

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: P892779

Luminaire Tested: 2MB-4HL-RND-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892779
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-RND-UNV-L940
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

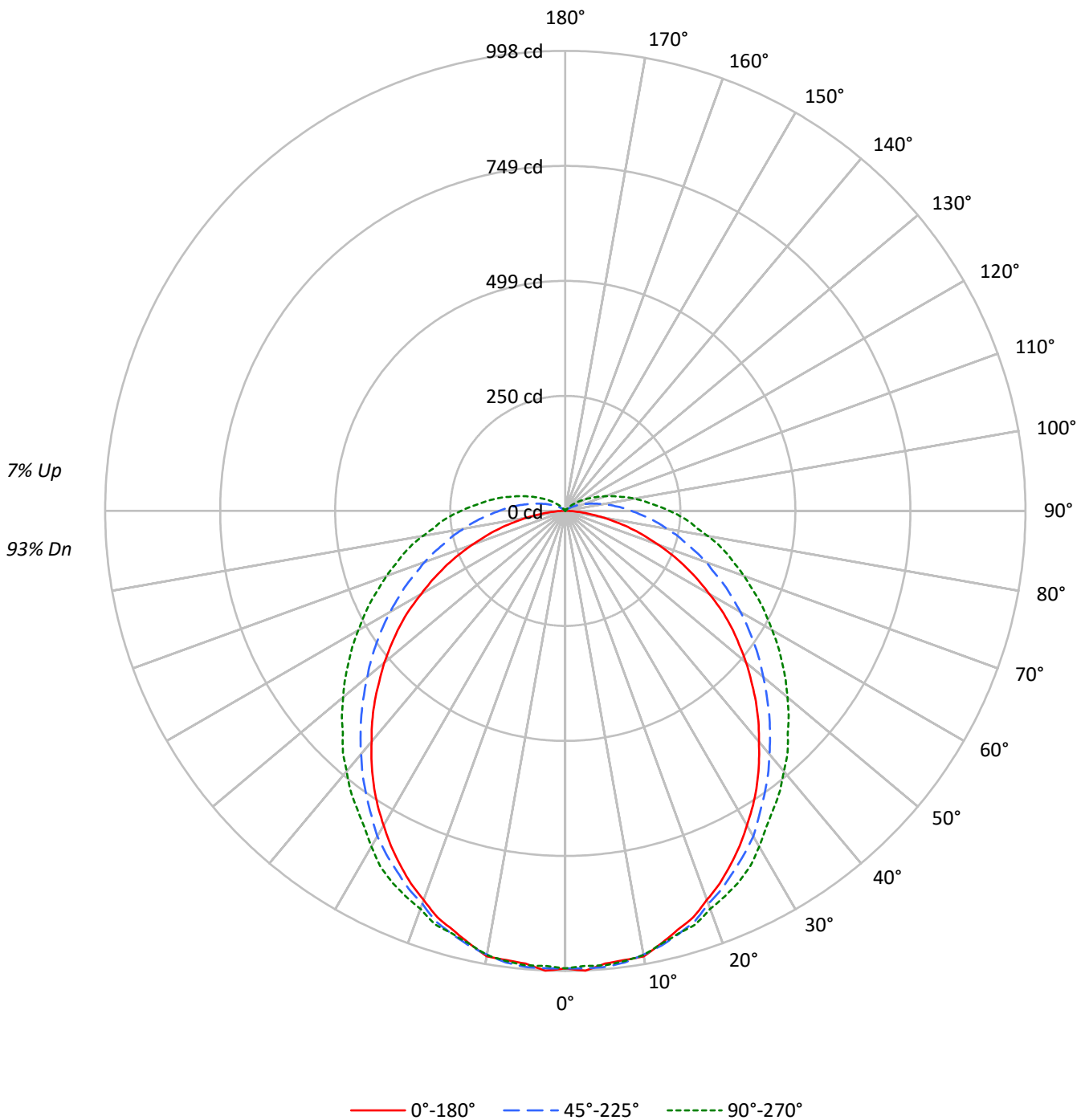
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3235.0 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 1.98' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P892779
CATALOG NUMBER: 2MB-4HL-RND-UNV-L940

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	66	63	63	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	43
5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	44	39	39	39	37
6	67	53	44	38	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	31	31	28
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	27	27	25
9	54	40	32	26	52	40	32	26	38	31	26	36	30	25	35	29	25	25	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14198	14198	14198
5°	14156	14262	14209
10°	14255	14201	14211
15°	13939	14071	14059
20°	13671	13808	13989
25°	13377	13623	14034
30°	13017	13471	13889
35°	12658	13138	13761
40°	12204	12869	13772
45°	11821	12648	13808
50°	11399	12474	13996
55°	10959	12460	14314
60°	10317	12549	14826
65°	9762	12883	15754
70°	8984	13589	17258
75°	8136	14957	20136
80°	6862	18437	25843
85°	5499	29889	44416

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 81433 cd/sqm



TEST NUMBER: P892779

CATALOG NUMBER: 2MB-4HL-RND-UNV-L940

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.0	2.9
10°-20°	267.4	8.3
20°-30°	398.9	12.3
30°-40°	472.2	14.6
40°-50°	486.5	15.0
50°-60°	449.8	13.9
60°-70°	373.8	11.6
70°-80°	279.7	8.6
80°-90°	185.4	5.7
90°-100°	113.4	3.5
100°-110°	64.1	2.0
110°-120°	31.9	1.0
120°-130°	13.2	0.4
130°-140°	3.9	0.1
140°-150°	0.6	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	760.3	23.5
0°-40°	1232.5	38.1
0°-60°	2168.8	67.0
0°-90°	3007.7	93.0
90°-120°	209.4	6.5
90°-150°	227.1	7.0
90°-180°	227.0	7.0
0°-180°	3235.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	986	981	993	990	990	94
15°	941	941	950	959	949	266
25°	848	850	863	880	889	390
35°	725	732	752	784	788	453
45°	584	590	625	669	682	450
55°	439	450	500	554	574	392
65°	288	311	381	440	465	285
75°	147	190	271	337	364	156
85°	34	97	182	245	271	38
90°	3	63	144	202	226	3
95°	1	39	112	167	185	1
105°	1	13	61	103	119	1
115°	1	4	29	58	70	1
125°	1	1	11	28	35	1
135°	1	1	3	9	13	1
145°	1	1	0	1	2	0
155°	1	1	0	0	0	0
165°	1	1	0	0	0	0
175°	2	1	0	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	992.5	992.5	992.5	992.5	992.5
2.5°	998.4	986.5	993.2	991.7	988.0
5°	985.8	980.6	993.2	990.2	989.5
7.5°	982.8	980.6	988.0	985.0	985.0
10°	981.3	966.4	977.6	985.0	978.3
12.5°	961.2	957.5	965.7	966.4	962.0
15°	941.2	941.2	950.1	959.0	949.3
17.5°	924.1	922.6	933.7	940.4	940.4
20°	898.0	900.3	907.0	919.6	918.9
22.5°	875.0	880.9	887.6	902.5	904.7
25°	847.5	850.5	863.1	879.5	889.1
27.5°	819.2	823.7	840.1	857.9	869.0
30°	788.0	788.0	815.5	836.3	840.8
32.5°	757.5	758.3	782.8	805.9	811.8
35°	724.8	732.3	752.3	783.6	788.0
37.5°	689.9	694.3	721.9	750.1	765.0
40°	653.5	660.9	689.1	728.5	737.5
42.5°	620.0	626.0	657.2	698.1	713.7
45°	584.3	590.3	625.2	669.1	682.5
47.5°	547.2	554.6	592.5	644.5	657.2
50°	512.2	518.2	560.5	613.3	628.9
52.5°	475.0	484.7	530.8	582.1	602.2
55°	439.4	449.8	499.6	553.8	573.9
57.5°	402.2	416.3	469.1	525.6	547.2
60°	360.6	379.1	438.6	498.8	518.2
62.5°	324.9	344.9	408.1	467.6	491.4
65°	288.4	310.7	380.6	440.1	465.4
67.5°	252.0	278.8	349.4	412.6	437.1
70°	214.8	249.0	324.9	388.1	412.6
72.5°	179.9	218.6	298.1	364.3	386.6
75°	147.2	189.6	270.6	336.8	364.3
77.5°	114.5	163.6	249.0	316.0	340.5
80°	83.3	138.3	223.8	290.7	313.7
82.5°	57.2	116.7	203.7	268.4	287.7
85°	33.5	97.4	182.1	244.6	270.6
87.5°	15.6	78.8	161.3	223.0	248.3
90°	3.0	63.2	143.5	202.2	226.0
92.5°	0.7	50.6	127.9	185.9	205.2
95°	0.7	39.4	111.5	167.3	185.1
97.5°	0.7	30.5	97.4	150.2	169.5
100°	0.7	23.0	84.0	134.6	152.4
102.5°	0.7	17.8	71.4	118.2	136.8
105°	0.7	13.4	61.0	103.3	118.9
107.5°	0.7	9.7	51.3	91.4	106.3
110°	0.7	7.4	43.1	80.3	92.9



TEST NUMBER: P892779

CATALOG NUMBER: 2MB-4HL-RND-UNV-L940

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	5.2	34.9	68.4	81.0
115°	0.7	3.7	29.0	58.0	69.9
117.5°	0.7	2.2	23.0	49.1	59.5
120°	0.7	1.5	18.6	40.9	50.6
122.5°	0.7	1.5	14.1	33.5	42.4
125°	0.7	0.7	11.2	27.5	34.9
127.5°	0.7	0.7	8.2	21.6	27.5
130°	0.7	0.7	5.9	16.4	21.6
132.5°	0.7	0.7	3.7	12.6	16.4
135°	0.7	0.7	3.0	8.9	12.6
137.5°	0.7	0.7	1.5	5.9	8.2
140°	0.7	0.7	0.7	3.7	5.2
142.5°	0.7	0.7	0.7	2.2	3.0
145°	0.7	0.7	0.0	0.7	1.5
147.5°	0.7	0.7	0.0	0.7	0.7
150°	0.7	0.7	0.0	0.0	0.0
152.5°	0.7	0.7	0.0	0.0	0.0
155°	0.7	0.7	0.0	0.0	0.0
157.5°	0.7	0.7	0.0	0.0	0.0
160°	0.7	0.7	0.0	0.0	0.0
162.5°	0.7	0.7	0.0	0.0	0.0
165°	0.7	0.7	0.0	0.0	0.0
167.5°	0.7	0.7	0.0	0.0	0.0
170°	0.7	0.7	0.0	0.0	0.0
172.5°	1.5	0.7	0.0	0.0	0.0
175°	1.5	0.7	0.0	0.0	0.0
177.5°	1.5	0.7	0.0	0.0	0.0
180°	0.7	0.7	0.7	0.7	0.7



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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	19.30	20.84	19.77	21.29	21.78	21.04	22.57	21.51	23.03	23.51
	3H	21.04	22.44	21.52	22.90	23.43	23.61	25.01	24.09	25.48	26.00
	4H	21.68	23.01	22.19	23.50	24.03	24.91	26.24	25.41	26.72	27.26
	6H	22.15	23.39	22.67	23.89	24.44	26.31	27.54	26.82	28.04	28.60
	8H	22.30	23.49	22.83	24.01	24.57	27.04	28.22	27.57	28.74	29.30
	12H	22.40	23.53	22.93	24.05	24.64	27.88	29.02	28.42	29.53	30.13
4H	2H	20.28	21.60	20.78	22.09	22.63	21.59	22.92	22.09	23.40	23.94
	3H	22.29	23.42	22.80	23.95	24.51	24.45	25.59	24.97	26.11	26.68
	4H	23.08	24.12	23.62	24.66	25.25	25.97	27.01	26.51	27.54	28.14
	6H	23.72	24.64	24.28	25.20	25.81	27.60	28.52	28.16	29.08	29.69
	8H	23.95	24.81	24.51	25.38	26.00	28.46	29.33	29.02	29.89	30.51
	12H	24.12	24.90	24.70	25.49	26.12	29.46	30.24	30.04	30.83	31.46
8H	4H	23.96	24.82	24.52	25.39	26.01	26.33	27.19	26.89	27.76	28.38
	6H	24.87	25.61	25.47	26.21	26.84	28.22	28.95	28.81	29.56	30.19
	8H	25.25	25.92	25.86	26.53	27.17	29.29	29.95	29.89	30.57	31.21
	12H	25.57	26.17	26.18	26.77	27.48	30.54	31.13	31.15	31.74	32.44
12H	4H	24.24	25.02	24.82	25.61	26.24	26.37	27.15	26.95	27.75	28.37
	6H	25.32	25.98	25.92	26.60	27.23	28.33	28.99	28.93	29.61	30.25
	8H	25.86	26.45	26.46	27.05	27.76	29.51	30.10	30.11	30.70	31.41