

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: P893537

Luminaire Tested: 4MB-4SL-LVRF-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893537
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-LVRF-UNV-L830
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 3000K C
Light Source: -
Ballast/Driver: -

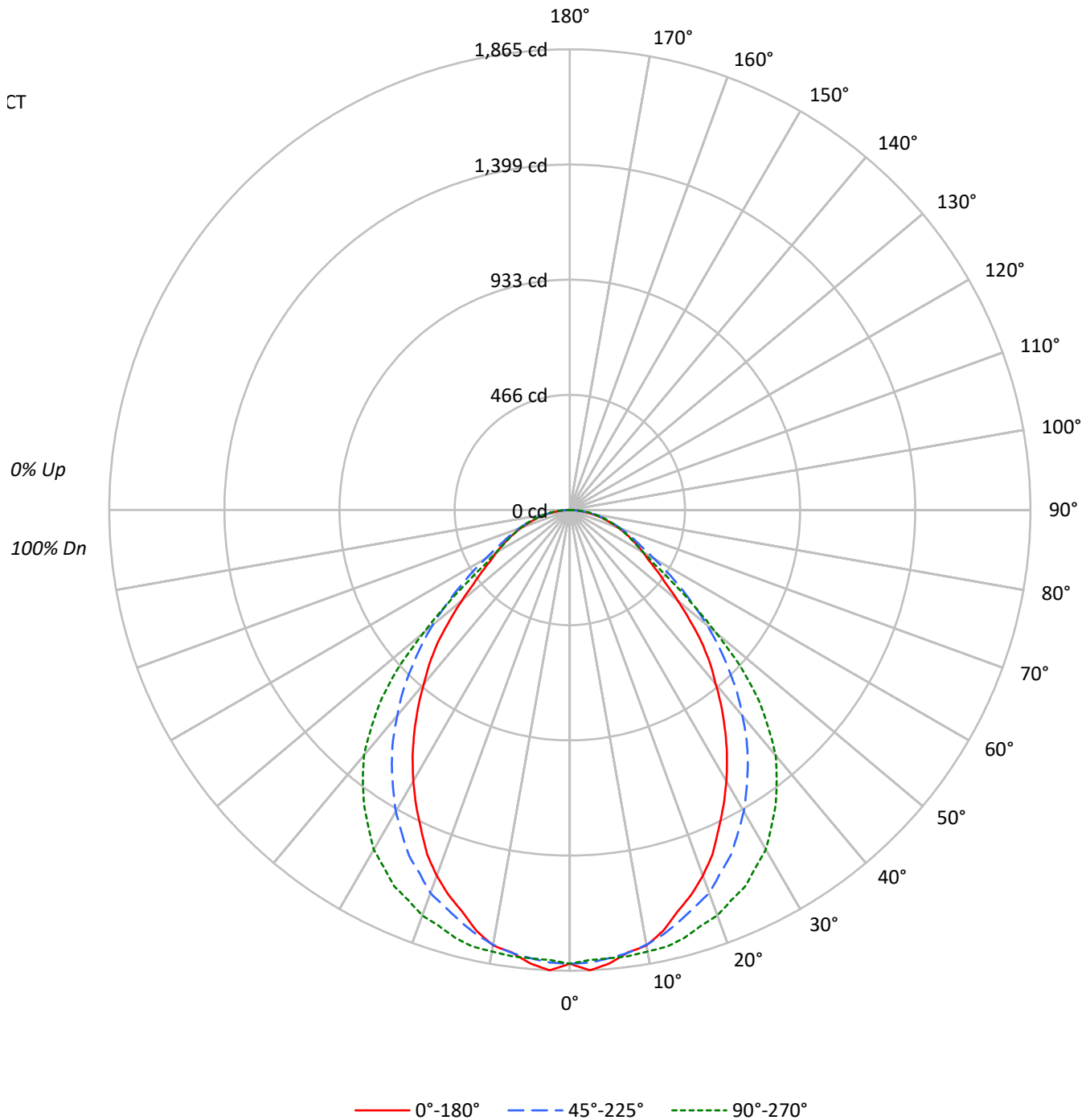
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3817.0 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.27 / 1.23
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	89	89	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	77	77	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	71	67	67	67	67	65
4	87	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	59	59	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	52	52	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	56	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	52	44	39	50	44	39	49	43	38	48	42	38	38	38	38	36
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	35	35	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	32	32	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13067	13067	13067
5°	13158	13008	13008
10°	12931	12910	13110
15°	12395	12684	13204
20°	11925	12495	13226
25°	11186	12109	13196
30°	10413	11573	13041
35°	9532	10916	12626
40°	8534	10094	12046
45°	7573	9139	10830
50°	6300	8045	8542
55°	5366	6777	6207
60°	4865	5600	4907
65°	4583	4904	4566
70°	4310	4550	4450
75°	4016	4332	4253
80°	3679	3991	4110
85°	3200	3510	4596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10830 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.9	4.6
10°-20°	489.3	12.8
20°-30°	710.5	18.6
30°-40°	791.2	20.7
40°-50°	699.0	18.3
50°-60°	458.7	12.0
60°-70°	280.9	7.4
70°-80°	163.4	4.3
80°-90°	50.1	1.3
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°	1373.7	36.0
0°-40°	2164.9	56.7
0°-60°	3322.6	87.0
0°-90°	3817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1837	1837	1837	1837	1837	
5°	1842	1843	1821	1839	1821	174
15°	1683	1702	1722	1790	1793	475
25°	1425	1459	1542	1641	1681	656
35°	1097	1157	1257	1390	1454	684
45°	753	798	908	1030	1076	576
55°	433	463	546	542	500	392
65°	272	277	291	283	271	271
75°	146	148	158	160	155	155
85°	39	41	43	49	56	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1836.6	1836.6	1836.6	1836.6	1836.6
2.5°	1865.2	1842.3	1833.7	1842.3	1823.2
5°	1842.3	1843.3	1821.3	1839.4	1821.3
7.5°	1806.0	1818.4	1807.9	1835.6	1821.3
10°	1789.8	1790.7	1786.9	1815.6	1814.6
12.5°	1744.9	1747.7	1758.3	1801.2	1810.8
15°	1682.8	1701.9	1722.0	1789.8	1792.6
17.5°	1634.1	1657.0	1683.8	1756.3	1764.9
20°	1574.9	1584.4	1650.3	1714.3	1746.8
22.5°	1509.0	1527.1	1591.1	1677.1	1709.5
25°	1424.9	1459.3	1542.4	1640.8	1680.9
27.5°	1347.6	1387.7	1473.6	1583.5	1630.3
30°	1267.4	1313.2	1408.7	1516.6	1587.3
32.5°	1184.3	1241.6	1332.3	1456.5	1518.5
35°	1097.4	1156.6	1256.8	1389.6	1453.6
37.5°	1010.4	1067.7	1176.6	1318.9	1376.2
40°	918.8	975.1	1086.8	1231.1	1297.0
42.5°	839.5	888.2	1002.8	1126.0	1187.1
45°	752.6	798.4	908.3	1030.5	1076.3
47.5°	657.1	710.6	817.5	917.8	936.0
50°	569.2	624.6	726.8	785.1	771.7
52.5°	491.9	538.6	632.2	657.1	625.6
55°	432.6	463.2	546.3	541.5	500.4
57.5°	378.2	397.3	468.0	441.2	402.1
60°	341.9	350.5	393.5	368.7	344.8
62.5°	307.5	311.3	334.3	320.9	302.8
65°	272.2	277.0	291.3	282.7	271.2
67.5°	239.7	241.6	255.0	253.1	238.8
70°	207.2	210.1	218.7	222.5	213.9
72.5°	175.7	178.6	187.2	191.0	183.4
75°	146.1	148.0	157.6	160.4	154.7
77.5°	117.5	121.3	127.0	131.8	125.1
80°	89.8	91.7	97.4	103.1	100.3
82.5°	63.0	65.9	69.7	77.4	79.3
85°	39.2	41.1	43.0	48.7	56.3
87.5°	15.3	16.2	19.1	21.0	27.7
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	16.46	17.94	16.82	18.25	18.57	17.11	18.59	17.48	18.91	19.22
	3H	18.06	19.39	18.44	19.71	20.08	18.55	19.87	18.92	20.20	20.56
	4H	18.68	19.92	19.08	20.27	20.65	19.15	20.39	19.55	20.74	21.12
	6H	19.15	20.29	19.56	20.66	21.05	19.64	20.78	20.05	21.15	21.54
	8H	19.30	20.39	19.73	20.78	21.18	19.84	20.93	20.26	21.32	21.72
	12H	19.40	20.44	19.83	20.83	21.26	20.00	21.05	20.43	21.43	21.86
4H	2H	17.08	18.32	17.48	18.67	19.05	17.60	18.85	18.00	19.20	19.58
	3H	18.90	19.93	19.31	20.33	20.73	19.30	20.33	19.71	20.73	21.13
	4H	19.64	20.56	20.07	20.98	21.42	20.06	20.98	20.49	21.40	21.84
	6H	20.24	21.04	20.70	21.49	21.95	20.69	21.50	21.15	21.94	22.40
	8H	20.43	21.19	20.90	21.63	22.10	20.95	21.70	21.41	22.14	22.61
	12H	20.58	21.25	21.06	21.73	22.20	21.17	21.84	21.65	22.32	22.79
8H	4H	19.96	20.71	20.42	21.16	21.62	20.32	21.08	20.79	21.52	21.99
	6H	20.68	21.31	21.18	21.80	22.28	21.10	21.72	21.60	22.21	22.69
	8H	20.95	21.52	21.47	22.03	22.51	21.44	22.01	21.96	22.52	23.00
	12H	21.17	21.67	21.68	22.16	22.73	21.76	22.26	22.27	22.75	23.32
12H	4H	19.99	20.66	20.48	21.14	21.62	20.34	21.02	20.83	21.50	21.97
	6H	20.75	21.31	21.26	21.82	22.31	21.15	21.71	21.66	22.22	22.71
	8H	21.08	21.58	21.59	22.07	22.63	21.55	22.05	22.06	22.54	23.11