

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: P893883

Luminaire Tested: 4MB-7HL-RNDU-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893883
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-7HL-RNDU-UNV-L840
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 4
Light Source: -
Ballast/Driver: -

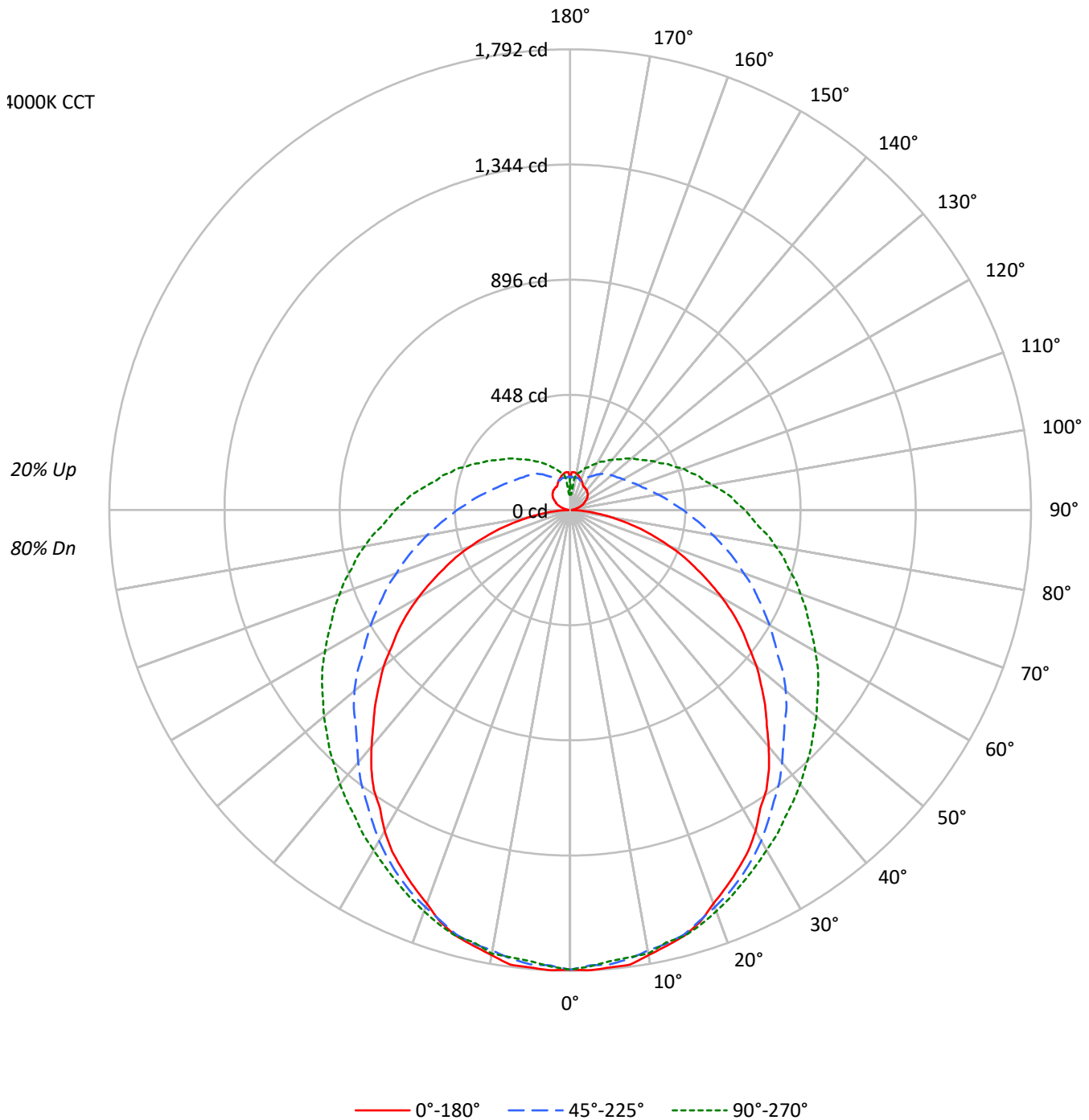
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7516.1 lumens
Efficiency: N/A
Efficacy: 145.1 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): 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

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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
RCR																				
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80		
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	61		
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	49		
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	41		
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	34		
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	29		
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	26		
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	23		
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	20		
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	18		
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	16		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12721	12721	12721
5°	12697	12216	12008
10°	12584	11695	11542
15°	12457	11309	11021
20°	12103	10781	10485
25°	11824	10314	9979
30°	11499	9805	9536
35°	11143	9253	9152
40°	10685	8779	8856
45°	10249	8327	8593
50°	9866	8048	8370
55°	9417	7614	8197
60°	8885	7339	8038
65°	8219	7094	7918
70°	7475	6895	7912
75°	6508	6819	7935
80°	5118	6782	8089
85°	3371	6933	8273

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10249 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.3	2.3
10°-20°	483.6	6.4
20°-30°	726.2	9.7
30°-40°	872.1	11.6
40°-50°	922.4	12.3
50°-60°	888.9	11.8
60°-70°	788.6	10.5
70°-80°	646.8	8.6
80°-90°	500.6	6.7
90°-100°	390.6	5.2
100°-110°	310.9	4.1
110°-120°	248.5	3.3
120°-130°	196.0	2.6
130°-140°	149.6	2.0
140°-150°	105.2	1.4
150°-160°	67.2	0.9
160°-170°	37.7	0.5
170°-180°	11.9	0.2
0°-30°	1379.1	18.3
0°-40°	2251.2	30.0
0°-60°	4062.5	54.1
0°-90°	5998.5	79.8
90°-120°	950.0	12.6
90°-150°	1400.7	18.6
90°-180°	1518.0	20.2
0°-180°	7516.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1788	1788	1788	1788	1788	
5°	1786	1791	1774	1787	1762	170
15°	1715	1716	1710	1721	1716	482
25°	1543	1568	1574	1601	1596	711
35°	1330	1350	1382	1439	1458	829
45°	1072	1104	1179	1291	1322	827
55°	816	857	986	1120	1178	728
65°	543	618	805	972	1023	540
75°	283	407	641	814	879	299
85°	66	248	497	676	736	75
90°	7	197	440	612	680	7
95°	9	163	389	559	625	9
105°	30	132	311	457	516	32
115°	58	129	258	373	421	56
125°	81	131	222	306	339	71
135°	95	127	199	259	279	74
145°	103	117	164	217	230	65
155°	114	120	135	170	190	52
165°	135	132	127	124	154	38
175°	148	143	127	104	66	14
180°	121	121	121	121	121	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1787.9	1787.9	1787.9	1787.9	1787.9
2.5°	1791.9	1797.9	1772.9	1787.9	1776.9
5°	1785.9	1790.9	1773.9	1786.9	1761.9
7.5°	1783.9	1781.9	1760.9	1777.9	1754.9
10°	1757.9	1764.9	1739.9	1762.9	1751.9
12.5°	1735.9	1749.9	1727.9	1745.9	1722.9
15°	1714.9	1715.9	1709.9	1720.9	1715.9
17.5°	1679.9	1688.9	1674.9	1699.9	1690.9
20°	1628.9	1656.9	1643.9	1666.9	1660.9
22.5°	1586.9	1600.9	1611.9	1637.9	1629.9
25°	1542.9	1567.9	1573.9	1600.9	1595.9
27.5°	1497.9	1508.9	1531.9	1560.9	1561.9
30°	1441.9	1453.9	1485.9	1518.9	1527.9
32.5°	1375.9	1413.9	1432.9	1482.9	1496.9
35°	1329.9	1349.9	1381.9	1438.9	1457.9
37.5°	1269.9	1292.9	1335.9	1402.9	1425.9
40°	1200.9	1234.9	1281.9	1364.9	1391.9
42.5°	1131.9	1171.9	1226.9	1323.9	1354.9
45°	1071.9	1103.9	1178.9	1290.9	1321.9
47.5°	1006.9	1045.9	1140.9	1247.9	1282.9
50°	946.9	986.9	1094.9	1207.9	1249.9
52.5°	874.9	920.9	1044.9	1161.9	1210.9
55°	815.9	856.9	985.9	1119.9	1177.9
57.5°	751.0	796.9	939.9	1088.9	1141.9
60°	681.0	739.0	894.9	1049.9	1100.9
62.5°	612.0	681.0	848.9	1011.9	1061.9
65°	543.0	618.0	804.9	971.9	1022.9
67.5°	481.0	562.0	764.9	927.9	990.9
70°	411.0	508.0	718.0	886.9	952.9
72.5°	345.0	459.0	680.0	853.9	919.9
75°	283.0	407.0	641.0	813.9	878.9
77.5°	221.0	358.0	600.0	777.9	848.9
80°	162.0	318.0	564.0	743.0	810.9
82.5°	112.0	283.0	529.0	714.0	777.9
85°	66.0	248.0	497.0	676.0	736.0
87.5°	30.0	220.0	464.0	647.0	706.0
90°	7.0	197.0	440.0	612.0	680.0
92.5°	7.0	179.0	411.0	586.0	648.0
95°	9.0	163.0	389.0	559.0	625.0
97.5°	12.0	151.0	369.0	534.0	592.0
100°	17.0	143.0	347.0	505.0	562.0
102.5°	23.0	137.0	327.0	479.0	532.0
105°	30.0	132.0	311.0	457.0	516.0
107.5°	37.0	130.0	295.0	436.0	486.0
110°	44.0	129.0	283.0	414.0	470.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	51.0	128.0	270.0	394.0	439.0
115°	58.0	129.0	258.0	373.0	421.0
117.5°	62.0	129.0	247.0	355.0	395.0
120°	68.0	130.0	239.0	336.0	378.0
122.5°	74.0	130.0	231.0	322.0	359.0
125°	81.0	131.0	222.0	306.0	339.0
127.5°	85.0	131.0	217.0	295.0	325.0
130°	89.0	130.0	210.0	281.0	312.0
132.5°	93.0	128.0	206.0	268.0	297.0
135°	95.0	127.0	199.0	259.0	279.0
137.5°	98.0	124.0	192.0	246.0	268.0
140°	101.0	123.0	182.0	236.0	255.0
142.5°	101.0	120.0	175.0	227.0	244.0
145°	103.0	117.0	164.0	217.0	230.0
147.5°	105.0	116.0	156.0	207.0	223.0
150°	105.0	115.0	149.0	196.0	211.0
152.5°	107.0	116.0	142.0	186.0	200.0
155°	114.0	120.0	135.0	170.0	190.0
157.5°	120.0	124.0	128.0	158.0	179.0
160°	125.0	127.0	122.0	146.0	174.0
162.5°	129.0	130.0	123.0	135.0	163.0
165°	135.0	132.0	127.0	124.0	154.0
167.5°	140.0	134.0	129.0	121.0	147.0
170°	144.0	138.0	127.0	114.0	144.0
172.5°	147.0	139.0	128.0	107.0	121.0
175°	148.0	143.0	127.0	104.0	66.0
177.5°	147.0	144.0	131.0	103.0	59.0
180°	121.0	121.0	121.0	121.0	121.0



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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	15.88	17.19	16.52	17.86	18.62	19.29	20.60	19.93	21.27	22.03
	3H	17.33	18.53	17.98	19.20	20.00	22.12	23.32	22.78	24.00	24.80
	4H	17.80	18.94	18.47	19.63	20.44	23.57	24.71	24.24	25.40	26.21
	6H	18.08	19.15	18.77	19.84	20.67	25.13	26.20	25.82	26.89	27.72
	8H	18.14	19.16	18.84	19.88	20.71	25.95	26.97	26.64	27.69	28.52
	12H	18.16	19.14	18.86	19.85	20.71	26.83	27.81	27.53	28.52	29.38
4H	2H	17.02	18.16	17.69	18.84	19.65	19.63	20.77	20.30	21.45	22.26
	3H	18.72	19.70	19.41	20.42	21.25	22.70	23.68	23.38	24.40	25.23
	4H	19.32	20.22	20.02	20.95	21.80	24.33	25.23	25.03	25.96	26.82
	6H	19.73	20.53	20.45	21.28	22.14	26.09	26.89	26.81	27.64	28.50
	8H	19.84	20.59	20.56	21.34	22.22	27.02	27.78	27.75	28.52	29.40
	12H	19.90	20.58	20.64	21.35	22.24	28.03	28.72	28.78	29.49	30.37
8H	4H	20.35	21.10	21.07	21.85	22.73	24.51	25.27	25.24	26.01	26.89
	6H	21.00	21.64	21.75	22.42	23.30	26.45	27.10	27.21	27.88	28.76
	8H	21.22	21.80	21.99	22.59	23.48	27.54	28.12	28.30	28.90	29.80
	12H	21.37	21.89	22.14	22.67	23.62	28.74	29.26	29.50	30.03	30.99
12H	4H	20.68	21.37	21.42	22.13	23.02	24.51	25.20	25.25	25.96	26.85
	6H	21.49	22.07	22.25	22.85	23.75	26.49	27.07	27.25	27.85	28.75
	8H	21.83	22.35	22.60	23.13	24.08	27.63	28.15	28.40	28.93	29.88