

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: P893231

Luminaire Tested: 4MB-10HL-RNDU-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-RNDU-UNV-L940
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, CCT
Light Source: -
Ballast/Driver: -

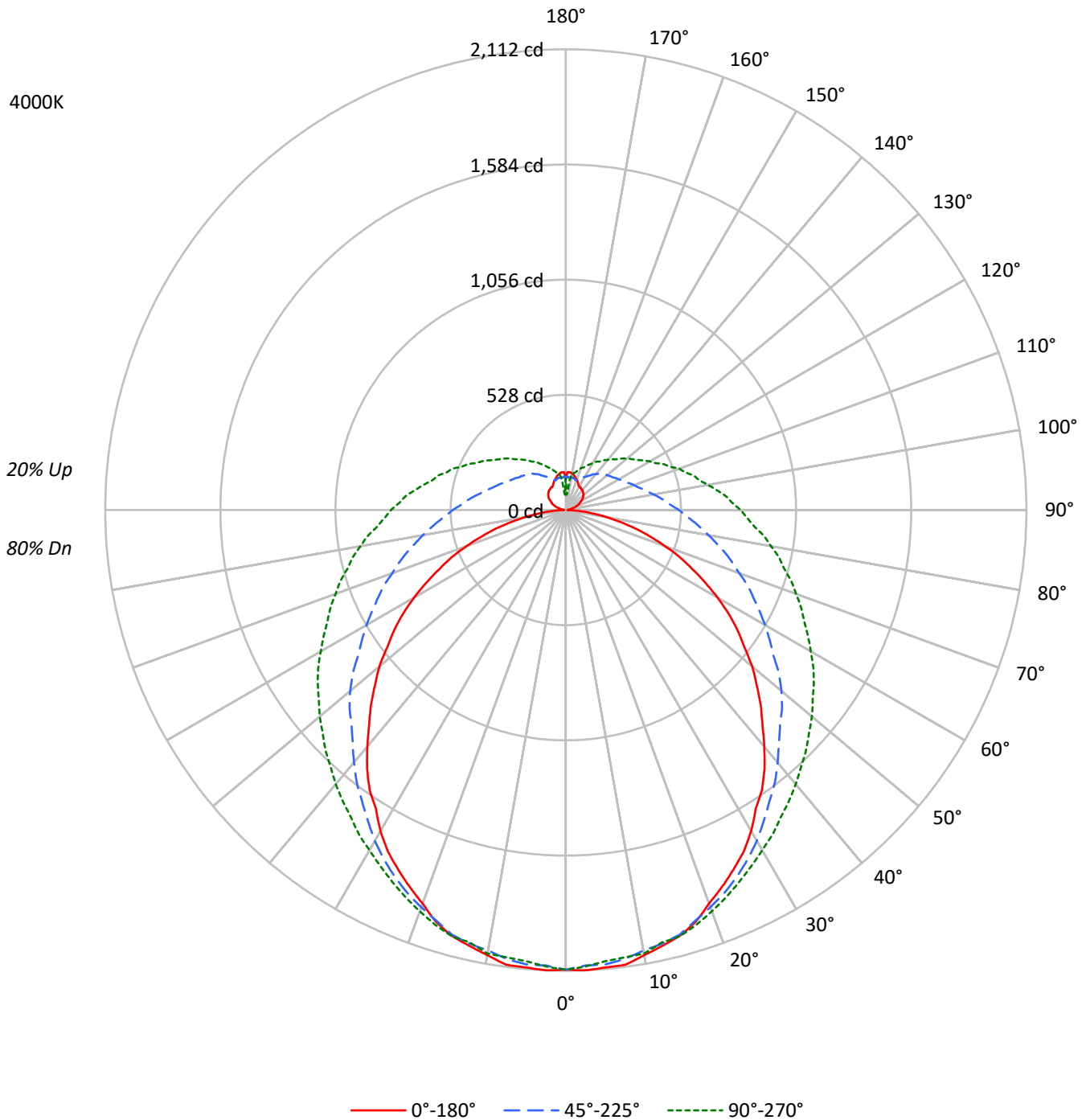
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8859.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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	0
RCR																					
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14993	14993	14993
5°	14966	14398	14154
10°	14833	13785	13604
15°	14683	13329	12990
20°	14266	12708	12358
25°	13937	12157	11762
30°	13554	11557	11240
35°	13134	10906	10787
40°	12594	10348	10438
45°	12081	9816	10128
50°	11628	9487	9866
55°	11100	8975	9662
60°	10471	8651	9474
65°	9687	8362	9332
70°	8810	8126	9326
75°	7669	8037	9353
80°	6031	7993	9535
85°	3973	8172	9751

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12081 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.5	2.3
10°-20°	570.1	6.4
20°-30°	856.0	9.7
30°-40°	1027.9	11.6
40°-50°	1087.2	12.3
50°-60°	1047.8	11.8
60°-70°	929.6	10.5
70°-80°	762.3	8.6
80°-90°	590.0	6.7
90°-100°	460.3	5.2
100°-110°	366.5	4.1
110°-120°	292.9	3.3
120°-130°	231.0	2.6
130°-140°	176.3	2.0
140°-150°	123.9	1.4
150°-160°	79.2	0.9
160°-170°	44.4	0.5
170°-180°	14.1	0.2
0°-30°	1625.5	18.3
0°-40°	2653.4	30.0
0°-60°	4788.5	54.1
0°-90°	7070.4	79.8
90°-120°	1119.7	12.6
90°-150°	1650.9	18.6
90°-180°	1789.0	20.2
0°-180°	8859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2107	2107	2107	2107	2107	
5°	2105	2111	2091	2106	2077	200
15°	2021	2022	2015	2028	2022	568
25°	1819	1848	1855	1887	1881	838
35°	1568	1591	1629	1696	1718	977
45°	1264	1301	1390	1522	1558	975
55°	962	1010	1162	1320	1388	858
65°	640	728	949	1146	1206	636
75°	334	480	756	959	1036	353
85°	78	292	586	797	868	88
90°	8	232	519	721	802	8
95°	11	192	458	659	737	11
105°	35	156	366	539	608	37
115°	68	152	304	440	496	66
125°	96	154	262	361	400	84
135°	112	150	234	305	329	87
145°	121	138	193	256	271	76
155°	134	141	159	200	224	62
165°	159	156	150	146	182	45
175°	174	168	150	123	78	16
180°	143	143	143	143	143	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2107.3	2107.3	2107.3	2107.3	2107.3
2.5°	2112.1	2119.1	2089.7	2107.3	2094.4
5°	2105.0	2110.9	2090.8	2106.2	2076.7
7.5°	2102.6	2100.3	2075.5	2095.6	2068.5
10°	2072.0	2080.2	2050.8	2077.9	2064.9
12.5°	2046.1	2062.6	2036.6	2057.8	2030.7
15°	2021.3	2022.5	2015.4	2028.4	2022.5
17.5°	1980.1	1990.7	1974.2	2003.6	1993.0
20°	1920.0	1953.0	1937.6	1964.7	1957.7
22.5°	1870.4	1887.0	1899.9	1930.6	1921.1
25°	1818.6	1848.1	1855.1	1887.0	1881.1
27.5°	1765.6	1778.5	1805.6	1839.8	1841.0
30°	1699.6	1713.7	1751.4	1790.3	1800.9
32.5°	1621.8	1666.6	1688.9	1747.9	1764.4
35°	1567.5	1591.1	1628.8	1696.0	1718.4
37.5°	1496.8	1523.9	1574.6	1653.6	1680.7
40°	1415.5	1455.6	1511.0	1608.8	1640.6
42.5°	1334.2	1381.3	1446.2	1560.5	1597.0
45°	1263.5	1301.2	1389.6	1521.6	1558.1
47.5°	1186.9	1232.8	1344.8	1470.9	1512.2
50°	1116.1	1163.3	1290.6	1423.8	1473.3
52.5°	1031.3	1085.5	1231.6	1369.5	1427.3
55°	961.7	1010.1	1162.1	1320.0	1388.4
57.5°	885.1	939.3	1107.9	1283.5	1346.0
60°	802.6	871.0	1054.9	1237.5	1297.6
62.5°	721.3	802.6	1000.6	1192.8	1251.7
65°	640.0	728.4	948.8	1145.6	1205.7
67.5°	566.9	662.4	901.6	1093.7	1168.0
70°	484.4	598.7	846.2	1045.4	1123.2
72.5°	406.6	541.0	801.5	1006.5	1084.3
75°	333.5	479.7	755.5	959.4	1036.0
77.5°	260.5	421.9	707.2	917.0	1000.6
80°	190.9	374.8	664.7	875.7	955.9
82.5°	132.0	333.5	623.5	841.5	917.0
85°	77.8	292.3	585.8	796.7	867.5
87.5°	35.4	259.3	546.9	762.6	832.1
90°	8.3	232.2	518.6	721.3	801.5
92.5°	8.3	211.0	484.4	690.7	763.7
95°	10.6	192.1	458.5	658.8	736.6
97.5°	14.1	178.0	434.9	629.4	697.7
100°	20.0	168.5	409.0	595.2	662.4
102.5°	27.1	161.5	385.4	564.6	627.0
105°	35.4	155.6	366.5	538.6	608.2
107.5°	43.6	153.2	347.7	513.9	572.8
110°	51.9	152.0	333.5	487.9	553.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	60.1	150.9	318.2	464.4	517.4
115°	68.4	152.0	304.1	439.6	496.2
117.5°	73.1	152.0	291.1	418.4	465.5
120°	80.1	153.2	281.7	396.0	445.5
122.5°	87.2	153.2	272.3	379.5	423.1
125°	95.5	154.4	261.7	360.7	399.5
127.5°	100.2	154.4	255.8	347.7	383.0
130°	104.9	153.2	247.5	331.2	367.7
132.5°	109.6	150.9	242.8	315.9	350.0
135°	112.0	149.7	234.5	305.3	328.8
137.5°	115.5	146.1	226.3	289.9	315.9
140°	119.0	145.0	214.5	278.2	300.5
142.5°	119.0	141.4	206.3	267.5	287.6
145°	121.4	137.9	193.3	255.8	271.1
147.5°	123.8	136.7	183.9	244.0	262.8
150°	123.8	135.5	175.6	231.0	248.7
152.5°	126.1	136.7	167.4	219.2	235.7
155°	134.4	141.4	159.1	200.4	223.9
157.5°	141.4	146.1	150.9	186.2	211.0
160°	147.3	149.7	143.8	172.1	205.1
162.5°	152.0	153.2	145.0	159.1	192.1
165°	159.1	155.6	149.7	146.1	181.5
167.5°	165.0	157.9	152.0	142.6	173.3
170°	169.7	162.6	149.7	134.4	169.7
172.5°	173.3	163.8	150.9	126.1	142.6
175°	174.4	168.5	149.7	122.6	77.8
177.5°	173.3	169.7	154.4	121.4	69.5
180°	142.6	142.6	142.6	142.6	142.6



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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	16.45	17.76	17.09	18.43	19.19	19.86	21.17	20.50	21.84	22.60
	3H	17.90	19.10	18.55	19.77	20.57	22.69	23.90	23.35	24.57	25.37
	4H	18.37	19.52	19.04	20.20	21.01	24.14	25.29	24.81	25.97	26.78
	6H	18.65	19.72	19.34	20.41	21.24	25.70	26.77	26.39	27.46	28.29
	8H	18.71	19.73	19.41	20.45	21.28	26.52	27.54	27.22	28.26	29.09
	12H	18.73	19.71	19.43	20.42	21.28	27.40	28.38	28.10	29.09	29.95
4H	2H	17.59	18.73	18.26	19.41	20.22	20.20	21.34	20.87	22.02	22.84
	3H	19.29	20.27	19.98	20.99	21.82	23.27	24.25	23.95	24.97	25.80
	4H	19.89	20.79	20.59	21.52	22.37	24.90	25.81	25.61	26.53	27.39
	6H	20.30	21.10	21.02	21.85	22.71	26.66	27.46	27.38	28.21	29.07
	8H	20.41	21.16	21.14	21.91	22.79	27.59	28.35	28.32	29.09	29.97
	12H	20.47	21.16	21.22	21.92	22.81	28.60	29.29	29.35	30.06	30.95
8H	4H	20.92	21.67	21.64	22.42	23.30	25.08	25.84	25.81	26.58	27.46
	6H	21.57	22.21	22.32	22.99	23.88	27.02	27.67	27.78	28.45	29.33
	8H	21.79	22.37	22.56	23.16	24.06	28.11	28.69	28.87	29.47	30.37
	12H	21.94	22.46	22.71	23.24	24.19	29.31	29.83	30.08	30.60	31.56
12H	4H	21.25	21.94	22.00	22.70	23.59	25.08	25.77	25.83	26.53	27.42
	6H	22.06	22.64	22.82	23.42	24.32	27.06	27.64	27.82	28.42	29.32
	8H	22.41	22.92	23.17	23.70	24.65	28.20	28.72	28.97	29.50	30.45