

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: P893193

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

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893193  
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-L830  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

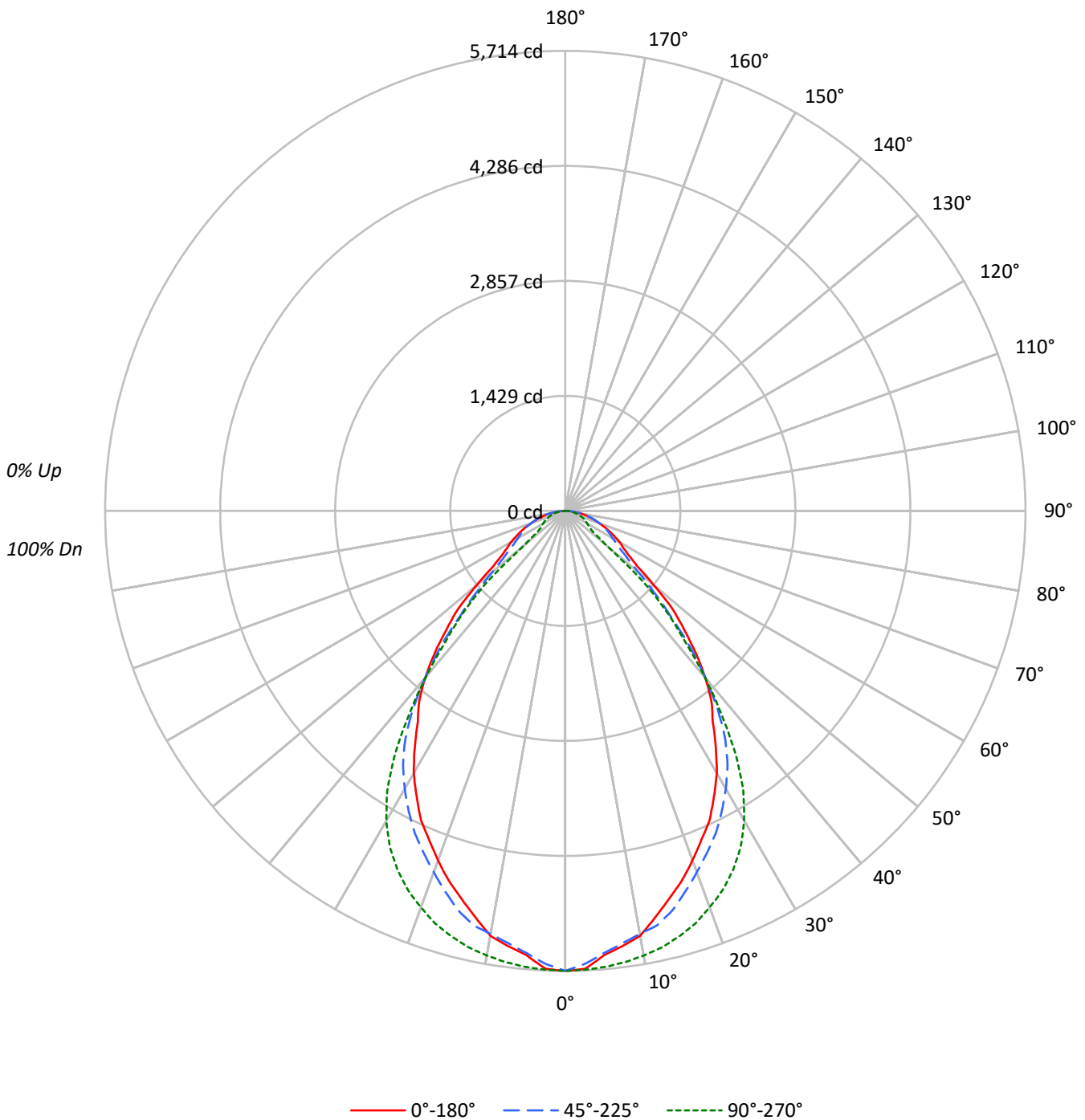
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9273.0 lumens  
Efficiency: N/A  
Efficacy: 122.8 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<sub>in</sub>): 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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	93	92	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	85	82	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	71	67	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	66	61	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	61	56	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	52	47	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	49	44	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	46	40	37	35

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	40652	40652	40652
5°	39556	39378	40608
10°	38715	38546	40514
15°	36717	37845	40286
20°	34977	36159	39672
25°	33271	34693	38658
30°	30912	32750	36501
35°	27717	30096	32015
40°	25112	25167	25029
45°	20997	18596	18136
50°	15860	13089	7416
55°	11928	10467	4677
60°	11085	9639	4505
65°	10313	9620	4512
70°	9436	9436	4441
75°	8945	9190	4291
80°	8264	8691	4405
85°	7217	7576	4808

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 21485 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	527.8	5.7
10°-20°	1454.2	15.7
20°-30°	2062.2	22.2
30°-40°	2124.5	22.9
40°-50°	1483.9	16.0
50°-60°	712.0	7.7
60°-70°	499.5	5.4
70°-80°	312.3	3.4
80°-90°	96.6	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°	4044.2	43.6
0°-40°	6168.6	66.5
0°-60°	8364.5	90.2
0°-90°	9273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9273.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5714	5714	5714	5714	5714	
5°	5538	5531	5513	5658	5686	524
15°	4985	5022	5138	5285	5469	1404
25°	4238	4281	4419	4718	4924	1938
35°	3191	3278	3465	3537	3686	2011
45°	2087	2135	1848	1754	1802	1608
55°	962	914	844	540	377	901
65°	613	573	571	434	268	607
75°	325	321	334	289	156	343
85°	88	88	93	91	59	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5713.6	5713.6	5713.6	5713.6	5713.6
2.5°	5691.5	5673.9	5631.2	5709.2	5703.3
5°	5538.4	5531.0	5513.4	5657.7	5685.6
7.5°	5451.5	5436.8	5416.2	5575.2	5653.3
10°	5358.7	5376.4	5335.2	5481.0	5607.6
12.5°	5167.3	5214.4	5270.4	5383.8	5551.6
15°	4984.7	5021.5	5137.8	5285.1	5469.2
17.5°	4813.9	4856.6	4956.7	5177.6	5373.5
20°	4619.5	4678.4	4775.6	5058.3	5239.5
22.5°	4419.2	4473.7	4595.9	4899.3	5101.0
25°	4238.1	4280.8	4419.2	4718.2	4924.3
27.5°	3998.1	4077.6	4208.6	4497.3	4713.7
30°	3762.5	3830.2	3986.3	4229.3	4442.8
32.5°	3478.2	3576.9	3749.2	3934.7	4112.9
35°	3191.1	3278.0	3465.0	3537.1	3685.9
37.5°	2982.0	3005.5	3111.6	3102.7	3186.7
40°	2703.7	2750.8	2709.6	2599.1	2694.8
42.5°	2403.3	2459.2	2292.8	2164.7	2198.6
45°	2086.7	2135.2	1848.1	1753.8	1802.4
47.5°	1812.8	1808.3	1490.3	1426.9	1359.2
50°	1432.8	1479.9	1182.5	1064.7	670.0
52.5°	1119.2	1136.8	974.9	680.3	440.3
55°	961.6	914.5	843.8	540.4	377.0
57.5°	854.1	795.2	748.1	502.2	344.6
60°	779.0	712.7	677.4	477.1	316.6
62.5°	693.6	642.0	628.8	455.0	291.6
65°	612.6	572.8	571.4	434.4	268.0
67.5°	531.6	509.5	515.4	409.4	241.5
70°	453.6	449.1	453.6	377.0	213.5
72.5°	387.3	382.9	394.7	335.7	182.6
75°	325.4	321.0	334.3	288.6	156.1
77.5°	259.2	262.1	271.0	240.0	131.1
80°	201.7	201.7	212.1	188.5	107.5
82.5°	144.3	145.8	151.7	138.4	83.9
85°	88.4	88.4	92.8	91.3	58.9
87.5°	29.5	33.9	39.8	42.7	29.5
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	18.52	19.87	18.88	20.19	20.50	14.85	16.21	15.22	16.52	16.83
	3H	20.26	21.46	20.64	21.79	22.16	16.83	18.03	17.21	18.36	18.73
	4H	20.93	22.06	21.33	22.41	22.79	17.53	18.66	17.93	19.01	19.39
	6H	21.44	22.47	21.85	22.84	23.24	18.06	19.09	18.47	19.46	19.86
	8H	21.61	22.59	22.04	22.98	23.39	18.24	19.23	18.67	19.62	20.02
	12H	21.72	22.66	22.15	23.04	23.47	18.38	19.32	18.81	19.70	20.14
4H	2H	19.05	20.18	19.45	20.53	20.91	16.47	17.60	16.88	17.95	18.33
	3H	21.03	21.96	21.44	22.36	22.76	18.65	19.58	19.06	19.99	20.39
	4H	21.83	22.66	22.26	23.08	23.53	19.53	20.37	19.97	20.79	21.23
	6H	22.47	23.20	22.93	23.64	24.11	20.17	20.90	20.64	21.34	21.81
	8H	22.69	23.37	23.16	23.82	24.29	20.38	21.06	20.85	21.51	21.98
	12H	22.85	23.45	23.33	23.93	24.40	20.54	21.14	21.03	21.62	22.10
8H	4H	22.11	22.79	22.58	23.24	23.71	20.18	20.86	20.65	21.30	21.77
	6H	22.90	23.45	23.40	23.95	24.43	21.04	21.60	21.54	22.09	22.57
	8H	23.20	23.70	23.72	24.21	24.70	21.37	21.87	21.89	22.38	22.87
	12H	23.43	23.87	23.95	24.37	24.94	21.63	22.07	22.15	22.57	23.14
12H	4H	22.13	22.73	22.62	23.21	23.69	20.25	20.85	20.74	21.34	21.81
	6H	22.95	23.45	23.47	23.96	24.45	21.18	21.68	21.70	22.19	22.68
	8H	23.31	23.75	23.83	24.25	24.82	21.59	22.03	22.11	22.53	23.10