

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: P894150

Luminaire Tested: 4MB-SC3-ASMF-UNV-CC93-MID-3500K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894150
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-MID-3500K
Description: Selectable 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 3500K CCT, 1 lumen setting
Light Source: -
Ballast/Driver: -

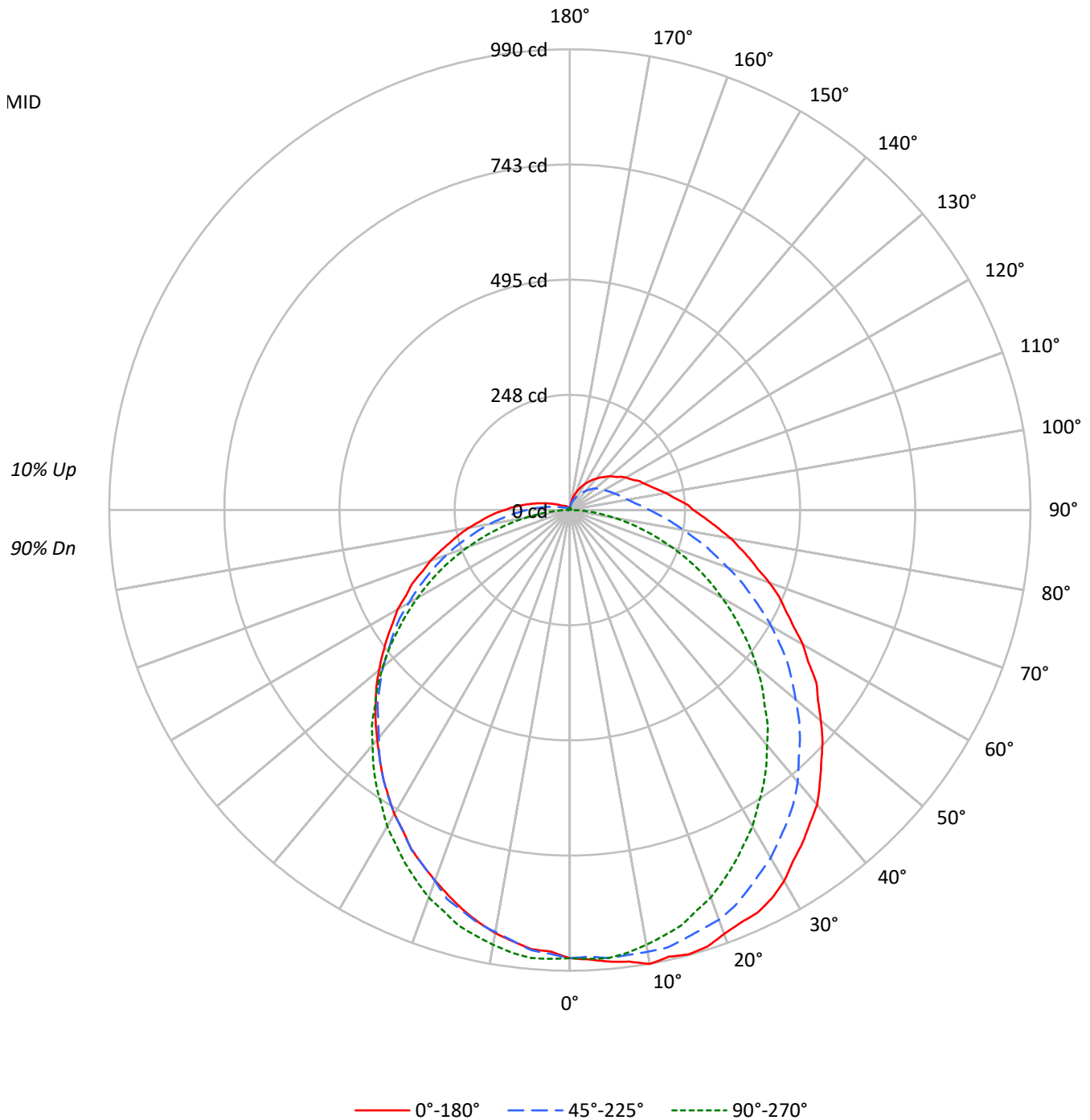
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3311.0 lumens
Efficiency: N/A
Efficacy: 98.8 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): 33.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9948
Total Harmonic Distortion (THDi): 5.65231997856897
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				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°	9807	9807	9807	9807	9807
5°	9931	9582	9489	9414	9656
10°	10187	9382	9058	8960	9493
15°	10335	9184	8656	8586	9294
20°	10386	8993	8198	8138	9076
25°	10574	8704	7717	7767	8911
30°	10639	8426	7258	7364	8710
35°	10614	8122	6777	6976	8523
40°	10710	7808	6283	6540	8339
45°	10677	7436	5796	6209	8237
50°	10759	7055	5328	5827	8171
55°	10998	6723	4791	5447	8141
60°	11181	6310	4242	5042	8250
65°	11566	5863	3685	4638	8437
70°	12513	5437	3021	4254	8725
75°	14060	5127	2310	3807	9326
80°	17473	4827	1547	3412	10956
85°	26120	4762	777	3004	15356

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 86006 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	2.8
10°-20°	261.9	7.9
20°-30°	394.9	11.9
30°-40°	474.0	14.3
40°-50°	493.5	14.9
50°-60°	457.5	13.8
60°-70°	376.8	11.4
70°-80°	271.8	8.2
80°-90°	172.5	5.2
90°-100°	106.4	3.2
100°-110°	70.9	2.1
110°-120°	50.5	1.5
120°-130°	37.0	1.1
130°-140°	25.5	0.8
140°-150°	15.5	0.5
150°-160°	7.7	0.2
160°-170°	2.8	0.1
170°-180°	0.5	0.0
0°-30°	748.2	22.6
0°-40°	1222.1	36.9
0°-60°	2173.2	65.6
0°-90°	2994.3	90.4
90°-120°	227.8	6.9
90°-150°	305.7	9.2
90°-180°	317.0	9.6
0°-180°	3311.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	963	963	963	963	963	
5°	974	966	966	950	947	93
15°	988	954	924	892	889	279
25°	955	903	837	806	805	439
35°	872	816	725	701	701	547
45°	765	700	592	584	590	592
55°	647	571	451	462	479	575
65°	512	428	307	339	374	510
75°	399	303	162	225	265	423
85°	304	206	42	130	179	258
90°	265	171	4	92	139	146
95°	236	145	2	62	107	188
105°	185	114	2	26	56	198
115°	152	94	3	12	27	152
125°	124	78	3	10	15	113
135°	99	63	3	7	12	78
145°	76	44	3	5	8	48
155°	52	29	4	3	5	25
165°	30	17	4	2	3	9
175°	4	7	4	2	0	1
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0
2.5°	966.9	969.8	960.6	966.4	965.4	966.4	954.8	964.5	949.5
5°	974.1	975.5	966.4	969.8	966.4	958.2	949.5	946.2	947.1
7.5°	978.9	986.6	964.0	965.0	959.2	950.5	934.1	937.0	935.1
10°	990.5	981.8	964.0	959.7	948.6	939.4	920.7	922.1	923.1
12.5°	983.3	981.3	963.5	947.6	936.5	928.8	909.6	904.8	907.2
15°	988.5	980.4	953.9	941.4	924.5	911.0	891.8	888.4	888.9
17.5°	983.7	977.0	944.2	926.9	903.3	895.1	876.8	871.1	868.2
20°	969.3	965.9	937.0	907.2	886.0	870.1	847.9	844.6	847.0
22.5°	959.7	951.5	922.6	892.7	861.9	847.9	825.8	825.3	825.8
25°	954.8	944.2	902.8	871.5	837.4	824.8	805.6	798.4	804.6
27.5°	940.4	930.8	882.1	847.9	809.9	793.1	777.2	775.7	776.7
30°	921.1	902.4	863.4	821.5	784.9	767.5	754.5	744.9	754.1
32.5°	893.7	883.1	838.8	793.1	752.6	740.6	727.6	726.6	726.6
35°	872.5	864.8	815.7	768.0	724.7	708.3	700.6	697.2	700.6
37.5°	847.9	836.4	791.1	737.7	693.4	679.4	671.7	668.8	671.2
40°	826.8	805.6	762.2	706.4	659.2	646.7	638.5	641.4	643.8
42.5°	795.5	783.4	728.0	674.6	629.8	616.3	609.6	612.0	617.8
45°	764.6	753.6	699.6	641.4	591.8	584.6	584.1	582.6	589.9
47.5°	736.7	720.8	668.3	608.6	560.0	551.8	552.8	557.6	563.9
50°	704.5	685.7	633.7	573.5	524.9	519.6	523.4	526.8	535.0
52.5°	672.2	657.3	601.9	540.3	489.2	485.4	490.7	501.7	506.6
55°	647.2	620.2	570.6	501.3	451.2	451.7	462.3	468.5	479.1
57.5°	607.2	587.0	535.0	466.6	415.5	418.9	433.4	444.0	450.7
60°	578.8	553.3	500.3	429.5	378.0	383.3	399.7	415.5	427.1
62.5°	542.2	520.0	464.2	392.9	343.3	351.0	369.3	388.1	396.3
65°	512.3	487.3	428.5	356.3	307.2	316.4	339.0	360.2	373.7
67.5°	486.8	460.8	396.8	322.6	270.6	284.1	310.6	331.3	341.9
70°	456.5	426.1	360.7	285.1	232.6	248.5	282.2	306.2	318.3
72.5°	424.2	399.7	329.4	250.4	197.4	216.7	253.8	278.8	290.4
75°	399.2	371.7	302.9	215.7	161.8	184.9	224.9	253.3	264.8
77.5°	373.7	348.6	273.0	183.9	130.0	156.0	199.3	230.6	242.7
80°	351.0	322.1	248.0	157.9	96.8	127.6	175.3	206.1	220.1
82.5°	326.0	300.9	226.3	130.5	68.9	101.6	151.7	185.4	196.9
85°	303.8	277.8	206.1	108.8	42.4	78.5	130.0	164.7	178.6
87.5°	283.6	261.9	187.3	92.5	21.2	59.7	109.3	144.5	160.3
90°	265.3	240.8	171.4	77.5	3.9	43.3	92.5	127.1	139.2
92.5°	253.8	224.4	158.4	67.9	2.4	30.8	77.0	111.2	125.2
95°	236.4	210.4	144.9	60.7	2.4	20.7	62.1	95.3	107.4
97.5°	221.5	197.4	135.3	56.3	1.9	14.0	51.0	79.9	92.5
100°	209.9	187.3	126.6	52.5	2.4	10.1	40.4	67.9	79.0
102.5°	196.9	176.2	119.9	50.1	2.4	7.2	31.8	57.3	67.4
105°	185.4	167.1	113.6	47.7	2.4	6.3	25.5	47.2	56.3
107.5°	176.7	157.5	108.3	46.2	2.4	6.3	20.2	38.5	46.2
110°	168.0	149.8	103.0	44.8	2.4	5.8	15.9	31.8	38.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	162.3	142.5	98.2	43.3	2.9	5.8	13.0	26.5	31.8
115°	152.2	136.3	93.9	42.9	2.9	5.3	12.0	21.7	27.0
117.5°	144.9	130.5	89.6	41.4	2.9	5.3	11.6	17.8	21.7
120°	139.6	123.7	85.7	40.0	2.9	4.8	10.6	15.9	18.3
122.5°	132.9	117.5	82.3	39.0	2.9	4.8	10.1	14.9	16.4
125°	123.7	111.7	78.5	37.1	3.4	4.8	9.6	14.0	15.4
127.5°	118.0	106.4	75.6	34.7	3.4	4.3	9.1	13.0	14.4
130°	113.2	100.6	72.2	32.3	3.4	4.3	8.7	12.0	13.5
132.5°	105.9	94.9	67.4	30.3	3.4	3.9	7.7	11.1	12.5
135°	99.2	90.0	62.6	28.4	3.4	3.9	7.2	10.6	11.6
137.5°	94.9	85.2	58.3	26.5	3.4	3.4	6.7	9.6	10.6
140°	87.6	79.9	53.4	24.6	3.4	3.4	6.3	9.1	9.6
142.5°	82.3	74.6	49.1	22.6	3.4	3.4	5.8	8.2	9.1
145°	76.1	69.3	44.3	20.7	3.4	2.9	5.3	7.7	8.2
147.5°	70.3	63.1	40.4	19.3	3.4	2.9	4.8	6.7	7.2
150°	64.5	56.8	36.6	17.8	3.4	2.9	4.3	5.8	6.7
152.5°	58.3	49.1	32.7	16.4	3.4	2.9	3.9	5.3	5.8
155°	52.0	42.9	29.4	14.9	3.9	2.9	3.4	4.3	5.3
157.5°	46.7	37.1	26.0	13.5	3.9	2.4	3.4	3.9	4.3
160°	40.4	31.8	23.1	12.0	3.9	2.4	2.9	3.4	3.9
162.5°	35.6	26.5	20.2	11.1	3.9	2.4	2.9	2.9	3.4
165°	30.3	22.1	16.9	10.1	3.9	2.4	2.4	2.4	2.9
167.5°	24.6	17.3	14.0	9.1	3.9	2.4	2.4	1.9	2.4
170°	18.3	13.0	11.6	8.2	3.9	2.4	1.9	1.4	1.9
172.5°	8.2	10.1	9.1	7.2	4.3	2.4	1.9	1.4	1.0
175°	4.3	7.2	7.2	6.3	4.3	2.4	1.9	1.4	0.5
177.5°	3.4	4.3	5.3	5.3	4.3	2.9	1.9	1.0	0.5
180°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9



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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	18.30	19.77	18.80	20.28	20.82	17.27	18.74	17.77	19.25	19.79
	3H	20.38	21.73	20.90	22.24	22.82	19.14	20.49	19.66	21.00	21.58
	4H	21.33	22.60	21.87	23.13	23.73	19.89	21.16	20.42	21.69	22.29
	6H	22.25	23.43	22.80	23.97	24.59	20.52	21.71	21.07	22.25	22.86
	8H	22.67	23.81	23.24	24.38	24.99	20.77	21.91	21.34	22.48	23.09
	12H	23.09	24.19	23.67	24.74	25.39	21.00	22.10	21.58	22.65	23.30
4H	2H	18.79	20.07	19.33	20.59	21.19	17.83	19.11	18.37	19.64	20.23
	3H	21.10	22.19	21.66	22.76	23.38	19.89	20.98	20.44	21.55	22.17
	4H	22.22	23.21	22.79	23.79	24.44	20.74	21.74	21.32	22.32	22.97
	6H	23.32	24.20	23.91	24.80	25.47	21.50	22.38	22.09	22.98	23.64
	8H	23.85	24.68	24.45	25.28	25.95	21.81	22.64	22.41	23.24	23.92
	12H	24.38	25.13	25.00	25.76	26.44	22.11	22.86	22.73	23.49	24.17
8H	4H	22.47	23.30	23.07	23.90	24.58	21.08	21.91	21.68	22.51	23.19
	6H	23.76	24.46	24.38	25.10	25.78	21.97	22.67	22.60	23.31	23.99
	8H	24.42	25.06	25.06	25.71	26.40	22.37	23.00	23.01	23.65	24.34
	12H	25.13	25.69	25.77	26.33	27.09	22.75	23.32	23.40	23.96	24.72
12H	4H	22.49	23.24	23.11	23.87	24.55	21.15	21.90	21.76	22.53	23.21
	6H	23.81	24.44	24.45	25.10	25.79	22.07	22.71	22.72	23.36	24.05
	8H	24.55	25.12	25.20	25.76	26.52	22.54	23.10	23.18	23.74	24.50