

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: P893588

Luminaire Tested: 4MB-5SL-AOL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893588
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-5SL-AOL-UNV-L850
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
5000K CCT
Light Source: -
Ballast/Driver: -

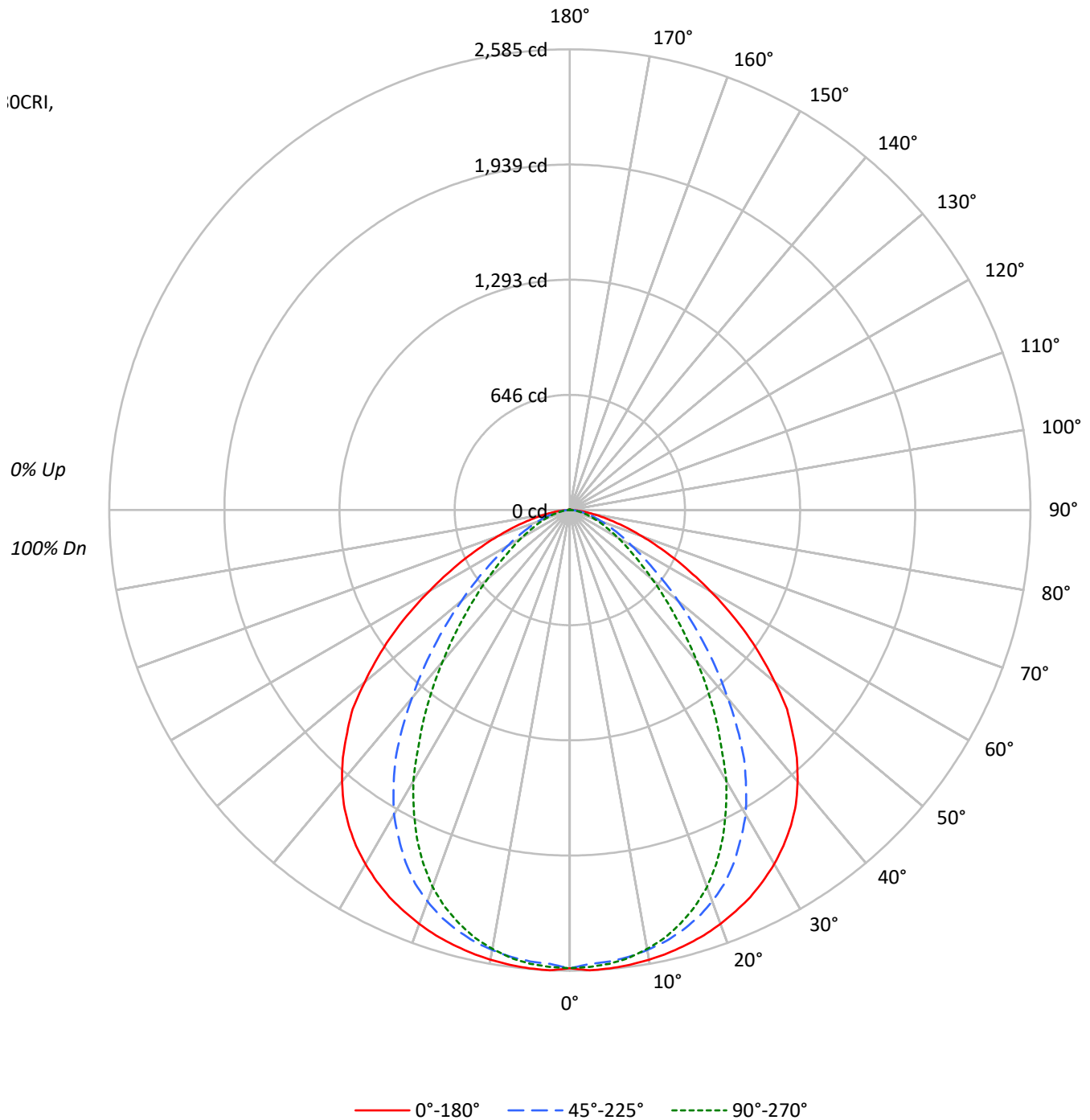
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5135.0 lumens
Efficiency: N/A
Efficacy: 146.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 9.55
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	78	78	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	68	68	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	60	60	60	58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	54	54	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	43	43	43	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	39	39	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	36	36	36	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26180	26180	26180
5°	26392	25993	26128
10°	26500	25928	25858
15°	26636	25742	25315
20°	26780	25326	24392
25°	26931	24502	22812
30°	26978	23214	20656
35°	26889	21205	17767
40°	26440	18352	14764
45°	25458	15421	11948
50°	23823	12559	9568
55°	21525	10094	7672
60°	18564	8217	6353
65°	15709	6841	5224
70°	12822	5818	4437
75°	10270	4903	3774
80°	8000	4193	3243
85°	6205	3704	2933

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25458 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	4.7
10°-20°	692.7	13.5
20°-30°	1009.7	19.7
30°-40°	1088.3	21.2
40°-50°	912.4	17.8
50°-60°	617.7	12.0
60°-70°	352.2	6.9
70°-80°	161.1	3.1
80°-90°	42.2	0.8
90°-100°	5.2	0.1
100°-110°	3.5	0.1
110°-120°	1.9	0.0
120°-130°	1.1	0.0
130°-140°	1.1	0.0
140°-150°	0.9	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1945.8	37.9
0°-40°	3034.1	59.1
0°-60°	4564.1	88.9
0°-90°	5119.6	99.7
90°-120°	10.6	0.2
90°-150°	13.8	0.3
90°-180°	15.0	0.3
0°-180°	5135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2571	2571	2571	2571	2571	
5°	2582	2574	2543	2563	2556	246
15°	2526	2504	2442	2425	2401	714
25°	2397	2333	2180	2080	2030	1104
35°	2163	2000	1706	1497	1429	1350
45°	1768	1475	1071	883	830	1361
55°	1212	887	568	461	432	1080
65°	652	454	284	230	217	650
75°	261	192	125	102	96	285
85°	53	45	32	26	25	62
90°	7	7	4	4	3	7
95°	11	7	4	2	2	9
105°	7	5	2	2	1	8
115°	4	3	2	1	1	4
125°	2	2	2	1	1	2
135°	1	2	2	2	1	1
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	0
175°	2	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2570.6	2570.6	2570.6	2570.6	2570.6
2.5°	2585.3	2578.7	2549.2	2573.5	2566.2
5°	2581.6	2573.5	2542.6	2563.2	2555.8
7.5°	2574.3	2563.9	2529.3	2544.8	2535.2
10°	2562.5	2549.9	2507.2	2516.0	2500.5
12.5°	2546.2	2530.8	2479.9	2477.7	2459.2
15°	2526.3	2504.2	2441.5	2425.3	2401.0
17.5°	2502.0	2474.0	2395.8	2363.4	2333.9
20°	2471.0	2434.9	2336.8	2285.2	2250.6
22.5°	2435.6	2387.0	2268.2	2185.7	2148.1
25°	2396.6	2333.1	2180.5	2080.2	2030.1
27.5°	2347.9	2268.2	2078.7	1949.0	1897.3
30°	2294.1	2193.0	1974.0	1808.1	1756.5
32.5°	2232.9	2106.8	1840.6	1656.2	1583.9
35°	2162.8	1999.8	1705.6	1496.9	1429.1
37.5°	2083.9	1888.5	1544.1	1336.2	1267.6
40°	1988.8	1756.5	1380.4	1174.7	1110.5
42.5°	1886.3	1622.3	1223.3	1021.3	966.0
45°	1767.6	1474.8	1070.7	882.7	829.6
47.5°	1653.3	1325.8	927.7	755.8	712.3
50°	1503.6	1167.3	792.7	640.1	603.9
52.5°	1357.6	1020.6	677.7	547.2	513.2
55°	1212.3	887.1	568.5	460.9	432.1
57.5°	1058.9	756.6	478.6	390.1	370.9
60°	911.4	643.8	403.4	327.4	311.9
62.5°	776.5	539.8	341.4	276.5	261.8
65°	651.9	453.5	283.9	230.1	216.8
67.5°	533.9	373.1	236.7	191.7	182.1
70°	430.6	302.3	195.4	157.8	149.0
72.5°	341.4	241.9	156.3	129.0	119.5
75°	261.0	191.7	124.6	101.8	95.9
77.5°	194.7	144.5	95.9	78.2	73.7
80°	136.4	104.7	71.5	59.0	55.3
82.5°	92.9	72.3	50.1	41.3	39.1
85°	53.1	45.0	31.7	26.5	25.1
87.5°	27.3	23.6	17.0	12.5	11.1
90°	7.4	7.4	4.4	3.7	2.9
92.5°	11.8	6.6	4.4	2.9	2.2
95°	11.1	6.6	3.7	2.2	2.2
97.5°	10.3	6.6	2.9	2.2	1.5
100°	9.6	5.9	2.9	1.5	1.5
102.5°	8.8	5.9	2.9	1.5	1.5
105°	7.4	5.2	2.2	1.5	0.7
107.5°	6.6	4.4	2.2	1.5	0.7
110°	5.2	3.7	2.2	1.5	0.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	3.7	1.5	1.5	0.7
115°	3.7	2.9	1.5	0.7	0.7
117.5°	2.9	2.2	1.5	0.7	0.7
120°	2.2	2.2	1.5	0.7	0.7
122.5°	2.2	1.5	1.5	0.7	0.7
125°	1.5	1.5	1.5	0.7	0.7
127.5°	1.5	1.5	1.5	0.7	0.7
130°	1.5	1.5	1.5	0.7	0.7
132.5°	1.5	1.5	1.5	1.5	0.7
135°	0.7	1.5	1.5	1.5	0.7
137.5°	1.5	1.5	1.5	1.5	1.5
140°	1.5	1.5	1.5	1.5	1.5
142.5°	1.5	1.5	1.5	1.5	1.5
145°	1.5	1.5	1.5	1.5	1.5
147.5°	1.5	1.5	1.5	1.5	1.5
150°	1.5	1.5	1.5	1.5	1.5
152.5°	1.5	1.5	1.5	1.5	1.5
155°	1.5	1.5	1.5	2.2	2.2
157.5°	1.5	1.5	2.2	2.2	2.2
160°	1.5	1.5	2.2	2.2	2.2
162.5°	1.5	1.5	2.2	2.2	2.2
165°	1.5	2.2	2.2	2.2	2.2
167.5°	1.5	2.2	2.2	2.2	2.9
170°	1.5	2.2	2.2	2.9	2.9
172.5°	1.5	2.2	2.2	2.9	2.9
175°	2.2	2.2	2.2	2.9	2.9
177.5°	2.2	2.2	2.2	2.9	2.9
180°	2.2	2.2	2.2	2.2	2.2



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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	21.71	23.15	22.08	23.47	23.79	16.56	17.99	16.93	18.31	18.64
	3H	23.02	24.30	23.40	24.64	25.01	17.57	18.85	17.95	19.19	19.56
	4H	23.45	24.64	23.85	25.00	25.39	17.90	19.10	18.31	19.46	19.85
	6H	23.71	24.82	24.13	25.19	25.59	18.13	19.23	18.55	19.61	20.01
	8H	23.78	24.83	24.22	25.23	25.64	18.20	19.25	18.63	19.64	20.05
	12H	23.82	24.83	24.26	25.21	25.65	18.24	19.24	18.68	19.63	20.07
4H	2H	21.71	22.91	22.12	23.27	23.65	17.18	18.38	17.58	18.73	19.12
	3H	23.18	24.16	23.59	24.57	24.98	18.38	19.36	18.79	19.77	20.18
	4H	23.70	24.59	24.14	25.01	25.46	18.79	19.68	19.23	20.10	20.55
	6H	24.08	24.85	24.54	25.30	25.77	19.10	19.87	19.57	20.32	20.79
	8H	24.19	24.91	24.66	25.36	25.83	19.20	19.91	19.67	20.36	20.84
	12H	24.27	24.90	24.76	25.39	25.87	19.27	19.90	19.76	20.39	20.87
8H	4H	23.68	24.40	24.15	24.85	25.33	19.13	19.84	19.60	20.29	20.77
	6H	24.11	24.70	24.62	25.20	25.69	19.52	20.11	20.02	20.61	21.09
	8H	24.27	24.80	24.79	25.32	25.81	19.66	20.19	20.18	20.71	21.20
	12H	24.40	24.87	24.92	25.37	25.94	19.78	20.25	20.30	20.75	21.32
12H	4H	23.65	24.29	24.14	24.78	25.26	19.17	19.81	19.66	20.30	20.77
	6H	24.08	24.61	24.60	25.13	25.63	19.59	20.12	20.11	20.63	21.13
	8H	24.27	24.74	24.79	25.24	25.81	19.78	20.24	20.29	20.74	21.32