

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: P894022

Luminaire Tested: 4MB-9HL-FLT-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894022
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-FLT-UNV-L935
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

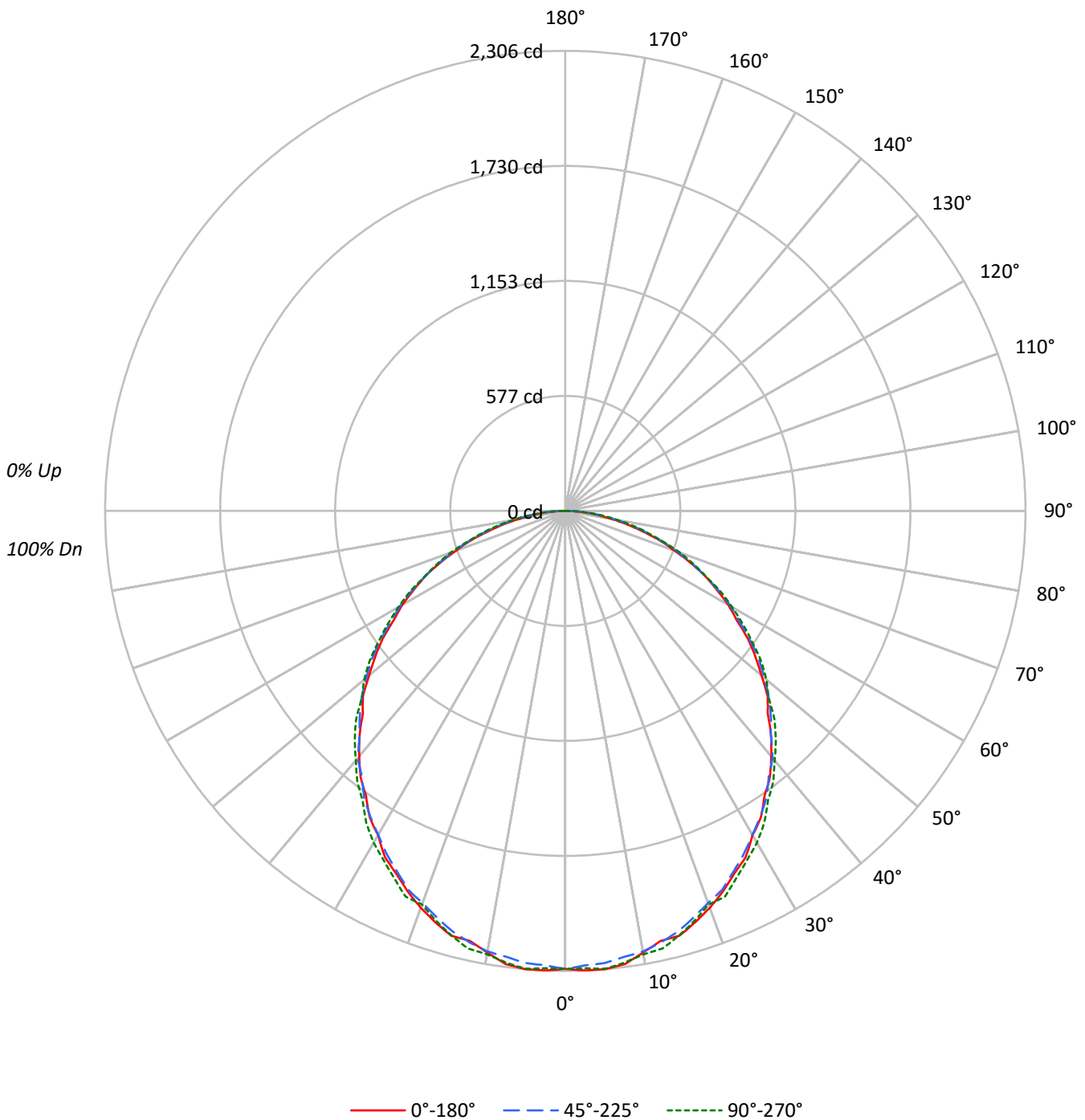
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6361.0 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	69	65	61	61	61	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	45	45	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	40	40	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	35	35	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	32	32	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16334	16334	16334
5°	16467	16248	16453
10°	16242	16199	16306
15°	16246	16078	16231
20°	16031	15835	15896
25°	15742	15656	15936
30°	15422	15399	15782
35°	15125	15254	15383
40°	14921	15013	15161
45°	14438	14659	14927
50°	14204	14413	14556
55°	13851	14023	14171
60°	13420	13618	13745
65°	13022	13073	13073
70°	12109	12399	12708
75°	11150	11587	11832
80°	9834	10686	11051
85°	8825	9878	10604

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 14927 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	3.4
10°-20°	619.3	9.7
20°-30°	928.8	14.6
30°-40°	1103.2	17.3
40°-50°	1129.5	17.8
50°-60°	1012.0	15.9
60°-70°	768.8	12.1
70°-80°	447.8	7.0
80°-90°	134.5	2.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1765.4	27.8
0°-40°	2868.6	45.1
0°-60°	5010.0	78.8
0°-90°	6361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2296	2296	2296	2296	2296	
5°	2306	2297	2275	2289	2304	218
15°	2206	2220	2183	2192	2204	619
25°	2005	2023	1994	2020	2030	925
35°	1741	1780	1756	1763	1771	1095
45°	1435	1471	1457	1469	1484	1116
55°	1117	1134	1130	1143	1142	995
65°	774	774	776	786	776	760
75°	406	412	422	434	430	432
85°	108	110	121	129	130	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2295.7	2295.7	2295.7	2295.7	2295.7
2.5°	2305.6	2294.7	2279.8	2284.8	2294.7
5°	2305.6	2296.7	2274.9	2288.8	2303.6
7.5°	2290.8	2302.7	2255.1	2255.1	2282.8
10°	2248.1	2270.9	2242.2	2239.2	2257.0
12.5°	2207.5	2249.1	2215.4	2225.3	2247.1
15°	2205.5	2220.3	2182.7	2191.6	2203.5
17.5°	2162.8	2177.7	2137.0	2153.9	2153.9
20°	2117.2	2120.2	2091.4	2128.1	2099.4
22.5°	2064.7	2095.4	2055.7	2067.6	2092.4
25°	2005.2	2023.0	1994.2	2020.0	2029.9
27.5°	1956.6	1978.4	1938.7	1969.5	1972.4
30°	1877.2	1901.0	1874.3	1894.1	1920.9
32.5°	1823.7	1831.6	1817.7	1847.5	1855.4
35°	1741.4	1780.0	1756.2	1763.2	1771.1
37.5°	1683.9	1695.8	1674.9	1698.7	1711.6
40°	1606.5	1624.4	1616.4	1620.4	1632.3
42.5°	1526.2	1545.0	1524.2	1553.0	1561.9
45°	1434.9	1470.6	1456.8	1468.7	1483.5
47.5°	1375.4	1387.3	1383.4	1390.3	1380.4
50°	1283.2	1295.1	1302.1	1311.0	1315.0
52.5°	1200.9	1209.8	1222.7	1227.7	1236.6
55°	1116.6	1133.5	1130.5	1143.4	1142.4
57.5°	1018.4	1043.2	1035.3	1054.1	1054.1
60°	943.1	947.0	957.0	965.9	965.9
62.5°	855.8	860.8	865.7	873.7	879.6
65°	773.5	773.5	776.5	786.4	776.5
67.5°	678.3	674.3	684.3	696.2	695.2
70°	582.1	587.1	596.0	610.9	610.9
72.5°	499.8	499.8	509.7	517.7	516.7
75°	405.6	412.5	421.5	434.4	430.4
77.5°	321.3	326.3	341.1	353.0	354.0
80°	240.0	244.9	260.8	272.7	269.7
82.5°	167.6	174.5	189.4	198.3	197.3
85°	108.1	110.1	121.0	128.9	129.9
87.5°	49.6	53.6	61.5	64.5	64.5
90°	0.0	0.0	0.0	0.0	0.0



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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	21.23	22.87	21.60	23.19	23.50	21.34	22.98	21.70	23.29	23.61
	3H	23.01	24.50	23.39	24.82	25.18	23.18	24.66	23.55	24.99	25.35
	4H	23.68	25.07	24.08	25.42	25.80	23.87	25.27	24.27	25.62	25.99
	6H	24.15	25.45	24.56	25.81	26.20	24.42	25.72	24.83	26.08	26.47
	8H	24.30	25.54	24.73	25.93	26.33	24.61	25.85	25.04	26.24	26.64
	12H	24.41	25.59	24.84	25.98	26.40	24.76	25.94	25.19	26.33	26.75
4H	2H	21.88	23.28	22.28	23.62	24.00	21.96	23.36	22.36	23.71	24.08
	3H	23.88	25.05	24.29	25.45	25.85	24.03	25.20	24.43	25.60	26.00
	4H	24.67	25.74	25.10	26.15	26.58	24.86	25.93	25.29	26.34	26.77
	6H	25.27	26.20	25.73	26.64	27.10	25.55	26.48	26.01	26.92	27.38
	8H	25.47	26.34	25.93	26.78	27.25	25.80	26.67	26.26	27.11	27.57
	12H	25.62	26.40	26.10	26.88	27.35	26.00	26.78	26.47	27.25	27.72
8H	4H	25.01	25.88	25.47	26.32	26.79	25.18	26.05	25.64	26.49	26.95
	6H	25.73	26.46	26.22	26.94	27.42	26.00	26.72	26.49	27.21	27.69
	8H	26.00	26.65	26.51	27.16	27.65	26.33	26.98	26.84	27.49	27.97
	12H	26.23	26.81	26.74	27.30	27.86	26.62	27.20	27.13	27.69	28.25
12H	4H	25.05	25.84	25.53	26.31	26.78	25.21	25.99	25.69	26.47	26.94
	6H	25.80	26.46	26.31	26.96	27.45	26.06	26.71	26.57	27.22	27.70
	8H	26.14	26.71	26.64	27.20	27.76	26.45	27.03	26.96	27.52	28.08