1057.3
22.5°	1069.3	1114.5	1062.6	1025.3	1032.0
25°	1050.6	1101.2	1026.7	1004.0	1009.3
27.5°	1030.6	1087.9	988.0	980.0	986.7
30°	1008.0	1069.3	958.7	956.1	964.1
32.5°	984.0	1033.3	930.8	932.1	941.4
35°	957.4	974.7	901.5	905.5	914.8
37.5°	930.8	920.1	873.5	880.2	889.5
40°	901.5	877.5	844.2	850.9	861.5
42.5°	869.5	832.2	812.3	821.6	830.9
45°	836.2	785.6	780.3	789.6	796.3
47.5°	801.6	745.7	747.0	753.7	564.6
50°	763.0	705.7	711.1	492.7	312.9
52.5°	721.7	664.5	675.1	274.3	158.5
55°	679.1	621.8	632.5	138.5	106.5
57.5°	633.8	579.2	412.8	99.9	105.2
60°	588.6	534.0	210.4	98.5	101.2
62.5°	542.0	488.7	99.9	94.5	95.9
65°	494.0	442.1	82.6	87.9	87.9
67.5°	440.8	392.8	78.6	78.6	77.2
70°	386.2	326.2	71.9	67.9	66.6
72.5°	335.6	125.2	62.6	55.9	54.6
75°	273.0	57.3	51.9	45.3	43.9
77.5°	217.0	47.9	41.3	36.0	34.6
80°	161.1	37.3	30.6	26.6	25.3
82.5°	111.9	25.3	21.3	17.3	17.3
85°	63.9	16.0	13.3	10.7	10.7
87.5°	25.3	8.0	6.7	4.0	4.0
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	22.35	23.87	22.72	24.19	24.50	10.12	11.64	10.48	11.95	12.27
	3H	24.37	25.73	24.75	26.06	26.42	12.43	13.79	12.81	14.12	14.48
	4H	24.83	26.11	25.23	26.46	26.83	13.15	14.42	13.55	14.77	15.15
	6H	25.24	26.41	25.65	26.78	27.17	13.63	14.80	14.04	15.17	15.56
	8H	25.39	26.51	25.82	26.90	27.30	13.77	14.88	14.19	15.27	15.67
	12H	25.49	26.56	25.92	26.94	27.37	13.85	14.92	14.28	15.30	15.73
4H	2H	22.19	23.47	22.59	23.81	24.19	10.92	12.19	11.32	12.54	12.92
	3H	24.40	25.44	24.81	25.84	26.25	13.43	14.47	13.84	14.88	15.28
	4H	24.84	25.78	25.28	26.20	26.64	14.25	15.19	14.68	15.60	16.04
	6H	25.31	26.12	25.77	26.57	27.03	14.84	15.65	15.30	16.10	16.56
	8H	25.50	26.26	25.97	26.71	27.18	15.01	15.77	15.47	16.21	16.68
	12H	25.65	26.33	26.14	26.81	27.28	15.13	15.81	15.61	16.29	16.76
8H	4H	24.76	25.52	25.23	25.97	26.44	15.09	15.85	15.55	16.29	16.76
	6H	25.22	25.85	25.72	26.34	26.82	15.71	16.34	16.21	16.83	17.31
	8H	25.42	25.99	25.94	26.50	26.99	15.91	16.47	16.42	16.98	17.47
	12H	25.61	26.11	26.12	26.60	27.17	16.07	16.57	16.58	17.06	17.63
12H	4H	24.73	25.41	25.22	25.89	26.36	15.16	15.84	15.64	16.32	16.79
	6H	25.18	25.74	25.69	26.25	26.74	15.80	16.37	16.32	16.88	17.37
	8H	25.40	25.90	25.91	26.39	26.96	16.05	16.56	16.56	17.05	17.61