

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: P893979

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893979
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-L840
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 4
Light Source: -
Ballast/Driver: -

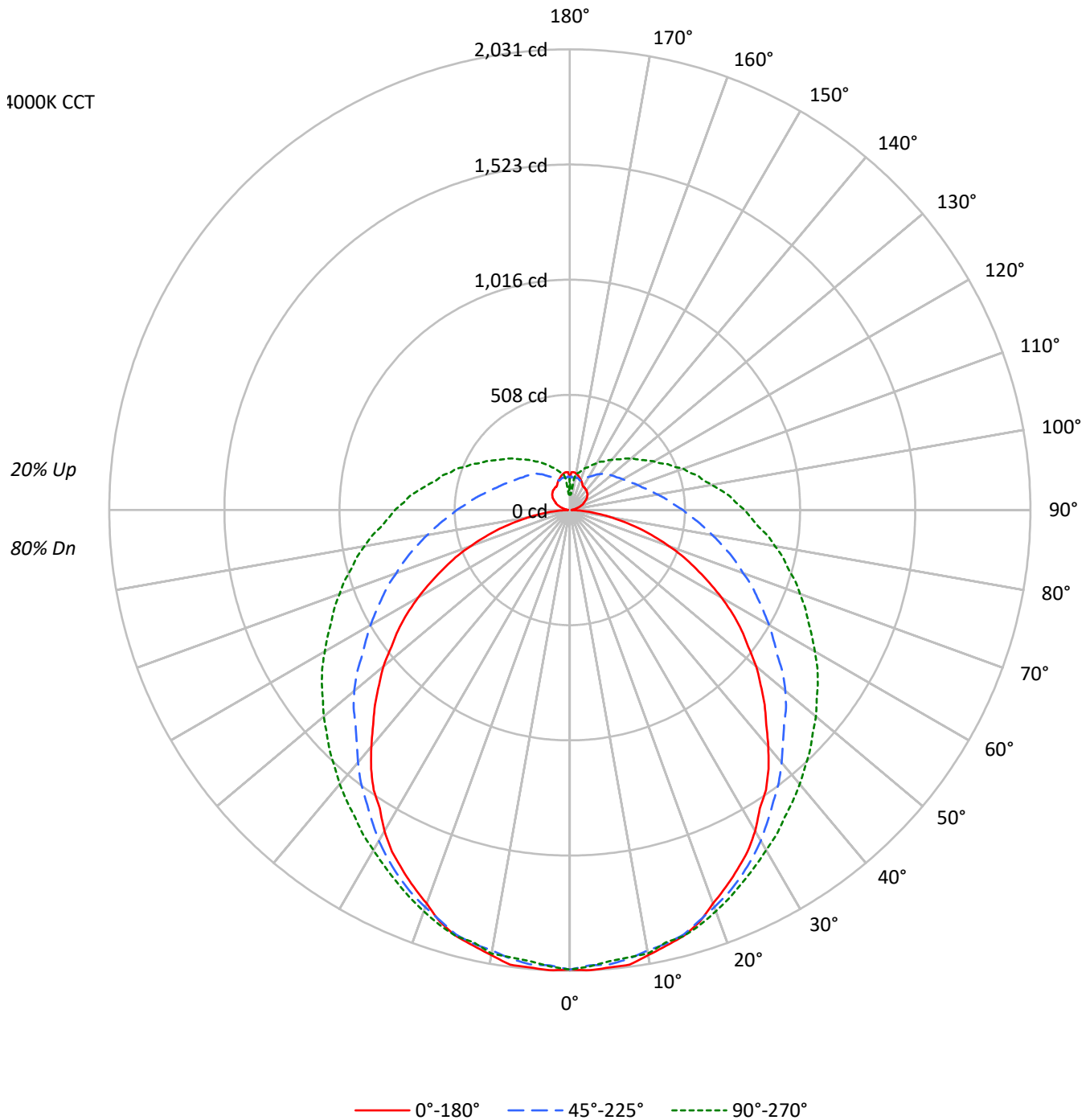
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8518.0 lumens
Efficiency: N/A
Efficacy: 147.1 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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CATALOG NUMBER: 4MB-8HL-RNDU-UNV-L840

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°	14416	14416	14416
5°	14390	13844	13609
10°	14261	13254	13080
15°	14118	12816	12490
20°	13716	12218	11882
25°	13400	11689	11310
30°	13031	11112	10807
35°	12628	10486	10372
40°	12109	9950	10037
45°	11615	9438	9738
50°	11182	9121	9486
55°	10673	8630	9290
60°	10068	8318	9109
65°	9313	8040	8973
70°	8471	7814	8967
75°	7375	7727	8993
80°	5800	7685	9168
85°	3820	7857	9375

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11615 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.8	2.3
10°-20°	548.1	6.4
20°-30°	823.0	9.7
30°-40°	988.3	11.6
40°-50°	1045.4	12.3
50°-60°	1007.4	11.8
60°-70°	893.8	10.5
70°-80°	733.0	8.6
80°-90°	567.3	6.7
90°-100°	442.6	5.2
100°-110°	352.4	4.1
110°-120°	281.6	3.3
120°-130°	222.1	2.6
130°-140°	169.5	2.0
140°-150°	119.2	1.4
150°-160°	76.2	0.9
160°-170°	42.7	0.5
170°-180°	13.5	0.2
0°-30°	1563.0	18.3
0°-40°	2551.3	30.0
0°-60°	4604.1	54.1
0°-90°	6798.2	79.8
90°-120°	1076.6	12.6
90°-150°	1587.4	18.6
90°-180°	1720.0	20.2
0°-180°	8518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2026	2026	2026	2026	2026	
5°	2024	2030	2010	2025	1997	193
15°	1944	1945	1938	1950	1945	546
25°	1749	1777	1784	1814	1809	805
35°	1507	1530	1566	1631	1652	940
45°	1215	1251	1336	1463	1498	937
55°	925	971	1117	1269	1335	825
65°	615	700	912	1102	1159	612
75°	321	461	726	922	996	339
85°	75	281	563	766	834	84
90°	8	223	499	694	771	8
95°	10	185	441	634	708	10
105°	34	150	352	518	585	36
115°	66	146	292	423	477	64
125°	92	148	252	347	384	81
135°	108	144	226	294	316	83
145°	117	133	186	246	261	73
155°	129	136	153	193	215	59
165°	153	150	144	140	174	43
175°	168	162	144	118	75	16
180°	137	137	137	137	137	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2026.2	2026.2	2026.2	2026.2	2026.2
2.5°	2030.8	2037.6	2009.2	2026.2	2013.8
5°	2024.0	2029.6	2010.4	2025.1	1996.8
7.5°	2021.7	2019.4	1995.6	2014.9	1988.8
10°	1992.2	2000.2	1971.8	1997.9	1985.4
12.5°	1967.3	1983.2	1958.2	1978.6	1952.6
15°	1943.5	1944.6	1937.8	1950.3	1944.6
17.5°	1903.8	1914.0	1898.2	1926.5	1916.3
20°	1846.0	1877.8	1863.0	1889.1	1882.3
22.5°	1798.5	1814.3	1826.8	1856.2	1847.2
25°	1748.6	1776.9	1783.7	1814.3	1808.7
27.5°	1697.6	1710.1	1736.1	1769.0	1770.1
30°	1634.1	1647.7	1684.0	1721.4	1731.6
32.5°	1559.3	1602.4	1623.9	1680.6	1696.5
35°	1507.2	1529.9	1566.1	1630.7	1652.3
37.5°	1439.2	1465.3	1514.0	1589.9	1616.0
40°	1361.0	1399.6	1452.8	1546.9	1577.5
42.5°	1282.8	1328.2	1390.5	1500.4	1535.5
45°	1214.8	1251.1	1336.1	1463.0	1498.1
47.5°	1141.2	1185.4	1293.0	1414.3	1453.9
50°	1073.2	1118.5	1240.9	1369.0	1416.6
52.5°	991.6	1043.7	1184.2	1316.8	1372.4
55°	924.7	971.2	1117.4	1269.2	1335.0
57.5°	851.1	903.2	1065.2	1234.1	1294.2
60°	771.7	837.5	1014.3	1189.9	1247.7
62.5°	693.5	771.7	962.1	1146.8	1203.5
65°	615.3	700.3	912.3	1101.5	1159.3
67.5°	545.1	636.9	866.9	1051.6	1123.0
70°	465.8	575.7	813.7	1005.2	1080.0
72.5°	391.0	520.2	770.6	967.8	1042.6
75°	320.7	461.2	726.4	922.5	996.1
77.5°	250.4	405.7	679.9	881.7	962.1
80°	183.6	360.4	639.1	842.0	919.1
82.5°	126.9	320.7	599.5	809.1	881.7
85°	74.8	281.0	563.2	766.1	834.1
87.5°	34.0	249.3	525.8	733.2	800.1
90°	7.9	223.2	498.6	693.5	770.6
92.5°	7.9	202.9	465.8	664.1	734.3
95°	10.2	184.7	440.8	633.5	708.3
97.5°	13.6	171.1	418.2	605.2	670.9
100°	19.3	162.1	393.2	572.3	636.9
102.5°	26.1	155.3	370.6	542.8	602.9
105°	34.0	149.6	352.4	517.9	584.8
107.5°	41.9	147.3	334.3	494.1	550.8
110°	49.9	146.2	320.7	469.2	532.6



TEST NUMBER: P893979
 CATALOG NUMBER: 4MB-8HL-RNDU-UNV-L840

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	57.8	145.1	306.0	446.5	497.5
115°	65.7	146.2	292.4	422.7	477.1
117.5°	70.3	146.2	279.9	402.3	447.6
120°	77.1	147.3	270.8	380.8	428.4
122.5°	83.9	147.3	261.8	364.9	406.8
125°	91.8	148.5	251.6	346.8	384.2
127.5°	96.3	148.5	245.9	334.3	368.3
130°	100.9	147.3	238.0	318.4	353.6
132.5°	105.4	145.1	233.4	303.7	336.6
135°	107.7	143.9	225.5	293.5	316.2
137.5°	111.1	140.5	217.6	278.8	303.7
140°	114.5	139.4	206.2	267.4	289.0
142.5°	114.5	136.0	198.3	257.2	276.5
145°	116.7	132.6	185.9	245.9	260.6
147.5°	119.0	131.5	176.8	234.6	252.7
150°	119.0	130.3	168.9	222.1	239.1
152.5°	121.3	131.5	160.9	210.8	226.6
155°	129.2	136.0	153.0	192.7	215.3
157.5°	136.0	140.5	145.1	179.1	202.9
160°	141.7	143.9	138.3	165.5	197.2
162.5°	146.2	147.3	139.4	153.0	184.7
165°	153.0	149.6	143.9	140.5	174.5
167.5°	158.7	151.9	146.2	137.1	166.6
170°	163.2	156.4	143.9	129.2	163.2
172.5°	166.6	157.5	145.1	121.3	137.1
175°	167.7	162.1	143.9	117.9	74.8
177.5°	166.6	163.2	148.5	116.7	66.9
180°	137.1	137.1	137.1	137.1	137.1



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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	16.31	17.63	16.95	18.29	19.06	19.72	21.04	20.36	21.70	22.47
	3H	17.77	18.97	18.42	19.64	20.44	22.56	23.76	23.21	24.43	25.23
	4H	18.24	19.38	18.91	20.06	20.87	24.01	25.15	24.68	25.83	26.64
	6H	18.52	19.58	19.20	20.27	21.10	25.57	26.63	26.25	27.33	28.15
	8H	18.58	19.60	19.27	20.31	21.14	26.39	27.41	27.08	28.12	28.95
	12H	18.59	19.57	19.30	20.28	21.14	27.27	28.24	27.97	28.95	29.81
4H	2H	17.45	18.59	18.12	19.28	20.09	20.06	21.20	20.74	21.89	22.70
	3H	19.16	20.13	19.84	20.85	21.69	23.13	24.11	23.82	24.83	25.66
	4H	19.75	20.66	20.46	21.38	22.24	24.77	25.67	25.47	26.39	27.25
	6H	20.16	20.96	20.88	21.71	22.58	26.53	27.33	27.25	28.07	28.94
	8H	20.28	21.03	21.00	21.77	22.65	27.46	28.21	28.18	28.96	29.84
	12H	20.33	21.02	21.08	21.79	22.67	28.47	29.15	29.21	29.92	30.81
8H	4H	20.78	21.54	21.51	22.28	23.16	24.95	25.70	25.67	26.45	27.33
	6H	21.43	22.07	22.18	22.86	23.74	26.89	27.53	27.64	28.31	29.20
	8H	21.66	22.24	22.42	23.02	23.92	27.97	28.55	28.73	29.34	30.23
	12H	21.81	22.33	22.57	23.10	24.06	29.17	29.69	29.94	30.47	31.42
12H	4H	21.11	21.80	21.86	22.57	23.45	24.94	25.63	25.69	26.40	27.28
	6H	21.92	22.50	22.68	23.29	24.18	26.92	27.50	27.68	28.29	29.18
	8H	22.27	22.79	23.04	23.57	24.52	28.07	28.59	28.83	29.36	30.31