

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: P893550

Luminaire Tested: 4MB-4SL-RFLW-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-RFLW-UNV-L935
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 3500K
Light Source: -
Ballast/Driver: -

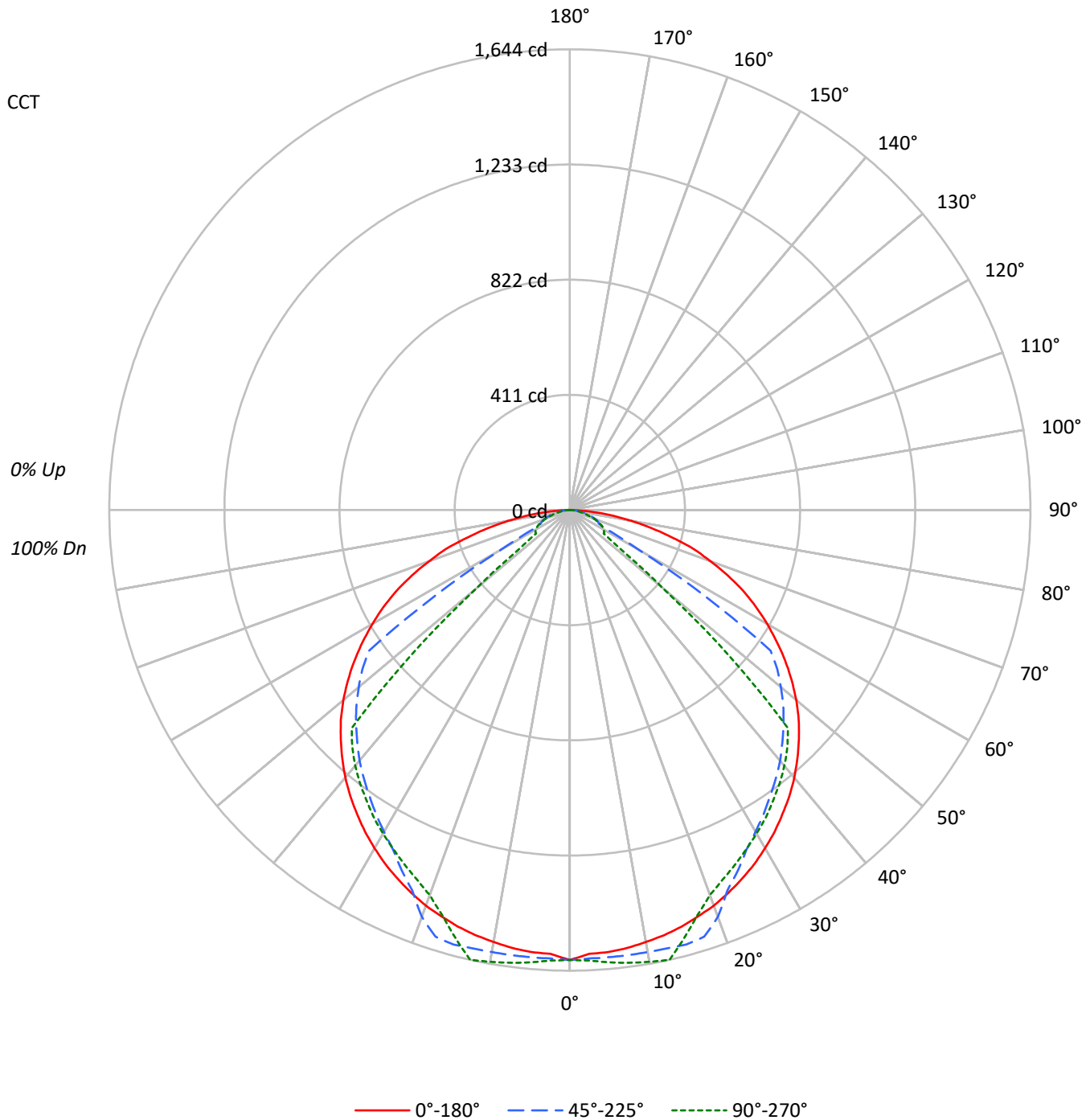
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3916.0 lumens
Efficiency: N/A
Efficacy: 131.4 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893550
CATALOG NUMBER: 4MB-4SL-RFLW-UNV-L935

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	89	89	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	66	66	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	61	55	51	51	51	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	40	40	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	36	36	36	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	33	33	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20849	20849	20849
5°	20640	20880	21120
10°	20636	21122	21583
15°	20693	21584	21237
20°	20762	21347	20203
25°	20815	20339	19997
30°	20898	19877	19988
35°	20986	19759	20053
40°	21129	19788	20194
45°	21234	19814	20220
50°	21312	19862	8741
55°	21258	19800	3335
60°	21135	7555	3633
65°	20988	3509	3733
70°	20274	3774	3497
75°	18939	3602	3050
80°	16661	3163	2617
85°	13170	2741	2190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 21312 cd/sqm



TEST NUMBER: P893550
 CATALOG NUMBER: 4MB-4SL-RFLW-UNV-L935

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.3	3.9
10°-20°	445.2	11.4
20°-30°	664.3	17.0
30°-40°	805.2	20.6
40°-50°	824.5	21.1
50°-60°	548.3	14.0
60°-70°	312.5	8.0
70°-80°	131.3	3.4
80°-90°	31.3	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1262.9	32.2
0°-40°	2068.1	52.8
0°-60°	3440.9	87.9
0°-90°	3916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1606	1606	1606	1606	1606	
5°	1584	1615	1602	1606	1620	151
15°	1539	1582	1606	1600	1580	435
25°	1453	1523	1420	1388	1396	670
35°	1324	1348	1246	1252	1265	829
45°	1156	1086	1079	1092	1101	892
55°	939	860	875	192	147	839
65°	683	611	114	122	122	672
75°	378	79	72	63	61	401
85°	88	22	18	15	15	106
90°	0	0	0	0	0	



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CATALOG NUMBER: 4MB-4SL-RFLW-UNV-L935

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1605.6	1605.6	1605.6	1605.6	1605.6
2.5°	1585.3	1618.5	1601.9	1603.7	1609.3
5°	1583.5	1614.8	1601.9	1605.6	1620.3
7.5°	1576.1	1609.3	1601.9	1613.0	1629.5
10°	1565.1	1603.7	1601.9	1620.3	1636.9
12.5°	1554.0	1592.7	1601.9	1629.5	1644.3
15°	1539.3	1581.7	1605.6	1600.1	1579.8
17.5°	1520.9	1570.6	1596.4	1517.2	1515.4
20°	1502.5	1555.9	1544.8	1469.3	1462.0
22.5°	1478.5	1541.1	1469.3	1417.8	1427.0
25°	1452.8	1522.7	1419.6	1388.3	1395.7
27.5°	1425.1	1504.3	1366.2	1355.2	1364.4
30°	1393.8	1478.5	1325.7	1322.0	1333.1
32.5°	1360.7	1428.8	1287.0	1288.9	1301.8
35°	1323.9	1347.8	1246.5	1252.1	1265.0
37.5°	1287.0	1272.3	1207.9	1217.1	1230.0
40°	1246.5	1213.4	1167.4	1176.6	1191.3
42.5°	1202.4	1150.8	1123.2	1136.1	1149.0
45°	1156.3	1086.4	1079.0	1091.9	1101.1
47.5°	1108.4	1031.1	1033.0	1042.2	780.7
50°	1055.0	975.9	983.2	681.3	432.7
52.5°	998.0	918.8	933.5	379.3	219.1
55°	939.0	859.9	874.6	191.5	147.3
57.5°	876.4	801.0	570.8	138.1	145.5
60°	813.8	738.4	290.9	136.3	139.9
62.5°	749.4	675.7	138.1	130.7	132.6
65°	683.1	611.3	114.2	121.5	121.5
67.5°	609.5	543.2	108.6	108.6	106.8
70°	534.0	451.1	99.4	93.9	92.1
72.5°	464.0	173.1	86.5	77.3	75.5
75°	377.5	79.2	71.8	62.6	60.8
77.5°	300.1	66.3	57.1	49.7	47.9
80°	222.8	51.6	42.3	36.8	35.0
82.5°	154.7	35.0	29.5	23.9	23.9
85°	88.4	22.1	18.4	14.7	14.7
87.5°	35.0	11.0	9.2	5.5	5.5
90°	0.0	0.0	0.0	0.0	0.0



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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	23.48	25.00	23.84	25.31	25.63	11.24	12.77	11.61	13.08	13.39
	3H	25.50	26.86	25.88	27.19	27.55	13.56	14.92	13.94	15.25	15.61
	4H	25.96	27.23	26.36	27.58	27.96	14.27	15.54	14.67	15.89	16.27
	6H	26.37	27.54	26.78	27.91	28.30	14.76	15.93	15.17	16.30	16.69
	8H	26.52	27.63	26.94	28.02	28.42	14.89	16.01	15.32	16.40	16.80
	12H	26.62	27.68	27.05	28.06	28.49	14.98	16.05	15.41	16.43	16.86
4H	2H	23.32	24.59	23.72	24.94	25.32	12.04	13.31	12.44	13.66	14.04
	3H	25.52	26.57	25.93	26.97	27.37	14.55	15.60	14.96	16.00	16.40
	4H	25.97	26.91	26.40	27.33	27.76	15.37	16.31	15.81	16.73	17.17
	6H	26.44	27.25	26.89	27.69	28.15	15.97	16.78	16.42	17.22	17.68
	8H	26.63	27.39	27.09	27.83	28.30	16.13	16.90	16.60	17.34	17.81
	12H	26.78	27.46	27.26	27.94	28.41	16.25	16.93	16.73	17.41	17.88
8H	4H	25.89	26.65	26.35	27.09	27.56	16.21	16.97	16.68	17.42	17.89
	6H	26.35	26.98	26.85	27.47	27.95	16.83	17.46	17.33	17.95	18.43
	8H	26.55	27.11	27.06	27.62	28.11	17.03	17.60	17.55	18.11	18.60
	12H	26.73	27.23	27.24	27.73	28.29	17.19	17.69	17.70	18.18	18.75
12H	4H	25.86	26.54	26.34	27.02	27.49	16.28	16.96	16.77	17.44	17.91
	6H	26.30	26.87	26.82	27.38	27.87	16.93	17.49	17.44	18.00	18.49
	8H	26.52	27.03	27.03	27.52	28.08	17.18	17.68	17.69	18.17	18.74