

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: P892773

Luminaire Tested: 2MB-4HL-RND-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892773
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-L830
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

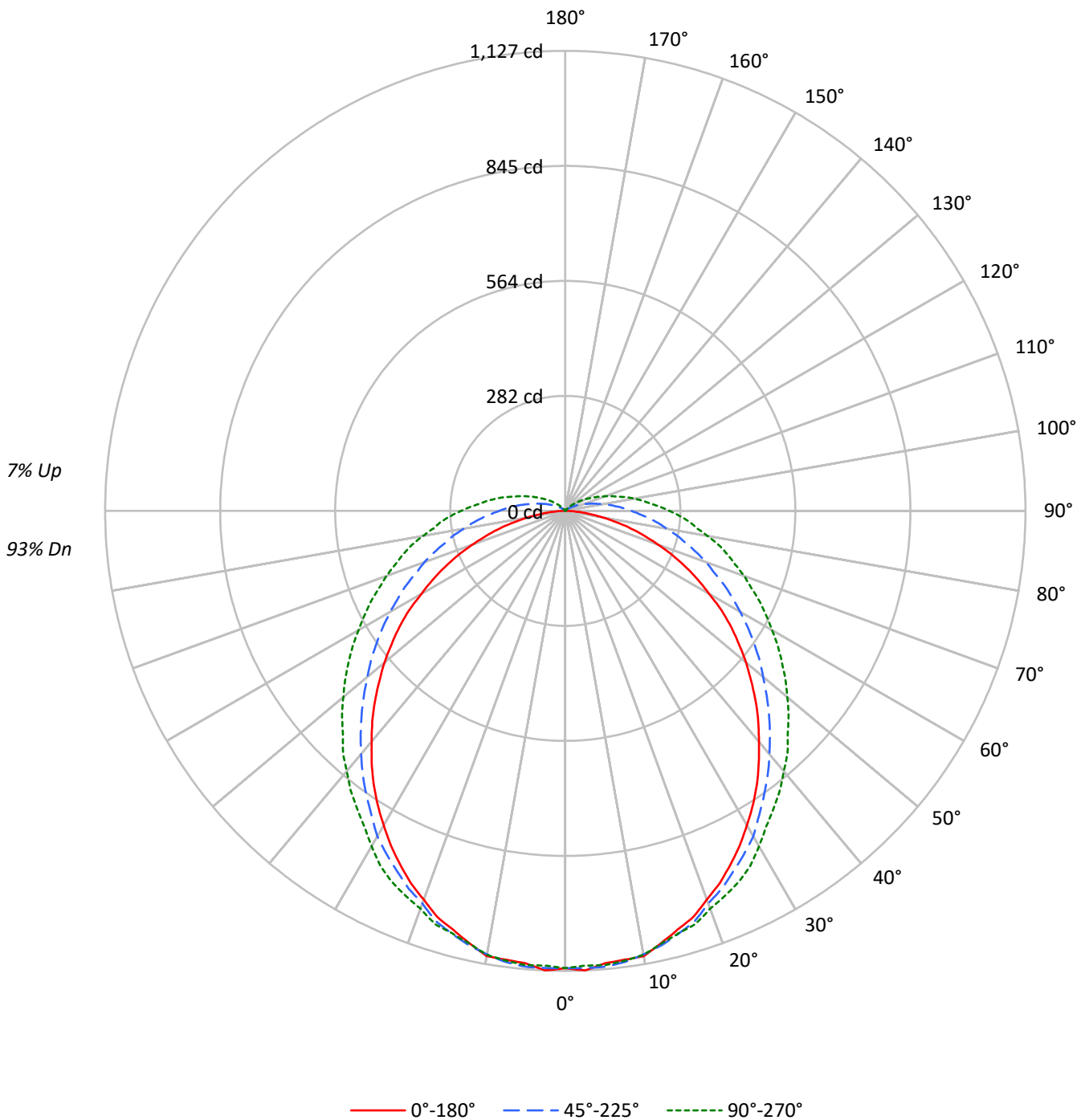
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3651.0 lumens
Efficiency: N/A
Efficacy: 132.3 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 (Ain): 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																																																																																																																																																																												
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	0																																																																																																																																																																																						
RCR	0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93	1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	74	2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	66	63	60	3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50	4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	43	5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	44	39	37	6	67	53	44	38	65	52	43	37	49	42	36	47	40	35	45	39	34	32	7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	28	8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	25	9	54	40	32	26	52	40	32	26	38	31	26	36	30	25	35	29	25	23	10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16024	16024	16024
5°	15976	16096	16036
10°	16088	16027	16038
15°	15731	15881	15868
20°	15429	15583	15787
25°	15098	15376	15840
30°	14692	15204	15674
35°	14285	14828	15532
40°	13772	14525	15543
45°	13342	14275	15582
50°	12866	14079	15797
55°	12368	14062	16154
60°	11642	14162	16732
65°	11018	14542	17778
70°	10143	15334	19479
75°	9181	16880	22722
80°	7744	20801	29171
85°	6204	33747	50127

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
Vertical Angle: 87.5°
Luminance: 91895 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.1	2.9
10°-20°	301.8	8.3
20°-30°	450.2	12.3
30°-40°	532.9	14.6
40°-50°	549.0	15.0
50°-60°	507.6	13.9
60°-70°	421.9	11.6
70°-80°	315.7	8.6
80°-90°	209.2	5.7
90°-100°	128.0	3.5
100°-110°	72.3	2.0
110°-120°	36.0	1.0
120°-130°	14.8	0.4
130°-140°	4.4	0.1
140°-150°	0.7	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	858.1	23.5
0°-40°	1391.0	38.1
0°-60°	2447.6	67.0
0°-90°	3394.4	93.0
90°-120°	236.4	6.5
90°-150°	256.3	7.0
90°-180°	257.0	7.0
0°-180°	3651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1112	1107	1121	1118	1117	106
15°	1062	1062	1072	1082	1071	300
25°	956	960	974	992	1004	440
35°	818	826	849	884	889	511
45°	660	666	706	755	770	508
55°	496	508	564	625	648	442
65°	326	351	430	497	525	322
75°	166	214	305	380	411	176
85°	38	110	206	276	305	43
90°	3	71	162	228	255	3
95°	1	44	126	189	209	1
105°	1	15	69	117	134	1
115°	1	4	33	65	79	1
125°	1	1	13	31	39	1
135°	1	1	3	10	14	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°	1120.1	1120.1	1120.1	1120.1	1120.1
2.5°	1126.8	1113.4	1120.9	1119.2	1115.0
5°	1112.5	1106.7	1120.9	1117.6	1116.7
7.5°	1109.2	1106.7	1115.0	1111.7	1111.7
10°	1107.5	1090.7	1103.3	1111.7	1104.1
12.5°	1084.8	1080.6	1089.9	1090.7	1085.7
15°	1062.2	1062.2	1072.3	1082.3	1071.4
17.5°	1042.9	1041.2	1053.8	1061.3	1061.3
20°	1013.5	1016.0	1023.6	1037.9	1037.0
22.5°	987.5	994.2	1001.8	1018.6	1021.1
25°	956.5	959.8	974.1	992.5	1003.5
27.5°	924.6	929.6	948.1	968.2	980.8
30°	889.4	889.4	920.4	943.9	948.9
32.5°	855.0	855.8	883.5	909.5	916.2
35°	818.0	826.4	849.1	884.3	889.4
37.5°	778.6	783.6	814.7	846.6	863.3
40°	737.5	745.9	777.8	822.2	832.3
42.5°	699.7	706.4	741.7	787.8	805.5
45°	659.5	666.2	705.6	755.1	770.2
47.5°	617.5	625.9	668.7	727.4	741.7
50°	578.1	584.8	632.6	692.2	709.8
52.5°	536.1	547.0	599.1	656.9	679.6
55°	495.9	507.6	563.8	625.1	647.7
57.5°	453.9	469.8	529.4	593.2	617.5
60°	406.9	427.9	495.0	563.0	584.8
62.5°	366.6	389.3	460.6	527.7	554.6
65°	325.5	350.7	429.6	496.7	525.2
67.5°	284.4	314.6	394.3	465.7	493.3
70°	242.5	281.1	366.6	438.0	465.7
72.5°	203.0	246.7	336.4	411.1	436.3
75°	166.1	213.9	305.4	380.1	411.1
77.5°	129.2	184.6	281.1	356.6	384.3
80°	94.0	156.1	252.5	328.1	354.1
82.5°	64.6	131.7	229.9	302.9	324.7
85°	37.8	109.9	205.6	276.0	305.4
87.5°	17.6	88.9	182.1	251.7	280.2
90°	3.4	71.3	161.9	228.2	255.1
92.5°	0.8	57.1	144.3	209.8	231.6
95°	0.8	44.5	125.9	188.8	208.9
97.5°	0.8	34.4	109.9	169.5	191.3
100°	0.8	26.0	94.8	151.9	172.0
102.5°	0.8	20.1	80.5	133.4	154.4
105°	0.8	15.1	68.8	116.6	134.2
107.5°	0.8	10.9	57.9	103.2	120.0
110°	0.8	8.4	48.7	90.6	104.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	5.9	39.4	77.2	91.5
115°	0.8	4.2	32.7	65.4	78.9
117.5°	0.8	2.5	26.0	55.4	67.1
120°	0.8	1.7	21.0	46.1	57.1
122.5°	0.8	1.7	15.9	37.8	47.8
125°	0.8	0.8	12.6	31.0	39.4
127.5°	0.8	0.8	9.2	24.3	31.0
130°	0.8	0.8	6.7	18.5	24.3
132.5°	0.8	0.8	4.2	14.3	18.5
135°	0.8	0.8	3.4	10.1	14.3
137.5°	0.8	0.8	1.7	6.7	9.2
140°	0.8	0.8	0.8	4.2	5.9
142.5°	0.8	0.8	0.8	2.5	3.4
145°	0.8	0.8	0.0	0.8	1.7
147.5°	0.8	0.8	0.0	0.8	0.8
150°	0.8	0.8	0.0	0.0	0.0
152.5°	0.8	0.8	0.0	0.0	0.0
155°	0.8	0.8	0.0	0.0	0.0
157.5°	0.8	0.8	0.0	0.0	0.0
160°	0.8	0.8	0.0	0.0	0.0
162.5°	0.8	0.8	0.0	0.0	0.0
165°	0.8	0.8	0.0	0.0	0.0
167.5°	0.8	0.8	0.0	0.0	0.0
170°	0.8	0.8	0.0	0.0	0.0
172.5°	1.7	0.8	0.0	0.0	0.0
175°	1.7	0.8	0.0	0.0	0.0
177.5°	1.7	0.8	0.0	0.0	0.0
180°	0.8	0.8	0.8	0.8	0.8



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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	19.72	21.26	20.19	21.71	22.20	21.46	22.99	21.93	23.45	23.93
	3H	21.46	22.86	21.94	23.32	23.85	24.03	25.43	24.51	25.90	26.42
	4H	22.10	23.43	22.61	23.92	24.45	25.33	26.66	25.83	27.14	27.68
	6H	22.57	23.81	23.09	24.31	24.86	26.73	27.97	27.24	28.46	29.02
	8H	22.72	23.91	23.25	24.43	24.99	27.46	28.64	27.99	29.16	29.73
	12H	22.82	23.95	23.35	24.47	25.06	28.30	29.44	28.84	29.95	30.55
4H	2H	20.70	22.02	21.20	22.51	23.05	22.01	23.34	22.51	23.82	24.36
	3H	22.71	23.84	23.22	24.37	24.93	24.87	26.01	25.39	26.53	27.10
	4H	23.50	24.54	24.04	25.08	25.67	26.39	27.43	26.93	27.96	28.56
	6H	24.14	25.06	24.70	25.62	26.23	28.02	28.94	28.58	29.51	30.11
	8H	24.37	25.23	24.93	25.80	26.42	28.88	29.75	29.44	30.31	30.93
	12H	24.54	25.32	25.12	25.91	26.54	29.88	30.66	30.46	31.25	31.88
8H	4H	24.38	25.24	24.94	25.81	26.43	26.75	27.61	27.31	28.18	28.80
	6H	25.29	26.03	25.89	26.63	27.26	28.64	29.38	29.23	29.98	30.61
	8H	25.67	26.34	26.28	26.95	27.59	29.71	30.37	30.31	30.99	31.63
	12H	25.99	26.59	26.60	27.19	27.90	30.96	31.55	31.57	32.16	32.86
12H	4H	24.66	25.44	25.24	26.03	26.66	26.79	27.57	27.37	28.17	28.79
	6H	25.74	26.40	26.34	27.02	27.65	28.75	29.41	29.35	30.03	30.67
	8H	26.28	26.87	26.88	27.47	28.18	29.93	30.52	30.53	31.12	31.83