

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: P892776

Luminaire Tested: 2MB-4HL-RND-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892776
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-L850
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

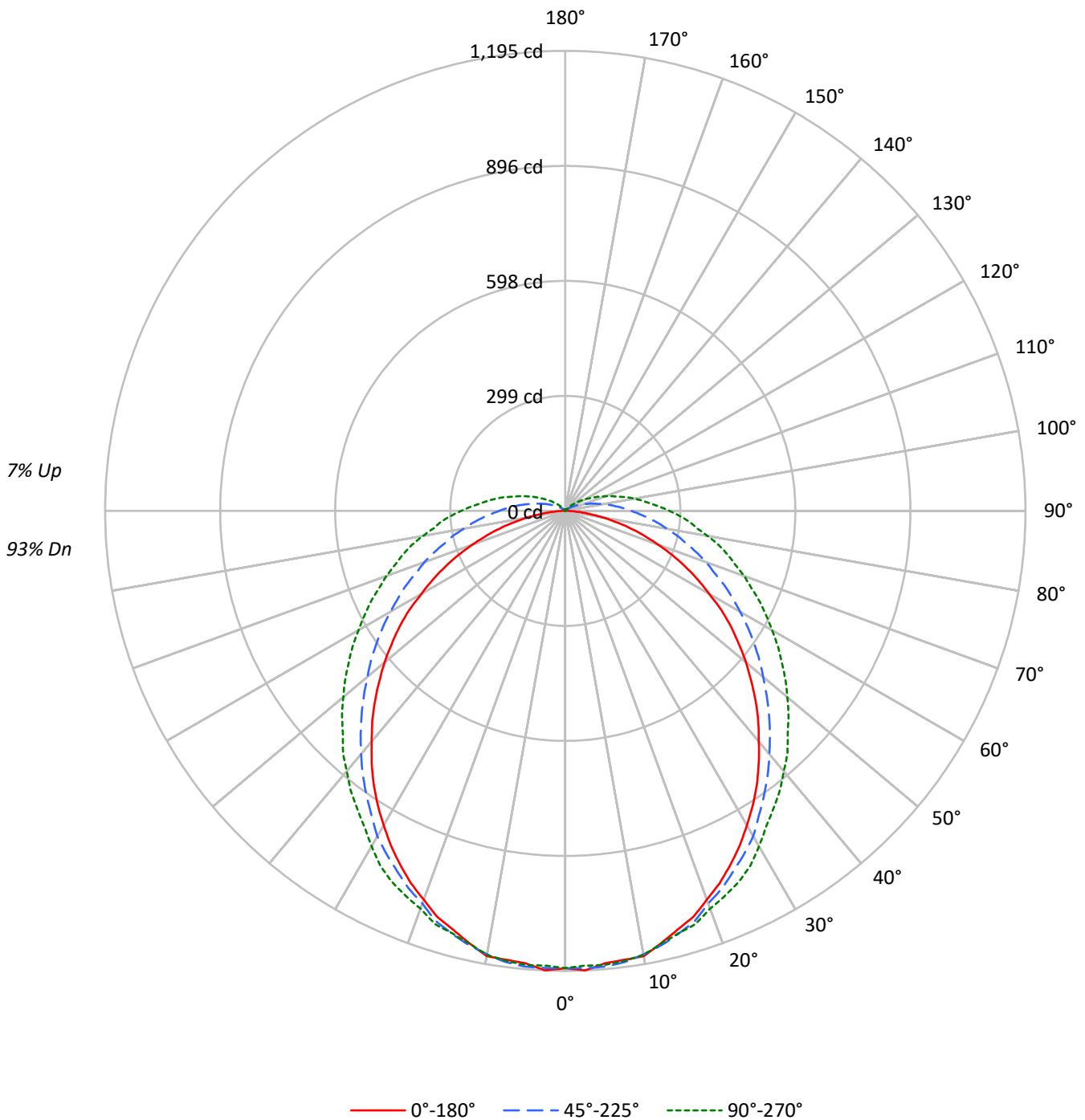
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3871.0 lumens
Efficiency: N/A
Efficacy: 140.3 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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	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	96	96	96	96	96	96	96
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	77	77	77	77	77	77
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	66	63	63	63	63	63	63	63	63	63	63
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	53	53	53	53	53	53
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	45	45	45	45	45	45
5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	44	39	39	39	39	39	39	39	39	39	39
6	67	53	44	38	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	34	34	34	34	34	34
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	31	31	31	31	31	31	31	31	31
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	27	27	27	27	27	27	27	27	27
9	54	40	32	26	52	40	32	26	38	31	26	36	30	25	35	29	25	25	25	25	25	25	25	25	25	25
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	22	22	22	22	22	22	22	22	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16989	16989	16989
5°	16939	17067	17002
10°	17057	16993	17006
15°	16679	16838	16824
20°	16359	16522	16738
25°	16007	16302	16793
30°	15575	16120	16619
35°	15146	15721	16467
40°	14602	15399	16480
45°	14146	15135	16521
50°	13640	14927	16749
55°	13111	14910	17127
60°	12343	15015	17739
65°	11685	15419	18851
70°	10754	16258	20650
75°	9733	17897	24093
80°	8205	22062	30926
85°	6565	35765	53148

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 97437 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.5	2.9
10°-20°	320.0	8.3
20°-30°	477.3	12.3
30°-40°	565.0	14.6
40°-50°	582.1	15.0
50°-60°	538.2	13.9
60°-70°	447.3	11.6
70°-80°	334.7	8.6
80°-90°	221.8	5.7
90°-100°	135.7	3.5
100°-110°	76.7	2.0
110°-120°	38.2	1.0
120°-130°	15.8	0.4
130°-140°	4.6	0.1
140°-150°	0.7	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	909.8	23.5
0°-40°	1474.8	38.1
0°-60°	2595.1	67.0
0°-90°	3599.0	93.0
90°-120°	250.6	6.5
90°-150°	271.7	7.0
90°-180°	272.0	7.0
0°-180°	3871.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1180	1173	1188	1185	1184	113
15°	1126	1126	1137	1148	1136	318
25°	1014	1018	1033	1052	1064	467
35°	867	876	900	938	943	542
45°	699	706	748	801	817	539
55°	526	538	598	663	687	469
65°	345	372	456	527	557	341
75°	176	227	324	403	436	186
85°	40	116	218	293	324	46
90°	4	76	172	242	270	4
95°	1	47	133	200	222	1
105°	1	16	73	124	142	1
115°	1	4	35	69	84	1
125°	1	1	13	33	42	1
135°	1	1	4	11	15	1
145°	1	1	0	1	2	1
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°	1187.6	1187.6	1187.6	1187.6	1187.6
2.5°	1194.7	1180.5	1188.5	1186.7	1182.2
5°	1179.6	1173.3	1188.5	1184.9	1184.0
7.5°	1176.0	1173.3	1182.2	1178.7	1178.7
10°	1174.2	1156.4	1169.8	1178.7	1170.7
12.5°	1150.2	1145.8	1155.5	1156.4	1151.1
15°	1126.2	1126.2	1136.9	1147.5	1136.0
17.5°	1105.7	1104.0	1117.3	1125.3	1125.3
20°	1074.6	1077.3	1085.3	1100.4	1099.5
22.5°	1047.0	1054.1	1062.1	1079.9	1082.6
25°	1014.1	1017.7	1032.8	1052.4	1063.9
27.5°	980.3	985.6	1005.2	1026.6	1039.9
30°	942.9	942.9	975.9	1000.8	1006.1
32.5°	906.5	907.4	936.7	964.3	971.4
35°	867.3	876.2	900.2	937.6	942.9
37.5°	825.5	830.9	863.8	897.6	915.4
40°	781.9	790.8	824.6	871.8	882.5
42.5°	741.9	749.0	786.4	835.3	854.0
45°	699.2	706.3	748.1	800.6	816.6
47.5°	654.7	663.6	709.0	771.3	786.4
50°	612.9	620.0	670.7	733.9	752.6
52.5°	568.4	580.0	635.2	696.5	720.5
55°	525.7	538.2	597.8	662.7	686.7
57.5°	481.3	498.2	561.3	628.9	654.7
60°	431.4	453.7	524.8	596.9	620.0
62.5°	388.7	412.8	488.4	559.5	588.0
65°	345.2	371.8	455.5	526.6	556.9
67.5°	301.6	333.6	418.1	493.7	523.1
70°	257.1	298.0	388.7	464.4	493.7
72.5°	215.3	261.5	356.7	435.9	462.6
75°	176.1	226.8	323.8	403.0	435.9
77.5°	137.0	195.7	298.0	378.1	407.4
80°	99.6	165.5	267.8	347.8	375.4
82.5°	68.5	139.7	243.7	321.1	344.3
85°	40.0	116.5	217.9	292.7	323.8
87.5°	18.7	94.3	193.0	266.9	297.1
90°	3.6	75.6	171.7	242.0	270.4
92.5°	0.9	60.5	153.0	222.4	245.5
95°	0.9	47.1	133.4	200.2	221.5
97.5°	0.9	36.5	116.5	179.7	202.8
100°	0.9	27.6	100.5	161.0	182.4
102.5°	0.9	21.3	85.4	141.4	163.7
105°	0.9	16.0	72.9	123.6	142.3
107.5°	0.9	11.6	61.4	109.4	127.2
110°	0.9	8.9	51.6	96.1	111.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.9	6.2	41.8	81.8	97.0
115°	0.9	4.4	34.7	69.4	83.6
117.5°	0.9	2.7	27.6	58.7	71.2
120°	0.9	1.8	22.2	48.9	60.5
122.5°	0.9	1.8	16.9	40.0	50.7
125°	0.9	0.9	13.3	32.9	41.8
127.5°	0.9	0.9	9.8	25.8	32.9
130°	0.9	0.9	7.1	19.6	25.8
132.5°	0.9	0.9	4.4	15.1	19.6
135°	0.9	0.9	3.6	10.7	15.1
137.5°	0.9	0.9	1.8	7.1	9.8
140°	0.9	0.9	0.9	4.4	6.2
142.5°	0.9	0.9	0.9	2.7	3.6
145°	0.9	0.9	0.0	0.9	1.8
147.5°	0.9	0.9	0.0	0.9	0.9
150°	0.9	0.9	0.0	0.0	0.0
152.5°	0.9	0.9	0.0	0.0	0.0
155°	0.9	0.9	0.0	0.0	0.0
157.5°	0.9	0.9	0.0	0.0	0.0
160°	0.9	0.9	0.0	0.0	0.0
162.5°	0.9	0.9	0.0	0.0	0.0
165°	0.9	0.9	0.0	0.0	0.0
167.5°	0.9	0.9	0.0	0.0	0.0
170°	0.9	0.9	0.0	0.0	0.0
172.5°	1.8	0.9	0.0	0.0	0.0
175°	1.8	0.9	0.0	0.0	0.0
177.5°	1.8	0.9	0.0	0.0	0.0
180°	0.9	0.9	0.9	0.9	0.9



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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	19.93	21.46	20.40	21.92	22.40	21.66	23.20	22.13	23.65	24.14
	3H	21.66	23.06	22.14	23.53	24.05	24.23	25.63	24.72	26.10	26.62
	4H	22.31	23.64	22.81	24.12	24.66	25.53	26.86	26.04	27.34	27.88
	6H	22.78	24.01	23.29	24.51	25.07	26.93	28.17	27.45	28.67	29.22
	8H	22.92	24.11	23.45	24.63	25.19	27.66	28.85	28.19	29.37	29.93
	12H	23.02	24.16	23.56	24.67	25.26	28.51	29.64	29.04	30.16	30.75
4H	2H	20.90	22.23	21.41	22.71	23.25	22.21	23.54	22.72	24.02	24.56
	3H	22.91	24.04	23.43	24.57	25.13	25.08	26.21	25.59	26.74	27.30
	4H	23.71	24.75	24.24	25.28	25.88	26.59	27.63	27.13	28.17	28.76
	6H	24.35	25.26	24.90	25.83	26.44	28.23	29.14	28.78	29.71	30.32
	8H	24.57	25.44	25.13	26.00	26.62	29.09	29.95	29.65	30.51	31.13
	12H	24.74	25.52	25.32	26.12	26.74	30.08	30.86	30.66	31.46	32.08
8H	4H	24.58	25.45	25.15	26.01	26.63	26.95	27.82	27.51	28.38	29.00
	6H	25.50	26.23	26.09	26.84	27.46	28.84	29.58	29.44	30.18	30.81
	8H	25.88	26.54	26.48	27.16	27.80	29.91	30.57	30.52	31.19	31.83
	12H	26.20	26.79	26.80	27.39	28.10	31.16	31.76	31.77	32.36	33.06
12H	4H	24.86	25.64	25.44	26.24	26.86	26.99	27.78	27.57	28.37	28.99
	6H	25.94	26.60	26.54	27.22	27.86	28.95	29.62	29.56	30.23	30.87
	8H	26.48	27.07	27.09	27.68	28.38	30.13	30.72	30.74	31.33	32.03