

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: P892703

Luminaire Tested: 2MB-4HL-ACL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892703
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-ACL-UNV-L840
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 4000K (C)
Light Source: -
Ballast/Driver: -

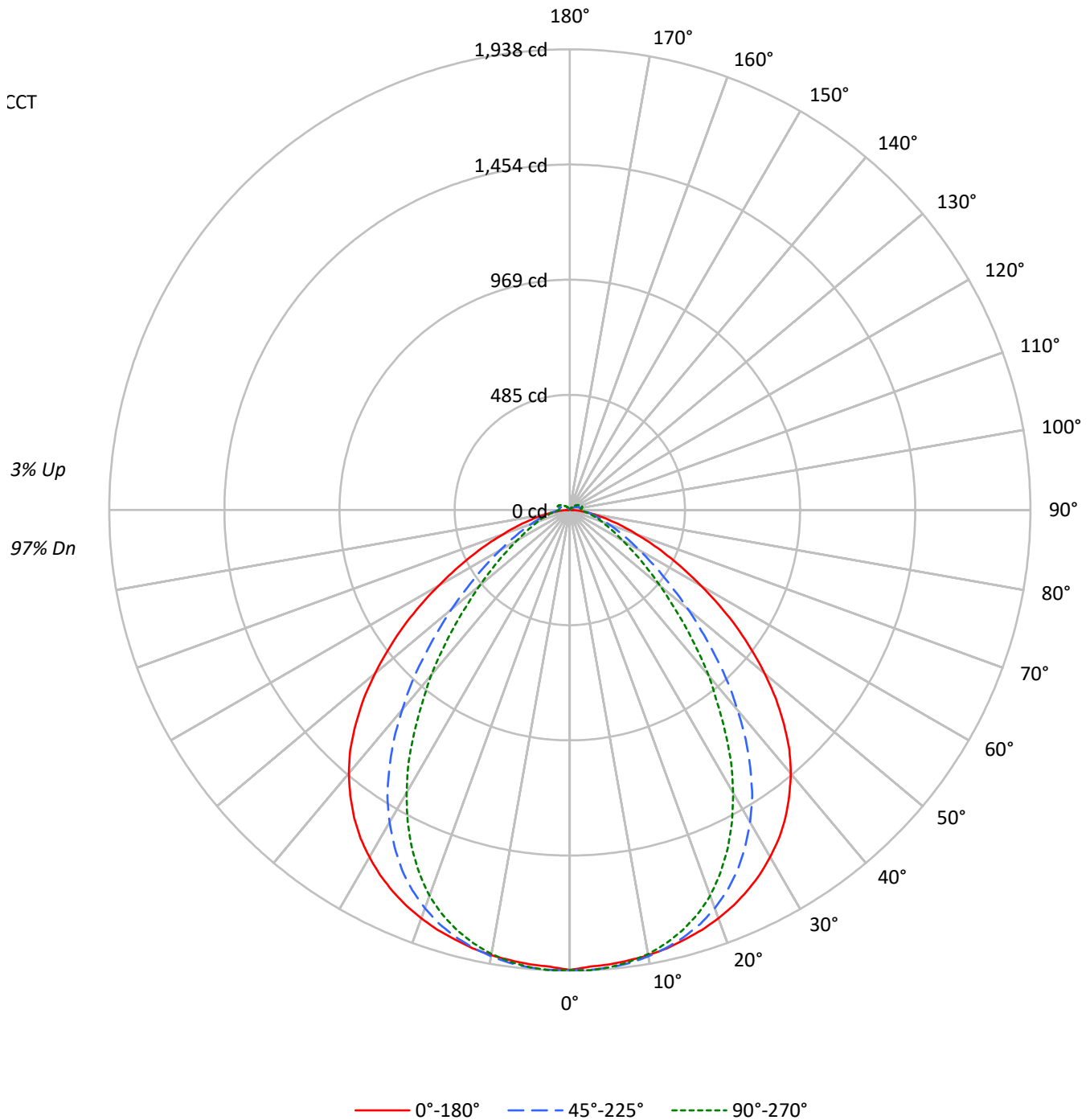
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4135.0 lumens
Efficiency: N/A
Efficacy: 149.8 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.09 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	89	88	86	89	88	86	84
2	101	94	88	83	98	92	86	82	88	83	79	84	80	77	81	77	75	81	77	75	73
3	93	84	77	71	90	82	75	70	79	73	68	76	71	67	73	69	65	73	69	65	63
4	86	75	68	62	84	74	67	61	71	65	60	68	63	59	66	61	58	66	61	58	56
5	80	68	60	54	78	67	59	54	65	58	53	62	57	52	60	55	51	60	55	51	49
6	74	62	54	48	72	61	53	48	59	52	47	57	51	46	55	50	46	55	50	46	44
7	69	57	49	43	67	56	48	43	54	47	42	52	46	42	51	45	41	51	45	41	39
8	65	52	44	39	63	51	44	39	50	43	38	48	42	38	47	42	37	47	42	37	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	38	34	44	38	34	32
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	41	35	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39616	39616	39616
5°	39290	38845	38623
10°	39245	37955	37370
15°	39200	36914	35795
20°	39230	35588	33775
25°	39161	33792	30964
30°	38911	31314	27499
35°	38399	28130	23364
40°	37341	24198	19213
45°	35405	19959	14988
50°	32470	15931	11474
55°	28806	12423	8832
60°	24349	9639	6802
65°	20118	7633	5504
70°	16051	6153	4602
75°	12711	5081	3948
80°	9624	4320	3395
85°	7186	3723	2983

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 35405 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.4	4.4
10°-20°	523.0	12.6
20°-30°	767.0	18.5
30°-40°	836.4	20.2
40°-50°	709.7	17.2
50°-60°	483.2	11.7
60°-70°	281.9	6.8
70°-80°	146.8	3.6
80°-90°	64.0	1.5
90°-100°	40.6	1.0
100°-110°	37.5	0.9
110°-120°	27.9	0.7
120°-130°	16.8	0.4
130°-140°	9.0	0.2
140°-150°	4.5	0.1
150°-160°	2.2	0.1
160°-170°	0.9	0.0
170°-180°	0.2	0.0
0°-30°	1473.4	35.6
0°-40°	2309.8	55.9
0°-60°	3502.6	84.7
0°-90°	3995.4	96.6
90°-120°	106.0	2.6
90°-150°	136.3	3.3
90°-180°	140.0	3.4
0°-180°	4135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1935	1935	1935	1935	1935	
5°	1918	1927	1931	1933	1931	183
15°	1870	1875	1859	1842	1830	529
25°	1767	1742	1671	1606	1571	814
35°	1581	1500	1324	1191	1140	987
45°	1274	1116	863	727	680	979
55°	855	681	473	380	358	762
65°	453	357	242	200	190	454
75°	186	160	124	113	108	202
85°	45	54	61	60	58	48
90°	7	24	43	46	45	7
95°	14	27	44	48	48	10
105°	4	20	41	53	53	4
115°	3	12	32	44	48	3
125°	2	6	19	30	35	2
135°	2	5	11	18	21	1
145°	2	3	7	10	12	1
155°	2	2	5	7	7	1
165°	2	2	3	4	5	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1934.7	1934.7	1934.7	1934.7	1934.7
2.5°	1922.5	1931.4	1936.3	1939.5	1937.9
5°	1918.5	1927.4	1931.4	1933.0	1930.6
7.5°	1910.4	1920.1	1922.5	1920.9	1916.9
10°	1901.5	1909.6	1906.4	1902.3	1896.7
12.5°	1888.6	1894.2	1885.3	1876.5	1867.6
15°	1870.0	1874.8	1858.7	1841.7	1830.4
17.5°	1851.4	1849.8	1825.5	1798.0	1784.3
20°	1827.9	1819.1	1782.7	1743.1	1726.9
22.5°	1800.5	1785.1	1731.7	1678.4	1654.1
25°	1767.3	1742.2	1671.1	1605.6	1570.9
27.5°	1730.1	1694.5	1597.5	1515.9	1477.1
30°	1685.7	1637.1	1516.7	1416.4	1373.6
32.5°	1638.0	1575.7	1428.6	1303.2	1263.6
35°	1581.4	1500.5	1323.5	1190.9	1139.9
37.5°	1516.7	1414.0	1215.9	1070.4	1017.1
40°	1446.3	1322.7	1096.3	950.8	907.9
42.5°	1367.1	1225.6	984.7	831.9	789.1
45°	1274.1	1115.7	862.6	726.8	679.9
47.5°	1176.3	1007.4	750.3	617.7	578.9
50°	1070.4	893.4	650.0	528.7	494.8
52.5°	961.3	787.4	553.8	447.9	419.6
55°	855.4	680.7	473.0	380.0	358.2
57.5°	744.6	591.0	401.8	323.4	301.6
60°	637.9	500.4	337.9	273.3	256.3
62.5°	541.7	422.0	287.8	232.8	220.7
65°	452.7	357.3	242.5	200.5	190.0
67.5°	373.5	295.9	207.8	173.8	164.1
70°	299.1	241.7	173.8	149.6	143.1
72.5°	242.5	201.3	147.1	131.0	126.1
75°	185.9	160.1	124.5	113.2	108.3
77.5°	139.9	125.3	105.9	97.0	93.0
80°	101.1	97.0	88.9	84.1	80.0
82.5°	69.5	73.6	74.4	70.3	68.7
85°	45.3	54.2	61.4	59.8	58.2
87.5°	25.1	36.4	50.1	50.9	49.3
90°	7.3	24.3	42.8	46.1	45.3
92.5°	13.7	25.9	43.7	46.9	46.1
95°	13.7	26.7	44.5	48.5	47.7
97.5°	12.9	26.7	45.3	50.1	50.1
100°	6.5	25.9	45.3	51.7	51.7
102.5°	4.0	23.4	43.7	52.6	53.4
105°	4.0	20.2	41.2	52.6	53.4
107.5°	4.0	17.0	39.6	50.9	53.4
110°	3.2	14.6	37.2	48.5	51.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	12.9	34.8	46.9	50.1
115°	3.2	12.1	31.5	44.5	47.7
117.5°	2.4	10.5	27.5	41.2	45.3
120°	2.4	8.9	24.3	38.0	42.0
122.5°	1.6	8.1	21.0	34.0	38.8
125°	1.6	6.5	18.6	29.9	34.8
127.5°	1.6	6.5	17.0	26.7	30.7
130°	1.6	5.7	14.6	23.4	26.7
132.5°	1.6	5.7	12.9	20.2	23.4
135°	1.6	4.9	11.3	17.8	21.0
137.5°	1.6	4.9	10.5	15.4	18.6
140°	1.6	4.0	8.9	13.7	16.2
142.5°	1.6	4.0	8.1	12.1	13.7
145°	1.6	3.2	7.3	10.5	12.1
147.5°	1.6	3.2	6.5	8.9	10.5
150°	1.6	3.2	6.5	8.1	8.9
152.5°	1.6	2.4	5.7	7.3	8.1
155°	1.6	2.4	4.9	7.3	7.3
157.5°	1.6	2.4	4.0	6.5	7.3
160°	1.6	2.4	4.0	5.7	6.5
162.5°	1.6	2.4	3.2	4.0	5.7
165°	1.6	1.6	3.2	4.0	4.9
167.5°	1.6	1.6	2.4	3.2	4.0
170°	1.6	1.6	2.4	2.4	2.4
172.5°	1.6	1.6	2.4	2.4	1.6
175°	1.6	1.6	2.4	2.4	1.6
177.5°	1.6	1.6	2.4	2.4	1.6
180°	1.6	1.6	1.6	1.6	1.6



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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	21.47	22.87	21.90	23.25	23.66	17.58	18.97	18.00	19.36	19.76
	3H	22.50	23.75	22.93	24.15	24.59	18.78	20.03	19.21	20.43	20.87
	4H	22.79	23.96	23.25	24.38	24.85	19.31	20.48	19.77	20.90	21.37
	6H	22.94	24.02	23.41	24.46	24.93	19.82	20.90	20.29	21.33	21.81
	8H	22.97	23.99	23.45	24.45	24.94	20.06	21.09	20.55	21.55	22.03
	12H	22.97	23.95	23.46	24.40	24.91	20.32	21.30	20.80	21.75	22.26
4H	2H	21.51	22.68	21.96	23.09	23.56	18.08	19.24	18.53	19.66	20.13
	3H	22.70	23.67	23.17	24.13	24.62	19.46	20.43	19.93	20.90	21.38
	4H	23.09	23.96	23.58	24.44	24.96	20.10	20.97	20.59	21.45	21.97
	6H	23.33	24.09	23.85	24.60	25.14	20.73	21.49	21.25	22.00	22.54
	8H	23.39	24.09	23.91	24.60	25.15	21.03	21.74	21.55	22.25	22.80
	12H	23.41	24.04	23.95	24.58	25.13	21.36	21.99	21.90	22.53	23.09
8H	4H	23.11	23.82	23.63	24.33	24.88	20.34	21.05	20.86	21.55	22.10
	6H	23.42	24.01	23.97	24.56	25.12	21.09	21.67	21.64	22.23	22.78
	8H	23.51	24.04	24.08	24.61	25.18	21.47	22.00	22.04	22.57	23.14
	12H	23.58	24.05	24.15	24.60	25.24	21.92	22.38	22.48	22.93	23.58
12H	4H	23.10	23.73	23.64	24.27	24.82	20.35	20.99	20.89	21.53	22.08
	6H	23.42	23.94	23.99	24.51	25.08	21.13	21.66	21.70	22.22	22.79
	8H	23.55	24.02	24.11	24.57	25.21	21.57	22.04	22.14	22.59	23.23