

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: P893232

Luminaire Tested: 4MB-10HL-RNDU-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893232
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-L950
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, CCT
Light Source: -
Ballast/Driver: -

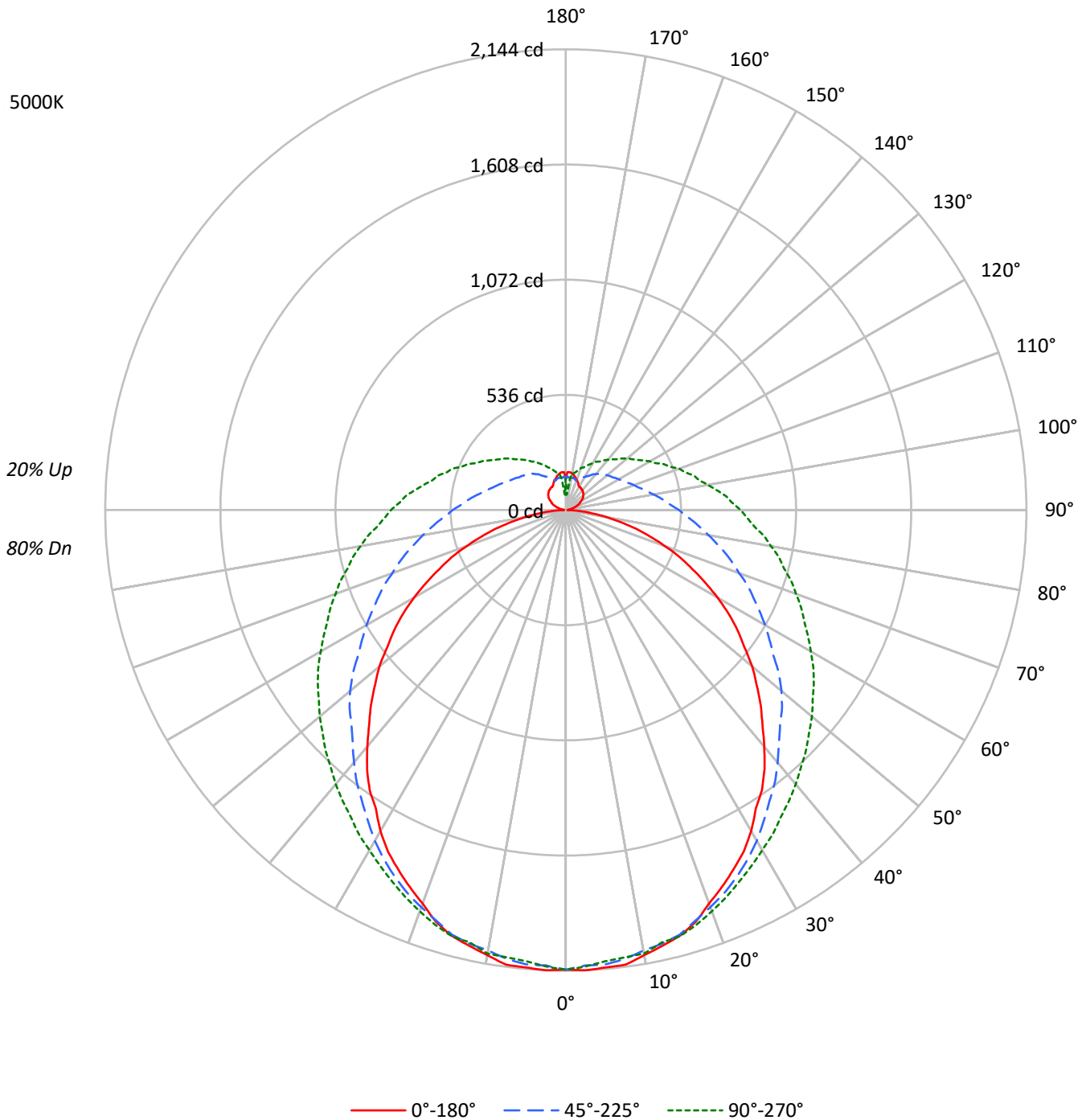
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8993.0 lumens
Efficiency: N/A
Efficacy: 119.1 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 (Ain): 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°	15220	15220	15220
5°	15192	14616	14368
10°	15057	13993	13810
15°	14905	13531	13187
20°	14481	12900	12545
25°	14147	12341	11940
30°	13759	11732	11410
35°	13333	11071	10950
40°	12784	10504	10596
45°	12264	9964	10282
50°	11805	9630	10014
55°	11268	9111	9808
60°	10631	8781	9618
65°	9834	8488	9474
70°	8942	8249	9467
75°	7787	8158	9495
80°	6123	8115	9679
85°	4035	8295	9898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12264 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.5	2.3
10°-20°	578.7	6.4
20°-30°	868.9	9.7
30°-40°	1043.5	11.6
40°-50°	1103.7	12.3
50°-60°	1063.6	11.8
60°-70°	943.6	10.5
70°-80°	773.9	8.6
80°-90°	599.0	6.7
90°-100°	467.3	5.2
100°-110°	372.0	4.1
110°-120°	297.3	3.3
120°-130°	234.5	2.6
130°-140°	178.9	2.0
140°-150°	125.8	1.4
150°-160°	80.4	0.9
160°-170°	45.1	0.5
170°-180°	14.3	0.2
0°-30°	1650.1	18.3
0°-40°	2693.6	30.0
0°-60°	4860.9	54.1
0°-90°	7177.4	79.8
90°-120°	1136.6	12.6
90°-150°	1675.8	18.6
90°-180°	1816.0	20.2
0°-180°	8993.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2139	2139	2139	2139	2139	
5°	2137	2143	2122	2138	2108	203
15°	2052	2053	2046	2059	2053	577
25°	1846	1876	1883	1916	1910	850
35°	1591	1615	1654	1722	1744	992
45°	1283	1321	1411	1545	1582	989
55°	976	1025	1180	1340	1409	871
65°	650	739	963	1163	1224	646
75°	339	487	767	974	1052	358
85°	79	297	595	809	881	89
90°	8	236	526	732	814	8
95°	11	195	465	669	748	11
105°	36	158	372	547	617	38
115°	69	154	309	446	504	67
125°	97	157	266	366	406	85
135°	114	152	238	310	334	88
145°	123	140	196	260	275	77
155°	136	144	162	203	227	63
165°	162	158	152	148	184	45
175°	177	171	152	124	79	17
180°	145	145	145	145	145	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2139.2	2139.2	2139.2	2139.2	2139.2
2.5°	2144.0	2151.2	2121.3	2139.2	2126.1
5°	2136.8	2142.8	2122.5	2138.0	2108.1
7.5°	2134.4	2132.0	2106.9	2127.3	2099.7
10°	2103.3	2111.7	2081.8	2109.3	2096.2
12.5°	2077.0	2093.8	2067.4	2089.0	2061.5
15°	2051.9	2053.1	2045.9	2059.1	2053.1
17.5°	2010.0	2020.8	2004.0	2033.9	2023.2
20°	1949.0	1982.5	1966.9	1994.5	1987.3
22.5°	1898.7	1915.5	1928.7	1959.8	1950.2
25°	1846.1	1876.0	1883.2	1915.5	1909.5
27.5°	1792.3	1805.4	1832.9	1867.6	1868.8
30°	1725.3	1739.6	1777.9	1817.4	1828.2
32.5°	1646.3	1691.8	1714.5	1774.3	1791.1
35°	1591.3	1615.2	1653.5	1721.7	1744.4
37.5°	1519.5	1547.0	1598.4	1678.6	1706.1
40°	1436.9	1477.6	1533.8	1633.1	1665.4
42.5°	1354.4	1402.2	1468.0	1584.1	1621.2
45°	1282.6	1320.9	1410.6	1544.6	1581.7
47.5°	1204.8	1251.5	1365.1	1493.2	1535.0
50°	1133.0	1180.9	1310.1	1445.3	1495.5
52.5°	1046.9	1101.9	1250.3	1390.3	1448.9
55°	976.3	1025.3	1179.7	1340.0	1409.4
57.5°	898.5	953.6	1124.6	1302.9	1366.3
60°	814.8	884.2	1070.8	1256.3	1317.3
62.5°	732.2	814.8	1015.8	1210.8	1270.6
65°	649.7	739.4	963.1	1162.9	1224.0
67.5°	575.5	672.4	915.3	1110.3	1185.7
70°	491.7	607.8	859.0	1061.2	1140.2
72.5°	412.8	549.2	813.6	1021.8	1100.7
75°	338.6	486.9	766.9	973.9	1051.7
77.5°	264.4	428.3	717.9	930.8	1015.8
80°	193.8	380.5	674.8	889.0	970.3
82.5°	134.0	338.6	632.9	854.3	930.8
85°	79.0	296.7	594.6	808.8	880.6
87.5°	35.9	263.2	555.1	774.1	844.7
90°	8.4	235.7	526.4	732.2	813.6
92.5°	8.4	214.2	491.7	701.1	775.3
95°	10.8	195.0	465.4	668.8	747.8
97.5°	14.4	180.7	441.5	638.9	708.3
100°	20.3	171.1	415.2	604.2	672.4
102.5°	27.5	163.9	391.2	573.1	636.5
105°	35.9	157.9	372.1	546.8	617.4
107.5°	44.3	155.5	352.9	521.6	581.5
110°	52.6	154.3	338.6	495.3	562.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	61.0	153.1	323.0	471.4	525.2
115°	69.4	154.3	308.7	446.3	503.7
117.5°	74.2	154.3	295.5	424.7	472.6
120°	81.4	155.5	285.9	402.0	452.3
122.5°	88.5	155.5	276.4	385.3	429.5
125°	96.9	156.7	265.6	366.1	405.6
127.5°	101.7	156.7	259.6	352.9	388.8
130°	106.5	155.5	251.3	336.2	373.3
132.5°	111.3	153.1	246.5	320.6	355.3
135°	113.7	151.9	238.1	309.9	333.8
137.5°	117.3	148.4	229.7	294.3	320.6
140°	120.8	147.2	217.8	282.4	305.1
142.5°	120.8	143.6	209.4	271.6	291.9
145°	123.2	140.0	196.2	259.6	275.2
147.5°	125.6	138.8	186.6	247.7	266.8
150°	125.6	137.6	178.3	234.5	252.4
152.5°	128.0	138.8	169.9	222.5	239.3
155°	136.4	143.6	161.5	203.4	227.3
157.5°	143.6	148.4	153.1	189.0	214.2
160°	149.6	151.9	146.0	174.7	208.2
162.5°	154.3	155.5	147.2	161.5	195.0
165°	161.5	157.9	151.9	148.4	184.3
167.5°	167.5	160.3	154.3	144.8	175.9
170°	172.3	165.1	151.9	136.4	172.3
172.5°	175.9	166.3	153.1	128.0	144.8
175°	177.1	171.1	151.9	124.4	79.0
177.5°	175.9	172.3	156.7	123.2	70.6
180°	144.8	144.8	144.8	144.8	144.8



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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	16.50	17.82	17.14	18.48	19.25	19.91	21.23	20.55	21.89	22.66
	3H	17.95	19.16	18.61	19.83	20.63	22.75	23.95	23.40	24.62	25.42
	4H	18.43	19.57	19.10	20.25	21.06	24.20	25.34	24.87	26.02	26.83
	6H	18.70	19.77	19.39	20.46	21.29	25.76	26.82	26.44	27.51	28.34
	8H	18.76	19.78	19.46	20.50	21.33	26.57	27.59	27.27	28.31	29.14
	12H	18.78	19.76	19.48	20.47	21.33	27.45	28.43	28.16	29.14	30.00
4H	2H	17.64	18.78	18.31	19.47	20.28	20.25	21.39	20.92	22.08	22.89
	3H	19.34	20.32	20.03	21.04	21.87	23.32	24.30	24.01	25.02	25.85
	4H	19.94	20.85	20.64	21.57	22.43	24.95	25.86	25.66	26.58	27.44
	6H	20.35	21.15	21.07	21.90	22.76	26.72	27.51	27.43	28.26	29.13
	8H	20.46	21.22	21.19	21.96	22.84	27.65	28.40	28.37	29.14	30.02
	12H	20.52	21.21	21.27	21.98	22.86	28.66	29.34	29.40	30.11	31.00
8H	4H	20.97	21.73	21.70	22.47	23.35	25.14	25.89	25.86	26.63	27.51
	6H	21.62	22.26	22.37	23.05	23.93	27.08	27.72	27.83	28.50	29.39
	8H	21.85	22.43	22.61	23.21	24.11	28.16	28.74	28.92	29.52	30.42
	12H	22.00	22.51	22.76	23.29	24.24	29.36	29.88	30.13	30.66	31.61
12H	4H	21.30	21.99	22.05	22.76	23.64	25.13	25.82	25.88	26.59	27.47
	6H	22.11	22.69	22.87	23.47	24.37	27.11	27.69	27.87	28.48	29.37
	8H	22.46	22.98	23.23	23.75	24.71	28.25	28.77	29.02	29.55	30.50