

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: P893378

Luminaire Tested: 4MB-3SL-ASML-UNV-L835

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893378  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-ASML-UNV-L835  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

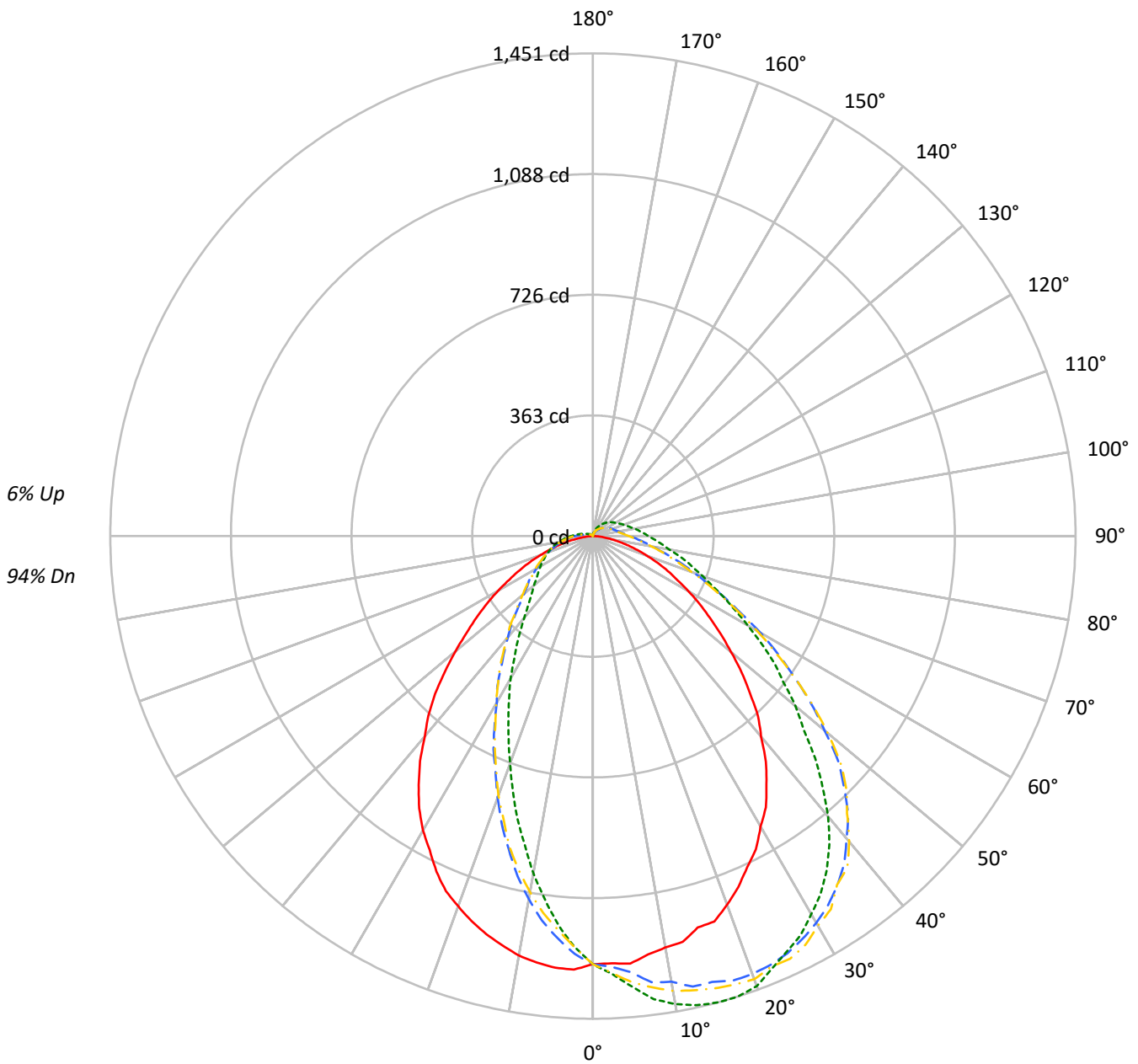
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3207.0 lumens  
Efficiency: N/A  
Efficacy: 152.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.07 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')  
CIE Type: Direct

Input Watts (W): 21.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 5.2  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P893378  
CATALOG NUMBER: 4MB-3SL-ASML-UNV-L835

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - 90°-270°    - · - 135°-315°



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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	97	97	97	94
1	107	103	98	94	104	100	96	92	95	91	88	90	87	85	85	83	81	85	83	81	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	75	72	69	66
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	67	63	59	57
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	60	55	51	49
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	55	49	45	43
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	50	44	40	38
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	46	40	36	34
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	42	37	32	30
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	39	33	29	28
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	36	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	13104	13104	13104	13104
5°	13153	13354	13277	11542
10°	12916	13639	13168	9836
15°	12735	13589	12951	8224
20°	12637	13321	12690	6729
25°	12155	12703	12323	5536
30°	11645	12140	11796	4574
35°	11070	11457	11102	3727
40°	10189	10480	10184	3056
45°	9320	9251	9366	2604
50°	8288	8074	8248	2352
55°	7302	7073	7253	2161
60°	6406	6033	6348	2042
65°	5613	5195	5479	1941
70°	4769	4552	4608	1854
75°	3888	4139	3783	1786
80°	2997	3725	2728	1664
85°	2063	3596	1668	1559

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 12964 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.9	3.8
10°-20°	336.0	10.5
20°-30°	483.3	15.1
30°-40°	548.5	17.1
40°-50°	524.2	16.3
50°-60°	425.9	13.3
60°-70°	297.2	9.3
70°-80°	184.1	5.7
80°-90°	105.6	3.3
90°-100°	63.1	2.0
100°-110°	41.4	1.3
110°-120°	29.0	0.9
120°-130°	21.0	0.7
130°-140°	14.0	0.4
140°-150°	7.9	0.2
150°-160°	3.5	0.1
160°-170°	1.0	0.0
170°-180°	0.1	0.0
0°-30°	940.3	29.3
0°-40°	1488.8	46.4
0°-60°	2438.9	76.1
0°-90°	3025.8	94.4
90°-120°	133.6	4.2
90°-150°	176.5	5.5
90°-180°	181.0	5.6
0°-180°	3207.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1287	1287	1287	1287	1287	
5°	1290	1360	1302	1176	1290	122
15°	1218	1451	1239	878	1218	346
25°	1098	1378	1113	601	1098	506
35°	910	1225	913	399	910	567
45°	667	945	671	266	667	515
55°	430	666	427	204	430	387
65°	249	433	243	162	249	247
75°	110	290	107	125	110	119
85°	24	196	19	85	24	27
90°	1	166	0	65	1	2
95°	1	144	0	50	1	1
105°	1	111	0	27	1	1
115°	1	88	0	15	1	1
125°	1	72	0	10	1	1
135°	1	57	0	8	1	1
145°	1	40	0	5	1	1
155°	1	25	0	3	1	1
165°	1	12	0	1	1	0
175°	1	0	0	0	1	0
180°	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°	202.5°	225°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1285.4	1295.1	1296.0	1326.3	1317.5	1328.8	1314.5	1317.0	1304.4	1301.0	1257.2
5°	1290.1	1310.7	1316.2	1368.4	1360.0	1365.9	1346.1	1331.8	1302.3	1284.6	1213.8
7.5°	1268.2	1322.5	1352.8	1389.9	1403.8	1408.5	1368.4	1341.9	1293.0	1249.6	1166.6
10°	1255.9	1330.9	1360.4	1416.0	1428.3	1419.4	1388.2	1344.4	1280.4	1210.4	1108.5
12.5°	1249.2	1335.6	1387.0	1443.9	1444.3	1435.0	1398.4	1351.2	1259.7	1168.3	1047.0
15°	1218.0	1334.7	1387.4	1445.1	1451.4	1445.5	1408.0	1346.5	1238.7	1116.1	976.2
17.5°	1214.7	1332.6	1400.9	1461.5	1451.0	1446.8	1413.9	1344.4	1213.4	1063.0	909.6
20°	1179.3	1328.0	1400.9	1443.0	1439.6	1441.3	1417.7	1341.5	1184.3	1005.7	836.7
22.5°	1141.8	1322.5	1395.0	1427.0	1406.8	1437.5	1400.9	1333.5	1154.8	945.9	764.3
25°	1097.5	1313.7	1383.6	1404.3	1378.5	1402.6	1402.1	1321.3	1112.7	881.4	707.0
27.5°	1061.7	1299.8	1365.1	1396.2	1352.4	1373.1	1384.9	1306.5	1063.0	817.8	639.6
30°	1008.2	1282.1	1342.7	1347.4	1312.8	1338.9	1352.4	1288.0	1021.3	745.7	578.0
32.5°	967.3	1261.8	1315.4	1309.0	1274.5	1309.0	1330.9	1269.4	971.6	682.5	534.7
35°	910.0	1237.4	1281.2	1247.9	1225.2	1253.8	1279.5	1249.6	912.6	615.1	479.0
37.5°	854.4	1215.9	1240.4	1199.1	1167.9	1199.9	1256.4	1212.6	853.2	561.6	437.7
40°	786.6	1166.6	1186.9	1130.8	1099.6	1146.8	1198.6	1180.5	786.2	506.0	397.7
42.5°	735.2	1130.0	1135.9	1059.2	1022.1	1072.3	1131.2	1135.0	731.8	455.9	362.3
45°	667.4	1078.6	1067.6	983.4	944.6	989.7	1078.2	1088.3	670.7	412.5	327.8
47.5°	606.3	1021.3	999.8	901.2	857.8	911.3	1009.5	1036.0	602.5	372.4	295.3
50°	542.7	957.2	909.6	824.5	795.4	822.0	922.3	966.1	540.1	332.8	270.5
52.5°	484.5	886.5	827.5	751.2	722.1	744.0	830.8	896.6	478.2	299.6	248.6
55°	429.7	815.7	739.4	672.0	666.1	672.8	738.1	813.6	426.8	270.1	234.7
57.5°	380.9	729.7	660.2	610.5	600.0	605.4	650.5	728.0	377.1	240.6	214.5
60°	331.6	641.7	581.8	543.5	537.6	541.8	570.9	644.6	328.6	215.7	195.5
62.5°	286.9	553.2	500.1	485.8	481.6	481.6	493.8	561.2	283.1	190.4	181.2
65°	248.6	477.4	437.3	431.9	433.1	432.7	425.1	468.5	242.7	168.1	168.5
67.5°	209.8	396.9	374.6	381.3	386.3	384.2	368.2	389.7	204.8	147.9	157.2
70°	174.0	327.8	323.6	338.7	350.5	339.6	316.4	318.5	168.1	128.1	142.4
72.5°	140.3	265.0	284.4	305.5	316.8	304.6	272.6	263.3	135.2	110.0	128.9
75°	110.4	213.2	243.9	275.1	289.9	274.3	237.2	205.6	107.4	92.7	118.0
77.5°	84.3	168.9	208.6	244.8	259.1	245.6	206.4	160.5	78.8	77.9	106.2
80°	60.2	133.6	185.0	219.9	233.0	219.9	179.1	126.8	54.8	62.4	93.5
82.5°	39.6	103.2	160.9	200.1	214.5	198.4	155.5	97.7	35.0	50.6	84.3
85°	24.0	81.7	140.3	179.9	196.3	180.7	136.1	74.2	19.4	38.8	73.3
87.5°	10.5	63.2	125.1	166.0	180.7	166.4	121.3	58.1	8.0	30.3	62.8
90°	0.8	50.1	110.4	152.9	166.0	152.5	107.4	47.2	0.0	21.9	53.9
92.5°	0.8	43.0	101.1	141.6	156.3	141.1	96.9	38.8	0.0	16.0	45.5
95°	1.3	36.2	91.8	132.7	144.5	131.5	88.5	33.3	0.0	11.0	38.3
97.5°	1.3	32.9	84.3	123.9	136.9	123.0	80.9	29.9	0.0	8.0	31.2
100°	0.8	30.3	78.4	115.4	127.7	114.6	75.0	27.0	0.0	5.1	25.3
102.5°	0.8	28.2	73.3	108.3	118.0	107.0	69.9	25.3	0.0	4.2	20.6
105°	0.8	27.0	68.7	99.9	111.2	99.9	65.7	23.6	0.0	3.4	16.0
107.5°	0.8	25.3	65.3	95.2	104.5	94.4	62.4	22.3	0.0	3.4	13.1
110°	0.8	24.0	62.4	88.5	99.0	89.3	59.4	20.2	0.0	2.1	10.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.8	21.9	59.4	83.8	94.0	84.3	56.9	18.5	0.0	2.1	9.3
115°	0.8	19.8	56.9	80.9	88.5	80.1	54.3	16.4	0.0	1.7	8.4
117.5°	0.8	18.5	55.2	77.1	84.7	76.3	52.2	15.6	0.0	1.7	8.0
120°	0.8	17.7	52.7	73.3	79.2	72.5	49.7	14.7	0.0	1.7	7.6
122.5°	0.8	16.9	50.6	69.9	76.3	69.5	47.6	14.3	0.0	1.3	6.7
125°	0.8	16.0	47.6	66.1	72.0	65.3	43.8	13.9	0.0	0.8	5.9
127.5°	0.8	15.2	44.7	63.2	68.7	62.4	41.3	13.5	0.0	0.8	5.5
130°	0.8	14.7	40.9	59.4	64.9	58.6	38.3	13.5	0.0	0.8	5.1
132.5°	0.8	14.3	36.7	55.6	61.5	54.8	35.4	13.1	0.0	0.8	4.2
135°	0.8	13.9	32.4	51.8	57.3	51.0	32.9	12.6	0.0	0.8	3.8
137.5°	0.8	13.1	28.6	47.6	53.1	46.8	31.2	11.8	0.0	0.8	3.4
140°	0.8	12.2	25.7	44.2	48.9	43.0	28.6	11.0	0.0	0.4	2.5
142.5°	0.8	11.0	23.2	40.0	44.7	39.2	25.7	9.3	0.0	0.4	2.5
145°	0.8	9.7	21.1	35.0	40.4	35.0	24.0	8.4	0.0	0.4	2.1
147.5°	0.8	8.8	19.0	29.5	36.7	32.0	21.5	7.2	0.0	0.4	1.7
150°	0.8	8.0	16.4	24.9	32.4	28.2	19.8	6.3	0.0	0.0	1.3
152.5°	0.8	7.2	14.3	20.6	29.1	25.7	17.7	5.5	0.0	0.0	0.8
155°	1.3	6.7	12.2	18.1	25.3	22.3	14.7	4.6	0.0	0.0	0.8
157.5°	1.3	5.9	10.1	14.7	22.3	19.4	11.8	3.8	0.0	0.0	0.4
160°	1.3	5.5	8.4	11.4	18.5	16.0	9.7	2.9	0.0	0.0	0.4
162.5°	1.3	5.1	7.2	8.4	15.2	12.6	7.6	2.1	0.0	0.0	0.4
165°	1.3	4.2	6.3	5.9	11.8	9.7	5.9	1.3	0.0	0.0	0.0
167.5°	1.3	3.8	5.1	4.2	8.8	7.2	4.2	0.8	0.0	0.0	0.0
170°	1.3	2.9	4.2	2.9	2.5	4.6	2.5	0.4	0.0	0.0	0.0
172.5°	1.3	2.5	3.4	2.1	0.8	2.5	1.3	0.0	0.0	0.0	0.0
175°	1.3	2.1	2.1	1.3	0.4	0.8	0.0	0.0	0.0	0.0	0.0
177.5°	1.3	1.7	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1286.7	1286.7	1286.7	1286.7	1286.7	1286.7
2.5°	1251.3	1237.4	1224.8	1238.3	1247.9	1285.4
5°	1190.2	1175.5	1177.2	1189.4	1221.8	1290.1
7.5°	1127.0	1102.6	1108.5	1142.6	1190.6	1268.2
10°	1052.5	1030.1	1035.6	1087.0	1154.4	1255.9
12.5°	985.9	948.4	980.4	1028.9	1112.3	1249.2
15°	907.9	878.4	895.7	967.3	1071.8	1218.0
17.5°	823.7	800.9	821.6	892.8	1022.1	1214.7
20°	758.8	727.2	751.6	830.0	960.6	1179.3
22.5°	685.9	661.9	687.6	759.6	897.8	1141.8
25°	626.1	600.8	626.5	698.1	842.2	1097.5
27.5°	567.9	544.8	567.9	633.7	787.0	1061.7
30°	517.0	494.6	518.2	581.4	722.6	1008.2
32.5°	469.3	440.7	471.0	532.1	665.7	967.3
35°	420.1	398.6	421.3	489.1	602.5	910.0
37.5°	379.2	356.9	383.8	442.0	549.0	854.4
40°	340.4	320.6	342.1	404.0	503.5	786.6
42.5°	310.1	290.3	312.2	369.5	457.6	735.2
45°	280.6	265.9	283.5	331.6	411.2	667.4
47.5°	259.1	246.5	261.2	303.8	372.4	606.3
50°	240.6	231.7	242.3	276.0	332.4	542.7
52.5°	224.1	215.3	227.5	254.5	300.8	484.5
55°	211.5	203.5	212.8	234.3	269.2	429.7
57.5°	197.6	192.5	199.7	212.8	244.4	380.9
60°	187.5	182.0	189.6	200.1	216.1	331.6
62.5°	176.1	173.2	177.8	186.2	194.6	286.9
65°	166.0	161.8	167.7	170.6	169.8	248.6
67.5°	155.0	153.8	157.2	157.6	151.3	209.8
70°	143.7	142.8	147.0	144.5	131.5	174.0
72.5°	134.4	134.4	136.9	131.9	114.6	140.3
75°	124.3	125.1	127.2	121.3	96.5	110.4
77.5°	115.0	115.9	116.3	108.3	80.9	84.3
80°	104.5	104.1	108.3	98.2	65.7	60.2
82.5°	95.2	93.5	96.1	85.9	53.1	39.6
85°	84.7	85.1	86.8	75.0	42.6	24.0
87.5°	76.3	76.3	77.9	66.1	32.0	10.5
90°	66.1	65.3	67.8	56.0	24.0	0.8
92.5°	57.7	57.7	59.4	48.0	17.7	0.8
95°	49.3	49.7	51.0	39.6	13.5	1.3
97.5°	42.1	42.6	44.2	33.7	9.7	1.3
100°	35.8	36.2	37.1	27.0	7.6	0.8
102.5°	29.9	31.2	31.2	22.3	5.9	0.8
105°	25.3	27.0	26.1	18.1	5.5	0.8
107.5°	21.1	22.8	22.8	14.7	5.5	0.8
110°	17.3	19.8	19.4	12.6	4.2	0.8





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	14.7	16.9	15.6	11.0	4.2	0.8
115°	12.6	14.7	13.9	10.1	3.8	0.8
117.5°	11.4	12.6	12.6	9.7	3.8	0.8
120°	10.5	11.8	11.4	9.3	3.8	0.8
122.5°	9.7	10.5	10.5	8.4	3.4	0.8
125°	9.3	9.7	10.1	7.6	3.4	0.8
127.5°	8.8	9.7	9.7	7.2	2.9	0.8
130°	8.0	8.8	8.8	6.7	2.9	0.8
132.5°	7.2	8.0	8.0	6.3	2.9	0.8
135°	6.7	7.6	7.6	5.9	2.9	0.8
137.5°	6.3	6.7	6.7	5.5	2.9	0.8
140°	5.5	6.3	6.3	5.1	2.9	0.8
142.5°	5.1	5.9	5.9	4.6	2.5	0.8
145°	4.6	5.1	5.5	4.2	2.5	0.8
147.5°	3.8	4.6	5.1	3.8	2.5	0.8
150°	2.9	4.2	4.2	3.8	2.5	0.8
152.5°	2.1	3.8	3.8	3.4	2.1	0.8
155°	1.7	2.9	3.4	2.9	2.1	1.3
157.5°	1.3	2.5	2.9	2.9	2.1	1.3
160°	0.8	2.1	2.5	2.5	1.7	1.3
162.5°	0.4	1.7	2.1	2.5	1.7	1.3
165°	0.0	1.3	1.7	2.1	1.7	1.3
167.5°	0.0	0.8	1.3	1.7	1.3	1.3
170°	0.0	0.4	0.8	1.3	1.3	1.3
172.5°	0.0	0.0	0.4	0.8	0.8	1.3
175°	0.0	0.0	0.0	0.4	0.8	1.3
177.5°	0.0	0.0	0.0	0.4	0.8	1.3
180°	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P893378  
 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L835

**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	17.86	19.32	18.31	19.75	20.20	20.12	21.58	20.57	22.01	22.46
	3H	18.68	20.00	19.15	20.44	20.94	21.82	23.13	22.28	23.58	24.07
	4H	18.88	20.12	19.37	20.59	21.10	22.65	23.90	23.14	24.36	24.87
	6H	18.97	20.12	19.47	20.60	21.13	23.53	24.68	24.03	25.16	25.68
	8H	18.98	20.08	19.49	20.57	21.11	24.00	25.10	24.52	25.60	26.13
	12H	18.96	20.02	19.48	20.51	21.07	24.54	25.60	25.06	26.09	26.65
4H	2H	18.29	19.54	18.78	20.00	20.51	20.48	21.72	20.97	22.18	22.70
	3H	19.39	20.43	19.89	20.94	21.47	22.36	23.41	22.87	23.92	24.45
	4H	19.73	20.68	20.25	21.19	21.76	23.34	24.29	23.86	24.80	25.37
	6H	19.92	20.75	20.46	21.29	21.88	24.38	25.21	24.92	25.75	26.34
	8H	19.95	20.73	20.50	21.27	21.87	24.94	25.72	25.49	26.26	26.86
	12H	19.95	20.66	20.52	21.23	21.83	25.60	26.30	26.17	26.87	27.47
8H	4H	20.06	20.84	20.61	21.38	21.98	23.48	24.26	24.03	24.80	25.40
	6H	20.38	21.03	20.96	21.62	22.22	24.65	25.30	25.23	25.89	26.49
	8H	20.47	21.06	21.06	21.66	22.27	25.33	25.92	25.92	26.52	27.13
	12H	20.52	21.05	21.12	21.63	22.32	26.15	26.67	26.74	27.26	27.94
12H	4H	20.14	20.84	20.70	21.41	22.01	23.47	24.17	24.04	24.75	25.35
	6H	20.52	21.11	21.11	21.71	22.32	24.66	25.25	25.26	25.85	26.47
	8H	20.68	21.20	21.27	21.79	22.47	25.40	25.92	25.99	26.51	27.19