

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: P893895

Luminaire Tested: 4MB-8HL-A-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893895
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-L940
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

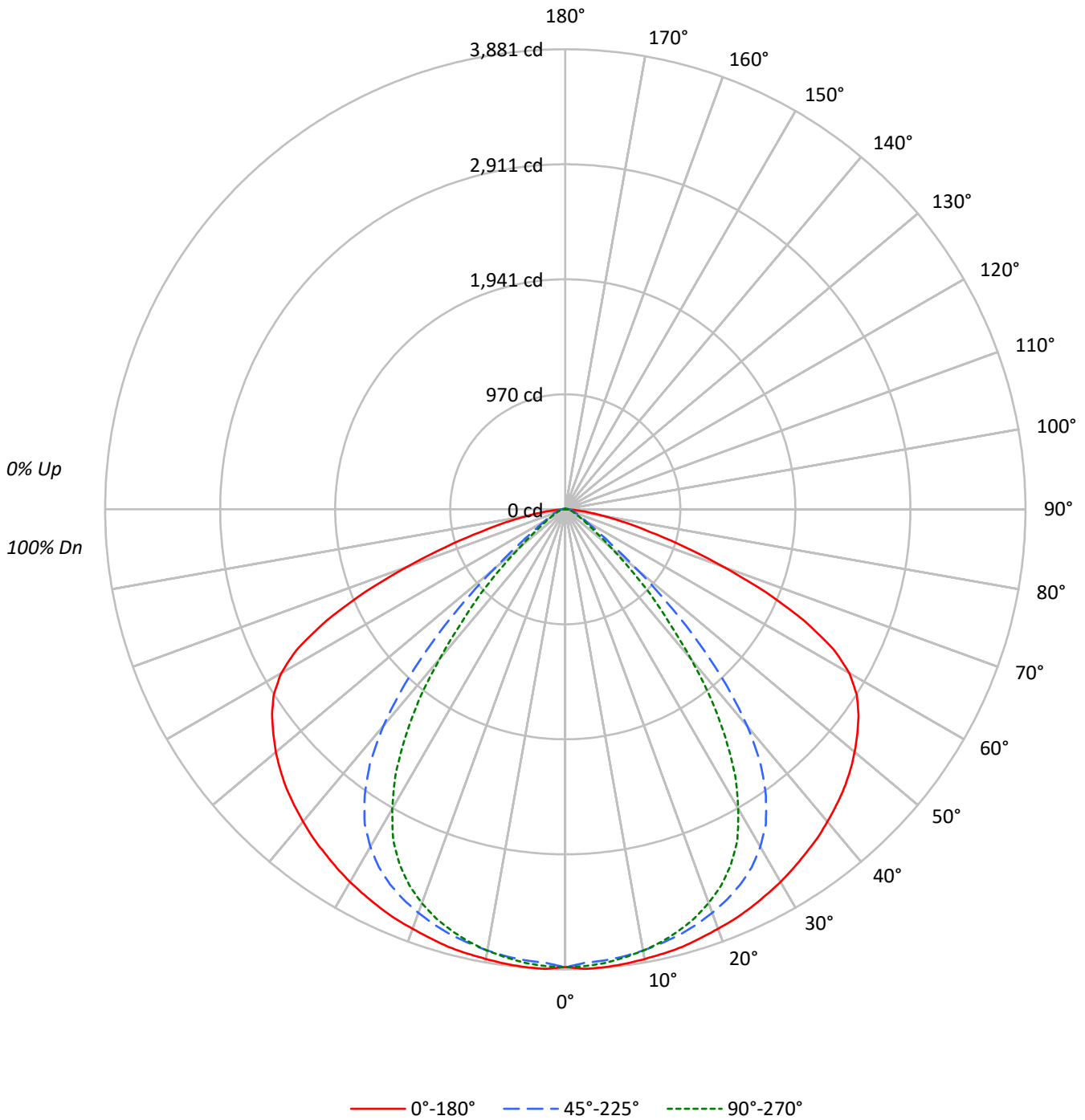
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7819.0 lumens
Efficiency: N/A
Efficacy: 135.0 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 (A_{in}): 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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	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	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39324	39324	39324
5°	39631	39065	39288
10°	39840	39093	39101
15°	40280	39188	38850
20°	40812	39261	38320
25°	41642	39248	37140
30°	42695	38661	34309
35°	44004	36671	29285
40°	45725	31761	21901
45°	47908	22856	14581
50°	50480	12525	7992
55°	53604	6156	4600
60°	56378	4059	3182
65°	53507	3326	2516
70°	42122	3022	2326
75°	29209	2987	2211
80°	19219	2997	2739
85°	11007	4604	4686

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 56378 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.2	4.7
10°-20°	1056.9	13.5
20°-30°	1610.2	20.6
30°-40°	1828.6	23.4
40°-50°	1468.3	18.8
50°-60°	787.6	10.1
60°-70°	416.6	5.3
70°-80°	188.9	2.4
80°-90°	60.2	0.8
90°-100°	18.6	0.2
100°-110°	6.7	0.1
110°-120°	2.1	0.0
120°-130°	1.6	0.0
130°-140°	1.6	0.0
140°-150°	1.7	0.0
150°-160°	1.6	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	3033.3	38.8
0°-40°	4861.9	62.2
0°-60°	7117.9	91.0
0°-90°	7783.5	99.5
90°-120°	27.4	0.4
90°-150°	32.3	0.4
90°-180°	36.0	0.5
0°-180°	7819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3861	3861	3861	3861	3861	
5°	3877	3869	3821	3853	3843	369
15°	3820	3796	3717	3707	3685	1080
25°	3706	3647	3493	3371	3305	1712
35°	3539	3389	2950	2522	2356	2221
45°	3326	2815	1587	1104	1012	2569
55°	3019	1126	347	271	259	2692
65°	2220	262	138	112	104	2147
75°	742	150	76	60	56	840
85°	94	56	39	39	40	128
90°	4	26	28	33	31	6
95°	4	10	23	20	19	3
105°	2	2	4	10	12	2
115°	2	2	2	3	3	1
125°	2	2	2	2	2	1
135°	2	2	2	2	2	1
145°	2	2	3	3	3	1
155°	3	3	4	4	4	1
165°	3	4	4	5	4	1
175°	4	4	5	6	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3861.3	3861.3	3861.3	3861.3	3861.3
2.5°	3881.0	3873.7	3829.9	3866.4	3856.9
5°	3876.6	3868.6	3821.2	3853.3	3843.1
7.5°	3867.1	3856.9	3803.6	3829.9	3813.9
10°	3852.5	3842.3	3780.3	3798.5	3781.0
12.5°	3837.9	3820.4	3749.6	3755.5	3738.7
15°	3820.4	3796.3	3716.8	3706.6	3684.7
17.5°	3793.4	3766.4	3673.7	3649.6	3619.0
20°	3765.7	3729.2	3622.6	3573.7	3535.8
22.5°	3740.1	3689.8	3564.2	3486.1	3435.0
25°	3705.8	3646.7	3492.7	3370.8	3305.1
27.5°	3668.6	3596.3	3404.4	3221.9	3143.8
30°	3630.6	3535.8	3287.6	3035.0	2917.5
32.5°	3586.1	3469.3	3147.4	2808.7	2670.1
35°	3539.4	3389.0	2949.6	2521.9	2355.5
37.5°	3494.9	3296.3	2705.8	2173.7	2026.3
40°	3439.4	3188.3	2389.0	1800.0	1647.4
42.5°	3384.7	3021.9	2009.5	1441.6	1295.6
45°	3326.3	2814.6	1586.9	1103.6	1012.4
47.5°	3259.8	2530.6	1161.3	803.6	724.8
50°	3186.1	2121.9	790.5	547.4	504.4
52.5°	3105.1	1643.8	513.9	377.4	352.6
55°	3019.0	1126.3	346.7	270.8	259.1
57.5°	2915.3	705.8	256.9	203.6	197.1
60°	2767.9	457.7	199.3	164.2	156.2
62.5°	2546.0	327.7	167.2	134.3	127.7
65°	2220.4	262.0	138.0	111.7	104.4
67.5°	1830.7	224.1	118.2	95.6	90.5
70°	1414.6	197.1	101.5	83.2	78.1
72.5°	1055.5	172.3	87.6	72.3	65.7
75°	742.3	149.6	75.9	59.9	56.2
77.5°	521.9	129.2	62.8	51.1	50.4
80°	327.7	107.3	51.1	47.4	46.7
82.5°	199.3	84.7	44.5	43.8	43.1
85°	94.2	56.2	39.4	39.4	40.1
87.5°	30.7	37.2	33.6	35.0	35.0
90°	3.6	25.5	28.5	32.8	31.4
92.5°	3.6	18.2	26.3	26.3	21.2
95°	3.6	10.2	22.6	19.7	19.0
97.5°	3.6	5.1	16.8	19.0	18.2
100°	3.6	2.9	12.4	16.8	18.2
102.5°	2.9	2.2	8.0	13.9	15.3
105°	2.2	1.5	4.4	10.2	12.4
107.5°	1.5	1.5	2.9	7.3	8.8
110°	1.5	0.7	2.2	5.1	5.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.5	0.7	2.2	3.6	3.6
115°	1.5	1.5	1.5	2.9	2.9
117.5°	1.5	1.5	1.5	2.2	2.2
120°	1.5	1.5	1.5	2.2	1.5
122.5°	1.5	1.5	1.5	2.2	1.5
125°	1.5	1.5	1.5	2.2	1.5
127.5°	1.5	1.5	2.2	2.2	1.5
130°	1.5	1.5	2.2	2.2	1.5
132.5°	1.5	1.5	2.2	2.2	2.2
135°	2.2	1.5	2.2	2.2	2.2
137.5°	2.2	2.2	2.2	2.9	2.2
140°	2.2	2.2	2.9	2.9	2.2
142.5°	2.2	2.2	2.9	2.9	2.9
145°	2.2	2.2	2.9	2.9	2.9
147.5°	2.2	2.2	2.9	3.6	2.9
150°	2.2	2.9	3.6	3.6	2.9
152.5°	2.2	2.9	3.6	3.6	3.6
155°	2.9	2.9	3.6	4.4	3.6
157.5°	2.9	2.9	3.6	4.4	3.6
160°	2.9	2.9	4.4	4.4	4.4
162.5°	2.9	3.6	4.4	5.1	4.4
165°	2.9	3.6	4.4	5.1	4.4
167.5°	2.9	3.6	4.4	5.1	5.1
170°	2.9	3.6	5.1	5.1	5.1
172.5°	3.6	3.6	5.1	5.8	5.1
175°	3.6	3.6	5.1	5.8	5.1
177.5°	3.6	3.6	5.1	5.8	5.1
180°	5.1	5.1	5.1	5.1	5.1



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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	22.42	23.81	22.80	24.13	24.46	10.63	12.02	11.01	12.34	12.67
	3H	25.32	26.55	25.71	26.89	27.27	11.59	12.82	11.98	13.16	13.54
	4H	26.11	27.26	26.51	27.62	28.01	12.01	13.16	12.42	13.52	13.92
	6H	26.54	27.60	26.96	27.98	28.38	12.49	13.55	12.91	13.93	14.33
	8H	26.64	27.65	27.08	28.05	28.46	12.80	13.81	13.24	14.21	14.62
	12H	26.68	27.64	27.12	28.03	28.47	13.20	14.17	13.64	14.56	15.00
4H	2H	22.24	23.39	22.65	23.75	24.14	11.15	12.30	11.56	12.66	13.06
	3H	25.15	26.10	25.57	26.51	26.92	12.36	13.30	12.78	13.72	14.13
	4H	25.95	26.79	26.39	27.22	27.67	12.90	13.74	13.34	14.17	14.62
	6H	26.47	27.20	26.94	27.66	28.13	13.53	14.26	14.00	14.72	15.19
	8H	26.62	27.30	27.09	27.76	28.24	13.94	14.62	14.41	15.07	15.55
	12H	26.70	27.30	27.19	27.79	28.28	14.47	15.07	14.96	15.56	16.05
8H	4H	25.83	26.52	26.31	26.97	27.45	13.46	14.14	13.94	14.60	15.08
	6H	26.36	26.93	26.87	27.43	27.92	14.23	14.79	14.74	15.30	15.79
	8H	26.53	27.04	27.06	27.56	28.06	14.76	15.26	15.28	15.78	16.28
	12H	26.65	27.10	27.17	27.60	28.18	15.46	15.90	15.98	16.41	16.99
12H	4H	25.79	26.40	26.29	26.89	27.37	13.71	14.31	14.20	14.80	15.29
	6H	26.31	26.82	26.84	27.34	27.84	14.51	15.01	15.03	15.53	16.04
	8H	26.50	26.95	27.02	27.45	28.03	15.10	15.55	15.62	16.05	16.63