

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: P893504

Luminaire Tested: 4MB-4SL-ASYMR-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893504
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-ASYMR-UNV-L950
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

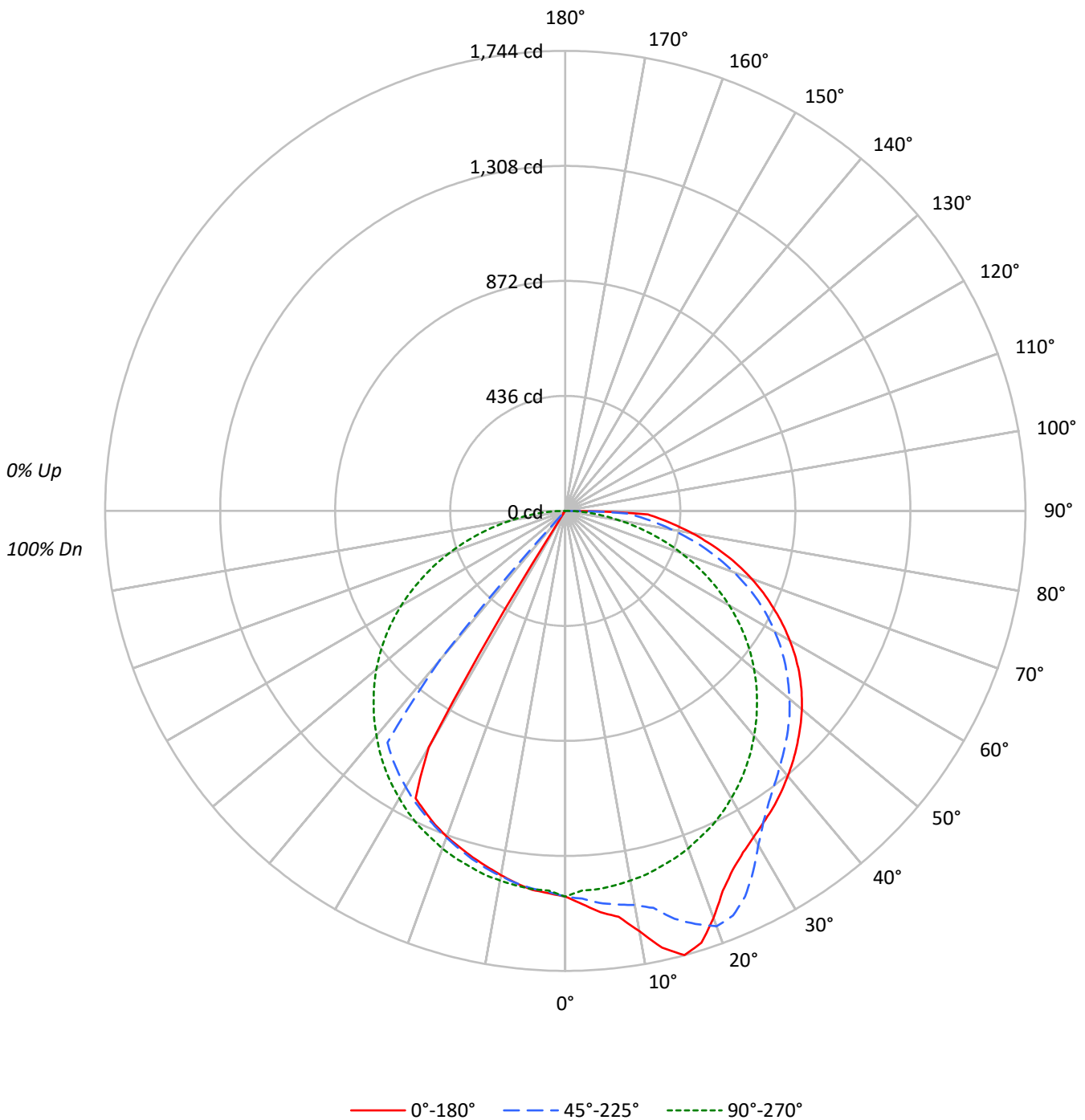
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3956.0 lumens
Efficiency: N/A
Efficacy: 132.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.28 / 1.25
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V):
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

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	85	85	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	71	71	71	69
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	53	53	53	50
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	41	41	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	18985	18985	18985	18985	18985
5°	19910	19452	18763	18731	18796
10°	21333	20008	18760	18539	18485
15°	23438	21525	18767	18361	18271
20°	22693	23156	18817	18214	18156
25°	21501	23109	18861	18153	18021
30°	21408	21936	18859	18131	15520
35°	21771	21332	18891	18133	212
40°	22243	21434	18865	12506	142
45°	22852	21867	18869	231	92
50°	23650	22415	18880	170	34
55°	24552	23053	18826	113	18
60°	25531	23835	18660	44	21
65°	26734	24777	18318	52	52
70°	28520	25817	17741	65	65
75°	31216	27478	16973	166	85
80°	36634	30749	15718	247	127
85°	54529	43162	14720	372	253

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 93475 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.1	3.5
10°-20°	418.3	10.6
20°-30°	643.1	16.3
30°-40°	689.2	17.4
40°-50°	625.9	15.8
50°-60°	570.9	14.4
60°-70°	424.7	10.7
70°-80°	298.9	7.6
80°-90°	144.8	3.7
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°	1201.5	30.4
0°-40°	1890.7	47.8
0°-60°	3087.5	78.0
0°-90°	3956.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3956.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1462	1462	1462	1462	1462	
5°	1528	1492	1440	1437	1442	148
15°	1744	1601	1396	1366	1359	481
25°	1501	1613	1316	1267	1258	698
35°	1373	1346	1192	1144	13	860
45°	1244	1191	1028	13	5	961
55°	1084	1018	832	5	1	969
65°	870	806	596	2	2	861
75°	622	548	338	3	2	656
85°	366	290	99	2	2	368
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1462.1	1462.1	1462.1	1462.1	1462.1	1462.1	1462.1	1462.1	1462.1
2.5°	1492.3	1475.5	1471.4	1483.1	1440.4	1468.8	1445.4	1450.4	1450.4
5°	1527.5	1504.0	1492.3	1488.9	1439.5	1458.8	1437.0	1437.0	1442.0
7.5°	1551.8	1525.8	1504.9	1496.5	1432.0	1448.7	1423.6	1423.6	1423.6
10°	1617.9	1569.3	1517.4	1502.3	1422.8	1435.3	1406.0	1407.7	1401.9
12.5°	1695.8	1652.2	1541.7	1499.8	1412.7	1418.6	1387.6	1386.8	1380.1
15°	1743.5	1710.9	1601.2	1496.5	1396.0	1401.0	1365.8	1363.3	1359.1
17.5°	1716.7	1711.7	1642.2	1494.0	1380.9	1376.7	1341.6	1339.0	1335.7
20°	1642.2	1654.8	1675.7	1488.9	1361.7	1353.3	1318.1	1316.4	1313.9
22.5°	1559.3	1571.8	1660.6	1497.3	1338.2	1328.2	1293.0	1291.3	1288.0
25°	1500.7	1500.7	1612.9	1517.4	1316.4	1298.0	1267.0	1264.5	1257.8
27.5°	1459.6	1452.1	1541.7	1540.0	1288.8	1267.9	1239.4	1236.9	1228.5
30°	1427.8	1415.3	1463.0	1550.9	1257.8	1235.2	1209.2	1206.7	1035.1
32.5°	1399.3	1385.9	1396.8	1560.1	1226.8	1200.0	1177.4	839.9	36.8
35°	1373.4	1358.3	1345.7	1553.4	1191.7	1164.9	1143.9	24.3	13.4
37.5°	1344.1	1332.3	1303.9	1518.3	1154.0	1127.2	1107.1	13.4	11.7
40°	1312.2	1301.4	1264.5	1466.3	1112.9	1090.3	737.8	11.7	8.4
42.5°	1279.6	1271.2	1227.7	1391.0	1071.9	1049.3	23.4	9.2	6.7
45°	1244.4	1236.9	1190.8	1299.7	1027.5	1006.6	12.6	6.7	5.0
47.5°	1208.4	1197.5	1152.3	1201.7	982.3	961.4	10.9	5.0	3.3
50°	1170.7	1159.0	1109.6	1115.5	934.6	913.6	8.4	3.3	1.7
52.5°	1128.9	1114.6	1064.4	1037.6	884.3	865.1	6.7	1.7	0.8
55°	1084.5	1068.6	1018.3	969.7	831.6	809.8	5.0	1.7	0.8
57.5°	1035.1	1017.5	969.7	905.3	775.5	547.7	3.3	1.7	0.8
60°	983.1	965.6	917.8	845.0	718.5	37.7	1.7	1.7	0.8
62.5°	927.9	909.4	863.4	783.8	657.4	31.0	1.7	1.7	1.7
65°	870.1	848.3	806.4	721.0	596.2	26.0	1.7	1.7	1.7
67.5°	812.3	784.7	745.3	656.5	533.4	21.8	1.7	1.7	1.7
70°	751.2	721.0	680.0	591.2	467.3	17.6	1.7	1.7	1.7
72.5°	688.4	659.1	614.7	525.1	405.3	13.4	1.7	1.7	1.7
75°	622.2	595.4	547.7	458.9	338.3	10.0	3.3	1.7	1.7
77.5°	553.5	532.6	479.0	391.1	273.0	6.7	3.3	1.7	1.7
80°	489.9	466.4	411.2	322.4	210.2	5.0	3.3	2.5	1.7
82.5°	424.6	403.6	348.4	259.6	150.7	4.2	3.3	2.5	1.7
85°	366.0	345.9	289.7	202.7	98.8	3.3	2.5	2.5	1.7
87.5°	314.0	295.6	240.3	148.2	56.1	2.5	2.5	2.5	1.7
90°	0.0	0.0	0.0	0.0	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	24.76	26.37	25.12	26.69	27.00	20.19	21.81	20.56	22.12	22.43
	3H	27.21	28.67	27.58	29.00	29.36	20.83	22.30	21.21	22.63	22.99
	4H	28.33	29.71	28.73	30.06	30.44	20.98	22.36	21.38	22.71	23.08
	6H	29.42	30.71	29.83	31.07	31.46	21.02	22.30	21.43	22.67	23.06
	8H	29.95	31.18	30.38	31.57	31.97	21.01	22.24	21.43	22.62	23.02
	12H	30.52	31.70	30.95	32.08	32.51	20.99	22.17	21.42	22.55	22.98
4H	2H	25.42	26.80	25.81	27.15	27.52	21.32	22.70	21.72	23.05	23.42
	3H	28.10	29.27	28.51	29.67	30.07	22.66	23.83	23.07	24.23	24.63
	4H	29.40	30.46	29.83	30.88	31.31	23.20	24.26	23.63	24.67	25.11
	6H	30.68	31.62	31.13	32.06	32.51	23.47	24.41	23.92	24.85	25.30
	8H	31.31	32.19	31.77	32.63	33.09	23.51	24.39	23.97	24.83	25.29
	12H	32.00	32.79	32.47	33.26	33.73	23.52	24.31	24.00	24.79	25.26
8H	4H	29.76	30.64	30.22	31.08	31.55	24.14	25.02	24.60	25.46	25.93
	6H	31.25	31.98	31.74	32.47	32.94	24.73	25.47	25.23	25.96	26.43
	8H	32.03	32.69	32.54	33.20	33.68	24.91	25.58	25.42	26.08	26.57
	12H	32.92	33.51	33.43	34.00	34.56	25.01	25.61	25.52	26.09	26.65
12H	4H	29.80	30.60	30.28	31.07	31.54	24.36	25.15	24.84	25.63	26.10
	6H	31.33	32.00	31.84	32.51	32.99	25.08	25.75	25.59	26.25	26.74
	8H	32.21	32.81	32.72	33.30	33.85	25.40	25.99	25.90	26.48	27.04