

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: P893889

Luminaire Tested: 4MB-8HL-A-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893889
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-8HL-A-UNV-L830
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

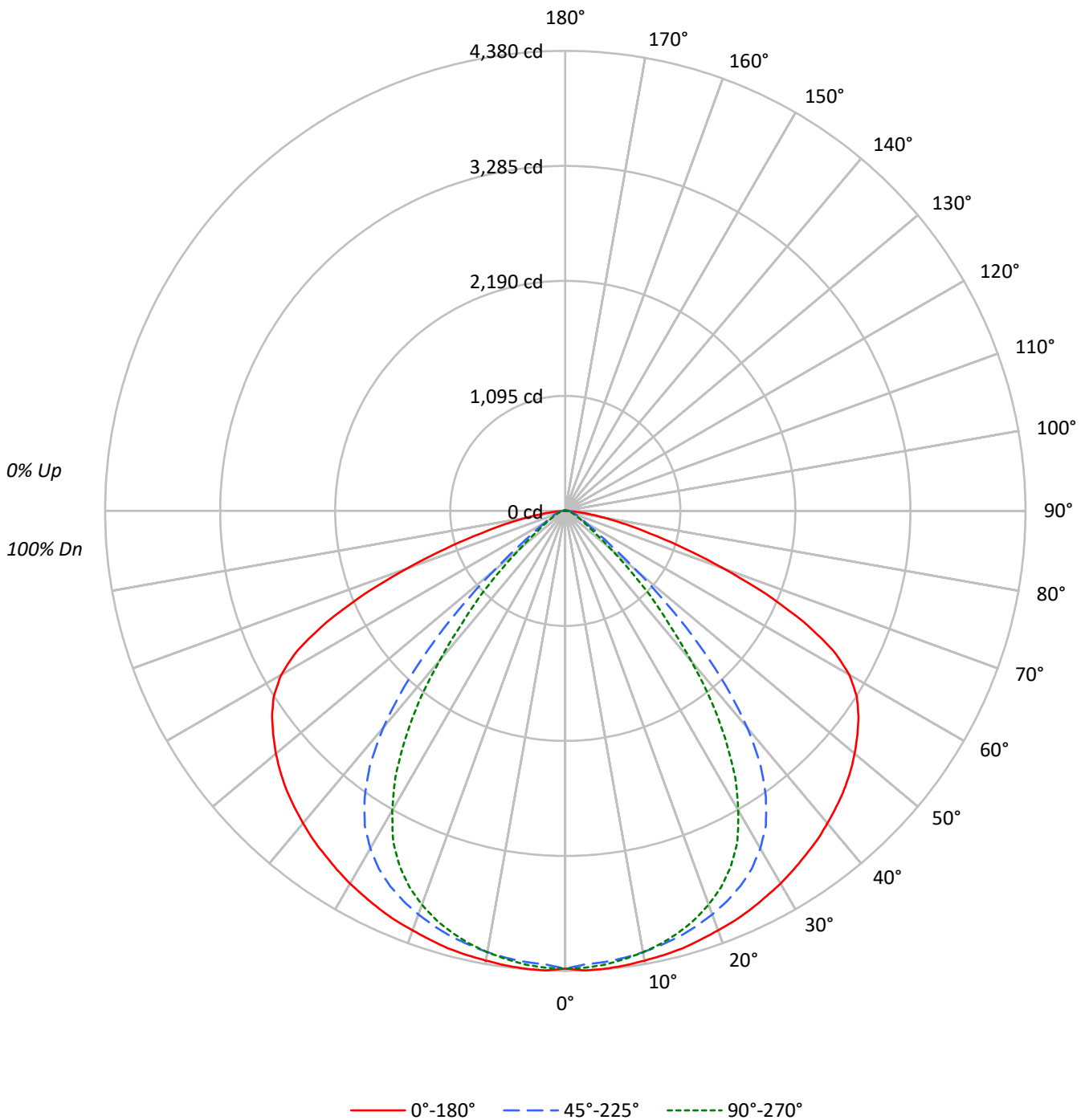
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8823.9 lumens
Efficiency: N/A
Efficacy: 152.4 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): 57.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	91	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	44379	44379	44379
5°	44725	44085	44338
10°	44961	44118	44126
15°	45458	44225	43843
20°	46057	44307	43245
25°	46994	44292	41913
30°	48183	43630	38719
35°	49660	41384	33048
40°	51603	35843	24717
45°	54065	25792	16455
50°	56968	14134	9018
55°	60493	6948	5192
60°	63623	4581	3591
65°	60385	3752	2839
70°	47535	3409	2623
75°	32962	3372	2495
80°	21694	3384	3091
85°	12421	5200	5293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 63623 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	413.3	4.7
10°-20°	1192.8	13.5
20°-30°	1817.1	20.6
30°-40°	2063.6	23.4
40°-50°	1657.1	18.8
50°-60°	888.9	10.1
60°-70°	470.1	5.3
70°-80°	213.1	2.4
80°-90°	67.9	0.8
90°-100°	21.0	0.2
100°-110°	7.5	0.1
110°-120°	2.3	0.0
120°-130°	1.7	0.0
130°-140°	1.9	0.0
140°-150°	1.9	0.0
150°-160°	1.8	0.0
160°-170°	1.3	0.0
170°-180°	0.5	0.0
0°-30°	3423.2	38.8
0°-40°	5486.8	62.2
0°-60°	8032.8	91.0
0°-90°	8783.9	99.5
90°-120°	30.9	0.3
90°-150°	36.4	0.4
90°-180°	40.0	0.5
0°-180°	8823.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4358	4358	4358	4358	4358	
5°	4375	4366	4312	4348	4337	417
15°	4312	4284	4194	4183	4158	1219
25°	4182	4115	3942	3804	3730	1932
35°	3994	3825	3329	2846	2658	2506
45°	3754	3176	1791	1246	1142	2899
55°	3407	1271	391	306	292	3038
65°	2506	296	156	126	118	2423
75°	838	169	86	68	63	948
85°	106	63	44	44	45	145
90°	4	29	32	37	35	6
95°	4	12	26	22	21	3
105°	2	2	5	12	14	3
115°	2	2	2	3	3	2
125°	2	2	2	2	2	1
135°	2	2	2	2	2	2
145°	2	2	3	3	3	2
155°	3	3	4	5	4	1
165°	3	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°	4357.6	4357.6	4357.6	4357.6	4357.6
2.5°	4379.8	4371.6	4322.2	4363.4	4352.7
5°	4374.9	4365.8	4312.3	4348.5	4337.0
7.5°	4364.2	4352.7	4292.5	4322.2	4304.1
10°	4347.7	4336.2	4266.2	4286.8	4267.0
12.5°	4331.2	4311.5	4231.6	4238.2	4219.2
15°	4311.5	4284.3	4194.5	4183.0	4158.3
17.5°	4281.0	4250.5	4145.9	4118.7	4084.1
20°	4249.7	4208.5	4088.2	4033.1	3990.2
22.5°	4220.9	4164.0	4022.3	3934.2	3876.5
25°	4182.1	4115.4	3941.6	3804.0	3729.9
27.5°	4140.1	4058.6	3841.9	3636.0	3547.9
30°	4097.3	3990.2	3710.1	3425.1	3292.5
32.5°	4047.1	3915.3	3552.0	3169.8	3013.3
35°	3994.3	3824.6	3328.7	2846.0	2658.2
37.5°	3944.1	3720.0	3053.6	2453.1	2286.7
40°	3881.5	3598.1	2696.1	2031.4	1859.2
42.5°	3819.7	3410.3	2267.8	1626.9	1462.1
45°	3753.8	3176.4	1790.8	1245.5	1142.5
47.5°	3678.8	2855.9	1310.6	906.9	818.0
50°	3595.6	2394.6	892.1	617.8	569.2
52.5°	3504.2	1855.1	579.9	425.9	397.9
55°	3407.0	1271.0	391.3	305.6	292.4
57.5°	3290.0	796.6	290.0	229.8	222.4
60°	3123.6	516.5	224.9	185.3	176.3
62.5°	2873.2	369.9	188.6	151.6	144.2
65°	2505.8	295.7	155.7	126.0	117.8
67.5°	2065.9	252.9	133.4	107.9	102.1
70°	1596.4	222.4	114.5	93.9	88.1
72.5°	1191.1	194.4	98.8	81.6	74.1
75°	837.7	168.9	85.7	67.5	63.4
77.5°	589.0	145.8	70.8	57.7	56.8
80°	369.9	121.1	57.7	53.5	52.7
82.5°	224.9	95.6	50.2	49.4	48.6
85°	106.3	63.4	44.5	44.5	45.3
87.5°	34.6	42.0	37.9	39.5	39.5
90°	4.1	28.8	32.1	37.1	35.4
92.5°	4.1	20.6	29.7	29.7	23.9
95°	4.1	11.5	25.5	22.2	21.4
97.5°	4.1	5.8	18.9	21.4	20.6
100°	4.1	3.3	14.0	18.9	20.6
102.5°	3.3	2.5	9.1	15.7	17.3
105°	2.5	1.6	4.9	11.5	14.0
107.5°	1.6	1.6	3.3	8.2	9.9
110°	1.6	0.8	2.5	5.8	6.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	0.8	2.5	4.1	4.1
115°	1.6	1.6	1.6	3.3	3.3
117.5°	1.6	1.6	1.6	2.5	2.5
120°	1.6	1.6	1.6	2.5	1.6
122.5°	1.6	1.6	1.6	2.5	1.6
125°	1.6	1.6	1.6	2.5	1.6
127.5°	1.6	1.6	2.5	2.5	1.6
130°	1.6	1.6	2.5	2.5	1.6
132.5°	1.6	1.6	2.5	2.5	2.5
135°	2.5	1.6	2.5	2.5	2.5
137.5°	2.5	2.5	2.5	3.3	2.5
140°	2.5	2.5	3.3	3.3	2.5
142.5°	2.5	2.5	3.3	3.3	3.3
145°	2.5	2.5	3.3	3.3	3.3
147.5°	2.5	2.5	3.3	4.1	3.3
150°	2.5	3.3	4.1	4.1	3.3
152.5°	2.5	3.3	4.1	4.1	4.1
155°	3.3	3.3	4.1	4.9	4.1
157.5°	3.3	3.3	4.1	4.9	4.1
160°	3.3	3.3	4.9	4.9	4.9
162.5°	3.3	4.1	4.9	5.8	4.9
165°	3.3	4.1	4.9	5.8	4.9
167.5°	3.3	4.1	4.9	5.8	5.8
170°	3.3	4.1	5.8	5.8	5.8
172.5°	4.1	4.1	5.8	6.6	5.8
175°	4.1	4.1	5.8	6.6	5.8
177.5°	4.1	4.1	5.8	6.6	5.8
180°	5.8	5.8	5.8	5.8	5.8



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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	22.84	24.23	23.22	24.55	24.88	11.05	12.44	11.43	12.77	13.09
	3H	25.74	26.98	26.13	27.31	27.69	12.01	13.24	12.40	13.58	13.96
	4H	26.53	27.68	26.93	28.04	28.43	12.43	13.58	12.84	13.94	14.34
	6H	26.96	28.02	27.38	28.40	28.80	12.91	13.97	13.33	14.35	14.75
	8H	27.06	28.07	27.50	28.47	28.88	13.22	14.22	13.66	14.62	15.04
	12H	27.10	28.06	27.54	28.45	28.89	13.62	14.58	14.06	14.98	15.42
4H	2H	22.66	23.81	23.07	24.17	24.56	11.57	12.72	11.98	13.08	13.48
	3H	25.57	26.52	25.99	26.93	27.34	12.78	13.72	13.20	14.14	14.55
	4H	26.37	27.21	26.81	27.64	28.09	13.32	14.16	13.76	14.59	15.04
	6H	26.89	27.63	27.36	28.08	28.55	13.95	14.68	14.42	15.14	15.61
	8H	27.04	27.72	27.51	28.18	28.66	14.35	15.04	14.83	15.49	15.97
	12H	27.12	27.72	27.61	28.21	28.70	14.88	15.49	15.38	15.98	16.46
8H	4H	26.25	26.94	26.73	27.39	27.87	13.88	14.56	14.36	15.02	15.50
	6H	26.78	27.35	27.29	27.85	28.34	14.65	15.21	15.16	15.72	16.21
	8H	26.95	27.46	27.48	27.98	28.48	15.17	15.68	15.70	16.20	16.70
	12H	27.07	27.52	27.59	28.02	28.60	15.88	16.32	16.40	16.83	17.41
12H	4H	26.21	26.82	26.71	27.31	27.79	14.13	14.73	14.62	15.22	15.71
	6H	26.73	27.24	27.26	27.76	28.26	14.93	15.43	15.45	15.95	16.45
	8H	26.92	27.37	27.44	27.87	28.45	15.52	15.97	16.04	16.47	17.05