

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: P893197

Luminaire Tested: 4MB-10HL-LVRA-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893197
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-LVRA-UNV-L930
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

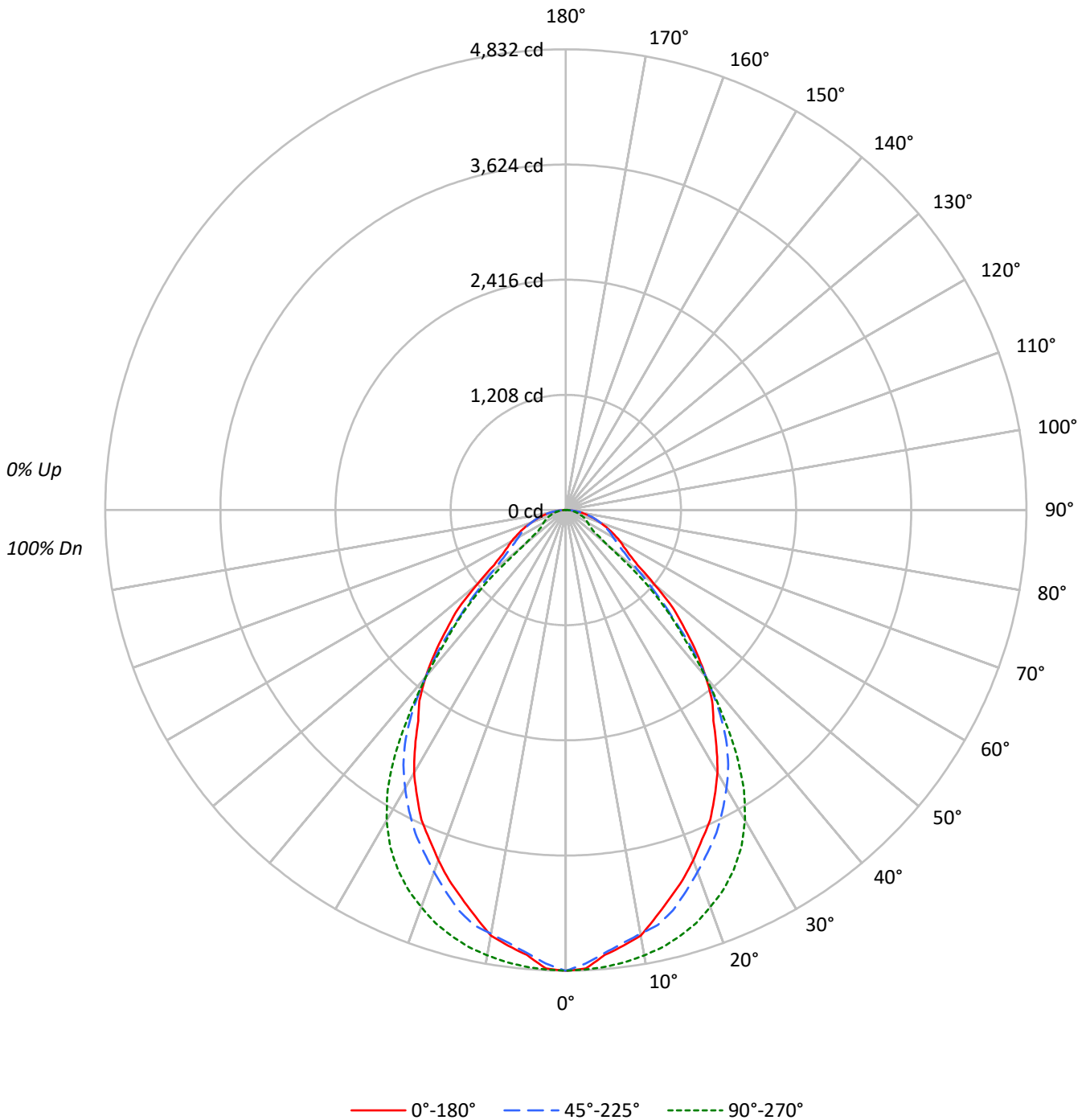
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7843.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12
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 (Ain): 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78	78	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69	69	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62	62	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55	55	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50	50	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45	45	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	41	41	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38	38	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	35	35	35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34383	34383	34383
5°	33456	33305	34346
10°	32745	32601	34266
15°	31055	32009	34074
20°	29583	30583	33554
25°	28140	29343	32697
30°	26144	27700	30872
35°	23443	25455	27078
40°	21239	21285	21170
45°	17759	15728	15340
50°	13414	11070	6273
55°	10089	8853	3955
60°	9376	8152	3811
65°	8722	8137	3817
70°	7980	7980	3757
75°	7568	7771	3629
80°	6990	7351	3725
85°	6098	6408	4065

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 18172 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	446.4	5.7
10°-20°	1230.0	15.7
20°-30°	1744.1	22.2
30°-40°	1796.9	22.9
40°-50°	1255.0	16.0
50°-60°	602.2	7.7
60°-70°	422.5	5.4
70°-80°	264.2	3.4
80°-90°	81.7	1.0
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°	3420.5	43.6
0°-40°	5217.4	66.5
0°-60°	7074.6	90.2
0°-90°	7843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4832	4832	4832	4832	4832	
5°	4684	4678	4663	4785	4809	443
15°	4216	4247	4346	4470	4626	1187
25°	3584	3621	3738	3991	4165	1639
35°	2699	2772	2931	2992	3118	1701
45°	1765	1806	1563	1483	1524	1360
55°	813	774	714	457	319	762
65°	518	484	483	367	227	513
75°	275	272	283	244	132	290
85°	75	75	78	77	50	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4832.5	4832.5	4832.5	4832.5	4832.5
2.5°	4813.8	4798.9	4762.8	4828.8	4823.8
5°	4684.3	4678.1	4663.1	4785.2	4808.9
7.5°	4610.8	4598.4	4580.9	4715.4	4781.5
10°	4532.4	4547.3	4512.4	4635.7	4742.8
12.5°	4370.4	4410.3	4457.6	4553.5	4695.5
15°	4216.0	4247.1	4345.5	4470.1	4625.8
17.5°	4071.5	4107.6	4192.3	4379.2	4544.8
20°	3907.1	3956.9	4039.1	4278.3	4431.5
22.5°	3737.7	3783.8	3887.2	4143.8	4314.4
25°	3584.5	3620.7	3737.7	3990.6	4164.9
27.5°	3381.5	3448.8	3559.6	3803.7	3986.8
30°	3182.2	3239.5	3371.6	3577.1	3757.7
32.5°	2941.9	3025.3	3171.0	3328.0	3478.7
35°	2699.0	2772.5	2930.7	2991.7	3117.5
37.5°	2522.1	2542.1	2631.7	2624.3	2695.3
40°	2286.7	2326.6	2291.7	2198.3	2279.3
42.5°	2032.6	2080.0	1939.2	1830.9	1859.5
45°	1764.9	1806.0	1563.1	1483.4	1524.5
47.5°	1533.2	1529.5	1260.4	1206.9	1149.6
50°	1211.9	1251.7	1000.1	900.5	566.7
52.5°	946.6	961.5	824.5	575.4	372.4
55°	813.3	773.5	713.7	457.1	318.8
57.5°	722.4	672.6	632.7	424.7	291.4
60°	658.9	602.8	572.9	403.5	267.8
62.5°	586.6	543.0	531.8	384.9	246.6
65°	518.1	484.5	483.3	367.4	226.7
67.5°	449.6	430.9	435.9	346.2	204.3
70°	383.6	379.9	383.6	318.8	180.6
72.5°	327.6	323.8	333.8	284.0	154.4
75°	275.3	271.5	282.7	244.1	132.0
77.5°	219.2	221.7	229.2	203.0	110.8
80°	170.6	170.6	179.4	159.4	90.9
82.5°	122.1	123.3	128.3	117.1	71.0
85°	74.7	74.7	78.5	77.2	49.8
87.5°	24.9	28.6	33.6	36.1	24.9
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	17.94	19.29	18.30	19.60	19.92	14.27	15.62	14.63	15.94	16.25
	3H	19.68	20.88	20.06	21.21	21.58	16.25	17.45	16.63	17.78	18.15
	4H	20.35	21.48	20.75	21.83	22.21	16.95	18.08	17.35	18.43	18.81
	6H	20.85	21.89	21.27	22.26	22.66	17.47	18.51	17.89	18.88	19.27
	8H	21.03	22.01	21.46	22.40	22.81	17.66	18.64	18.09	19.03	19.44
	12H	21.14	22.08	21.57	22.46	22.89	17.80	18.74	18.23	19.12	19.55
4H	2H	18.47	19.60	18.87	19.95	20.33	15.89	17.02	16.29	17.37	17.75
	3H	20.45	21.38	20.86	21.78	22.18	18.07	19.00	18.48	19.40	19.81
	4H	21.25	22.08	21.68	22.50	22.94	18.95	19.78	19.38	20.20	20.65
	6H	21.89	22.61	22.35	23.06	23.52	19.59	20.32	20.05	20.76	21.23
	8H	22.11	22.79	22.58	23.23	23.70	19.80	20.48	20.27	20.92	21.39
	12H	22.26	22.86	22.75	23.35	23.82	19.96	20.56	20.44	21.04	21.51
8H	4H	21.53	22.21	22.00	22.65	23.12	19.60	20.28	20.07	20.72	21.19
	6H	22.31	22.87	22.82	23.37	23.85	20.46	21.02	20.96	21.51	21.99
	8H	22.62	23.12	23.14	23.63	24.12	20.79	21.29	21.31	21.80	22.29
	12H	22.85	23.29	23.36	23.79	24.36	21.05	21.49	21.56	21.99	22.56
12H	4H	21.55	22.15	22.03	22.63	23.10	19.67	20.27	20.16	20.75	21.23
	6H	22.37	22.87	22.89	23.38	23.87	20.60	21.10	21.12	21.61	22.10
	8H	22.73	23.17	23.24	23.67	24.24	21.01	21.45	21.52	21.95	22.51