

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: P893971

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893971
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-RND-UNV-L840
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

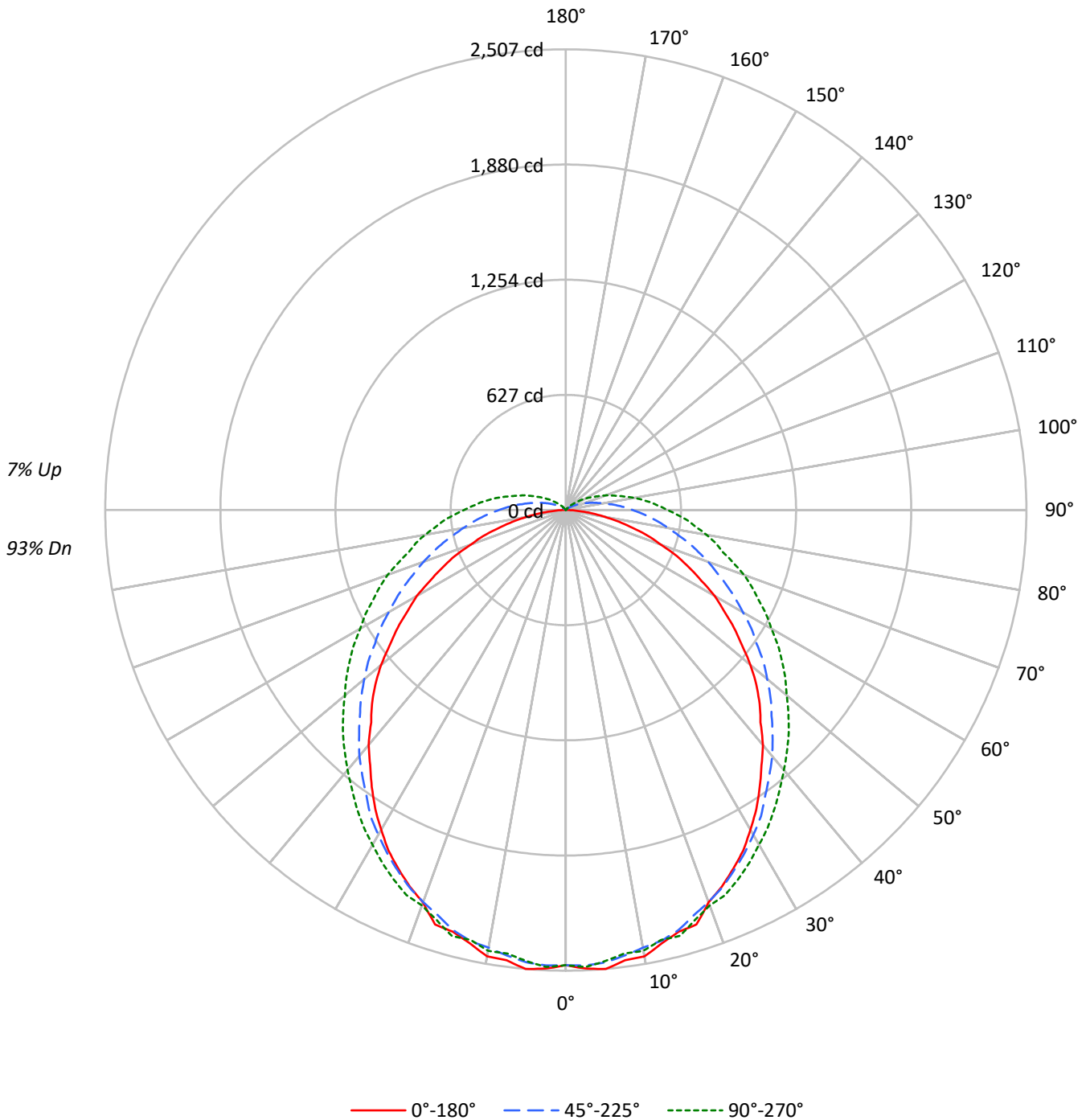
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8160.0 lumens
Efficiency: N/A
Efficacy: 140.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: 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				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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	63	60
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17626	17626	17626
5°	17904	17645	17596
10°	17816	17472	17595
15°	17496	17438	17672
20°	17204	17187	17333
25°	16922	16992	17411
30°	16508	16768	17280
35°	15985	16448	17216
40°	15504	16231	17157
45°	15018	15941	17265
50°	14526	15843	17374
55°	13861	15730	17825
60°	13321	15837	18384
65°	12440	16255	19499
70°	11433	17162	21477
75°	10375	19004	24332
80°	8916	23216	31898
85°	7217	37560	54581

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 99076 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.9	2.9
10°-20°	668.6	8.2
20°-30°	1002.0	12.3
30°-40°	1190.7	14.6
40°-50°	1232.7	15.1
50°-60°	1142.3	14.0
60°-70°	951.0	11.7
70°-80°	705.9	8.7
80°-90°	466.9	5.7
90°-100°	284.1	3.5
100°-110°	159.3	2.0
110°-120°	78.4	1.0
120°-130°	31.9	0.4
130°-140°	9.2	0.1
140°-150°	1.3	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1905.5	23.4
0°-40°	3096.2	37.9
0°-60°	5471.2	67.0
0°-90°	7595.0	93.1
90°-120°	521.8	6.4
90°-150°	564.3	6.9
90°-180°	565.0	6.9
0°-180°	8160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2477	2477	2477	2477	2477	
5°	2507	2480	2470	2483	2464	237
15°	2375	2366	2367	2371	2399	673
25°	2156	2153	2164	2206	2218	992
35°	1840	1854	1894	1954	1982	1152
45°	1492	1514	1584	1683	1716	1150
55°	1117	1165	1268	1395	1437	999
65°	739	808	966	1107	1158	734
75°	377	492	691	840	885	404
85°	88	248	460	623	669	99
90°	4	161	364	509	554	7
95°	1	100	282	420	467	1
105°	1	33	153	260	296	1
115°	1	8	71	143	171	1
125°	1	2	26	66	84	1
135°	2	1	7	22	30	1
145°	2	1	0	2	3	1
155°	2	2	0	0	0	1
165°	3	2	0	0	0	1
175°	3	2	0	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2477.3	2477.3	2477.3	2477.3	2477.3
2.5°	2497.7	2485.2	2480.7	2475.0	2488.6
5°	2506.8	2479.6	2470.5	2483.0	2463.7
7.5°	2471.6	2464.8	2445.6	2452.4	2434.2
10°	2466.0	2428.6	2418.4	2441.0	2435.4
12.5°	2415.0	2383.2	2401.4	2417.2	2395.7
15°	2375.3	2366.2	2367.4	2370.8	2399.1
17.5°	2365.1	2324.3	2313.0	2341.3	2339.0
20°	2272.2	2264.3	2269.9	2307.3	2289.2
22.5°	2217.8	2192.9	2223.5	2259.7	2267.7
25°	2155.5	2153.2	2164.5	2206.5	2217.8
27.5°	2089.7	2075.0	2105.6	2154.3	2163.4
30°	2009.3	2003.6	2041.0	2082.9	2103.3
32.5°	1929.9	1933.3	1976.4	2011.5	2046.7
35°	1840.4	1854.0	1893.7	1953.7	1982.1
37.5°	1749.8	1766.8	1820.0	1889.1	1912.9
40°	1669.3	1672.7	1747.5	1817.7	1847.2
42.5°	1568.4	1602.4	1665.9	1758.8	1781.5
45°	1492.5	1514.0	1584.3	1682.9	1715.8
47.5°	1406.4	1431.3	1511.8	1608.1	1643.2
50°	1312.3	1335.0	1431.3	1541.2	1569.6
52.5°	1208.1	1254.5	1355.4	1468.7	1506.1
55°	1117.4	1165.0	1268.1	1395.0	1437.0
57.5°	1019.9	1067.5	1196.7	1314.6	1369.0
60°	936.1	981.4	1112.9	1259.1	1291.9
62.5°	831.8	896.4	1039.2	1183.1	1229.6
65°	738.9	808.0	965.5	1107.2	1158.2
67.5°	653.9	725.3	889.6	1041.5	1097.0
70°	549.6	643.7	825.0	974.6	1032.4
72.5°	472.6	566.6	755.9	904.3	956.5
75°	377.4	491.8	691.3	839.7	885.1
77.5°	298.0	421.6	624.4	791.0	836.3
80°	217.6	358.1	566.6	726.4	778.5
82.5°	148.5	299.2	513.4	666.4	716.2
85°	88.4	248.2	460.1	623.3	668.6
87.5°	38.5	202.9	411.4	561.0	607.4
90°	4.5	160.9	363.8	508.8	554.2
92.5°	1.1	129.2	321.8	462.4	506.6
95°	1.1	99.7	282.2	420.4	466.9
97.5°	1.1	77.1	242.5	377.4	421.6
100°	1.1	58.9	209.7	332.0	379.6
102.5°	1.1	44.2	177.9	294.6	335.4
105°	1.1	32.9	153.0	259.5	295.8
107.5°	1.1	23.8	128.1	226.7	262.9
110°	1.1	17.0	107.7	196.1	232.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	12.5	87.3	168.9	199.5
115°	1.1	7.9	71.4	142.8	171.1
117.5°	1.1	5.7	56.7	120.1	147.3
120°	1.1	4.5	45.3	99.7	123.5
122.5°	1.1	3.4	35.1	81.6	104.3
125°	1.1	2.3	26.1	65.7	83.9
127.5°	1.1	2.3	19.3	52.1	68.0
130°	1.1	1.1	13.6	39.7	53.3
132.5°	1.1	1.1	9.1	29.5	39.7
135°	2.3	1.1	6.8	21.5	29.5
137.5°	2.3	1.1	4.5	14.7	20.4
140°	2.3	1.1	2.3	9.1	12.5
142.5°	2.3	1.1	1.1	4.5	6.8
145°	2.3	1.1	0.0	2.3	3.4
147.5°	2.3	1.1	0.0	1.1	1.1
150°	2.3	1.1	0.0	0.0	0.0
152.5°	2.3	1.1	0.0	0.0	0.0
155°	2.3	2.3	0.0	0.0	0.0
157.5°	2.3	2.3	0.0	0.0	0.0
160°	2.3	2.3	0.0	0.0	0.0
162.5°	2.3	2.3	0.0	0.0	0.0
165°	3.4	2.3	0.0	0.0	0.0
167.5°	3.4	2.3	0.0	0.0	0.0
170°	3.4	2.3	0.0	0.0	0.0
172.5°	3.4	2.3	0.0	0.0	0.0
175°	3.4	2.3	0.0	0.0	0.0
177.5°	3.4	2.3	0.0	0.0	0.0
180°	1.1	1.1	1.1	1.1	1.1



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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	20.20	21.74	20.67	22.19	22.67	21.77	23.31	22.24	23.76	24.25
	3H	21.96	23.37	22.44	23.83	24.35	24.36	25.76	24.84	26.23	26.75
	4H	22.62	23.95	23.12	24.43	24.97	25.62	26.95	26.12	27.43	27.97
	6H	23.10	24.34	23.61	24.83	25.39	27.00	28.24	27.51	28.73	29.29
	8H	23.25	24.43	23.77	24.95	25.51	27.73	28.92	28.25	29.44	29.99
	12H	23.34	24.48	23.88	25.00	25.59	28.57	29.71	29.10	30.22	30.81
4H	2H	21.15	22.48	21.66	22.97	23.50	22.34	23.67	22.85	24.16	24.69
	3H	23.19	24.33	23.71	24.86	25.42	25.21	26.35	25.73	26.87	27.43
	4H	24.01	25.05	24.54	25.58	26.18	26.69	27.73	27.22	28.27	28.86
	6H	24.66	25.58	25.21	26.14	26.75	28.31	29.23	28.86	29.79	30.40
	8H	24.88	25.75	25.44	26.31	26.93	29.17	30.03	29.73	30.59	31.21
	12H	25.05	25.84	25.63	26.43	27.05	30.16	30.94	30.74	31.53	32.16
8H	4H	24.86	25.72	25.41	26.28	26.90	27.06	27.93	27.62	28.49	29.11
	6H	25.78	26.52	26.37	27.12	27.74	28.94	29.67	29.53	30.28	30.90
	8H	26.16	26.83	26.77	27.44	28.08	30.00	30.66	30.60	31.28	31.92
	12H	26.48	27.08	27.09	27.68	28.38	31.26	31.85	31.86	32.45	33.16
12H	4H	25.12	25.91	25.70	26.50	27.12	27.10	27.89	27.69	28.48	29.11
	6H	26.20	26.87	26.81	27.48	28.12	29.05	29.72	29.65	30.33	30.97
	8H	26.74	27.34	27.35	27.94	28.64	30.22	30.82	30.83	31.42	32.12