

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: P893230

Luminaire Tested: 4MB-10HL-RNDU-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893230
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-L935
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, CCT
Light Source: -
Ballast/Driver: -

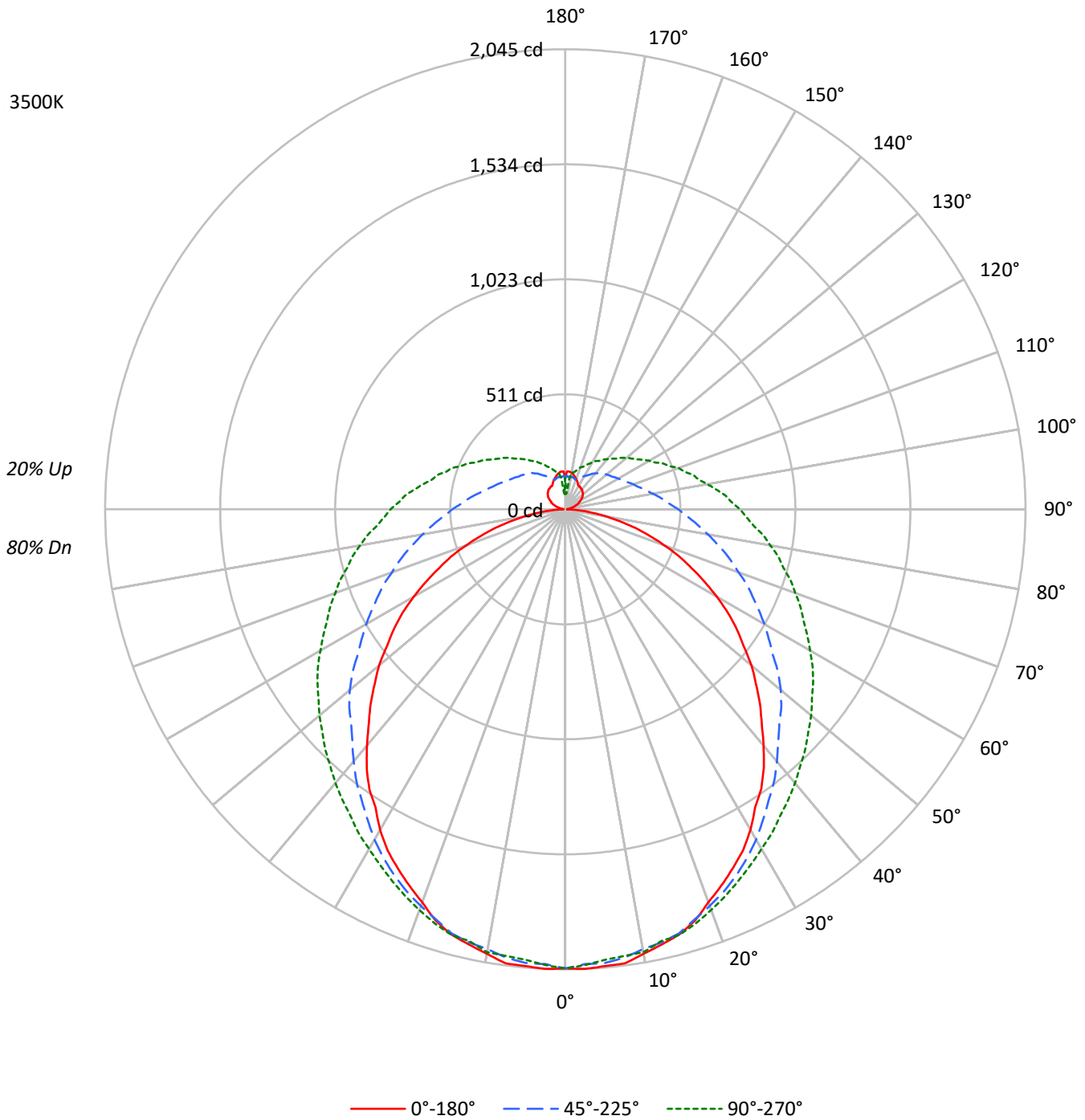
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8578.0 lumens
Efficiency: N/A
Efficacy: 113.6 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°	14518	14518	14518
5°	14491	13942	13705
10°	14362	13347	13173
15°	14217	12907	12578
20°	13813	12305	11966
25°	13495	11772	11389
30°	13123	11191	10884
35°	12717	10560	10445
40°	12194	10020	10108
45°	11698	9504	9807
50°	11260	9185	9552
55°	10748	8690	9356
60°	10140	8376	9174
65°	9380	8097	9037
70°	8530	7869	9030
75°	7428	7782	9056
80°	5841	7739	9232
85°	3846	7913	9440

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11698 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.2	2.3
10°-20°	552.0	6.4
20°-30°	828.8	9.7
30°-40°	995.3	11.6
40°-50°	1052.7	12.3
50°-60°	1014.5	11.8
60°-70°	900.1	10.5
70°-80°	738.2	8.6
80°-90°	571.3	6.7
90°-100°	445.7	5.2
100°-110°	354.8	4.1
110°-120°	283.6	3.3
120°-130°	223.7	2.6
130°-140°	170.7	2.0
140°-150°	120.0	1.4
150°-160°	76.7	0.9
160°-170°	43.0	0.5
170°-180°	13.6	0.2
0°-30°	1574.0	18.3
0°-40°	2569.3	30.0
0°-60°	4636.6	54.1
0°-90°	6846.1	79.8
90°-120°	1084.1	12.6
90°-150°	1598.5	18.6
90°-180°	1732.0	20.2
0°-180°	8578.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2040	2040	2040	2040	2040	
5°	2038	2044	2024	2039	2011	194
15°	1957	1958	1952	1964	1958	550
25°	1761	1789	1796	1827	1821	811
35°	1518	1541	1577	1642	1664	946
45°	1223	1260	1346	1473	1509	944
55°	931	978	1125	1278	1344	831
65°	620	705	919	1109	1168	616
75°	323	464	732	929	1003	342
85°	75	283	567	772	840	85
90°	8	225	502	698	776	8
95°	10	186	444	638	713	10
105°	34	151	355	522	589	36
115°	66	147	294	426	480	64
125°	92	150	253	349	387	81
135°	108	145	227	296	318	84
145°	118	134	187	248	262	74
155°	130	137	154	194	217	60
165°	154	151	145	142	176	43
175°	169	163	145	119	75	16
180°	138	138	138	138	138	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2040.5	2040.5	2040.5	2040.5	2040.5
2.5°	2045.1	2051.9	2023.4	2040.5	2028.0
5°	2038.2	2043.9	2024.5	2039.4	2010.8
7.5°	2035.9	2033.7	2009.7	2029.1	2002.8
10°	2006.3	2014.3	1985.7	2012.0	1999.4
12.5°	1981.2	1997.1	1972.0	1992.6	1966.3
15°	1957.2	1958.3	1951.5	1964.0	1958.3
17.5°	1917.3	1927.5	1911.5	1940.1	1929.8
20°	1859.1	1891.0	1876.2	1902.4	1895.6
22.5°	1811.1	1827.1	1839.7	1869.3	1860.2
25°	1760.9	1789.4	1796.3	1827.1	1821.4
27.5°	1709.6	1722.1	1748.4	1781.4	1782.6
30°	1645.6	1659.3	1695.9	1733.5	1743.8
32.5°	1570.3	1613.7	1635.4	1692.4	1708.4
35°	1517.8	1540.7	1577.2	1642.2	1663.9
37.5°	1449.4	1475.6	1524.7	1601.1	1627.4
40°	1370.6	1409.4	1463.0	1557.8	1588.6
42.5°	1291.9	1337.5	1400.3	1511.0	1546.4
45°	1223.4	1259.9	1345.5	1473.3	1508.7
47.5°	1149.2	1193.7	1302.1	1424.2	1464.2
50°	1080.7	1126.4	1249.6	1378.6	1426.5
52.5°	998.6	1051.1	1192.6	1326.1	1382.0
55°	931.2	978.0	1125.2	1278.2	1344.4
57.5°	857.1	909.6	1072.7	1242.8	1303.3
60°	777.2	843.4	1021.4	1198.3	1256.5
62.5°	698.4	777.2	968.9	1154.9	1212.0
65°	619.7	705.3	918.7	1109.3	1167.5
67.5°	548.9	641.4	873.0	1059.1	1131.0
70°	469.0	579.7	819.4	1012.3	1087.6
72.5°	393.7	523.8	776.0	974.6	1049.9
75°	323.0	464.5	731.5	929.0	1003.1
77.5°	252.2	408.6	684.7	887.9	968.9
80°	184.9	362.9	643.6	847.9	925.5
82.5°	127.8	323.0	603.7	814.8	887.9
85°	75.3	283.0	567.2	771.5	839.9
87.5°	34.2	251.1	529.5	738.4	805.7
90°	8.0	224.8	502.1	698.4	776.0
92.5°	8.0	204.3	469.0	668.8	739.5
95°	10.3	186.0	443.9	637.9	713.3
97.5°	13.7	172.3	421.1	609.4	675.6
100°	19.4	163.2	396.0	576.3	641.4
102.5°	26.2	156.3	373.2	546.6	607.1
105°	34.2	150.6	354.9	521.5	588.9
107.5°	42.2	148.4	336.7	497.6	554.6
110°	50.2	147.2	323.0	472.5	536.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	58.2	146.1	308.1	449.6	501.0
115°	66.2	147.2	294.4	425.7	480.5
117.5°	70.8	147.2	281.9	405.1	450.8
120°	77.6	148.4	272.8	383.5	431.4
122.5°	84.5	148.4	263.6	367.5	409.7
125°	92.4	149.5	253.4	349.2	386.9
127.5°	97.0	149.5	247.6	336.7	370.9
130°	101.6	148.4	239.7	320.7	356.1
132.5°	106.1	146.1	235.1	305.8	338.9
135°	108.4	144.9	227.1	295.6	318.4
137.5°	111.8	141.5	219.1	280.7	305.8
140°	115.3	140.4	207.7	269.3	291.0
142.5°	115.3	136.9	199.7	259.1	278.5
145°	117.5	133.5	187.2	247.6	262.5
147.5°	119.8	132.4	178.0	236.2	254.5
150°	119.8	131.2	170.0	223.7	240.8
152.5°	122.1	132.4	162.1	212.3	228.2
155°	130.1	136.9	154.1	194.0	216.8
157.5°	136.9	141.5	146.1	180.3	204.3
160°	142.7	144.9	139.2	166.6	198.6
162.5°	147.2	148.4	140.4	154.1	186.0
165°	154.1	150.6	144.9	141.5	175.7
167.5°	159.8	152.9	147.2	138.1	167.8
170°	164.3	157.5	144.9	130.1	164.3
172.5°	167.8	158.6	146.1	122.1	138.1
175°	168.9	163.2	144.9	118.7	75.3
177.5°	167.8	164.3	149.5	117.5	67.3
180°	138.1	138.1	138.1	138.1	138.1



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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	16.34	17.65	16.98	18.32	19.08	19.75	21.06	20.39	21.73	22.49
	3H	17.79	18.99	18.44	19.66	20.46	22.58	23.78	23.24	24.46	25.26
	4H	18.26	19.40	18.93	20.09	20.90	24.03	25.17	24.70	25.86	26.67
	6H	18.54	19.61	19.22	20.30	21.13	25.59	26.66	26.28	27.35	28.18
	8H	18.60	19.62	19.29	20.34	21.17	26.41	27.43	27.10	28.15	28.98
	12H	18.62	19.60	19.32	20.31	21.17	27.29	28.27	27.99	28.98	29.84
4H	2H	17.48	18.62	18.15	19.30	20.11	20.09	21.23	20.76	21.91	22.72
	3H	19.18	20.16	19.87	20.88	21.71	23.16	24.14	23.84	24.86	25.69
	4H	19.78	20.68	20.48	21.40	22.26	24.79	25.69	25.49	26.42	27.28
	6H	20.19	20.99	20.91	21.73	22.60	26.55	27.35	27.27	28.10	28.96
	8H	20.30	21.05	21.02	21.80	22.68	27.48	28.23	28.21	28.98	29.86
	12H	20.36	21.04	21.10	21.81	22.70	28.49	29.18	29.24	29.95	30.83
8H	4H	20.81	21.56	21.53	22.31	23.19	24.97	25.73	25.70	26.47	27.35
	6H	21.45	22.10	22.21	22.88	23.76	26.91	27.55	27.67	28.34	29.22
	8H	21.68	22.26	22.45	23.05	23.94	27.99	28.57	28.76	29.36	30.26
	12H	21.83	22.35	22.60	23.13	24.08	29.20	29.72	29.96	30.49	31.45
12H	4H	21.14	21.82	21.88	22.59	23.48	24.97	25.65	25.71	26.42	27.31
	6H	21.94	22.53	22.71	23.31	24.21	26.95	27.53	27.71	28.31	29.21
	8H	22.29	22.81	23.06	23.59	24.54	28.09	28.61	28.86	29.39	30.34