

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: P893887

Luminaire Tested: 4MB-7HL-RNDU-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893887
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-L940
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, 4
Light Source: -
Ballast/Driver: -

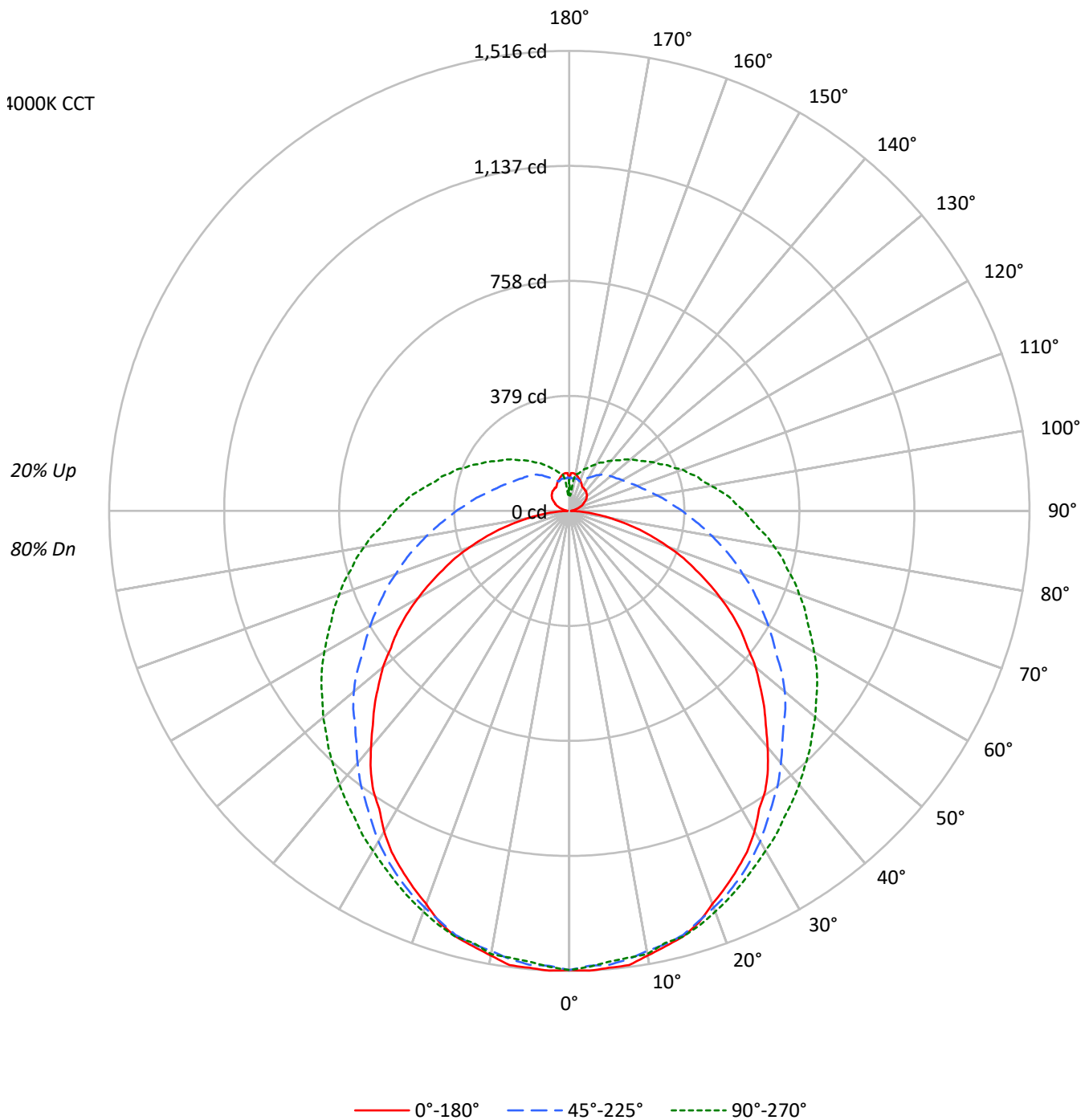
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6361.0 lumens
Efficiency: N/A
Efficacy: 122.8 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°	10766	10766	10766
5°	10745	10339	10163
10°	10650	9898	9768
15°	10543	9571	9327
20°	10243	9125	8874
25°	10007	8729	8445
30°	9731	8298	8071
35°	9430	7831	7746
40°	9043	7430	7495
45°	8674	7048	7273
50°	8350	6812	7083
55°	7971	6444	6937
60°	7519	6211	6802
65°	6955	6003	6701
70°	6325	5835	6696
75°	5508	5771	6716
80°	4331	5740	6846
85°	2855	5868	7001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.3	2.3
10°-20°	409.3	6.4
20°-30°	614.6	9.7
30°-40°	738.1	11.6
40°-50°	780.7	12.3
50°-60°	752.3	11.8
60°-70°	667.5	10.5
70°-80°	547.4	8.6
80°-90°	423.7	6.7
90°-100°	330.5	5.2
100°-110°	263.1	4.1
110°-120°	210.3	3.3
120°-130°	165.9	2.6
130°-140°	126.6	2.0
140°-150°	89.0	1.4
150°-160°	56.9	0.9
160°-170°	31.9	0.5
170°-180°	10.1	0.2
0°-30°	1167.2	18.3
0°-40°	1905.2	30.0
0°-60°	3438.2	54.1
0°-90°	5076.8	79.8
90°-120°	804.0	12.6
90°-150°	1185.4	18.6
90°-180°	1284.0	20.2
0°-180°	6361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1513	1513	1513	1513	1513	
5°	1511	1516	1501	1512	1491	144
15°	1451	1452	1447	1456	1452	408
25°	1306	1327	1332	1355	1351	601
35°	1126	1142	1170	1218	1234	702
45°	907	934	998	1092	1119	700
55°	691	725	834	948	997	616
65°	460	523	681	823	866	457
75°	240	344	542	689	744	253
85°	56	210	421	572	623	63
90°	6	167	372	518	576	6
95°	8	138	329	473	529	8
105°	25	112	263	387	437	27
115°	49	109	218	316	356	48
125°	68	111	188	259	287	60
135°	80	108	168	219	236	62
145°	87	99	139	184	195	55
155°	96	102	114	144	161	44
165°	114	112	108	105	130	32
175°	125	121	108	88	56	12
180°	102	102	102	102	102	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1513.1	1513.1	1513.1	1513.1	1513.1
2.5°	1516.5	1521.6	1500.4	1513.1	1503.8
5°	1511.4	1515.7	1501.3	1512.3	1491.1
7.5°	1509.7	1508.1	1490.3	1504.7	1485.2
10°	1487.7	1493.7	1472.5	1492.0	1482.7
12.5°	1469.1	1481.0	1462.4	1477.6	1458.1
15°	1451.4	1452.2	1447.1	1456.4	1452.2
17.5°	1421.7	1429.4	1417.5	1438.7	1431.0
20°	1378.6	1402.3	1391.3	1410.7	1405.7
22.5°	1343.0	1354.9	1364.2	1386.2	1379.4
25°	1305.8	1327.0	1332.0	1354.9	1350.6
27.5°	1267.7	1277.0	1296.5	1321.0	1321.9
30°	1220.3	1230.5	1257.6	1285.5	1293.1
32.5°	1164.5	1196.6	1212.7	1255.0	1266.9
35°	1125.5	1142.5	1169.5	1217.8	1233.9
37.5°	1074.8	1094.2	1130.6	1187.3	1206.8
40°	1016.4	1045.1	1084.9	1155.2	1178.0
42.5°	958.0	991.8	1038.4	1120.5	1146.7
45°	907.2	934.3	997.8	1092.5	1118.8
47.5°	852.2	885.2	965.6	1056.1	1085.8
50°	801.4	835.3	926.7	1022.3	1057.8
52.5°	740.5	779.4	884.4	983.4	1024.8
55°	690.6	725.3	834.4	947.8	996.9
57.5°	635.6	674.5	795.5	921.6	966.4
60°	576.3	625.4	757.4	888.6	931.7
62.5°	517.9	576.3	718.5	856.4	898.7
65°	459.5	523.0	681.2	822.6	865.7
67.5°	407.1	475.6	647.4	785.3	838.7
70°	347.8	429.9	607.6	750.6	806.5
72.5°	292.0	388.4	575.5	722.7	778.6
75°	239.5	344.4	542.5	688.9	743.9
77.5°	187.0	303.0	507.8	658.4	718.5
80°	137.1	269.1	477.3	628.8	686.3
82.5°	94.8	239.5	447.7	604.2	658.4
85°	55.9	209.9	420.6	572.1	622.9
87.5°	25.4	186.2	392.7	547.5	597.5
90°	5.9	166.7	372.4	517.9	575.5
92.5°	5.9	151.5	347.8	495.9	548.4
95°	7.6	137.9	329.2	473.1	528.9
97.5°	10.2	127.8	312.3	451.9	501.0
100°	14.4	121.0	293.7	427.4	475.6
102.5°	19.5	115.9	276.7	405.4	450.2
105°	25.4	111.7	263.2	386.7	436.7
107.5°	31.3	110.0	249.7	369.0	411.3
110°	37.2	109.2	239.5	350.4	397.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	43.2	108.3	228.5	333.4	371.5
115°	49.1	109.2	218.3	315.7	356.3
117.5°	52.5	109.2	209.0	300.4	334.3
120°	57.5	110.0	202.3	284.3	319.9
122.5°	62.6	110.0	195.5	272.5	303.8
125°	68.5	110.9	187.9	259.0	286.9
127.5°	71.9	110.9	183.6	249.7	275.0
130°	75.3	110.0	177.7	237.8	264.0
132.5°	78.7	108.3	174.3	226.8	251.3
135°	80.4	107.5	168.4	219.2	236.1
137.5°	82.9	104.9	162.5	208.2	226.8
140°	85.5	104.1	154.0	199.7	215.8
142.5°	85.5	101.6	148.1	192.1	206.5
145°	87.2	99.0	138.8	183.6	194.6
147.5°	88.9	98.2	132.0	175.2	188.7
150°	88.9	97.3	126.1	165.9	178.6
152.5°	90.6	98.2	120.2	157.4	169.3
155°	96.5	101.6	114.2	143.9	160.8
157.5°	101.6	104.9	108.3	133.7	151.5
160°	105.8	107.5	103.2	123.6	147.3
162.5°	109.2	110.0	104.1	114.2	137.9
165°	114.2	111.7	107.5	104.9	130.3
167.5°	118.5	113.4	109.2	102.4	124.4
170°	121.9	116.8	107.5	96.5	121.9
172.5°	124.4	117.6	108.3	90.6	102.4
175°	125.2	121.0	107.5	88.0	55.9
177.5°	124.4	121.9	110.9	87.2	49.9
180°	102.4	102.4	102.4	102.4	102.4



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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	15.30	16.61	15.94	17.28	18.04	18.71	20.02	19.35	20.69	21.45
	3H	16.75	17.95	17.40	18.62	19.42	21.54	22.74	22.20	23.42	24.22
	4H	17.22	18.37	17.89	19.05	19.86	22.99	24.14	23.66	24.82	25.63
	6H	17.50	18.57	18.19	19.26	20.09	24.55	25.62	25.24	26.31	27.14
	8H	17.56	18.58	18.26	19.30	20.13	25.37	26.39	26.07	27.11	27.94
	12H	17.58	18.56	18.28	19.27	20.13	26.25	27.23	26.95	27.94	28.80
4H	2H	16.44	17.58	17.11	18.26	19.07	19.05	20.19	19.72	20.87	21.68
	3H	18.14	19.12	18.83	19.84	20.67	22.12	23.10	22.80	23.82	24.65
	4H	18.74	19.64	19.44	20.37	21.22	23.75	24.65	24.45	25.38	26.24
	6H	19.15	19.95	19.87	20.70	21.56	25.51	26.31	26.23	27.06	27.92
	8H	19.26	20.01	19.99	20.76	21.64	26.44	27.20	27.17	27.94	28.82
	12H	19.32	20.01	20.06	20.77	21.66	27.45	28.14	28.20	28.91	29.79
8H	4H	19.77	20.52	20.49	21.27	22.15	23.93	24.69	24.66	25.43	26.31
	6H	20.42	21.06	21.17	21.84	22.72	25.87	26.52	26.63	27.30	28.18
	8H	20.64	21.22	21.41	22.01	22.90	26.96	27.54	27.72	28.32	29.22
	12H	20.79	21.31	21.56	22.09	23.04	28.16	28.68	28.93	29.45	30.41
12H	4H	20.10	20.79	20.84	21.55	22.44	23.93	24.62	24.68	25.38	26.27
	6H	20.91	21.49	21.67	22.27	23.17	25.91	26.49	26.67	27.27	28.17
	8H	21.25	21.77	22.02	22.55	23.50	27.05	27.57	27.82	28.35	29.30