

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: P894148

Luminaire Tested: 4MB-SC3-ASMF-UNV-CC93-LOW-4000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894148
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-LOW-4000K
Description: Selectable 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 4000K CCT, 1 lumen setting
Light Source: -
Ballast/Driver: -

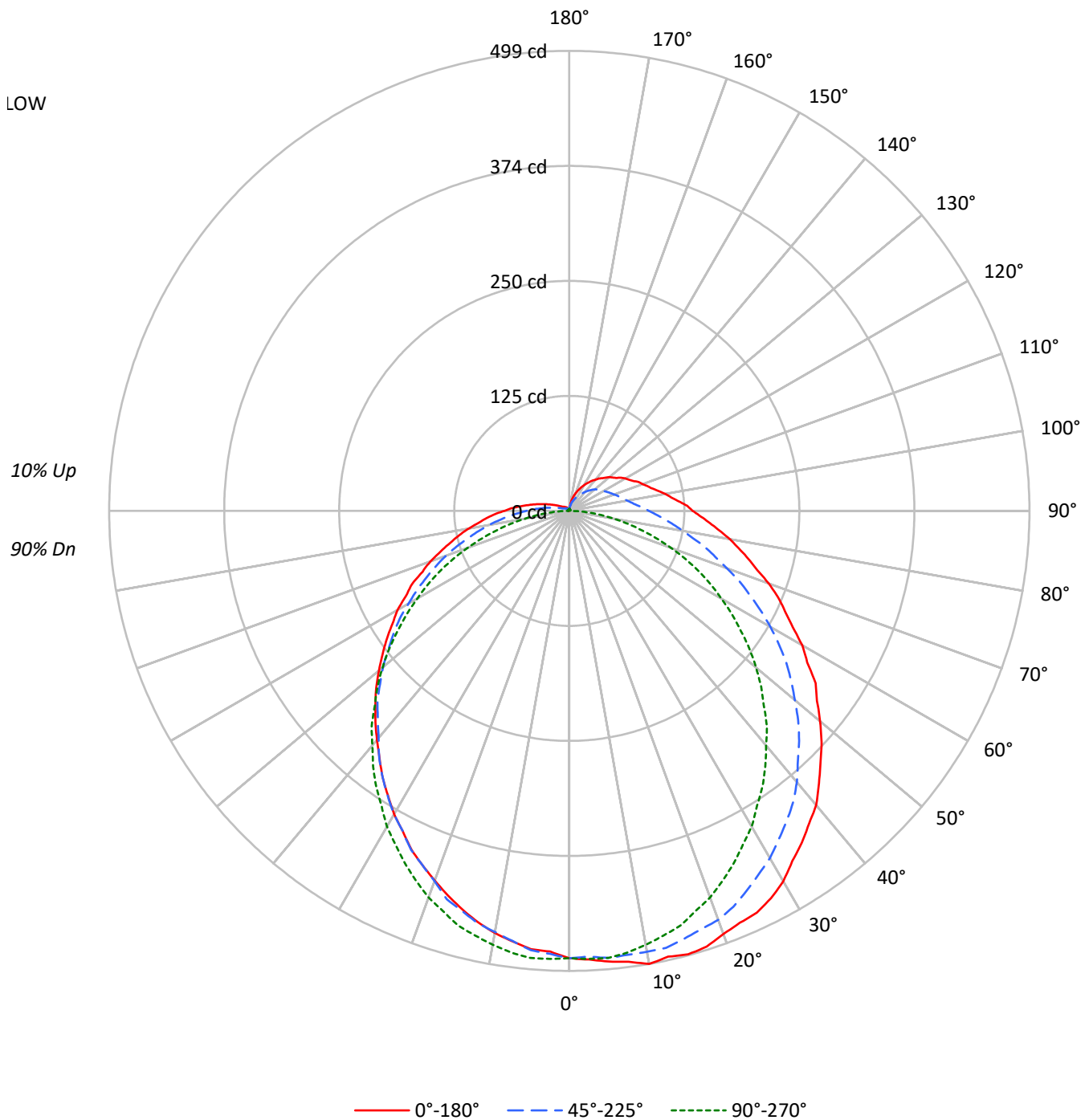
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1668.0 lumens
Efficiency: N/A
Efficacy: 99.9 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): 16.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9915
Total Harmonic Distortion (THDi): 6.67573310469889
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P894148
CATALOG NUMBER: 4MB-SC3-ASMF-UNV-CC93-LOW-4000K

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°	4941	4941	4941	4941	4941
5°	5003	4827	4780	4743	4864
10°	5132	4726	4563	4514	4782
15°	5207	4626	4360	4325	4682
20°	5232	4531	4130	4100	4572
25°	5327	4385	3887	3912	4489
30°	5359	4244	3656	3710	4388
35°	5347	4092	3414	3514	4293
40°	5395	3933	3165	3295	4201
45°	5379	3747	2920	3127	4150
50°	5420	3554	2684	2936	4116
55°	5540	3387	2414	2744	4102
60°	5633	3179	2137	2539	4157
65°	5827	2954	1857	2337	4249
70°	6304	2739	1522	2142	4394
75°	7083	2583	1164	1918	4698
80°	8801	2431	780	1719	5521
85°	13163	2398	390	1513	7738

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 43343 cd/sqm



TEST NUMBER: P894148

CATALOG NUMBER: 4MB-SC3-ASMF-UNV-CC93-LOW-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	2.8
10°-20°	131.9	7.9
20°-30°	198.9	11.9
30°-40°	238.8	14.3
40°-50°	248.6	14.9
50°-60°	230.5	13.8
60°-70°	189.8	11.4
70°-80°	136.9	8.2
80°-90°	86.9	5.2
90°-100°	53.6	3.2
100°-110°	35.7	2.1
110°-120°	25.4	1.5
120°-130°	18.6	1.1
130°-140°	12.8	0.8
140°-150°	7.8	0.5
150°-160°	3.9	0.2
160°-170°	1.4	0.1
170°-180°	0.2	0.0
0°-30°	376.9	22.6
0°-40°	615.7	36.9
0°-60°	1094.8	65.6
0°-90°	1508.4	90.4
90°-120°	114.8	6.9
90°-150°	154.0	9.2
90°-180°	160.0	9.6
0°-180°	1668.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	485	485	485	485	485	
5°	491	487	487	478	477	47
15°	498	480	466	449	448	140
25°	481	455	422	406	405	221
35°	440	411	365	353	353	275
45°	385	352	298	294	297	298
55°	326	288	227	233	241	290
65°	258	216	155	171	188	257
75°	201	153	82	113	133	213
85°	153	104	21	66	90	130
90°	134	86	2	47	70	74
95°	119	73	1	31	54	95
105°	93	57	1	13	28	100
115°	77	47	2	6	14	77
125°	62	40	2	5	8	57
135°	50	32	2	4	6	39
145°	38	22	2	3	4	24
155°	26	15	2	2	3	12
165°	15	8	2	1	2	4
175°	2	4	2	1	0	0
180°	2	2	2	2	2	



TEST NUMBER: P894148

CATALOG NUMBER: 4MB-SC3-ASM-F-UNV-CC93-LOW-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	485.2	485.2	485.2	485.2	485.2	485.2	485.2	485.2	485.2
2.5°	487.1	488.5	483.9	486.8	486.4	486.8	481.0	485.9	478.4
5°	490.7	491.5	486.8	488.5	486.8	482.7	478.4	476.7	477.1
7.5°	493.2	497.0	485.6	486.1	483.2	478.8	470.6	472.1	471.1
10°	499.0	494.6	485.6	483.5	477.9	473.3	463.8	464.5	465.0
12.5°	495.3	494.4	485.4	477.4	471.8	467.9	458.2	455.8	457.0
15°	498.0	493.9	480.5	474.2	465.7	459.0	449.2	447.6	447.8
17.5°	495.6	492.2	475.7	467.0	455.1	450.9	441.7	438.8	437.4
20°	488.3	486.6	472.1	457.0	446.3	438.3	427.2	425.5	426.7
22.5°	483.5	479.3	464.8	449.7	434.2	427.2	416.0	415.8	416.0
25°	481.0	475.7	454.8	439.1	421.8	415.5	405.8	402.2	405.3
27.5°	473.7	468.9	444.4	427.2	408.0	399.5	391.5	390.8	391.3
30°	464.0	454.6	434.9	413.8	395.4	386.7	380.1	375.3	379.9
32.5°	450.2	444.9	422.6	399.5	379.1	373.1	366.5	366.0	366.0
35°	439.5	435.7	410.9	386.9	365.1	356.8	352.9	351.2	352.9
37.5°	427.2	421.4	398.6	371.6	349.3	342.3	338.4	336.9	338.1
40°	416.5	405.8	384.0	355.9	332.1	325.8	321.7	323.1	324.3
42.5°	400.7	394.7	366.8	339.8	317.3	310.5	307.1	308.3	311.2
45°	385.2	379.6	352.5	323.1	298.1	294.5	294.2	293.5	297.2
47.5°	371.1	363.1	336.7	306.6	282.1	278.0	278.5	280.9	284.1
50°	354.9	345.4	319.2	288.9	264.4	261.7	263.7	265.4	269.5
52.5°	338.6	331.1	303.2	272.2	246.5	244.5	247.2	252.8	255.2
55°	326.0	312.4	287.5	252.5	227.3	227.5	232.9	236.0	241.4
57.5°	305.9	295.7	269.5	235.1	209.3	211.0	218.3	223.7	227.1
60°	291.6	278.7	252.0	216.4	190.4	193.1	201.3	209.3	215.2
62.5°	273.1	262.0	233.8	197.9	173.0	176.8	186.1	195.5	199.6
65°	258.1	245.5	215.9	179.5	154.8	159.4	170.8	181.4	188.2
67.5°	245.2	232.1	199.9	162.5	136.3	143.1	156.5	166.9	172.2
70°	230.0	214.7	181.7	143.6	117.2	125.2	142.1	154.3	160.3
72.5°	213.7	201.3	165.9	126.1	99.5	109.2	127.8	140.5	146.3
75°	201.1	187.3	152.6	108.7	81.5	93.1	113.3	127.6	133.4
77.5°	188.2	175.6	137.5	92.7	65.5	78.6	100.4	116.2	122.3
80°	176.8	162.3	124.9	79.6	48.8	64.3	88.3	103.8	110.9
82.5°	164.2	151.6	114.0	65.7	34.7	51.2	76.4	93.4	99.2
85°	153.1	140.0	103.8	54.8	21.3	39.5	65.5	83.0	90.0
87.5°	142.9	132.0	94.4	46.6	10.7	30.1	55.1	72.8	80.8
90°	133.7	121.3	86.4	39.1	1.9	21.8	46.6	64.0	70.1
92.5°	127.8	113.0	79.8	34.2	1.2	15.5	38.8	56.0	63.1
95°	119.1	106.0	73.0	30.6	1.2	10.4	31.3	48.0	54.1
97.5°	111.6	99.5	68.2	28.4	1.0	7.0	25.7	40.3	46.6
100°	105.8	94.4	63.8	26.4	1.2	5.1	20.4	34.2	39.8
102.5°	99.2	88.8	60.4	25.2	1.2	3.6	16.0	28.9	34.0
105°	93.4	84.2	57.2	24.0	1.2	3.2	12.9	23.8	28.4
107.5°	89.0	79.3	54.6	23.3	1.2	3.2	10.2	19.4	23.3
110°	84.7	75.4	51.9	22.6	1.2	2.9	8.0	16.0	19.4



TEST NUMBER: P894148

CATALOG NUMBER: 4MB-SC3-ASM-F-UNV-CC93-LOW-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	81.7	71.8	49.5	21.8	1.5	2.9	6.5	13.3	16.0
115°	76.7	68.6	47.3	21.6	1.5	2.7	6.1	10.9	13.6
117.5°	73.0	65.7	45.1	20.9	1.5	2.7	5.8	9.0	10.9
120°	70.3	62.3	43.2	20.1	1.5	2.4	5.3	8.0	9.2
122.5°	67.0	59.2	41.5	19.6	1.5	2.4	5.1	7.5	8.2
125°	62.3	56.3	39.5	18.7	1.7	2.4	4.9	7.0	7.8
127.5°	59.4	53.6	38.1	17.5	1.7	2.2	4.6	6.5	7.3
130°	57.0	50.7	36.4	16.3	1.7	2.2	4.4	6.1	6.8
132.5°	53.4	47.8	34.0	15.3	1.7	1.9	3.9	5.6	6.3
135°	50.0	45.4	31.5	14.3	1.7	1.9	3.6	5.3	5.8
137.5°	47.8	42.9	29.4	13.3	1.7	1.7	3.4	4.9	5.3
140°	44.1	40.3	26.9	12.4	1.7	1.7	3.2	4.6	4.9
142.5°	41.5	37.6	24.7	11.4	1.7	1.7	2.9	4.1	4.6
145°	38.3	34.9	22.3	10.4	1.7	1.5	2.7	3.9	4.1
147.5°	35.4	31.8	20.4	9.7	1.7	1.5	2.4	3.4	3.6
150°	32.5	28.6	18.4	9.0	1.7	1.5	2.2	2.9	3.4
152.5°	29.4	24.7	16.5	8.2	1.7	1.5	1.9	2.7	2.9
155°	26.2	21.6	14.8	7.5	1.9	1.5	1.7	2.2	2.7
157.5°	23.5	18.7	13.1	6.8	1.9	1.2	1.7	1.9	2.2
160°	20.4	16.0	11.6	6.1	1.9	1.2	1.5	1.7	1.9
162.5°	18.0	13.3	10.2	5.6	1.9	1.2	1.5	1.5	1.7
165°	15.3	11.2	8.5	5.1	1.9	1.2	1.2	1.2	1.5
167.5°	12.4	8.7	7.0	4.6	1.9	1.2	1.2	1.0	1.2
170°	9.2	6.5	5.8	4.1	1.9	1.2	1.0	0.7	1.0
172.5°	4.1	5.1	4.6	3.6	2.2	1.2	1.0	0.7	0.5
175°	2.2	3.6	3.6	3.2	2.2	1.2	1.0	0.7	0.2
177.5°	1.7	2.2	2.7	2.7	2.2	1.5	1.0	0.5	0.2
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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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	15.91	17.39	16.42	17.89	18.44	14.88	16.36	15.39	16.86	17.41
	3H	18.00	19.35	18.52	19.86	20.44	16.76	18.10	17.28	18.61	19.20
	4H	18.94	20.22	19.48	20.75	21.34	17.50	18.78	18.04	19.31	19.90
	6H	19.86	21.05	20.41	21.59	22.20	18.14	19.32	18.69	19.86	20.48
	8H	20.29	21.43	20.86	21.99	22.61	18.39	19.53	18.96	20.09	20.71
	12H	20.71	21.80	21.28	22.36	23.01	18.62	19.71	19.19	20.27	20.92
4H	2H	16.41	17.68	16.95	18.21	18.81	15.45	16.72	15.99	17.25	17.85
	3H	18.72	19.81	19.27	20.38	21.00	17.51	18.60	18.06	19.16	19.78
	4H	19.83	20.83	20.41	21.41	22.06	18.36	19.36	18.93	19.93	20.58
	6H	20.94	21.82	21.53	22.42	23.08	19.12	20.00	19.71	20.60	21.26
	8H	21.47	22.29	22.06	22.90	23.57	19.43	20.26	20.03	20.86	21.54
	12H	21.99	22.75	22.61	23.38	24.06	19.72	20.48	20.34	21.11	21.79
8H	4H	20.09	20.92	20.69	21.52	22.20	18.70	19.53	19.30	20.13	20.80
	6H	21.37	22.07	22.00	22.72	23.40	19.58	20.28	20.21	20.93	21.61
	8H	22.04	22.67	22.68	23.33	24.02	19.98	20.61	20.62	21.27	21.96
	12H	22.75	23.31	23.39	23.95	24.71	20.37	20.94	21.01	21.58	22.33
12H	4H	20.11	20.86	20.73	21.49	22.17	18.76	19.51	19.38	20.14	20.82
	6H	21.43	22.06	22.07	22.71	23.41	19.69	20.33	20.33	20.98	21.67
	8H	22.17	22.73	22.81	23.38	24.13	20.16	20.72	20.80	21.36	22.12