

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: P893439

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

Issue Date: 11/11/2024

**Test Information**

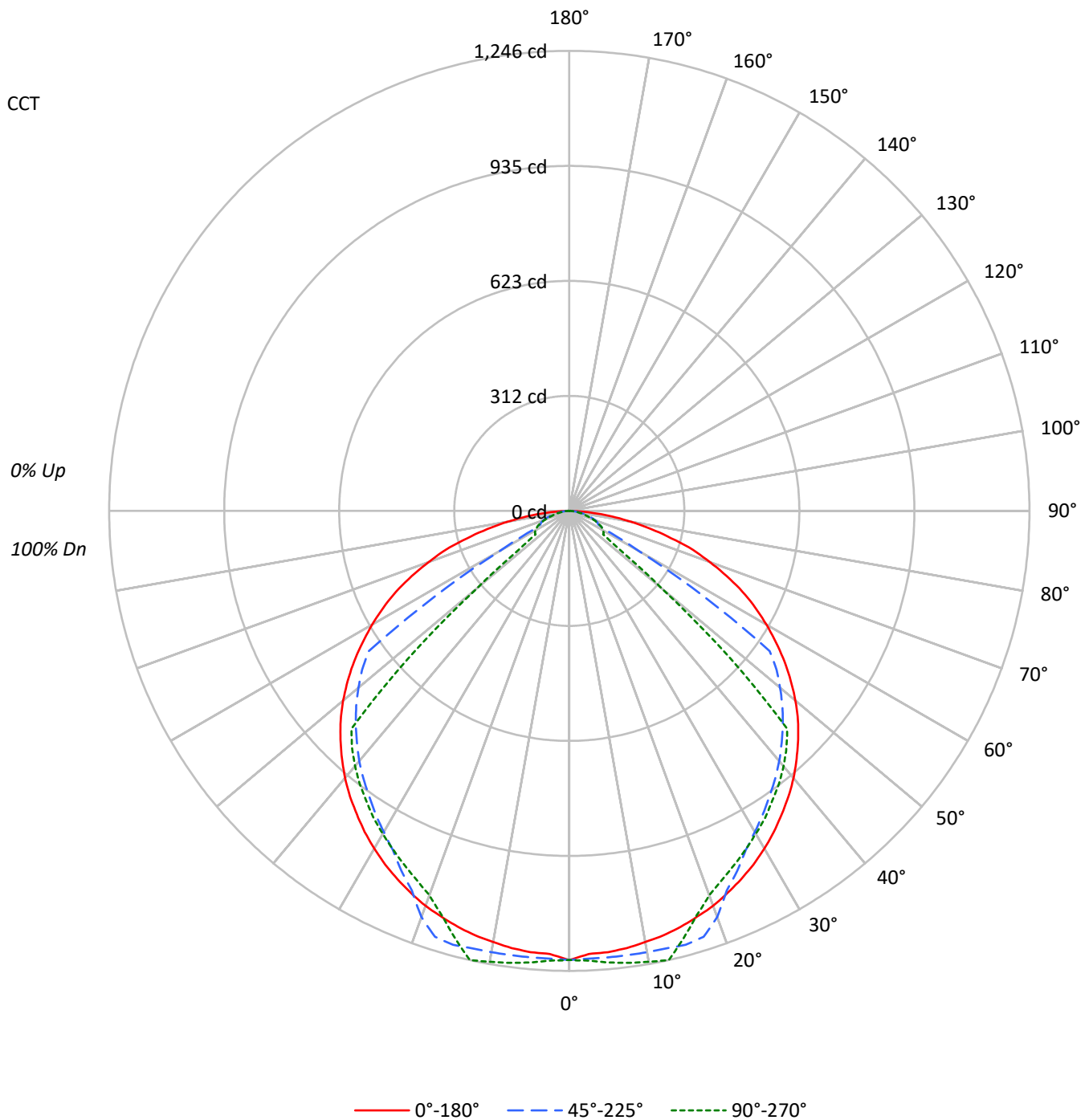
Test Method: LM-79-2019  
Report Number: P893439  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-RFLW-UNV-L940  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 4000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2967.0 lumens  
Efficiency: N/A  
Efficacy: 140.6 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38  
Luminous Opening: Rectangular (W 0.21' 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				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	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	89	89	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	66	66	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	61	55	51	51	51	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	40	40	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	36	36	36	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	33	33	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28

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

	0°	45°	90°
0°	15796	15796	15796
5°	15639	15820	16003
10°	15635	16003	16353
15°	15679	16354	16091
20°	15731	16174	15307
25°	15770	15411	15151
30°	15835	15060	15144
35°	15899	14972	15192
40°	16010	14993	15300
45°	16088	15012	15319
50°	16149	15050	6622
55°	16107	15003	2526
60°	16013	5724	2753
65°	15903	2658	2830
70°	15361	2859	2650
75°	14349	2729	2308
80°	12623	2400	1982
85°	9982	2086	1669

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 16149 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.2	3.9
10°-20°	337.3	11.4
20°-30°	503.3	17.0
30°-40°	610.1	20.6
40°-50°	624.7	21.1
50°-60°	415.4	14.0
60°-70°	236.8	8.0
70°-80°	99.5	3.4
80°-90°	23.7	0.8
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°	956.8	32.2
0°-40°	1566.9	52.8
0°-60°	2607.0	87.9
0°-90°	2967.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2967.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1200	1224	1214	1216	1228	114
15°	1166	1198	1216	1212	1197	329
25°	1101	1154	1076	1052	1058	508
35°	1003	1021	944	949	958	628
45°	876	823	818	827	834	676
55°	712	652	663	145	112	635
65°	518	463	86	92	92	509
75°	286	60	54	47	46	304
85°	67	17	14	11	11	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1216.5	1216.5	1216.5	1216.5	1216.5
2.5°	1201.1	1226.3	1213.7	1215.1	1219.3
5°	1199.8	1223.5	1213.7	1216.5	1227.7
7.5°	1194.2	1219.3	1213.7	1222.1	1234.6
10°	1185.8	1215.1	1213.7	1227.7	1240.2
12.5°	1177.4	1206.7	1213.7	1234.6	1245.8
15°	1166.3	1198.4	1216.5	1212.3	1197.0
17.5°	1152.3	1190.0	1209.5	1149.5	1148.1
20°	1138.4	1178.8	1170.5	1113.3	1107.7
22.5°	1120.2	1167.7	1113.3	1074.2	1081.2
25°	1100.7	1153.7	1075.6	1051.9	1057.5
27.5°	1079.8	1139.8	1035.1	1026.8	1033.7
30°	1056.1	1120.2	1004.4	1001.7	1010.0
32.5°	1030.9	1082.6	975.1	976.5	986.3
35°	1003.0	1021.2	944.5	948.6	958.4
37.5°	975.1	964.0	915.2	922.1	931.9
40°	944.5	919.3	884.5	891.4	902.6
42.5°	911.0	871.9	851.0	860.8	870.5
45°	876.1	823.1	817.5	827.3	834.2
47.5°	839.8	781.2	782.6	789.6	591.5
50°	799.4	739.4	745.0	516.2	327.8
52.5°	756.1	696.1	707.3	287.4	166.0
55°	711.5	651.5	662.7	145.1	111.6
57.5°	664.0	606.9	432.5	104.6	110.2
60°	616.6	559.4	220.4	103.2	106.0
62.5°	567.8	512.0	104.6	99.0	100.4
65°	517.6	463.2	86.5	92.1	92.1
67.5°	461.8	411.5	82.3	82.3	80.9
70°	404.6	341.8	75.3	71.1	69.8
72.5°	351.6	131.1	65.6	58.6	57.2
75°	286.0	60.0	54.4	47.4	46.0
77.5°	227.4	50.2	43.2	37.7	36.3
80°	168.8	39.1	32.1	27.9	26.5
82.5°	117.2	26.5	22.3	18.1	18.1
85°	67.0	16.7	14.0	11.2	11.2
87.5°	26.5	8.4	7.0	4.2	4.2
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	22.51	24.04	22.88	24.35	24.66	10.28	11.80	10.64	12.11	12.43
	3H	24.53	25.89	24.91	26.22	26.58	12.59	13.95	12.97	14.28	14.64
	4H	25.00	26.27	25.40	26.62	27.00	13.31	14.58	13.71	14.93	15.31
	6H	25.40	26.58	25.82	26.94	27.34	13.79	14.96	14.20	15.33	15.72
	8H	25.55	26.67	25.98	27.06	27.46	13.93	15.04	14.35	15.43	15.83
	12H	25.65	26.72	26.08	27.10	27.53	14.01	15.08	14.45	15.46	15.89
4H	2H	22.36	23.63	22.76	23.98	24.36	11.08	12.35	11.48	12.70	13.08
	3H	24.56	25.61	24.97	26.01	26.41	13.59	14.63	14.00	15.03	15.44
	4H	25.01	25.95	25.44	26.36	26.80	14.41	15.35	14.84	15.76	16.20
	6H	25.47	26.29	25.93	26.73	27.19	15.00	15.81	15.46	16.26	16.72
	8H	25.66	26.42	26.13	26.87	27.34	15.17	15.93	15.63	16.38	16.84
	12H	25.82	26.49	26.30	26.97	27.45	15.29	15.97	15.77	16.45	16.92
8H	4H	24.93	25.69	25.39	26.13	26.60	15.25	16.01	15.71	16.45	16.92
	6H	25.38	26.01	25.88	26.50	26.98	15.87	16.50	16.37	16.99	17.47
	8H	25.58	26.15	26.10	26.66	27.15	16.07	16.63	16.58	17.15	17.63
	12H	25.77	26.27	26.28	26.76	27.33	16.23	16.73	16.74	17.22	17.79
12H	4H	24.89	25.57	25.38	26.05	26.52	15.32	16.00	15.80	16.48	16.95
	6H	25.34	25.90	25.85	26.41	26.90	15.96	16.53	16.48	17.04	17.53
	8H	25.56	26.06	26.07	26.55	27.12	16.22	16.72	16.73	17.21	17.77