

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: P893906

Luminaire Tested: 4MB-8HL-AOL-UNV-L835

Issue Date: 11/11/2024

**Test Information**

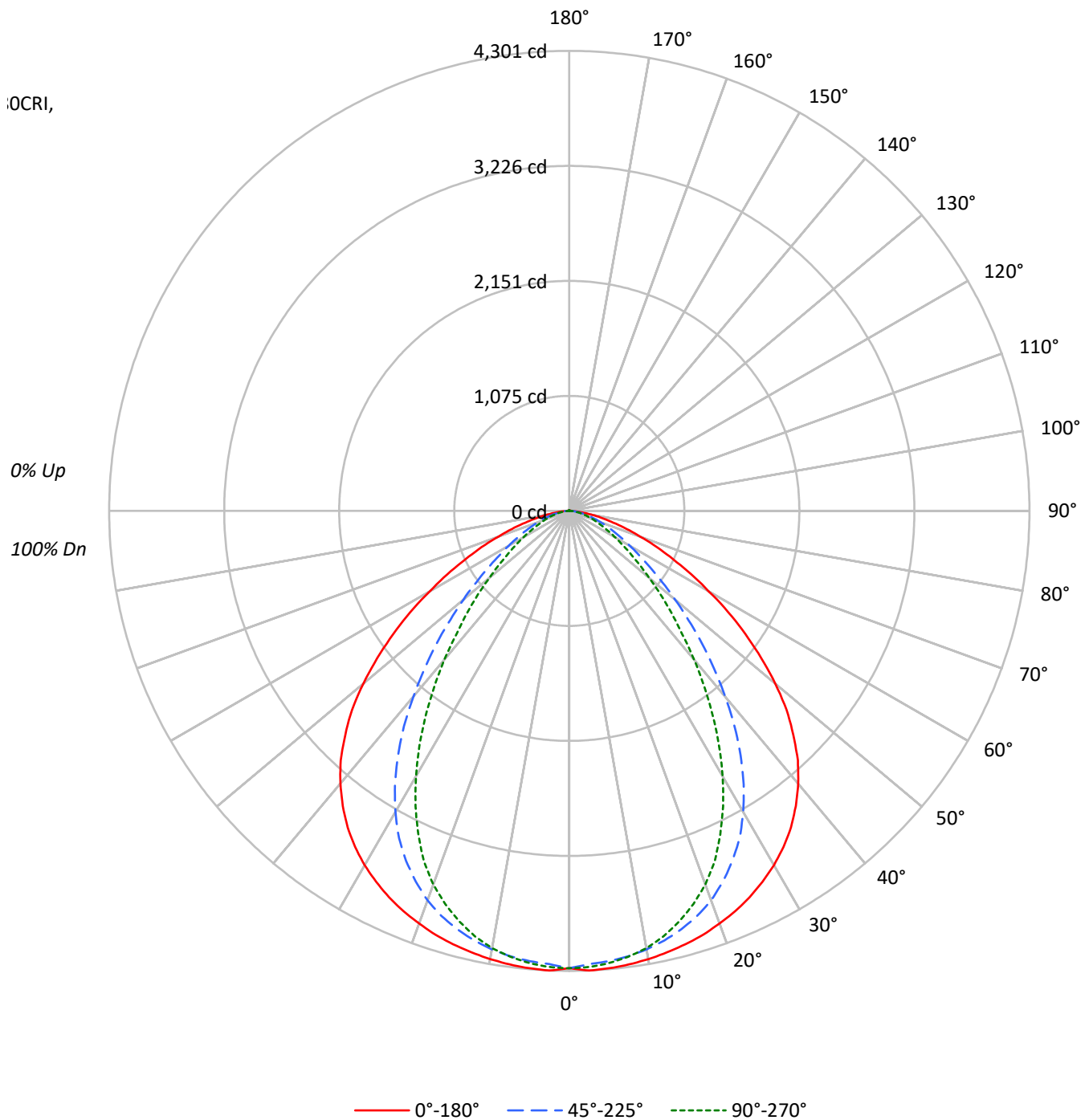
Test Method: LM-79-2019  
Report Number: P893906  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-AOL-UNV-L835  
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8  
3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8451.9 lumens  
Efficiency: N/A  
Efficacy: 146.0 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.16  
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 4.23  
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				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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	88
2	102	95	90	85	100	93	88	84	90	86	82	87	83	80	84	81	78	78	78	78	76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	68	68	68	67
4	87	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	61	61	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	54	54	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	45	56	49	44	55	48	44	53	48	44	44	44	44	42
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	40	40	40	38
9	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	36	36	36	34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	33	33	33	32

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

	0°	45°	90°
0°	43547	43547	43547
5°	43886	43201	43392
10°	44007	43052	42938
15°	44225	42687	41883
20°	44485	41995	40278
25°	44800	40551	37502
30°	44989	38220	33715
35°	44918	34685	29110
40°	44258	30136	24140
45°	42648	25285	19438
50°	39823	20510	15432
55°	35673	16376	12358
60°	30683	13364	10101
65°	25761	11114	8355
70°	21025	9341	7167
75°	16680	7905	6103
80°	12979	6762	5273
85°	10002	6041	4557

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 42648 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	404.5	4.8
10°-20°	1148.2	13.6
20°-30°	1670.8	19.8
30°-40°	1796.2	21.3
40°-50°	1500.1	17.7
50°-60°	1007.6	11.9
60°-70°	572.4	6.8
70°-80°	260.8	3.1
80°-90°	66.6	0.8
90°-100°	7.4	0.1
100°-110°	5.4	0.1
110°-120°	3.2	0.0
120°-130°	2.1	0.0
130°-140°	1.9	0.0
140°-150°	1.8	0.0
150°-160°	1.6	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	3223.4	38.1
0°-40°	5019.6	59.4
0°-60°	7527.2	89.1
0°-90°	8426.9	99.7
90°-120°	15.9	0.2
90°-150°	21.8	0.3
90°-180°	25.0	0.3
0°-180°	8451.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4276	4276	4276	4276	4276	
5°	4293	4281	4226	4260	4244	408
15°	4194	4161	4049	4016	3972	1185
25°	3987	3872	3609	3421	3337	1838
35°	3613	3323	2790	2456	2341	2254
45°	2961	2442	1756	1436	1350	2276
55°	2009	1444	922	739	696	1796
65°	1069	735	461	370	347	1074
75°	424	306	201	164	155	466
85°	86	70	52	42	39	97
90°	11	9	7	6	5	10
95°	14	9	6	3	3	11
105°	10	8	4	2	2	11
115°	5	4	2	2	2	5
125°	3	2	2	2	2	3
135°	2	2	2	2	2	2
145°	2	2	3	3	2	2
155°	2	3	3	3	3	1
165°	3	3	4	5	5	1
175°	3	4	5	5	5	0
180°	5	5	5	5	5	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4275.9	4275.9	4275.9	4275.9	4275.9
2.5°	4301.3	4289.4	4241.1	4278.4	4268.2
5°	4292.8	4280.9	4225.8	4259.7	4244.5
7.5°	4276.7	4264.8	4200.4	4225.0	4204.6
10°	4255.5	4238.6	4163.1	4169.9	4152.1
12.5°	4227.5	4202.1	4113.1	4101.2	4073.2
15°	4194.5	4160.6	4048.7	4016.5	3972.4
17.5°	4156.3	4107.2	3970.7	3902.9	3854.5
20°	4104.6	4041.9	3874.9	3767.2	3716.4
22.5°	4051.2	3965.6	3751.1	3608.7	3547.7
25°	3986.8	3871.5	3608.7	3421.4	3337.4
27.5°	3909.6	3765.5	3448.5	3212.8	3112.8
30°	3825.7	3640.9	3250.1	2978.9	2867.0
32.5°	3724.8	3494.3	3033.1	2722.8	2606.7
35°	3612.9	3323.0	2789.8	2455.8	2341.4
37.5°	3477.3	3124.7	2537.2	2182.9	2072.7
40°	3329.0	2920.4	2266.8	1911.6	1815.8
42.5°	3162.0	2684.7	2004.0	1662.4	1558.9
45°	2961.1	2442.3	1755.6	1436.0	1349.6
47.5°	2755.9	2174.4	1508.1	1218.2	1156.3
50°	2513.5	1922.6	1294.5	1037.6	974.0
52.5°	2261.7	1675.1	1095.2	880.8	824.0
55°	2009.1	1444.5	922.3	739.2	696.0
57.5°	1763.2	1232.6	775.7	624.8	587.5
60°	1506.4	1046.1	656.1	526.4	495.9
62.5°	1286.0	884.2	551.0	443.4	417.9
65°	1069.0	735.0	461.2	369.6	346.7
67.5°	886.7	607.0	382.3	306.9	287.4
70°	706.1	494.2	313.7	253.5	240.7
72.5°	562.9	394.2	254.3	206.0	193.3
75°	423.9	306.0	200.9	163.6	155.1
77.5°	318.7	232.3	155.1	127.2	117.8
80°	221.3	166.2	115.3	94.1	89.9
82.5°	141.6	114.4	79.7	67.0	61.9
85°	85.6	69.5	51.7	41.5	39.0
87.5°	40.7	33.9	26.3	20.3	18.6
90°	11.0	9.3	6.8	5.9	5.1
92.5°	12.7	9.3	5.9	4.2	3.4
95°	13.6	9.3	5.9	3.4	3.4
97.5°	13.6	10.2	5.1	3.4	2.5
100°	12.7	9.3	5.1	3.4	2.5
102.5°	11.0	8.5	4.2	2.5	2.5
105°	10.2	7.6	4.2	2.5	1.7
107.5°	8.5	6.8	3.4	2.5	1.7
110°	7.6	5.9	3.4	2.5	1.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	5.9	5.1	3.4	2.5	1.7
115°	5.1	4.2	2.5	1.7	1.7
117.5°	4.2	3.4	2.5	1.7	1.7
120°	4.2	3.4	2.5	1.7	1.7
122.5°	3.4	3.4	2.5	1.7	1.7
125°	3.4	2.5	2.5	1.7	1.7
127.5°	2.5	2.5	2.5	1.7	1.7
130°	2.5	2.5	2.5	2.5	1.7
132.5°	2.5	2.5	2.5	2.5	1.7
135°	2.5	2.5	2.5	2.5	2.5
137.5°	2.5	2.5	2.5	2.5	2.5
140°	2.5	2.5	2.5	2.5	2.5
142.5°	2.5	2.5	3.4	2.5	2.5
145°	2.5	2.5	3.4	3.4	2.5
147.5°	2.5	2.5	3.4	3.4	3.4
150°	2.5	2.5	3.4	3.4	3.4
152.5°	2.5	3.4	3.4	3.4	3.4
155°	2.5	3.4	3.4	3.4	3.4
157.5°	3.4	3.4	3.4	4.2	4.2
160°	3.4	3.4	4.2	4.2	4.2
162.5°	3.4	3.4	4.2	4.2	4.2
165°	3.4	3.4	4.2	5.1	5.1
167.5°	3.4	4.2	4.2	5.1	5.1
170°	3.4	4.2	4.2	5.1	5.1
172.5°	3.4	4.2	5.1	5.1	5.1
175°	3.4	4.2	5.1	5.1	5.1
177.5°	4.2	4.2	5.1	5.1	5.1
180°	5.1	5.1	5.1	5.1	5.1



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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	23.41	24.85	23.78	25.17	25.49	18.09	19.53	18.46	19.85	20.17
	3H	24.73	26.01	25.11	26.34	26.71	19.10	20.38	19.49	20.72	21.09
	4H	25.15	26.34	25.55	26.70	27.09	19.44	20.64	19.85	20.99	21.38
	6H	25.41	26.51	25.83	26.88	27.28	19.67	20.77	20.09	21.15	21.55
	8H	25.47	26.52	25.90	26.91	27.32	19.74	20.79	20.17	21.18	21.59
	12H	25.50	26.50	25.94	26.89	27.33	19.78	20.78	20.22	21.17	21.61
4H	2H	23.41	24.60	23.81	24.96	25.35	18.74	19.93	19.14	20.29	20.68
	3H	24.88	25.86	25.30	26.27	26.68	19.93	20.91	20.35	21.32	21.73
	4H	25.39	26.27	25.83	26.69	27.14	20.35	21.23	20.79	21.65	22.10
	6H	25.76	26.52	26.22	26.97	27.44	20.66	21.43	21.13	21.88	22.35
	8H	25.86	26.57	26.33	27.02	27.50	20.76	21.47	21.23	21.92	22.40
	12H	25.92	26.56	26.41	27.05	27.52	20.82	21.46	21.31	21.94	22.42
8H	4H	25.37	26.08	25.84	26.53	27.01	20.69	21.40	21.16	21.85	22.33
	6H	25.79	26.37	26.29	26.87	27.36	21.08	21.67	21.59	22.17	22.66
	8H	25.93	26.46	26.45	26.97	27.47	21.23	21.75	21.75	22.27	22.77
	12H	26.05	26.51	26.56	27.01	27.59	21.34	21.81	21.86	22.31	22.88
12H	4H	25.34	25.97	25.83	26.46	26.94	20.74	21.37	21.22	21.86	22.34
	6H	25.75	26.28	26.28	26.80	27.30	21.15	21.68	21.67	22.20	22.69
	8H	25.93	26.39	26.44	26.89	27.47	21.34	21.81	21.86	22.31	22.88