

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: P894136

Luminaire Tested: 4MB-SC3-ASMF-UNV-CC83-HI-4000K

Issue Date: 11/11/2024

**Test Information**

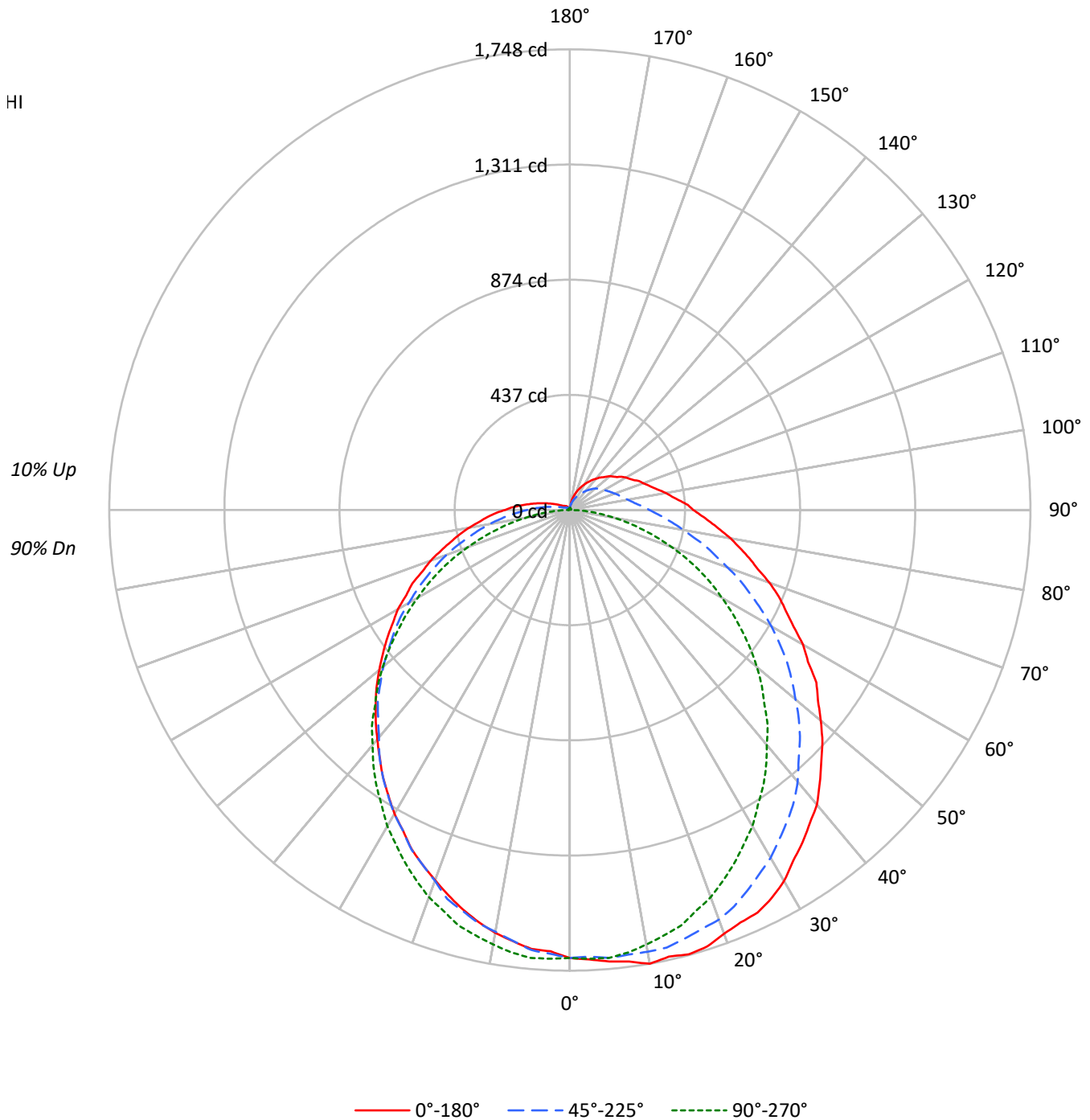
Test Method: LM-79-2019  
Report Number: P894136  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-185-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASMF-UNV-CC83-HI-4000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 80CRI, 4000K CCT, 1 lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5843.9 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')  
CIE Type: Direct  
  
Input Watts (W): 50.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.39961257980444  
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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	93	93	93	90
1	105	99	95	90	101	96	92	88	90	87	83	85	82	79	79	77	75	75	75	75	72
2	95	86	79	72	91	83	76	71	78	72	68	73	69	65	69	65	62	62	62	62	59
3	86	75	66	60	83	73	65	58	68	62	56	64	59	54	60	56	52	52	52	52	49
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	44	44	44	44	42
5	72	59	50	43	69	57	49	42	54	47	41	51	45	40	48	43	38	38	38	38	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	34	34	34	31
7	62	48	39	33	59	47	38	32	44	37	32	42	36	31	40	34	30	30	30	30	28
8	57	44	35	29	55	43	35	29	41	33	28	39	32	27	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22
10	50	37	29	24	49	36	29	23	34	28	23	33	27	22	31	26	22	22	22	22	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	17311	17311	17311	17311	17311
5°	17528	16912	16748	16618	17043
10°	17979	16559	15988	15815	16755
15°	18243	16209	15278	15154	16404
20°	18332	15874	14470	14364	16018
25°	18664	15363	13620	13709	15728
30°	18778	14872	12810	12998	15372
35°	18734	14336	11961	12314	15043
40°	18902	13782	11089	11543	14719
45°	18846	13126	10230	10958	14538
50°	18989	12452	9404	10285	14420
55°	19410	11866	8456	9613	14369
60°	19735	11138	7487	8897	14561
65°	20416	10349	6503	8186	14889
70°	22085	9597	5331	7507	15399
75°	24816	9049	4077	6718	16462
80°	30843	8520	2730	6022	19334
85°	46110	8406	1370	5303	27109

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 151815 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.3	2.8
10°-20°	462.2	7.9
20°-30°	697.0	11.9
30°-40°	836.6	14.3
40°-50°	871.1	14.9
50°-60°	807.5	13.8
60°-70°	665.0	11.4
70°-80°	479.7	8.2
80°-90°	304.5	5.2
90°-100°	187.7	3.2
100°-110°	125.2	2.1
110°-120°	89.1	1.5
120°-130°	65.3	1.1
130°-140°	44.9	0.8
140°-150°	27.3	0.5
150°-160°	13.5	0.2
160°-170°	5.0	0.1
170°-180°	0.8	0.0
0°-30°	1320.5	22.6
0°-40°	2157.1	36.9
0°-60°	3835.7	65.6
0°-90°	5285.0	90.4
90°-120°	402.0	6.9
90°-150°	539.6	9.2
90°-180°	559.0	9.6
0°-180°	5843.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1700	1700	1700	1700	1700	
5°	1719	1706	1706	1676	1672	165
15°	1745	1684	1632	1574	1569	492
25°	1685	1594	1478	1422	1420	775
35°	1540	1440	1279	1237	1237	965
45°	1350	1235	1044	1031	1041	1044
55°	1142	1007	796	816	846	1015
65°	904	756	542	598	660	901
75°	705	535	286	397	467	747
85°	536	364	75	230	315	455
90°	468	303	7	163	246	258
95°	417	256	4	110	190	332
105°	327	201	4	45	99	349
115°	269	166	5	21	48	269
125°	218	138	6	17	27	199
135°	175	110	6	13	20	137
145°	134	78	6	9	14	85
155°	92	52	7	6	9	43
165°	54	30	7	4	5	16
175°	8	13	8	3	1	1
180°	5	5	5	5	5	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1699.8	1699.8	1699.8	1699.8	1699.8	1699.8	1699.8	1699.8	1699.8
2.5°	1706.6	1711.7	1695.5	1705.7	1704.0	1705.7	1685.3	1702.3	1676.0
5°	1719.3	1721.9	1705.7	1711.7	1705.7	1691.3	1676.0	1670.0	1671.7
7.5°	1727.8	1741.4	1701.5	1703.2	1693.0	1677.7	1648.8	1653.9	1650.5
10°	1748.2	1732.9	1701.5	1693.8	1674.3	1658.1	1625.0	1627.5	1629.2
12.5°	1735.5	1732.1	1700.6	1672.6	1653.0	1639.4	1605.4	1596.9	1601.2
15°	1744.8	1730.4	1683.6	1661.5	1631.8	1608.0	1574.0	1568.0	1568.9
17.5°	1736.3	1724.4	1666.6	1636.0	1594.4	1579.9	1547.6	1537.4	1532.3
20°	1710.8	1704.9	1653.9	1601.2	1563.8	1535.7	1496.6	1490.7	1494.9
22.5°	1693.8	1679.4	1628.4	1575.7	1521.3	1496.6	1457.6	1456.7	1457.6
25°	1685.3	1666.6	1593.5	1538.3	1478.0	1455.9	1421.9	1409.1	1420.2
27.5°	1659.8	1642.8	1557.0	1496.6	1429.5	1399.8	1371.7	1369.2	1370.9
30°	1625.8	1592.7	1523.8	1449.9	1385.3	1354.7	1331.8	1314.8	1330.9
32.5°	1577.4	1558.7	1480.5	1399.8	1328.4	1307.1	1284.2	1282.5	1282.5
35°	1540.0	1526.4	1439.7	1355.6	1279.1	1250.2	1236.6	1230.6	1236.6
37.5°	1496.6	1476.3	1396.4	1302.0	1223.8	1199.2	1185.6	1180.5	1184.7
40°	1459.3	1421.9	1345.4	1246.8	1163.5	1141.4	1126.9	1132.0	1136.3
42.5°	1404.0	1382.8	1285.0	1190.7	1111.7	1087.9	1076.0	1080.2	1090.4
45°	1349.6	1330.1	1234.9	1132.0	1044.5	1031.8	1030.9	1028.4	1041.1
47.5°	1300.3	1272.3	1179.6	1074.3	988.4	974.0	975.7	984.2	995.2
50°	1243.4	1210.2	1118.4	1012.2	926.4	917.0	923.8	929.8	944.2
52.5°	1186.4	1160.1	1062.4	953.6	863.5	856.7	866.0	885.6	894.1
55°	1142.2	1094.7	1007.1	884.7	796.3	797.2	815.9	826.9	845.6
57.5°	1071.7	1036.0	944.2	823.5	733.5	739.4	764.9	783.6	795.5
60°	1021.6	976.5	883.0	758.1	667.2	676.5	705.4	733.5	753.8
62.5°	957.0	917.9	819.3	693.5	606.0	619.6	651.9	685.0	699.5
65°	904.3	860.1	756.4	628.9	542.2	558.4	598.3	635.7	659.5
67.5°	859.2	813.3	700.3	569.4	477.6	501.4	548.2	584.7	603.4
70°	805.7	752.1	636.6	503.1	410.5	438.5	498.0	540.5	561.8
72.5°	748.7	705.4	581.3	441.9	348.5	382.4	447.9	492.1	512.5
75°	704.6	656.1	534.6	380.7	285.6	326.4	396.9	447.0	467.4
77.5°	659.5	615.3	481.9	324.7	229.5	275.4	351.9	407.1	428.3
80°	619.6	568.6	437.7	278.8	170.8	225.2	309.4	363.8	388.4
82.5°	575.4	531.2	399.4	230.3	121.5	179.3	267.7	327.2	347.6
85°	536.3	490.4	363.8	192.1	74.8	138.5	229.5	290.7	315.3
87.5°	500.6	462.3	330.6	163.2	37.4	105.4	192.9	255.0	283.0
90°	468.3	424.9	302.6	136.8	6.8	76.5	163.2	224.4	245.6
92.5°	447.9	396.0	279.6	119.8	4.2	54.4	136.0	196.3	221.0
95°	417.3	371.4	255.8	107.1	4.2	36.5	109.6	168.3	189.5
97.5°	390.9	348.5	238.8	99.4	3.4	24.6	90.1	141.1	163.2
100°	370.6	330.6	223.5	92.6	4.2	17.8	71.4	119.8	139.4
102.5°	347.6	311.1	211.6	88.4	4.2	12.7	56.1	101.1	119.0
105°	327.2	294.9	200.6	84.1	4.2	11.0	45.0	83.3	99.4
107.5°	311.9	277.9	191.2	81.6	4.2	11.0	35.7	68.0	81.6
110°	296.6	264.3	181.9	79.0	4.2	10.2	28.0	56.1	68.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	286.4	251.6	173.4	76.5	5.1	10.2	22.9	46.7	56.1
115°	268.6	240.5	165.7	75.6	5.1	9.3	21.2	38.2	47.6
117.5°	255.8	230.3	158.1	73.1	5.1	9.3	20.4	31.4	38.2
120°	246.5	218.4	151.3	70.5	5.1	8.5	18.7	28.0	32.3
122.5°	234.6	207.4	145.3	68.8	5.1	8.5	17.8	26.3	28.9
125°	218.4	197.2	138.5	65.4	5.9	8.5	17.0	24.6	27.2
127.5°	208.2	187.8	133.4	61.2	5.9	7.6	16.1	22.9	25.5
130°	199.7	177.6	127.5	56.9	5.9	7.6	15.3	21.2	23.8
132.5°	187.0	167.4	119.0	53.5	5.9	6.8	13.6	19.5	22.1
135°	175.1	158.9	110.5	50.1	5.9	6.8	12.7	18.7	20.4
137.5°	167.4	150.4	102.8	46.7	5.9	5.9	11.9	17.0	18.7
140°	154.7	141.1	94.3	43.3	5.9	5.9	11.0	16.1	17.0
142.5°	145.3	131.7	86.7	39.9	5.9	5.9	10.2	14.4	16.1
145°	134.3	122.4	78.2	36.5	5.9	5.1	9.3	13.6	14.4
147.5°	124.1	111.3	71.4	34.0	5.9	5.1	8.5	11.9	12.7
150°	113.9	100.3	64.6	31.4	5.9	5.1	7.6	10.2	11.9
152.5°	102.8	86.7	57.8	28.9	5.9	5.1	6.8	9.3	10.2
155°	91.8	75.6	51.8	26.3	6.8	5.1	5.9	7.6	9.3
157.5°	82.4	65.4	45.9	23.8	6.8	4.2	5.9	6.8	7.6
160°	71.4	56.1	40.8	21.2	6.8	4.2	5.1	5.9	6.8
162.5°	62.9	46.7	35.7	19.5	6.8	4.2	5.1	5.1	5.9
165°	53.5	39.1	29.7	17.8	6.8	4.2	4.2	4.2	5.1
167.5°	43.3	30.6	24.6	16.1	6.8	4.2	4.2	3.4	4.2
170°	32.3	22.9	20.4	14.4	6.8	4.2	3.4	2.5	3.4
172.5°	14.4	17.8	16.1	12.7	7.6	4.2	3.4	2.5	1.7
175°	7.6	12.7	12.7	11.0	7.6	4.2	3.4	2.5	0.8
177.5°	5.9	7.6	9.3	9.3	7.6	5.1	3.4	1.7	0.8
180°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1



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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	20.27	21.75	20.78	22.25	22.79	19.24	20.72	19.75	21.22	21.76
	3H	22.36	23.70	22.88	24.22	24.80	21.11	22.46	21.63	22.97	23.55
	4H	23.30	24.58	23.84	25.10	25.70	21.86	23.14	22.40	23.66	24.26
	6H	24.22	25.41	24.77	25.95	26.56	22.49	23.68	23.04	24.22	24.83
	8H	24.65	25.79	25.21	26.35	26.97	22.75	23.89	23.31	24.45	25.07
	12H	25.07	26.16	25.64	26.72	27.37	22.98	24.07	23.55	24.63	25.27
4H	2H	20.76	22.04	21.30	22.57	23.16	19.81	21.08	20.35	21.61	22.21
	3H	23.08	24.17	23.63	24.73	25.35	21.86	22.95	22.42	23.52	24.14
	4H	24.19	25.19	24.76	25.76	26.41	22.72	23.71	23.29	24.29	24.94
	6H	25.30	26.17	25.89	26.78	27.44	23.47	24.35	24.06	24.96	25.62
	8H	25.82	26.65	26.42	27.25	27.93	23.79	24.61	24.39	25.22	25.89
	12H	26.35	27.10	26.97	27.73	28.41	24.08	24.83	24.70	25.46	26.14
8H	4H	24.45	25.27	25.04	25.88	26.55	23.06	23.88	23.65	24.49	25.16
	6H	25.73	26.43	26.36	27.07	27.76	23.94	24.64	24.57	25.29	25.97
	8H	26.40	27.03	27.04	27.68	28.38	24.34	24.97	24.98	25.62	26.32
	12H	27.10	27.67	27.74	28.31	29.07	24.73	25.29	25.37	25.93	26.69
12H	4H	24.47	25.22	25.08	25.85	26.53	23.12	23.87	23.74	24.50	25.18
	6H	25.79	26.42	26.43	27.07	27.76	24.05	24.68	24.69	25.34	26.03
	8H	26.53	27.09	27.17	27.73	28.49	24.51	25.08	25.16	25.72	26.48