

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: P893428

Luminaire Tested: 4MB-3SL-LVRF-UNV-L850

Issue Date: 11/11/2024

**Test Information**

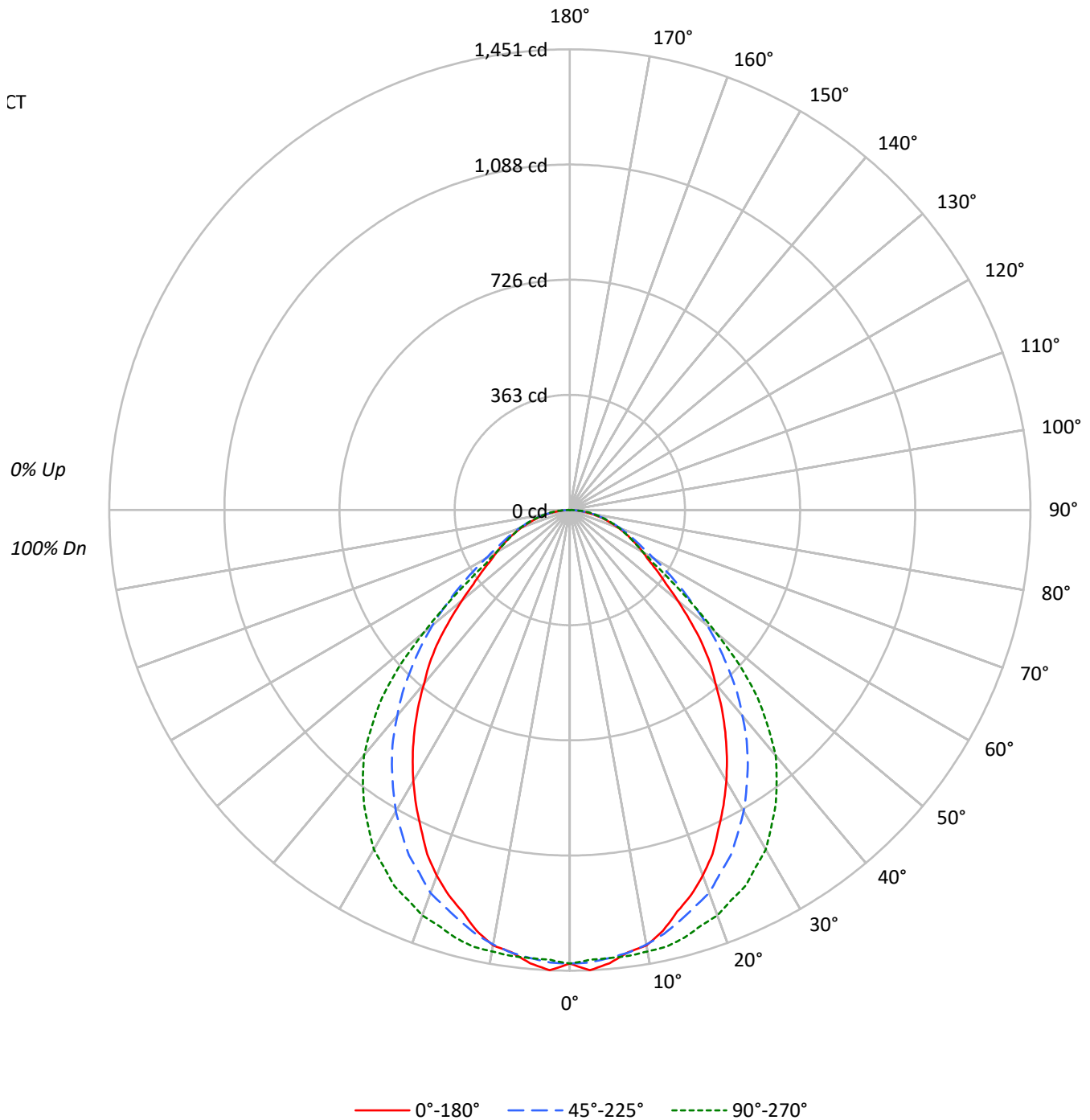
Test Method: LM-79-2019  
Report Number: P893428  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-LVRF-UNV-L850  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 5000K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2969.0 lumens  
Efficiency: N/A  
Efficacy: 140.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.27 / 1.23  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	71	67	65	65	
4	87	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57	57	
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50	50	
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	56	51	47	45	45	
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40	40	
8	65	52	44	39	63	52	44	39	50	44	39	49	43	38	48	42	38	36	36	
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33	33	
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30	30	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10164	10164	10164
5°	10235	10118	10118
10°	10058	10042	10198
15°	9641	9866	10271
20°	9275	9720	10288
25°	8702	9418	10265
30°	8099	9002	10144
35°	7414	8491	9821
40°	6637	7852	9370
45°	5890	7109	8424
50°	4901	6257	6644
55°	4174	5271	4829
60°	3784	4356	3816
65°	3564	3815	3552
70°	3353	3539	3462
75°	3126	3370	3307
80°	2860	3106	3196
85°	2490	2727	3576

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8424 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.2	4.6
10°-20°	380.6	12.8
20°-30°	552.7	18.6
30°-40°	615.4	20.7
40°-50°	543.7	18.3
50°-60°	356.8	12.0
60°-70°	218.5	7.4
70°-80°	127.1	4.3
80°-90°	38.9	1.3
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°	1068.5	36.0
0°-40°	1684.0	56.7
0°-60°	2584.4	87.0
0°-90°	2969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2969.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1433	1434	1417	1431	1417	135
15°	1309	1324	1339	1392	1394	369
25°	1108	1135	1200	1276	1308	510
35°	854	900	978	1081	1131	532
45°	585	621	706	802	837	448
55°	336	360	425	421	389	305
65°	212	215	227	220	211	211
75°	114	115	123	125	120	121
85°	30	32	33	38	44	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1428.5	1428.5	1428.5	1428.5	1428.5
2.5°	1450.8	1433.0	1426.3	1433.0	1418.1
5°	1433.0	1433.7	1416.7	1430.8	1416.7
7.5°	1404.8	1414.4	1406.3	1427.8	1416.7
10°	1392.1	1392.9	1389.9	1412.2	1411.5
12.5°	1357.2	1359.5	1367.6	1401.1	1408.5
15°	1308.9	1323.8	1339.4	1392.1	1394.4
17.5°	1271.1	1288.9	1309.7	1366.1	1372.8
20°	1225.0	1232.4	1283.7	1333.5	1358.7
22.5°	1173.7	1187.9	1237.6	1304.5	1329.7
25°	1108.4	1135.1	1199.7	1276.3	1307.5
27.5°	1048.2	1079.4	1146.3	1231.7	1268.1
30°	985.8	1021.5	1095.7	1179.7	1234.7
32.5°	921.2	965.7	1036.3	1132.9	1181.2
35°	853.6	899.6	977.6	1080.9	1130.7
37.5°	786.0	830.5	915.2	1025.9	1070.5
40°	714.6	758.5	845.4	957.6	1008.8
42.5°	653.0	690.9	780.0	875.8	923.4
45°	585.4	621.0	706.5	801.6	837.2
47.5°	511.1	552.7	635.9	713.9	728.0
50°	442.8	485.8	565.3	610.6	600.2
52.5°	382.6	419.0	491.8	511.1	486.6
55°	336.5	360.3	424.9	421.2	389.3
57.5°	294.2	309.0	364.0	343.2	312.7
60°	265.9	272.6	306.1	286.7	268.2
62.5°	239.2	242.2	260.0	249.6	235.5
65°	211.7	215.4	226.6	219.9	211.0
67.5°	186.5	187.9	198.3	196.9	185.7
70°	161.2	163.4	170.1	173.1	166.4
72.5°	136.7	138.9	145.6	148.6	142.6
75°	113.7	115.1	122.6	124.8	120.3
77.5°	91.4	94.3	98.8	102.5	97.3
80°	69.8	71.3	75.8	80.2	78.0
82.5°	49.0	51.3	54.2	60.2	61.7
85°	30.5	31.9	33.4	37.9	43.8
87.5°	11.9	12.6	14.9	16.3	21.5
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	15.59	17.07	15.95	17.38	17.69	16.24	17.72	16.60	18.03	18.35
	3H	17.19	18.51	17.56	18.84	19.20	17.67	19.00	18.05	19.33	19.69
	4H	17.80	19.05	18.20	19.39	19.77	18.28	19.52	18.68	19.87	20.25
	6H	18.27	19.42	18.69	19.79	20.18	18.77	19.91	19.18	20.28	20.67
	8H	18.43	19.52	18.85	19.91	20.31	18.96	20.05	19.39	20.44	20.85
	12H	18.53	19.57	18.96	19.95	20.38	19.13	20.17	19.56	20.56	20.99
4H	2H	16.21	17.45	16.61	17.80	18.18	16.73	17.97	17.13	18.32	18.70
	3H	18.03	19.06	18.44	19.46	19.86	18.43	19.46	18.84	19.86	20.26
	4H	18.77	19.69	19.20	20.11	20.55	19.18	20.11	19.62	20.52	20.96
	6H	19.36	20.17	19.82	20.61	21.07	19.82	20.62	20.28	21.07	21.53
	8H	19.56	20.31	20.03	20.76	21.23	20.07	20.83	20.54	21.27	21.74
	12H	19.70	20.37	20.19	20.85	21.33	20.30	20.97	20.78	21.45	21.92
8H	4H	19.08	19.84	19.55	20.28	20.75	19.45	20.20	19.92	20.65	21.12
	6H	19.81	20.43	20.31	20.92	21.40	20.23	20.85	20.72	21.34	21.82
	8H	20.08	20.64	20.60	21.15	21.64	20.57	21.13	21.09	21.64	22.13
	12H	20.30	20.80	20.81	21.29	21.85	20.89	21.39	21.40	21.88	22.45
12H	4H	19.12	19.79	19.60	20.27	20.74	19.47	20.14	19.96	20.62	21.09
	6H	19.87	20.43	20.39	20.94	21.43	20.27	20.83	20.79	21.34	21.83
	8H	20.21	20.70	20.72	21.20	21.76	20.68	21.18	21.19	21.67	22.23