

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: P893314

Luminaire Tested: 4MB-2SL-LVRF-UNV-L835

Issue Date: 11/11/2024

**Test Information**

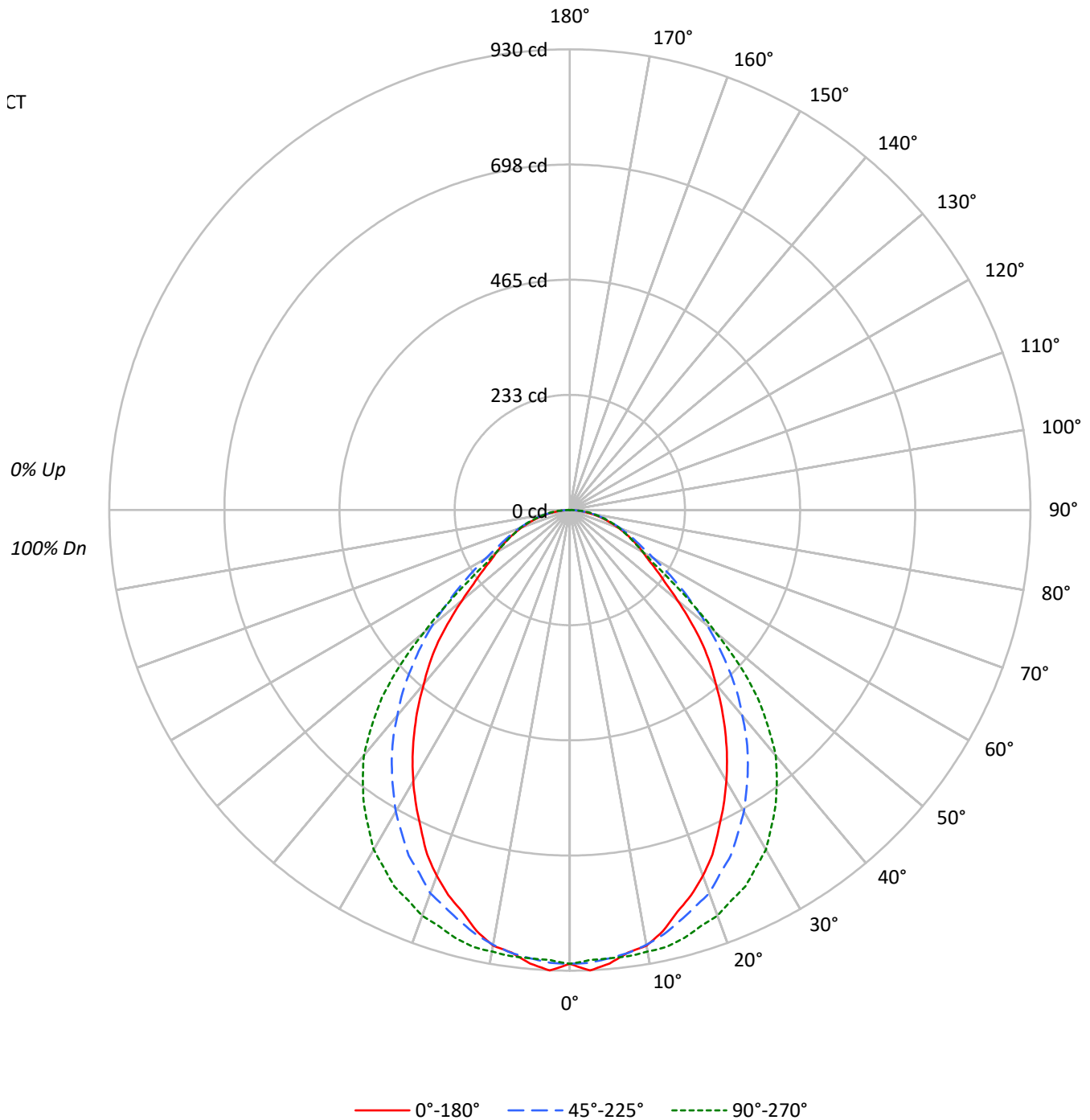
Test Method: LM-79-2019  
Report Number: P893314  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-LVRF-UNV-L835  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 3500K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1904.0 lumens  
Efficiency: N/A  
Efficacy: 138.0 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): 13.8  
Input Voltage (V): 120  
Input Current (Ain): 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		0
RCR																			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102		100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89		87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77		75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	71	67		65
4	87	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59		57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52		50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	56	51	47		45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42		40
8	65	52	44	39	63	52	44	39	50	44	39	49	43	38	48	42	38		36
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35		33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32		30

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

	0°	45°	90°
0°	6518	6518	6518
5°	6564	6489	6489
10°	6450	6439	6540
15°	6183	6327	6587
20°	5948	6233	6597
25°	5580	6040	6583
30°	5194	5773	6505
35°	4755	5445	6298
40°	4257	5035	6009
45°	3777	4559	5402
50°	3142	4013	4260
55°	2677	3380	3096
60°	2428	2793	2448
65°	2286	2446	2278
70°	2151	2270	2220
75°	2004	2161	2122
80°	1836	1991	2049
85°	1592	1747	2294

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5402 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.7	4.6
10°-20°	244.1	12.8
20°-30°	354.4	18.6
30°-40°	394.7	20.7
40°-50°	348.7	18.3
50°-60°	228.8	12.0
60°-70°	140.1	7.4
70°-80°	81.5	4.3
80°-90°	25.0	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°	685.2	36.0
0°-40°	1079.9	56.7
0°-60°	1657.4	87.0
0°-90°	1904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1904.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	919	920	908	918	908	87
15°	839	849	859	893	894	237
25°	711	728	769	818	838	327
35°	547	577	627	693	725	341
45°	375	398	453	514	537	287
55°	216	231	272	270	250	196
65°	136	138	145	141	135	135
75°	73	74	79	80	77	77
85°	20	20	21	24	28	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	916.1	916.1	916.1	916.1	916.1
2.5°	930.4	919.0	914.7	919.0	909.4
5°	919.0	919.5	908.5	917.5	908.5
7.5°	900.9	907.1	901.8	915.6	908.5
10°	892.8	893.3	891.3	905.6	905.2
12.5°	870.4	871.8	877.1	898.5	903.3
15°	839.4	848.9	858.9	892.8	894.2
17.5°	815.1	826.6	839.9	876.1	880.4
20°	785.6	790.3	823.2	855.1	871.3
22.5°	752.7	761.8	793.7	836.6	852.8
25°	710.8	727.9	769.4	818.5	838.5
27.5°	672.2	692.2	735.1	789.9	813.2
30°	632.2	655.1	702.7	756.5	791.8
32.5°	590.7	619.3	664.6	726.5	757.5
35°	547.4	576.9	626.9	693.2	725.1
37.5°	504.0	532.6	586.9	657.9	686.5
40°	458.3	486.4	542.1	614.1	647.0
42.5°	418.8	443.1	500.2	561.7	592.2
45°	375.4	398.3	453.1	514.0	536.9
47.5°	327.8	354.4	407.8	457.8	466.9
50°	283.9	311.6	362.5	391.6	384.9
52.5°	245.3	268.7	315.4	327.8	312.0
55°	215.8	231.1	272.5	270.1	249.6
57.5°	188.7	198.2	233.4	220.1	200.6
60°	170.6	174.8	196.3	183.9	172.0
62.5°	153.4	155.3	166.7	160.1	151.0
65°	135.8	138.2	145.3	141.0	135.3
67.5°	119.6	120.5	127.2	126.2	119.1
70°	103.4	104.8	109.1	111.0	106.7
72.5°	87.7	89.1	93.4	95.3	91.5
75°	72.9	73.8	78.6	80.0	77.2
77.5°	58.6	60.5	63.4	65.7	62.4
80°	44.8	45.7	48.6	51.5	50.0
82.5°	31.4	32.9	34.8	38.6	39.5
85°	19.5	20.5	21.4	24.3	28.1
87.5°	7.6	8.1	9.5	10.5	13.8
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	14.04	15.52	14.41	15.84	16.15	14.69	16.18	15.06	16.49	16.80
	3H	15.64	16.97	16.02	17.30	17.66	16.13	17.46	16.51	17.78	18.15
	4H	16.26	17.50	16.66	17.85	18.23	16.74	17.98	17.14	18.33	18.71
	6H	16.73	17.88	17.14	18.25	18.64	17.22	18.37	17.63	18.74	19.13
	8H	16.88	17.97	17.31	18.36	18.77	17.42	18.51	17.85	18.90	19.30
	12H	16.98	18.03	17.41	18.41	18.84	17.59	18.63	18.02	19.01	19.44
4H	2H	14.67	15.91	15.07	16.26	16.64	15.19	16.43	15.59	16.78	17.16
	3H	16.49	17.51	16.90	17.91	18.32	16.89	17.91	17.30	18.31	18.72
	4H	17.22	18.15	17.66	18.57	19.00	17.64	18.56	18.07	18.98	19.42
	6H	17.82	18.63	18.28	19.07	19.53	18.27	19.08	18.73	19.52	19.98
	8H	18.02	18.77	18.48	19.22	19.68	18.53	19.28	18.99	19.73	20.19
	12H	18.16	18.83	18.64	19.31	19.78	18.75	19.42	19.24	19.90	20.38
8H	4H	17.54	18.29	18.01	18.74	19.21	17.91	18.66	18.37	19.11	19.57
	6H	18.27	18.89	18.76	19.38	19.86	18.68	19.31	19.18	19.80	20.28
	8H	18.54	19.10	19.05	19.61	20.10	19.03	19.59	19.54	20.10	20.59
	12H	18.76	19.25	19.27	19.75	20.31	19.35	19.84	19.86	20.34	20.90
12H	4H	17.58	18.25	18.06	18.73	19.20	17.93	18.60	18.41	19.08	19.55
	6H	18.33	18.89	18.85	19.40	19.89	18.73	19.29	19.24	19.80	20.29
	8H	18.66	19.16	19.17	19.65	20.22	19.13	19.63	19.65	20.12	20.69