

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: P892702

Luminaire Tested: 2MB-4HL-ACL-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892702
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-L835
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3500K (C)
Light Source: -
Ballast/Driver: -

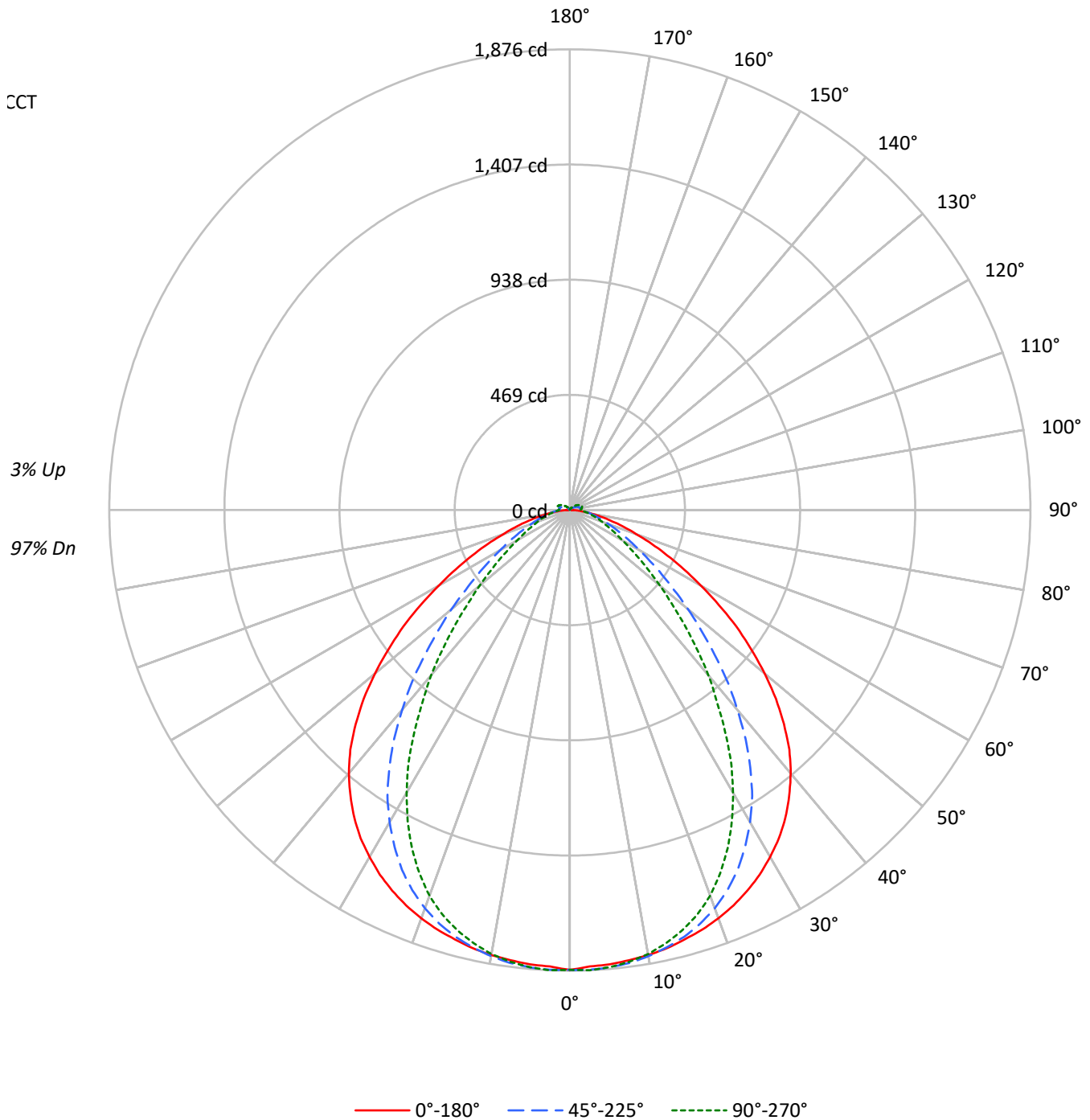
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4002.0 lumens
Efficiency: N/A
Efficacy: 145.0 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°	38340	38340	38340
5°	38026	37596	37381
10°	37984	36733	36169
15°	37938	35727	34643
20°	37968	34442	32688
25°	37902	32707	29966
30°	37658	30307	26614
35°	37163	27224	22614
40°	36140	23418	18595
45°	34269	19318	14508
50°	31426	15419	11105
55°	27876	12022	8546
60°	23566	9331	6581
65°	19474	7387	5327
70°	15536	5955	4454
75°	12307	4918	3824
80°	9310	4184	3289
85°	6948	3608	2885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 34269 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.5	4.4
10°-20°	506.2	12.6
20°-30°	742.3	18.5
30°-40°	809.5	20.2
40°-50°	686.9	17.2
50°-60°	467.6	11.7
60°-70°	272.9	6.8
70°-80°	142.1	3.6
80°-90°	61.9	1.5
90°-100°	39.3	1.0
100°-110°	36.3	0.9
110°-120°	27.0	0.7
120°-130°	16.3	0.4
130°-140°	8.7	0.2
140°-150°	4.4	0.1
150°-160°	2.1	0.1
160°-170°	0.8	0.0
170°-180°	0.2	0.0
0°-30°	1426.0	35.6
0°-40°	2235.5	55.9
0°-60°	3390.0	84.7
0°-90°	3866.9	96.6
90°-120°	102.6	2.6
90°-150°	131.9	3.3
90°-180°	135.0	3.4
0°-180°	4002.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1872	1872	1872	1872	1872	
5°	1857	1865	1869	1871	1868	177
15°	1810	1814	1799	1782	1772	512
25°	1710	1686	1617	1554	1520	788
35°	1530	1452	1281	1153	1103	955
45°	1233	1080	835	703	658	947
55°	828	659	458	368	347	738
65°	438	346	235	194	184	439
75°	180	155	120	110	105	196
85°	44	52	60	58	56	47
90°	7	24	42	45	44	7
95°	13	26	43	47	46	10
105°	4	20	40	51	52	4
115°	3	12	30	43	46	3
125°	2	6	18	29	34	2
135°	2	5	11	17	20	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°	1872.4	1872.4	1872.4	1872.4	1872.4
2.5°	1860.7	1869.3	1874.0	1877.1	1875.6
5°	1856.8	1865.4	1869.3	1870.9	1868.5
7.5°	1849.0	1858.4	1860.7	1859.1	1855.2
10°	1840.4	1848.2	1845.0	1841.1	1835.7
12.5°	1827.8	1833.3	1824.7	1816.1	1807.5
15°	1809.8	1814.5	1798.9	1782.5	1771.5
17.5°	1791.8	1790.3	1766.8	1740.2	1726.9
20°	1769.1	1760.5	1725.3	1687.0	1671.3
22.5°	1742.5	1727.7	1676.0	1624.4	1600.9
25°	1710.5	1686.2	1617.4	1554.0	1520.3
27.5°	1674.5	1640.0	1546.1	1467.1	1429.6
30°	1631.4	1584.5	1467.9	1370.9	1329.4
32.5°	1585.3	1525.0	1382.6	1261.3	1223.0
35°	1530.5	1452.3	1280.9	1152.6	1103.3
37.5°	1467.9	1368.5	1176.8	1036.0	984.3
40°	1399.8	1280.1	1061.0	920.2	878.7
42.5°	1323.1	1186.2	953.0	805.2	763.7
45°	1233.2	1079.8	834.9	703.4	658.1
47.5°	1138.5	974.9	726.1	597.8	560.2
50°	1036.0	864.6	629.1	511.7	478.9
52.5°	930.3	762.1	536.0	433.5	406.1
55°	827.8	658.8	457.7	367.8	346.6
57.5°	720.6	572.0	388.9	313.0	291.9
60°	617.4	484.3	327.1	264.5	248.0
62.5°	524.3	408.4	278.6	225.3	213.6
65°	438.2	345.8	234.7	194.1	183.9
67.5°	361.5	286.4	201.1	168.2	158.8
70°	289.5	234.0	168.2	144.8	138.5
72.5°	234.7	194.8	142.4	126.8	122.1
75°	180.0	154.9	120.5	109.5	104.9
77.5°	135.4	121.3	102.5	93.9	90.0
80°	97.8	93.9	86.1	81.4	77.5
82.5°	67.3	71.2	72.0	68.1	66.5
85°	43.8	52.4	59.5	57.9	56.3
87.5°	24.3	35.2	48.5	49.3	47.7
90°	7.0	23.5	41.5	44.6	43.8
92.5°	13.3	25.0	42.3	45.4	44.6
95°	13.3	25.8	43.0	46.9	46.2
97.5°	12.5	25.8	43.8	48.5	48.5
100°	6.3	25.0	43.8	50.1	50.1
102.5°	3.9	22.7	42.3	50.9	51.6
105°	3.9	19.6	39.9	50.9	51.6
107.5°	3.9	16.4	38.3	49.3	51.6
110°	3.1	14.1	36.0	46.9	50.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.1	12.5	33.6	45.4	48.5
115°	3.1	11.7	30.5	43.0	46.2
117.5°	2.3	10.2	26.6	39.9	43.8
120°	2.3	8.6	23.5	36.8	40.7
122.5°	1.6	7.8	20.3	32.9	37.6
125°	1.6	6.3	18.0	29.0	33.6
127.5°	1.6	6.3	16.4	25.8	29.7
130°	1.6	5.5	14.1	22.7	25.8
132.5°	1.6	5.5	12.5	19.6	22.7
135°	1.6	4.7	11.0	17.2	20.3
137.5°	1.6	4.7	10.2	14.9	18.0
140°	1.6	3.9	8.6	13.3	15.6
142.5°	1.6	3.9	7.8	11.7	13.3
145°	1.6	3.1	7.0	10.2	11.7
147.5°	1.6	3.1	6.3	8.6	10.2
150°	1.6	3.1	6.3	7.8	8.6
152.5°	1.6	2.3	5.5	7.0	7.8
155°	1.6	2.3	4.7	7.0	7.0
157.5°	1.6	2.3	3.9	6.3	7.0
160°	1.6	2.3	3.9	5.5	6.3
162.5°	1.6	2.3	3.1	3.9	5.5
165°	1.6	1.6	3.1	3.9	4.7
167.5°	1.6	1.6	2.3	3.1	3.9
170°	1.6	1.6	2.3	2.3	2.3
172.5°	1.6	1.6	2.3	2.3	1.6
175°	1.6	1.6	2.3	2.3	1.6
177.5°	1.6	1.6	2.3	2.3	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	21.36	22.75	21.78	23.14	23.54	17.46	18.86	17.88	19.24	19.64
	3H	22.39	23.63	22.82	24.03	24.48	18.66	19.91	19.10	20.31	20.76
	4H	22.68	23.85	23.14	24.27	24.73	19.20	20.37	19.66	20.79	21.25
	6H	22.83	23.91	23.30	24.35	24.82	19.71	20.79	20.18	21.22	21.70
	8H	22.85	23.88	23.34	24.34	24.82	19.95	20.98	20.43	21.43	21.92
	12H	22.86	23.84	23.34	24.29	24.80	20.20	21.19	20.69	21.64	22.15
4H	2H	21.39	22.56	21.85	22.98	23.44	17.96	19.13	18.42	19.55	20.01
	3H	22.59	23.55	23.05	24.02	24.50	19.35	20.31	19.82	20.78	21.27
	4H	22.98	23.85	23.47	24.33	24.85	19.98	20.86	20.47	21.34	21.86
	6H	23.22	23.98	23.74	24.49	25.03	20.62	21.38	21.13	21.88	22.42
	8H	23.27	23.98	23.79	24.49	25.03	20.92	21.63	21.44	22.14	22.68
	12H	23.30	23.93	23.84	24.47	25.02	21.25	21.88	21.79	22.42	22.97
8H	4H	23.00	23.71	23.52	24.22	24.76	20.23	20.93	20.75	21.44	21.99
	6H	23.31	23.90	23.86	24.45	25.00	20.97	21.56	21.53	22.11	22.67
	8H	23.40	23.93	23.97	24.50	25.06	21.36	21.89	21.93	22.46	23.02
	12H	23.47	23.94	24.04	24.49	25.13	21.80	22.27	22.37	22.82	23.46
12H	4H	22.99	23.62	23.52	24.16	24.71	20.24	20.87	20.78	21.41	21.96
	6H	23.30	23.83	23.87	24.40	24.97	21.02	21.54	21.58	22.11	22.68
	8H	23.44	23.90	24.00	24.45	25.10	21.46	21.93	22.03	22.48	23.12