

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: P893839

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893839
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-FLTU-UNV-L940
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 90CRI, 400
Light Source: -
Ballast/Driver: -

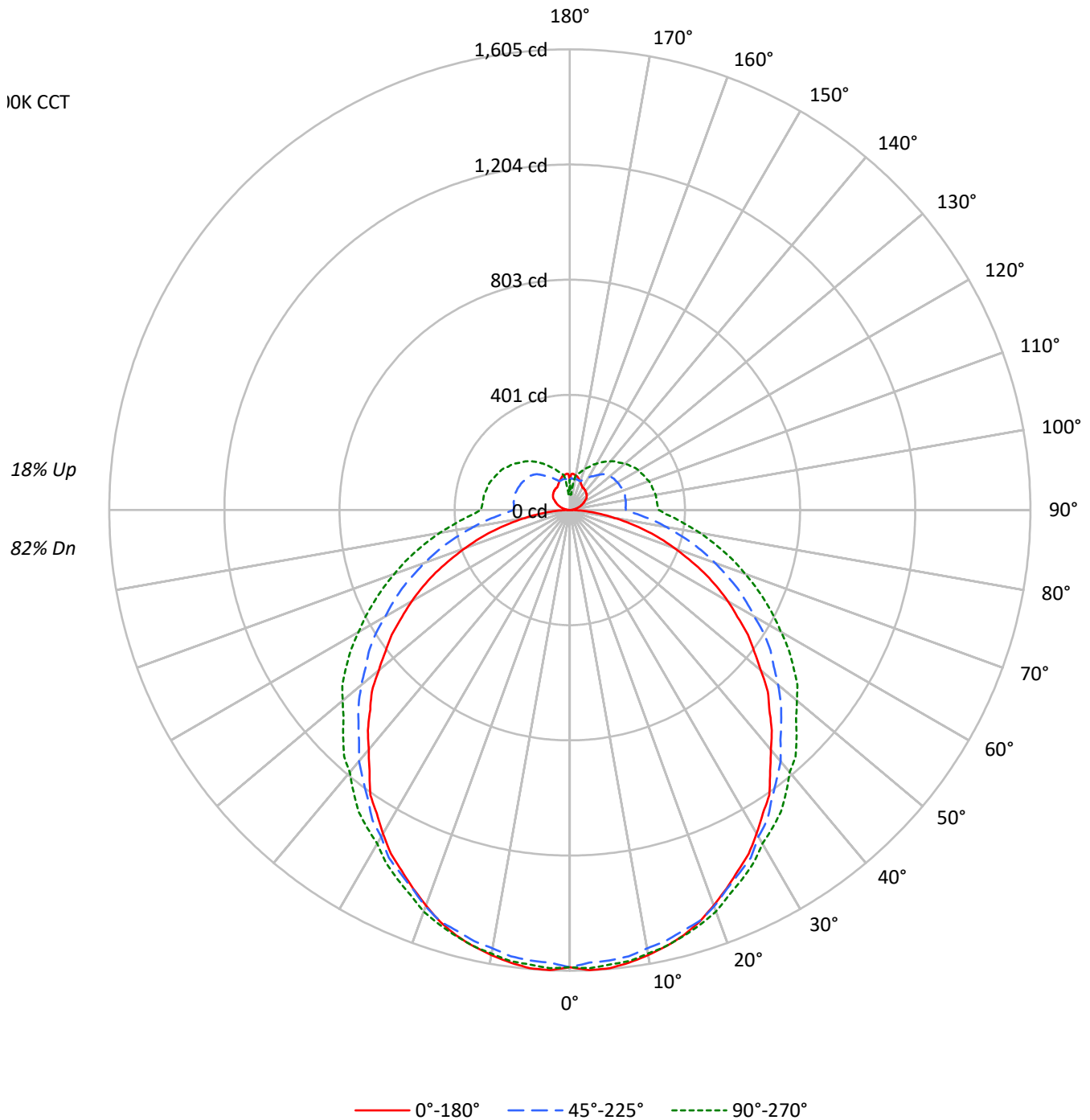
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5988.0 lumens
Efficiency: N/A
Efficacy: 115.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36
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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	69	69	66
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	57	57	54
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	48	48	45
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	41	41	38
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	35	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	31	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	27	27	25
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	24	24	22
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	22	22	20
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	20	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11333	11333	11333
5°	11390	10852	10832
10°	11268	10421	10338
15°	11139	10042	9866
20°	10891	9641	9398
25°	10624	9151	8880
30°	10380	8673	8377
35°	10154	8216	8054
40°	9698	7825	7587
45°	9403	7359	7262
50°	9056	6968	6919
55°	8742	6595	6614
60°	8303	6087	6204
65°	7801	5676	5817
70°	7049	5169	5397
75°	6248	4664	4997
80°	4947	4111	4593
85°	3417	3577	4214

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9403 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.9	2.5
10°-20°	430.8	7.2
20°-30°	647.2	10.8
30°-40°	775.6	13.0
40°-50°	813.2	13.6
50°-60°	762.8	12.7
60°-70°	633.6	10.6
70°-80°	453.0	7.6
80°-90°	268.7	4.5
90°-100°	197.1	3.3
100°-110°	194.2	3.2
110°-120°	181.1	3.0
120°-130°	159.0	2.7
130°-140°	128.0	2.1
140°-150°	91.9	1.5
150°-160°	58.4	1.0
160°-170°	32.4	0.5
170°-180°	10.2	0.2
0°-30°	1228.9	20.5
0°-40°	2004.5	33.5
0°-60°	3580.5	59.8
0°-90°	4935.8	82.4
90°-120°	572.4	9.6
90°-150°	951.3	15.9
90°-180°	1052.0	17.6
0°-180°	5988.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1593	1593	1593	1593	1593	
5°	1602	1599	1576	1583	1589	152
15°	1534	1524	1518	1529	1536	432
25°	1386	1399	1396	1412	1420	640
35°	1212	1216	1227	1263	1283	752
45°	983	1011	1042	1110	1117	761
55°	757	782	854	923	950	674
65°	515	554	644	730	752	508
75°	272	334	438	529	554	287
85°	67	146	256	343	375	73
90°	2	89	196	279	310	5
95°	8	93	196	276	305	8
105°	27	102	199	272	298	29
115°	49	111	195	259	284	49
125°	70	114	189	240	262	62
135°	81	110	175	218	235	63
145°	88	102	144	191	205	55
155°	96	102	118	148	168	45
165°	115	112	108	108	135	32
175°	127	122	109	91	55	12
180°	105	105	105	105	105	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1592.8	1592.8	1592.8	1592.8	1592.8
2.5°	1604.6	1591.9	1578.4	1598.7	1597.8
5°	1602.1	1598.7	1575.8	1583.4	1589.4
7.5°	1590.2	1581.8	1568.2	1586.8	1585.1
10°	1574.1	1564.0	1550.4	1561.4	1569.1
12.5°	1556.4	1547.9	1538.6	1550.4	1555.5
15°	1533.5	1524.2	1518.3	1529.3	1536.1
17.5°	1503.9	1501.4	1502.2	1503.0	1514.0
20°	1465.8	1467.5	1470.0	1485.3	1488.7
22.5°	1426.9	1436.2	1429.4	1453.1	1451.4
25°	1386.3	1399.0	1396.4	1412.5	1420.1
27.5°	1349.9	1350.7	1365.9	1388.8	1386.3
30°	1301.6	1316.0	1314.3	1342.2	1342.2
32.5°	1252.5	1273.7	1280.5	1305.0	1313.5
35°	1211.9	1216.1	1227.1	1262.7	1283.0
37.5°	1145.9	1166.2	1184.0	1230.5	1238.2
40°	1090.0	1110.4	1142.5	1196.7	1192.5
42.5°	1041.8	1063.0	1086.7	1149.3	1164.5
45°	983.4	1011.3	1041.8	1110.4	1117.1
47.5°	936.0	958.0	997.8	1060.4	1068.9
50°	869.2	904.7	947.9	1020.6	1033.3
52.5°	809.9	840.4	895.4	970.7	999.5
55°	757.4	782.0	853.9	923.3	950.4
57.5°	693.1	727.0	802.3	879.3	903.9
60°	636.4	669.4	742.2	830.2	849.7
62.5°	576.3	615.3	694.0	779.5	801.5
65°	515.4	554.3	644.0	730.4	751.5
67.5°	449.4	497.6	589.0	678.7	700.7
70°	387.6	440.1	538.3	628.0	650.0
72.5°	331.8	388.5	488.3	580.6	604.3
75°	271.7	334.3	438.4	528.9	553.5
77.5°	213.3	281.0	386.8	478.2	506.9
80°	156.6	231.0	341.9	429.9	460.4
82.5°	110.0	186.2	300.4	386.8	414.7
85°	66.9	146.4	256.4	342.8	374.9
87.5°	29.6	113.4	221.7	307.2	336.0
90°	2.5	88.9	195.5	279.3	309.7
92.5°	5.1	90.6	194.7	275.9	306.4
95°	7.6	93.1	195.5	275.9	304.7
97.5°	11.0	96.5	197.2	275.9	303.8
100°	16.1	98.2	198.0	275.9	303.8
102.5°	21.2	100.7	197.2	271.7	300.4
105°	27.1	102.4	198.9	272.5	297.9
107.5°	33.0	104.1	198.9	268.3	297.1
110°	38.9	106.6	197.2	265.7	293.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	44.0	109.2	196.3	260.7	287.7
115°	49.1	110.9	194.7	259.0	284.4
117.5°	54.2	111.7	193.8	254.7	279.3
120°	58.4	113.4	192.1	249.7	276.7
122.5°	63.5	114.3	189.6	244.6	271.7
125°	70.2	114.3	188.7	240.4	262.4
127.5°	73.6	115.1	185.3	235.3	258.1
130°	77.0	112.6	183.6	229.3	251.4
132.5°	79.6	111.7	179.4	223.4	242.9
135°	81.2	110.0	175.2	217.5	235.3
137.5°	83.8	107.5	169.3	213.3	230.2
140°	85.5	105.8	160.8	204.8	221.7
142.5°	87.2	103.2	152.3	197.2	213.3
145°	88.0	101.6	143.9	191.3	204.8
147.5°	90.6	99.0	138.8	183.6	195.5
150°	89.7	97.3	131.2	174.3	186.2
152.5°	92.2	99.9	124.4	161.6	178.6
155°	96.5	101.6	117.6	148.1	167.6
157.5°	100.7	104.9	112.6	136.3	159.1
160°	106.6	106.6	106.6	126.9	152.3
162.5°	110.0	110.0	107.5	115.9	143.0
165°	115.1	111.7	108.3	107.5	134.6
167.5°	120.2	113.4	110.0	104.1	128.6
170°	121.0	115.9	109.2	98.2	124.4
172.5°	124.4	118.5	108.3	93.1	96.5
175°	126.9	121.9	109.2	90.6	55.0
177.5°	126.1	121.9	111.7	90.6	53.3
180°	104.9	104.9	104.9	104.9	104.9



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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	16.16	17.48	16.77	18.11	18.83	18.67	20.00	19.28	20.62	21.34
	3H	17.59	18.80	18.22	19.43	20.18	21.04	22.24	21.66	22.88	23.63
	4H	18.06	19.20	18.70	19.85	20.61	22.15	23.29	22.80	23.94	24.71
	6H	18.32	19.38	18.98	20.04	20.82	23.27	24.33	23.92	24.99	25.77
	8H	18.38	19.39	19.04	20.07	20.86	23.81	24.83	24.48	25.51	26.29
	12H	18.39	19.36	19.07	20.04	20.85	24.40	25.37	25.07	26.05	26.86
4H	2H	17.03	18.17	17.68	18.82	19.58	19.02	20.16	19.66	20.81	21.57
	3H	18.68	19.66	19.34	20.34	21.13	21.59	22.57	22.25	23.25	24.04
	4H	19.27	20.16	19.94	20.85	21.66	22.87	23.76	23.55	24.45	25.26
	6H	19.64	20.42	20.34	21.14	21.96	24.16	24.94	24.85	25.66	26.48
	8H	19.73	20.47	20.43	21.18	22.02	24.80	25.54	25.50	26.25	27.09
	12H	19.78	20.44	20.50	21.18	22.02	25.49	26.16	26.22	26.90	27.74
8H	4H	19.89	20.63	20.59	21.34	22.18	23.03	23.76	23.72	24.47	25.31
	6H	20.43	21.05	21.16	21.80	22.64	24.46	25.08	25.19	25.83	26.67
	8H	20.60	21.15	21.34	21.91	22.76	25.23	25.78	25.97	26.54	27.39
	12H	20.70	21.20	21.44	21.95	22.86	26.08	26.57	26.82	27.32	28.23
12H	4H	20.05	20.72	20.77	21.45	22.29	23.02	23.68	23.74	24.42	25.26
	6H	20.67	21.23	21.41	21.99	22.84	24.48	25.04	25.22	25.80	26.65
	8H	20.92	21.42	21.66	22.16	23.07	25.30	25.79	26.04	26.54	27.45