

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: P893874

Luminaire Tested: 4MB-7HL-RND-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893874
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-7HL-RND-UNV-L835
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

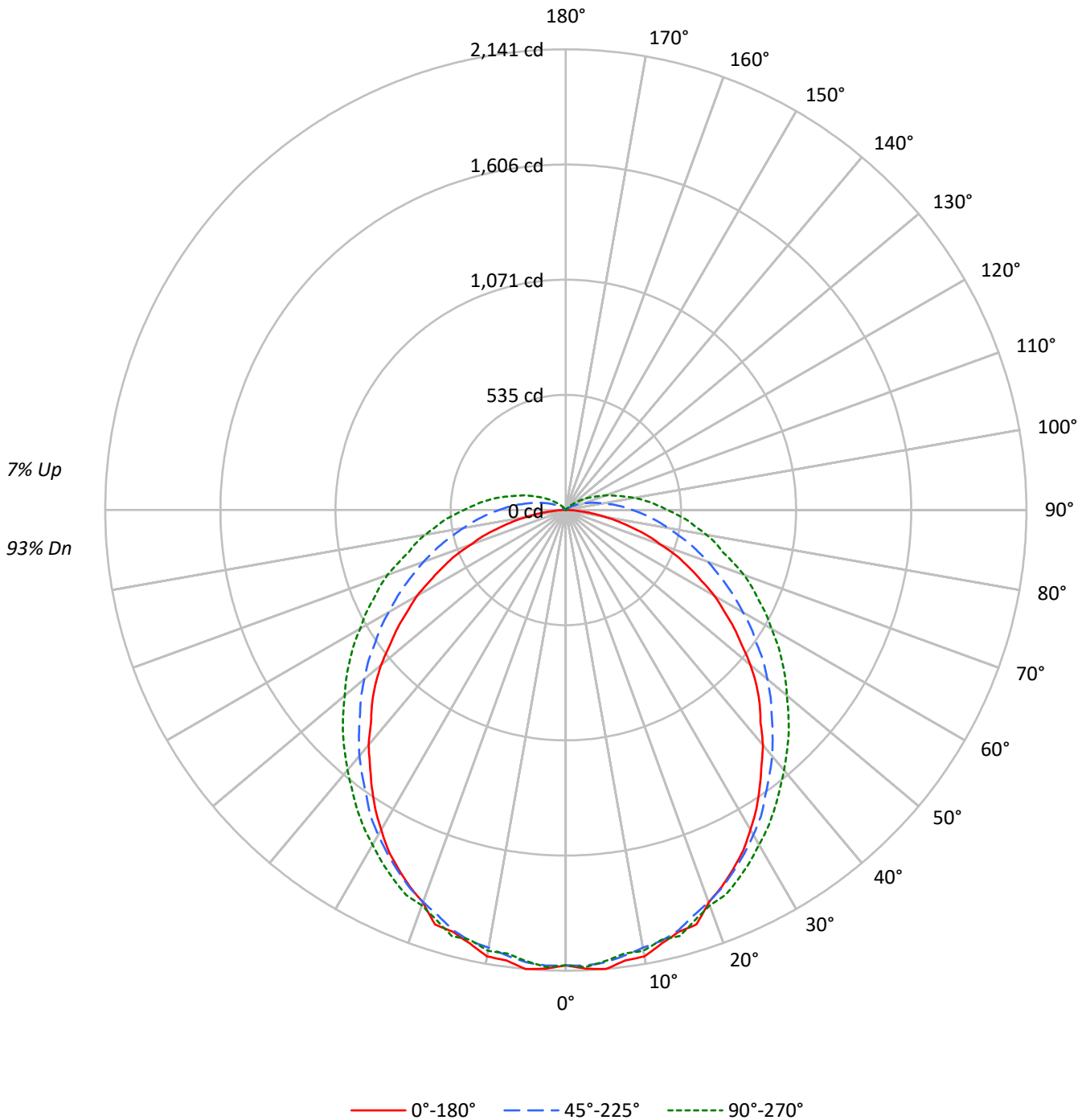
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6970.1 lumens
Efficiency: N/A
Efficacy: 134.6 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): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893874
CATALOG NUMBER: 4MB-7HL-RND-UNV-L835

Luminous Intensity Polar Plot





TEST NUMBER: P893874

CATALOG NUMBER: 4MB-7HL-RND-UNV-L835

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°	15055	15055	15055
5°	15293	15071	15030
10°	15218	14924	15029
15°	14945	14895	15094
20°	14695	14681	14805
25°	14454	14515	14872
30°	14101	14323	14760
35°	13654	14049	14705
40°	13244	13863	14655
45°	12827	13617	14746
50°	12407	13533	14840
55°	11839	13437	15225
60°	11378	13527	15703
65°	10625	13884	16655
70°	9767	14660	18344
75°	8860	16233	20783
80°	7617	19831	27247
85°	6163	32083	46622

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 84624 cd/sqm



TEST NUMBER: P893874
 CATALOG NUMBER: 4MB-7HL-RND-UNV-L835

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.6	2.9
10°-20°	571.1	8.2
20°-30°	855.9	12.3
30°-40°	1017.0	14.6
40°-50°	1052.9	15.1
50°-60°	975.8	14.0
60°-70°	812.3	11.7
70°-80°	602.9	8.7
80°-90°	398.8	5.7
90°-100°	242.7	3.5
100°-110°	136.1	2.0
110°-120°	67.0	1.0
120°-130°	27.3	0.4
130°-140°	7.9	0.1
140°-150°	1.1	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1627.6	23.4
0°-40°	2644.6	37.9
0°-60°	4673.3	67.0
0°-90°	6487.4	93.1
90°-120°	445.7	6.4
90°-150°	482.0	6.9
90°-180°	483.0	6.9
0°-180°	6970.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2116	2116	2116	2116	2116	
5°	2141	2118	2110	2121	2104	202
15°	2029	2021	2022	2025	2049	575
25°	1841	1839	1849	1885	1894	847
35°	1572	1584	1618	1669	1693	984
45°	1275	1293	1353	1438	1466	982
55°	954	995	1083	1192	1227	854
65°	631	690	825	946	989	627
75°	322	420	590	717	756	345
85°	76	212	393	532	571	85
90°	4	138	311	435	473	6
95°	1	85	241	359	399	1
105°	1	28	131	222	253	1
115°	1	7	61	122	146	1
125°	1	2	22	56	72	1
135°	2	1	6	18	25	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	



TEST NUMBER: P893874

CATALOG NUMBER: 4MB-7HL-RND-UNV-L835

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2116.0	2116.0	2116.0	2116.0	2116.0
2.5°	2133.5	2122.8	2118.9	2114.1	2125.7
5°	2141.2	2118.0	2110.2	2120.9	2104.4
7.5°	2111.2	2105.4	2088.9	2094.7	2079.2
10°	2106.4	2074.4	2065.7	2085.1	2080.2
12.5°	2062.8	2035.7	2051.2	2064.7	2046.3
15°	2028.9	2021.2	2022.1	2025.0	2049.2
17.5°	2020.2	1985.4	1975.7	1999.9	1997.9
20°	1940.8	1934.1	1938.9	1970.8	1955.3
22.5°	1894.4	1873.1	1899.2	1930.2	1937.0
25°	1841.1	1839.2	1848.9	1884.7	1894.4
27.5°	1785.0	1772.4	1798.5	1840.2	1847.9
30°	1716.3	1711.4	1743.4	1779.2	1796.6
32.5°	1648.5	1651.4	1688.2	1718.2	1748.2
35°	1572.0	1583.6	1617.5	1668.8	1693.0
37.5°	1494.6	1509.1	1554.6	1613.6	1634.0
40°	1425.9	1428.8	1492.6	1552.7	1577.8
42.5°	1339.7	1368.7	1423.0	1502.3	1521.7
45°	1274.8	1293.2	1353.3	1437.5	1465.5
47.5°	1201.3	1222.6	1291.3	1373.6	1403.6
50°	1120.9	1140.3	1222.6	1316.5	1340.7
52.5°	1031.9	1071.6	1157.7	1254.5	1286.5
55°	954.4	995.1	1083.2	1191.6	1227.4
57.5°	871.2	911.8	1022.2	1122.9	1169.3
60°	799.6	838.3	950.6	1075.4	1103.5
62.5°	710.5	765.7	887.6	1010.6	1050.3
65°	631.1	690.2	824.7	945.7	989.3
67.5°	558.5	619.5	759.9	889.6	937.0
70°	469.5	549.8	704.7	832.5	881.8
72.5°	403.7	484.0	645.7	772.5	817.0
75°	322.3	420.1	590.5	717.3	756.0
77.5°	254.6	360.1	533.4	675.7	714.4
80°	185.9	305.9	484.0	620.5	665.0
82.5°	126.8	255.6	438.5	569.2	611.8
85°	75.5	212.0	393.0	532.4	571.1
87.5°	32.9	173.3	351.4	479.2	518.8
90°	3.9	137.5	310.7	434.6	473.3
92.5°	1.0	110.4	274.9	394.9	432.7
95°	1.0	85.2	241.0	359.1	398.8
97.5°	1.0	65.8	207.2	322.3	360.1
100°	1.0	50.3	179.1	283.6	324.3
102.5°	1.0	37.8	152.0	251.7	286.5
105°	1.0	28.1	130.7	221.7	252.6
107.5°	1.0	20.3	109.4	193.6	224.6
110°	1.0	14.5	92.0	167.5	198.4



TEST NUMBER: P893874

CATALOG NUMBER: 4MB-7HL-RND-UNV-L835

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	10.6	74.5	144.2	170.4
115°	1.0	6.8	61.0	122.0	146.2
117.5°	1.0	4.8	48.4	102.6	125.8
120°	1.0	3.9	38.7	85.2	105.5
122.5°	1.0	2.9	30.0	69.7	89.1
125°	1.0	1.9	22.3	56.1	71.6
127.5°	1.0	1.9	16.5	44.5	58.1
130°	1.0	1.0	11.6	33.9	45.5
132.5°	1.0	1.0	7.7	25.2	33.9
135°	1.9	1.0	5.8	18.4	25.2
137.5°	1.9	1.0	3.9	12.6	17.4
140°	1.9	1.0	1.9	7.7	10.6
142.5°	1.9	1.0	1.0	3.9	5.8
145°	1.9	1.0	0.0	1.9	2.9
147.5°	1.9	1.0	0.0	1.0	1.0
150°	1.9	1.0	0.0	0.0	0.0
152.5°	1.9	1.0	0.0	0.0	0.0
155°	1.9	1.9	0.0	0.0	0.0
157.5°	1.9	1.9	0.0	0.0	0.0
160°	1.9	1.9	0.0	0.0	0.0
162.5°	1.9	1.9	0.0	0.0	0.0
165°	2.9	1.9	0.0	0.0	0.0
167.5°	2.9	1.9	0.0	0.0	0.0
170°	2.9	1.9	0.0	0.0	0.0
172.5°	2.9	1.9	0.0	0.0	0.0
175°	2.9	1.9	0.0	0.0	0.0
177.5°	2.9	1.9	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0



TEST NUMBER: P893874
 CATALOG NUMBER: 4MB-7HL-RND-UNV-L835

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	19.65	21.19	20.12	21.64	22.13	21.22	22.76	21.69	23.22	23.70
	3H	21.41	22.82	21.90	23.28	23.81	23.81	25.21	24.29	25.68	26.20
	4H	22.07	23.40	22.57	23.88	24.42	25.07	26.40	25.57	26.88	27.42
	6H	22.55	23.79	23.06	24.28	24.84	26.45	27.69	26.96	28.19	28.74
	8H	22.70	23.89	23.23	24.41	24.97	27.18	28.37	27.71	28.89	29.45
	12H	22.80	23.94	23.33	24.45	25.04	28.02	29.16	28.56	29.68	30.27
4H	2H	20.61	21.94	21.11	22.42	22.96	21.80	23.13	22.30	23.61	24.15
	3H	22.65	23.78	23.16	24.31	24.87	24.66	25.80	25.18	26.33	26.89
	4H	23.46	24.50	23.99	25.04	25.63	26.14	27.18	26.68	27.72	28.31
	6H	24.11	25.03	24.66	25.59	26.20	27.76	28.68	28.32	29.24	29.85
	8H	24.34	25.20	24.90	25.76	26.38	28.62	29.48	29.18	30.05	30.66
	12H	24.51	25.29	25.09	25.88	26.51	29.61	30.40	30.19	30.99	31.61
8H	4H	24.31	25.17	24.87	25.74	26.35	26.51	27.38	27.07	27.94	28.56
	6H	25.23	25.97	25.82	26.57	27.20	28.39	29.13	28.98	29.73	30.36
	8H	25.61	26.28	26.22	26.89	27.53	29.45	30.12	30.06	30.73	31.37
	12H	25.94	26.53	26.54	27.13	27.84	30.71	31.30	31.31	31.91	32.61
12H	4H	24.57	25.36	25.15	25.95	26.57	26.56	27.34	27.14	27.93	28.56
	6H	25.66	26.32	26.26	26.94	27.57	28.50	29.17	29.11	29.78	30.42
	8H	26.20	26.79	26.80	27.39	28.10	29.68	30.27	30.28	30.87	31.58