

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: P892871

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892871
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-5HL-RND-UNV-L840
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

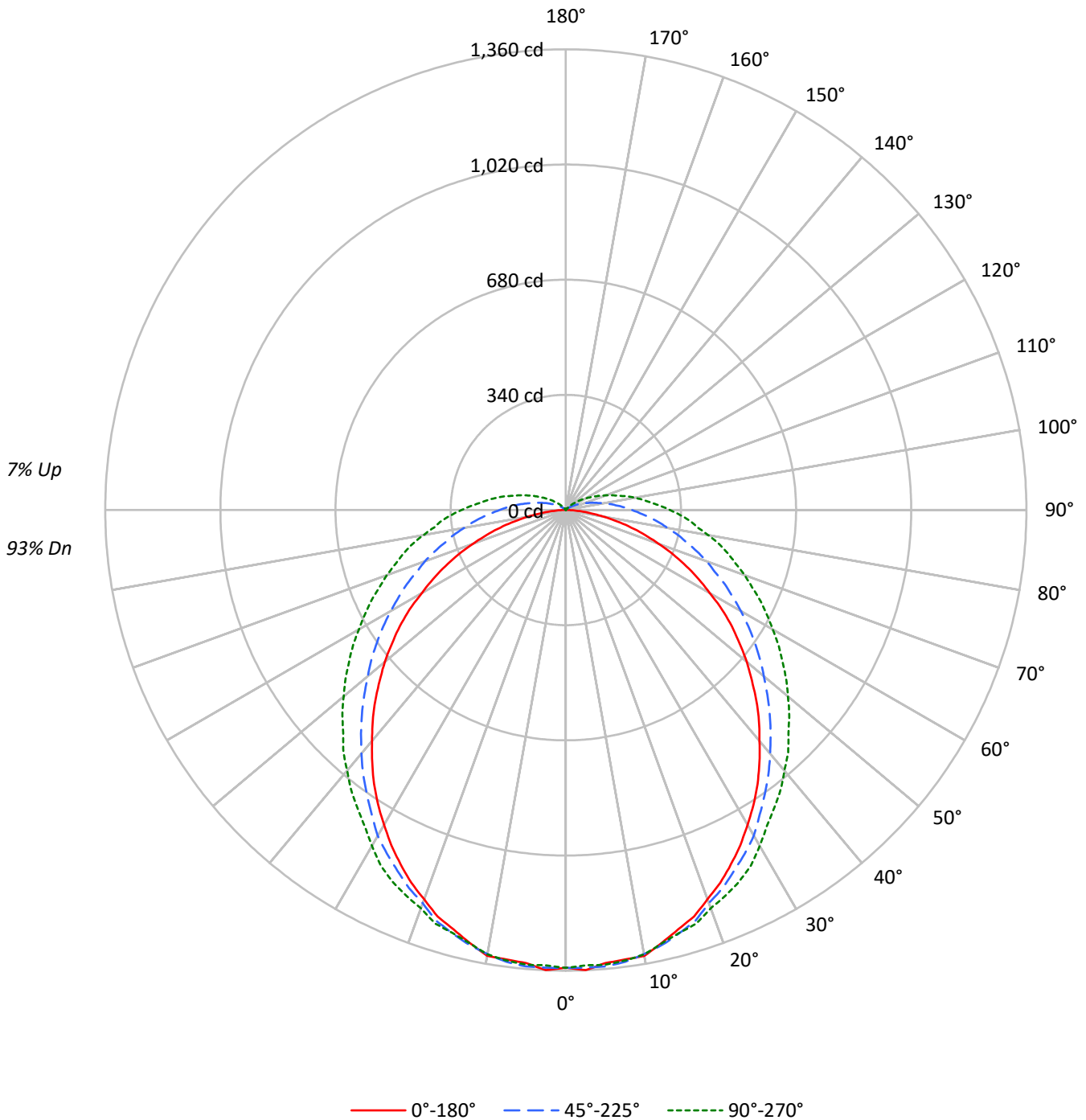
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4405.0 lumens
Efficiency: N/A
Efficacy: 130.7 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): 33.7
Input Voltage (V): 120
Input Current (A_{in}): 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				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	0
RCR																					
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	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	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	66	63	63	63	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	38	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	31	31	31	28
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	40	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19332	19332	19332
5°	19276	19421	19347
10°	19410	19337	19352
15°	18979	19160	19145
20°	18615	18801	19048
25°	18215	18551	19110
30°	17724	18344	18912
35°	17237	17890	18739
40°	16617	17524	18753
45°	16098	17223	18801
50°	15523	16988	19060
55°	14922	16967	19491
60°	14048	17086	20188
65°	13296	17544	21451
70°	12234	18504	23498
75°	11077	20368	27415
80°	9342	25102	35194
85°	7485	40706	60485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 110884 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.0	2.9
10°-20°	364.1	8.3
20°-30°	543.1	12.3
30°-40°	643.0	14.6
40°-50°	662.4	15.0
50°-60°	612.5	13.9
60°-70°	509.1	11.6
70°-80°	380.9	8.6
80°-90°	252.4	5.7
90°-100°	154.4	3.5
100°-110°	87.3	2.0
110°-120°	43.4	1.0
120°-130°	17.9	0.4
130°-140°	5.3	0.1
140°-150°	0.8	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1035.3	23.5
0°-40°	1678.3	38.1
0°-60°	2953.1	67.0
0°-90°	4095.4	93.0
90°-120°	285.2	6.5
90°-150°	309.2	7.0
90°-180°	310.0	7.0
0°-180°	4405.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1351	1351	1351	1351	1351	
5°	1342	1335	1352	1348	1347	128
15°	1282	1282	1294	1306	1293	362
25°	1154	1158	1175	1198	1211	531
35°	987	997	1024	1067	1073	616
45°	796	804	851	911	929	613
55°	598	612	680	754	782	534
65°	393	423	518	599	634	388
75°	200	258	368	459	496	212
85°	46	133	248	333	368	52
90°	4	86	195	275	308	4
95°	1	54	152	228	252	1
105°	1	18	83	141	162	1
115°	1	5	40	79	95	1
125°	1	1	15	38	48	1
135°	1	1	4	12	17	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°	1351.4	1351.4	1351.4	1351.4	1351.4
2.5°	1359.5	1343.3	1352.4	1350.4	1345.3
5°	1342.3	1335.2	1352.4	1348.4	1347.3
7.5°	1338.2	1335.2	1345.3	1341.3	1341.3
10°	1336.2	1316.0	1331.2	1341.3	1332.2
12.5°	1308.9	1303.8	1315.0	1316.0	1309.9
15°	1281.5	1281.5	1293.7	1305.8	1292.7
17.5°	1258.3	1256.2	1271.4	1280.5	1280.5
20°	1222.8	1225.9	1235.0	1252.2	1251.2
22.5°	1191.5	1199.6	1208.7	1228.9	1231.9
25°	1154.0	1158.1	1175.3	1197.5	1210.7
27.5°	1115.5	1121.6	1143.9	1168.2	1183.4
30°	1073.0	1073.0	1110.5	1138.8	1144.9
32.5°	1031.5	1032.5	1065.9	1097.3	1105.4
35°	987.0	997.1	1024.4	1066.9	1073.0
37.5°	939.4	945.5	982.9	1021.4	1041.6
40°	889.8	899.9	938.4	992.0	1004.2
42.5°	844.2	852.3	894.9	950.5	971.8
45°	795.7	803.8	851.3	911.1	929.3
47.5°	745.0	755.2	806.8	877.6	894.9
50°	697.5	705.6	763.3	835.1	856.4
52.5°	646.8	660.0	722.8	792.6	819.9
55°	598.3	612.4	680.3	754.1	781.5
57.5°	547.6	566.9	638.7	715.7	745.0
60°	491.0	516.3	597.2	679.2	705.6
62.5°	442.4	469.7	555.7	636.7	669.1
65°	392.8	423.1	518.3	599.3	633.7
67.5°	343.2	379.6	475.8	561.8	595.2
70°	292.5	339.1	442.4	528.4	561.8
72.5°	245.0	297.6	405.9	496.0	526.4
75°	200.4	258.1	368.5	458.6	496.0
77.5°	155.9	222.7	339.1	430.2	463.6
80°	113.4	188.3	304.7	395.8	427.2
82.5°	77.9	158.9	277.4	365.4	391.8
85°	45.6	132.6	248.0	333.0	368.5
87.5°	21.3	107.3	219.7	303.7	338.1
90°	4.0	86.0	195.4	275.3	307.7
92.5°	1.0	68.8	174.1	253.1	279.4
95°	1.0	53.7	151.8	227.8	252.1
97.5°	1.0	41.5	132.6	204.5	230.8
100°	1.0	31.4	114.4	183.2	207.5
102.5°	1.0	24.3	97.2	161.0	186.3
105°	1.0	18.2	83.0	140.7	162.0
107.5°	1.0	13.2	69.8	124.5	144.8
110°	1.0	10.1	58.7	109.3	126.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	7.1	47.6	93.1	110.3
115°	1.0	5.1	39.5	79.0	95.2
117.5°	1.0	3.0	31.4	66.8	81.0
120°	1.0	2.0	25.3	55.7	68.8
122.5°	1.0	2.0	19.2	45.6	57.7
125°	1.0	1.0	15.2	37.5	47.6
127.5°	1.0	1.0	11.1	29.4	37.5
130°	1.0	1.0	8.1	22.3	29.4
132.5°	1.0	1.0	5.1	17.2	22.3
135°	1.0	1.0	4.0	12.1	17.2
137.5°	1.0	1.0	2.0	8.1	11.1
140°	1.0	1.0	1.0	5.1	7.1
142.5°	1.0	1.0	1.0	3.0	4.0
145°	1.0	1.0	0.0	1.0	2.0
147.5°	1.0	1.0	0.0	1.0	1.0
150°	1.0	1.0	0.0	0.0	0.0
152.5°	1.0	1.0	0.0	0.0	0.0
155°	1.0	1.0	0.0	0.0	0.0
157.5°	1.0	1.0	0.0	0.0	0.0
160°	1.0	1.0	0.0	0.0	0.0
162.5°	1.0	1.0	0.0	0.0	0.0
165°	1.0	1.0	0.0	0.0	0.0
167.5°	1.0	1.0	0.0	0.0	0.0
170°	1.0	1.0	0.0	0.0	0.0
172.5°	2.0	1.0	0.0	0.0	0.0
175°	2.0	1.0	0.0	0.0	0.0
177.5°	2.0	1.0	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0



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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	20.38	21.91	20.85	22.37	22.85	22.11	23.64	22.58	24.10	24.59
	3H	22.11	23.51	22.59	23.98	24.50	24.68	26.08	25.16	26.55	27.07
	4H	22.76	24.08	23.26	24.57	25.11	25.98	27.31	26.49	27.79	28.33
	6H	23.23	24.46	23.74	24.96	25.52	27.38	28.62	27.90	29.11	29.67
	8H	23.37	24.56	23.90	25.08	25.64	28.11	29.29	28.64	29.82	30.38
	12H	23.47	24.61	24.00	25.12	25.71	28.95	30.09	29.49	30.61	31.20
4H	2H	21.35	22.68	21.85	23.16	23.70	22.66	23.99	23.17	24.47	25.01
	3H	23.36	24.49	23.88	25.02	25.58	25.53	26.66	26.04	27.18	27.75
	4H	24.16	25.19	24.69	25.73	26.33	27.04	28.08	27.58	28.62	29.21
	6H	24.80	25.71	25.35	26.28	26.89	28.68	29.59	29.23	30.16	30.77
	8H	25.02	25.88	25.58	26.45	27.07	29.53	30.40	30.10	30.96	31.58
	12H	25.19	25.97	25.77	26.56	27.19	30.53	31.31	31.11	31.91	32.53
8H	4H	25.03	25.90	25.59	26.46	27.08	27.40	28.26	27.96	28.83	29.45
	6H	25.95	26.68	26.54	27.29	27.91	29.29	30.03	29.89	30.63	31.26
	8H	26.33	26.99	26.93	27.61	28.25	30.36	31.02	30.96	31.64	32.28
	12H	26.65	27.24	27.25	27.84	28.55	31.61	32.20	32.22	32.81	33.51
12H	4H	25.31	26.09	25.89	26.68	27.31	27.44	28.23	28.02	28.82	29.44
	6H	26.39	27.05	26.99	27.67	28.31	29.40	30.06	30.01	30.68	31.32
	8H	26.93	27.52	27.53	28.12	28.83	30.58	31.17	31.19	31.78	32.48