

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: P893180

Luminaire Tested: 4MB-10HL-FLTU-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893180
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-10HL-FLTU-UNV-L850
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 50
Light Source: -
Ballast/Driver: -

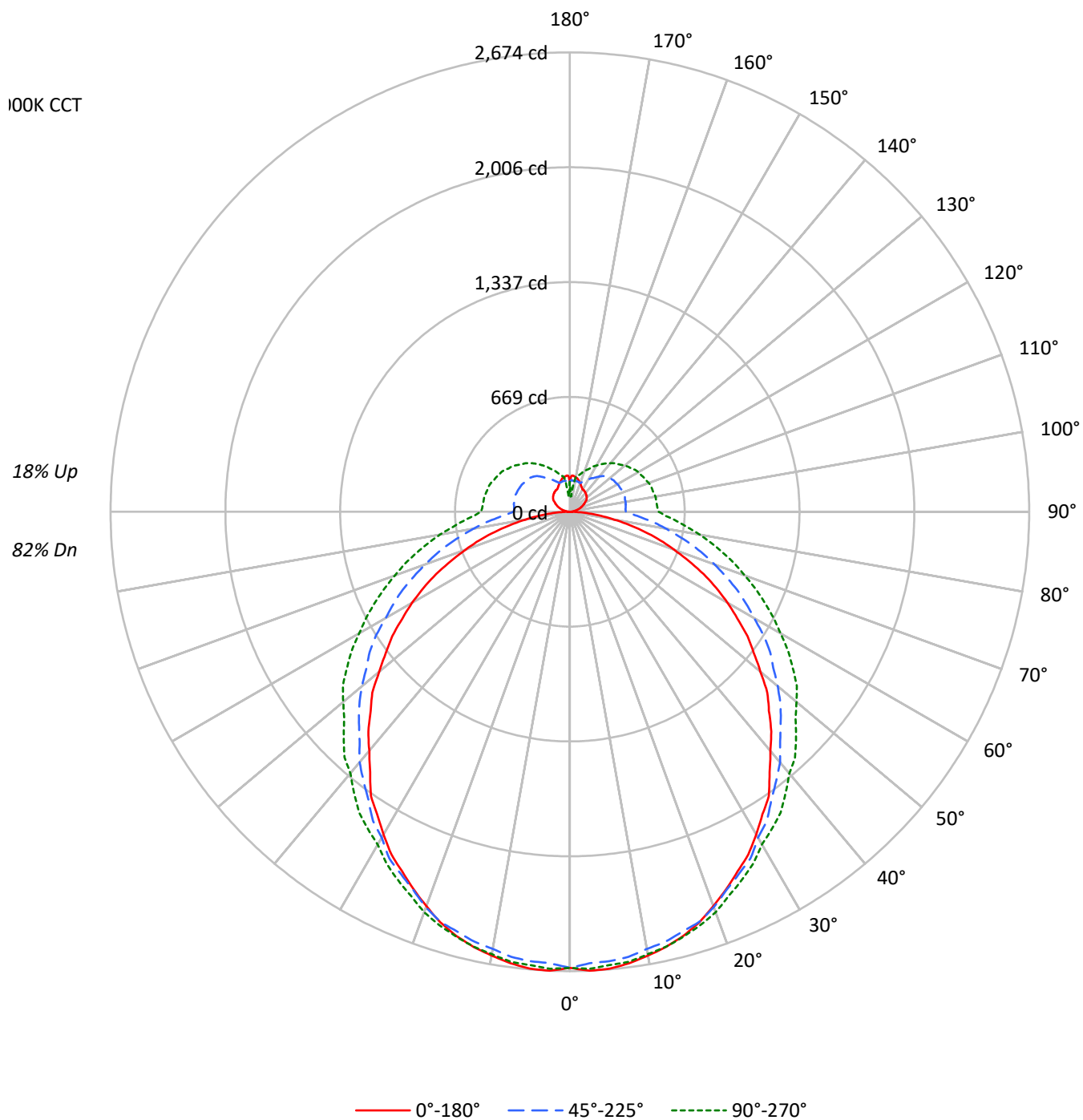
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9979.0 lumens
Efficiency: N/A
Efficacy: 132.2 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): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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	0
RCR																				
0	115	115	115	115	110	110	110	110	101	101	101		93	93	93		86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80		80	77	74		73	71	69	66
2	93	85	77	71	89	81	75	69	75	70	65		69	65	61		63	60	57	54
3	85	74	66	59	81	71	63	57	66	59	54		60	55	51		56	51	48	45
4	78	65	56	49	74	63	55	48	58	51	46		54	48	43		50	45	41	38
5	71	58	49	42	68	56	48	41	52	45	39		48	42	37		44	39	35	33
6	66	52	43	37	63	50	42	36	47	40	34		43	37	33		40	35	31	28
7	61	47	38	32	58	46	37	32	42	35	30		39	33	29		37	31	27	25
8	56	43	34	29	54	42	34	28	39	32	27		36	30	26		34	28	24	22
9	53	39	31	26	50	38	30	25	36	29	24		33	27	23		31	26	22	20
10	49	36	28	23	47	35	28	23	33	26	22		31	25	21		29	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18885	18885	18885
5°	18981	18084	18052
10°	18779	17367	17227
15°	18564	16734	16442
20°	18150	16067	15660
25°	17704	15250	14798
30°	17299	14453	13961
35°	16922	13693	13422
40°	16162	13040	12644
45°	15670	12264	12102
50°	15092	11611	11532
55°	14569	10990	11022
60°	13837	10144	10338
65°	13000	9459	9694
70°	11749	8614	8994
75°	10411	7772	8328
80°	8243	6852	7653
85°	5689	5961	7023

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 15670 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.4	2.5
10°-20°	718.0	7.2
20°-30°	1078.5	10.8
30°-40°	1292.6	13.0
40°-50°	1355.2	13.6
50°-60°	1271.3	12.7
60°-70°	1055.9	10.6
70°-80°	755.0	7.6
80°-90°	447.7	4.5
90°-100°	328.5	3.3
100°-110°	323.6	3.2
110°-120°	301.9	3.0
120°-130°	264.9	2.7
130°-140°	213.3	2.1
140°-150°	153.1	1.5
150°-160°	97.3	1.0
160°-170°	53.9	0.5
170°-180°	17.0	0.2
0°-30°	2047.9	20.5
0°-40°	3340.5	33.5
0°-60°	5966.9	59.8
0°-90°	8225.6	82.4
90°-120°	953.9	9.6
90°-150°	1585.2	15.9
90°-180°	1753.0	17.6
0°-180°	9979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2654	2654	2654	2654	2654	
5°	2670	2664	2626	2639	2649	253
15°	2556	2540	2530	2548	2560	719
25°	2310	2331	2327	2354	2367	1066
35°	2020	2027	2045	2104	2138	1254
45°	1639	1685	1736	1850	1862	1268
55°	1262	1303	1423	1539	1584	1123
65°	859	924	1073	1217	1252	846
75°	453	557	731	882	922	478
85°	111	244	427	571	625	122
90°	4	148	326	465	516	9
95°	13	155	326	460	508	13
105°	45	171	331	454	496	48
115°	82	185	324	432	474	81
125°	117	190	314	400	437	103
135°	135	183	292	362	392	105
145°	147	169	240	319	341	92
155°	161	169	196	247	279	74
165°	192	186	180	179	224	54
175°	212	203	182	151	92	20
180°	175	175	175	175	175	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2654.3	2654.3	2654.3	2654.3	2654.3
2.5°	2674.1	2652.9	2630.3	2664.2	2662.8
5°	2669.8	2664.2	2626.1	2638.8	2648.7
7.5°	2650.1	2636.0	2613.4	2644.5	2641.6
10°	2623.3	2606.4	2583.8	2602.1	2614.8
12.5°	2593.7	2579.6	2564.1	2583.8	2592.3
15°	2555.6	2540.1	2530.2	2548.5	2559.8
17.5°	2506.2	2502.0	2503.4	2504.8	2523.2
20°	2442.8	2445.6	2449.8	2475.2	2480.8
22.5°	2377.9	2393.4	2382.1	2421.6	2418.8
25°	2310.2	2331.4	2327.1	2353.9	2366.6
27.5°	2249.5	2251.0	2276.3	2314.4	2310.2
30°	2169.2	2193.1	2190.3	2236.9	2236.9
32.5°	2087.4	2122.6	2133.9	2174.8	2188.9
35°	2019.7	2026.7	2045.0	2104.3	2138.1
37.5°	1909.6	1943.5	1973.1	2050.7	2063.4
40°	1816.6	1850.4	1904.0	1994.3	1987.2
42.5°	1736.2	1771.4	1810.9	1915.3	1940.7
45°	1638.9	1685.4	1736.2	1850.4	1861.7
47.5°	1559.9	1596.5	1662.8	1767.2	1781.3
50°	1448.5	1507.7	1579.6	1700.9	1722.1
52.5°	1349.7	1400.5	1492.2	1617.7	1665.7
55°	1262.3	1303.2	1423.1	1538.7	1583.9
57.5°	1155.1	1211.5	1337.0	1465.4	1506.3
60°	1060.6	1115.6	1236.9	1383.6	1416.0
62.5°	960.5	1025.3	1156.5	1299.0	1335.6
65°	858.9	923.8	1073.3	1217.2	1252.4
67.5°	748.9	829.3	981.6	1131.1	1167.8
70°	646.0	733.4	897.0	1046.5	1083.2
72.5°	552.9	647.4	813.8	967.5	1007.0
75°	452.7	557.1	730.6	881.5	922.4
77.5°	355.4	468.2	644.5	796.9	844.8
80°	260.9	385.0	569.8	716.5	767.2
82.5°	183.3	310.3	500.7	644.5	691.1
85°	111.4	244.0	427.3	571.2	624.8
87.5°	49.4	189.0	369.5	512.0	559.9
90°	4.2	148.1	325.8	465.4	516.2
92.5°	8.5	150.9	324.4	459.8	510.6
95°	12.7	155.1	325.8	459.8	507.7
97.5°	18.3	160.8	328.6	459.8	506.3
100°	26.8	163.6	330.0	459.8	506.3
102.5°	35.3	167.8	328.6	452.7	500.7
105°	45.1	170.7	331.4	454.1	496.5
107.5°	55.0	173.5	331.4	447.1	495.0
110°	64.9	177.7	328.6	442.9	489.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	73.3	181.9	327.2	434.4	479.5
115°	81.8	184.8	324.4	431.6	473.9
117.5°	90.3	186.2	323.0	424.5	465.4
120°	97.3	189.0	320.2	416.1	461.2
122.5°	105.8	190.4	315.9	407.6	452.7
125°	117.1	190.4	314.5	400.5	437.2
127.5°	122.7	191.8	308.9	392.1	430.2
130°	128.3	187.6	306.1	382.2	418.9
132.5°	132.6	186.2	299.0	372.3	404.8
135°	135.4	183.3	291.9	362.5	392.1
137.5°	139.6	179.1	282.1	355.4	383.6
140°	142.4	176.3	268.0	341.3	369.5
142.5°	145.3	172.1	253.9	328.6	355.4
145°	146.7	169.2	239.8	318.7	341.3
147.5°	150.9	165.0	231.3	306.1	325.8
150°	149.5	162.2	218.6	290.5	310.3
152.5°	153.7	166.4	207.3	269.4	297.6
155°	160.8	169.2	196.0	246.8	279.3
157.5°	167.8	174.9	187.6	227.1	265.2
160°	177.7	177.7	177.7	211.6	253.9
162.5°	183.3	183.3	179.1	193.2	238.4
165°	191.8	186.2	180.5	179.1	224.2
167.5°	200.3	189.0	183.3	173.5	214.4
170°	201.7	193.2	181.9	163.6	207.3
172.5°	207.3	197.5	180.5	155.1	160.8
175°	211.6	203.1	181.9	150.9	91.7
177.5°	210.1	203.1	186.2	150.9	88.9
180°	174.9	174.9	174.9	174.9	174.9

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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	17.93	19.26	18.54	19.89	20.60	20.45	21.77	21.06	22.40	23.11
	3H	19.37	20.57	19.99	21.21	21.96	22.81	24.02	23.43	24.65	25.40
	4H	19.83	20.97	20.47	21.62	22.39	23.93	25.07	24.57	25.72	26.48
	6H	20.10	21.16	20.75	21.82	22.60	25.04	26.10	25.70	26.76	27.54
	8H	20.15	21.17	20.82	21.85	22.63	25.59	26.60	26.26	27.29	28.07
	12H	20.17	21.14	20.84	21.81	22.63	26.17	27.14	26.85	27.82	28.63
4H	2H	18.81	19.95	19.45	20.60	21.36	20.79	21.93	21.44	22.58	23.35
	3H	20.46	21.43	21.12	22.12	22.90	23.37	24.34	24.03	25.03	25.81
	4H	21.04	21.93	21.72	22.62	23.43	24.65	25.53	25.32	26.23	27.04
	6H	21.42	22.20	22.11	22.92	23.74	25.93	26.71	26.63	27.43	28.25
	8H	21.51	22.24	22.21	22.96	23.79	26.58	27.31	27.28	28.03	28.86
	12H	21.55	22.22	22.27	22.96	23.80	27.27	27.94	27.99	28.67	29.51
8H	4H	21.67	22.40	22.37	23.12	23.95	24.80	25.53	25.50	26.25	27.08
	6H	22.20	22.82	22.93	23.58	24.41	26.23	26.85	26.96	27.61	28.45
	8H	22.37	22.93	23.11	23.69	24.54	27.00	27.56	27.74	28.32	29.17
	12H	22.48	22.97	23.22	23.72	24.63	27.85	28.35	28.60	29.10	30.01
12H	4H	21.82	22.49	22.54	23.23	24.07	24.79	25.46	25.51	26.20	27.04
	6H	22.45	23.01	23.19	23.76	24.61	26.25	26.81	26.99	27.57	28.42
	8H	22.69	23.19	23.44	23.94	24.85	27.07	27.57	27.82	28.32	29.23