

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: P893980

Luminaire Tested: 4MB-8HL-RNDU-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-RNDU-UNV-L850
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 5
Light Source: -
Ballast/Driver: -

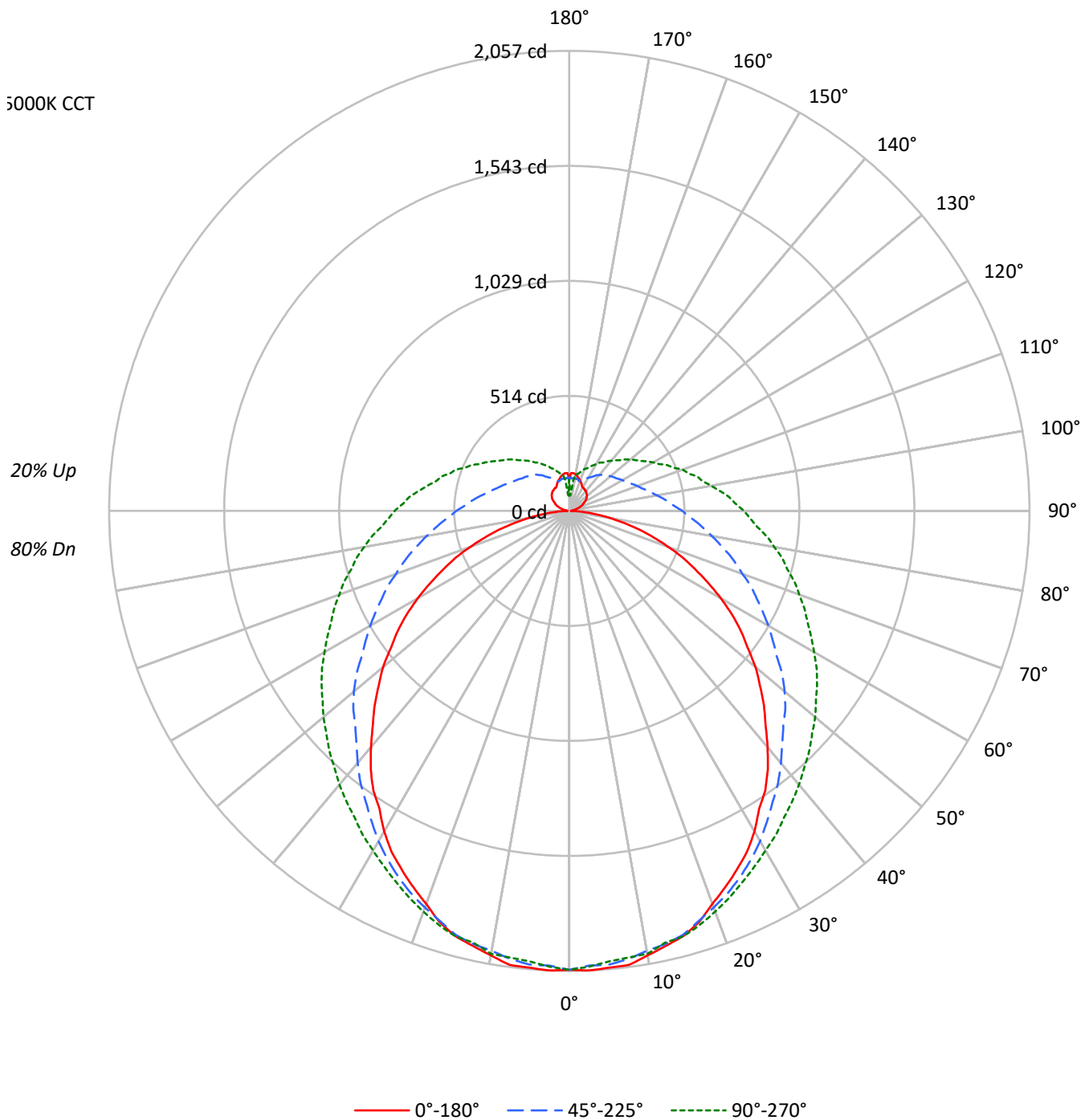
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8627.0 lumens
Efficiency: N/A
Efficacy: 149.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14601	14601	14601
5°	14574	14021	13783
10°	14444	13424	13248
15°	14299	12980	12650
20°	13892	12375	12034
25°	13572	11839	11454
30°	13198	11254	10945
35°	12790	10621	10505
40°	12264	10077	10166
45°	11764	9559	9863
50°	11324	9238	9607
55°	10810	8740	9409
60°	10197	8424	9226
65°	9433	8142	9088
70°	8579	7914	9082
75°	7469	7826	9109
80°	5873	7784	9285
85°	3871	7957	9494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11764 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.3	2.3
10°-20°	555.1	6.4
20°-30°	833.6	9.7
30°-40°	1001.0	11.6
40°-50°	1058.8	12.3
50°-60°	1020.4	11.8
60°-70°	905.2	10.5
70°-80°	742.4	8.6
80°-90°	574.6	6.7
90°-100°	448.3	5.2
100°-110°	356.9	4.1
110°-120°	285.2	3.3
120°-130°	224.9	2.6
130°-140°	171.7	2.0
140°-150°	120.7	1.4
150°-160°	77.2	0.9
160°-170°	43.2	0.5
170°-180°	13.7	0.2
0°-30°	1583.0	18.3
0°-40°	2583.9	30.0
0°-60°	4663.1	54.1
0°-90°	6885.3	79.8
90°-120°	1090.3	12.6
90°-150°	1607.6	18.6
90°-180°	1742.0	20.2
0°-180°	8627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2052	2052	2052	2052	2052	
5°	2050	2056	2036	2051	2022	195
15°	1968	1970	1963	1975	1970	553
25°	1771	1800	1806	1838	1832	816
35°	1526	1550	1586	1652	1673	952
45°	1230	1267	1353	1482	1517	949
55°	937	984	1132	1286	1352	836
65°	623	709	924	1116	1174	620
75°	325	467	736	934	1009	344
85°	76	285	570	776	845	86
90°	8	226	505	702	780	8
95°	10	187	446	642	717	10
105°	34	152	357	524	592	36
115°	67	148	296	428	483	64
125°	93	150	255	351	389	82
135°	109	146	228	297	320	85
145°	118	134	188	249	264	74
155°	131	138	155	195	218	60
165°	155	152	146	142	177	43
175°	170	164	146	119	76	16
180°	139	139	139	139	139	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2052.2	2052.2	2052.2	2052.2	2052.2
2.5°	2056.8	2063.6	2034.9	2052.2	2039.5
5°	2049.9	2055.6	2036.1	2051.0	2022.3
7.5°	2047.6	2045.3	2021.2	2040.7	2014.3
10°	2017.7	2025.8	1997.1	2023.5	2010.8
12.5°	1992.5	2008.5	1983.3	2004.0	1977.6
15°	1968.4	1969.5	1962.6	1975.3	1969.5
17.5°	1928.2	1938.5	1922.5	1951.2	1940.8
20°	1869.7	1901.8	1886.9	1913.3	1906.4
22.5°	1821.5	1837.5	1850.2	1880.0	1870.8
25°	1771.0	1799.7	1806.5	1837.5	1831.8
27.5°	1719.3	1731.9	1758.3	1791.6	1792.8
30°	1655.0	1668.8	1705.5	1743.4	1753.7
32.5°	1579.3	1622.9	1644.7	1702.1	1718.2
35°	1526.5	1549.5	1586.2	1651.6	1673.4
37.5°	1457.6	1484.0	1533.4	1610.3	1636.7
40°	1378.4	1417.5	1471.4	1566.7	1597.7
42.5°	1299.2	1345.2	1408.3	1519.6	1555.2
45°	1230.4	1267.1	1353.2	1481.7	1517.3
47.5°	1155.8	1200.5	1309.6	1432.4	1472.6
50°	1086.9	1132.8	1256.8	1386.5	1434.7
52.5°	1004.3	1057.1	1199.4	1333.7	1389.9
55°	936.6	983.6	1131.7	1285.5	1352.0
57.5°	862.0	914.8	1078.9	1249.9	1310.7
60°	781.6	848.2	1027.2	1205.1	1263.7
62.5°	702.4	781.6	974.4	1161.5	1218.9
65°	623.2	709.3	923.9	1115.6	1174.1
67.5°	552.1	645.0	878.0	1065.1	1137.4
70°	471.7	583.1	824.1	1018.0	1093.8
72.5°	396.0	526.8	780.5	980.2	1055.9
75°	324.8	467.1	735.7	934.3	1008.9
77.5°	253.7	410.9	688.6	892.9	974.4
80°	185.9	365.0	647.3	852.8	930.8
82.5°	128.5	324.8	607.2	819.5	892.9
85°	75.8	284.6	570.4	775.9	844.7
87.5°	34.4	252.5	532.6	742.6	810.3
90°	8.0	226.1	505.0	702.4	780.5
92.5°	8.0	205.4	471.7	672.6	743.7
95°	10.3	187.1	446.5	641.6	717.3
97.5°	13.8	173.3	423.5	612.9	679.5
100°	19.5	164.1	398.3	579.6	645.0
102.5°	26.4	157.2	375.3	549.8	610.6
105°	34.4	151.5	356.9	524.5	592.2
107.5°	42.5	149.2	338.6	500.4	557.8
110°	50.5	148.1	324.8	475.2	539.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	58.5	146.9	309.9	452.2	503.9
115°	66.6	148.1	296.1	428.1	483.2
117.5°	71.2	148.1	283.5	407.4	453.4
120°	78.0	149.2	274.3	385.6	433.8
122.5°	84.9	149.2	265.1	369.6	412.0
125°	93.0	150.4	254.8	351.2	389.1
127.5°	97.6	150.4	249.1	338.6	373.0
130°	102.1	149.2	241.0	322.5	358.1
132.5°	106.7	146.9	236.4	307.6	340.9
135°	109.0	145.8	228.4	297.3	320.2
137.5°	112.5	142.3	220.4	282.3	307.6
140°	115.9	141.2	208.9	270.9	292.7
142.5°	115.9	137.7	200.9	260.5	280.0
145°	118.2	134.3	188.2	249.1	264.0
147.5°	120.5	133.1	179.0	237.6	255.9
150°	120.5	132.0	171.0	225.0	242.2
152.5°	122.8	133.1	163.0	213.5	229.5
155°	130.8	137.7	154.9	195.1	218.1
157.5°	137.7	142.3	146.9	181.3	205.4
160°	143.5	145.8	140.0	167.6	199.7
162.5°	148.1	149.2	141.2	154.9	187.1
165°	154.9	151.5	145.8	142.3	176.8
167.5°	160.7	153.8	148.1	138.9	168.7
170°	165.3	158.4	145.8	130.8	165.3
172.5°	168.7	159.5	146.9	122.8	138.9
175°	169.9	164.1	145.8	119.4	75.8
177.5°	168.7	165.3	150.4	118.2	67.7
180°	138.9	138.9	138.9	138.9	138.9



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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	16.36	17.67	17.00	18.34	19.10	19.77	21.08	20.41	21.74	22.51
	3H	17.81	19.01	18.46	19.68	20.48	22.60	23.80	23.26	24.48	25.27
	4H	18.28	19.42	18.95	20.11	20.92	24.05	25.19	24.72	25.88	26.69
	6H	18.56	19.62	19.24	20.32	21.15	25.61	26.68	26.30	27.37	28.20
	8H	18.62	19.64	19.31	20.36	21.19	26.43	27.45	27.12	28.17	29.00
	12H	18.64	19.62	19.34	20.33	21.19	27.31	28.29	28.01	29.00	29.86
4H	2H	17.49	18.64	18.17	19.32	20.13	20.11	21.25	20.78	21.93	22.74
	3H	19.20	20.18	19.89	20.90	21.73	23.18	24.15	23.86	24.87	25.71
	4H	19.80	20.70	20.50	21.42	22.28	24.81	25.71	25.51	26.44	27.30
	6H	20.21	21.01	20.93	21.75	22.62	26.57	27.37	27.29	28.12	28.98
	8H	20.32	21.07	21.04	21.82	22.70	27.50	28.25	28.23	29.00	29.88
	12H	20.38	21.06	21.12	21.83	22.72	28.51	29.20	29.26	29.97	30.85
8H	4H	20.83	21.58	21.55	22.33	23.21	24.99	25.74	25.72	26.49	27.37
	6H	21.47	22.12	22.23	22.90	23.78	26.93	27.57	27.69	28.36	29.24
	8H	21.70	22.28	22.47	23.07	23.96	28.01	28.59	28.78	29.38	30.28
	12H	21.85	22.37	22.62	23.15	24.10	29.22	29.73	29.98	30.51	31.46
12H	4H	21.16	21.84	21.90	22.61	23.50	24.99	25.67	25.73	26.44	27.33
	6H	21.96	22.55	22.73	23.33	24.23	26.97	27.55	27.73	28.33	29.23
	8H	22.31	22.83	23.08	23.61	24.56	28.11	28.63	28.88	29.41	30.36