

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: P893975

Luminaire Tested: 4MB-8HL-RND-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893975
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-RND-UNV-L940
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

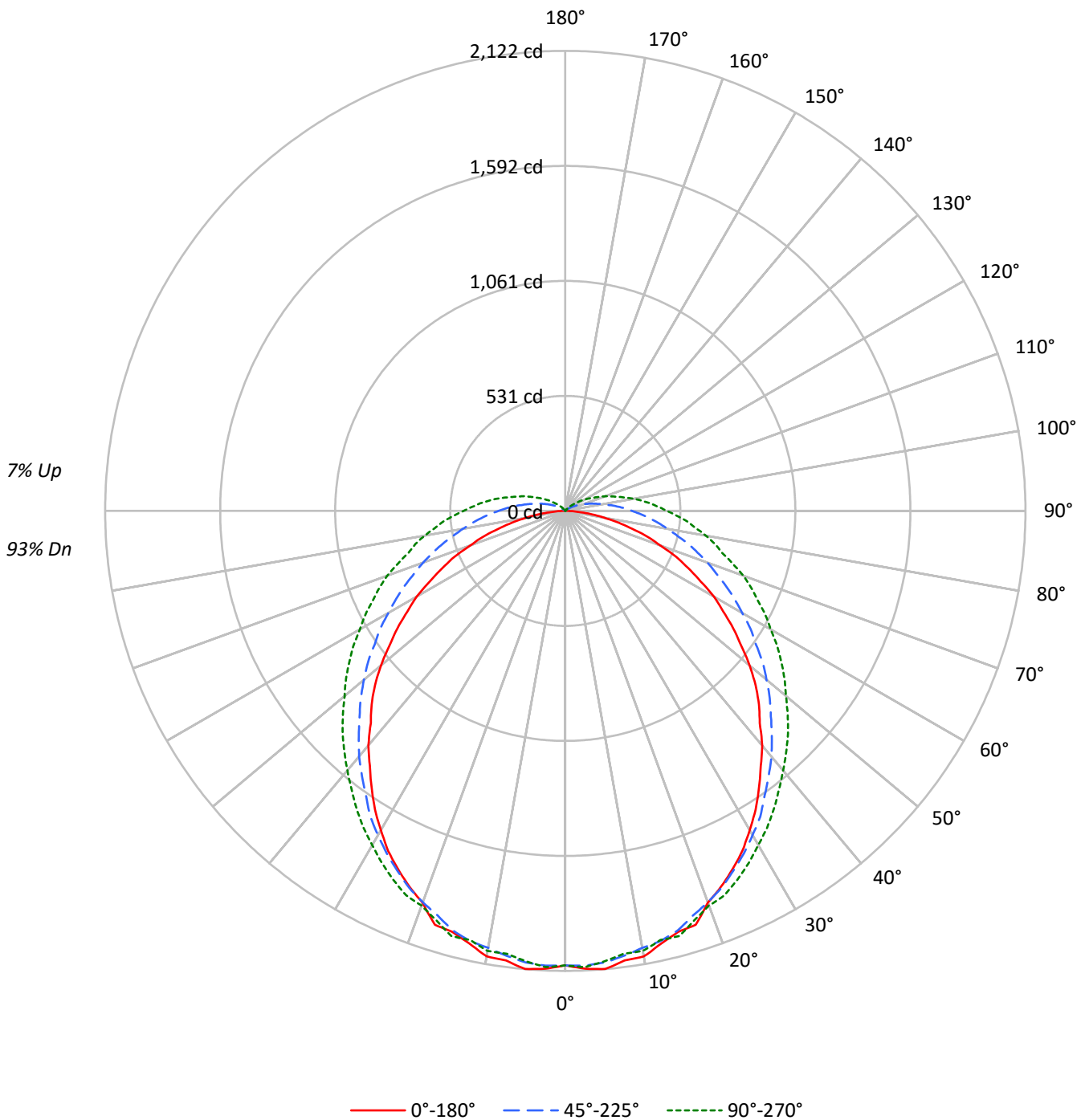
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6906.0 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	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	67	63	63	63	63	60									
3	86	75	66	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	42	55	47	41	52	45	40	49	44	39	39	39	39	37									
6	67	53	44	37	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	30	30	30	30	28									
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25									
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23									
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21									

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14917	14917	14917
5°	15152	14933	14892
10°	15078	14787	14891
15°	14808	14758	14956
20°	14560	14546	14669
25°	14321	14381	14735
30°	13971	14191	14625
35°	13529	13921	14570
40°	13122	13736	14520
45°	12709	13491	14611
50°	12293	13408	14704
55°	11731	13313	15085
60°	11273	13402	15559
65°	10527	13758	16502
70°	9677	14525	18175
75°	8780	16085	20593
80°	7543	19651	26998
85°	6106	31789	46197

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 83858 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.8	2.9
10°-20°	565.9	8.2
20°-30°	848.0	12.3
30°-40°	1007.7	14.6
40°-50°	1043.3	15.1
50°-60°	966.8	14.0
60°-70°	804.9	11.7
70°-80°	597.4	8.7
80°-90°	395.1	5.7
90°-100°	240.4	3.5
100°-110°	134.8	2.0
110°-120°	66.4	1.0
120°-130°	27.0	0.4
130°-140°	7.8	0.1
140°-150°	1.1	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
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0°-30°	1612.6	23.4
0°-40°	2620.3	37.9
0°-60°	4630.4	67.0
0°-90°	6427.8	93.1
90°-120°	441.6	6.4
90°-150°	477.6	6.9
90°-180°	478.0	6.9
0°-180°	6906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2097	2097	2097	2097	2097	
5°	2122	2098	2091	2101	2085	201
15°	2010	2003	2004	2006	2030	569
25°	1824	1822	1832	1867	1877	840
35°	1558	1569	1603	1654	1678	975
45°	1263	1281	1341	1424	1452	973
55°	946	986	1073	1181	1216	846
65°	625	684	817	937	980	621
75°	319	416	585	711	749	342
85°	75	210	389	528	566	84
90°	4	136	308	431	469	6
95°	1	84	239	356	395	1
105°	1	28	130	220	250	1
115°	1	7	60	121	145	1
125°	1	2	22	56	71	1
135°	2	1	6	18	25	1
145°	2	1	0	2	3	1
155°	2	2	0	0	0	1
165°	3	2	0	0	0	1
175°	3	2	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°	2096.6	2096.6	2096.6	2096.6	2096.6
2.5°	2113.9	2103.3	2099.5	2094.7	2106.2
5°	2121.5	2098.5	2090.8	2101.4	2085.1
7.5°	2091.8	2086.1	2069.7	2075.5	2060.2
10°	2087.0	2055.4	2046.7	2065.9	2061.1
12.5°	2043.9	2017.0	2032.3	2045.8	2027.5
15°	2010.3	2002.6	2003.6	2006.4	2030.4
17.5°	2001.7	1967.1	1957.5	1981.5	1979.6
20°	1923.0	1916.3	1921.1	1952.7	1937.4
22.5°	1877.0	1855.9	1881.8	1912.5	1919.2
25°	1824.2	1822.3	1831.9	1867.4	1877.0
27.5°	1768.6	1756.1	1782.0	1823.3	1830.9
30°	1700.5	1695.7	1727.3	1762.8	1780.1
32.5°	1633.4	1636.2	1672.7	1702.4	1732.1
35°	1557.6	1569.1	1602.7	1653.5	1677.5
37.5°	1480.9	1495.2	1540.3	1598.8	1619.0
40°	1412.8	1415.6	1478.9	1538.4	1563.3
42.5°	1327.4	1356.2	1409.9	1488.5	1507.7
45°	1263.1	1281.4	1340.8	1424.3	1452.1
47.5°	1190.2	1211.3	1279.4	1361.0	1390.7
50°	1110.6	1129.8	1211.3	1304.4	1328.4
52.5°	1022.4	1061.7	1147.1	1243.0	1274.7
55°	945.7	986.0	1073.2	1180.7	1216.1
57.5°	863.2	903.5	1012.8	1112.6	1158.6
60°	792.2	830.6	941.8	1065.6	1093.4
62.5°	704.0	758.7	879.5	1001.3	1040.6
65°	625.3	683.8	817.2	937.0	980.2
67.5°	553.4	613.8	752.9	881.4	928.4
70°	465.2	544.8	698.2	824.8	873.7
72.5°	399.9	479.6	639.7	765.4	809.5
75°	319.4	416.3	585.1	710.7	749.1
77.5°	252.2	356.8	528.5	669.5	707.8
80°	184.1	303.1	479.6	614.8	658.9
82.5°	125.6	253.2	434.5	564.0	606.2
85°	74.8	210.0	389.4	527.5	565.9
87.5°	32.6	171.7	348.2	474.8	514.1
90°	3.8	136.2	307.9	430.6	469.0
92.5°	1.0	109.3	272.4	391.3	428.7
95°	1.0	84.4	238.8	355.8	395.2
97.5°	1.0	65.2	205.2	319.4	356.8
100°	1.0	49.9	177.4	281.0	321.3
102.5°	1.0	37.4	150.6	249.4	283.9
105°	1.0	27.8	129.5	219.6	250.3
107.5°	1.0	20.1	108.4	191.8	222.5
110°	1.0	14.4	91.1	165.9	196.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	10.6	73.9	142.9	168.8
115°	1.0	6.7	60.4	120.8	144.8
117.5°	1.0	4.8	48.0	101.7	124.7
120°	1.0	3.8	38.4	84.4	104.5
122.5°	1.0	2.9	29.7	69.1	88.2
125°	1.0	1.9	22.1	55.6	71.0
127.5°	1.0	1.9	16.3	44.1	57.5
130°	1.0	1.0	11.5	33.6	45.1
132.5°	1.0	1.0	7.7	24.9	33.6
135°	1.9	1.0	5.8	18.2	24.9
137.5°	1.9	1.0	3.8	12.5	17.3
140°	1.9	1.0	1.9	7.7	10.6
142.5°	1.9	1.0	1.0	3.8	5.8
145°	1.9	1.0	0.0	1.9	2.9
147.5°	1.9	1.0	0.0	1.0	1.0
150°	1.9	1.0	0.0	0.0	0.0
152.5°	1.9	1.0	0.0	0.0	0.0
155°	1.9	1.9	0.0	0.0	0.0
157.5°	1.9	1.9	0.0	0.0	0.0
160°	1.9	1.9	0.0	0.0	0.0
162.5°	1.9	1.9	0.0	0.0	0.0
165°	2.9	1.9	0.0	0.0	0.0
167.5°	2.9	1.9	0.0	0.0	0.0
170°	2.9	1.9	0.0	0.0	0.0
172.5°	2.9	1.9	0.0	0.0	0.0
175°	2.9	1.9	0.0	0.0	0.0
177.5°	2.9	1.9	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	19.62	21.16	20.09	21.61	22.09	21.19	22.73	21.66	23.18	23.67
	3H	21.38	22.79	21.86	23.25	23.77	23.78	25.18	24.26	25.65	26.17
	4H	22.04	23.37	22.54	23.85	24.39	25.04	26.37	25.54	26.85	27.39
	6H	22.52	23.76	23.03	24.25	24.81	26.42	27.66	26.93	28.15	28.71
	8H	22.67	23.85	23.19	24.37	24.93	27.15	28.34	27.68	28.86	29.42
	12H	22.76	23.91	23.30	24.42	25.01	27.99	29.13	28.52	29.64	30.23
4H	2H	20.57	21.91	21.08	22.39	22.92	21.76	23.10	22.27	23.58	24.11
	3H	22.61	23.75	23.13	24.28	24.84	24.63	25.77	25.15	26.29	26.85
	4H	23.43	24.47	23.96	25.00	25.60	26.11	27.15	26.64	27.69	28.28
	6H	24.08	25.00	24.63	25.56	26.17	27.73	28.65	28.28	29.21	29.82
	8H	24.30	25.17	24.86	25.73	26.35	28.59	29.45	29.15	30.01	30.63
	12H	24.47	25.26	25.05	25.85	26.47	29.58	30.37	30.16	30.96	31.58
8H	4H	24.28	25.14	24.84	25.70	26.32	26.48	27.35	27.04	27.91	28.53
	6H	25.20	25.94	25.79	26.54	27.16	28.36	29.10	28.95	29.70	30.32
	8H	25.58	26.25	26.19	26.86	27.50	29.42	30.09	30.02	30.70	31.34
	12H	25.90	26.50	26.51	27.10	27.80	30.68	31.27	31.28	31.87	32.58
12H	4H	24.54	25.33	25.12	25.92	26.54	26.52	27.31	27.11	27.90	28.53
	6H	25.62	26.29	26.23	26.90	27.54	28.47	29.14	29.07	29.75	30.39
	8H	26.16	26.76	26.77	27.36	28.06	29.64	30.24	30.25	30.84	31.55