

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: P893472

Luminaire Tested: 4MB-4SL-ACL-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893472
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-ACL-UNV-L950
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 5000K (C)
Light Source: -
Ballast/Driver: -

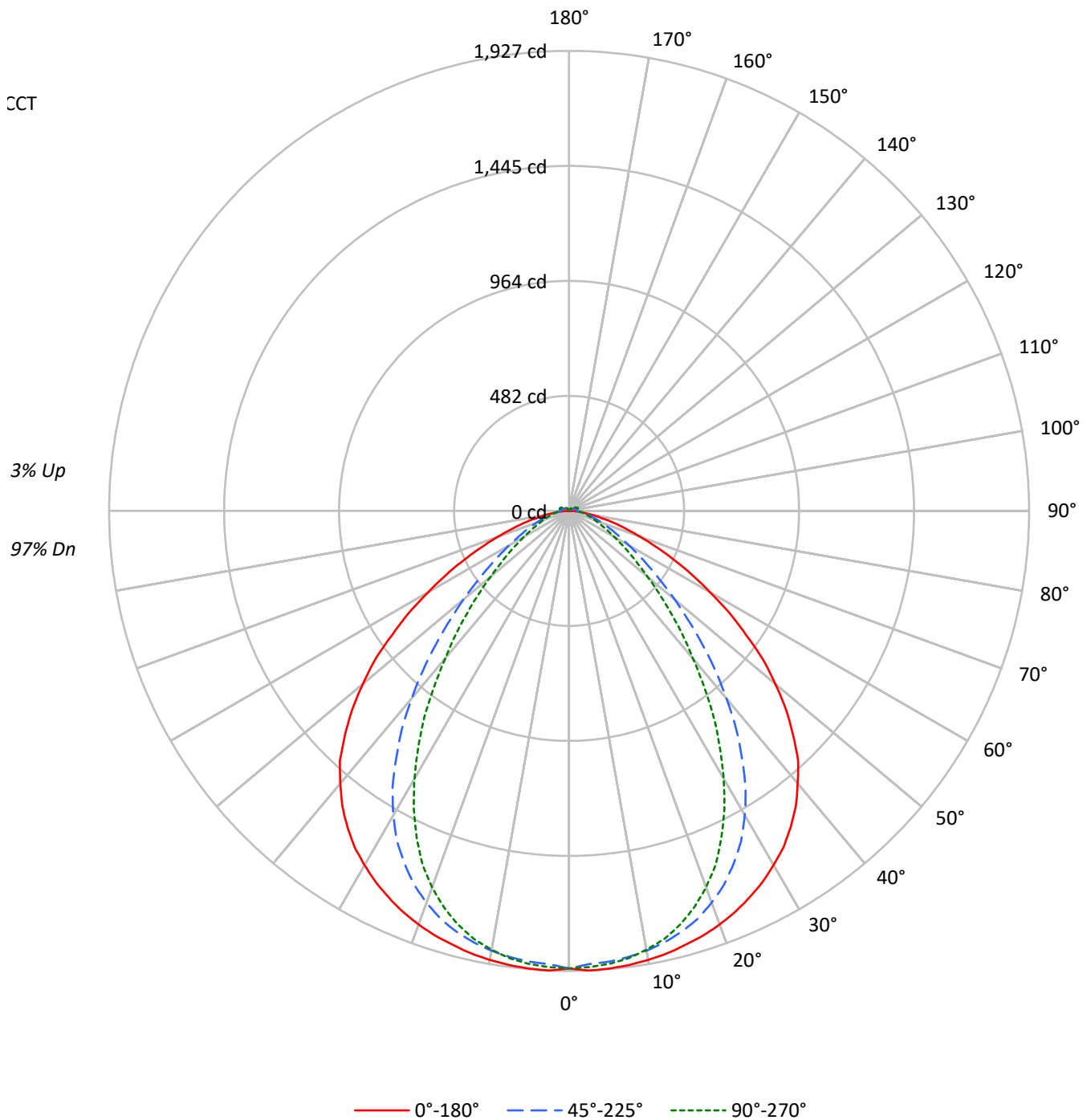
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3931.0 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
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				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	110	110	110	104	104	104	100	100	100	97				97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85				85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74				74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64				64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57				57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45				45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40				40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19516	19516	19516
5°	19639	18986	18956
10°	19675	18574	18291
15°	19734	18091	17459
20°	19829	17426	16319
25°	19888	16503	14802
30°	19907	15234	12896
35°	19823	13463	10787
40°	19471	11372	8489
45°	18722	9181	6583
50°	17429	7123	4939
55°	15602	5453	3777
60°	13405	4192	2877
65°	11178	3306	2288
70°	8940	2653	1868
75°	7121	2138	1592
80°	5216	1763	1393
85°	3583	1499	1282

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18722 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.5	4.6
10°-20°	517.1	13.2
20°-30°	753.8	19.2
30°-40°	809.9	20.6
40°-50°	674.1	17.1
50°-60°	450.8	11.5
60°-70°	258.1	6.6
70°-80°	128.3	3.3
80°-90°	52.5	1.3
90°-100°	30.5	0.8
100°-110°	26.9	0.7
110°-120°	19.7	0.5
120°-130°	12.7	0.3
130°-140°	7.6	0.2
140°-150°	4.3	0.1
150°-160°	2.1	0.1
160°-170°	0.9	0.0
170°-180°	0.2	0.0
0°-30°	1452.4	36.9
0°-40°	2262.3	57.6
0°-60°	3387.3	86.2
0°-90°	3826.2	97.3
90°-120°	77.1	2.0
90°-150°	101.6	2.6
90°-180°	105.0	2.7
0°-180°	3931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1916	1916	1916	1916	1916	
5°	1925	1918	1896	1911	1905	183
15°	1882	1869	1825	1811	1795	532
25°	1787	1745	1631	1548	1510	824
35°	1618	1500	1262	1107	1058	1010
45°	1327	1103	788	638	600	1020
55°	905	653	411	325	308	811
65°	485	329	207	168	159	484
75°	195	142	102	91	88	209
85°	38	42	48	50	50	44
90°	6	18	32	39	40	5
95°	8	18	32	39	40	7
105°	6	14	28	38	39	6
115°	3	8	22	31	34	3
125°	2	6	15	22	25	1
135°	1	4	10	15	17	1
145°	1	3	7	10	12	1
155°	1	3	4	6	8	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°	1916.3	1916.3	1916.3	1916.3	1916.3
2.5°	1927.4	1922.4	1900.6	1917.9	1912.9
5°	1924.6	1918.5	1895.6	1911.2	1905.1
7.5°	1918.5	1911.8	1885.5	1897.8	1891.1
10°	1909.6	1901.2	1871.0	1877.1	1866.5
12.5°	1898.4	1887.8	1850.3	1848.6	1836.9
15°	1882.2	1869.3	1824.6	1811.2	1795.0
17.5°	1865.4	1846.4	1791.6	1764.2	1741.9
20°	1843.6	1818.4	1746.3	1705.5	1677.6
22.5°	1818.4	1784.3	1695.5	1632.8	1603.8
25°	1787.1	1744.6	1630.6	1548.4	1509.9
27.5°	1753.6	1697.1	1560.2	1452.3	1408.1
30°	1713.3	1643.5	1472.4	1342.7	1295.2
32.5°	1670.9	1575.3	1376.3	1227.6	1175.6
35°	1617.8	1500.4	1262.2	1106.8	1058.2
37.5°	1560.2	1410.9	1149.3	983.3	928.5
40°	1490.3	1316.5	1025.2	860.9	806.6
42.5°	1421.0	1213.6	906.1	750.2	703.2
45°	1327.1	1102.9	788.2	637.8	600.4
47.5°	1232.6	984.4	675.3	546.7	509.8
50°	1127.5	868.1	576.3	458.9	428.2
52.5°	1025.2	759.7	486.3	387.9	361.7
55°	905.0	652.9	410.9	324.8	308.0
57.5°	796.6	554.0	346.6	275.0	259.4
60°	682.0	469.6	290.1	232.5	218.0
62.5°	581.4	394.7	244.3	197.3	187.3
65°	484.7	328.7	206.8	167.7	158.8
67.5°	395.8	274.5	174.4	143.1	135.8
70°	317.5	222.5	147.0	121.9	116.8
72.5°	249.9	178.9	122.4	105.1	100.6
75°	195.1	142.0	102.3	90.6	87.8
77.5°	140.9	110.7	85.5	77.7	76.0
80°	99.5	83.9	70.4	67.1	66.0
82.5°	66.0	60.9	58.1	58.1	57.6
85°	38.0	42.5	47.5	49.8	50.3
87.5°	19.6	28.5	38.0	42.5	43.0
90°	5.6	17.9	32.4	38.6	39.7
92.5°	8.4	17.9	31.9	38.6	39.7
95°	8.4	17.9	31.9	38.6	39.7
97.5°	7.8	17.3	31.9	38.6	39.7
100°	7.3	16.2	31.3	38.6	39.7
102.5°	6.1	15.7	30.2	38.0	39.7
105°	5.6	14.5	28.5	37.5	39.1
107.5°	5.0	12.3	26.8	35.8	38.0
110°	3.9	10.6	25.7	34.1	36.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.4	9.5	24.0	32.4	35.2
115°	2.8	8.4	22.4	30.7	33.5
117.5°	2.2	7.8	20.1	28.5	31.3
120°	1.7	7.3	18.4	26.8	29.1
122.5°	1.7	6.7	16.2	24.6	26.8
125°	1.7	5.6	15.1	22.4	24.6
127.5°	1.1	5.0	13.4	20.1	22.4
130°	1.1	5.0	12.3	18.4	20.1
132.5°	1.1	4.5	11.2	16.8	18.4
135°	1.1	4.5	10.1	15.1	16.8
137.5°	1.1	3.9	8.9	14.0	15.7
140°	1.1	3.9	8.4	12.3	14.0
142.5°	1.1	3.4	7.3	11.7	12.9
145°	1.1	3.4	6.7	10.1	11.7
147.5°	1.1	3.4	6.1	9.5	10.6
150°	1.1	2.8	5.6	7.8	9.5
152.5°	1.1	2.8	5.0	7.3	8.9
155°	1.1	2.8	4.5	6.1	7.8
157.5°	1.1	2.8	4.5	5.6	6.7
160°	1.7	2.2	3.9	5.0	6.1
162.5°	1.7	2.2	3.4	4.5	5.6
165°	1.7	2.2	3.4	3.9	5.0
167.5°	1.7	2.2	2.8	3.4	3.9
170°	1.7	1.7	2.8	2.8	2.8
172.5°	1.7	1.7	2.2	2.8	2.2
175°	1.7	1.7	2.2	2.2	2.2
177.5°	1.7	1.7	2.2	2.2	2.2
180°	1.7	1.7	1.7	1.7	1.7



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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	19.06	20.45	19.47	20.82	21.20	14.35	15.74	14.76	16.12	16.50
	3H	20.15	21.39	20.58	21.78	22.21	15.49	16.74	15.92	17.12	17.55
	4H	20.46	21.62	20.90	22.03	22.47	15.99	17.16	16.44	17.56	18.01
	6H	20.60	21.68	21.06	22.10	22.56	16.49	17.57	16.95	17.99	18.45
	8H	20.62	21.64	21.09	22.09	22.55	16.75	17.77	17.23	18.22	18.69
	12H	20.62	21.59	21.09	22.03	22.52	17.05	18.02	17.52	18.46	18.95
4H	2H	19.04	20.20	19.49	20.61	21.05	14.85	16.01	15.30	16.42	16.86
	3H	20.28	21.24	20.73	21.69	22.16	16.16	17.12	16.62	17.58	18.05
	4H	20.66	21.53	21.14	21.99	22.50	16.76	17.62	17.24	18.09	18.59
	6H	20.89	21.64	21.40	22.14	22.66	17.38	18.13	17.88	18.62	19.15
	8H	20.93	21.64	21.44	22.13	22.66	17.70	18.40	18.21	18.90	19.43
	12H	20.95	21.57	21.47	22.10	22.63	18.07	18.70	18.60	19.23	19.76
8H	4H	20.65	21.35	21.16	21.84	22.38	17.00	17.70	17.51	18.19	18.72
	6H	20.93	21.51	21.47	22.05	22.59	17.72	18.30	18.26	18.84	19.38
	8H	21.00	21.52	21.56	22.08	22.63	18.13	18.65	18.69	19.20	19.76
	12H	21.04	21.51	21.60	22.05	22.67	18.62	19.08	19.17	19.62	20.25
12H	4H	20.63	21.25	21.15	21.78	22.31	17.01	17.64	17.54	18.17	18.70
	6H	20.90	21.43	21.46	21.98	22.54	17.76	18.28	18.32	18.84	19.39
	8H	21.01	21.47	21.57	22.01	22.64	18.22	18.68	18.77	19.22	19.85