

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: P893147

Luminaire Tested: 4MB-10HL-ACL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893147
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-ACL-UNV-L840
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 4000K
Light Source: -
Ballast/Driver: -

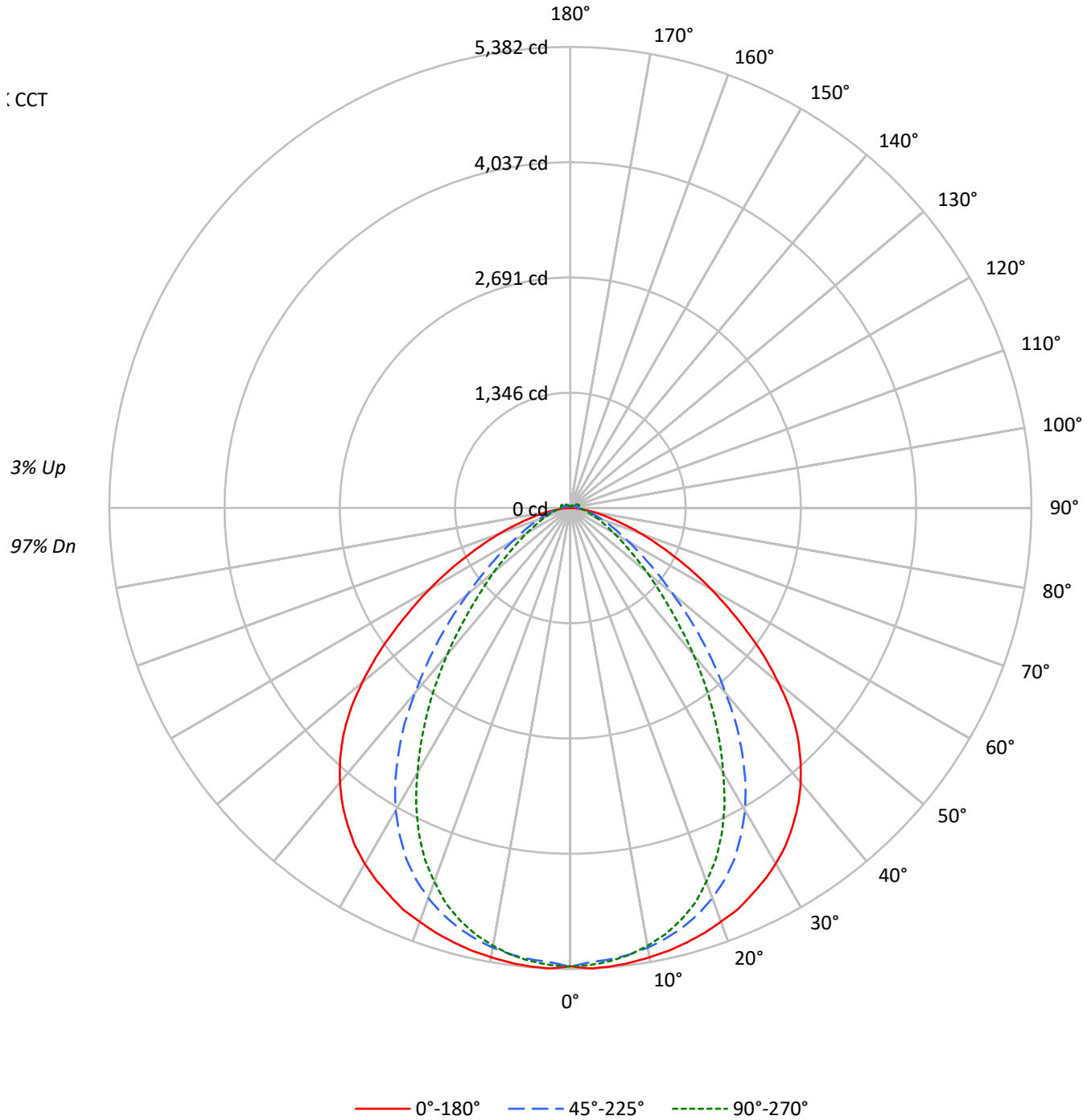
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10855.0 lumens
Efficiency: N/A
Efficacy: 143.8 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	87	87	87	85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	76	76	76	74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	67	67	67	65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	59	59	59	57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	52	52	52	50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	47	47	47	45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	42	42	42	41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	39	39	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	35	35	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	32	32	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	54499	54499	54499
5°	54826	52984	52839
10°	54870	51735	50858
15°	55057	50252	48458
20°	55289	48362	45155
25°	55540	45804	41023
30°	55738	42183	35536
35°	55482	37298	29624
40°	54658	31280	23551
45°	52854	25197	17807
50°	49015	19262	13431
55°	43512	14756	10004
60°	37340	11352	7743
65°	30805	8895	6125
70°	24880	7129	5010
75°	18935	5827	4273
80°	14160	4771	3772
85°	9636	4041	3428

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 52854 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	506.2	4.7
10°-20°	1437.4	13.2
20°-30°	2092.3	19.3
30°-40°	2245.4	20.7
40°-50°	1857.9	17.1
50°-60°	1231.4	11.3
60°-70°	701.6	6.5
70°-80°	347.9	3.2
80°-90°	140.7	1.3
90°-100°	82.7	0.8
100°-110°	73.5	0.7
110°-120°	55.5	0.5
120°-130°	36.9	0.3
130°-140°	22.6	0.2
140°-150°	12.9	0.1
150°-160°	6.6	0.1
160°-170°	2.8	0.0
170°-180°	0.7	0.0
0°-30°	4035.9	37.2
0°-40°	6281.3	57.9
0°-60°	9370.6	86.3
0°-90°	10560.8	97.3
90°-120°	211.7	2.0
90°-150°	284.1	2.6
90°-180°	294.0	2.7
0°-180°	10855.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5351	5351	5351	5351	5351	
5°	5373	5359	5290	5330	5310	511
15°	5251	5209	5068	5022	4982	1484
25°	4991	4860	4526	4279	4185	2303
35°	4528	4168	3497	3039	2906	2829
45°	3747	3043	2163	1742	1624	2871
55°	2524	1784	1112	879	816	2258
65°	1336	896	556	449	425	1342
75°	519	386	279	243	236	573
85°	102	110	128	136	134	118
90°	14	45	87	107	110	13
95°	16	47	88	107	110	13
105°	13	36	80	102	108	13
115°	8	24	61	87	95	8
125°	4	16	44	65	72	4
135°	3	13	30	45	51	3
145°	4	10	20	31	36	3
155°	4	9	14	19	25	2
165°	5	6	10	12	15	2
175°	5	6	8	8	6	1
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5351.3	5351.3	5351.3	5351.3	5351.3
2.5°	5381.5	5369.6	5308.3	5354.6	5340.6
5°	5372.8	5358.9	5290.0	5329.8	5310.4
7.5°	5354.6	5337.3	5259.8	5286.7	5263.1
10°	5325.5	5304.0	5211.4	5216.8	5189.9
12.5°	5294.3	5260.9	5147.9	5132.8	5099.5
15°	5251.2	5209.3	5068.3	5022.0	4982.2
17.5°	5201.7	5143.6	4969.2	4887.4	4835.8
20°	5140.4	5062.9	4846.5	4721.7	4642.0
22.5°	5081.2	4967.1	4700.2	4521.5	4437.5
25°	4990.8	4860.5	4525.8	4279.3	4184.6
27.5°	4901.4	4726.0	4311.6	4009.2	3899.4
30°	4797.0	4566.7	4077.0	3704.6	3569.0
32.5°	4676.5	4392.3	3804.7	3388.2	3243.9
35°	4528.0	4168.5	3496.9	3039.4	2906.0
37.5°	4368.7	3922.0	3179.4	2707.9	2570.2
40°	4183.5	3660.5	2819.9	2363.5	2237.6
42.5°	3978.0	3361.3	2486.2	2039.6	1913.6
45°	3746.6	3042.7	2163.3	1742.5	1624.1
47.5°	3480.7	2716.6	1851.2	1474.5	1375.5
50°	3170.8	2390.4	1558.5	1237.7	1164.5
52.5°	2858.6	2083.7	1322.8	1049.4	970.8
55°	2523.9	1784.5	1111.8	879.3	815.8
57.5°	2199.9	1519.7	928.8	737.3	693.1
60°	1899.7	1282.9	785.7	622.1	586.6
62.5°	1611.2	1081.7	657.6	526.3	495.1
65°	1335.7	895.5	556.4	448.8	425.1
67.5°	1093.5	748.0	469.3	383.2	364.9
70°	883.6	604.9	395.0	328.3	313.2
72.5°	687.8	485.4	331.5	284.1	271.2
75°	518.8	386.4	278.8	243.2	235.7
77.5°	390.7	300.3	230.3	209.9	204.5
80°	270.1	223.9	190.5	181.9	178.7
82.5°	172.2	160.4	156.1	156.1	156.1
85°	102.2	109.8	128.1	135.6	134.5
87.5°	48.4	72.1	103.3	117.3	119.5
90°	14.0	45.2	87.2	106.6	109.8
92.5°	16.1	46.3	87.2	106.6	109.8
95°	16.1	47.4	88.3	106.6	109.8
97.5°	16.1	45.2	87.2	107.6	110.9
100°	16.1	44.1	86.1	106.6	110.9
102.5°	14.0	40.9	82.9	105.5	109.8
105°	12.9	35.5	79.6	102.2	107.6
107.5°	10.8	32.3	76.4	99.0	105.5
110°	9.7	29.1	72.1	95.8	103.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.6	25.8	66.7	92.6	99.0
115°	7.5	23.7	61.3	87.2	94.7
117.5°	6.5	21.5	56.0	81.8	90.4
120°	5.4	19.4	51.7	76.4	84.0
122.5°	5.4	18.3	47.4	70.0	78.6
125°	4.3	16.1	44.1	64.6	72.1
127.5°	4.3	15.1	39.8	59.2	65.7
130°	3.2	15.1	36.6	54.9	61.3
132.5°	3.2	14.0	32.3	49.5	56.0
135°	3.2	12.9	30.1	45.2	50.6
137.5°	3.2	12.9	26.9	42.0	47.4
140°	4.3	11.8	23.7	37.7	43.1
142.5°	4.3	10.8	22.6	34.4	38.7
145°	4.3	9.7	20.4	31.2	35.5
147.5°	4.3	9.7	18.3	28.0	32.3
150°	4.3	8.6	17.2	24.8	29.1
152.5°	4.3	8.6	16.1	21.5	26.9
155°	4.3	8.6	14.0	19.4	24.8
157.5°	4.3	7.5	12.9	17.2	21.5
160°	5.4	7.5	11.8	15.1	19.4
162.5°	5.4	7.5	10.8	14.0	17.2
165°	5.4	6.5	9.7	11.8	15.1
167.5°	5.4	6.5	9.7	10.8	12.9
170°	5.4	6.5	8.6	8.6	9.7
172.5°	5.4	6.5	7.5	8.6	6.5
175°	5.4	6.5	7.5	7.5	6.5
177.5°	5.4	6.5	6.5	7.5	6.5
180°	6.5	6.5	6.5	6.5	6.5



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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	22.56	23.94	22.97	24.31	24.70	17.68	19.06	18.09	19.43	19.82
	3H	23.65	24.89	24.08	25.28	25.71	18.82	20.06	19.24	20.44	20.88
	4H	23.95	25.10	24.39	25.51	25.96	19.32	20.48	19.77	20.89	21.34
	6H	24.09	25.16	24.55	25.58	26.04	19.83	20.90	20.29	21.32	21.78
	8H	24.10	25.12	24.58	25.57	26.03	20.10	21.11	20.57	21.56	22.02
	12H	24.10	25.07	24.57	25.50	26.00	20.39	21.36	20.87	21.80	22.29
4H	2H	22.53	23.69	22.98	24.09	24.54	18.18	19.34	18.62	19.74	20.19
	3H	23.76	24.72	24.22	25.18	25.65	19.50	20.45	19.96	20.91	21.38
	4H	24.14	25.00	24.62	25.47	25.97	20.09	20.95	20.57	21.42	21.93
	6H	24.37	25.11	24.87	25.61	26.13	20.72	21.47	21.23	21.96	22.49
	8H	24.40	25.10	24.91	25.59	26.13	21.05	21.74	21.56	22.24	22.77
	12H	24.41	25.03	24.94	25.56	26.10	21.42	22.04	21.95	22.57	23.11
8H	4H	24.12	24.82	24.63	25.31	25.85	20.34	21.04	20.85	21.53	22.06
	6H	24.39	24.97	24.94	25.51	26.05	21.07	21.65	21.61	22.19	22.73
	8H	24.46	24.98	25.02	25.53	26.09	21.48	22.00	22.04	22.56	23.11
	12H	24.50	24.96	25.05	25.50	26.12	21.97	22.43	22.53	22.97	23.60
12H	4H	24.10	24.72	24.63	25.25	25.78	20.35	20.98	20.88	21.50	22.04
	6H	24.37	24.89	24.93	25.45	26.00	21.11	21.63	21.67	22.18	22.74
	8H	24.47	24.93	25.02	25.47	26.10	21.57	22.03	22.13	22.57	23.20