

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: P893547

Luminaire Tested: 4MB-4SL-RFLW-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893547
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-RFLW-UNV-L840
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 4000K
Light Source: -
Ballast/Driver: -

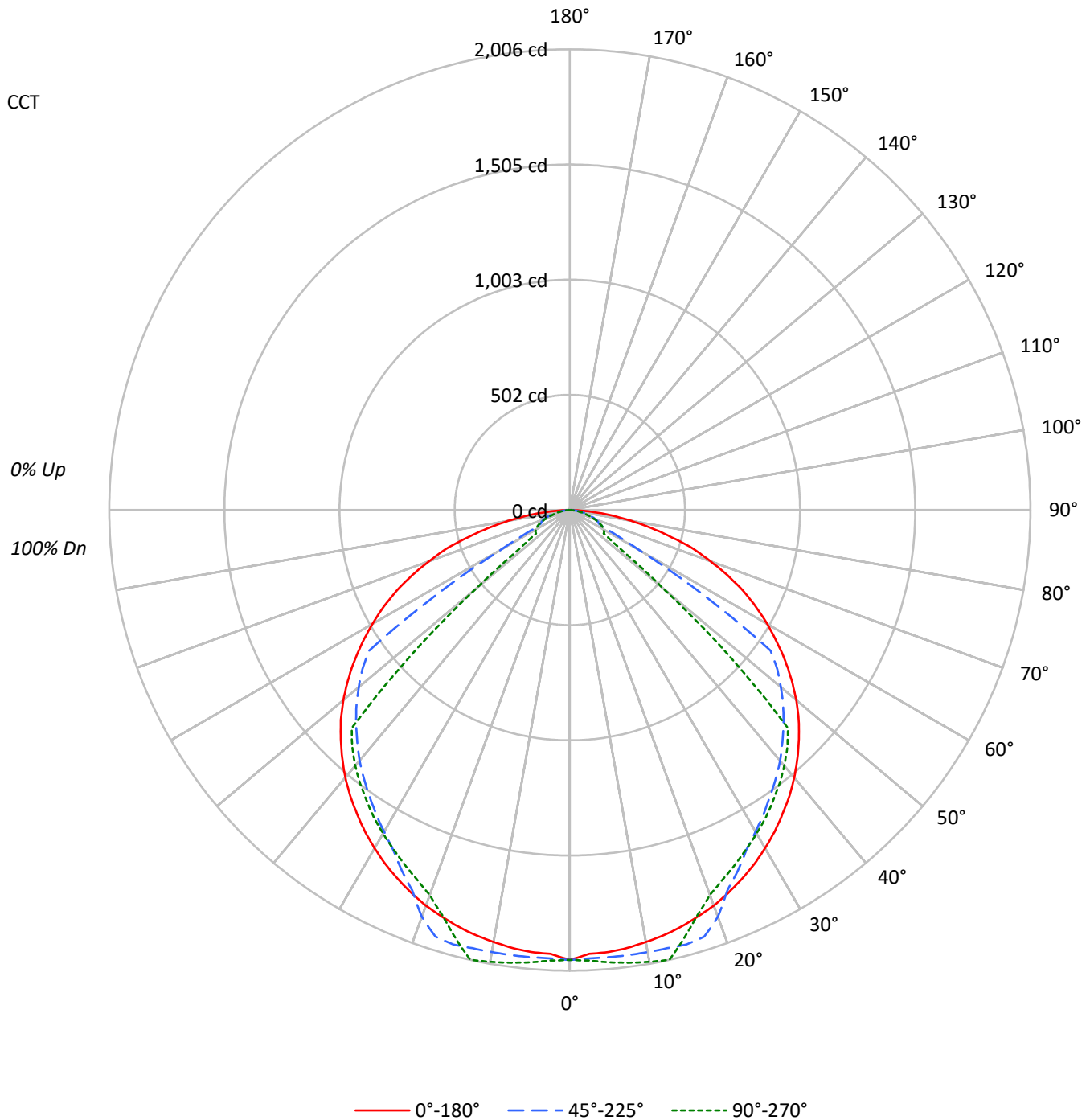
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4778.0 lumens
Efficiency: N/A
Efficacy: 160.3 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38
Luminous Opening: Rectangular (W 0.21' 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	101	98	100	97	94	96	94	92	92	91	89	89	89	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	66	66	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	61	55	51	51	51	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	40	40	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	36	36	36	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	33	33	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25438	25438	25438
5°	25184	25476	25770
10°	25179	25771	26334
15°	25248	26335	25913
20°	25332	26046	24649
25°	25397	24817	24398
30°	25500	24253	24388
35°	25605	24109	24466
40°	25780	24143	24638
45°	25909	24176	24672
50°	26005	24235	10664
55°	25940	24158	4068
60°	25788	9219	4433
65°	25610	4280	4557
70°	24735	4605	4264
75°	23104	4395	3718
80°	20325	3866	3193
85°	16061	3352	2682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 26005 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.1	3.9
10°-20°	543.2	11.4
20°-30°	810.5	17.0
30°-40°	982.5	20.6
40°-50°	1006.0	21.1
50°-60°	669.0	14.0
60°-70°	381.3	8.0
70°-80°	160.2	3.4
80°-90°	38.2	0.8
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°	1540.9	32.2
0°-40°	2523.3	52.8
0°-60°	4198.3	87.9
0°-90°	4778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4778.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1959	1959	1959	1959	1959	
5°	1932	1970	1954	1959	1977	184
15°	1878	1930	1959	1952	1928	530
25°	1773	1858	1732	1694	1703	818
35°	1615	1644	1521	1528	1543	1012
45°	1411	1326	1316	1332	1344	1088
55°	1146	1049	1067	234	180	1023
65°	834	746	139	148	148	820
75°	460	97	88	76	74	489
85°	108	27	22	18	18	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1959.0	1959.0	1959.0	1959.0	1959.0
2.5°	1934.3	1974.7	1954.5	1956.8	1963.5
5°	1932.1	1970.2	1954.5	1959.0	1977.0
7.5°	1923.1	1963.5	1954.5	1968.0	1988.2
10°	1909.6	1956.8	1954.5	1977.0	1997.2
12.5°	1896.1	1943.3	1954.5	1988.2	2006.2
15°	1878.1	1929.8	1959.0	1952.3	1927.6
17.5°	1855.7	1916.3	1947.8	1851.2	1848.9
20°	1833.2	1898.4	1884.9	1792.8	1783.8
22.5°	1804.0	1880.4	1792.8	1729.9	1741.1
25°	1772.6	1857.9	1732.1	1693.9	1702.9
27.5°	1738.9	1835.5	1667.0	1653.5	1664.7
30°	1700.7	1804.0	1617.5	1613.0	1626.5
32.5°	1660.2	1743.3	1570.4	1572.6	1588.3
35°	1615.3	1644.5	1520.9	1527.7	1543.4
37.5°	1570.4	1552.4	1473.8	1485.0	1500.7
40°	1520.9	1480.5	1424.3	1435.6	1453.5
42.5°	1467.0	1404.1	1370.4	1386.1	1401.9
45°	1410.9	1325.5	1316.5	1332.2	1343.5
47.5°	1352.4	1258.1	1260.3	1271.6	952.5
50°	1287.3	1190.7	1199.7	831.2	527.9
52.5°	1217.6	1121.0	1139.0	462.8	267.3
55°	1145.8	1049.2	1067.1	233.6	179.7
57.5°	1069.4	977.3	696.4	168.5	177.5
60°	993.0	900.9	355.0	166.2	170.7
62.5°	914.4	824.5	168.5	159.5	161.8
65°	833.5	745.9	139.3	148.3	148.3
67.5°	743.6	662.7	132.5	132.5	130.3
70°	651.5	550.4	121.3	114.6	112.3
72.5°	566.1	211.2	105.6	94.4	92.1
75°	460.5	96.6	87.6	76.4	74.1
77.5°	366.2	80.9	69.6	60.7	58.4
80°	271.8	62.9	51.7	44.9	42.7
82.5°	188.7	42.7	35.9	29.2	29.2
85°	107.8	27.0	22.5	18.0	18.0
87.5°	42.7	13.5	11.2	6.7	6.7
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	24.17	25.69	24.53	26.00	26.32	11.94	13.46	12.30	13.77	14.08
	3H	26.19	27.55	26.57	27.88	28.24	14.25	15.61	14.63	15.94	16.30
	4H	26.65	27.92	27.05	28.27	28.65	14.96	16.23	15.36	16.58	16.96
	6H	27.06	28.23	27.47	28.60	28.99	15.45	16.62	15.86	16.99	17.38
	8H	27.21	28.32	27.63	28.71	29.11	15.58	16.70	16.01	17.09	17.49
	12H	27.31	28.37	27.74	28.76	29.19	15.67	16.74	16.10	17.12	17.55
4H	2H	24.01	25.28	24.41	25.63	26.01	12.73	14.01	13.13	14.35	14.73
	3H	26.21	27.26	26.63	27.66	28.06	15.24	16.29	15.66	16.69	17.09
	4H	26.66	27.60	27.09	28.02	28.46	16.06	17.00	16.50	17.42	17.86
	6H	27.13	27.94	27.59	28.39	28.85	16.66	17.47	17.11	17.91	18.37
	8H	27.32	28.08	27.78	28.52	28.99	16.83	17.59	17.29	18.03	18.50
	12H	27.47	28.15	27.95	28.63	29.10	16.94	17.62	17.43	18.10	18.57
8H	4H	26.58	27.34	27.04	27.79	28.25	16.90	17.66	17.37	18.11	18.58
	6H	27.04	27.67	27.54	28.16	28.64	17.53	18.15	18.02	18.65	19.12
	8H	27.24	27.80	27.75	28.31	28.80	17.73	18.29	18.24	18.80	19.29
	12H	27.42	27.93	27.93	28.42	28.98	17.88	18.38	18.39	18.88	19.44
12H	4H	26.55	27.23	27.03	27.71	28.18	16.97	17.65	17.46	18.13	18.60
	6H	26.99	27.56	27.51	28.07	28.56	17.62	18.18	18.13	18.69	19.18
	8H	27.22	27.72	27.73	28.21	28.77	17.87	18.37	18.38	18.87	19.43