

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: P894138

Luminaire Tested: 4MB-SC3-ASMF-UNV-CC83-LOW-3500K

Issue Date: 11/11/2024

**Test Information**

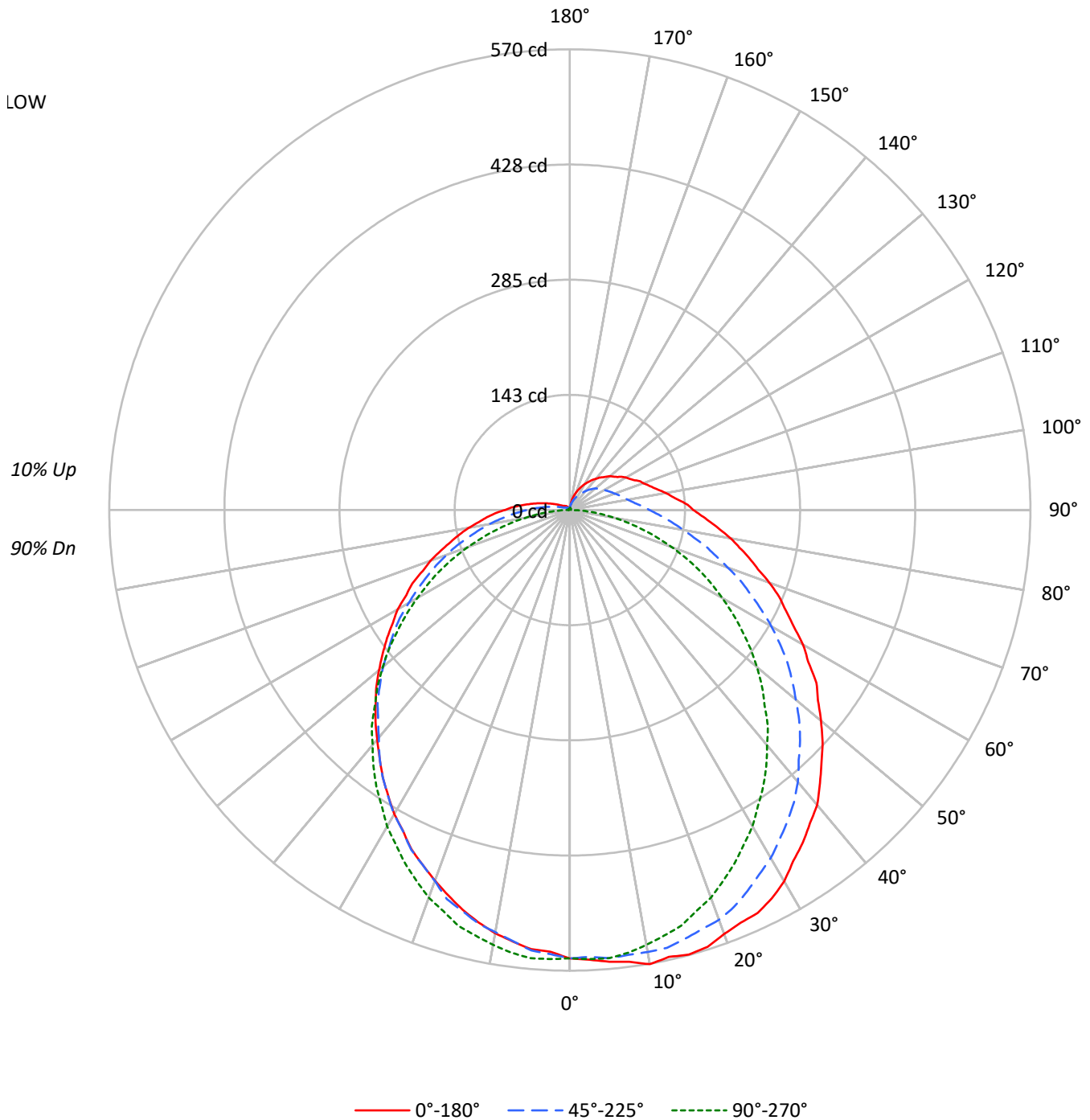
Test Method: LM-79-2019  
Report Number: P894138  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-185-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASMF-UNV-CC83-LOW-3500K  
Description: Selectable 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 3500K CCT, 1 lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1907.0 lumens  
Efficiency: N/A  
Efficacy: 114.2 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9915  
Total Harmonic Distortion (THDi): 6.67573310469889  
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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	93	93	93	90
1	105	99	95	90	101	96	92	88	90	87	83	85	82	79	79	77	75	75	75	75	72
2	95	86	79	72	91	83	76	71	78	72	68	73	69	65	69	65	62	62	62	62	59
3	86	75	66	60	83	73	65	58	68	62	56	64	59	54	60	56	52	52	52	52	49
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	44	44	44	44	42
5	72	59	50	43	69	57	49	42	54	47	41	51	45	40	48	43	38	38	38	38	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	34	34	34	31
7	62	48	39	33	59	47	38	32	44	37	32	42	36	31	40	34	30	30	30	30	28
8	57	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22
10	50	37	29	24	49	36	29	23	34	28	23	33	27	22	31	26	22	22	22	22	20

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

	0°	45°	90°	135°	180°
0°	5649	5649	5649	5649	5649
5°	5719	5519	5465	5423	5561
10°	5867	5403	5217	5161	5467
15°	5953	5289	4986	4945	5353
20°	5982	5180	4722	4688	5227
25°	6091	5013	4444	4474	5132
30°	6127	4853	4181	4242	5016
35°	6113	4678	3903	4018	4909
40°	6168	4497	3619	3767	4803
45°	6150	4284	3338	3576	4744
50°	6196	4064	3069	3357	4705
55°	6333	3872	2760	3137	4688
60°	6440	3634	2443	2904	4752
65°	6662	3377	2122	2671	4859
70°	7206	3131	1740	2450	5024
75°	8097	2952	1331	2192	5371
80°	10065	2780	890	1964	6307
85°	15046	2743	447	1731	8847

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 49535 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.6	2.8
10°-20°	150.8	7.9
20°-30°	227.4	11.9
30°-40°	273.0	14.3
40°-50°	284.3	14.9
50°-60°	263.5	13.8
60°-70°	217.0	11.4
70°-80°	156.5	8.2
80°-90°	99.4	5.2
90°-100°	61.3	3.2
100°-110°	40.9	2.1
110°-120°	29.1	1.5
120°-130°	21.3	1.1
130°-140°	14.7	0.8
140°-150°	8.9	0.5
150°-160°	4.4	0.2
160°-170°	1.6	0.1
170°-180°	0.3	0.0
0°-30°	430.9	22.6
0°-40°	703.9	36.9
0°-60°	1251.7	65.6
0°-90°	1724.6	90.4
90°-120°	131.2	6.9
90°-150°	176.1	9.2
90°-180°	182.0	9.5
0°-180°	1907.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	555	555	555	555	555	
5°	561	557	557	547	546	54
15°	569	549	532	514	512	161
25°	550	520	482	464	463	253
35°	502	470	417	404	404	315
45°	440	403	341	336	340	341
55°	373	329	260	266	276	331
65°	295	247	177	195	215	294
75°	230	174	93	130	152	244
85°	175	119	24	75	103	149
90°	153	99	2	53	80	84
95°	136	84	1	36	62	108
105°	107	66	1	15	32	114
115°	88	54	2	7	16	88
125°	71	45	2	6	9	65
135°	57	36	2	4	7	45
145°	44	26	2	3	5	28
155°	30	17	2	2	3	14
165°	18	10	2	1	2	5
175°	2	4	2	1	0	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	554.7	554.7	554.7	554.7	554.7	554.7	554.7	554.7	554.7
2.5°	556.9	558.5	553.3	556.6	556.1	556.6	550.0	555.5	546.9
5°	561.0	561.9	556.6	558.5	556.6	551.9	546.9	545.0	545.5
7.5°	563.8	568.3	555.2	555.8	552.4	547.5	538.0	539.7	538.6
10°	570.5	565.5	555.2	552.7	546.3	541.1	530.3	531.1	531.6
12.5°	566.3	565.2	554.9	545.8	539.4	535.0	523.9	521.1	522.5
15°	569.4	564.6	549.4	542.2	532.5	524.7	513.6	511.7	512.0
17.5°	566.6	562.7	543.8	533.9	520.3	515.6	505.0	501.7	500.0
20°	558.3	556.3	539.7	522.5	510.3	501.1	488.4	486.4	487.8
22.5°	552.7	548.0	531.4	514.2	496.4	488.4	475.6	475.3	475.6
25°	550.0	543.8	520.0	502.0	482.3	475.1	464.0	459.8	463.4
27.5°	541.6	536.1	508.1	488.4	466.5	456.8	447.6	446.8	447.3
30°	530.5	519.7	497.3	473.1	452.1	442.1	434.6	429.0	434.3
32.5°	514.7	508.6	483.1	456.8	433.5	426.5	419.0	418.5	418.5
35°	502.5	498.1	469.8	442.3	417.4	408.0	403.5	401.6	403.5
37.5°	488.4	481.7	455.7	424.9	399.4	391.3	386.9	385.2	386.6
40°	476.2	464.0	439.0	406.8	379.7	372.5	367.7	369.4	370.8
42.5°	458.2	451.2	419.3	388.5	362.8	355.0	351.1	352.5	355.8
45°	440.4	434.0	403.0	369.4	340.8	336.7	336.4	335.6	339.7
47.5°	424.3	415.2	384.9	350.5	322.5	317.8	318.4	321.2	324.8
50°	405.7	394.9	365.0	330.3	302.3	299.2	301.5	303.4	308.1
52.5°	387.2	378.6	346.7	311.2	281.8	279.6	282.6	289.0	291.8
55°	372.7	357.2	328.6	288.7	259.9	260.1	266.2	269.8	275.9
57.5°	349.7	338.1	308.1	268.7	239.3	241.3	249.6	255.7	259.6
60°	333.4	318.7	288.1	247.4	217.7	220.8	230.2	239.3	246.0
62.5°	312.3	299.5	267.3	226.3	197.7	202.2	212.7	223.5	228.2
65°	295.1	280.7	246.8	205.2	176.9	182.2	195.2	207.4	215.2
67.5°	280.4	265.4	228.5	185.8	155.9	163.6	178.9	190.8	196.9
70°	262.9	245.4	207.7	164.2	134.0	143.1	162.5	176.4	183.3
72.5°	244.3	230.2	189.7	144.2	113.7	124.8	146.2	160.6	167.2
75°	229.9	214.1	174.4	124.2	93.2	106.5	129.5	145.9	152.5
77.5°	215.2	200.8	157.2	105.9	74.9	89.9	114.8	132.8	139.8
80°	202.2	185.5	142.8	91.0	55.7	73.5	100.9	118.7	126.7
82.5°	187.8	173.3	130.3	75.2	39.7	58.5	87.4	106.8	113.4
85°	175.0	160.0	118.7	62.7	24.4	45.2	74.9	94.8	102.9
87.5°	163.3	150.9	107.9	53.2	12.2	34.4	63.0	83.2	92.4
90°	152.8	138.7	98.7	44.7	2.2	25.0	53.2	73.2	80.1
92.5°	146.2	129.2	91.2	39.1	1.4	17.7	44.4	64.1	72.1
95°	136.2	121.2	83.5	34.9	1.4	11.9	35.8	54.9	61.8
97.5°	127.6	113.7	77.9	32.4	1.1	8.0	29.4	46.0	53.2
100°	120.9	107.9	72.9	30.2	1.4	5.8	23.3	39.1	45.5
102.5°	113.4	101.5	69.1	28.8	1.4	4.2	18.3	33.0	38.8
105°	106.8	96.2	65.5	27.5	1.4	3.6	14.7	27.2	32.4
107.5°	101.8	90.7	62.4	26.6	1.4	3.6	11.6	22.2	26.6
110°	96.8	86.3	59.3	25.8	1.4	3.3	9.2	18.3	22.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	93.5	82.1	56.6	25.0	1.7	3.3	7.5	15.3	18.3
115°	87.6	78.5	54.1	24.7	1.7	3.1	6.9	12.5	15.5
117.5°	83.5	75.2	51.6	23.9	1.7	3.1	6.7	10.3	12.5
120°	80.4	71.3	49.4	23.0	1.7	2.8	6.1	9.2	10.5
122.5°	76.5	67.7	47.4	22.5	1.7	2.8	5.8	8.6	9.4
125°	71.3	64.3	45.2	21.4	1.9	2.8	5.5	8.0	8.9
127.5°	67.9	61.3	43.5	20.0	1.9	2.5	5.3	7.5	8.3
130°	65.2	58.0	41.6	18.6	1.9	2.5	5.0	6.9	7.8
132.5°	61.0	54.6	38.8	17.5	1.9	2.2	4.4	6.4	7.2
135°	57.1	51.9	36.1	16.4	1.9	2.2	4.2	6.1	6.7
137.5°	54.6	49.1	33.6	15.3	1.9	1.9	3.9	5.5	6.1
140°	50.5	46.0	30.8	14.1	1.9	1.9	3.6	5.3	5.5
142.5°	47.4	43.0	28.3	13.0	1.9	1.9	3.3	4.7	5.3
145°	43.8	39.9	25.5	11.9	1.9	1.7	3.1	4.4	4.7
147.5°	40.5	36.3	23.3	11.1	1.9	1.7	2.8	3.9	4.2
150°	37.2	32.7	21.1	10.3	1.9	1.7	2.5	3.3	3.9
152.5°	33.6	28.3	18.9	9.4	1.9	1.7	2.2	3.1	3.3
155°	30.0	24.7	16.9	8.6	2.2	1.7	1.9	2.5	3.1
157.5°	26.9	21.4	15.0	7.8	2.2	1.4	1.9	2.2	2.5
160°	23.3	18.3	13.3	6.9	2.2	1.4	1.7	1.9	2.2
162.5°	20.5	15.3	11.6	6.4	2.2	1.4	1.7	1.7	1.9
165°	17.5	12.8	9.7	5.8	2.2	1.4	1.4	1.4	1.7
167.5°	14.1	10.0	8.0	5.3	2.2	1.4	1.4	1.1	1.4
170°	10.5	7.5	6.7	4.7	2.2	1.4	1.1	0.8	1.1
172.5°	4.7	5.8	5.3	4.2	2.5	1.4	1.1	0.8	0.6
175°	2.5	4.2	4.2	3.6	2.5	1.4	1.1	0.8	0.3
177.5°	1.9	2.5	3.1	3.1	2.5	1.7	1.1	0.6	0.3
180°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7



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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	16.38	17.86	16.89	18.36	18.90	15.35	16.83	15.86	17.33	17.87
	3H	18.47	19.81	18.99	20.32	20.91	17.22	18.57	17.74	19.08	19.66
	4H	19.41	20.69	19.95	21.21	21.81	17.97	19.24	18.51	19.77	20.37
	6H	20.33	21.52	20.88	22.06	22.67	18.60	19.79	19.15	20.33	20.94
	8H	20.76	21.90	21.32	22.46	23.08	18.86	20.00	19.42	20.56	21.18
	12H	21.18	22.27	21.75	22.83	23.47	19.09	20.18	19.66	20.74	21.38
4H	2H	16.87	18.15	17.41	18.68	19.27	15.91	17.19	16.45	17.72	18.31
	3H	19.19	20.27	19.74	20.84	21.46	17.97	19.06	18.53	19.63	20.25
	4H	20.30	21.29	20.87	21.87	22.52	18.83	19.82	19.40	20.40	21.05
	6H	21.40	22.28	22.00	22.89	23.55	19.58	20.46	20.17	21.06	21.73
	8H	21.93	22.76	22.53	23.36	24.04	19.90	20.72	20.49	21.33	22.00
	12H	22.46	23.21	23.08	23.84	24.52	20.19	20.94	20.81	21.57	22.25
8H	4H	20.56	21.38	21.15	21.99	22.66	19.16	19.99	19.76	20.59	21.27
	6H	21.84	22.54	22.47	23.18	23.86	20.05	20.75	20.68	21.39	22.07
	8H	22.51	23.14	23.15	23.79	24.48	20.45	21.08	21.09	21.73	22.43
	12H	23.21	23.77	23.85	24.42	25.17	20.84	21.40	21.48	22.04	22.80
12H	4H	20.57	21.32	21.19	21.95	22.63	19.23	19.98	19.85	20.61	21.29
	6H	21.89	22.53	22.53	23.18	23.87	20.16	20.79	20.80	21.44	22.14
	8H	22.64	23.20	23.28	23.84	24.60	20.62	21.19	21.26	21.83	22.59