

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: P893440

Luminaire Tested: 4MB-3SL-RFLW-UNV-L950

Issue Date: 11/11/2024

**Test Information**

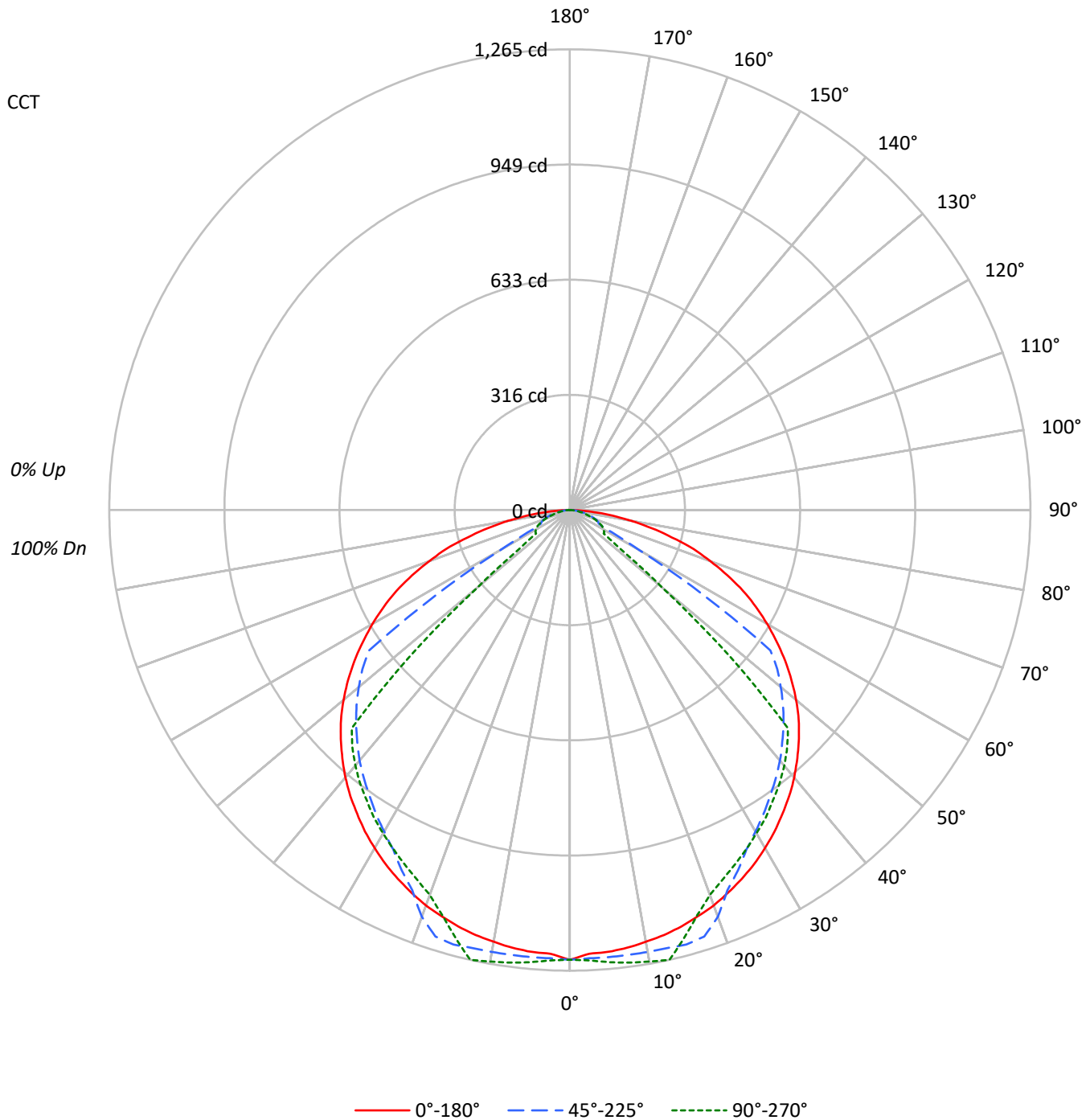
Test Method: LM-79-2019  
Report Number: P893440  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-RFLW-UNV-L950  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 5000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3012.0 lumens  
Efficiency: N/A  
Efficacy: 142.7 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				
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°	16035	16035	16035
5°	15875	16060	16245
10°	15873	16246	16600
15°	15917	16601	16335
20°	15969	16419	15539
25°	16009	15644	15381
30°	16075	15289	15373
35°	16142	15199	15422
40°	16252	15220	15532
45°	16333	15240	15552
50°	16393	15278	6723
55°	16352	15229	2565
60°	16257	5812	2794
65°	16143	2698	2873
70°	15593	2904	2688
75°	14564	2769	2343
80°	12817	2438	2012
85°	10131	2116	1684

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 16393 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.9	3.9
10°-20°	342.4	11.4
20°-30°	511.0	17.0
30°-40°	619.3	20.6
40°-50°	634.2	21.1
50°-60°	421.7	14.0
60°-70°	240.4	8.0
70°-80°	101.0	3.4
80°-90°	24.1	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°	971.3	32.2
0°-40°	1590.7	52.8
0°-60°	2646.6	87.9
0°-90°	3012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3012.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1235	1235	1235	1235	1235	
5°	1218	1242	1232	1235	1246	116
15°	1184	1216	1235	1231	1215	334
25°	1117	1171	1092	1068	1074	516
35°	1018	1037	959	963	973	638
45°	889	836	830	840	847	686
55°	722	661	673	147	113	645
65°	525	470	88	94	94	517
75°	290	61	55	48	47	308
85°	68	17	14	11	11	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1234.9	1234.9	1234.9	1234.9	1234.9
2.5°	1219.4	1244.9	1232.1	1233.5	1237.8
5°	1217.9	1242.0	1232.1	1234.9	1246.3
7.5°	1212.3	1237.8	1232.1	1240.6	1253.4
10°	1203.8	1233.5	1232.1	1246.3	1259.0
12.5°	1195.3	1225.0	1232.1	1253.4	1264.7
15°	1184.0	1216.5	1234.9	1230.7	1215.1
17.5°	1169.8	1208.0	1227.9	1167.0	1165.5
20°	1155.6	1196.7	1188.2	1130.1	1124.5
22.5°	1137.2	1185.4	1130.1	1090.5	1097.6
25°	1117.4	1171.2	1091.9	1067.8	1073.5
27.5°	1096.2	1157.1	1050.8	1042.3	1049.4
30°	1072.1	1137.2	1019.7	1016.8	1025.3
32.5°	1046.6	1099.0	989.9	991.4	1001.3
35°	1018.3	1036.7	958.8	963.0	972.9
37.5°	989.9	978.6	929.0	936.1	946.0
40°	958.8	933.3	897.9	905.0	916.3
42.5°	924.8	885.1	863.9	873.8	883.7
45°	889.4	835.6	829.9	839.8	846.9
47.5°	852.6	793.1	794.5	801.6	600.5
50°	811.5	750.6	756.3	524.0	332.8
52.5°	767.6	706.7	718.0	291.7	168.5
55°	722.3	661.4	672.7	147.3	113.3
57.5°	674.1	616.1	439.0	106.2	111.9
60°	626.0	567.9	223.8	104.8	107.6
62.5°	576.4	519.8	106.2	100.6	102.0
65°	525.4	470.2	87.8	93.5	93.5
67.5°	468.8	417.8	83.6	83.6	82.1
70°	410.7	347.0	76.5	72.2	70.8
72.5°	356.9	133.1	66.6	59.5	58.1
75°	290.3	60.9	55.2	48.2	46.7
77.5°	230.8	51.0	43.9	38.2	36.8
80°	171.4	39.7	32.6	28.3	26.9
82.5°	119.0	26.9	22.7	18.4	18.4
85°	68.0	17.0	14.2	11.3	11.3
87.5°	26.9	8.5	7.1	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	22.57	24.09	22.93	24.40	24.72	10.33	11.85	10.70	12.17	12.48
	3H	24.59	25.95	24.96	26.27	26.64	12.65	14.00	13.02	14.33	14.69
	4H	25.05	26.32	25.45	26.67	27.05	13.36	14.63	13.76	14.98	15.36
	6H	25.46	26.63	25.87	27.00	27.39	13.84	15.02	14.26	15.38	15.77
	8H	25.61	26.72	26.03	27.11	27.51	13.98	15.10	14.41	15.49	15.89
	12H	25.70	26.77	26.13	27.15	27.58	14.07	15.13	14.50	15.52	15.95
4H	2H	22.41	23.68	22.81	24.03	24.41	11.13	12.40	11.53	12.75	13.13
	3H	24.61	25.66	25.02	26.06	26.46	13.64	14.69	14.05	15.09	15.49
	4H	25.06	26.00	25.49	26.41	26.85	14.46	15.40	14.89	15.82	16.26
	6H	25.52	26.34	25.98	26.78	27.24	15.05	15.87	15.51	16.31	16.77
	8H	25.72	26.48	26.18	26.92	27.39	15.22	15.98	15.69	16.43	16.90
	12H	25.87	26.55	26.35	27.03	27.50	15.34	16.02	15.82	16.50	16.97
8H	4H	24.98	25.74	25.44	26.18	26.65	15.30	16.06	15.76	16.51	16.97
	6H	25.44	26.07	25.93	26.56	27.04	15.92	16.55	16.42	17.04	17.52
	8H	25.64	26.20	26.15	26.71	27.20	16.12	16.69	16.64	17.20	17.69
	12H	25.82	26.32	26.33	26.82	27.38	16.28	16.78	16.79	17.27	17.84
12H	4H	24.95	25.63	25.43	26.10	26.58	15.37	16.05	15.85	16.53	17.00
	6H	25.39	25.96	25.91	26.47	26.96	16.01	16.58	16.53	17.09	17.58
	8H	25.61	26.11	26.12	26.61	27.17	16.27	16.77	16.78	17.26	17.83