

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: P893903

Luminaire Tested: 4MB-8HL-ACL-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893903
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-8HL-ACL-UNV-L940
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K (C)
Light Source: -
Ballast/Driver: -

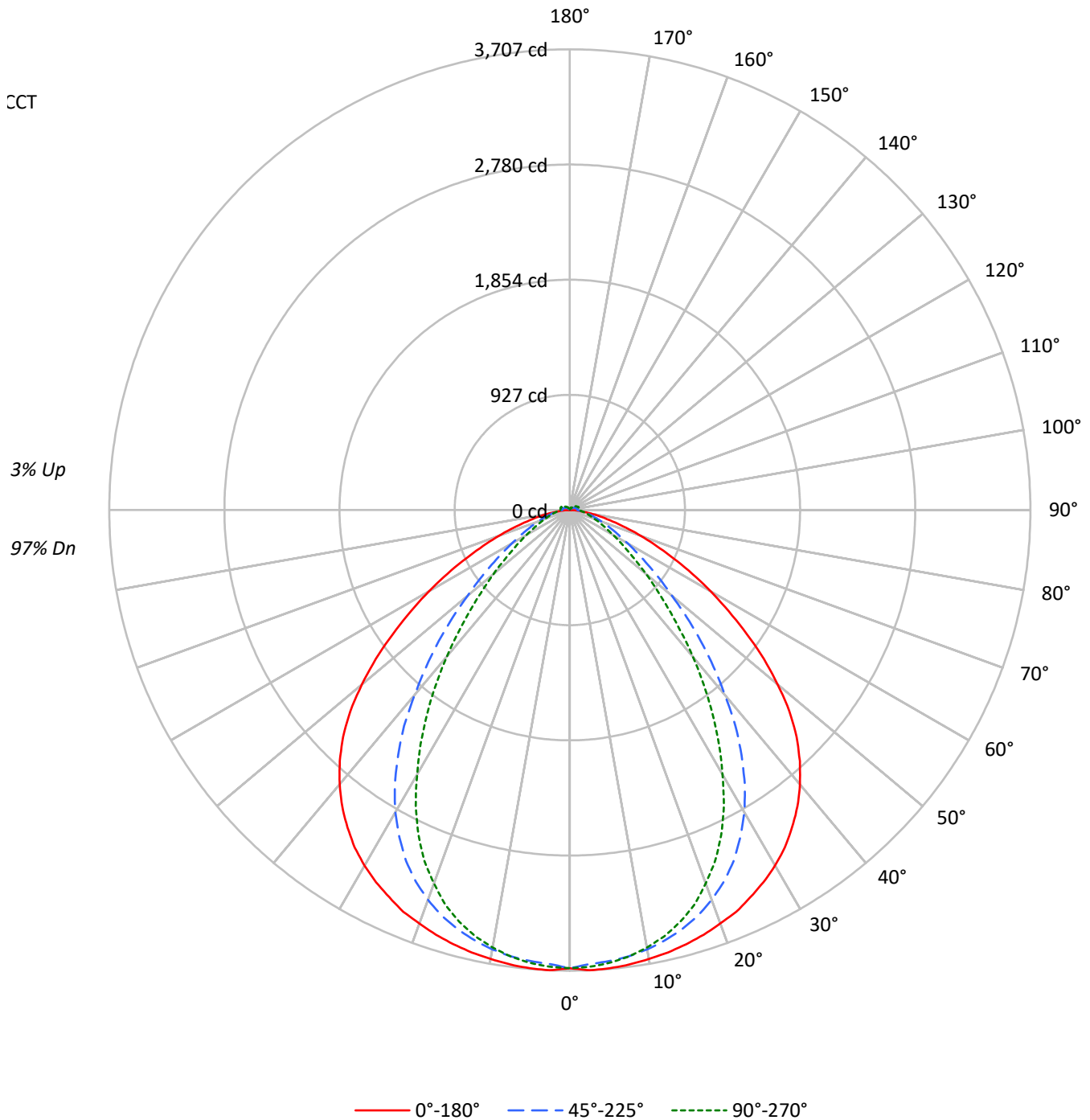
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7477.0 lumens
Efficiency: N/A
Efficacy: 129.1 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): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	97			97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	85			85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	74			74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	65			65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	57			57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	50			50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	45			45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	41			41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37			37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34			34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37539	37539	37539
5°	37766	36496	36397
10°	37795	35636	35031
15°	37924	34614	33377
20°	38083	33312	31104
25°	38256	31550	28257
30°	38392	29056	24477
35°	38216	25691	20406
40°	37650	21547	16222
45°	36407	17356	12266
50°	33761	13268	9251
55°	29972	10164	6891
60°	25719	7820	5332
65°	21218	6128	4219
70°	17139	4911	3450
75°	13040	4013	2944
80°	9756	3286	2598
85°	6638	2783	2363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 36407 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.7	4.7
10°-20°	990.1	13.2
20°-30°	1441.2	19.3
30°-40°	1546.6	20.7
40°-50°	1279.8	17.1
50°-60°	848.2	11.3
60°-70°	483.2	6.5
70°-80°	239.6	3.2
80°-90°	96.9	1.3
90°-100°	56.9	0.8
100°-110°	50.7	0.7
110°-120°	38.2	0.5
120°-130°	25.4	0.3
130°-140°	15.6	0.2
140°-150°	8.9	0.1
150°-160°	4.6	0.1
160°-170°	2.0	0.0
170°-180°	0.5	0.0
0°-30°	2780.0	37.2
0°-40°	4326.6	57.9
0°-60°	6454.5	86.3
0°-90°	7274.3	97.3
90°-120°	145.8	1.9
90°-150°	195.7	2.6
90°-180°	203.0	2.7
0°-180°	7477.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3686	3686	3686	3686	3686	
5°	3701	3691	3644	3671	3658	352
15°	3617	3588	3491	3459	3432	1022
25°	3438	3348	3117	2948	2882	1586
35°	3119	2871	2409	2094	2002	1949
45°	2581	2096	1490	1200	1119	1977
55°	1738	1229	766	606	562	1555
65°	920	617	383	309	293	924
75°	357	266	192	168	162	394
85°	70	76	88	93	93	81
90°	10	31	60	73	76	9
95°	11	33	61	73	76	9
105°	9	24	55	70	74	9
115°	5	16	42	60	65	5
125°	3	11	30	44	50	3
135°	2	9	21	31	35	2
145°	3	7	14	22	24	2
155°	3	6	10	13	17	1
165°	4	4	7	8	10	1
175°	4	4	5	5	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3686.0	3686.0	3686.0	3686.0	3686.0
2.5°	3706.8	3698.6	3656.4	3688.3	3678.6
5°	3700.9	3691.2	3643.8	3671.2	3657.9
7.5°	3688.3	3676.4	3623.0	3641.5	3625.2
10°	3668.2	3653.4	3589.7	3593.4	3574.8
12.5°	3646.7	3623.8	3545.9	3535.5	3512.5
15°	3617.1	3588.2	3491.1	3459.2	3431.7
17.5°	3583.0	3542.9	3422.8	3366.5	3330.9
20°	3540.7	3487.3	3338.3	3252.3	3197.5
22.5°	3499.9	3421.4	3237.5	3114.4	3056.6
25°	3437.7	3348.0	3117.4	2947.6	2882.4
27.5°	3376.1	3255.3	2969.9	2761.6	2685.9
30°	3304.2	3145.6	2808.3	2551.8	2458.3
32.5°	3221.2	3025.5	2620.7	2333.8	2234.5
35°	3118.9	2871.3	2408.7	2093.6	2001.7
37.5°	3009.2	2701.5	2190.0	1865.3	1770.4
40°	2881.7	2521.4	1942.4	1628.0	1541.3
42.5°	2740.1	2315.3	1712.5	1404.9	1318.1
45°	2580.7	2095.8	1490.1	1200.3	1118.7
47.5°	2397.5	1871.2	1275.1	1015.7	947.5
50°	2184.0	1646.6	1073.5	852.6	802.1
52.5°	1969.0	1435.3	911.1	722.8	668.7
55°	1738.5	1229.2	765.8	605.7	561.9
57.5°	1515.3	1046.8	639.8	507.8	477.4
60°	1308.5	883.7	541.2	428.5	404.0
62.5°	1109.8	745.1	453.0	362.5	341.0
65°	920.0	616.8	383.3	309.1	292.8
67.5°	753.2	515.2	323.2	263.9	251.3
70°	608.7	416.6	272.1	226.1	215.7
72.5°	473.7	334.4	228.3	195.7	186.8
75°	357.3	266.1	192.0	167.5	162.4
77.5°	269.1	206.8	158.7	144.6	140.9
80°	186.1	154.2	131.2	125.3	123.1
82.5°	118.6	110.5	107.5	107.5	107.5
85°	70.4	75.6	88.2	93.4	92.7
87.5°	33.4	49.7	71.2	80.8	82.3
90°	9.6	31.1	60.0	73.4	75.6
92.5°	11.1	31.9	60.0	73.4	75.6
95°	11.1	32.6	60.8	73.4	75.6
97.5°	11.1	31.1	60.0	74.1	76.4
100°	11.1	30.4	59.3	73.4	76.4
102.5°	9.6	28.2	57.1	72.7	75.6
105°	8.9	24.5	54.9	70.4	74.1
107.5°	7.4	22.2	52.6	68.2	72.7
110°	6.7	20.0	49.7	66.0	71.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.9	17.8	46.0	63.8	68.2
115°	5.2	16.3	42.3	60.0	65.2
117.5°	4.4	14.8	38.6	56.3	62.3
120°	3.7	13.3	35.6	52.6	57.8
122.5°	3.7	12.6	32.6	48.2	54.1
125°	3.0	11.1	30.4	44.5	49.7
127.5°	3.0	10.4	27.4	40.8	45.2
130°	2.2	10.4	25.2	37.8	42.3
132.5°	2.2	9.6	22.2	34.1	38.6
135°	2.2	8.9	20.8	31.1	34.8
137.5°	2.2	8.9	18.5	28.9	32.6
140°	3.0	8.2	16.3	25.9	29.7
142.5°	3.0	7.4	15.6	23.7	26.7
145°	3.0	6.7	14.1	21.5	24.5
147.5°	3.0	6.7	12.6	19.3	22.2
150°	3.0	5.9	11.9	17.1	20.0
152.5°	3.0	5.9	11.1	14.8	18.5
155°	3.0	5.9	9.6	13.3	17.1
157.5°	3.0	5.2	8.9	11.9	14.8
160°	3.7	5.2	8.2	10.4	13.3
162.5°	3.7	5.2	7.4	9.6	11.9
165°	3.7	4.4	6.7	8.2	10.4
167.5°	3.7	4.4	6.7	7.4	8.9
170°	3.7	4.4	5.9	5.9	6.7
172.5°	3.7	4.4	5.2	5.9	4.4
175°	3.7	4.4	5.2	5.2	4.4
177.5°	3.7	4.4	4.4	5.2	4.4
180°	4.4	4.4	4.4	4.4	4.4



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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	21.26	22.65	21.67	23.02	23.40	16.38	17.77	16.79	18.14	18.52
	3H	22.36	23.59	22.78	23.98	24.41	17.52	18.76	17.95	19.15	19.58
	4H	22.65	23.81	23.10	24.21	24.66	18.03	19.19	18.47	19.59	20.04
	6H	22.80	23.86	23.26	24.29	24.75	18.54	19.60	18.99	20.03	20.49
	8H	22.81	23.83	23.28	24.27	24.74	18.80	19.82	19.27	20.26	20.73
	12H	22.80	23.77	23.28	24.21	24.70	19.10	20.07	19.57	20.50	21.00
4H	2H	21.23	22.39	21.68	22.80	23.25	16.88	18.04	17.33	18.45	18.89
	3H	22.47	23.43	22.93	23.88	24.35	18.20	19.16	18.66	19.61	20.08
	4H	22.84	23.70	23.32	24.17	24.68	18.80	19.66	19.28	20.13	20.63
	6H	23.07	23.82	23.58	24.31	24.84	19.43	20.17	19.93	20.67	21.19
	8H	23.11	23.80	23.62	24.30	24.83	19.75	20.45	20.26	20.94	21.48
	12H	23.11	23.74	23.64	24.26	24.80	20.13	20.75	20.66	21.28	21.81
8H	4H	22.83	23.52	23.34	24.02	24.55	19.04	19.74	19.55	20.24	20.77
	6H	23.10	23.67	23.64	24.22	24.76	19.78	20.35	20.32	20.89	21.44
	8H	23.16	23.68	23.72	24.24	24.79	20.18	20.70	20.74	21.26	21.81
	12H	23.20	23.66	23.76	24.20	24.83	20.68	21.14	21.23	21.68	22.30
12H	4H	22.80	23.42	23.33	23.95	24.49	19.06	19.68	19.59	20.21	20.74
	6H	23.08	23.59	23.64	24.15	24.71	19.81	20.33	20.37	20.89	21.44
	8H	23.17	23.63	23.73	24.17	24.80	20.27	20.73	20.83	21.27	21.90