

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: P894026

Luminaire Tested: 4MB-9HL-FLTU-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894026
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-FLTU-UNV-L835
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 350
Light Source: -
Ballast/Driver: -

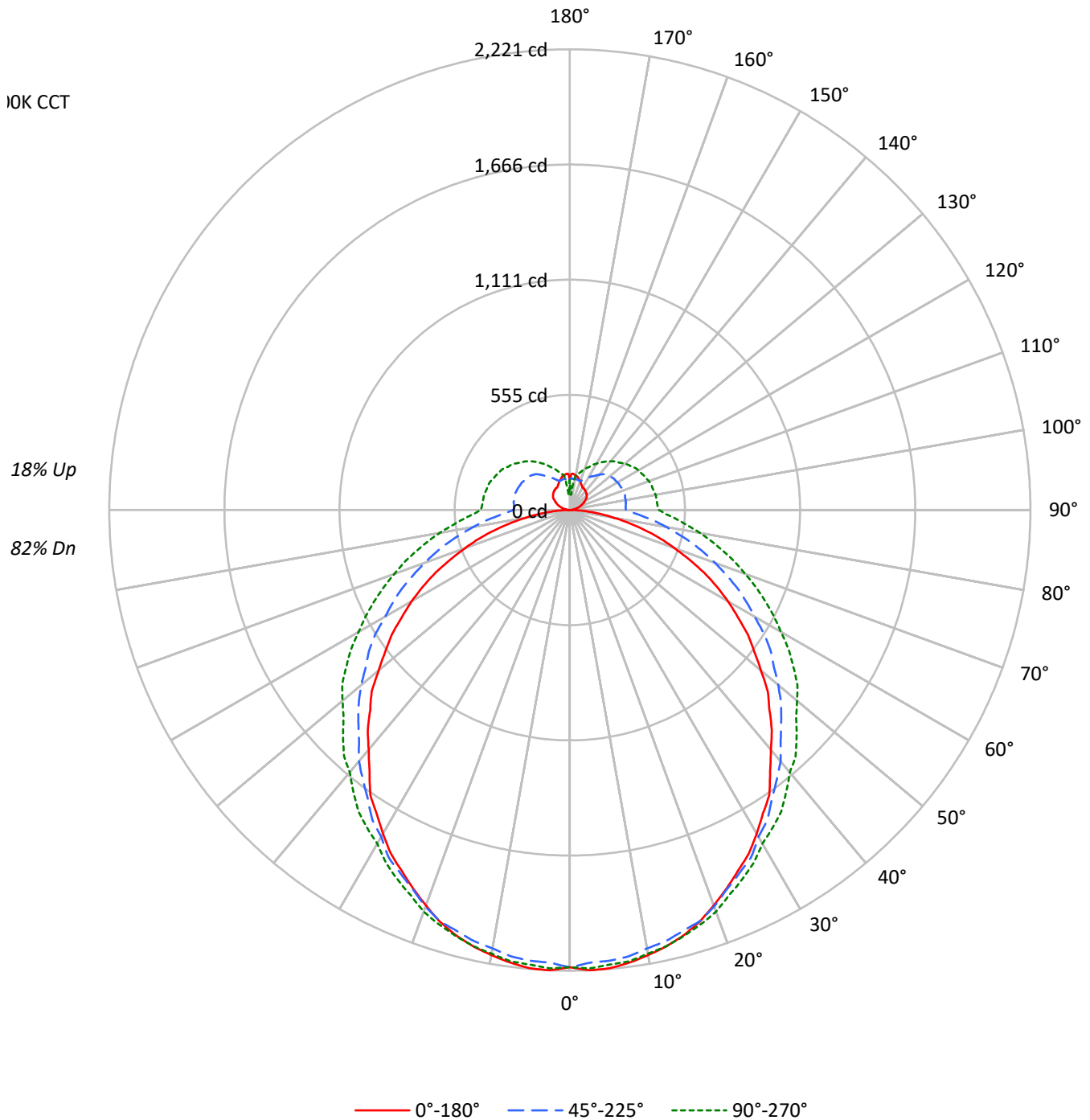
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8288.0 lumens
Efficiency: N/A
Efficacy: 128.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
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					0																
RCR																																																						
0	115	115	115	115					110	110	110	110					101	101	101					93	93	93					86	86	86					82																
1	103	98	93	89					99	94	90	86					87	83	80					80	77	74					73	71	69					66																
2	93	85	77	71					89	81	75	69					75	70	65					69	65	61					63	60	57					54																
3	85	74	66	59					81	71	63	57					66	59	54					60	55	51					56	51	48					45																
4	78	65	56	49					74	63	55	48					58	51	46					54	48	43					50	45	41					38																
5	71	58	49	42					68	56	48	41					52	45	39					48	42	37					44	39	35					33																
6	66	52	43	37					63	50	42	36					47	40	34					43	37	33					40	35	31					28																
7	61	47	38	32					58	46	37	32					42	35	30					39	33	29					37	31	27					25																
8	56	43	34	29					54	42	34	28					39	32	27					36	30	26					34	28	24					22																
9	53	39	31	26					50	38	30	25					36	29	24					33	27	23					31	26	22					20																
10	49	36	28	23					47	35	28	23					33	26	22					31	25	21					29	24	20					18																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15685	15685	15685
5°	15765	15020	14993
10°	15597	14425	14308
15°	15418	13899	13656
20°	15074	13344	13007
25°	14704	12666	12291
30°	14367	12004	11595
35°	14054	11373	11147
40°	13423	10830	10501
45°	13014	10186	10051
50°	12534	9643	9578
55°	12100	9128	9155
60°	11493	8425	8587
65°	10798	7856	8051
70°	9757	7154	7469
75°	8647	6455	6917
80°	6846	5690	6356
85°	4724	4951	5832

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13014 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.8	2.5
10°-20°	596.3	7.2
20°-30°	895.7	10.8
30°-40°	1073.6	13.0
40°-50°	1125.5	13.6
50°-60°	1055.9	12.7
60°-70°	877.0	10.6
70°-80°	627.1	7.6
80°-90°	371.9	4.5
90°-100°	272.8	3.3
100°-110°	268.8	3.2
110°-120°	250.7	3.0
120°-130°	220.0	2.7
130°-140°	177.2	2.1
140°-150°	127.2	1.5
150°-160°	80.8	1.0
160°-170°	44.8	0.5
170°-180°	14.1	0.2
0°-30°	1700.9	20.5
0°-40°	2774.4	33.5
0°-60°	4955.8	59.8
0°-90°	6831.7	82.4
90°-120°	792.3	9.6
90°-150°	1316.6	15.9
90°-180°	1456.0	17.6
0°-180°	8288.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2204	2204	2204	2204	2204	
5°	2217	2213	2181	2192	2200	210
15°	2122	2110	2102	2117	2126	598
25°	1919	1936	1933	1955	1966	885
35°	1677	1683	1698	1748	1776	1041
45°	1361	1400	1442	1537	1546	1053
55°	1048	1082	1182	1278	1316	933
65°	713	767	891	1011	1040	703
75°	376	463	607	732	766	397
85°	92	203	355	474	519	102
90°	4	123	271	387	429	8
95°	10	129	271	382	422	11
105°	38	142	275	377	412	40
115°	68	154	269	358	394	67
125°	97	158	261	333	363	85
135°	112	152	242	301	326	87
145°	122	141	199	265	284	77
155°	134	141	163	205	232	62
165°	159	155	150	149	186	45
175°	176	169	151	125	76	16
180°	145	145	145	145	145	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2204.5	2204.5	2204.5	2204.5	2204.5
2.5°	2220.9	2203.4	2184.6	2212.7	2211.6
5°	2217.4	2212.7	2181.1	2191.6	2199.8
7.5°	2201.0	2189.3	2170.6	2196.3	2194.0
10°	2178.8	2164.7	2146.0	2161.2	2171.7
12.5°	2154.2	2142.5	2129.6	2146.0	2153.0
15°	2122.5	2109.7	2101.5	2116.7	2126.1
17.5°	2081.5	2078.0	2079.2	2080.4	2095.6
20°	2028.8	2031.2	2034.7	2055.8	2060.5
22.5°	1974.9	1987.8	1978.5	2011.3	2008.9
25°	1918.7	1936.3	1932.8	1955.0	1965.6
27.5°	1868.3	1869.5	1890.6	1922.2	1918.7
30°	1801.6	1821.5	1819.2	1857.8	1857.8
32.5°	1733.6	1762.9	1772.3	1806.3	1818.0
35°	1677.4	1683.3	1698.5	1747.7	1775.8
37.5°	1586.0	1614.2	1638.8	1703.2	1713.7
40°	1508.7	1536.8	1581.4	1656.3	1650.5
42.5°	1442.0	1471.3	1504.1	1590.7	1611.8
45°	1361.1	1399.8	1442.0	1536.8	1546.2
47.5°	1295.5	1326.0	1381.1	1467.7	1479.5
50°	1203.0	1252.2	1311.9	1412.7	1430.3
52.5°	1121.0	1163.2	1239.3	1343.6	1383.4
55°	1048.4	1082.4	1181.9	1278.0	1315.5
57.5°	959.4	1006.2	1110.5	1217.1	1251.0
60°	880.9	926.6	1027.3	1149.1	1176.1
62.5°	797.7	851.6	960.5	1078.8	1109.3
65°	713.4	767.3	891.4	1010.9	1040.2
67.5°	622.0	688.8	815.3	939.4	969.9
70°	536.5	609.1	745.0	869.2	899.6
72.5°	459.2	537.7	675.9	803.6	836.4
75°	376.0	462.7	606.8	732.1	766.1
77.5°	295.2	388.9	535.3	661.8	701.7
80°	216.7	319.8	473.2	595.1	637.2
82.5°	152.3	257.7	415.8	535.3	574.0
85°	92.5	202.6	354.9	474.4	518.9
87.5°	41.0	157.0	306.9	425.2	465.0
90°	3.5	123.0	270.6	386.6	428.7
92.5°	7.0	125.3	269.4	381.9	424.0
95°	10.5	128.9	270.6	381.9	421.7
97.5°	15.2	133.5	272.9	381.9	420.5
100°	22.3	135.9	274.1	381.9	420.5
102.5°	29.3	139.4	272.9	376.0	415.8
105°	37.5	141.7	275.3	377.2	412.3
107.5°	45.7	144.1	275.3	371.3	411.2
110°	53.9	147.6	272.9	367.8	406.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	60.9	151.1	271.8	360.8	398.3
115°	67.9	153.5	269.4	358.4	393.6
117.5°	75.0	154.6	268.2	352.6	386.6
120°	80.8	157.0	265.9	345.6	383.0
122.5°	87.9	158.1	262.4	338.5	376.0
125°	97.2	158.1	261.2	332.7	363.1
127.5°	101.9	159.3	256.5	325.6	357.3
130°	106.6	155.8	254.2	317.4	347.9
132.5°	110.1	154.6	248.3	309.2	336.2
135°	112.5	152.3	242.5	301.0	325.6
137.5°	116.0	148.8	234.3	295.2	318.6
140°	118.3	146.4	222.6	283.5	306.9
142.5°	120.7	142.9	210.8	272.9	295.2
145°	121.8	140.6	199.1	264.7	283.5
147.5°	125.3	137.1	192.1	254.2	270.6
150°	124.2	134.7	181.6	241.3	257.7
152.5°	127.7	138.2	172.2	223.7	247.2
155°	133.5	140.6	162.8	205.0	231.9
157.5°	139.4	145.3	155.8	188.6	220.2
160°	147.6	147.6	147.6	175.7	210.8
162.5°	152.3	152.3	148.8	160.5	198.0
165°	159.3	154.6	149.9	148.8	186.2
167.5°	166.3	157.0	152.3	144.1	178.0
170°	167.5	160.5	151.1	135.9	172.2
172.5°	172.2	164.0	149.9	128.9	133.5
175°	175.7	168.7	151.1	125.3	76.1
177.5°	174.5	168.7	154.6	125.3	73.8
180°	145.3	145.3	145.3	145.3	145.3



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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	17.29	18.61	17.90	19.24	19.96	19.80	21.12	20.41	21.75	22.47
	3H	18.72	19.92	19.34	20.56	21.31	22.17	23.37	22.79	24.01	24.76
	4H	19.19	20.33	19.83	20.98	21.74	23.28	24.42	23.92	25.07	25.84
	6H	19.45	20.51	20.11	21.17	21.95	24.40	25.46	25.05	26.12	26.89
	8H	19.51	20.52	20.17	21.20	21.98	24.94	25.96	25.61	26.64	27.42
	12H	19.52	20.49	20.20	21.17	21.98	25.53	26.50	26.20	27.18	27.99
4H	2H	18.16	19.30	18.81	19.95	20.71	20.15	21.29	20.79	21.94	22.70
	3H	19.81	20.78	20.47	21.47	22.25	22.72	23.69	23.38	24.38	25.16
	4H	20.40	21.29	21.07	21.98	22.79	24.00	24.89	24.68	25.58	26.39
	6H	20.77	21.55	21.47	22.27	23.09	25.29	26.07	25.98	26.79	27.61
	8H	20.86	21.60	21.56	22.31	23.15	25.93	26.67	26.63	27.38	28.22
	12H	20.91	21.57	21.63	22.31	23.15	26.62	27.29	27.35	28.03	28.87
8H	4H	21.02	21.76	21.72	22.47	23.30	24.16	24.89	24.85	25.60	26.44
	6H	21.56	22.18	22.29	22.93	23.77	25.59	26.21	26.32	26.96	27.80
	8H	21.73	22.28	22.47	23.04	23.89	26.36	26.91	27.10	27.67	28.52
	12H	21.83	22.33	22.57	23.07	23.99	27.21	27.70	27.95	28.45	29.36
12H	4H	21.18	21.84	21.90	22.58	23.42	24.15	24.81	24.87	25.55	26.39
	6H	21.80	22.36	22.54	23.12	23.97	25.61	26.17	26.35	26.92	27.78
	8H	22.05	22.54	22.79	23.29	24.20	26.43	26.92	27.17	27.67	28.58