

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: P893433

Luminaire Tested: 4MB-3SL-RFLW-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893433
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-L830
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3000K
Light Source: -
Ballast/Driver: -

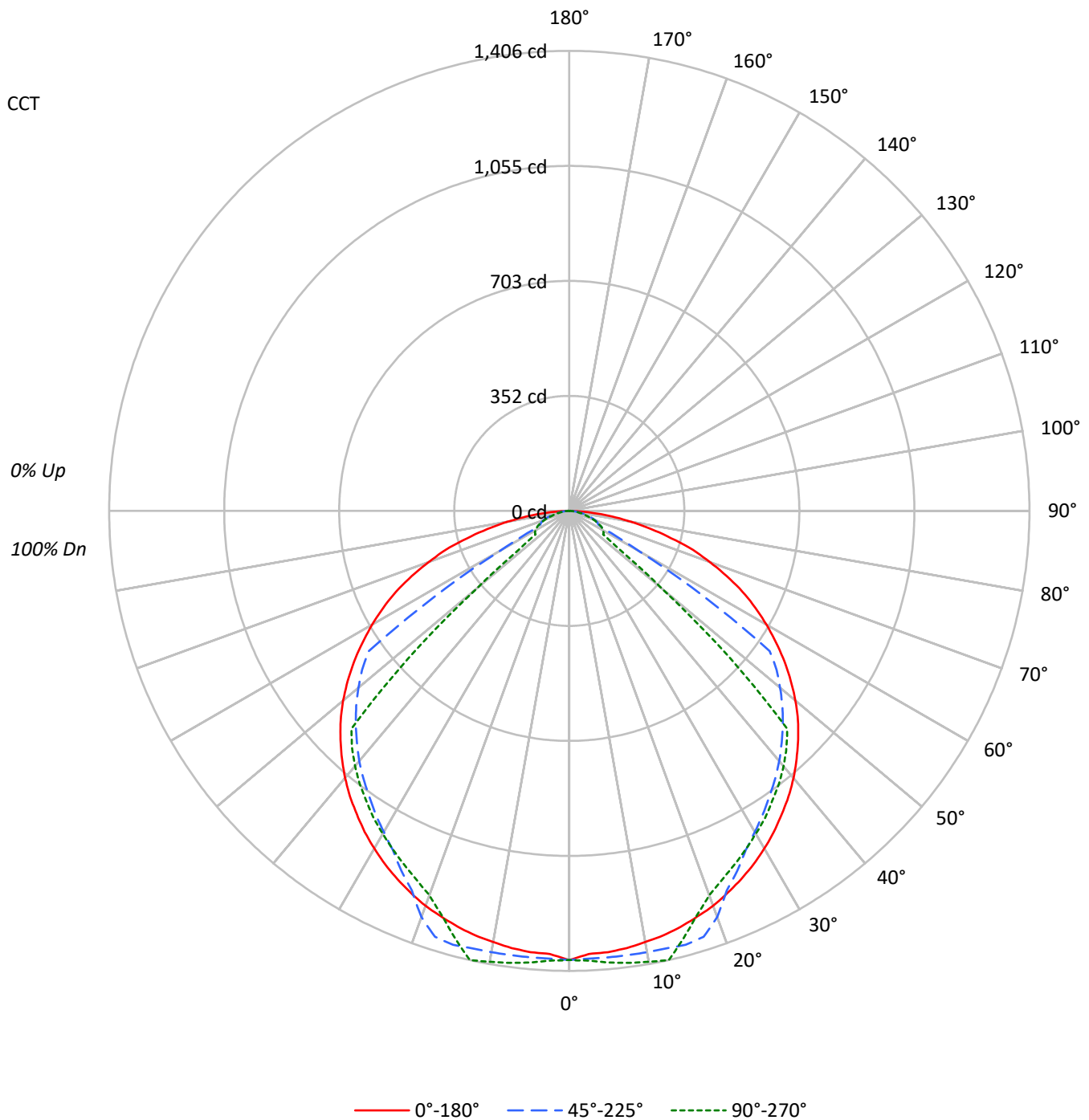
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3348.0 lumens
Efficiency: N/A
Efficacy: 158.7 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_{in}): 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°	17825	17825	17825
5°	17646	17852	18057
10°	17643	18059	18453
15°	17691	18453	18158
20°	17751	18251	17272
25°	17795	17389	17096
30°	17868	16994	17089
35°	17943	16893	17144
40°	18064	16917	17264
45°	18154	16940	17288
50°	18221	16981	7472
55°	18174	16927	2850
60°	18070	6459	3106
65°	17944	2999	3192
70°	17331	3227	2988
75°	16190	3080	2604
80°	14245	2707	2236
85°	11263	2339	1877

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 18221 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	3.9
10°-20°	380.6	11.4
20°-30°	568.0	17.0
30°-40°	688.4	20.6
40°-50°	704.9	21.1
50°-60°	468.8	14.0
60°-70°	267.2	8.0
70°-80°	112.2	3.4
80°-90°	26.8	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°	1079.7	32.2
0°-40°	1768.1	52.8
0°-60°	2941.8	87.9
0°-90°	3348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1373	1373	1373	1373	1373	
5°	1354	1381	1370	1373	1385	129
15°	1316	1352	1373	1368	1351	372
25°	1242	1302	1214	1187	1193	573
35°	1132	1152	1066	1070	1082	709
45°	989	929	922	934	941	763
55°	803	735	748	164	126	717
65°	584	523	98	104	104	575
75°	323	68	61	54	52	343
85°	76	19	16	13	13	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1372.7	1372.7	1372.7	1372.7	1372.7
2.5°	1355.4	1383.7	1369.6	1371.1	1375.9
5°	1353.8	1380.6	1369.6	1372.7	1385.3
7.5°	1347.5	1375.9	1369.6	1379.0	1393.2
10°	1338.1	1371.1	1369.6	1385.3	1399.5
12.5°	1328.6	1361.7	1369.6	1393.2	1405.8
15°	1316.0	1352.2	1372.7	1368.0	1350.7
17.5°	1300.3	1342.8	1364.8	1297.1	1295.6
20°	1284.6	1330.2	1320.8	1256.2	1249.9
22.5°	1264.1	1317.6	1256.2	1212.1	1220.0
25°	1242.0	1301.9	1213.7	1186.9	1193.2
27.5°	1218.4	1286.1	1168.1	1158.6	1166.5
30°	1191.7	1264.1	1133.4	1130.3	1139.7
32.5°	1163.3	1221.6	1100.4	1101.9	1113.0
35°	1131.9	1152.3	1065.7	1070.5	1081.5
37.5°	1100.4	1087.8	1032.7	1040.5	1051.6
40°	1065.7	1037.4	998.0	1005.9	1018.5
42.5°	1028.0	983.9	960.3	971.3	982.3
45°	988.6	928.8	922.5	933.5	941.4
47.5°	947.7	881.6	883.1	891.0	667.5
50°	902.0	834.3	840.6	582.5	369.9
52.5°	853.2	785.5	798.1	324.3	187.3
55°	802.8	735.2	747.7	163.7	125.9
57.5°	749.3	684.8	488.0	118.1	124.4
60°	695.8	631.3	248.7	116.5	119.6
62.5°	640.7	577.7	118.1	111.8	113.3
65°	584.0	522.6	97.6	103.9	103.9
67.5°	521.1	464.4	92.9	92.9	91.3
70°	456.5	385.7	85.0	80.3	78.7
72.5°	396.7	148.0	74.0	66.1	64.5
75°	322.7	67.7	61.4	53.5	51.9
77.5°	256.6	56.7	48.8	42.5	40.9
80°	190.5	44.1	36.2	31.5	29.9
82.5°	132.2	29.9	25.2	20.5	20.5
85°	75.6	18.9	15.7	12.6	12.6
87.5°	29.9	9.4	7.9	4.7	4.7
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	22.93	24.46	23.30	24.77	25.08	10.70	12.22	11.07	12.54	12.85
	3H	24.95	26.31	25.33	26.64	27.00	13.02	14.37	13.39	14.70	15.06
	4H	25.42	26.69	25.82	27.04	27.42	13.73	15.00	14.13	15.35	15.73
	6H	25.82	27.00	26.24	27.36	27.76	14.21	15.38	14.62	15.75	16.14
	8H	25.97	27.09	26.40	27.48	27.88	14.35	15.46	14.78	15.85	16.26
	12H	26.07	27.14	26.50	27.52	27.95	14.44	15.50	14.87	15.89	16.31
4H	2H	22.78	24.05	23.18	24.40	24.77	11.50	12.77	11.90	13.12	13.50
	3H	24.98	26.03	25.39	26.43	26.83	14.01	15.06	14.42	15.46	15.86
	4H	25.43	26.37	25.86	26.78	27.22	14.83	15.77	15.26	16.18	16.62
	6H	25.89	26.71	26.35	27.15	27.61	15.42	16.24	15.88	16.68	17.14
	8H	26.08	26.84	26.55	27.29	27.76	15.59	16.35	16.05	16.80	17.26
	12H	26.24	26.91	26.72	27.39	27.86	15.71	16.39	16.19	16.87	17.34
8H	4H	25.34	26.11	25.81	26.55	27.02	15.67	16.43	16.13	16.87	17.34
	6H	25.80	26.43	26.30	26.92	27.40	16.29	16.92	16.79	17.41	17.89
	8H	26.00	26.57	26.52	27.08	27.57	16.49	17.06	17.01	17.57	18.06
	12H	26.19	26.69	26.70	27.18	27.75	16.65	17.15	17.16	17.64	18.21
12H	4H	25.31	25.99	25.80	26.47	26.94	15.74	16.42	16.22	16.90	17.37
	6H	25.76	26.32	26.27	26.83	27.32	16.38	16.95	16.90	17.46	17.95
	8H	25.98	26.48	26.49	26.97	27.54	16.64	17.14	17.15	17.63	18.20