

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: P894144

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894144
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-3500K
Description: Selectable 4FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 3500K CCT, 1 lumen setting
Light Source: -
Ballast/Driver: -

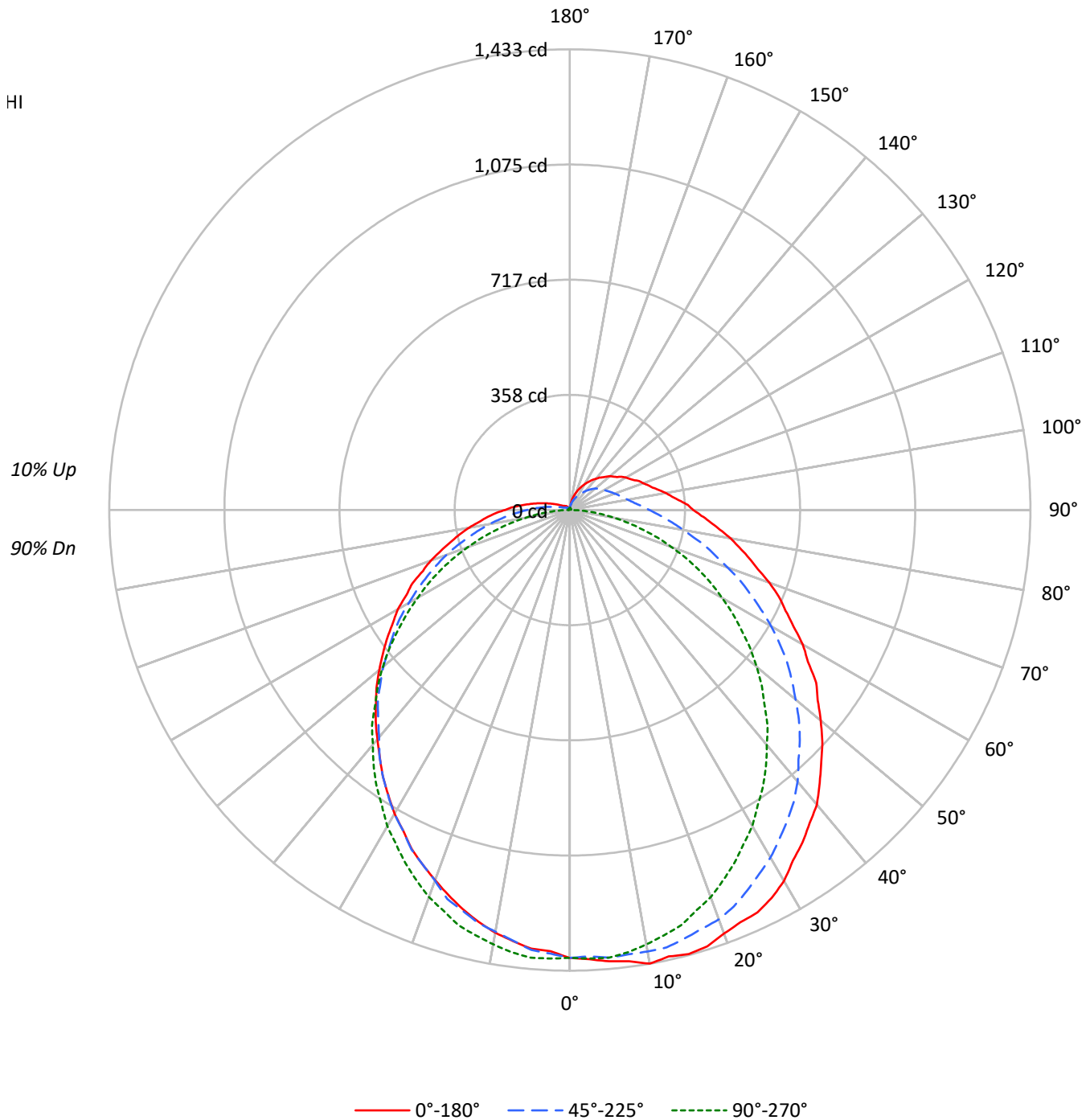
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4789.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

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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°	14186	14186	14186	14186	14186
5°	14364	13859	13725	13618	13966
10°	14733	13570	13101	12959	13731
15°	14949	13283	12520	12418	13443
20°	15023	13008	11858	11772	13127
25°	15295	12590	11160	11234	12889
30°	15388	12187	10498	10651	12598
35°	15352	11748	9802	10090	12327
40°	15489	11293	9088	9460	12062
45°	15444	10757	8383	8980	11914
50°	15561	10204	7706	8429	11818
55°	15906	9724	6930	7878	11776
60°	16171	9127	6135	7292	11934
65°	16729	8480	5329	6708	12203
70°	18097	7863	4369	6152	12620
75°	20336	7415	3341	5504	13493
80°	25273	6982	2238	4934	15845
85°	37787	6888	1123	4344	22217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 124389 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.2	2.8
10°-20°	378.8	7.9
20°-30°	571.2	11.9
30°-40°	685.6	14.3
40°-50°	713.9	14.9
50°-60°	661.7	13.8
60°-70°	545.0	11.4
70°-80°	393.1	8.2
80°-90°	249.6	5.2
90°-100°	153.9	3.2
100°-110°	102.6	2.1
110°-120°	73.1	1.5
120°-130°	53.5	1.1
130°-140°	36.8	0.8
140°-150°	22.4	0.5
150°-160°	11.1	0.2
160°-170°	4.1	0.1
170°-180°	0.7	0.0
0°-30°	1082.1	22.6
0°-40°	1767.7	36.9
0°-60°	3143.3	65.6
0°-90°	4330.9	90.4
90°-120°	329.5	6.9
90°-150°	442.2	9.2
90°-180°	458.0	9.6
0°-180°	4789.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1393	1393	1393	1393	1393	
5°	1409	1398	1398	1373	1370	135
15°	1430	1380	1337	1290	1286	403
25°	1381	1306	1211	1165	1164	635
35°	1262	1180	1048	1013	1013	791
45°	1106	1012	856	845	853	856
55°	936	825	653	669	693	832
65°	741	620	444	490	540	738
75°	577	438	234	325	383	612
85°	440	298	61	188	258	373
90°	384	248	6	134	201	212
95°	342	210	4	90	155	272
105°	268	164	4	37	82	286
115°	220	136	4	17	39	220
125°	179	114	5	14	22	163
135°	144	90	5	10	17	112
145°	110	64	5	8	12	70
155°	75	42	6	5	8	36
165°	44	24	6	4	4	13
175°	6	10	6	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°	1392.9	1392.9	1392.9	1392.9	1392.9	1392.9	1392.9	1392.9	1392.9
2.5°	1398.5	1402.7	1389.4	1397.8	1396.4	1397.8	1381.1	1395.0	1373.4
5°	1408.9	1411.0	1397.8	1402.7	1397.8	1386.0	1373.4	1368.5	1369.9
7.5°	1415.9	1427.0	1394.3	1395.7	1387.3	1374.8	1351.1	1355.3	1352.5
10°	1432.6	1420.1	1394.3	1388.0	1372.0	1358.8	1331.6	1333.7	1335.1
12.5°	1422.2	1419.4	1393.6	1370.6	1354.6	1343.5	1315.6	1308.6	1312.1
15°	1429.8	1418.0	1379.7	1361.6	1337.2	1317.7	1289.8	1285.0	1285.7
17.5°	1422.9	1413.1	1365.8	1340.7	1306.6	1294.7	1268.3	1259.9	1255.7
20°	1402.0	1397.1	1355.3	1312.1	1281.5	1258.5	1226.5	1221.6	1225.1
22.5°	1388.0	1376.2	1334.4	1291.2	1246.7	1226.5	1194.4	1193.7	1194.4
25°	1381.1	1365.8	1305.9	1260.6	1211.1	1193.0	1165.2	1154.7	1163.8
27.5°	1360.2	1346.3	1275.9	1226.5	1171.4	1147.1	1124.1	1122.0	1123.4
30°	1332.3	1305.2	1248.7	1188.2	1135.2	1110.2	1091.3	1077.4	1090.7
32.5°	1292.6	1277.3	1213.2	1147.1	1088.6	1071.2	1052.3	1051.0	1051.0
35°	1262.0	1250.8	1179.8	1110.9	1048.2	1024.5	1013.3	1008.5	1013.3
37.5°	1226.5	1209.7	1144.3	1067.0	1002.9	982.7	971.6	967.4	970.9
40°	1195.8	1165.2	1102.5	1021.7	953.5	935.3	923.5	927.7	931.2
42.5°	1150.5	1133.1	1053.0	975.7	911.0	891.5	881.7	885.2	893.6
45°	1106.0	1090.0	1012.0	927.7	855.9	845.5	844.8	842.7	853.2
47.5°	1065.6	1042.6	966.7	880.3	810.0	798.1	799.5	806.5	815.6
50°	1018.9	991.8	916.5	829.5	759.1	751.5	757.1	761.9	773.8
52.5°	972.3	950.7	870.6	781.4	707.6	702.0	709.7	725.7	732.7
55°	936.0	897.0	825.3	725.0	652.6	653.3	668.6	677.7	693.0
57.5°	878.2	849.0	773.8	674.9	601.0	605.9	626.8	642.1	651.9
60°	837.1	800.2	723.6	621.2	546.7	554.4	578.1	601.0	617.8
62.5°	784.2	752.2	671.4	568.3	496.6	507.7	534.2	561.3	573.2
65°	741.0	704.8	619.8	515.4	444.3	457.6	490.3	521.0	540.5
67.5°	704.1	666.5	573.9	466.6	391.4	410.9	449.2	479.2	494.5
70°	660.2	616.4	521.6	412.3	336.4	359.4	408.1	442.9	460.4
72.5°	613.6	578.1	476.4	362.2	285.5	313.4	367.0	403.2	420.0
75°	577.4	537.7	438.1	312.0	234.0	267.4	325.2	366.3	383.1
77.5°	540.5	504.2	394.9	266.0	188.0	225.7	288.3	333.6	351.0
80°	507.7	465.9	358.7	228.4	140.0	184.6	253.5	298.1	318.3
82.5°	471.5	435.3	327.3	188.7	99.6	147.0	219.4	268.1	284.9
85°	439.5	401.9	298.1	157.4	61.3	113.5	188.0	238.2	258.4
87.5°	410.2	378.9	270.9	133.7	30.6	86.4	158.1	208.9	231.9
90°	383.7	348.2	247.9	112.1	5.6	62.7	133.7	183.9	201.3
92.5°	367.0	324.5	229.1	98.2	3.5	44.6	111.4	160.9	181.1
95°	342.0	304.4	209.6	87.8	3.5	29.9	89.8	137.9	155.3
97.5°	320.4	285.5	195.7	81.5	2.8	20.2	73.8	115.6	133.7
100°	303.7	270.9	183.2	75.9	3.5	14.6	58.5	98.2	114.2
102.5°	284.9	254.9	173.4	72.4	3.5	10.4	46.0	82.9	97.5
105°	268.1	241.7	164.4	68.9	3.5	9.1	36.9	68.3	81.5
107.5°	255.6	227.7	156.7	66.9	3.5	9.1	29.3	55.7	66.9
110°	243.1	216.6	149.0	64.8	3.5	8.4	23.0	46.0	55.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	234.7	206.2	142.1	62.7	4.2	8.4	18.8	38.3	46.0
115°	220.1	197.1	135.8	62.0	4.2	7.7	17.4	31.3	39.0
117.5°	209.6	188.7	129.5	59.9	4.2	7.7	16.7	25.8	31.3
120°	202.0	179.0	124.0	57.8	4.2	7.0	15.3	23.0	26.5
122.5°	192.2	169.9	119.1	56.4	4.2	7.0	14.6	21.6	23.7
125°	179.0	161.6	113.5	53.6	4.9	7.0	13.9	20.2	22.3
127.5°	170.6	153.9	109.3	50.1	4.9	6.3	13.2	18.8	20.9
130°	163.7	145.6	104.5	46.7	4.9	6.3	12.5	17.4	19.5
132.5°	153.2	137.2	97.5	43.9	4.9	5.6	11.1	16.0	18.1
135°	143.5	130.2	90.5	41.1	4.9	5.6	10.4	15.3	16.7
137.5°	137.2	123.3	84.3	38.3	4.9	4.9	9.8	13.9	15.3
140°	126.8	115.6	77.3	35.5	4.9	4.9	9.1	13.2	13.9
142.5°	119.1	108.0	71.0	32.7	4.9	4.9	8.4	11.8	13.2
145°	110.0	100.3	64.1	29.9	4.9	4.2	7.7	11.1	11.8
147.5°	101.7	91.2	58.5	27.9	4.9	4.2	7.0	9.8	10.4
150°	93.3	82.2	52.9	25.8	4.9	4.2	6.3	8.4	9.8
152.5°	84.3	71.0	47.4	23.7	4.9	4.2	5.6	7.7	8.4
155°	75.2	62.0	42.5	21.6	5.6	4.2	4.9	6.3	7.7
157.5°	67.6	53.6	37.6	19.5	5.6	3.5	4.9	5.6	6.3
160°	58.5	46.0	33.4	17.4	5.6	3.5	4.2	4.9	5.6
162.5°	51.5	38.3	29.3	16.0	5.6	3.5	4.2	4.2	4.9
165°	43.9	32.0	24.4	14.6	5.6	3.5	3.5	3.5	4.2
167.5°	35.5	25.1	20.2	13.2	5.6	3.5	3.5	2.8	3.5
170°	26.5	18.8	16.7	11.8	5.6	3.5	2.8	2.1	2.8
172.5°	11.8	14.6	13.2	10.4	6.3	3.5	2.8	2.1	1.4
175°	6.3	10.4	10.4	9.1	6.3	3.5	2.8	2.1	0.7
177.5°	4.9	6.3	7.7	7.7	6.3	4.2	2.8	1.4	0.7
180°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2



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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	19.58	21.06	20.08	21.56	22.10	18.55	20.03	19.06	20.53	21.07
	3H	21.67	23.01	22.18	23.52	24.11	20.42	21.77	20.94	22.28	22.86
	4H	22.61	23.89	23.15	24.41	25.01	21.17	22.44	21.71	22.97	23.57
	6H	23.53	24.72	24.08	25.26	25.87	21.80	22.99	22.35	23.53	24.14
	8H	23.96	25.09	24.52	25.66	26.28	22.06	23.19	22.62	23.76	24.38
	12H	24.38	25.47	24.95	26.03	26.67	22.29	23.38	22.86	23.94	24.58
4H	2H	20.07	21.35	20.61	21.88	22.47	19.11	20.39	19.65	20.92	21.51
	3H	22.39	23.47	22.94	24.04	24.66	21.17	22.26	21.73	22.83	23.45
	4H	23.50	24.49	24.07	25.07	25.72	22.03	23.02	22.60	23.60	24.25
	6H	24.60	25.48	25.20	26.09	26.75	22.78	23.66	23.37	24.26	24.93
	8H	25.13	25.96	25.73	26.56	27.24	23.10	23.92	23.69	24.53	25.20
	12H	25.66	26.41	26.28	27.04	27.72	23.39	24.14	24.01	24.77	25.45
8H	4H	23.76	24.58	24.35	25.19	25.86	22.36	23.19	22.96	23.79	24.47
	6H	25.04	25.74	25.67	26.38	27.06	23.25	23.95	23.88	24.59	25.27
	8H	25.71	26.34	26.35	26.99	27.68	23.65	24.28	24.29	24.93	25.63
	12H	26.41	26.97	27.05	27.62	28.37	24.04	24.60	24.68	25.24	26.00
12H	4H	23.77	24.52	24.39	25.15	25.83	22.43	23.18	23.05	23.81	24.49
	6H	25.09	25.73	25.73	26.38	27.07	23.36	23.99	24.00	24.64	25.34
	8H	25.84	26.40	26.48	27.04	27.80	23.82	24.38	24.46	25.03	25.78