

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: P893199

Luminaire Tested: 4MB-10HL-LVRA-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893199
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-L940
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

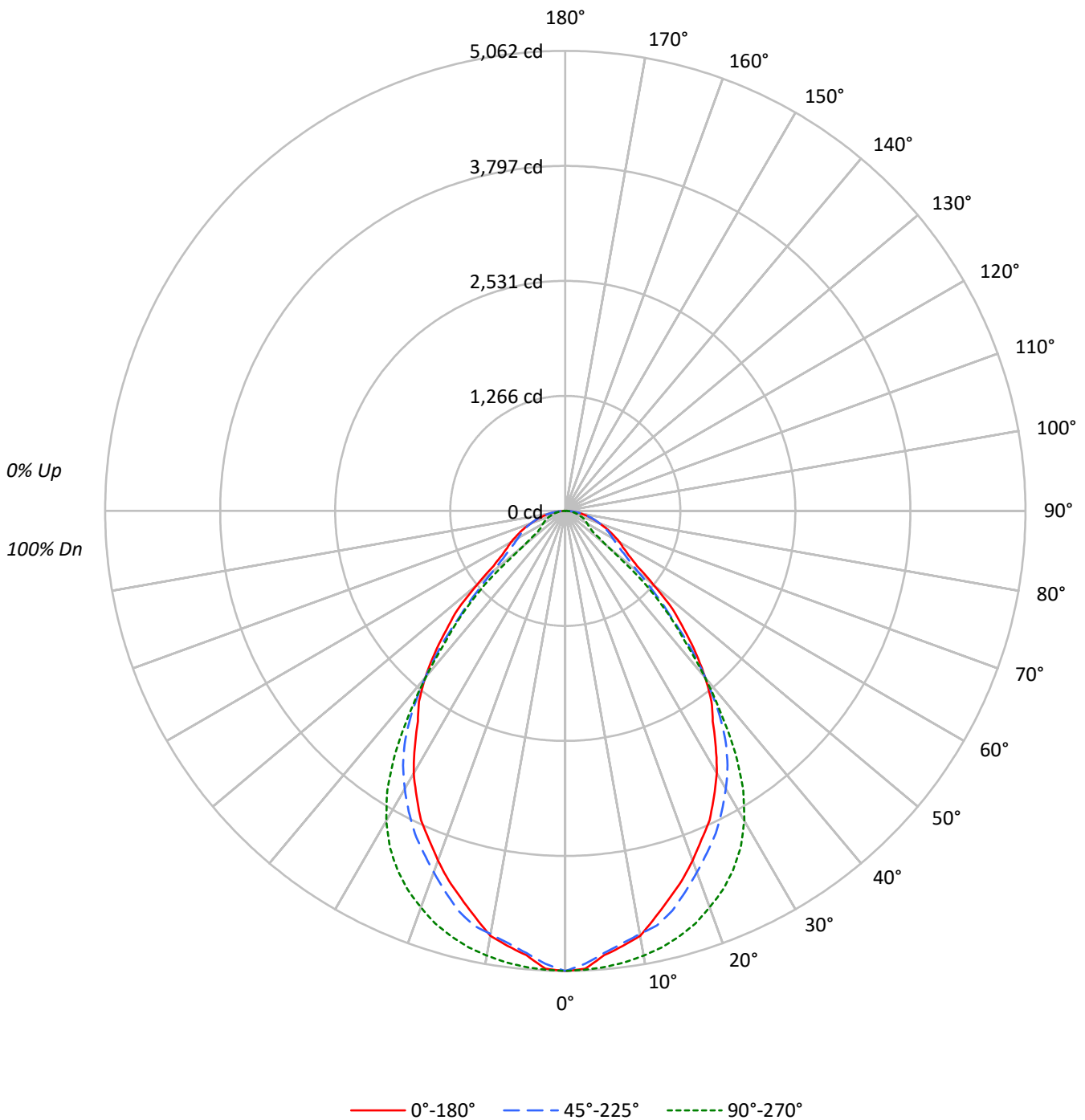
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8216.0 lumens
Efficiency: N/A
Efficacy: 108.8 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 (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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	88	
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	78	
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	69	
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	62	
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	55	
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	50	
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	45	
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	41	
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	38	
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	35	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	36018	36018	36018
5°	35047	34889	35979
10°	34302	34151	35895
15°	32532	33531	35694
20°	30990	32037	35149
25°	29479	30739	34252
30°	27388	29017	32340
35°	24557	26665	28365
40°	22249	22298	22177
45°	18603	16476	16069
50°	14052	11597	6572
55°	10569	9274	4143
60°	9822	8541	3992
65°	9138	8522	3998
70°	8361	8361	3936
75°	7925	8143	3802
80°	7322	7699	3901
85°	6392	6710	4261

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 19037 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.6	5.7
10°-20°	1288.5	15.7
20°-30°	1827.1	22.2
30°-40°	1882.3	22.9
40°-50°	1314.7	16.0
50°-60°	630.9	7.7
60°-70°	442.6	5.4
70°-80°	276.7	3.4
80°-90°	85.6	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°	3583.2	43.6
0°-40°	5465.5	66.5
0°-60°	7411.1	90.2
0°-90°	8216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8216.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5062	5062	5062	5062	5062	
5°	4907	4901	4885	5013	5038	464
15°	4416	4449	4552	4683	4846	1244
25°	3755	3793	3916	4180	4363	1717
35°	2827	2904	3070	3134	3266	1782
45°	1849	1892	1637	1554	1597	1424
55°	852	810	748	479	334	798
65°	543	508	506	385	238	538
75°	288	284	296	256	138	304
85°	78	78	82	81	52	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5062.3	5062.3	5062.3	5062.3	5062.3
2.5°	5042.8	5027.1	4989.3	5058.4	5053.2
5°	4907.1	4900.6	4884.9	5012.8	5037.6
7.5°	4830.1	4817.1	4798.8	4939.7	5008.9
10°	4747.9	4763.6	4727.0	4856.2	4968.4
12.5°	4578.3	4620.0	4669.6	4770.1	4918.8
15°	4416.5	4449.1	4552.2	4682.7	4845.8
17.5°	4265.2	4303.0	4391.7	4587.4	4761.0
20°	4092.9	4145.1	4231.2	4481.7	4642.2
22.5°	3915.5	3963.8	4072.1	4340.8	4519.6
25°	3755.0	3792.8	3915.5	4180.4	4363.0
27.5°	3542.3	3612.8	3728.9	3984.6	4176.4
30°	3333.6	3393.6	3531.9	3747.2	3936.4
32.5°	3081.8	3169.2	3321.8	3486.2	3644.1
35°	2827.3	2904.3	3070.0	3134.0	3265.7
37.5°	2642.1	2663.0	2756.9	2749.1	2823.4
40°	2395.5	2437.2	2400.7	2302.8	2387.7
42.5°	2129.3	2178.9	2031.5	1918.0	1948.0
45°	1848.8	1891.9	1637.4	1553.9	1597.0
47.5°	1606.1	1602.2	1320.4	1264.3	1204.3
50°	1269.5	1311.3	1047.7	943.3	593.7
52.5°	991.6	1007.3	863.7	602.8	390.1
55°	852.0	810.2	747.6	478.8	334.0
57.5°	756.7	704.6	662.8	444.9	305.3
60°	690.2	631.5	600.2	422.7	280.5
62.5°	614.5	568.9	557.1	403.2	258.3
65°	542.8	507.5	506.2	384.9	237.5
67.5°	471.0	451.4	456.7	362.7	214.0
70°	401.9	397.9	401.9	334.0	189.2
72.5°	343.1	339.2	349.7	297.5	161.8
75°	288.3	284.4	296.2	255.7	138.3
77.5°	229.6	232.2	240.1	212.7	116.1
80°	178.7	178.7	187.9	167.0	95.2
82.5°	127.9	129.2	134.4	122.6	74.4
85°	78.3	78.3	82.2	80.9	52.2
87.5°	26.1	30.0	35.2	37.8	26.1
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	18.10	19.45	18.46	19.77	20.08	14.43	15.78	14.80	16.10	16.41
	3H	19.84	21.04	20.22	21.37	21.74	16.41	17.61	16.79	17.94	18.31
	4H	20.51	21.64	20.91	21.99	22.37	17.11	18.24	17.51	18.59	18.97
	6H	21.02	22.05	21.43	22.42	22.82	17.63	18.67	18.05	19.04	19.44
	8H	21.19	22.17	21.62	22.56	22.97	17.82	18.81	18.25	19.20	19.60
	12H	21.30	22.24	21.73	22.62	23.05	17.96	18.90	18.39	19.28	19.71
4H	2H	18.63	19.76	19.03	20.11	20.49	16.05	17.18	16.46	17.53	17.91
	3H	20.61	21.54	21.02	21.94	22.34	18.23	19.16	18.64	19.56	19.97
	4H	21.41	22.24	21.84	22.66	23.10	19.11	19.95	19.55	20.36	20.81
	6H	22.05	22.78	22.51	23.22	23.69	19.75	20.48	20.22	20.92	21.39
	8H	22.27	22.95	22.74	23.39	23.86	19.96	20.64	20.43	21.09	21.56
	12H	22.43	23.03	22.91	23.51	23.98	20.12	20.72	20.61	21.20	21.68
8H	4H	21.69	22.37	22.16	22.82	23.29	19.76	20.44	20.23	20.88	21.35
	6H	22.48	23.03	22.98	23.53	24.01	20.62	21.18	21.12	21.67	22.15
	8H	22.78	23.28	23.30	23.79	24.28	20.95	21.45	21.47	21.96	22.45
	12H	23.01	23.45	23.53	23.95	24.52	21.21	21.65	21.73	22.15	22.72
12H	4H	21.71	22.31	22.19	22.79	23.26	19.83	20.43	20.32	20.91	21.39
	6H	22.53	23.03	23.05	23.54	24.03	20.76	21.26	21.28	21.77	22.26
	8H	22.89	23.33	23.41	23.83	24.40	21.17	21.61	21.69	22.11	22.68