

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: P893178

Luminaire Tested: 4MB-10HL-FLTU-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893178
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-L835
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 35
Light Source: -
Ballast/Driver: -

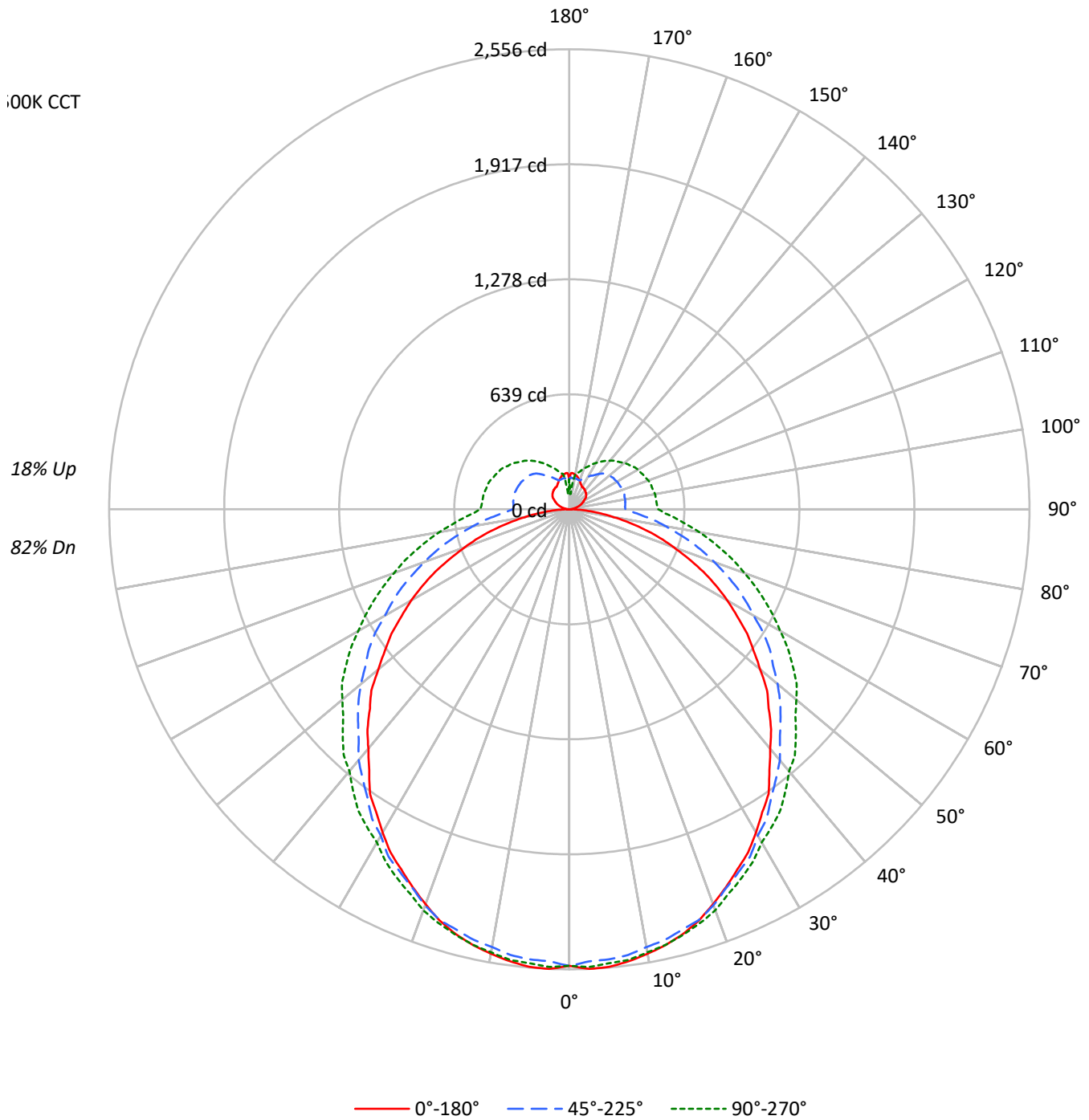
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9538.0 lumens
Efficiency: N/A
Efficacy: 126.3 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	50	30	10
RCR																				
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	82	
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	66	
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	54	
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	45	
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	38	
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	33	
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	28	
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	25	
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	22	
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	20	
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	18	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18051	18051	18051
5°	18143	17286	17254
10°	17950	16600	16466
15°	17744	15995	15715
20°	17348	15357	14969
25°	16922	14577	14144
30°	16534	13814	13344
35°	16174	13088	12828
40°	15448	12464	12085
45°	14977	11722	11567
50°	14424	11098	11022
55°	13925	10505	10535
60°	13226	9695	9881
65°	12427	9041	9266
70°	11228	8234	8596
75°	9951	7429	7959
80°	7879	6549	7315
85°	5439	5699	6713

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14977 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.3	2.5
10°-20°	686.2	7.2
20°-30°	1030.8	10.8
30°-40°	1235.5	13.0
40°-50°	1295.3	13.6
50°-60°	1215.1	12.7
60°-70°	1009.3	10.6
70°-80°	721.6	7.6
80°-90°	428.0	4.5
90°-100°	313.9	3.3
100°-110°	309.3	3.2
110°-120°	288.5	3.0
120°-130°	253.2	2.7
130°-140°	203.9	2.1
140°-150°	146.3	1.5
150°-160°	93.0	1.0
160°-170°	51.5	0.5
170°-180°	16.2	0.2
0°-30°	1957.4	20.5
0°-40°	3192.9	33.5
0°-60°	5703.2	59.8
0°-90°	7862.1	82.4
90°-120°	911.8	9.6
90°-150°	1515.2	15.9
90°-180°	1676.0	17.6
0°-180°	9538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2537	2537	2537	2537	2537	
5°	2552	2546	2510	2522	2532	242
15°	2443	2428	2418	2436	2447	688
25°	2208	2228	2224	2250	2262	1019
35°	1930	1937	1955	2011	2044	1198
45°	1566	1611	1659	1769	1779	1212
55°	1206	1246	1360	1471	1514	1073
65°	821	883	1026	1163	1197	809
75°	433	532	698	842	882	457
85°	106	233	408	546	597	117
90°	4	142	311	445	493	9
95°	12	148	311	440	485	13
105°	43	163	317	434	474	46
115°	78	177	310	412	453	77
125°	112	182	301	383	418	98
135°	129	175	279	346	375	100
145°	140	162	229	305	326	88
155°	154	162	187	236	267	71
165°	183	178	172	171	214	51
175°	202	194	174	144	88	19
180°	167	167	167	167	167	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2537.0	2537.0	2537.0	2537.0	2537.0
2.5°	2555.9	2535.7	2514.1	2546.5	2545.1
5°	2551.9	2546.5	2510.1	2522.2	2531.6
7.5°	2533.0	2519.5	2497.9	2527.6	2524.9
10°	2507.4	2491.2	2469.6	2487.1	2499.3
12.5°	2479.1	2465.6	2450.7	2469.6	2477.7
15°	2442.7	2427.8	2418.4	2435.9	2446.7
17.5°	2395.5	2391.4	2392.8	2394.1	2411.7
20°	2334.8	2337.5	2341.6	2365.8	2371.2
22.5°	2272.8	2287.6	2276.9	2314.6	2311.9
25°	2208.1	2228.3	2224.3	2249.9	2262.0
27.5°	2150.1	2151.5	2175.7	2212.1	2208.1
30°	2073.3	2096.2	2093.5	2138.0	2138.0
32.5°	1995.1	2028.8	2039.6	2078.7	2092.2
35°	1930.4	1937.1	1954.7	2011.3	2043.6
37.5°	1825.3	1857.6	1885.9	1960.1	1972.2
40°	1736.3	1768.6	1819.9	1906.1	1899.4
42.5°	1659.4	1693.1	1730.9	1830.6	1854.9
45°	1566.4	1610.9	1659.4	1768.6	1779.4
47.5°	1490.9	1526.0	1589.3	1689.1	1702.6
50°	1384.4	1441.1	1509.8	1625.7	1646.0
52.5°	1290.1	1338.6	1426.2	1546.2	1592.0
55°	1206.5	1245.6	1360.2	1470.7	1513.9
57.5°	1104.1	1158.0	1277.9	1400.6	1439.7
60°	1013.7	1066.3	1182.2	1322.4	1353.4
62.5°	918.0	980.0	1105.4	1241.6	1276.6
65°	821.0	883.0	1025.9	1163.4	1197.1
67.5°	715.8	792.7	938.2	1081.1	1116.2
70°	617.4	701.0	857.4	1000.3	1035.3
72.5°	528.4	618.8	777.8	924.8	962.5
75°	432.7	532.5	698.3	842.5	881.6
77.5°	339.7	447.6	616.1	761.6	807.5
80°	249.4	368.0	544.6	684.8	733.3
82.5°	175.2	296.6	478.6	616.1	660.5
85°	106.5	233.2	408.5	546.0	597.2
87.5°	47.2	180.6	353.2	489.3	535.2
90°	4.0	141.5	311.4	444.9	493.4
92.5°	8.1	144.2	310.1	439.5	488.0
95°	12.1	148.3	311.4	439.5	485.3
97.5°	17.5	153.7	314.1	439.5	483.9
100°	25.6	156.4	315.4	439.5	483.9
102.5°	33.7	160.4	314.1	432.7	478.6
105°	43.1	163.1	316.8	434.1	474.5
107.5°	52.6	165.8	316.8	427.3	473.2
110°	62.0	169.9	314.1	423.3	467.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	70.1	173.9	312.7	415.2	458.3
115°	78.2	176.6	310.1	412.5	452.9
117.5°	86.3	177.9	308.7	405.8	444.9
120°	93.0	180.6	306.0	397.7	440.8
122.5°	101.1	182.0	302.0	389.6	432.7
125°	111.9	182.0	300.6	382.8	417.9
127.5°	117.3	183.3	295.2	374.8	411.2
130°	122.7	179.3	292.5	365.3	400.4
132.5°	126.7	177.9	285.8	355.9	386.9
135°	129.4	175.2	279.0	346.4	374.8
137.5°	133.5	171.2	269.6	339.7	366.7
140°	136.2	168.5	256.1	326.2	353.2
142.5°	138.8	164.5	242.6	314.1	339.7
145°	140.2	161.8	229.2	304.7	326.2
147.5°	144.2	157.7	221.1	292.5	311.4
150°	142.9	155.0	208.9	277.7	296.6
152.5°	146.9	159.1	198.2	257.5	284.4
155°	153.7	161.8	187.4	235.9	266.9
157.5°	160.4	167.2	179.3	217.0	253.4
160°	169.9	169.9	169.9	202.2	242.6
162.5°	175.2	175.2	171.2	184.7	227.8
165°	183.3	177.9	172.5	171.2	214.3
167.5°	191.4	180.6	175.2	165.8	204.9
170°	192.8	184.7	173.9	156.4	198.2
172.5°	198.2	188.7	172.5	148.3	153.7
175°	202.2	194.1	173.9	144.2	87.6
177.5°	200.9	194.1	177.9	144.2	84.9
180°	167.2	167.2	167.2	167.2	167.2



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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	17.78	19.10	18.39	19.73	20.44	20.29	21.61	20.90	22.24	22.96
	3H	19.21	20.41	19.83	21.05	21.80	22.65	23.86	23.28	24.50	25.25
	4H	19.67	20.82	20.32	21.47	22.23	23.77	24.91	24.41	25.56	26.32
	6H	19.94	21.00	20.60	21.66	22.44	24.88	25.94	25.54	26.60	27.38
	8H	19.99	21.01	20.66	21.69	22.47	25.43	26.45	26.10	27.13	27.91
	12H	20.01	20.98	20.68	21.66	22.47	26.02	26.99	26.69	27.66	28.47
4H	2H	18.65	19.79	19.29	20.44	21.20	20.63	21.78	21.28	22.43	23.19
	3H	20.30	21.27	20.96	21.96	22.74	23.21	24.18	23.87	24.87	25.65
	4H	20.88	21.77	21.56	22.47	23.28	24.49	25.38	25.16	26.07	26.88
	6H	21.26	22.04	21.95	22.76	23.58	25.78	26.56	26.47	27.27	28.10
	8H	21.35	22.09	22.05	22.80	23.63	26.42	27.16	27.12	27.87	28.70
	12H	21.39	22.06	22.11	22.80	23.64	27.11	27.78	27.83	28.52	29.36
8H	4H	21.51	22.24	22.21	22.96	23.79	24.64	25.38	25.34	26.09	26.93
	6H	22.04	22.66	22.77	23.42	24.26	26.08	26.70	26.81	27.45	28.29
	8H	22.21	22.77	22.95	23.53	24.38	26.84	27.40	27.59	28.16	29.01
	12H	22.32	22.81	23.06	23.56	24.47	27.69	28.19	28.44	28.94	29.85
12H	4H	21.67	22.33	22.39	23.07	23.91	24.63	25.30	25.36	26.04	26.88
	6H	22.29	22.85	23.03	23.61	24.46	26.10	26.65	26.84	27.41	28.26
	8H	22.54	23.03	23.28	23.78	24.69	26.92	27.41	27.66	28.16	29.07