

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: P893885

Luminaire Tested: 4MB-7HL-RNDU-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893885
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-RNDU-UNV-L930
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, 5
Light Source: -
Ballast/Driver: -

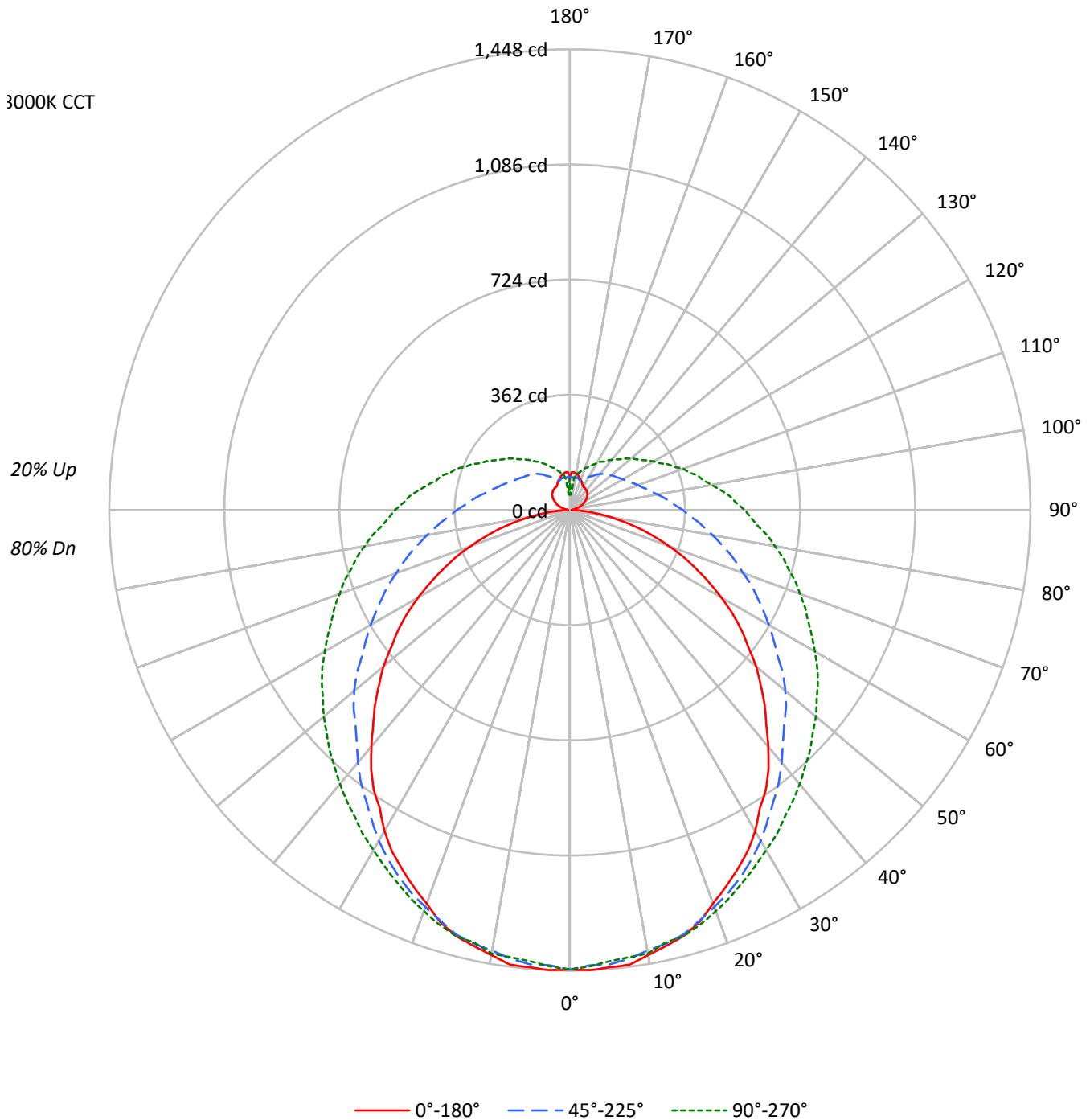
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6072.0 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10277	10277	10277
5°	10258	9869	9701
10°	10167	9448	9324
15°	10064	9136	8904
20°	9777	8710	8470
25°	9552	8333	8062
30°	9290	7921	7704
35°	9002	7475	7393
40°	8632	7092	7155
45°	8280	6728	6942
50°	7970	6502	6762
55°	7608	6151	6622
60°	7177	5929	6493
65°	6639	5731	6397
70°	6038	5570	6393
75°	5257	5508	6411
80°	4135	5479	6535
85°	2722	5601	6683

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8280 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.7	2.3
10°-20°	390.7	6.4
20°-30°	586.7	9.7
30°-40°	704.5	11.6
40°-50°	745.2	12.3
50°-60°	718.2	11.8
60°-70°	637.1	10.5
70°-80°	522.5	8.6
80°-90°	404.4	6.7
90°-100°	315.5	5.2
100°-110°	251.2	4.1
110°-120°	200.7	3.3
120°-130°	158.3	2.6
130°-140°	120.8	2.0
140°-150°	84.9	1.4
150°-160°	54.3	0.9
160°-170°	30.4	0.5
170°-180°	9.6	0.2
0°-30°	1114.2	18.3
0°-40°	1818.7	30.0
0°-60°	3282.0	54.1
0°-90°	4846.1	79.8
90°-120°	767.4	12.6
90°-150°	1131.5	18.6
90°-180°	1226.0	20.2
0°-180°	6072.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1444	1444	1444	1444	1444	
5°	1443	1447	1433	1444	1423	137
15°	1385	1386	1381	1390	1386	389
25°	1246	1267	1272	1293	1289	574
35°	1074	1091	1116	1162	1178	670
45°	866	892	952	1043	1068	668
55°	659	692	796	905	952	588
65°	439	499	650	785	826	436
75°	229	329	518	658	710	242
85°	53	200	402	546	595	60
90°	6	159	355	494	549	6
95°	7	132	314	452	505	7
105°	24	107	251	369	417	26
115°	47	104	208	301	340	45
125°	65	106	179	247	274	58
135°	77	103	161	209	225	59
145°	83	94	132	175	186	52
155°	92	97	109	137	154	42
165°	109	107	103	100	124	31
175°	120	116	103	84	53	11
180°	98	98	98	98	98	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1444.4	1444.4	1444.4	1444.4	1444.4
2.5°	1447.6	1452.5	1432.3	1444.4	1435.5
5°	1442.8	1446.8	1433.1	1443.6	1423.4
7.5°	1441.2	1439.5	1422.6	1436.3	1417.7
10°	1420.2	1425.8	1405.6	1424.2	1415.3
12.5°	1402.4	1413.7	1395.9	1410.5	1391.9
15°	1385.4	1386.2	1381.4	1390.3	1386.2
17.5°	1357.1	1364.4	1353.1	1373.3	1366.0
20°	1315.9	1338.6	1328.1	1346.6	1341.8
22.5°	1282.0	1293.3	1302.2	1323.2	1316.8
25°	1246.5	1266.7	1271.5	1293.3	1289.3
27.5°	1210.1	1219.0	1237.6	1261.0	1261.8
30°	1164.9	1174.6	1200.4	1227.1	1234.4
32.5°	1111.6	1142.3	1157.6	1198.0	1209.3
35°	1074.4	1090.6	1116.4	1162.5	1177.8
37.5°	1025.9	1044.5	1079.3	1133.4	1152.0
40°	970.2	997.7	1035.6	1102.7	1124.5
42.5°	914.5	946.8	991.2	1069.6	1094.6
45°	866.0	891.8	952.4	1042.9	1067.9
47.5°	813.5	845.0	921.7	1008.2	1036.4
50°	765.0	797.3	884.6	975.9	1009.8
52.5°	706.8	744.0	844.2	938.7	978.3
55°	659.2	692.3	796.5	904.8	951.6
57.5°	606.7	643.8	759.4	879.7	922.5
60°	550.1	597.0	723.0	848.2	889.4
62.5°	494.4	550.1	685.8	817.5	857.9
65°	438.6	499.2	650.3	785.2	826.4
67.5°	388.6	454.0	618.0	749.7	800.6
70°	332.0	410.4	580.0	716.5	769.9
72.5°	278.7	370.8	549.3	689.9	743.2
75°	228.6	328.8	517.8	657.6	710.1
77.5°	178.5	289.2	484.7	628.5	685.8
80°	130.9	256.9	455.6	600.2	655.1
82.5°	90.5	228.6	427.3	576.8	628.5
85°	53.3	200.3	401.5	546.1	594.6
87.5°	24.2	177.7	374.8	522.7	570.3
90°	5.7	159.1	355.4	494.4	549.3
92.5°	5.7	144.6	332.0	473.4	523.5
95°	7.3	131.7	314.2	451.6	504.9
97.5°	9.7	122.0	298.1	431.4	478.2
100°	13.7	115.5	280.3	408.0	454.0
102.5°	18.6	110.7	264.2	386.9	429.8
105°	24.2	106.6	251.2	369.2	416.8
107.5°	29.9	105.0	238.3	352.2	392.6
110°	35.5	104.2	228.6	334.4	379.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	41.2	103.4	218.1	318.3	354.6
115°	46.9	104.2	208.4	301.3	340.1
117.5°	50.1	104.2	199.5	286.8	319.1
120°	54.9	105.0	193.1	271.4	305.4
122.5°	59.8	105.0	186.6	260.1	290.0
125°	65.4	105.8	179.3	247.2	273.9
127.5°	68.7	105.8	175.3	238.3	262.5
130°	71.9	105.0	169.6	227.0	252.0
132.5°	75.1	103.4	166.4	216.5	239.9
135°	76.7	102.6	160.8	209.2	225.4
137.5°	79.2	100.2	155.1	198.7	216.5
140°	81.6	99.4	147.0	190.6	206.0
142.5°	81.6	96.9	141.4	183.4	197.1
145°	83.2	94.5	132.5	175.3	185.8
147.5°	84.8	93.7	126.0	167.2	180.1
150°	84.8	92.9	120.4	158.3	170.5
152.5°	86.4	93.7	114.7	150.3	161.6
155°	92.1	96.9	109.1	137.3	153.5
157.5°	96.9	100.2	103.4	127.6	144.6
160°	101.0	102.6	98.6	117.9	140.6
162.5°	104.2	105.0	99.4	109.1	131.7
165°	109.1	106.6	102.6	100.2	124.4
167.5°	113.1	108.2	104.2	97.7	118.7
170°	116.3	111.5	102.6	92.1	116.3
172.5°	118.7	112.3	103.4	86.4	97.7
175°	119.6	115.5	102.6	84.0	53.3
177.5°	118.7	116.3	105.8	83.2	47.7
180°	97.7	97.7	97.7	97.7	97.7



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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	15.14	16.45	15.78	17.12	17.88	18.55	19.86	19.19	20.52	21.29
	3H	16.59	17.79	17.24	18.46	19.26	21.38	22.58	22.04	23.26	24.05
	4H	17.06	18.20	17.73	18.89	19.70	22.83	23.97	23.50	24.66	25.47
	6H	17.34	18.40	18.02	19.10	19.93	24.39	25.46	25.08	26.15	26.98
	8H	17.40	18.42	18.09	19.14	19.96	25.21	26.23	25.90	26.95	27.78
	12H	17.42	18.40	18.12	19.11	19.97	26.09	27.07	26.79	27.78	28.64
4H	2H	16.27	17.42	16.95	18.10	18.91	18.89	20.03	19.56	20.71	21.52
	3H	17.98	18.96	18.67	19.68	20.51	21.96	22.93	22.64	23.65	24.49
	4H	18.58	19.48	19.28	20.20	21.06	23.59	24.49	24.29	25.22	26.07
	6H	18.99	19.79	19.71	20.53	21.40	25.35	26.15	26.07	26.90	27.76
	8H	19.10	19.85	19.82	20.60	21.48	26.28	27.03	27.01	27.78	28.66
	12H	19.16	19.84	19.90	20.61	21.50	27.29	27.98	28.04	28.75	29.63
8H	4H	19.61	20.36	20.33	21.11	21.99	23.77	24.52	24.50	25.27	26.15
	6H	20.25	20.90	21.01	21.68	22.56	25.71	26.35	26.46	27.14	28.02
	8H	20.48	21.06	21.24	21.85	22.74	26.79	27.37	27.56	28.16	29.06
	12H	20.63	21.15	21.40	21.93	22.88	28.00	28.51	28.76	29.29	30.24
12H	4H	19.94	20.62	20.68	21.39	22.28	23.77	24.45	24.51	25.22	26.11
	6H	20.74	21.32	21.51	22.11	23.01	25.75	26.33	26.51	27.11	28.01
	8H	21.09	21.61	21.86	22.39	23.34	26.89	27.41	27.66	28.19	29.14