

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: P892879

Luminaire Tested: 2MB-5HL-RNDU-UNV-L840

Issue Date: 11/11/2024

**Test Information**

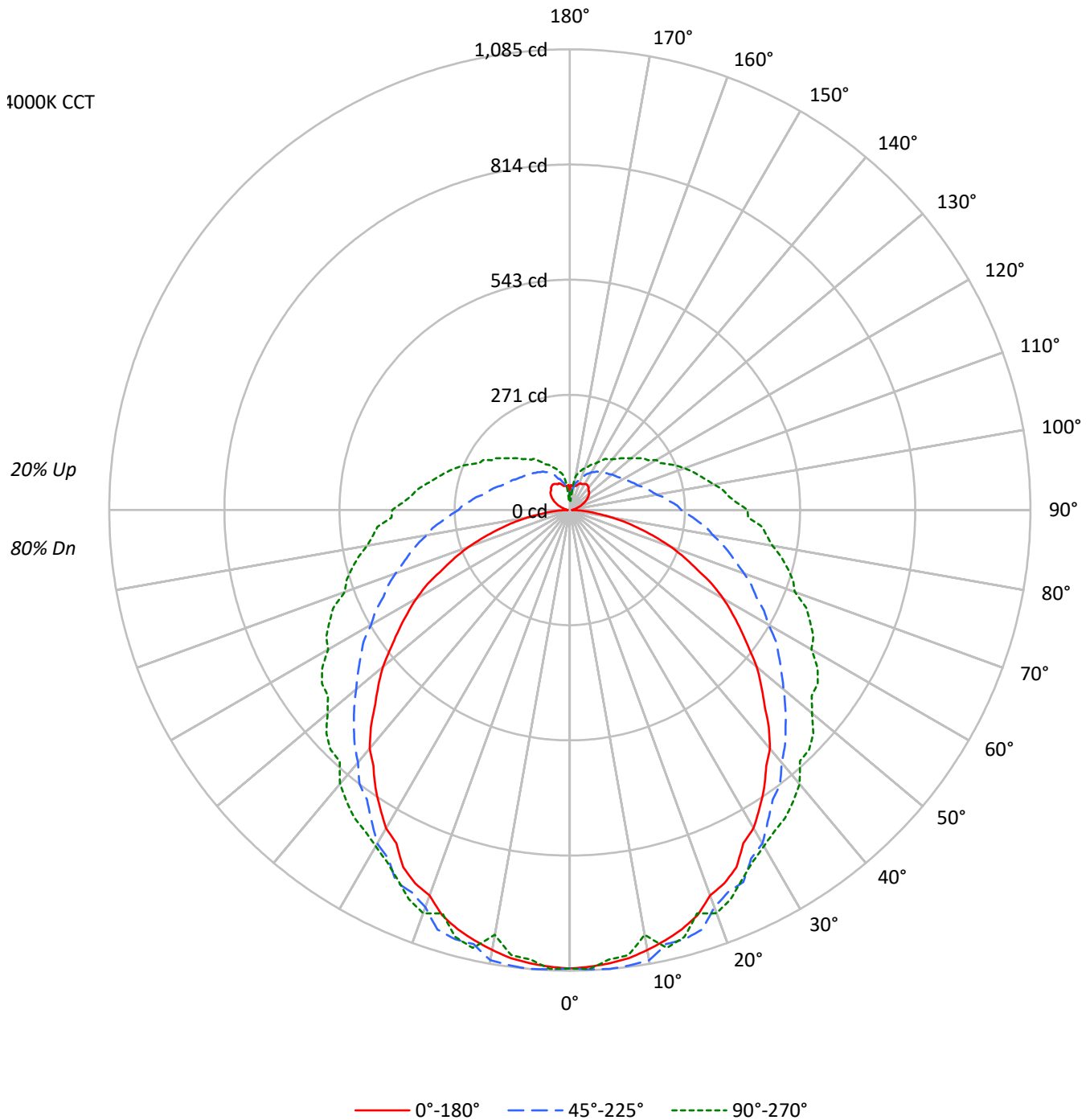
Test Method: LM-79-2019  
Report Number: P892879  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-5HL-RNDU-UNV-L840  
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 4  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4550.0 lumens  
Efficiency: N/A  
Efficacy: 135.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 1.98' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 4.5  
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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80		
1	102	96	91	86	97	92	87	83	84	80	76	76	73	70	69	67	65	61		
2	92	82	75	68	87	79	72	66	72	66	61	65	61	57	60	56	53	49		
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	41		
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	34		
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	29		
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	37	32	28	26		
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	23		
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	20		
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	18		
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	16		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	15446	15446	15446
5°	15248	14973	14558
10°	15007	14462	13454
15°	14718	13788	13445
20°	14162	12973	12827
25°	13969	12559	12068
30°	13476	11828	11471
35°	12986	10991	11166
40°	12583	10444	10771
45°	11861	9952	10420
50°	11368	9434	10024
55°	10659	9036	9976
60°	10103	8590	9647
65°	9116	8239	9722
70°	8205	8052	9411
75°	6770	7894	9642
80°	5081	7791	9717
85°	3181	7912	10283

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11861 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.7	2.3
10°-20°	292.9	6.4
20°-30°	438.8	9.6
30°-40°	526.7	11.6
40°-50°	555.5	12.2
50°-60°	535.9	11.8
60°-70°	475.2	10.4
70°-80°	391.6	8.6
80°-90°	304.4	6.7
90°-100°	237.3	5.2
100°-110°	189.3	4.2
110°-120°	151.6	3.3
120°-130°	120.3	2.6
130°-140°	92.4	2.0
140°-150°	67.2	1.5
150°-160°	42.5	0.9
160°-170°	20.8	0.5
170°-180°	4.9	0.1
0°-30°	834.4	18.3
0°-40°	1361.2	29.9
0°-60°	2452.6	53.9
0°-90°	3623.8	79.6
90°-120°	578.1	12.7
90°-150°	858.1	18.9
90°-180°	926.0	20.4
0°-180°	4550.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1080	1080	1080	1080	1080	
5°	1072	1087	1085	1076	1062	102
15°	1022	1035	1046	1051	1041	287
25°	928	943	967	966	960	424
35°	798	812	833	877	885	499
45°	648	663	719	768	797	503
55°	492	521	601	678	713	441
65°	330	370	484	573	625	330
75°	171	247	389	495	531	183
85°	43	150	303	411	455	46
90°	6	119	262	379	418	5
95°	7	98	236	337	375	7
105°	16	81	190	280	315	18
115°	34	78	157	231	256	34
125°	52	78	136	188	212	46
135°	63	79	123	156	173	49
145°	72	77	111	133	147	45
155°	67	71	93	109	118	32
165°	59	61	69	80	93	17
175°	58	54	45	41	21	5
180°	42	42	42	42	42	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1079.7	1079.7	1079.7	1079.7	1079.7
2.5°	1076.7	1083.8	1082.8	1096.0	1081.7
5°	1071.6	1086.8	1084.8	1075.6	1062.4
7.5°	1064.5	1085.8	1081.7	1079.7	1057.4
10°	1052.3	1069.6	1076.7	1078.7	1015.7
12.5°	1038.1	1054.3	1047.2	1056.3	1056.3
15°	1021.8	1035.0	1046.2	1051.3	1041.1
17.5°	1000.5	1021.8	1036.0	1033.0	996.4
20°	965.9	995.4	995.4	1013.7	1010.6
22.5°	951.7	976.1	974.1	986.3	991.3
25°	928.4	942.6	967.0	965.9	959.9
27.5°	884.7	923.3	925.3	932.4	933.4
30°	865.4	890.8	907.0	918.2	914.1
32.5°	831.9	845.1	868.4	891.8	896.9
35°	798.4	811.6	832.9	876.6	884.7
37.5°	759.8	788.2	813.6	841.0	864.4
40°	733.3	743.5	776.0	816.6	842.0
42.5°	693.7	711.0	750.6	785.2	802.4
45°	648.0	663.3	719.1	767.9	797.3
47.5°	611.5	634.8	688.7	745.5	778.0
50°	574.9	594.2	657.2	710.0	744.5
52.5°	530.2	556.6	628.7	708.0	718.1
55°	491.6	521.1	601.3	677.5	713.0
57.5°	454.0	480.4	575.9	644.0	691.7
60°	417.5	445.9	540.4	621.6	657.2
62.5°	377.8	405.3	516.0	602.3	647.0
65°	330.1	369.7	484.5	572.9	624.7
67.5°	292.5	341.3	463.2	565.8	603.3
70°	252.9	303.7	436.8	530.2	563.7
72.5°	211.3	274.2	410.4	520.0	551.5
75°	170.6	246.8	389.0	494.7	531.2
77.5°	136.1	219.4	366.7	474.3	509.9
80°	98.5	193.0	342.3	448.9	484.5
82.5°	67.0	169.6	326.0	434.7	468.2
85°	42.7	150.3	302.7	411.4	455.0
87.5°	20.3	133.1	282.4	394.1	420.5
90°	6.1	118.8	262.1	378.9	418.5
92.5°	5.1	107.7	252.9	356.5	394.1
95°	7.1	98.5	235.6	337.2	374.8
97.5°	10.2	91.4	224.5	321.0	363.6
100°	11.2	85.3	208.2	307.8	345.3
102.5°	13.2	82.3	198.1	294.6	329.1
105°	16.3	81.3	189.9	280.3	314.9
107.5°	20.3	77.2	180.8	261.0	301.7
110°	24.4	78.2	169.6	252.9	287.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	29.5	77.2	164.5	237.7	273.2
115°	33.5	78.2	157.4	230.6	256.0
117.5°	38.6	77.2	152.4	215.3	239.7
120°	43.7	78.2	145.2	210.3	235.6
122.5°	47.7	79.2	141.2	198.1	218.4
125°	51.8	78.2	136.1	187.9	212.3
127.5°	55.9	79.2	133.1	178.8	200.1
130°	58.9	78.2	130.0	171.7	189.9
132.5°	62.0	78.2	124.9	163.5	180.8
135°	63.0	79.2	122.9	156.4	172.7
137.5°	65.0	80.2	118.8	149.3	162.5
140°	69.1	80.2	116.8	145.2	156.4
142.5°	70.1	78.2	112.7	137.1	149.3
145°	72.1	77.2	110.7	133.1	147.3
147.5°	72.1	77.2	105.6	124.9	138.1
150°	71.1	74.1	102.6	119.9	129.0
152.5°	69.1	74.1	97.5	114.8	120.9
155°	67.0	71.1	93.4	108.7	117.8
157.5°	68.1	70.1	86.3	105.6	109.7
160°	66.0	67.0	78.2	99.5	105.6
162.5°	63.0	64.0	76.2	91.4	100.6
165°	58.9	60.9	69.1	80.2	93.4
167.5°	57.9	56.9	65.0	72.1	88.4
170°	57.9	55.9	57.9	60.9	81.3
172.5°	56.9	53.8	51.8	48.8	59.9
175°	57.9	53.8	44.7	40.6	21.3
177.5°	58.9	54.8	43.7	30.5	22.3
180°	41.6	41.6	41.6	41.6	41.6



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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	16.48	17.79	17.13	18.46	19.23	19.64	20.95	20.28	21.61	22.38
	3H	17.96	19.15	18.61	19.83	20.63	22.47	23.66	23.12	24.34	25.14
	4H	18.43	19.57	19.10	20.26	21.07	23.88	25.02	24.56	25.71	26.52
	6H	18.72	19.78	19.40	20.48	21.31	25.36	26.42	26.05	27.12	27.95
	8H	18.78	19.80	19.47	20.51	21.35	26.11	27.13	26.81	27.85	28.68
	12H	18.80	19.77	19.50	20.49	21.35	26.93	27.90	27.63	28.62	29.48
4H	2H	17.59	18.73	18.26	19.41	20.23	20.00	21.14	20.68	21.83	22.64
	3H	19.30	20.28	19.99	21.00	21.84	23.06	24.04	23.75	24.76	25.60
	4H	19.91	20.81	20.61	21.54	22.40	24.67	25.57	25.38	26.30	27.16
	6H	20.33	21.13	21.05	21.88	22.75	26.35	27.15	27.07	27.90	28.77
	8H	20.44	21.20	21.17	21.94	22.83	27.22	27.97	27.95	28.72	29.61
	12H	20.50	21.19	21.25	21.96	22.85	28.17	28.85	28.92	29.62	30.51
8H	4H	20.91	21.66	21.64	22.41	23.30	24.87	25.62	25.59	26.37	27.25
	6H	21.57	22.21	22.33	23.00	23.88	26.73	27.38	27.49	28.16	29.05
	8H	21.80	22.38	22.56	23.16	24.06	27.76	28.34	28.53	29.13	30.03
	12H	21.95	22.47	22.72	23.25	24.20	28.91	29.42	29.67	30.20	31.16
12H	4H	21.22	21.91	21.97	22.68	23.57	24.86	25.55	25.61	26.32	27.21
	6H	22.04	22.62	22.81	23.41	24.31	26.77	27.35	27.54	28.14	29.04
	8H	22.39	22.91	23.16	23.69	24.64	27.87	28.39	28.64	29.17	30.12