

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: P892819

Luminaire Tested: 2MB-5HL-ASMF-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892819
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: 2MB-5HL-ASMF-UNV-L940
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with FROSTED ASYMMETRIC LENS, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

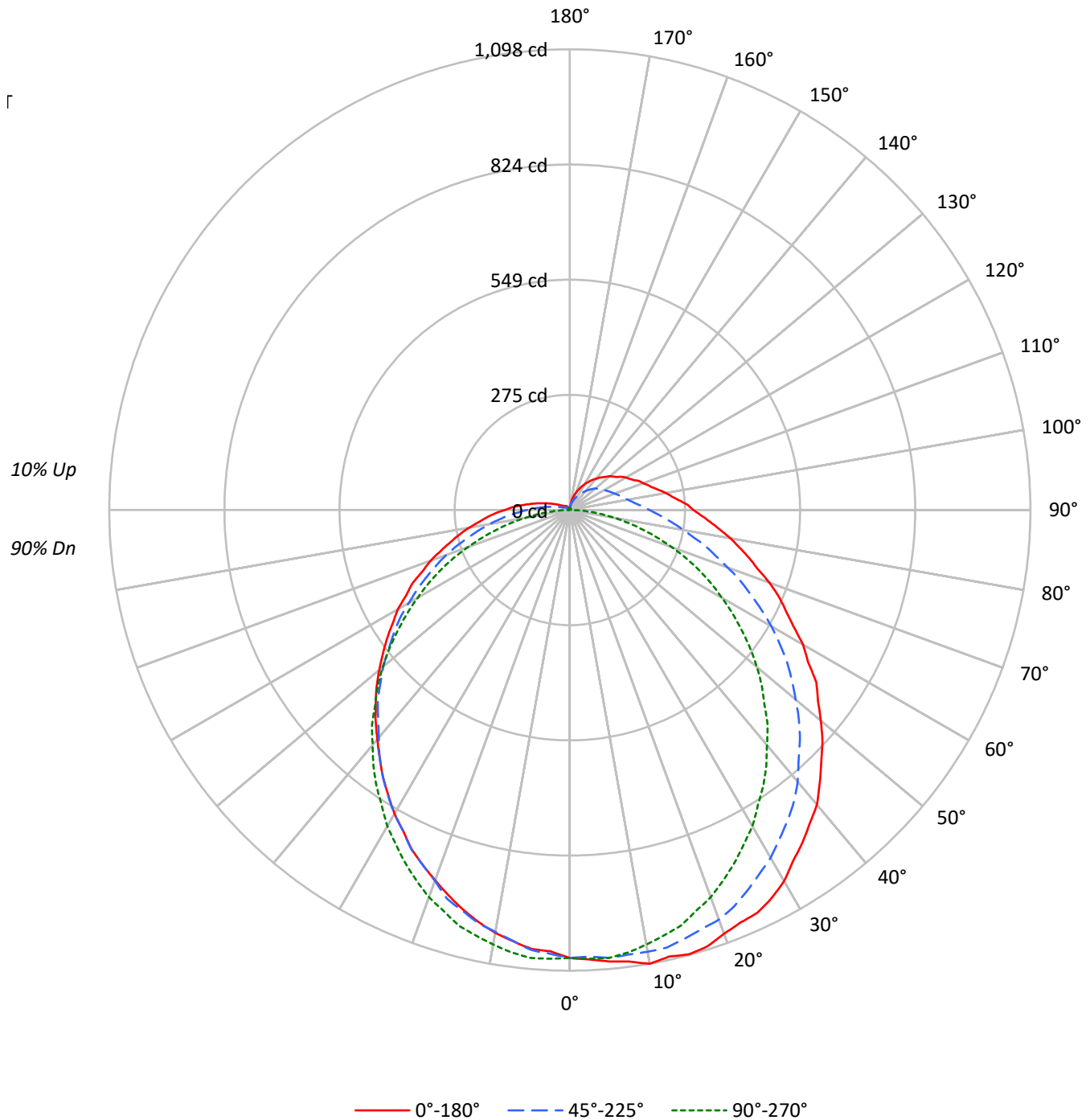
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3671.0 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.21 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.12')
CIE Type: Direct

Input Watts (W): 33.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4.5
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	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	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	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	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	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	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	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	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	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	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	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	22	22	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	21863	21863	21863	21863	21863
5°	22077	21320	21153	20948	21466
10°	22583	20836	20192	19900	21045
15°	22847	20361	19296	19034	20544
20°	22892	19904	18275	18011	20004
25°	23235	19231	17201	17160	19579
30°	23298	18583	16179	16242	19071
35°	23158	17882	15107	15359	18595
40°	23270	17156	14006	14371	18120
45°	23092	16308	12920	13615	17813
50°	23141	15438	11876	12751	17571
55°	23495	14674	10680	11888	17395
60°	23688	13737	9456	10973	17479
65°	24237	12722	8214	10063	17679
70°	25819	11754	6734	9194	18004
75°	28337	11030	5149	8189	18797
80°	33790	10322	3449	7296	21184
85°	45966	10103	1731	6371	27028

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 95375 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	2.8
10°-20°	290.4	7.9
20°-30°	437.8	11.9
30°-40°	525.5	14.3
40°-50°	547.2	14.9
50°-60°	507.3	13.8
60°-70°	417.7	11.4
70°-80°	301.3	8.2
80°-90°	191.3	5.2
90°-100°	117.9	3.2
100°-110°	78.6	2.1
110°-120°	56.0	1.5
120°-130°	41.0	1.1
130°-140°	28.2	0.8
140°-150°	17.2	0.5
150°-160°	8.5	0.2
160°-170°	3.1	0.1
170°-180°	0.5	0.0
0°-30°	829.5	22.6
0°-40°	1355.0	36.9
0°-60°	2409.5	65.6
0°-90°	3319.8	90.4
90°-120°	252.6	6.9
90°-150°	339.0	9.2
90°-180°	351.0	9.6
0°-180°	3671.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1068	1068	1068	1068	1068	
5°	1080	1072	1072	1053	1050	104
15°	1096	1058	1025	989	986	309
25°	1059	1001	928	893	892	487
35°	967	904	804	777	777	606
45°	848	776	656	648	654	656
55°	718	633	500	512	531	637
65°	568	475	341	376	414	566
75°	443	336	179	249	294	469
85°	337	228	47	144	198	286
90°	294	190	4	102	154	162
95°	262	161	3	69	119	208
105°	206	126	3	28	62	220
115°	169	104	3	13	30	169
125°	137	87	4	11	17	125
135°	110	69	4	8	13	86
145°	84	49	4	6	9	53
155°	58	33	4	4	6	27
165°	34	19	4	3	3	10
175°	5	8	5	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°	1067.7	1067.7	1067.7	1067.7	1067.7	1067.7	1067.7	1067.7	1067.7
2.5°	1072.0	1075.2	1065.1	1071.5	1070.4	1071.5	1058.7	1069.3	1052.8
5°	1080.0	1081.6	1071.5	1075.2	1071.5	1062.4	1052.8	1049.1	1050.1
7.5°	1085.4	1093.9	1068.8	1069.9	1063.5	1053.9	1035.7	1038.9	1036.8
10°	1098.2	1088.6	1068.8	1064.0	1051.7	1041.6	1020.8	1022.4	1023.4
12.5°	1090.2	1088.0	1068.3	1050.7	1038.4	1029.8	1008.5	1003.1	1005.8
15°	1096.0	1087.0	1057.6	1043.7	1025.0	1010.1	988.7	985.0	985.5
17.5°	1090.7	1083.2	1046.9	1027.7	1001.5	992.5	972.2	965.8	962.6
20°	1074.7	1070.9	1038.9	1005.8	982.3	964.7	940.1	936.4	939.1
22.5°	1064.0	1054.9	1022.9	989.8	955.6	940.1	915.6	915.1	915.6
25°	1058.7	1046.9	1001.0	966.3	928.4	914.5	893.2	885.2	892.1
27.5°	1042.6	1032.0	978.0	940.1	898.0	879.3	861.7	860.1	861.1
30°	1021.3	1000.5	957.2	910.8	870.2	851.0	836.6	825.9	836.0
32.5°	990.9	979.1	930.0	879.3	834.4	821.1	806.7	805.6	805.6
35°	967.4	958.8	904.4	851.5	803.5	785.3	776.8	773.0	776.8
37.5°	940.1	927.3	877.1	817.9	768.8	753.3	744.7	741.5	744.2
40°	916.7	893.2	845.1	783.2	730.9	717.0	707.9	711.1	713.8
42.5°	882.0	868.6	807.2	748.0	698.3	683.4	675.9	678.5	685.0
45°	847.8	835.5	775.7	711.1	656.1	648.1	647.6	646.0	654.0
47.5°	816.8	799.2	741.0	674.8	620.9	611.8	612.9	618.2	625.2
50°	781.1	760.2	702.6	635.8	581.9	576.0	580.3	584.1	593.1
52.5°	745.3	728.7	667.3	599.0	542.4	538.1	544.0	556.3	561.6
55°	717.5	687.6	632.6	555.8	500.2	500.8	512.5	519.5	531.2
57.5°	673.2	650.8	593.1	517.3	460.7	464.5	480.5	492.2	499.7
60°	641.7	613.4	554.7	476.2	419.1	425.0	443.1	460.7	473.5
62.5°	601.1	576.6	514.6	435.6	380.6	389.2	409.5	430.3	439.4
65°	568.0	540.3	475.1	395.1	340.6	350.8	375.8	399.3	414.3
67.5°	539.7	510.9	439.9	357.7	300.0	315.0	344.3	367.3	379.0
70°	506.1	472.5	399.9	316.1	257.9	275.5	312.8	339.5	352.9
72.5°	470.3	443.1	365.2	277.6	218.9	240.2	281.3	309.1	321.9
75°	442.6	412.1	335.8	239.2	179.4	205.0	249.3	280.8	293.6
77.5°	414.3	386.5	302.7	203.9	144.1	173.0	221.0	255.7	269.1
80°	389.2	357.2	274.9	175.1	107.3	141.5	194.3	228.5	244.0
82.5°	361.4	333.7	250.9	144.7	76.3	112.6	168.2	205.5	218.4
85°	336.9	308.0	228.5	120.7	47.0	87.0	144.1	182.6	198.1
87.5°	314.4	290.4	207.7	102.5	23.5	66.2	121.2	160.2	177.8
90°	294.2	266.9	190.1	86.0	4.3	48.0	102.5	140.9	154.3
92.5°	281.3	248.8	175.6	75.3	2.7	34.2	85.4	123.3	138.8
95°	262.1	233.3	160.7	67.3	2.7	23.0	68.9	105.7	119.1
97.5°	245.6	218.9	150.0	62.5	2.1	15.5	56.6	88.6	102.5
100°	232.8	207.7	140.4	58.2	2.7	11.2	44.8	75.3	87.6
102.5°	218.4	195.4	132.9	55.5	2.7	8.0	35.2	63.5	74.7
105°	205.5	185.3	126.0	52.9	2.7	6.9	28.3	52.3	62.5
107.5°	195.9	174.6	120.1	51.3	2.7	6.9	22.4	42.7	51.3
110°	186.3	166.0	114.2	49.6	2.7	6.4	17.6	35.2	42.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	179.9	158.0	108.9	48.0	3.2	6.4	14.4	29.4	35.2
115°	168.7	151.1	104.1	47.5	3.2	5.9	13.3	24.0	29.9
117.5°	160.7	144.7	99.3	45.9	3.2	5.9	12.8	19.8	24.0
120°	154.8	137.2	95.0	44.3	3.2	5.3	11.7	17.6	20.3
122.5°	147.3	130.3	91.3	43.2	3.2	5.3	11.2	16.5	18.2
125°	137.2	123.9	87.0	41.1	3.7	5.3	10.7	15.5	17.1
127.5°	130.8	118.0	83.8	38.4	3.7	4.8	10.1	14.4	16.0
130°	125.5	111.6	80.1	35.8	3.7	4.8	9.6	13.3	14.9
132.5°	117.5	105.2	74.7	33.6	3.7	4.3	8.5	12.3	13.9
135°	110.0	99.8	69.4	31.5	3.7	4.3	8.0	11.7	12.8
137.5°	105.2	94.5	64.6	29.4	3.7	3.7	7.5	10.7	11.7
140°	97.2	88.6	59.3	27.2	3.7	3.7	6.9	10.1	10.7
142.5°	91.3	82.7	54.5	25.1	3.7	3.7	6.4	9.1	10.1
145°	84.4	76.9	49.1	23.0	3.7	3.2	5.9	8.5	9.1
147.5°	77.9	69.9	44.8	21.4	3.7	3.2	5.3	7.5	8.0
150°	71.5	63.0	40.6	19.8	3.7	3.2	4.8	6.4	7.5
152.5°	64.6	54.5	36.3	18.2	3.7	3.2	4.3	5.9	6.4
155°	57.7	47.5	32.6	16.5	4.3	3.2	3.7	4.8	5.9
157.5°	51.8	41.1	28.8	14.9	4.3	2.7	3.7	4.3	4.8
160°	44.8	35.2	25.6	13.3	4.3	2.7	3.2	3.7	4.3
162.5°	39.5	29.4	22.4	12.3	4.3	2.7	3.2	3.2	3.7
165°	33.6	24.6	18.7	11.2	4.3	2.7	2.7	2.7	3.2
167.5°	27.2	19.2	15.5	10.1	4.3	2.7	2.7	2.1	2.7
170°	20.3	14.4	12.8	9.1	4.3	2.7	2.1	1.6	2.1
172.5°	9.1	11.2	10.1	8.0	4.8	2.7	2.1	1.6	1.1
175°	4.8	8.0	8.0	6.9	4.8	2.7	2.1	1.6	0.5
177.5°	3.7	4.8	5.9	5.9	4.8	3.2	2.1	1.1	0.5
180°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2



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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	21.05	22.53	21.56	23.03	23.57	19.93	21.40	20.43	21.91	22.45
	3H	23.14	24.49	23.66	25.00	25.58	21.76	23.11	22.28	23.62	24.21
	4H	24.08	25.36	24.62	25.89	26.49	22.49	23.76	23.02	24.29	24.89
	6H	25.01	26.19	25.56	26.73	27.35	23.09	24.27	23.64	24.81	25.43
	8H	25.44	26.58	26.00	27.14	27.76	23.32	24.46	23.88	25.02	25.64
	12H	25.86	26.95	26.43	27.51	28.16	23.52	24.61	24.09	25.17	25.82
4H	2H	21.53	22.81	22.07	23.34	23.93	20.50	21.77	21.04	22.30	22.90
	3H	23.85	24.94	24.40	25.50	26.12	22.52	23.61	23.08	24.18	24.80
	4H	24.96	25.96	25.53	26.54	27.19	23.35	24.35	23.93	24.93	25.58
	6H	26.07	26.95	26.66	27.55	28.21	24.08	24.96	24.67	25.56	26.22
	8H	26.60	27.43	27.20	28.03	28.70	24.37	25.20	24.97	25.80	26.47
	12H	27.13	27.88	27.75	28.51	29.19	24.63	25.38	25.25	26.01	26.69
8H	4H	25.21	26.04	25.81	26.64	27.32	23.70	24.52	24.30	25.13	25.80
	6H	26.49	27.19	27.12	27.84	28.52	24.55	25.25	25.18	25.90	26.58
	8H	27.16	27.80	27.80	28.45	29.14	24.93	25.56	25.57	26.21	26.91
	12H	27.87	28.43	28.51	29.08	29.83	25.29	25.85	25.93	26.49	27.25
12H	4H	25.23	25.98	25.85	26.61	27.29	23.76	24.51	24.38	25.15	25.83
	6H	26.55	27.18	27.19	27.83	28.53	24.66	25.30	25.30	25.95	26.64
	8H	27.29	27.85	27.93	28.50	29.25	25.10	25.67	25.75	26.31	27.07