

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: P893384

Luminaire Tested: 4MB-3SL-ASML-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893384
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-L950
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

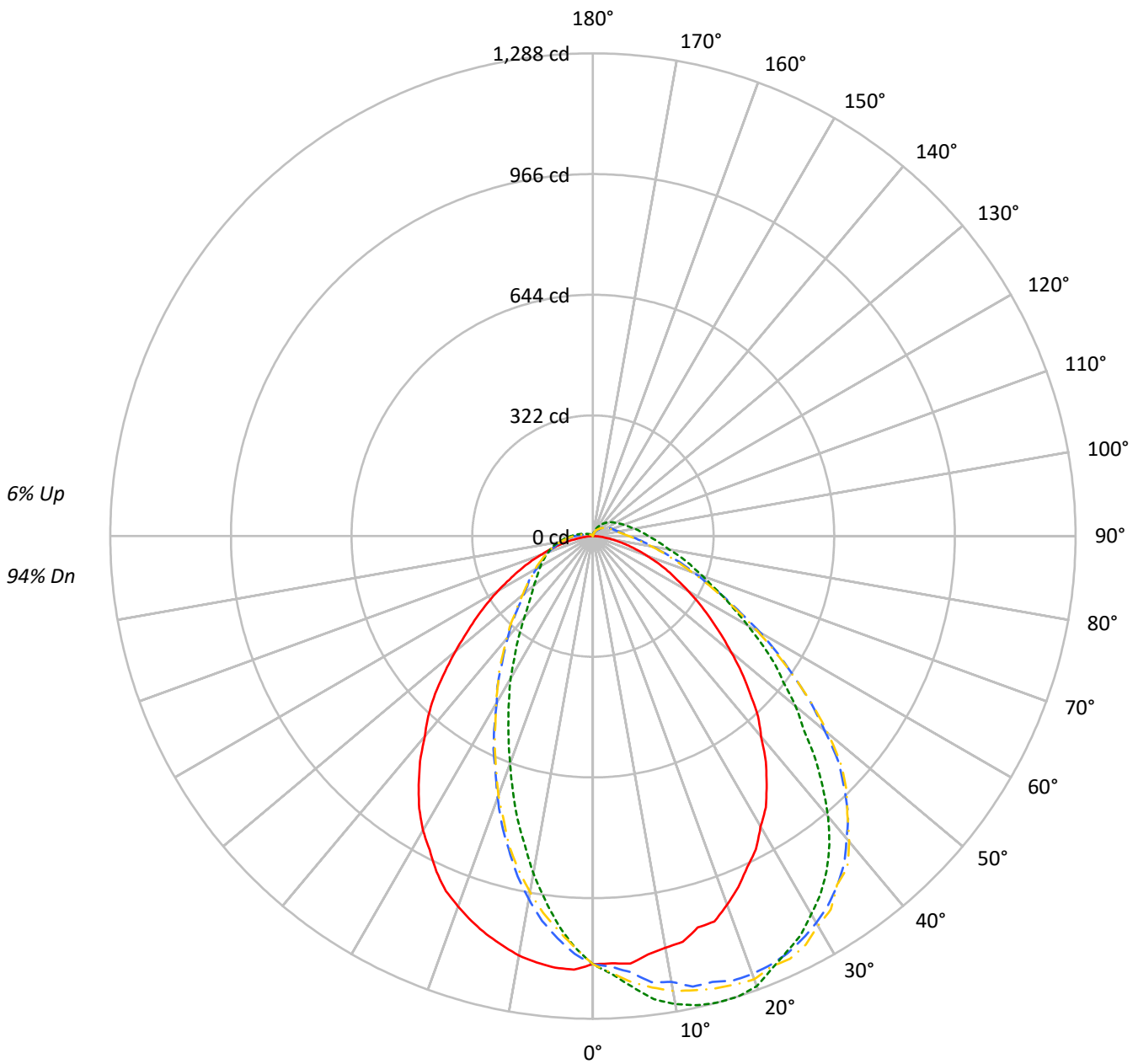
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2847.0 lumens
Efficiency: N/A
Efficacy: 134.9 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_{in}): 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: P893384
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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	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°	11633	11633	11633	11633
5°	11676	11854	11787	10246
10°	11467	12107	11690	8733
15°	11305	12064	11497	7301
20°	11218	11825	11266	5974
25°	10790	11277	10940	4915
30°	10337	10778	10471	4060
35°	9828	10171	9855	3308
40°	9045	9304	9040	2713
45°	8274	8213	8314	2311
50°	7357	7169	7323	2088
55°	6483	6279	6439	1919
60°	5687	5356	5635	1813
65°	4983	4612	4863	1722
70°	4235	4041	4090	1647
75°	3452	3673	3360	1586
80°	2663	3306	2419	1477
85°	1831	3193	1479	1385

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 11508 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	3.8
10°-20°	298.3	10.5
20°-30°	429.1	15.1
30°-40°	486.9	17.1
40°-50°	465.4	16.3
50°-60°	378.1	13.3
60°-70°	263.8	9.3
70°-80°	163.4	5.7
80°-90°	93.8	3.3
90°-100°	56.0	2.0
100°-110°	36.8	1.3
110°-120°	25.8	0.9
120°-130°	18.7	0.7
130°-140°	12.4	0.4
140°-150°	7.0	0.2
150°-160°	3.1	0.1
160°-170°	0.9	0.0
170°-180°	0.1	0.0
0°-30°	834.7	29.3
0°-40°	1321.7	46.4
0°-60°	2165.2	76.1
0°-90°	2686.2	94.4
90°-120°	118.6	4.2
90°-150°	156.7	5.5
90°-180°	161.0	5.7
0°-180°	2847.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1142	1142	1142	1142	1142	
5°	1145	1207	1156	1044	1145	108
15°	1081	1288	1100	780	1081	307
25°	974	1224	988	533	974	449
35°	808	1088	810	354	808	504
45°	592	839	595	236	592	457
55°	382	591	379	181	382	343
65°	221	384	215	144	221	219
75°	98	257	95	111	98	106
85°	21	174	17	76	21	24
90°	1	147	0	58	1	2
95°	1	128	0	44	1	1
105°	1	99	0	24	1	1
115°	1	78	0	13	1	1
125°	1	64	0	9	1	1
135°	1	51	0	7	1	1
145°	1	36	0	4	1	0
155°	1	22	0	3	1	0
165°	1	10	0	1	1	0
175°	1	0	0	0	1	0
180°	0	0	0	0	0	



TEST NUMBER: P893384
 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L950

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3
2.5°	1141.1	1149.7	1150.5	1177.4	1169.6	1179.7	1167.0	1169.2	1158.0	1155.0	1116.1
5°	1145.3	1163.6	1168.4	1214.8	1207.3	1212.6	1195.0	1182.3	1156.1	1140.4	1077.6
7.5°	1125.8	1174.1	1201.0	1233.9	1246.2	1250.4	1214.8	1191.3	1147.9	1109.4	1035.7
10°	1115.0	1181.5	1207.7	1257.1	1267.9	1260.1	1232.4	1193.5	1136.7	1074.6	984.1
12.5°	1109.0	1185.7	1231.3	1281.8	1282.1	1273.9	1241.4	1199.5	1118.3	1037.2	929.4
15°	1081.3	1184.9	1231.7	1282.9	1288.5	1283.3	1250.0	1195.4	1099.6	990.8	866.6
17.5°	1078.3	1183.0	1243.6	1297.5	1288.1	1284.4	1255.2	1193.5	1077.2	943.7	807.5
20°	1046.9	1178.9	1243.6	1281.0	1278.0	1279.5	1258.6	1190.9	1051.4	892.8	742.8
22.5°	1013.6	1174.1	1238.4	1266.8	1248.9	1276.2	1243.6	1183.8	1025.2	839.7	678.5
25°	974.3	1166.2	1228.3	1246.6	1223.8	1245.1	1244.7	1172.9	987.8	782.5	627.6
27.5°	942.5	1153.9	1211.8	1239.5	1200.6	1218.9	1229.4	1159.8	943.7	726.0	567.8
30°	895.0	1138.2	1192.0	1196.1	1165.5	1188.6	1200.6	1143.4	906.6	662.0	513.2
32.5°	858.8	1120.2	1167.7	1162.1	1131.4	1162.1	1181.5	1126.9	862.5	605.9	474.6
35°	807.9	1098.5	1137.4	1107.9	1087.7	1113.1	1135.9	1109.4	810.1	546.1	425.3
37.5°	758.5	1079.4	1101.1	1064.5	1036.8	1065.2	1115.3	1076.4	757.4	498.6	388.6
40°	698.3	1035.7	1053.6	1003.9	976.2	1018.1	1064.1	1048.0	697.9	449.2	353.1
42.5°	652.7	1003.1	1008.4	940.3	907.4	951.9	1004.3	1007.6	649.7	404.7	321.7
45°	592.5	957.5	947.8	873.0	838.6	878.6	957.1	966.1	595.4	366.2	291.0
47.5°	538.2	906.6	887.6	800.0	761.5	809.0	896.2	919.7	534.9	330.6	262.2
50°	481.7	849.8	807.5	732.0	706.2	729.7	818.7	857.6	479.5	295.5	240.1
52.5°	430.1	786.9	734.6	666.9	641.1	660.5	737.6	795.9	424.5	265.9	220.7
55°	381.5	724.1	656.4	596.6	591.3	597.3	655.3	722.2	378.9	239.7	208.3
57.5°	338.1	647.8	586.1	542.0	532.6	537.5	577.5	646.3	334.8	213.6	190.4
60°	294.4	569.6	516.5	482.5	477.3	481.0	506.8	572.3	291.7	191.5	173.5
62.5°	254.7	491.1	444.0	431.2	427.5	427.5	438.4	498.2	251.3	169.1	160.8
65°	220.7	423.8	388.2	383.4	384.5	384.1	377.4	415.9	215.4	149.2	149.6
67.5°	186.3	352.3	332.5	338.5	343.0	341.1	326.9	346.0	181.8	131.3	139.5
70°	154.5	291.0	287.2	300.7	311.2	301.5	280.9	282.8	149.2	113.7	126.4
72.5°	124.5	235.3	252.5	271.2	281.3	270.4	242.0	233.8	120.1	97.6	114.5
75°	98.0	189.3	216.6	244.2	257.3	243.5	210.6	182.5	95.4	82.3	104.7
77.5°	74.8	150.0	185.1	217.3	230.0	218.1	183.3	142.5	69.9	69.2	94.3
80°	53.5	118.6	164.2	195.2	206.8	195.2	159.0	112.6	48.6	55.4	83.0
82.5°	35.2	91.6	142.9	177.7	190.4	176.2	138.0	86.8	31.0	44.9	74.8
85°	21.3	72.6	124.5	159.7	174.3	160.5	120.8	65.8	17.2	34.4	65.1
87.5°	9.4	56.1	111.1	147.4	160.5	147.7	107.7	51.6	7.1	26.9	55.7
90°	0.7	44.5	98.0	135.8	147.4	135.4	95.4	41.9	0.0	19.4	47.9
92.5°	0.7	38.2	89.8	125.7	138.8	125.3	86.0	34.4	0.0	14.2	40.4
95°	1.1	32.2	81.5	117.8	128.3	116.7	78.5	29.5	0.0	9.7	34.0
97.5°	1.1	29.2	74.8	110.0	121.6	109.2	71.8	26.6	0.0	7.1	27.7
100°	0.7	26.9	69.6	102.5	113.3	101.7	66.6	23.9	0.0	4.5	22.4
102.5°	0.7	25.1	65.1	96.1	104.7	95.0	62.1	22.4	0.0	3.7	18.3
105°	0.7	23.9	61.0	88.6	98.7	88.6	58.3	20.9	0.0	3.0	14.2
107.5°	0.7	22.4	58.0	84.5	92.8	83.8	55.4	19.8	0.0	3.0	11.6
110°	0.7	21.3	55.4	78.5	87.9	79.3	52.7	18.0	0.0	1.9	9.4



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CATALOG NUMBER: 4MB-3SL-ASML-UNV-L950

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.7	19.4	52.7	74.4	83.4	74.8	50.5	16.5	0.0	1.9	8.2
115°	0.7	17.6	50.5	71.8	78.5	71.1	48.2	14.6	0.0	1.5	7.5
117.5°	0.7	16.5	49.0	68.4	75.2	67.7	46.4	13.8	0.0	1.5	7.1
120°	0.7	15.7	46.8	65.1	70.3	64.3	44.1	13.1	0.0	1.5	6.7
122.5°	0.7	15.0	44.9	62.1	67.7	61.7	42.3	12.7	0.0	1.1	6.0
125°	0.7	14.2	42.3	58.7	64.0	58.0	38.9	12.3	0.0	0.7	5.2
127.5°	0.7	13.5	39.6	56.1	61.0	55.4	36.7	12.0	0.0	0.7	4.9
130°	0.7	13.1	36.3	52.7	57.6	52.0	34.0	12.0	0.0	0.7	4.5
132.5°	0.7	12.7	32.5	49.4	54.6	48.6	31.4	11.6	0.0	0.7	3.7
135°	0.7	12.3	28.8	46.0	50.9	45.3	29.2	11.2	0.0	0.7	3.4
137.5°	0.7	11.6	25.4	42.3	47.1	41.5	27.7	10.5	0.0	0.7	3.0
140°	0.7	10.8	22.8	39.3	43.4	38.2	25.4	9.7	0.0	0.4	2.2
142.5°	0.7	9.7	20.6	35.5	39.6	34.8	22.8	8.2	0.0	0.4	2.2
145°	0.7	8.6	18.7	31.0	35.9	31.0	21.3	7.5	0.0	0.4	1.9
147.5°	0.7	7.9	16.8	26.2	32.5	28.4	19.1	6.4	0.0	0.4	1.5
150°	0.7	7.1	14.6	22.1	28.8	25.1	17.6	5.6	0.0	0.0	1.1
152.5°	0.7	6.4	12.7	18.3	25.8	22.8	15.7	4.9	0.0	0.0	0.7
155°	1.1	6.0	10.8	16.1	22.4	19.8	13.1	4.1	0.0	0.0	0.7
157.5°	1.1	5.2	9.0	13.1	19.8	17.2	10.5	3.4	0.0	0.0	0.4
160°	1.1	4.9	7.5	10.1	16.5	14.2	8.6	2.6	0.0	0.0	0.4
162.5°	1.1	4.5	6.4	7.5	13.5	11.2	6.7	1.9	0.0	0.0	0.4
165°	1.1	3.7	5.6	5.2	10.5	8.6	5.2	1.1	0.0	0.0	0.0
167.5°	1.1	3.4	4.5	3.7	7.9	6.4	3.7	0.7	0.0	0.0	0.0
170°	1.1	2.6	3.7	2.6	2.2	4.1	2.2	0.4	0.0	0.0	0.0
172.5°	1.1	2.2	3.0	1.9	0.7	2.2	1.1	0.0	0.0	0.0	0.0
175°	1.1	1.9	1.9	1.1	0.4	0.7	0.0	0.0	0.0	0.0	0.0
177.5°	1.1	1.5	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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CATALOG NUMBER: 4MB-3SL-ASML-UNV-L950

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1142.3	1142.3	1142.3	1142.3	1142.3	1142.3
2.5°	1110.8	1098.5	1087.3	1099.3	1107.9	1141.1
5°	1056.6	1043.5	1045.0	1055.9	1084.7	1145.3
7.5°	1000.5	978.8	984.1	1014.3	1057.0	1125.8
10°	934.3	914.5	919.3	965.0	1024.8	1115.0
12.5°	875.2	841.9	870.4	913.4	987.4	1109.0
15°	806.0	779.8	795.2	858.8	951.5	1081.3
17.5°	731.2	711.0	729.3	792.6	907.4	1078.3
20°	673.6	645.6	667.3	736.8	852.8	1046.9
22.5°	608.9	587.6	610.4	674.4	797.0	1013.6
25°	555.8	533.4	556.2	619.8	747.7	974.3
27.5°	504.2	483.6	504.2	562.5	698.7	942.5
30°	458.9	439.1	460.0	516.2	641.4	895.0
32.5°	416.7	391.2	418.2	472.4	591.0	858.8
35°	372.9	353.8	374.0	434.2	534.9	807.9
37.5°	336.6	316.8	340.7	392.3	487.4	758.5
40°	302.2	284.6	303.7	358.7	447.0	698.3
42.5°	275.3	257.7	277.2	328.0	406.2	652.7
45°	249.1	236.0	251.7	294.4	365.0	592.5
47.5°	230.0	218.8	231.9	269.7	330.6	538.2
50°	213.6	205.7	215.1	245.0	295.1	481.7
52.5°	199.0	191.1	202.0	225.9	267.1	430.1
55°	187.8	180.7	188.9	208.0	239.0	381.5
57.5°	175.4	170.9	177.3	188.9	216.9	338.1
60°	166.4	161.6	168.3	177.7	191.9	294.4
62.5°	156.3	153.7	157.8	165.3	172.8	254.7
65°	147.4	143.6	148.9	151.5	150.7	220.7
67.5°	137.6	136.5	139.5	139.9	134.3	186.3
70°	127.5	126.8	130.5	128.3	116.7	154.5
72.5°	119.3	119.3	121.6	117.1	101.7	124.5
75°	110.3	111.1	113.0	107.7	85.7	98.0
77.5°	102.1	102.9	103.2	96.1	71.8	74.8
80°	92.8	92.4	96.1	87.1	58.3	53.5
82.5°	84.5	83.0	85.3	76.3	47.1	35.2
85°	75.2	75.6	77.0	66.6	37.8	21.3
87.5°	67.7	67.7	69.2	58.7	28.4	9.4
90°	58.7	58.0	60.2	49.7	21.3	0.7
92.5°	51.2	51.2	52.7	42.6	15.7	0.7
95°	43.8	44.1	45.3	35.2	12.0	1.1
97.5°	37.4	37.8	39.3	29.9	8.6	1.1
100°	31.8	32.2	32.9	23.9	6.7	0.7
102.5°	26.6	27.7	27.7	19.8	5.2	0.7
105°	22.4	23.9	23.2	16.1	4.9	0.7
107.5°	18.7	20.2	20.2	13.1	4.9	0.7
110°	15.3	17.6	17.2	11.2	3.7	0.7



TEST NUMBER: P893384

CATALOG NUMBER: 4MB-3SL-ASML-UNV-L950

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	13.1	15.0	13.8	9.7	3.7	0.7
115°	11.2	13.1	12.3	9.0	3.4	0.7
117.5°	10.1	11.2	11.2	8.6	3.4	0.7
120°	9.4	10.5	10.1	8.2	3.4	0.7
122.5°	8.6	9.4	9.4	7.5	3.0	0.7
125°	8.2	8.6	9.0	6.7	3.0	0.7
127.5°	7.9	8.6	8.6	6.4	2.6	0.7
130°	7.1	7.9	7.9	6.0	2.6	0.7
132.5°	6.4	7.1	7.1	5.6	2.6	0.7
135°	6.0	6.7	6.7	5.2	2.6	0.7
137.5°	5.6	6.0	6.0	4.9	2.6	0.7
140°	4.9	5.6	5.6	4.5	2.6	0.7
142.5°	4.5	5.2	5.2	4.1	2.2	0.7
145°	4.1	4.5	4.9	3.7	2.2	0.7
147.5°	3.4	4.1	4.5	3.4	2.2	0.7
150°	2.6	3.7	3.7	3.4	2.2	0.7
152.5°	1.9	3.4	3.4	3.0	1.9	0.7
155°	1.5	2.6	3.0	2.6	1.9	1.1
157.5°	1.1	2.2	2.6	2.6	1.9	1.1
160°	0.7	1.9	2.2	2.2	1.5	1.1
162.5°	0.4	1.5	1.9	2.2	1.5	1.1
165°	0.0	1.1	1.5	1.9	1.5	1.1
167.5°	0.0	0.7	1.1	1.5	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: P893384
 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L950

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	17.44	18.90	17.90	19.33	19.79	19.70	21.16	20.16	21.59	22.05
	3H	18.26	19.58	18.73	20.03	20.52	21.40	22.72	21.87	23.16	23.66
	4H	18.47	19.71	18.96	20.17	20.68	22.24	23.48	22.73	23.94	24.46
	6H	18.56	19.71	19.06	20.19	20.71	23.12	24.27	23.62	24.74	25.27
	8H	18.56	19.66	19.08	20.16	20.69	23.59	24.69	24.10	25.19	25.72
	12H	18.55	19.60	19.07	20.09	20.66	24.13	25.18	24.65	25.68	26.24
4H	2H	17.88	19.12	18.37	19.58	20.09	20.07	21.31	20.56	21.77	22.28
	3H	18.98	20.02	19.48	20.53	21.06	21.95	23.00	22.45	23.50	24.04
	4H	19.32	20.26	19.84	20.78	21.35	22.92	23.87	23.44	24.39	24.96
	6H	19.51	20.34	20.05	20.88	21.47	23.96	24.79	24.51	25.34	25.92
	8H	19.53	20.31	20.08	20.86	21.45	24.53	25.31	25.08	25.85	26.45
	12H	19.54	20.24	20.11	20.82	21.42	25.18	25.89	25.75	26.46	27.06
8H	4H	19.64	20.42	20.19	20.97	21.56	23.06	23.84	23.61	24.39	24.98
	6H	19.97	20.62	20.55	21.21	21.81	24.24	24.89	24.82	25.48	26.08
	8H	20.05	20.64	20.65	21.24	21.86	24.92	25.50	25.51	26.10	26.72
	12H	20.11	20.63	20.71	21.22	21.90	25.73	26.26	26.33	26.84	27.53
12H	4H	19.72	20.42	20.29	21.00	21.60	23.06	23.76	23.63	24.33	24.93
	6H	20.10	20.69	20.70	21.29	21.91	24.25	24.84	24.84	25.44	26.05
	8H	20.26	20.79	20.86	21.37	22.06	24.99	25.51	25.58	26.10	26.78