

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: P894146

Luminaire Tested: 4MB-SC3-ASMF-UNV-CC93-HI-5000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894146
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-CC93-HI-5000K
Description: Selectable 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 5000K CCT, 1 lumen setting
Light Source: -
Ballast/Driver: -

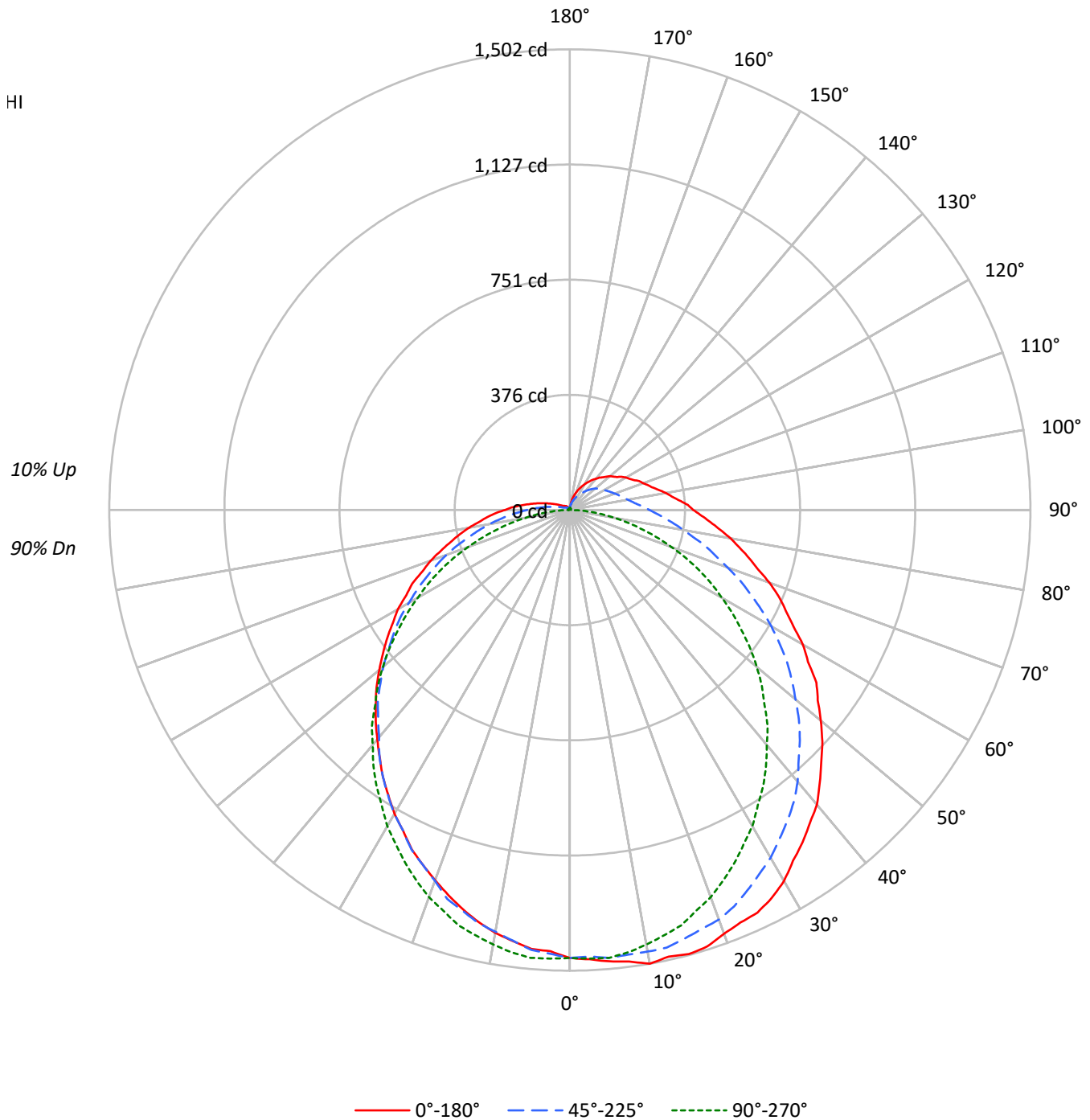
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5021.0 lumens
Efficiency: N/A
Efficacy: 99.0 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 (Ain): 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

TEST NUMBER: P894146
CATALOG NUMBER: 4MB-SC3-ASMF-UNV-CC93-HI-5000K

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	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°	14873	14873	14873	14873	14873
5°	15060	14531	14390	14277	14643
10°	15447	14227	13736	13587	14396
15°	15674	13927	13127	13020	14093
20°	15750	13638	12432	12342	13763
25°	16036	13200	11701	11778	13513
30°	16135	12777	11006	11167	13208
35°	16096	12318	10276	10579	12924
40°	16239	11840	9527	9918	12646
45°	16193	11278	8789	9415	12491
50°	16315	10698	8079	8837	12389
55°	16677	10195	7265	8260	12346
60°	16955	9570	6432	7645	12512
65°	17540	8892	5588	7034	12792
70°	18974	8244	4580	6450	13231
75°	21318	7774	3502	5772	14144
80°	26498	7321	2347	5174	16611
85°	39619	7220	1178	4556	23291

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 130419 cd/sqm



TEST NUMBER: P894146

CATALOG NUMBER: 4MB-SC3-ASMF-UNV-CC93-HI-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.6	2.8
10°-20°	397.1	7.9
20°-30°	598.8	11.9
30°-40°	718.8	14.3
40°-50°	748.4	14.9
50°-60°	693.8	13.8
60°-70°	571.4	11.4
70°-80°	412.2	8.2
80°-90°	261.6	5.2
90°-100°	161.3	3.2
100°-110°	107.6	2.1
110°-120°	76.6	1.5
120°-130°	56.1	1.1
130°-140°	38.6	0.8
140°-150°	23.5	0.5
150°-160°	11.6	0.2
160°-170°	4.3	0.1
170°-180°	0.7	0.0
0°-30°	1134.6	22.6
0°-40°	1853.3	36.9
0°-60°	3295.6	65.6
0°-90°	4540.7	90.4
90°-120°	345.5	6.9
90°-150°	463.7	9.2
90°-180°	480.0	9.6
0°-180°	5021.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1460	1460	1460	1460	1460	
5°	1477	1466	1466	1440	1436	142
15°	1499	1446	1402	1352	1348	423
25°	1448	1369	1270	1222	1220	666
35°	1323	1237	1099	1062	1062	829
45°	1160	1061	897	886	894	897
55°	981	865	684	701	726	872
65°	777	650	466	514	567	774
75°	605	459	245	341	402	641
85°	461	312	64	197	271	391
90°	402	260	6	140	211	222
95°	358	220	4	94	163	285
105°	281	172	4	39	85	300
115°	231	142	4	18	41	231
125°	188	119	5	15	23	171
135°	150	95	5	11	18	118
145°	115	67	5	8	12	73
155°	79	44	6	5	8	37
165°	46	26	6	4	4	13
175°	7	11	7	3	1	1
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4	1460.4
2.5°	1466.2	1470.6	1456.7	1465.5	1464.0	1465.5	1448.0	1462.6	1439.9
5°	1477.2	1479.4	1465.5	1470.6	1465.5	1453.1	1439.9	1434.8	1436.3
7.5°	1484.5	1496.2	1461.9	1463.3	1454.6	1441.4	1416.6	1421.0	1418.0
10°	1502.0	1488.9	1461.9	1455.3	1438.5	1424.6	1396.1	1398.3	1399.8
12.5°	1491.1	1488.1	1461.1	1437.0	1420.2	1408.6	1379.3	1372.0	1375.7
15°	1499.1	1486.7	1446.5	1427.5	1402.0	1381.5	1352.3	1347.2	1347.9
17.5°	1491.8	1481.6	1431.9	1405.6	1369.9	1357.4	1329.7	1320.9	1316.5
20°	1469.9	1464.8	1421.0	1375.7	1343.6	1319.5	1285.9	1280.8	1284.4
22.5°	1455.3	1442.9	1399.1	1353.8	1307.1	1285.9	1252.3	1251.6	1252.3
25°	1448.0	1431.9	1369.1	1321.7	1269.8	1250.8	1221.6	1210.7	1220.2
27.5°	1426.1	1411.5	1337.7	1285.9	1228.2	1202.6	1178.5	1176.3	1177.8
30°	1396.9	1368.4	1309.2	1245.7	1190.2	1163.9	1144.2	1129.6	1143.5
32.5°	1355.2	1339.2	1272.0	1202.6	1141.3	1123.0	1103.3	1101.9	1101.9
35°	1323.1	1311.4	1237.0	1164.7	1098.9	1074.1	1062.4	1057.3	1062.4
37.5°	1285.9	1268.4	1199.7	1118.7	1051.5	1030.3	1018.6	1014.2	1017.9
40°	1253.7	1221.6	1155.9	1071.2	999.6	980.7	968.2	972.6	976.3
42.5°	1206.3	1188.0	1104.1	1023.0	955.1	934.7	924.4	928.1	936.8
45°	1159.6	1142.8	1061.0	972.6	897.4	886.5	885.7	883.5	894.5
47.5°	1117.2	1093.1	1013.5	923.0	849.2	836.8	838.3	845.6	855.1
50°	1068.3	1039.8	960.9	869.7	795.9	787.9	793.7	798.8	811.2
52.5°	1019.4	996.7	912.7	819.3	741.9	736.0	744.1	760.9	768.2
55°	981.4	940.5	865.3	760.1	684.2	684.9	701.0	710.5	726.5
57.5°	920.8	890.1	811.2	707.6	630.2	635.3	657.2	673.2	683.5
60°	877.7	839.0	758.7	651.3	573.2	581.2	606.1	630.2	647.7
62.5°	822.2	788.6	703.9	595.8	520.6	532.3	560.1	588.5	601.0
65°	776.9	739.0	649.9	540.3	465.9	479.7	514.1	546.2	566.6
67.5°	738.2	698.8	601.7	489.2	410.4	430.8	471.0	502.4	518.4
70°	692.2	646.2	546.9	432.3	352.7	376.8	427.9	464.4	482.7
72.5°	643.3	606.1	499.5	379.7	299.4	328.6	384.8	422.8	440.3
75°	605.3	563.7	459.3	327.1	245.3	280.4	341.0	384.1	401.6
77.5°	566.6	528.7	414.0	278.9	197.2	236.6	302.3	349.8	368.0
80°	532.3	488.5	376.1	239.5	146.8	193.5	265.8	312.5	333.7
82.5°	494.3	456.4	343.2	197.9	104.4	154.1	230.0	281.1	298.7
85°	460.8	421.3	312.5	165.0	64.3	119.0	197.2	249.7	270.9
87.5°	430.1	397.2	284.0	140.2	32.1	90.5	165.8	219.1	243.2
90°	402.3	365.1	260.0	117.6	5.8	65.7	140.2	192.8	211.0
92.5°	384.8	340.3	240.2	103.0	3.7	46.7	116.8	168.7	189.9
95°	358.5	319.1	219.8	92.0	3.7	31.4	94.2	144.6	162.8
97.5°	335.9	299.4	205.2	85.4	2.9	21.2	77.4	121.2	140.2
100°	318.4	284.0	192.0	79.6	3.7	15.3	61.3	103.0	119.8
102.5°	298.7	267.3	181.8	75.9	3.7	11.0	48.2	86.9	102.2
105°	281.1	253.4	172.3	72.3	3.7	9.5	38.7	71.6	85.4
107.5°	268.0	238.8	164.3	70.1	3.7	9.5	30.7	58.4	70.1
110°	254.8	227.1	156.3	67.9	3.7	8.8	24.1	48.2	58.4



TEST NUMBER: P894146

CATALOG NUMBER: 4MB-SC3-ASM-F-UNV-CC93-HI-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	246.1	216.1	149.0	65.7	4.4	8.8	19.7	40.2	48.2
115°	230.7	206.6	142.4	65.0	4.4	8.0	18.3	32.9	40.9
117.5°	219.8	197.9	135.8	62.8	4.4	8.0	17.5	27.0	32.9
120°	211.8	187.7	130.0	60.6	4.4	7.3	16.1	24.1	27.7
122.5°	201.5	178.2	124.9	59.1	4.4	7.3	15.3	22.6	24.8
125°	187.7	169.4	119.0	56.2	5.1	7.3	14.6	21.2	23.4
127.5°	178.9	161.4	114.6	52.6	5.1	6.6	13.9	19.7	21.9
130°	171.6	152.6	109.5	48.9	5.1	6.6	13.1	18.3	20.4
132.5°	160.6	143.8	102.2	46.0	5.1	5.8	11.7	16.8	19.0
135°	150.4	136.5	94.9	43.1	5.1	5.8	11.0	16.1	17.5
137.5°	143.8	129.2	88.4	40.2	5.1	5.1	10.2	14.6	16.1
140°	132.9	121.2	81.1	37.2	5.1	5.1	9.5	13.9	14.6
142.5°	124.9	113.2	74.5	34.3	5.1	5.1	8.8	12.4	13.9
145°	115.4	105.1	67.2	31.4	5.1	4.4	8.0	11.7	12.4
147.5°	106.6	95.7	61.3	29.2	5.1	4.4	7.3	10.2	11.0
150°	97.8	86.2	55.5	27.0	5.1	4.4	6.6	8.8	10.2
152.5°	88.4	74.5	49.7	24.8	5.1	4.4	5.8	8.0	8.8
155°	78.9	65.0	44.5	22.6	5.8	4.4	5.1	6.6	8.0
157.5°	70.8	56.2	39.4	20.4	5.8	3.7	5.1	5.8	6.6
160°	61.3	48.2	35.0	18.3	5.8	3.7	4.4	5.1	5.8
162.5°	54.0	40.2	30.7	16.8	5.8	3.7	4.4	4.4	5.1
165°	46.0	33.6	25.6	15.3	5.8	3.7	3.7	3.7	4.4
167.5°	37.2	26.3	21.2	13.9	5.8	3.7	3.7	2.9	3.7
170°	27.7	19.7	17.5	12.4	5.8	3.7	2.9	2.2	2.9
172.5°	12.4	15.3	13.9	11.0	6.6	3.7	2.9	2.2	1.5
175°	6.6	11.0	11.0	9.5	6.6	3.7	2.9	2.2	0.7
177.5°	5.1	6.6	8.0	8.0	6.6	4.4	2.9	1.5	0.7
180°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4



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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	19.74	21.22	20.25	21.72	22.27	18.71	20.19	19.22	20.69	21.24
	3H	21.83	23.18	22.35	23.69	24.27	20.59	21.93	21.10	22.44	23.03
	4H	22.77	24.05	23.31	24.58	25.17	21.33	22.61	21.87	23.14	23.73
	6H	23.69	24.88	24.24	25.42	26.03	21.97	23.15	22.52	23.69	24.31
	8H	24.12	25.26	24.69	25.82	26.44	22.22	23.36	22.78	23.92	24.54
	12H	24.54	25.63	25.11	26.19	26.84	22.45	23.54	23.02	24.10	24.75
4H	2H	20.24	21.51	20.78	22.04	22.64	19.28	20.55	19.82	21.08	21.68
	3H	22.55	23.64	23.10	24.21	24.83	21.34	22.42	21.89	22.99	23.61
	4H	23.66	24.66	24.24	25.24	25.89	22.19	23.19	22.76	23.76	24.41
	6H	24.77	25.65	25.36	26.25	26.91	22.95	23.82	23.54	24.43	25.09
	8H	25.30	26.12	25.89	26.72	27.40	23.26	24.09	23.86	24.69	25.37
	12H	25.82	26.57	26.44	27.20	27.88	23.55	24.30	24.17	24.93	25.62
8H	4H	23.92	24.75	24.52	25.35	26.02	22.53	23.35	23.13	23.96	24.63
	6H	25.20	25.90	25.83	26.55	27.23	23.41	24.11	24.04	24.76	25.44
	8H	25.87	26.50	26.51	27.16	27.85	23.81	24.44	24.45	25.10	25.79
	12H	26.57	27.14	27.22	27.78	28.54	24.20	24.76	24.84	25.41	26.16
12H	4H	23.94	24.69	24.56	25.32	26.00	22.59	23.34	23.21	23.97	24.65
	6H	25.26	25.89	25.90	26.54	27.24	23.52	24.15	24.16	24.81	25.50
	8H	26.00	26.56	26.64	27.21	27.96	23.99	24.55	24.63	25.19	25.95