

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: P893381

Luminaire Tested: 4MB-3SL-ASML-UNV-L930

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893381  
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-L930  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

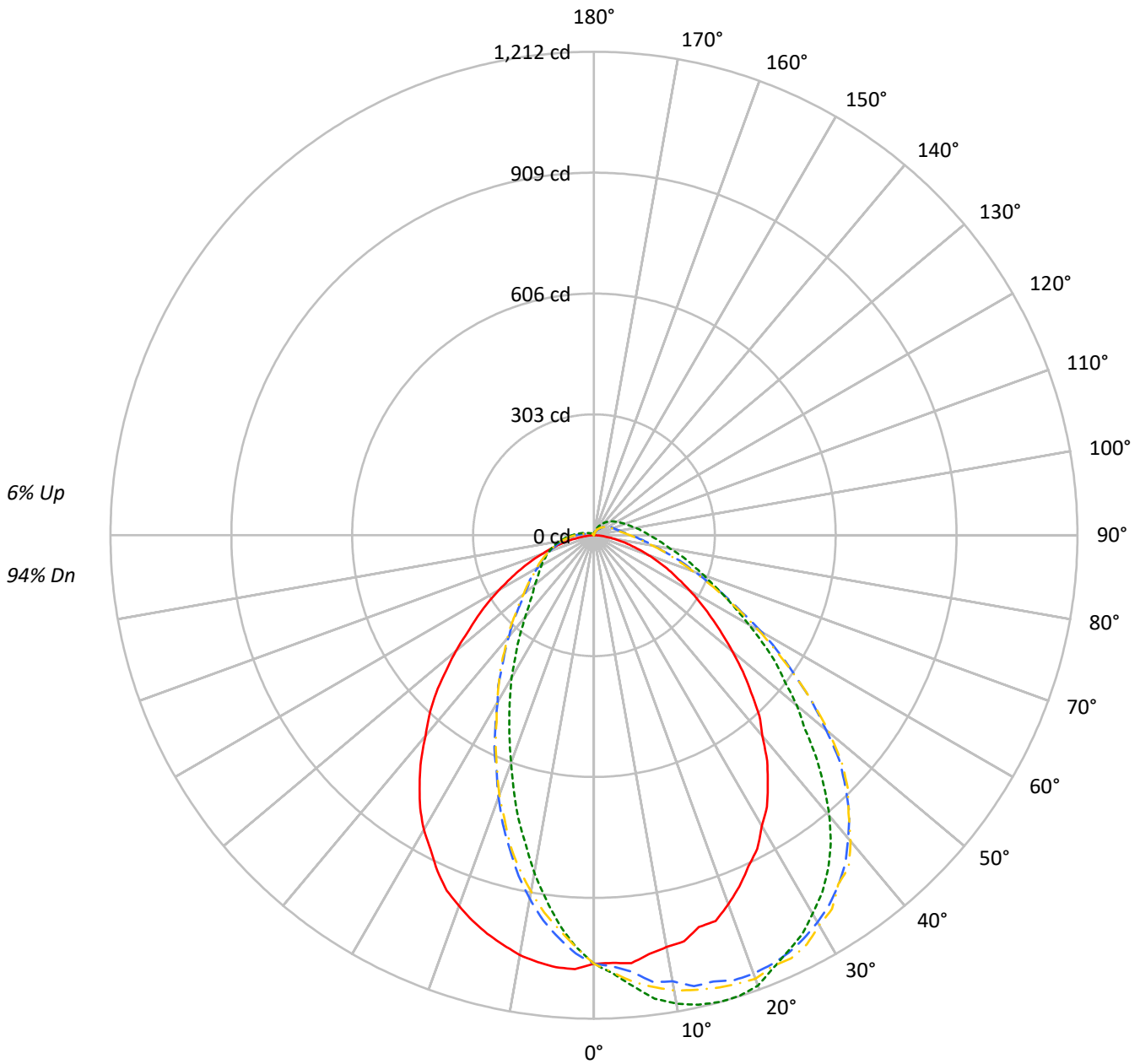
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2677.0 lumens  
Efficiency: N/A  
Efficacy: 126.9 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

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### 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	0
RCR																		
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	107	103	98	94	104	100	96	92	95	91	88	90	87	85	85	83	81	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	66
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	57
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	49
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	43
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	38
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	34
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	30
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	28
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	25

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

	0°	90°	180°	270°
0°	10939	10939	10939	10939
5°	10979	11147	11083	9634
10°	10782	11384	10992	8211
15°	10630	11344	10811	6866
20°	10548	11119	10593	5617
25°	10146	10604	10286	4621
30°	9721	10134	9847	3818
35°	9241	9564	9267	3111
40°	8505	8749	8501	2551
45°	7779	7722	7818	2173
50°	6918	6740	6886	1963
55°	6095	5904	6055	1804
60°	5347	5036	5299	1705
65°	4685	4336	4574	1619
70°	3980	3800	3846	1548
75°	3244	3455	3159	1492
80°	2504	3109	2275	1389
85°	1720	3002	1393	1301

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°

Vertical Angle: 45°

Luminance: 10821 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.9	3.8
10°-20°	280.5	10.5
20°-30°	403.5	15.1
30°-40°	457.9	17.1
40°-50°	437.6	16.3
50°-60°	355.6	13.3
60°-70°	248.1	9.3
70°-80°	153.7	5.7
80°-90°	88.2	3.3
90°-100°	52.7	2.0
100°-110°	34.6	1.3
110°-120°	24.2	0.9
120°-130°	17.6	0.7
130°-140°	11.7	0.4
140°-150°	6.6	0.2
150°-160°	2.9	0.1
160°-170°	0.8	0.0
170°-180°	0.1	0.0
0°-30°	784.9	29.3
0°-40°	1242.7	46.4
0°-60°	2035.9	76.0
0°-90°	2525.8	94.4
90°-120°	111.5	4.2
90°-150°	147.4	5.5
90°-180°	151.0	5.6
0°-180°	2677.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1074	1074	1074	1074	1074	
5°	1077	1135	1087	981	1077	101
15°	1017	1212	1034	733	1017	289
25°	916	1151	929	502	916	423
35°	760	1023	762	333	760	473
45°	557	788	560	222	557	430
55°	359	556	356	170	359	323
65°	208	362	203	135	208	206
75°	92	242	90	104	92	99
85°	20	164	16	71	20	22
90°	1	139	0	54	1	1
95°	1	121	0	42	1	1
105°	1	93	0	22	1	1
115°	1	74	0	12	1	1
125°	1	60	0	8	1	1
135°	1	48	0	6	1	1
145°	1	34	0	4	1	0
155°	1	21	0	2	1	0
165°	1	10	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°	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1
2.5°	1073.0	1081.1	1081.8	1107.1	1099.7	1109.2	1097.3	1099.4	1088.8	1086.0	1049.4
5°	1076.9	1094.1	1098.7	1142.3	1135.3	1140.2	1123.6	1111.7	1087.1	1072.3	1013.2
7.5°	1058.6	1104.0	1129.3	1160.2	1171.8	1175.7	1142.3	1120.1	1079.3	1043.1	973.8
10°	1048.4	1111.0	1135.6	1182.0	1192.2	1184.8	1158.8	1122.2	1068.8	1010.4	925.3
12.5°	1042.8	1114.9	1157.8	1205.2	1205.6	1197.9	1167.3	1127.9	1051.5	975.2	873.9
15°	1016.7	1114.2	1158.1	1206.3	1211.6	1206.6	1175.3	1124.0	1034.0	931.6	814.9
17.5°	1013.9	1112.4	1169.4	1220.0	1211.2	1207.7	1180.3	1122.2	1012.9	887.3	759.3
20°	984.4	1108.5	1169.4	1204.5	1201.7	1203.1	1183.4	1119.8	988.6	839.5	698.5
22.5°	953.1	1104.0	1164.4	1191.2	1174.3	1200.0	1169.4	1113.1	964.0	789.5	638.0
25°	916.1	1096.6	1154.9	1172.2	1150.7	1170.8	1170.4	1102.9	928.8	735.7	590.1
27.5°	886.3	1085.0	1139.5	1165.5	1128.9	1146.2	1156.0	1090.6	887.3	682.6	533.9
30°	841.6	1070.2	1120.8	1124.7	1095.9	1117.7	1128.9	1075.1	852.5	622.5	482.5
32.5°	807.5	1053.3	1098.0	1092.7	1063.9	1092.7	1111.0	1059.6	811.0	569.7	446.3
35°	759.6	1032.9	1069.5	1041.7	1022.7	1046.6	1068.1	1043.1	761.8	513.5	399.9
37.5°	713.2	1015.0	1035.4	1000.9	974.9	1001.6	1048.7	1012.2	712.2	468.8	365.4
40°	656.6	973.8	990.7	943.9	917.9	957.3	1000.6	985.4	656.3	422.4	332.0
42.5°	613.7	943.2	948.2	884.1	853.2	895.0	944.3	947.4	610.9	380.5	302.5
45°	557.1	900.3	891.2	820.8	788.5	826.1	900.0	908.4	559.9	344.3	273.6
47.5°	506.1	852.5	834.6	752.3	716.0	760.7	842.6	864.8	502.9	310.9	246.5
50°	453.0	799.0	759.3	688.3	664.0	686.1	769.8	806.4	450.9	277.8	225.8
52.5°	404.4	740.0	690.7	627.1	602.8	621.1	693.5	748.4	399.2	250.1	207.5
55°	358.7	680.9	617.2	560.9	556.0	561.6	616.2	679.1	356.3	225.4	195.9
57.5°	317.9	609.1	551.1	509.6	500.8	505.4	543.0	607.7	314.8	200.8	179.0
60°	276.8	535.6	485.7	453.7	448.8	452.3	476.5	538.1	274.3	180.1	163.2
62.5°	239.5	461.8	417.5	405.5	402.0	402.0	412.2	468.4	236.3	159.0	151.2
65°	207.5	398.5	365.1	360.5	361.5	361.2	354.9	391.1	202.6	140.3	140.7
67.5°	175.1	331.3	312.7	318.3	322.5	320.7	307.4	325.3	170.9	123.4	131.2
70°	145.2	273.6	270.1	282.8	292.6	283.5	264.1	265.9	140.3	106.9	118.9
72.5°	117.1	221.2	237.4	255.0	264.5	254.3	227.5	219.8	112.9	91.8	107.6
75°	92.1	178.0	203.6	229.7	242.0	228.9	198.0	171.6	89.7	77.4	98.5
77.5°	70.3	141.0	174.1	204.3	216.3	205.0	172.3	134.0	65.8	65.1	88.6
80°	50.3	111.5	154.4	183.6	194.5	183.6	149.5	105.9	45.7	52.0	78.1
82.5°	33.1	86.2	134.3	167.1	179.0	165.6	129.8	81.6	29.2	42.2	70.3
85°	20.0	68.2	117.1	150.2	163.9	150.9	113.6	61.9	16.2	32.4	61.2
87.5°	8.8	52.8	104.5	138.6	150.9	138.9	101.3	48.5	6.7	25.3	52.4
90°	0.7	41.9	92.1	127.7	138.6	127.3	89.7	39.4	0.0	18.3	45.0
92.5°	0.7	35.9	84.4	118.2	130.5	117.8	80.9	32.4	0.0	13.4	38.0
95°	1.1	30.2	76.7	110.8	120.6	109.7	73.9	27.8	0.0	9.1	32.0
97.5°	1.1	27.4	70.3	103.4	114.3	102.7	67.5	25.0	0.0	6.7	26.0
100°	0.7	25.3	65.4	96.4	106.6	95.7	62.6	22.5	0.0	4.2	21.1
102.5°	0.7	23.6	61.2	90.4	98.5	89.3	58.4	21.1	0.0	3.5	17.2
105°	0.7	22.5	57.3	83.4	92.8	83.4	54.9	19.7	0.0	2.8	13.4
107.5°	0.7	21.1	54.5	79.5	87.2	78.8	52.0	18.6	0.0	2.8	10.9
110°	0.7	20.0	52.0	73.9	82.6	74.6	49.6	16.9	0.0	1.8	8.8



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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°	0.7	18.3	49.6	70.0	78.4	70.3	47.5	15.5	0.0	1.8	7.7
115°	0.7	16.5	47.5	67.5	73.9	66.8	45.4	13.7	0.0	1.4	7.0
117.5°	0.7	15.5	46.1	64.4	70.7	63.7	43.6	13.0	0.0	1.4	6.7
120°	0.7	14.8	44.0	61.2	66.1	60.5	41.5	12.3	0.0	1.4	6.3
122.5°	0.7	14.1	42.2	58.4	63.7	58.0	39.7	12.0	0.0	1.1	5.6
125°	0.7	13.4	39.7	55.2	60.1	54.5	36.6	11.6	0.0	0.7	4.9
127.5°	0.7	12.7	37.3	52.8	57.3	52.0	34.5	11.3	0.0	0.7	4.6
130°	0.7	12.3	34.1	49.6	54.2	48.9	32.0	11.3	0.0	0.7	4.2
132.5°	0.7	12.0	30.6	46.4	51.3	45.7	29.5	10.9	0.0	0.7	3.5
135°	0.7	11.6	27.1	43.3	47.8	42.6	27.4	10.6	0.0	0.7	3.2
137.5°	0.7	10.9	23.9	39.7	44.3	39.0	26.0	9.8	0.0	0.7	2.8
140°	0.7	10.2	21.5	36.9	40.8	35.9	23.9	9.1	0.0	0.4	2.1
142.5°	0.7	9.1	19.3	33.4	37.3	32.7	21.5	7.7	0.0	0.4	2.1
145°	0.7	8.1	17.6	29.2	33.8	29.2	20.0	7.0	0.0	0.4	1.8
147.5°	0.7	7.4	15.8	24.6	30.6	26.7	17.9	6.0	0.0	0.4	1.4
150°	0.7	6.7	13.7	20.7	27.1	23.6	16.5	5.3	0.0	0.0	1.1
152.5°	0.7	6.0	12.0	17.2	24.3	21.5	14.8	4.6	0.0	0.0	0.7
155°	1.1	5.6	10.2	15.1	21.1	18.6	12.3	3.9	0.0	0.0	0.7
157.5°	1.1	4.9	8.4	12.3	18.6	16.2	9.8	3.2	0.0	0.0	0.4
160°	1.1	4.6	7.0	9.5	15.5	13.4	8.1	2.5	0.0	0.0	0.4
162.5°	1.1	4.2	6.0	7.0	12.7	10.6	6.3	1.8	0.0	0.0	0.4
165°	1.1	3.5	5.3	4.9	9.8	8.1	4.9	1.1	0.0	0.0	0.0
167.5°	1.1	3.2	4.2	3.5	7.4	6.0	3.5	0.7	0.0	0.0	0.0
170°	1.1	2.5	3.5	2.5	2.1	3.9	2.1	0.4	0.0	0.0	0.0
172.5°	1.1	2.1	2.8	1.8	0.7	2.1	1.1	0.0	0.0	0.0	0.0
175°	1.1	1.8	1.8	1.1	0.4	0.7	0.0	0.0	0.0	0.0	0.0
177.5°	1.1	1.4	1.1	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°	1074.1	1074.1	1074.1	1074.1	1074.1	1074.1
2.5°	1044.5	1032.9	1022.4	1033.6	1041.7	1073.0
5°	993.5	981.2	982.6	992.8	1019.9	1076.9
7.5°	940.8	920.4	925.3	953.8	993.9	1058.6
10°	878.5	859.9	864.5	907.4	963.6	1048.4
12.5°	823.0	791.7	818.4	858.8	928.5	1042.8
15°	757.9	733.3	747.7	807.5	894.7	1016.7
17.5°	687.6	668.6	685.8	745.2	853.2	1013.9
20°	633.4	607.0	627.4	692.8	801.9	984.4
22.5°	572.5	552.5	574.0	634.1	749.4	953.1
25°	522.6	501.5	523.0	582.7	703.0	916.1
27.5°	474.1	454.7	474.1	528.9	657.0	886.3
30°	431.5	412.9	432.6	485.3	603.1	841.6
32.5°	391.8	367.9	393.2	444.2	555.7	807.5
35°	350.6	332.7	351.7	408.3	502.9	759.6
37.5°	316.5	297.9	320.4	368.9	458.3	713.2
40°	284.2	267.6	285.6	337.3	420.3	656.6
42.5°	258.8	242.3	260.6	308.4	381.9	613.7
45°	234.2	221.9	236.7	276.8	343.2	557.1
47.5°	216.3	205.7	218.0	253.6	310.9	506.1
50°	200.8	193.4	202.2	230.4	277.5	453.0
52.5°	187.1	179.7	189.9	212.4	251.1	404.4
55°	176.5	169.9	177.6	195.5	224.7	358.7
57.5°	164.9	160.7	166.7	177.6	204.0	317.9
60°	156.5	151.9	158.3	167.1	180.4	276.8
62.5°	147.0	144.5	148.4	155.4	162.5	239.5
65°	138.6	135.0	140.0	142.4	141.7	207.5
67.5°	129.4	128.4	131.2	131.5	126.3	175.1
70°	119.9	119.2	122.7	120.6	109.7	145.2
72.5°	112.2	112.2	114.3	110.1	95.7	117.1
75°	103.7	104.5	106.2	101.3	80.5	92.1
77.5°	96.0	96.7	97.1	90.4	67.5	70.3
80°	87.2	86.9	90.4	81.9	54.9	50.3
82.5°	79.5	78.1	80.2	71.7	44.3	33.1
85°	70.7	71.0	72.4	62.6	35.5	20.0
87.5°	63.7	63.7	65.1	55.2	26.7	8.8
90°	55.2	54.5	56.6	46.8	20.0	0.7
92.5°	48.2	48.2	49.6	40.1	14.8	0.7
95°	41.1	41.5	42.6	33.1	11.3	1.1
97.5°	35.2	35.5	36.9	28.1	8.1	1.1
100°	29.9	30.2	30.9	22.5	6.3	0.7
102.5°	25.0	26.0	26.0	18.6	4.9	0.7
105°	21.1	22.5	21.8	15.1	4.6	0.7
107.5°	17.6	19.0	19.0	12.3	4.6	0.7
110°	14.4	16.5	16.2	10.6	3.5	0.7





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	12.3	14.1	13.0	9.1	3.5	0.7
115°	10.6	12.3	11.6	8.4	3.2	0.7
117.5°	9.5	10.6	10.6	8.1	3.2	0.7
120°	8.8	9.8	9.5	7.7	3.2	0.7
122.5°	8.1	8.8	8.8	7.0	2.8	0.7
125°	7.7	8.1	8.4	6.3	2.8	0.7
127.5°	7.4	8.1	8.1	6.0	2.5	0.7
130°	6.7	7.4	7.4	5.6	2.5	0.7
132.5°	6.0	6.7	6.7	5.3	2.5	0.7
135°	5.6	6.3	6.3	4.9	2.5	0.7
137.5°	5.3	5.6	5.6	4.6	2.5	0.7
140°	4.6	5.3	5.3	4.2	2.5	0.7
142.5°	4.2	4.9	4.9	3.9	2.1	0.7
145°	3.9	4.2	4.6	3.5	2.1	0.7
147.5°	3.2	3.9	4.2	3.2	2.1	0.7
150°	2.5	3.5	3.5	3.2	2.1	0.7
152.5°	1.8	3.2	3.2	2.8	1.8	0.7
155°	1.4	2.5	2.8	2.5	1.8	1.1
157.5°	1.1	2.1	2.5	2.5	1.8	1.1
160°	0.7	1.8	2.1	2.1	1.4	1.1
162.5°	0.4	1.4	1.8	2.1	1.4	1.1
165°	0.0	1.1	1.4	1.8	1.4	1.1
167.5°	0.0	0.7	1.1	1.4	1.1	1.1
170°	0.0	0.4	0.7	1.1	1.1	1.1
172.5°	0.0	0.0	0.4	0.7	0.7	1.1
175°	0.0	0.0	0.0	0.4	0.7	1.1
177.5°	0.0	0.0	0.0	0.4	0.7	1.1
180°	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P893381  
 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L930

**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	17.23	18.69	17.68	19.12	19.57	19.49	20.95	19.94	21.38	21.83
	3H	18.05	19.37	18.52	19.81	20.31	21.19	22.51	21.66	22.95	23.45
	4H	18.25	19.50	18.74	19.96	20.47	22.03	23.27	22.52	23.73	24.24
	6H	18.34	19.50	18.85	19.97	20.50	22.90	24.05	23.40	24.53	25.06
	8H	18.35	19.45	18.86	19.95	20.48	23.37	24.47	23.89	24.97	25.51
	12H	18.33	19.39	18.85	19.88	20.44	23.92	24.97	24.44	25.46	26.02
4H	2H	17.66	18.91	18.15	19.37	19.88	19.85	21.10	20.34	21.56	22.07
	3H	18.76	19.81	19.26	20.31	20.85	21.74	22.78	22.24	23.29	23.82
	4H	19.10	20.05	19.62	20.57	21.14	22.71	23.66	23.23	24.18	24.74
	6H	19.29	20.12	19.84	20.67	21.25	23.75	24.58	24.29	25.12	25.71
	8H	19.32	20.10	19.87	20.64	21.24	24.31	25.09	24.86	25.64	26.23
	12H	19.33	20.03	19.90	20.60	21.20	24.97	25.67	25.54	26.25	26.85
8H	4H	19.43	20.21	19.98	20.75	21.35	22.85	23.63	23.40	24.17	24.77
	6H	19.75	20.40	20.33	20.99	21.59	24.02	24.68	24.60	25.26	25.87
	8H	19.84	20.43	20.44	21.03	21.64	24.70	25.29	25.30	25.89	26.50
	12H	19.90	20.42	20.49	21.01	21.69	25.52	26.04	26.11	26.63	27.31
12H	4H	19.51	20.21	20.08	20.78	21.38	22.84	23.55	23.41	24.12	24.72
	6H	19.89	20.48	20.48	21.08	21.69	24.03	24.62	24.63	25.22	25.84
	8H	20.05	20.57	20.64	21.16	21.84	24.77	25.30	25.37	25.88	26.57