

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: P893142

Luminaire Tested: 4MB-10HL-A-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893142
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-A-UNV-L935
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

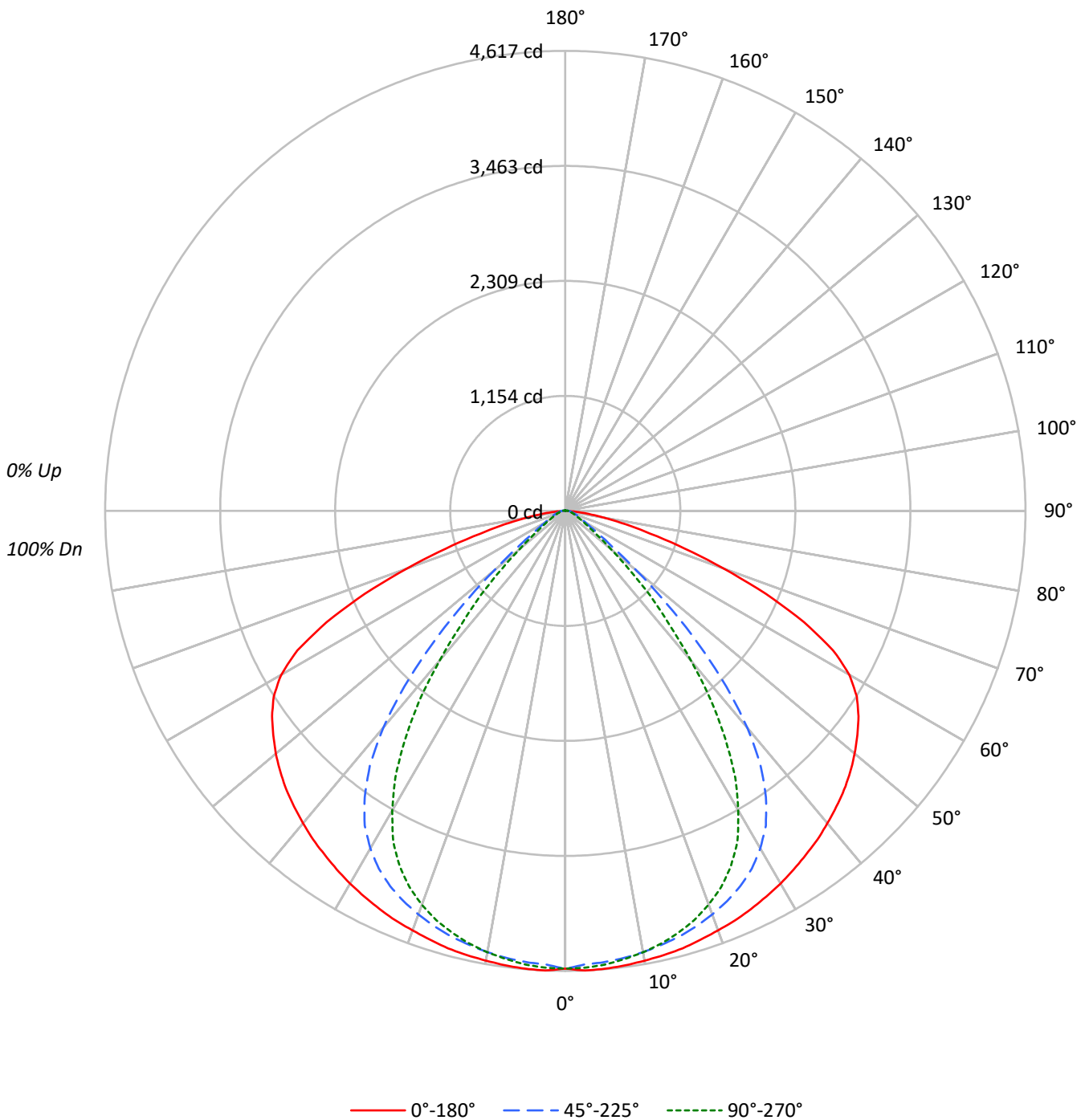
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9302.0 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
Luminous Opening: Rectangular (W 0.27' 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	100	100	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90	88	88	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77	77	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	68	68	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60	60	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	53	53	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	48	48	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43	43	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39	39	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	35	35	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	46783	46783	46783
5°	47148	46473	46739
10°	47396	46508	46516
15°	47920	46620	46217
20°	48552	46708	45588
25°	49541	46691	44184
30°	50794	45993	40817
35°	52350	43627	34839
40°	54397	37786	26056
45°	56993	27189	17347
50°	60054	14900	9506
55°	63771	7324	5474
60°	67069	4829	3784
65°	63657	3954	2993
70°	50111	3594	2766
75°	34749	3553	2632
80°	22867	3566	3261
85°	13087	5480	5585

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 67069 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	435.7	4.7
10°-20°	1257.4	13.5
20°-30°	1915.6	20.6
30°-40°	2175.4	23.4
40°-50°	1746.8	18.8
50°-60°	937.0	10.1
60°-70°	495.6	5.3
70°-80°	224.7	2.4
80°-90°	71.6	0.8
90°-100°	22.1	0.2
100°-110°	8.0	0.1
110°-120°	2.4	0.0
120°-130°	1.8	0.0
130°-140°	1.9	0.0
140°-150°	2.1	0.0
150°-160°	1.9	0.0
160°-170°	1.4	0.0
170°-180°	0.5	0.0
0°-30°	3608.6	38.8
0°-40°	5784.1	62.2
0°-60°	8467.9	91.0
0°-90°	9259.8	99.5
90°-120°	32.6	0.3
90°-150°	38.3	0.4
90°-180°	42.0	0.5
0°-180°	9302.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4594	4594	4594	4594	4594	
5°	4612	4602	4546	4584	4572	439
15°	4545	4516	4422	4410	4384	1285
25°	4409	4338	4155	4010	3932	2037
35°	4211	4032	3509	3000	2802	2642
45°	3957	3348	1888	1313	1204	3056
55°	3592	1340	412	322	308	3202
65°	2642	312	164	133	124	2555
75°	883	178	90	71	67	999
85°	112	67	47	47	48	153
90°	4	30	34	39	37	7
95°	4	12	27	23	23	4
105°	3	2	5	12	15	3
115°	2	2	2	4	4	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	4	4	4	2
155°	4	4	4	5	4	1
165°	4	4	5	6	5	1
175°	4	4	6	7	6	0
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4593.7	4593.7	4593.7	4593.7	4593.7
2.5°	4617.1	4608.4	4556.3	4599.7	4588.4
5°	4611.9	4602.3	4545.9	4584.1	4571.9
7.5°	4600.6	4588.4	4525.1	4556.3	4537.2
10°	4583.2	4571.1	4497.3	4519.0	4498.1
12.5°	4565.9	4545.0	4460.8	4467.7	4447.8
15°	4545.0	4516.4	4421.7	4409.6	4383.5
17.5°	4512.9	4480.8	4370.5	4341.8	4305.4
20°	4479.9	4436.5	4309.7	4251.5	4206.4
22.5°	4449.5	4389.6	4240.2	4147.3	4086.5
25°	4408.7	4338.4	4155.1	4010.1	3932.0
27.5°	4364.4	4278.4	4050.1	3833.0	3740.1
30°	4319.3	4206.4	3911.1	3610.7	3470.9
32.5°	4266.3	4127.3	3744.4	3341.5	3176.5
35°	4210.7	4031.8	3509.1	3000.2	2802.2
37.5°	4157.7	3921.5	3219.0	2586.0	2410.6
40°	4091.7	3793.0	2842.2	2141.4	1959.9
42.5°	4026.6	3595.0	2390.6	1715.0	1541.4
45°	3957.1	3348.4	1887.8	1313.0	1204.4
47.5°	3878.1	3010.6	1381.6	956.1	862.3
50°	3790.4	2524.3	940.4	651.3	600.0
52.5°	3694.0	1955.6	611.3	448.9	419.4
55°	3591.6	1339.9	412.5	322.2	308.3
57.5°	3468.3	839.7	305.7	242.3	234.5
60°	3292.8	544.5	237.1	195.4	185.8
62.5°	3028.9	389.9	198.9	159.8	152.0
65°	2641.6	311.7	164.1	132.9	124.2
67.5°	2177.9	266.6	140.7	113.8	107.7
70°	1682.9	234.5	120.7	99.0	92.9
72.5°	1255.7	204.9	104.2	86.0	78.2
75°	883.1	178.0	90.3	71.2	66.9
77.5°	620.9	153.7	74.7	60.8	59.9
80°	389.9	127.6	60.8	56.4	55.6
82.5°	237.1	100.7	53.0	52.1	51.2
85°	112.0	66.9	46.9	46.9	47.8
87.5°	36.5	44.3	39.9	41.7	41.7
90°	4.3	30.4	33.9	39.1	37.3
92.5°	4.3	21.7	31.3	31.3	25.2
95°	4.3	12.2	26.9	23.4	22.6
97.5°	4.3	6.1	20.0	22.6	21.7
100°	4.3	3.5	14.8	20.0	21.7
102.5°	3.5	2.6	9.6	16.5	18.2
105°	2.6	1.7	5.2	12.2	14.8
107.5°	1.7	1.7	3.5	8.7	10.4
110°	1.7	0.9	2.6	6.1	6.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	0.9	2.6	4.3	4.3
115°	1.7	1.7	1.7	3.5	3.5
117.5°	1.7	1.7	1.7	2.6	2.6
120°	1.7	1.7	1.7	2.6	1.7
122.5°	1.7	1.7	1.7	2.6	1.7
125°	1.7	1.7	1.7	2.6	1.7
127.5°	1.7	1.7	2.6	2.6	1.7
130°	1.7	1.7	2.6	2.6	1.7
132.5°	1.7	1.7	2.6	2.6	2.6
135°	2.6	1.7	2.6	2.6	2.6
137.5°	2.6	2.6	2.6	3.5	2.6
140°	2.6	2.6	3.5	3.5	2.6
142.5°	2.6	2.6	3.5	3.5	3.5
145°	2.6	2.6	3.5	3.5	3.5
147.5°	2.6	2.6	3.5	4.3	3.5
150°	2.6	3.5	4.3	4.3	3.5
152.5°	2.6	3.5	4.3	4.3	4.3
155°	3.5	3.5	4.3	5.2	4.3
157.5°	3.5	3.5	4.3	5.2	4.3
160°	3.5	3.5	5.2	5.2	5.2
162.5°	3.5	4.3	5.2	6.1	5.2
165°	3.5	4.3	5.2	6.1	5.2
167.5°	3.5	4.3	5.2	6.1	6.1
170°	3.5	4.3	6.1	6.1	6.1
172.5°	4.3	4.3	6.1	6.9	6.1
175°	4.3	4.3	6.1	6.9	6.1
177.5°	4.3	4.3	6.1	6.9	6.1
180°	6.1	6.1	6.1	6.1	6.1



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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	23.03	24.41	23.40	24.74	25.06	11.24	12.63	11.61	12.95	13.28
	3H	25.93	27.16	26.31	27.50	27.87	12.20	13.43	12.58	13.77	14.14
	4H	26.71	27.86	27.12	28.22	28.61	12.62	13.77	13.03	14.13	14.52
	6H	27.15	28.20	27.57	28.58	28.99	13.10	14.16	13.52	14.53	14.94
	8H	27.25	28.25	27.68	28.65	29.06	13.40	14.41	13.84	14.81	15.22
	12H	27.28	28.24	27.72	28.64	29.08	13.81	14.77	14.25	15.16	15.60
4H	2H	22.84	23.99	23.25	24.35	24.74	11.76	12.91	12.17	13.27	13.66
	3H	25.76	26.70	26.18	27.11	27.53	12.97	13.91	13.39	14.32	14.73
	4H	26.55	27.40	26.99	27.82	28.27	13.50	14.35	13.94	14.77	15.23
	6H	27.08	27.81	27.55	28.26	28.74	14.14	14.87	14.61	15.32	15.80
	8H	27.22	27.90	27.70	28.36	28.84	14.54	15.22	15.01	15.68	16.16
	12H	27.30	27.91	27.79	28.40	28.88	15.07	15.68	15.56	16.17	16.65
8H	4H	26.44	27.12	26.91	27.58	28.06	14.07	14.75	14.54	15.20	15.68
	6H	26.97	27.53	27.48	28.03	28.52	14.84	15.40	15.35	15.90	16.39
	8H	27.13	27.64	27.66	28.16	28.66	15.36	15.86	15.89	16.39	16.89
	12H	27.25	27.70	27.77	28.20	28.78	16.06	16.51	16.58	17.01	17.59
12H	4H	26.40	27.00	26.89	27.49	27.98	14.31	14.92	14.81	15.41	15.89
	6H	26.91	27.42	27.44	27.94	28.44	15.11	15.62	15.64	16.14	16.64
	8H	27.10	27.55	27.62	28.05	28.63	15.71	16.15	16.23	16.66	17.24