

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: P893891

Luminaire Tested: 4MB-8HL-A-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893891
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-L840
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

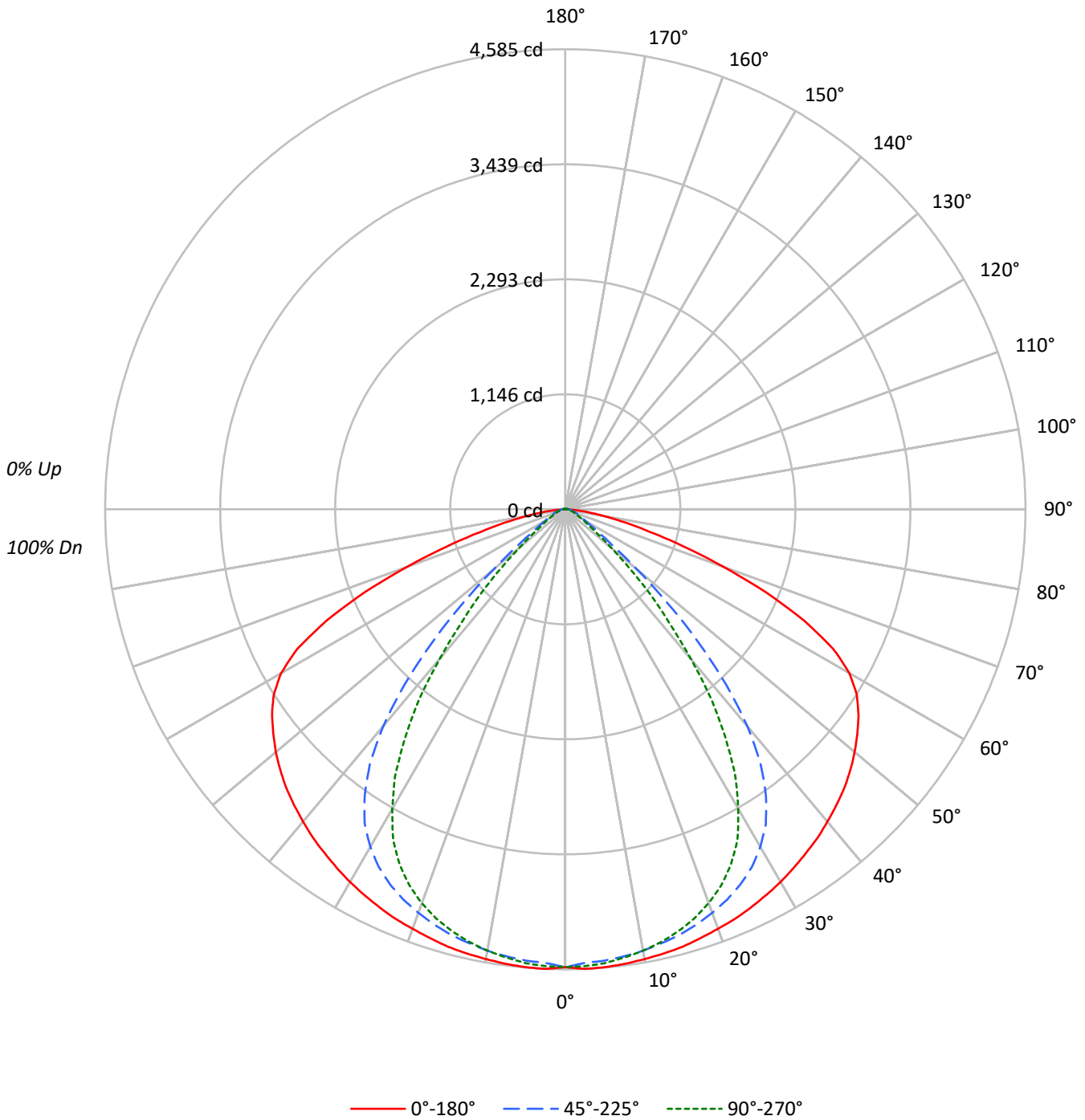
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9237.9 lumens
Efficiency: N/A
Efficacy: 159.5 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	93	91	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	85	82	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	77	73	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	70	66	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	64	59	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	59	54	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	54	49	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	50	45	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	47	41	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	46461	46461	46461
5°	46824	46153	46418
10°	47071	46187	46197
15°	47591	46300	45900
20°	48219	46387	45274
25°	49200	46370	43879
30°	50443	45677	40536
35°	51990	43326	34599
40°	54024	37525	25876
45°	56601	27002	17227
50°	59641	14798	9441
55°	63333	7273	5435
60°	66609	4795	3760
65°	63218	3928	2971
70°	49766	3570	2748
75°	34513	3530	2613
80°	22709	3542	3237
85°	12994	5445	5539

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 66609 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	432.7	4.7
10°-20°	1248.7	13.5
20°-30°	1902.4	20.6
30°-40°	2160.5	23.4
40°-50°	1734.8	18.8
50°-60°	930.6	10.1
60°-70°	492.2	5.3
70°-80°	223.1	2.4
80°-90°	71.1	0.8
90°-100°	22.0	0.2
100°-110°	7.9	0.1
110°-120°	2.4	0.0
120°-130°	1.8	0.0
130°-140°	1.9	0.0
140°-150°	2.0	0.0
150°-160°	1.9	0.0
160°-170°	1.4	0.0
170°-180°	0.5	0.0
0°-30°	3583.8	38.8
0°-40°	5744.3	62.2
0°-60°	8409.6	91.0
0°-90°	9196.1	99.5
90°-120°	32.3	0.3
90°-150°	38.1	0.4
90°-180°	42.0	0.5
0°-180°	9237.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4562	4562	4562	4562	4562	
5°	4580	4571	4515	4553	4540	436
15°	4514	4485	4391	4379	4353	1276
25°	4378	4308	4126	3982	3905	2023
35°	4182	4004	3485	2980	2783	2624
45°	3930	3325	1875	1304	1196	3035
55°	3567	1331	410	320	306	3180
65°	2623	310	163	132	123	2537
75°	877	177	90	71	66	992
85°	111	66	47	47	47	152
90°	4	30	34	39	37	7
95°	4	12	27	23	22	4
105°	3	2	5	12	15	3
115°	2	2	2	3	3	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	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°	4562.1	4562.1	4562.1	4562.1	4562.1
2.5°	4585.3	4576.7	4525.0	4568.1	4556.9
5°	4580.2	4570.7	4514.6	4552.6	4540.5
7.5°	4569.0	4556.9	4493.9	4525.0	4506.0
10°	4551.7	4539.6	4466.3	4487.9	4467.2
12.5°	4534.5	4513.8	4430.1	4437.0	4417.2
15°	4513.8	4485.3	4391.3	4379.2	4353.4
17.5°	4481.9	4449.9	4340.4	4312.0	4275.7
20°	4449.1	4406.0	4280.1	4222.3	4177.4
22.5°	4418.9	4359.4	4211.1	4118.8	4058.4
25°	4378.4	4308.5	4126.5	3982.5	3904.9
27.5°	4334.4	4249.0	4022.2	3806.6	3714.3
30°	4289.5	4177.4	3884.2	3585.8	3447.0
32.5°	4236.9	4098.9	3718.6	3318.5	3154.6
35°	4181.7	4004.1	3484.9	2979.6	2782.9
37.5°	4129.1	3894.6	3196.9	2568.2	2394.0
40°	4063.6	3766.9	2822.6	2126.7	1946.4
42.5°	3998.9	3570.3	2374.2	1703.2	1530.7
45°	3929.9	3325.4	1874.8	1303.9	1196.1
47.5°	3851.4	2989.9	1372.1	949.5	856.4
50°	3764.3	2507.0	934.0	646.8	595.9
52.5°	3668.6	1942.1	607.1	445.9	416.5
55°	3566.9	1330.7	409.6	319.9	306.1
57.5°	3444.4	833.9	303.6	240.6	232.8
60°	3270.2	540.7	235.4	194.0	184.6
62.5°	3008.0	387.2	197.5	158.7	150.9
65°	2623.4	309.6	163.0	131.9	123.3
67.5°	2162.9	264.8	139.7	113.0	106.9
70°	1671.3	232.8	119.9	98.3	92.3
72.5°	1247.0	203.5	103.5	85.4	77.6
75°	877.1	176.8	89.7	70.7	66.4
77.5°	616.6	152.6	74.2	60.4	59.5
80°	387.2	126.8	60.4	56.1	55.2
82.5°	235.4	100.0	52.6	51.7	50.9
85°	111.2	66.4	46.6	46.6	47.4
87.5°	36.2	44.0	39.7	41.4	41.4
90°	4.3	30.2	33.6	38.8	37.1
92.5°	4.3	21.6	31.0	31.0	25.0
95°	4.3	12.1	26.7	23.3	22.4
97.5°	4.3	6.0	19.8	22.4	21.6
100°	4.3	3.4	14.7	19.8	21.6
102.5°	3.4	2.6	9.5	16.4	18.1
105°	2.6	1.7	5.2	12.1	14.7
107.5°	1.7	1.7	3.4	8.6	10.3
110°	1.7	0.9	2.6	6.0	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	3.4	3.4
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	3.4	2.6
140°	2.6	2.6	3.4	3.4	2.6
142.5°	2.6	2.6	3.4	3.4	3.4
145°	2.6	2.6	3.4	3.4	3.4
147.5°	2.6	2.6	3.4	4.3	3.4
150°	2.6	3.4	4.3	4.3	3.4
152.5°	2.6	3.4	4.3	4.3	4.3
155°	3.4	3.4	4.3	5.2	4.3
157.5°	3.4	3.4	4.3	5.2	4.3
160°	3.4	3.4	5.2	5.2	5.2
162.5°	3.4	4.3	5.2	6.0	5.2
165°	3.4	4.3	5.2	6.0	5.2
167.5°	3.4	4.3	5.2	6.0	6.0
170°	3.4	4.3	6.0	6.0	6.0
172.5°	4.3	4.3	6.0	6.9	6.0
175°	4.3	4.3	6.0	6.9	6.0
177.5°	4.3	4.3	6.0	6.9	6.0
180°	6.0	6.0	6.0	6.0	6.0



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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	23.00	24.39	23.38	24.71	25.04	11.21	12.60	11.59	12.92	13.25
	3H	25.90	27.13	26.29	27.47	27.85	12.17	13.40	12.56	13.74	14.12
	4H	26.68	27.84	27.09	28.20	28.59	12.59	13.74	13.00	14.10	14.50
	6H	27.12	28.18	27.54	28.56	28.96	13.07	14.13	13.49	14.51	14.91
	8H	27.22	28.23	27.66	28.63	29.04	13.38	14.39	13.82	14.79	15.20
	12H	27.26	28.22	27.70	28.61	29.05	13.78	14.75	14.22	15.14	15.58
4H	2H	22.82	23.97	23.22	24.33	24.72	11.73	12.88	12.14	13.24	13.64
	3H	25.73	26.68	26.15	27.09	27.50	12.94	13.88	13.36	14.30	14.71
	4H	26.53	27.37	26.97	27.80	28.25	13.48	14.32	13.92	14.75	15.20
	6H	27.05	27.78	27.52	28.24	28.71	14.11	14.84	14.58	15.30	15.77
	8H	27.20	27.88	27.67	28.34	28.82	14.52	15.20	14.99	15.65	16.13
	12H	27.28	27.88	27.77	28.37	28.86	15.05	15.65	15.54	16.14	16.62
8H	4H	26.41	27.10	26.89	27.55	28.03	14.04	14.72	14.52	15.18	15.66
	6H	26.94	27.51	27.45	28.01	28.50	14.81	15.37	15.32	15.88	16.37
	8H	27.11	27.61	27.64	28.14	28.64	15.33	15.84	15.86	16.36	16.86
	12H	27.23	27.68	27.75	28.18	28.76	16.04	16.48	16.56	16.99	17.57
12H	4H	26.37	26.98	26.87	27.47	27.95	14.29	14.89	14.78	15.38	15.87
	6H	26.89	27.40	27.42	27.92	28.42	15.09	15.59	15.61	16.11	16.62
	8H	27.08	27.53	27.60	28.03	28.61	15.68	16.13	16.20	16.63	17.21