

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: P893931

Luminaire Tested: 4MB-8HL-FLTU-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893931
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-8HL-FLTU-UNV-L840
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 400
Light Source: -
Ballast/Driver: -

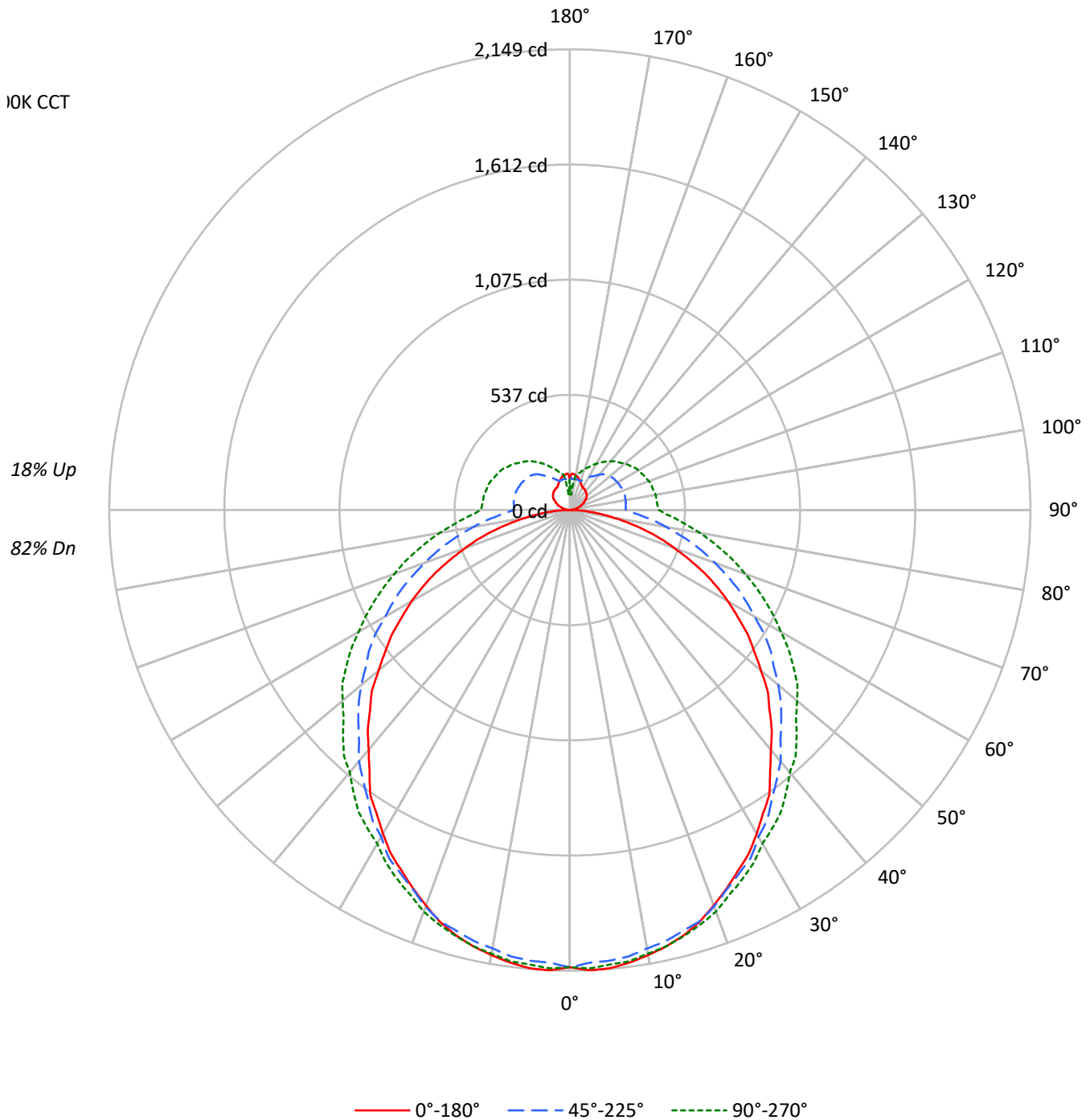
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8019.0 lumens
Efficiency: N/A
Efficacy: 138.5 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): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	69	69	66
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	57	57	54
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	48	48	45
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	41	41	38
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	35	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	31	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	27	27	25
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	24	24	22
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	22	22	20
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	20	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15176	15176	15176
5°	15254	14532	14506
10°	15090	13956	13843
15°	14918	13447	13212
20°	14585	12911	12585
25°	14226	12255	11892
30°	13901	11614	11219
35°	13599	11004	10786
40°	12988	10478	10160
45°	12593	9855	9725
50°	12128	9331	9266
55°	11708	8832	8857
60°	11120	8152	8308
65°	10447	7601	7790
70°	9441	6922	7227
75°	8366	6246	6692
80°	6625	5506	6150
85°	4571	4791	5644

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12593 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.0	2.5
10°-20°	576.9	7.2
20°-30°	866.7	10.8
30°-40°	1038.7	13.0
40°-50°	1089.0	13.6
50°-60°	1021.6	12.7
60°-70°	848.5	10.6
70°-80°	606.7	7.6
80°-90°	359.8	4.5
90°-100°	264.0	3.3
100°-110°	260.0	3.2
110°-120°	242.6	3.0
120°-130°	212.9	2.7
130°-140°	171.4	2.1
140°-150°	123.0	1.5
150°-160°	78.2	1.0
160°-170°	43.3	0.5
170°-180°	13.6	0.2
0°-30°	1645.6	20.5
0°-40°	2684.4	33.5
0°-60°	4795.0	59.8
0°-90°	6610.0	82.4
90°-120°	766.6	9.6
90°-150°	1273.9	15.9
90°-180°	1409.0	17.6
0°-180°	8019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2133	2133	2133	2133	2133	
5°	2146	2141	2110	2120	2128	203
15°	2054	2041	2033	2048	2057	578
25°	1856	1873	1870	1892	1902	857
35°	1623	1629	1643	1691	1718	1007
45°	1317	1354	1395	1487	1496	1019
55°	1014	1047	1144	1236	1273	902
65°	690	742	862	978	1006	680
75°	364	448	587	708	741	384
85°	90	196	343	459	502	98
90°	3	119	262	374	415	7
95°	10	125	262	370	408	11
105°	36	137	266	365	399	38
115°	66	148	261	347	381	65
125°	94	153	253	322	351	82
135°	109	147	235	291	315	84
145°	118	136	193	256	274	74
155°	129	136	158	198	224	60
165°	154	150	145	144	180	43
175°	170	163	146	121	74	16
180°	140	140	140	140	140	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2133.0	2133.0	2133.0	2133.0	2133.0
2.5°	2148.9	2131.9	2113.7	2140.9	2139.8
5°	2145.5	2140.9	2110.3	2120.5	2128.4
7.5°	2129.6	2118.2	2100.1	2125.0	2122.8
10°	2108.0	2094.4	2076.3	2091.0	2101.2
12.5°	2084.2	2072.9	2060.4	2076.3	2083.1
15°	2053.6	2041.2	2033.2	2048.0	2057.0
17.5°	2014.0	2010.6	2011.7	2012.8	2027.6
20°	1963.0	1965.2	1968.6	1989.0	1993.6
22.5°	1910.8	1923.3	1914.2	1946.0	1943.7
25°	1856.4	1873.4	1870.0	1891.6	1901.8
27.5°	1807.7	1808.8	1829.2	1859.8	1856.4
30°	1743.1	1762.4	1760.1	1797.5	1797.5
32.5°	1677.4	1705.7	1714.8	1747.6	1759.0
35°	1623.0	1628.6	1643.4	1691.0	1718.2
37.5°	1534.6	1561.8	1585.6	1647.9	1658.1
40°	1459.8	1487.0	1530.0	1602.6	1596.9
42.5°	1395.2	1423.5	1455.2	1539.1	1559.5
45°	1317.0	1354.4	1395.2	1487.0	1496.0
47.5°	1253.5	1283.0	1336.2	1420.1	1431.4
50°	1164.0	1211.6	1269.4	1366.8	1383.8
52.5°	1084.6	1125.4	1199.1	1300.0	1338.5
55°	1014.4	1047.2	1143.6	1236.5	1272.8
57.5°	928.2	973.6	1074.4	1177.6	1210.4
60°	852.3	896.5	994.0	1111.8	1137.9
62.5°	771.8	824.0	929.4	1043.8	1073.3
65°	690.2	742.4	862.5	978.1	1006.4
67.5°	601.8	666.4	788.8	909.0	938.4
70°	519.1	589.3	720.8	841.0	870.4
72.5°	444.3	520.2	653.9	777.5	809.2
75°	363.8	447.7	587.1	708.3	741.2
77.5°	285.6	376.3	517.9	640.3	678.9
80°	209.7	309.4	457.9	575.7	616.5
82.5°	147.3	249.3	402.3	517.9	555.3
85°	89.5	196.1	343.4	459.0	502.1
87.5°	39.7	151.9	296.9	411.4	449.9
90°	3.4	119.0	261.8	374.0	414.8
92.5°	6.8	121.3	260.7	369.5	410.3
95°	10.2	124.7	261.8	369.5	408.0
97.5°	14.7	129.2	264.1	369.5	406.9
100°	21.5	131.5	265.2	369.5	406.9
102.5°	28.3	134.9	264.1	363.8	402.3
105°	36.3	137.1	266.3	364.9	398.9
107.5°	44.2	139.4	266.3	359.3	397.8
110°	52.1	142.8	264.1	355.9	393.3



TEST NUMBER: P893931
 CATALOG NUMBER: 4MB-8HL-FLTU-UNV-L840

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	58.9	146.2	262.9	349.1	385.3
115°	65.7	148.5	260.7	346.8	380.8
117.5°	72.5	149.6	259.5	341.1	374.0
120°	78.2	151.9	257.3	334.3	370.6
122.5°	85.0	153.0	253.9	327.5	363.8
125°	94.1	153.0	252.7	321.9	351.3
127.5°	98.6	154.1	248.2	315.1	345.7
130°	103.1	150.7	245.9	307.1	336.6
132.5°	106.5	149.6	240.3	299.2	325.3
135°	108.8	147.3	234.6	291.3	315.1
137.5°	112.2	143.9	226.7	285.6	308.3
140°	114.5	141.7	215.3	274.3	296.9
142.5°	116.7	138.3	204.0	264.1	285.6
145°	117.9	136.0	192.7	256.1	274.3
147.5°	121.3	132.6	185.9	245.9	261.8
150°	120.1	130.3	175.7	233.5	249.3
152.5°	123.5	133.7	166.6	216.5	239.1
155°	129.2	136.0	157.5	198.3	224.4
157.5°	134.9	140.5	150.7	182.5	213.1
160°	142.8	142.8	142.8	170.0	204.0
162.5°	147.3	147.3	143.9	155.3	191.5
165°	154.1	149.6	145.1	143.9	180.2
167.5°	160.9	151.9	147.3	139.4	172.3
170°	162.1	155.3	146.2	131.5	166.6
172.5°	166.6	158.7	145.1	124.7	129.2
175°	170.0	163.2	146.2	121.3	73.7
177.5°	168.9	163.2	149.6	121.3	71.4
180°	140.5	140.5	140.5	140.5	140.5



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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	17.17	18.50	17.78	19.13	19.84	19.69	21.01	20.30	21.64	22.35
	3H	18.61	19.81	19.23	20.45	21.20	22.05	23.26	22.68	23.89	24.64
	4H	19.07	20.21	19.71	20.86	21.63	23.17	24.31	23.81	24.96	25.72
	6H	19.34	20.40	19.99	21.06	21.84	24.28	25.34	24.94	26.00	26.78
	8H	19.39	20.41	20.06	21.09	21.87	24.83	25.85	25.50	26.53	27.31
	12H	19.41	20.38	20.08	21.05	21.87	25.41	26.38	26.09	27.06	27.87
4H	2H	18.05	19.19	18.69	19.84	20.60	20.03	21.17	20.68	21.82	22.59
	3H	19.70	20.67	20.36	21.36	22.14	22.61	23.58	23.27	24.27	25.05
	4H	20.28	21.17	20.96	21.86	22.67	23.89	24.78	24.56	25.47	26.28
	6H	20.66	21.44	21.35	22.16	22.98	25.17	25.95	25.87	26.67	27.49
	8H	20.75	21.48	21.45	22.20	23.03	25.82	26.55	26.52	27.27	28.10
	12H	20.79	21.46	21.51	22.20	23.04	26.51	27.18	27.23	27.91	28.75
8H	4H	20.91	21.64	21.61	22.36	23.19	24.04	24.77	24.74	25.49	26.32
	6H	21.44	22.06	22.17	22.82	23.65	25.47	26.09	26.20	26.85	27.69
	8H	21.61	22.17	22.35	22.93	23.78	26.24	26.80	26.98	27.56	28.41
	12H	21.72	22.21	22.46	22.96	23.87	27.09	27.59	27.84	28.34	29.25
12H	4H	21.06	21.73	21.78	22.47	23.31	24.03	24.70	24.75	25.44	26.28
	6H	21.69	22.25	22.43	23.00	23.85	25.49	26.05	26.23	26.81	27.66
	8H	21.93	22.43	22.68	23.18	24.09	26.31	26.81	27.06	27.56	28.47