

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: P894017

Luminaire Tested: 4MB-9HL-FLT-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894017
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-L830
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

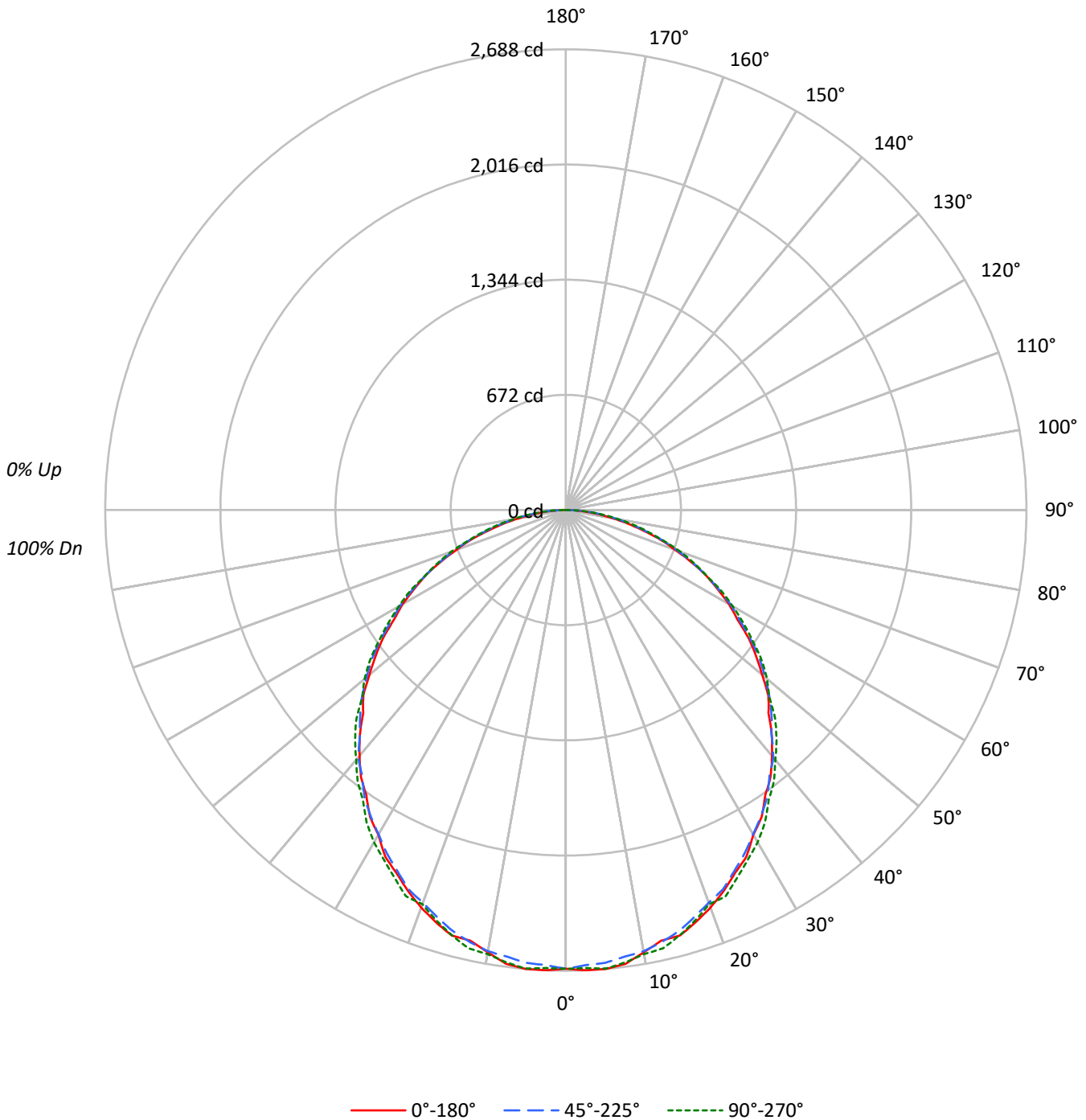
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7415.0 lumens
Efficiency: N/A
Efficacy: 115.1 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				
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°	19040	19040	19040
5°	19196	18940	19180
10°	18933	18883	19008
15°	18937	18741	18920
20°	18687	18460	18529
25°	18350	18250	18577
30°	17978	17950	18396
35°	17631	17782	17933
40°	17394	17501	17672
45°	16831	17086	17401
50°	16557	16800	16967
55°	16146	16347	16519
60°	15643	15874	16022
65°	15181	15238	15238
70°	14117	14452	14814
75°	12997	13506	13792
80°	11460	12456	12882
85°	10286	11511	12360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 17401 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.3	3.4
10°-20°	721.9	9.7
20°-30°	1082.8	14.6
30°-40°	1286.0	17.3
40°-50°	1316.6	17.8
50°-60°	1179.6	15.9
60°-70°	896.1	12.1
70°-80°	521.9	7.0
80°-90°	156.7	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°	2057.9	27.8
0°-40°	3343.9	45.1
0°-60°	5840.2	78.8
0°-90°	7415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2676	2676	2676	2676	2676	
5°	2688	2677	2652	2668	2685	255
15°	2571	2588	2544	2555	2569	722
25°	2337	2358	2325	2355	2366	1079
35°	2030	2075	2047	2055	2065	1276
45°	1673	1714	1698	1712	1729	1301
55°	1302	1321	1318	1333	1332	1160
65°	902	902	905	917	905	885
75°	473	481	491	506	502	503
85°	126	128	141	150	151	141
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2676.1	2676.1	2676.1	2676.1	2676.1
2.5°	2687.7	2674.9	2657.6	2663.4	2674.9
5°	2687.7	2677.3	2651.8	2668.0	2685.4
7.5°	2670.3	2684.2	2628.7	2628.7	2661.1
10°	2620.6	2647.2	2613.7	2610.2	2631.0
12.5°	2573.2	2621.8	2582.5	2594.0	2619.5
15°	2570.9	2588.2	2544.3	2554.7	2568.6
17.5°	2521.2	2538.5	2491.1	2510.8	2510.8
20°	2468.0	2471.5	2438.0	2480.7	2447.2
22.5°	2406.8	2442.6	2396.4	2410.2	2439.1
25°	2337.4	2358.2	2324.7	2354.7	2366.3
27.5°	2280.8	2306.2	2259.9	2295.8	2299.3
30°	2188.3	2216.0	2184.8	2207.9	2239.1
32.5°	2125.9	2135.1	2118.9	2153.6	2162.8
35°	2029.9	2075.0	2047.2	2055.3	2064.6
37.5°	1962.9	1976.7	1952.5	1980.2	1995.2
40°	1872.7	1893.5	1884.3	1888.9	1902.7
42.5°	1779.1	1801.0	1776.7	1810.3	1820.7
45°	1672.7	1714.3	1698.1	1712.0	1729.4
47.5°	1603.4	1617.2	1612.6	1620.7	1609.1
50°	1495.8	1509.7	1517.8	1528.2	1532.8
52.5°	1399.9	1410.3	1425.3	1431.1	1441.5
55°	1301.6	1321.3	1317.8	1332.8	1331.7
57.5°	1187.2	1216.1	1206.8	1228.8	1228.8
60°	1099.3	1104.0	1115.5	1125.9	1125.9
62.5°	997.6	1003.4	1009.2	1018.4	1025.4
65°	901.7	901.7	905.1	916.7	905.1
67.5°	790.7	786.1	797.6	811.5	810.3
70°	678.6	684.3	694.7	712.1	712.1
72.5°	582.6	582.6	594.2	603.4	602.3
75°	472.8	480.9	491.3	506.3	501.7
77.5°	374.5	380.3	397.7	411.5	412.7
80°	279.7	285.5	304.0	317.9	314.4
82.5°	195.4	203.5	220.8	231.2	230.0
85°	126.0	128.3	141.0	150.3	151.4
87.5°	57.8	62.4	71.7	75.1	75.1
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	21.77	23.40	22.13	23.72	24.03	21.87	23.51	22.24	23.82	24.14
	3H	23.55	25.03	23.92	25.36	25.72	23.71	25.19	24.09	25.52	25.88
	4H	24.21	25.61	24.61	25.96	26.33	24.41	25.80	24.80	26.15	26.53
	6H	24.68	25.98	25.10	26.34	26.74	24.96	26.25	25.37	26.62	27.01
	8H	24.83	26.07	25.26	26.46	26.86	25.15	26.38	25.57	26.77	27.17
	12H	24.94	26.13	25.37	26.51	26.94	25.29	26.48	25.72	26.86	27.29
4H	2H	22.41	23.81	22.81	24.16	24.53	22.49	23.89	22.89	24.24	24.61
	3H	24.41	25.59	24.82	25.98	26.38	24.56	25.73	24.97	26.13	26.53
	4H	25.21	26.27	25.64	26.68	27.12	25.40	26.46	25.83	26.87	27.31
	6H	25.80	26.73	26.26	27.17	27.63	26.08	27.01	26.54	27.45	27.91
	8H	26.00	26.87	26.46	27.31	27.78	26.33	27.20	26.79	27.64	28.11
	12H	26.15	26.94	26.63	27.41	27.88	26.53	27.31	27.01	27.79	28.25
8H	4H	25.54	26.41	26.00	26.85	27.32	25.71	26.58	26.17	27.02	27.49
	6H	26.26	26.99	26.76	27.48	27.95	26.53	27.26	27.02	27.74	28.22
	8H	26.54	27.19	27.04	27.69	28.18	26.86	27.52	27.37	28.02	28.51
	12H	26.76	27.34	27.27	27.83	28.39	27.15	27.73	27.66	28.22	28.78
12H	4H	25.58	26.37	26.06	26.84	27.31	25.74	26.53	26.22	27.00	27.47
	6H	26.34	26.99	26.85	27.49	27.98	26.59	27.24	27.10	27.75	28.23
	8H	26.67	27.25	27.18	27.74	28.30	26.99	27.56	27.49	28.05	28.61