

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: P893835

Luminaire Tested: 4MB-7HL-FLTU-UNV-L840

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893835  
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-L840  
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 400  
Light Source: -  
Ballast/Driver: -

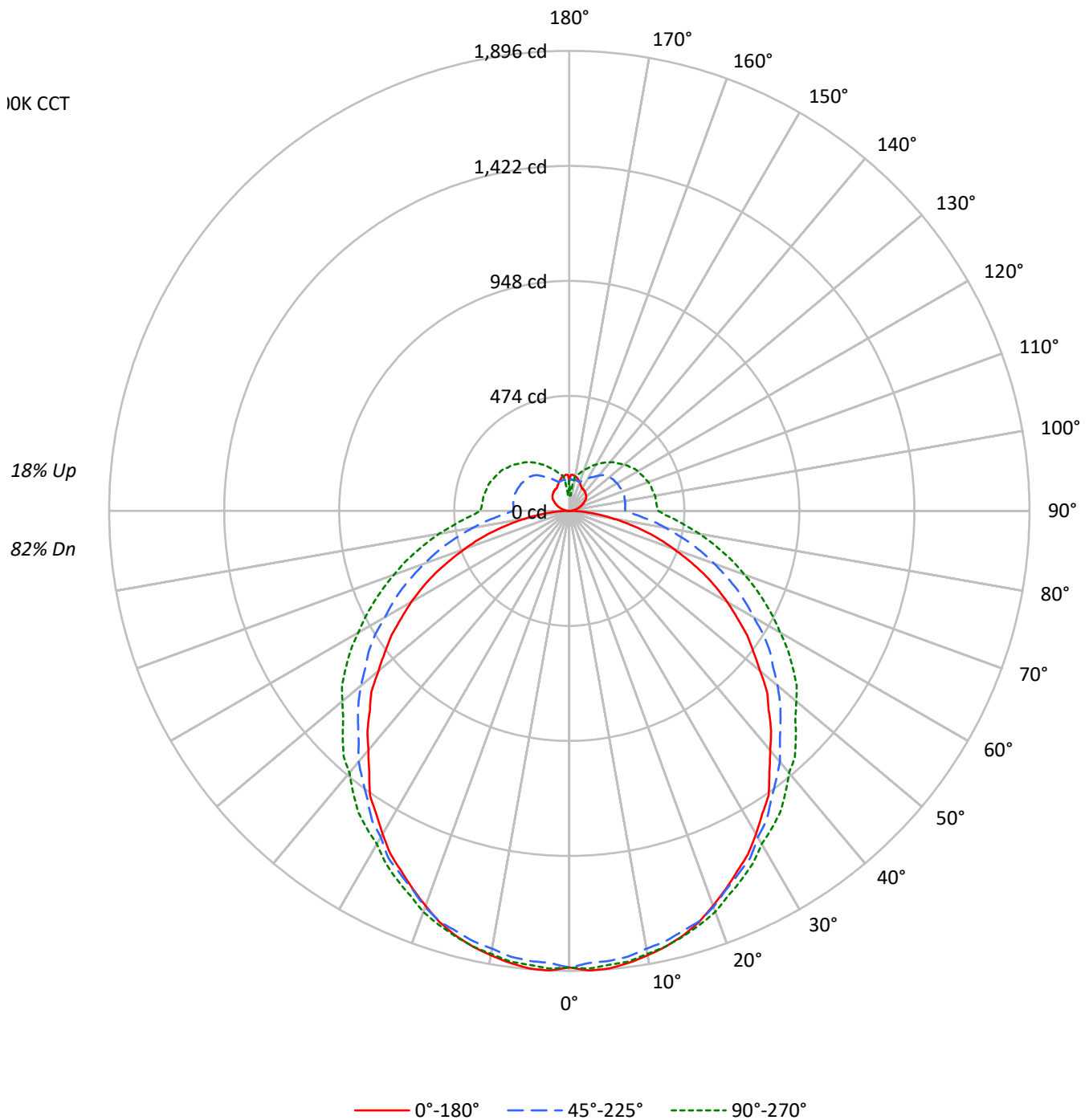
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7075.1 lumens  
Efficiency: N/A  
Efficacy: 136.6 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<sub>in</sub>): 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°	13390	13390	13390
5°	13458	12822	12799
10°	13314	12313	12214
15°	13162	11864	11657
20°	12868	11391	11103
25°	12552	10812	10492
30°	12264	10247	9898
35°	11997	9708	9516
40°	11459	9245	8964
45°	11110	8695	8580
50°	10699	8232	8175
55°	10329	7792	7814
60°	9811	7191	7329
65°	9218	6707	6873
70°	8330	6108	6377
75°	7382	5510	5904
80°	5845	4858	5427
85°	4035	4227	4979

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11110 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.3	2.5
10°-20°	509.0	7.2
20°-30°	764.6	10.8
30°-40°	916.4	13.0
40°-50°	960.8	13.6
50°-60°	901.3	12.7
60°-70°	748.7	10.6
70°-80°	535.3	7.6
80°-90°	317.5	4.5
90°-100°	232.9	3.3
100°-110°	229.4	3.2
110°-120°	214.0	3.0
120°-130°	187.8	2.7
130°-140°	151.2	2.1
140°-150°	108.6	1.5
150°-160°	69.0	1.0
160°-170°	38.2	0.5
170°-180°	12.0	0.2
0°-30°	1451.9	20.5
0°-40°	2368.4	33.5
0°-60°	4230.4	59.8
0°-90°	5831.9	82.4
90°-120°	676.4	9.6
90°-150°	1124.0	15.9
90°-180°	1243.0	17.6
0°-180°	7075.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1882	1882	1882	1882	1882	
5°	1893	1889	1862	1871	1878	180
15°	1812	1801	1794	1807	1815	510
25°	1638	1653	1650	1669	1678	756
35°	1432	1437	1450	1492	1516	889
45°	1162	1195	1231	1312	1320	899
55°	895	924	1009	1091	1123	796
65°	609	655	761	863	888	600
75°	321	395	518	625	654	339
85°	79	173	303	405	443	87
90°	3	105	231	330	366	6
95°	9	110	231	326	360	9
105°	32	121	235	322	352	34
115°	58	131	230	306	336	57
125°	83	135	223	284	310	73
135°	96	130	207	257	278	74
145°	104	120	170	226	242	65
155°	114	120	139	175	198	53
165°	136	132	128	127	159	38
175°	150	144	129	107	65	14
180°	124	124	124	124	124	



TEST NUMBER: P893835

CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L840

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1881.9	1881.9	1881.9	1881.9	1881.9
2.5°	1895.9	1880.9	1864.9	1888.9	1887.9
5°	1892.9	1888.9	1861.9	1870.9	1877.9
7.5°	1878.9	1868.9	1852.9	1874.9	1872.9
10°	1859.9	1847.9	1831.9	1844.9	1853.9
12.5°	1838.9	1828.9	1817.9	1831.9	1837.9
15°	1811.9	1800.9	1793.9	1806.9	1814.9
17.5°	1776.9	1773.9	1774.9	1775.9	1788.9
20°	1731.9	1733.9	1736.9	1754.9	1758.9
22.5°	1685.9	1696.9	1688.9	1716.9	1714.9
25°	1637.9	1652.9	1649.9	1668.9	1677.9
27.5°	1594.9	1595.9	1613.9	1640.9	1637.9
30°	1537.9	1554.9	1552.9	1585.9	1585.9
32.5°	1479.9	1504.9	1512.9	1541.9	1551.9
35°	1431.9	1436.9	1449.9	1491.9	1515.9
37.5°	1353.9	1377.9	1398.9	1453.9	1462.9
40°	1287.9	1311.9	1349.9	1413.9	1408.9
42.5°	1230.9	1255.9	1283.9	1357.9	1375.9
45°	1161.9	1194.9	1230.9	1311.9	1319.9
47.5°	1105.9	1131.9	1178.9	1252.9	1262.9
50°	1026.9	1068.9	1119.9	1205.9	1220.9
52.5°	956.9	992.9	1057.9	1146.9	1180.9
55°	894.9	923.9	1008.9	1090.9	1122.9
57.5°	819.0	858.9	947.9	1038.9	1067.9
60°	752.0	791.0	876.9	980.9	1003.9
62.5°	681.0	727.0	820.0	920.9	946.9
65°	609.0	655.0	761.0	862.9	887.9
67.5°	531.0	588.0	696.0	802.0	828.0
70°	458.0	520.0	636.0	742.0	768.0
72.5°	392.0	459.0	577.0	686.0	714.0
75°	321.0	395.0	518.0	625.0	654.0
77.5°	252.0	332.0	457.0	565.0	599.0
80°	185.0	273.0	404.0	508.0	544.0
82.5°	130.0	220.0	355.0	457.0	490.0
85°	79.0	173.0	303.0	405.0	443.0
87.5°	35.0	134.0	262.0	363.0	397.0
90°	3.0	105.0	231.0	330.0	366.0
92.5°	6.0	107.0	230.0	326.0	362.0
95°	9.0	110.0	231.0	326.0	360.0
97.5°	13.0	114.0	233.0	326.0	359.0
100°	19.0	116.0	234.0	326.0	359.0
102.5°	25.0	119.0	233.0	321.0	355.0
105°	32.0	121.0	235.0	322.0	352.0
107.5°	39.0	123.0	235.0	317.0	351.0
110°	46.0	126.0	233.0	314.0	347.0



TEST NUMBER: P893835

CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L840

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	52.0	129.0	232.0	308.0	340.0
115°	58.0	131.0	230.0	306.0	336.0
117.5°	64.0	132.0	229.0	301.0	330.0
120°	69.0	134.0	227.0	295.0	327.0
122.5°	75.0	135.0	224.0	289.0	321.0
125°	83.0	135.0	223.0	284.0	310.0
127.5°	87.0	136.0	219.0	278.0	305.0
130°	91.0	133.0	217.0	271.0	297.0
132.5°	94.0	132.0	212.0	264.0	287.0
135°	96.0	130.0	207.0	257.0	278.0
137.5°	99.0	127.0	200.0	252.0	272.0
140°	101.0	125.0	190.0	242.0	262.0
142.5°	103.0	122.0	180.0	233.0	252.0
145°	104.0	120.0	170.0	226.0	242.0
147.5°	107.0	117.0	164.0	217.0	231.0
150°	106.0	115.0	155.0	206.0	220.0
152.5°	109.0	118.0	147.0	191.0	211.0
155°	114.0	120.0	139.0	175.0	198.0
157.5°	119.0	124.0	133.0	161.0	188.0
160°	126.0	126.0	126.0	150.0	180.0
162.5°	130.0	130.0	127.0	137.0	169.0
165°	136.0	132.0	128.0	127.0	159.0
167.5°	142.0	134.0	130.0	123.0	152.0
170°	143.0	137.0	129.0	116.0	147.0
172.5°	147.0	140.0	128.0	110.0	114.0
175°	150.0	144.0	129.0	107.0	65.0
177.5°	149.0	144.0	132.0	107.0	63.0
180°	124.0	124.0	124.0	124.0	124.0



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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	16.74	18.06	17.35	18.69	19.41	19.25	20.57	19.86	21.20	21.92
	3H	18.17	19.37	18.79	20.01	20.76	21.62	22.82	22.24	23.46	24.21
	4H	18.64	19.78	19.28	20.43	21.19	22.73	23.87	23.38	24.52	25.29
	6H	18.90	19.96	19.56	20.62	21.40	23.85	24.91	24.50	25.57	26.35
	8H	18.96	19.97	19.62	20.65	21.43	24.39	25.41	25.06	26.09	26.87
	12H	18.97	19.94	19.65	20.62	21.43	24.98	25.95	25.65	26.63	27.44
4H	2H	17.61	18.75	18.26	19.40	20.16	19.60	20.74	20.24	21.39	22.15
	3H	19.26	20.23	19.92	20.92	21.70	22.17	23.14	22.83	23.83	24.61
	4H	19.85	20.74	20.52	21.43	22.24	23.45	24.34	24.13	25.03	25.84
	6H	20.22	21.00	20.92	21.72	22.54	24.74	25.52	25.43	26.24	27.06
	8H	20.31	21.05	21.01	21.76	22.60	25.38	26.12	26.08	26.83	27.67
	12H	20.36	21.02	21.08	21.76	22.60	26.07	26.74	26.80	27.48	28.32
8H	4H	20.47	21.21	21.17	21.92	22.75	23.61	24.34	24.30	25.05	25.89
	6H	21.01	21.63	21.74	22.38	23.22	25.04	25.66	25.77	26.41	27.25
	8H	21.18	21.73	21.92	22.49	23.34	25.81	26.36	26.55	27.12	27.97
	12H	21.28	21.78	22.02	22.53	23.44	26.66	27.15	27.40	27.90	28.81
12H	4H	20.63	21.30	21.35	22.03	22.87	23.60	24.26	24.32	25.00	25.84
	6H	21.25	21.81	21.99	22.57	23.42	25.06	25.62	25.80	26.37	27.23
	8H	21.50	22.00	22.24	22.74	23.65	25.88	26.37	26.62	27.12	28.03