

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: P892705

Luminaire Tested: 2MB-4HL-ACL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892705
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-ACL-UNV-L930
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

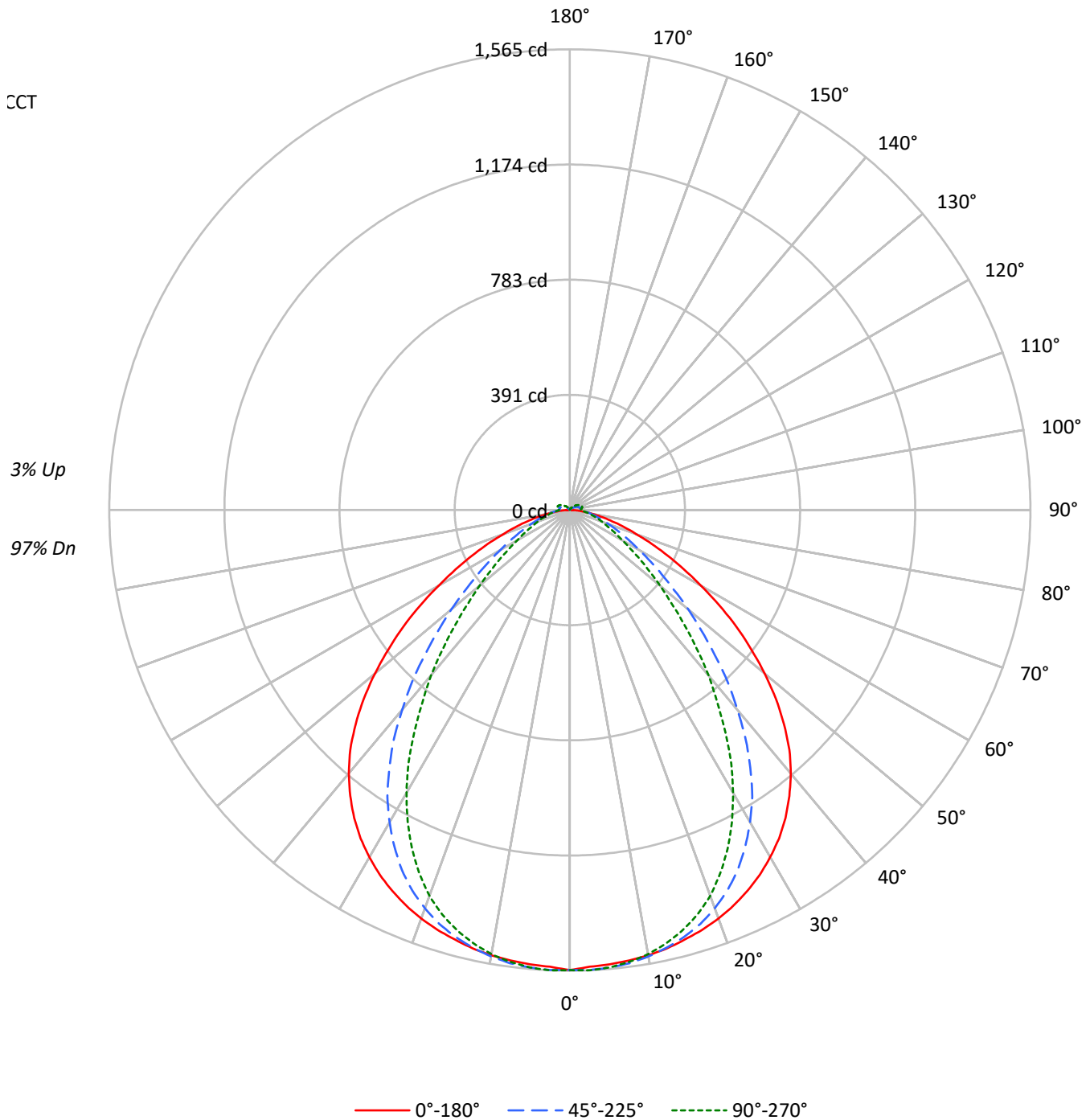
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3340.0 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.09 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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
RCR																				
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	97	
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	89	88	86	89	84	
2	101	94	88	83	98	92	86	82	88	83	79	84	80	77	81	77	75	81	73	
3	93	84	77	71	90	82	75	70	79	73	68	76	71	67	73	69	65	73	63	
4	86	75	68	62	84	74	67	61	71	65	60	68	63	59	66	61	58	66	56	
5	80	68	60	54	78	67	59	54	65	58	53	62	57	52	60	55	51	60	49	
6	74	62	54	48	72	61	53	48	59	52	47	57	51	46	55	50	46	55	44	
7	69	57	49	43	67	56	48	43	54	47	42	52	46	42	51	45	41	51	39	
8	65	52	44	39	63	51	44	39	50	43	38	48	42	38	47	42	37	47	36	
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	38	34	44	32	
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	41	30	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	31999	31999	31999
5°	31735	31377	31197
10°	31700	30657	30185
15°	31664	29816	28913
20°	31688	28745	27282
25°	31631	27295	25009
30°	31430	25294	22212
35°	31015	22721	18873
40°	30163	19545	15520
45°	28600	16123	12107
50°	26227	12867	9269
55°	23266	10033	7133
60°	19665	7788	5493
65°	16252	6166	4447
70°	12965	4971	3718
75°	10270	4105	3190
80°	7768	3489	2746
85°	5806	3007	2409

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 28600 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.1	4.4
10°-20°	422.4	12.6
20°-30°	619.5	18.5
30°-40°	675.6	20.2
40°-50°	573.3	17.2
50°-60°	390.3	11.7
60°-70°	227.8	6.8
70°-80°	118.6	3.6
80°-90°	51.7	1.5
90°-100°	32.8	1.0
100°-110°	30.3	0.9
110°-120°	22.5	0.7
120°-130°	13.6	0.4
130°-140°	7.2	0.2
140°-150°	3.6	0.1
150°-160°	1.8	0.1
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	1190.1	35.6
0°-40°	1865.7	55.9
0°-60°	2829.2	84.7
0°-90°	3227.2	96.6
90°-120°	85.7	2.6
90°-150°	110.1	3.3
90°-180°	113.0	3.4
0°-180°	3340.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1563	1563	1563	1563	1563	
5°	1550	1557	1560	1561	1559	147
15°	1510	1514	1501	1488	1478	427
25°	1428	1407	1350	1297	1269	658
35°	1277	1212	1069	962	921	797
45°	1029	901	697	587	549	791
55°	691	550	382	307	289	616
65°	366	289	196	162	154	366
75°	150	129	101	91	88	164
85°	37	44	50	48	47	39
90°	6	20	35	37	37	6
95°	11	22	36	39	38	8
105°	3	16	33	42	43	4
115°	3	10	26	36	38	2
125°	1	5	15	24	28	1
135°	1	4	9	14	17	1
145°	1	3	6	8	10	1
155°	1	2	4	6	6	1
165°	1	1	3	3	4	0
175°	1	1	2	2	1	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1562.7	1562.7	1562.7	1562.7	1562.7
2.5°	1552.9	1560.1	1564.0	1566.6	1565.3
5°	1549.6	1556.8	1560.1	1561.4	1559.4
7.5°	1543.1	1550.9	1552.9	1551.6	1548.3
10°	1535.9	1542.5	1539.8	1536.6	1532.0
12.5°	1525.5	1530.1	1522.9	1515.7	1508.5
15°	1510.5	1514.4	1501.3	1487.6	1478.5
17.5°	1495.4	1494.1	1474.5	1452.3	1441.2
20°	1476.5	1469.3	1439.9	1407.9	1394.9
22.5°	1454.3	1441.9	1398.8	1355.7	1336.1
25°	1427.5	1407.3	1349.8	1296.9	1268.8
27.5°	1397.5	1368.8	1290.4	1224.4	1193.1
30°	1361.6	1322.4	1225.1	1144.1	1109.5
32.5°	1323.0	1272.8	1153.9	1052.7	1020.7
35°	1277.3	1212.0	1069.0	961.9	920.8
37.5°	1225.1	1142.2	982.2	864.6	821.5
40°	1168.3	1068.4	885.5	768.0	733.4
42.5°	1104.3	990.0	795.4	672.0	637.4
45°	1029.2	901.2	696.8	587.1	549.2
47.5°	950.2	813.7	606.0	498.9	467.6
50°	864.6	721.6	525.0	427.1	399.7
52.5°	776.5	636.1	447.3	361.8	338.9
55°	690.9	549.9	382.0	306.9	289.3
57.5°	601.4	477.4	324.6	261.2	243.6
60°	515.2	404.2	273.0	220.7	207.0
62.5°	437.5	340.9	232.5	188.1	178.3
65°	365.7	288.6	195.9	162.0	153.5
67.5°	301.7	239.0	167.8	140.4	132.6
70°	241.6	195.3	140.4	120.8	115.6
72.5°	195.9	162.6	118.9	105.8	101.9
75°	150.2	129.3	100.6	91.4	87.5
77.5°	113.0	101.2	85.5	78.4	75.1
80°	81.6	78.4	71.8	67.9	64.7
82.5°	56.2	59.4	60.1	56.8	55.5
85°	36.6	43.8	49.6	48.3	47.0
87.5°	20.2	29.4	40.5	41.1	39.8
90°	5.9	19.6	34.6	37.2	36.6
92.5°	11.1	20.9	35.3	37.9	37.2
95°	11.1	21.6	35.9	39.2	38.5
97.5°	10.4	21.6	36.6	40.5	40.5
100°	5.2	20.9	36.6	41.8	41.8
102.5°	3.3	18.9	35.3	42.4	43.1
105°	3.3	16.3	33.3	42.4	43.1
107.5°	3.3	13.7	32.0	41.1	43.1
110°	2.6	11.8	30.0	39.2	41.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	10.4	28.1	37.9	40.5
115°	2.6	9.8	25.5	35.9	38.5
117.5°	2.0	8.5	22.2	33.3	36.6
120°	2.0	7.2	19.6	30.7	34.0
122.5°	1.3	6.5	17.0	27.4	31.3
125°	1.3	5.2	15.0	24.2	28.1
127.5°	1.3	5.2	13.7	21.6	24.8
130°	1.3	4.6	11.8	18.9	21.6
132.5°	1.3	4.6	10.4	16.3	18.9
135°	1.3	3.9	9.1	14.4	17.0
137.5°	1.3	3.9	8.5	12.4	15.0
140°	1.3	3.3	7.2	11.1	13.1
142.5°	1.3	3.3	6.5	9.8	11.1
145°	1.3	2.6	5.9	8.5	9.8
147.5°	1.3	2.6	5.2	7.2	8.5
150°	1.3	2.6	5.2	6.5	7.2
152.5°	1.3	2.0	4.6	5.9	6.5
155°	1.3	2.0	3.9	5.9	5.9
157.5°	1.3	2.0	3.3	5.2	5.9
160°	1.3	2.0	3.3	4.6	5.2
162.5°	1.3	2.0	2.6	3.3	4.6
165°	1.3	1.3	2.6	3.3	3.9
167.5°	1.3	1.3	2.0	2.6	3.3
170°	1.3	1.3	2.0	2.0	2.0
172.5°	1.3	1.3	2.0	2.0	1.3
175°	1.3	1.3	2.0	2.0	1.3
177.5°	1.3	1.3	2.0	2.0	1.3
180°	1.3	1.3	1.3	1.3	1.3



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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	20.73	22.13	21.15	22.51	22.91	16.83	18.23	17.26	18.61	19.02
	3H	21.76	23.00	22.19	23.40	23.85	18.04	19.28	18.47	19.68	20.13
	4H	22.05	23.22	22.51	23.64	24.10	18.57	19.74	19.03	20.16	20.62
	6H	22.20	23.28	22.67	23.72	24.19	19.08	20.16	19.55	20.59	21.07
	8H	22.23	23.25	22.71	23.71	24.19	19.32	20.35	19.81	20.81	21.29
	12H	22.23	23.21	22.72	23.66	24.17	19.58	20.56	20.06	21.01	21.52
4H	2H	20.76	21.93	21.22	22.35	22.82	17.33	18.50	17.79	18.92	19.38
	3H	21.96	22.92	22.43	23.39	23.88	18.72	19.69	19.19	20.15	20.64
	4H	22.35	23.22	22.84	23.70	24.22	19.36	20.23	19.85	20.71	21.23
	6H	22.59	23.35	23.11	23.86	24.40	19.99	20.75	20.50	21.25	21.79
	8H	22.64	23.35	23.16	23.86	24.41	20.29	21.00	20.81	21.51	22.06
	12H	22.67	23.30	23.21	23.84	24.39	20.62	21.25	21.16	21.79	22.34
8H	4H	22.37	23.08	22.89	23.59	24.13	19.60	20.30	20.12	20.81	21.36
	6H	22.68	23.27	23.23	23.82	24.38	20.34	20.93	20.90	21.49	22.04
	8H	22.77	23.30	23.34	23.87	24.44	20.73	21.26	21.30	21.83	22.40
	12H	22.84	23.31	23.41	23.86	24.50	21.17	21.64	21.74	22.19	22.83
12H	4H	22.36	22.99	22.90	23.53	24.08	19.61	20.24	20.15	20.78	21.33
	6H	22.67	23.20	23.24	23.77	24.34	20.39	20.91	20.96	21.48	22.05
	8H	22.81	23.28	23.37	23.83	24.47	20.83	21.30	21.40	21.85	22.49