

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: P893169

Luminaire Tested: 4MB-10HL-FLT-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893169
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-FLT-UNV-L830
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

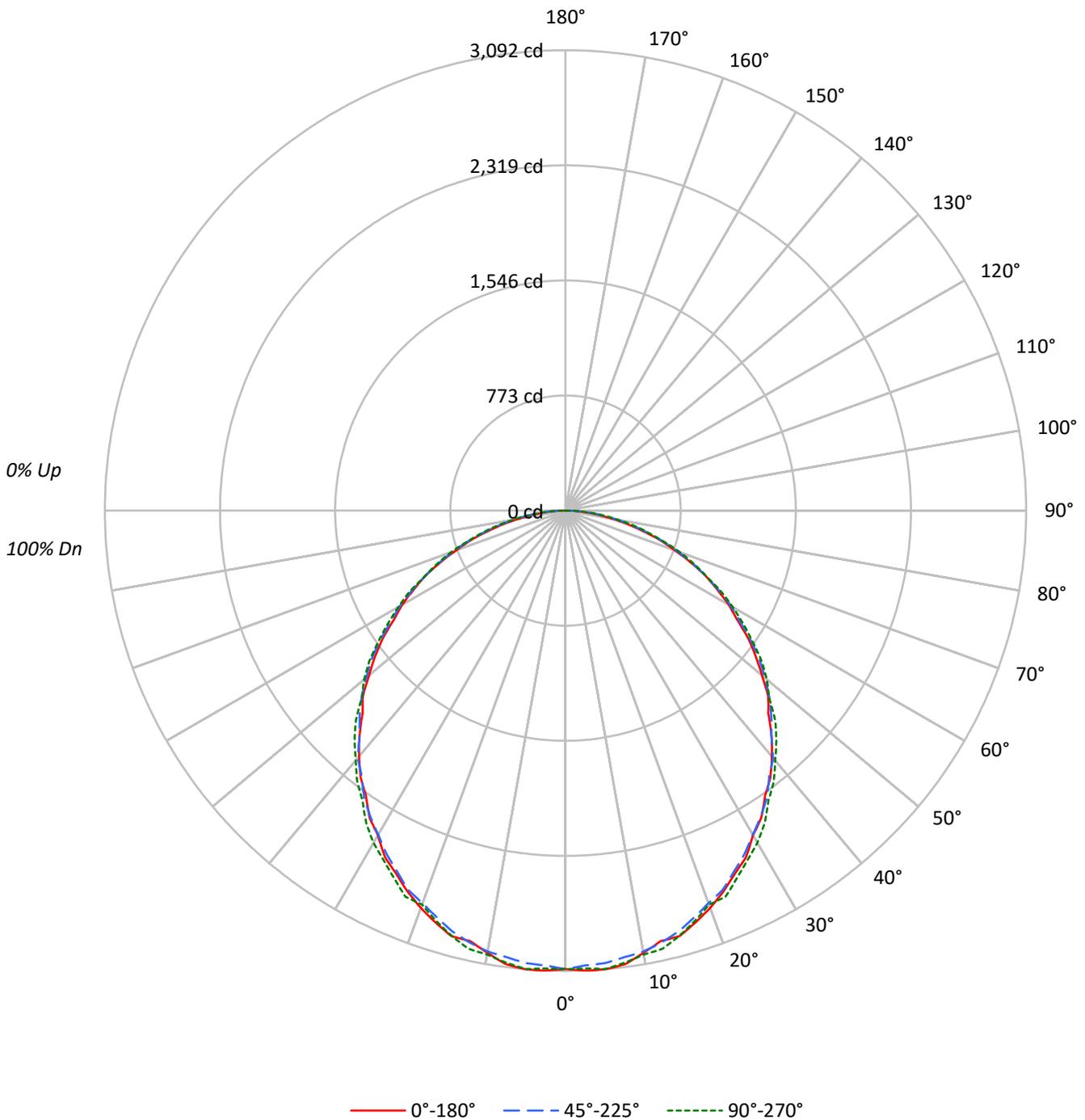
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8532.0 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: 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				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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	69	65	61	61	61	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	45	45	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	40	40	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	35	35	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	32	32	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21908	21908	21908
5°	22087	21793	22069
10°	21786	21728	21872
15°	21790	21565	21770
20°	21502	21240	21321
25°	21114	20999	21375
30°	20686	20653	21167
35°	20287	20460	20634
40°	20014	20137	20335
45°	19367	19660	20023
50°	19052	19332	19522
55°	18578	18809	19008
60°	18000	18266	18435
65°	17467	17534	17534
70°	16243	16630	17046
75°	14955	15540	15870
80°	13189	14333	14824
85°	11837	13249	14221

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 20023 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.4	3.4
10°-20°	830.6	9.7
20°-30°	1245.9	14.6
30°-40°	1479.7	17.3
40°-50°	1515.0	17.8
50°-60°	1357.3	15.9
60°-70°	1031.1	12.1
70°-80°	600.6	7.0
80°-90°	180.4	2.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2367.9	27.8
0°-40°	3847.6	45.1
0°-60°	6719.9	78.8
0°-90°	8532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3079	3079	3079	3079	3079	
5°	3092	3081	3051	3070	3090	293
15°	2958	2978	2928	2940	2956	830
25°	2690	2713	2675	2710	2723	1241
35°	2336	2388	2356	2365	2376	1468
45°	1925	1973	1954	1970	1990	1497
55°	1498	1520	1516	1534	1532	1334
65°	1038	1038	1042	1055	1042	1019
75°	544	553	565	583	577	579
85°	145	148	162	173	174	162
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3079.2	3079.2	3079.2	3079.2	3079.2
2.5°	3092.5	3077.9	3058.0	3064.6	3077.9
5°	3092.5	3080.6	3051.3	3069.9	3089.9
7.5°	3072.6	3088.5	3024.7	3024.7	3061.9
10°	3015.4	3046.0	3007.4	3003.4	3027.4
12.5°	2960.9	3016.7	2971.5	2984.8	3014.1
15°	2958.2	2978.1	2927.6	2939.6	2955.5
17.5°	2901.0	2920.9	2866.4	2889.0	2889.0
20°	2839.8	2843.8	2805.2	2854.4	2815.9
22.5°	2769.3	2810.5	2757.3	2773.3	2806.6
25°	2689.5	2713.4	2674.9	2709.5	2722.8
27.5°	2624.3	2653.6	2600.4	2641.6	2645.6
30°	2517.9	2549.8	2513.9	2540.5	2576.4
32.5°	2446.1	2456.7	2438.1	2478.0	2488.7
35°	2335.7	2387.6	2355.6	2365.0	2375.6
37.5°	2258.5	2274.5	2246.6	2278.5	2295.8
40°	2154.8	2178.7	2168.1	2173.4	2189.4
42.5°	2047.1	2072.3	2044.4	2083.0	2094.9
45°	1924.7	1972.6	1953.9	1969.9	1989.9
47.5°	1844.9	1860.8	1855.5	1864.8	1851.5
50°	1721.2	1737.1	1746.5	1758.4	1763.7
52.5°	1610.8	1622.7	1640.0	1646.7	1658.7
55°	1497.7	1520.3	1516.3	1533.6	1532.3
57.5°	1366.0	1399.3	1388.6	1413.9	1413.9
60°	1264.9	1270.3	1283.6	1295.5	1295.5
62.5°	1147.9	1154.5	1161.2	1171.8	1179.8
65°	1037.5	1037.5	1041.5	1054.8	1041.5
67.5°	909.8	904.5	917.8	933.7	932.4
70°	780.8	787.4	799.4	819.4	819.4
72.5°	670.4	670.4	683.7	694.3	693.0
75°	544.0	553.3	565.3	582.6	577.3
77.5°	431.0	437.6	457.6	473.5	474.9
80°	321.9	328.5	349.8	365.8	361.8
82.5°	224.8	234.1	254.1	266.0	264.7
85°	145.0	147.6	162.3	172.9	174.2
87.5°	66.5	71.8	82.5	86.5	86.5
90°	0.0	0.0	0.0	0.0	0.0



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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	22.25	23.89	22.62	24.21	24.52	22.36	24.00	22.72	24.31	24.63
	3H	24.03	25.52	24.41	25.84	26.20	24.20	25.68	24.57	26.01	26.37
	4H	24.70	26.10	25.10	26.44	26.82	24.89	26.29	25.29	26.64	27.01
	6H	25.17	26.47	25.58	26.83	27.22	25.44	26.74	25.85	27.10	27.49
	8H	25.32	26.56	25.75	26.95	27.35	25.63	26.87	26.06	27.26	27.66
	12H	25.43	26.62	25.86	27.00	27.43	25.78	26.96	26.21	27.35	27.77
4H	2H	22.90	24.30	23.30	24.64	25.02	22.98	24.38	23.38	24.73	25.10
	3H	24.90	26.07	25.31	26.47	26.87	25.05	26.22	25.45	26.62	27.02
	4H	25.69	26.76	26.12	27.17	27.60	25.88	26.95	26.31	27.36	27.79
	6H	26.29	27.22	26.75	27.66	28.12	26.57	27.50	27.03	27.94	28.40
	8H	26.49	27.36	26.95	27.80	28.27	26.82	27.69	27.28	28.13	28.59
	12H	26.64	27.42	27.12	27.90	28.37	27.02	27.80	27.49	28.27	28.74
8H	4H	26.03	26.90	26.49	27.34	27.81	26.20	27.07	26.66	27.51	27.97
	6H	26.75	27.48	27.25	27.96	28.44	27.02	27.74	27.51	28.23	28.71
	8H	27.02	27.68	27.53	28.18	28.67	27.35	28.00	27.86	28.51	28.99
	12H	27.25	27.83	27.76	28.32	28.88	27.64	28.22	28.15	28.71	29.27
12H	4H	26.07	26.86	26.55	27.33	27.80	26.23	27.01	26.71	27.49	27.96
	6H	26.82	27.48	27.33	27.98	28.47	27.08	27.73	27.59	28.24	28.72
	8H	27.16	27.74	27.66	28.23	28.79	27.47	28.05	27.98	28.54	29.10