

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: P893367

Luminaire Tested: 4MB-3SL-AOL-UNV-L940

Issue Date: 11/11/2024

**Test Information**

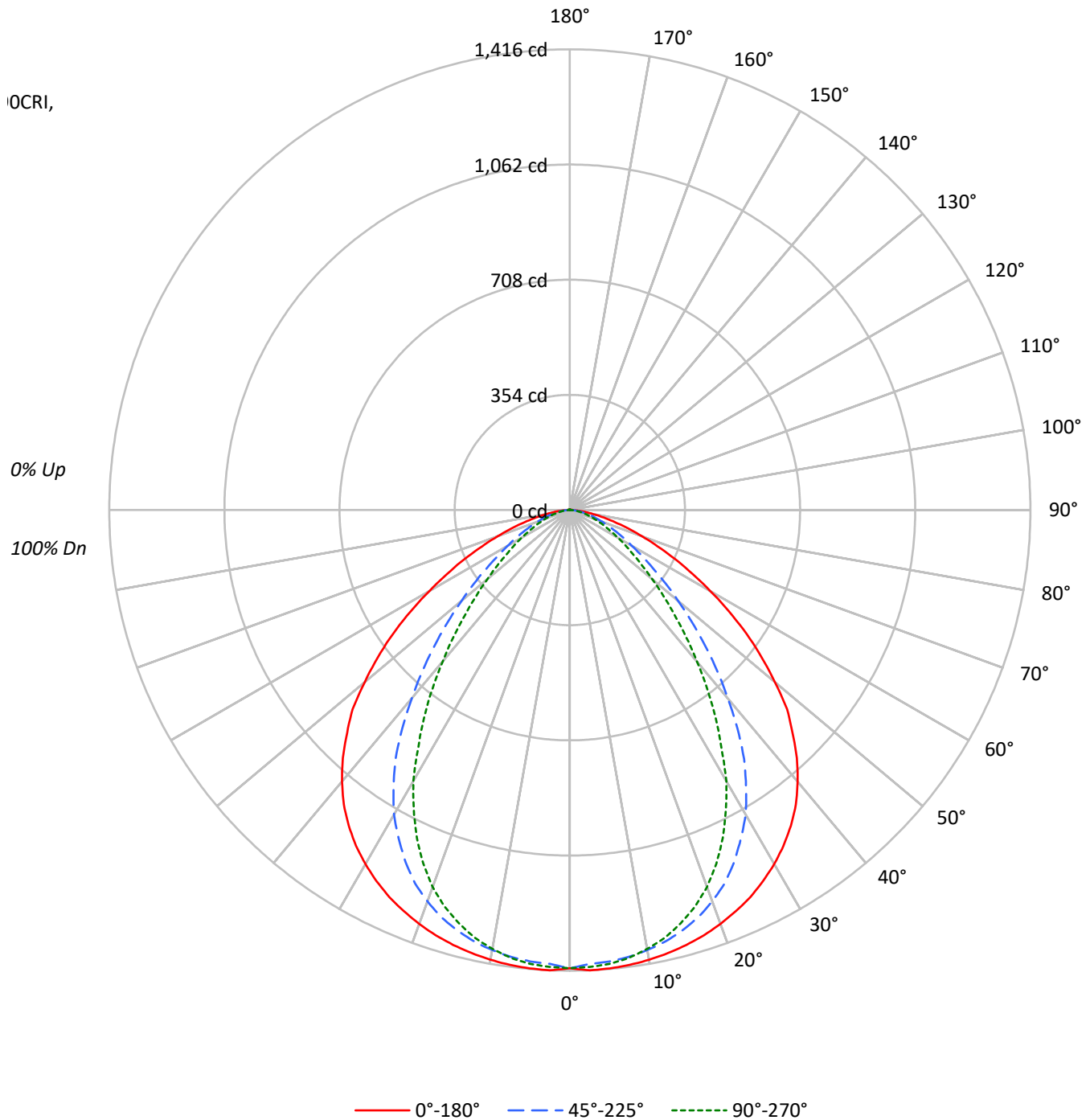
Test Method: LM-79-2019  
Report Number: P893367  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-AOL-UNV-L940  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9  
4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2812.9 lumens  
Efficiency: N/A  
Efficacy: 133.3 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16  
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.1  
Input Voltage (V): 120  
Input Current (Ain): 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				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	100				100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	87				87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76				76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	66				66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58
5	81	70	62	56	79	69	61	55	67	60	55	65	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	42				42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31				31

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

	0°	45°	90°
0°	14341	14341	14341
5°	14458	14239	14313
10°	14516	14203	14166
15°	14592	14102	13868
20°	14671	13873	13362
25°	14753	13423	12497
30°	14778	12717	11315
35°	14730	11616	9734
40°	14484	10053	8088
45°	13946	8447	6546
50°	13051	6881	5241
55°	11792	5529	4203
60°	10170	4501	3481
65°	8605	3747	2863
70°	7024	3186	2430
75°	5627	2688	2066
80°	4381	2299	1777
85°	3400	2033	1601

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13946 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.4	4.7
10°-20°	379.5	13.5
20°-30°	553.1	19.7
30°-40°	596.2	21.2
40°-50°	499.8	17.8
50°-60°	338.4	12.0
60°-70°	193.0	6.9
70°-80°	88.2	3.1
80°-90°	23.1	0.8
90°-100°	2.8	0.1
100°-110°	1.9	0.1
110°-120°	1.0	0.0
120°-130°	0.6	0.0
130°-140°	0.6	0.0
140°-150°	0.5	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1065.9	37.9
0°-40°	1662.1	59.1
0°-60°	2500.3	88.9
0°-90°	2804.6	99.7
90°-120°	5.8	0.2
90°-150°	7.5	0.3
90°-180°	8.0	0.3
0°-180°	2812.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1408	1408	1408	1408	1408	
5°	1414	1410	1393	1404	1400	135
15°	1384	1372	1338	1329	1315	391
25°	1313	1278	1194	1140	1112	605
35°	1185	1096	934	820	783	740
45°	968	808	586	484	454	745
55°	664	486	311	252	237	591
65°	357	248	156	126	119	356
75°	143	105	68	56	52	156
85°	29	25	17	14	14	34
90°	4	4	2	2	2	4
95°	6	4	2	1	1	5
105°	4	3	1	1	0	4
115°	2	2	1	0	0	2
125°	1	1	1	0	0	1
135°	0	1	1	1	0	1
145°	1	1	1	1	1	1
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	2	2	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1408.2	1408.2	1408.2	1408.2	1408.2
2.5°	1416.3	1412.6	1396.5	1409.8	1405.8
5°	1414.2	1409.8	1392.8	1404.1	1400.1
7.5°	1410.2	1404.6	1385.6	1394.1	1388.8
10°	1403.7	1396.9	1373.4	1378.3	1369.8
12.5°	1394.9	1386.4	1358.5	1357.3	1347.2
15°	1384.0	1371.8	1337.5	1328.6	1315.3
17.5°	1370.6	1355.3	1312.5	1294.7	1278.5
20°	1353.7	1333.9	1280.1	1251.9	1232.9
22.5°	1334.3	1307.6	1242.6	1197.3	1176.7
25°	1312.9	1278.1	1194.5	1139.6	1112.1
27.5°	1286.2	1242.6	1138.8	1067.7	1039.4
30°	1256.7	1201.4	1081.4	990.5	962.2
32.5°	1223.2	1154.1	1008.3	907.3	867.7
35°	1184.8	1095.5	934.3	820.0	782.9
37.5°	1141.6	1034.5	845.9	732.0	694.4
40°	1089.5	962.2	756.2	643.5	608.4
42.5°	1033.3	888.7	670.2	559.5	529.2
45°	968.3	807.9	586.5	483.5	454.5
47.5°	905.7	726.3	508.2	414.1	390.2
50°	823.7	639.5	434.3	350.6	330.8
52.5°	743.7	559.1	371.2	299.7	281.2
55°	664.1	486.0	311.4	252.5	236.7
57.5°	580.1	414.5	262.2	213.7	203.2
60°	499.3	352.7	221.0	179.4	170.9
62.5°	425.4	295.7	187.0	151.5	143.4
65°	357.1	248.4	155.5	126.0	118.8
67.5°	292.5	204.4	129.7	105.0	99.8
70°	235.9	165.6	107.0	86.4	81.6
72.5°	187.0	132.5	85.6	70.7	65.4
75°	143.0	105.0	68.3	55.7	52.5
77.5°	106.6	79.2	52.5	42.8	40.4
80°	74.7	57.4	39.2	32.3	30.3
82.5°	50.9	39.6	27.5	22.6	21.4
85°	29.1	24.6	17.4	14.5	13.7
87.5°	14.9	12.9	9.3	6.9	6.1
90°	4.0	4.0	2.4	2.0	1.6
92.5°	6.5	3.6	2.4	1.6	1.2
95°	6.1	3.6	2.0	1.2	1.2
97.5°	5.7	3.6	1.6	1.2	0.8
100°	5.3	3.2	1.6	0.8	0.8
102.5°	4.8	3.2	1.6	0.8	0.8
105°	4.0	2.8	1.2	0.8	0.4
107.5°	3.6	2.4	1.2	0.8	0.4
110°	2.8	2.0	1.2	0.8	0.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.4	2.0	0.8	0.8	0.4
115°	2.0	1.6	0.8	0.4	0.4
117.5°	1.6	1.2	0.8	0.4	0.4
120°	1.2	1.2	0.8	0.4	0.4
122.5°	1.2	0.8	0.8	0.4	0.4
125°	0.8	0.8	0.8	0.4	0.4
127.5°	0.8	0.8	0.8	0.4	0.4
130°	0.8	0.8	0.8	0.4	0.4
132.5°	0.8	0.8	0.8	0.8	0.4
135°	0.4	0.8	0.8	0.8	0.4
137.5°	0.8	0.8	0.8	0.8	0.8
140°	0.8	0.8	0.8	0.8	0.8
142.5°	0.8	0.8	0.8	0.8	0.8
145°	0.8	0.8	0.8	0.8	0.8
147.5°	0.8	0.8	0.8	0.8	0.8
150°	0.8	0.8	0.8	0.8	0.8
152.5°	0.8	0.8	0.8	0.8	0.8
155°	0.8	0.8	0.8	1.2	1.2
157.5°	0.8	0.8	1.2	1.2	1.2
160°	0.8	0.8	1.2	1.2	1.2
162.5°	0.8	0.8	1.2	1.2	1.2
165°	0.8	1.2	1.2	1.2	1.2
167.5°	0.8	1.2	1.2	1.2	1.6
170°	0.8	1.2	1.2	1.6	1.6
172.5°	0.8	1.2	1.2	1.6	1.6
175°	1.2	1.2	1.2	1.6	1.6
177.5°	1.2	1.2	1.2	1.6	1.6
180°	1.2	1.2	1.2	1.2	1.2



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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	19.62	21.06	19.99	21.38	21.70	14.47	15.90	14.84	16.22	16.55
	3H	20.93	22.21	21.31	22.55	22.92	15.48	16.76	15.86	17.09	17.46
	4H	21.35	22.55	21.76	22.91	23.30	15.81	17.01	16.22	17.37	17.75
	6H	21.62	22.73	22.04	23.10	23.50	16.04	17.14	16.46	17.52	17.92
	8H	21.69	22.74	22.13	23.14	23.55	16.10	17.15	16.54	17.55	17.96
	12H	21.73	22.74	22.17	23.12	23.56	16.15	17.15	16.58	17.54	17.98
4H	2H	19.62	20.82	20.03	21.18	21.56	15.09	16.29	15.49	16.64	17.03
	3H	21.09	22.07	21.50	22.48	22.89	16.28	17.27	16.70	17.68	18.09
	4H	21.61	22.50	22.05	22.92	23.37	16.70	17.59	17.14	18.01	18.46
	6H	21.99	22.75	22.45	23.20	23.67	17.01	17.78	17.47	18.23	18.70
	8H	22.10	22.82	22.57	23.27	23.74	17.10	17.82	17.57	18.27	18.75
	12H	22.18	22.81	22.66	23.30	23.78	17.17	17.81	17.66	18.30	18.78
8H	4H	21.59	22.31	22.06	22.76	23.24	17.03	17.75	17.51	18.20	18.68
	6H	22.02	22.61	22.53	23.11	23.60	17.43	18.02	17.93	18.52	19.00
	8H	22.18	22.71	22.70	23.23	23.72	17.57	18.10	18.09	18.61	19.11
	12H	22.31	22.78	22.83	23.28	23.85	17.69	18.16	18.21	18.66	19.23
12H	4H	21.56	22.20	22.05	22.69	23.17	17.08	17.72	17.57	18.20	18.68
	6H	21.99	22.52	22.51	23.04	23.54	17.49	18.02	18.02	18.54	19.04
	8H	22.18	22.65	22.70	23.15	23.72	17.68	18.15	18.20	18.65	19.23