

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: P893383

Luminaire Tested: 4MB-3SL-ASML-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893383
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-L940
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

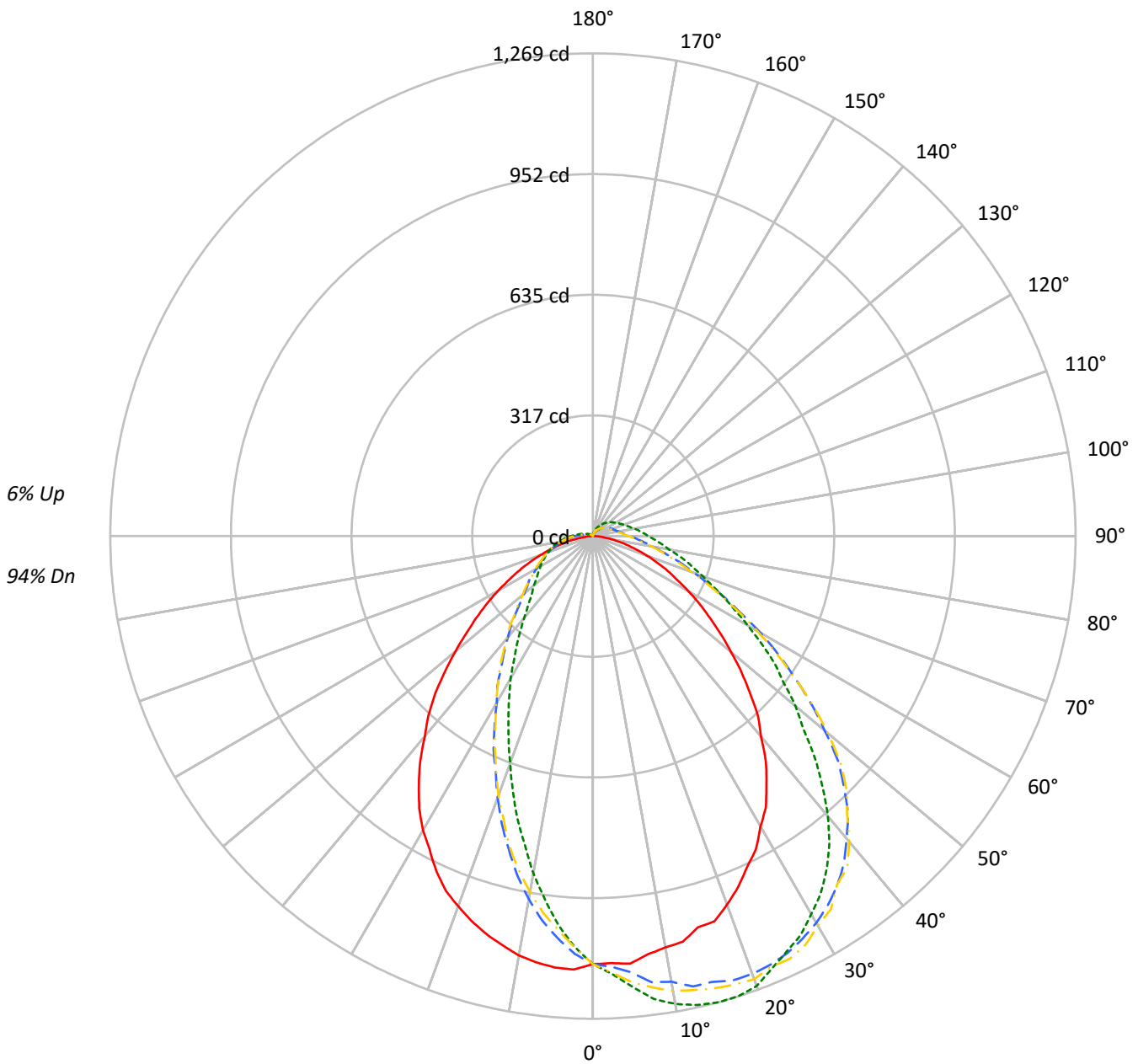
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2804.0 lumens
Efficiency: N/A
Efficacy: 132.9 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: P893383
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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	81	81	81	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	69	69	69	66
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	59	59	59	57
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	51	51	51	49
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	45	45	45	43
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	40	40	40	38
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	36	36	36	34
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	32	32	32	30
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	29	29	29	28
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	11457	11457	11457	11457
5°	11500	11676	11608	10092
10°	11293	11925	11513	8601
15°	11135	11881	11323	7192
20°	11049	11647	11096	5883
25°	10627	11107	10775	4841
30°	10182	10615	10313	3999
35°	9680	10017	9706	3259
40°	8909	9164	8904	2672
45°	8148	8089	8190	2276
50°	7247	7060	7213	2057
55°	6384	6184	6342	1889
60°	5600	5274	5550	1785
65°	4906	4542	4791	1697
70°	4169	3980	4029	1622
75°	3399	3618	3307	1562
80°	2623	3256	2384	1455
85°	1806	3145	1453	1363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 11334 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.7	3.8
10°-20°	293.8	10.5
20°-30°	422.6	15.1
30°-40°	479.6	17.1
40°-50°	458.3	16.3
50°-60°	372.4	13.3
60°-70°	259.9	9.3
70°-80°	161.0	5.7
80°-90°	92.3	3.3
90°-100°	55.2	2.0
100°-110°	36.2	1.3
110°-120°	25.4	0.9
120°-130°	18.4	0.7
130°-140°	12.2	0.4
140°-150°	6.9	0.2
150°-160°	3.1	0.1
160°-170°	0.9	0.0
170°-180°	0.1	0.0
0°-30°	822.1	29.3
0°-40°	1301.7	46.4
0°-60°	2132.4	76.1
0°-90°	2645.6	94.4
90°-120°	116.8	4.2
90°-150°	154.3	5.5
90°-180°	158.0	5.6
0°-180°	2804.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1125	1125	1125	1125	1125	
5°	1128	1189	1139	1028	1128	106
15°	1065	1269	1083	768	1065	303
25°	960	1205	973	525	960	443
35°	796	1071	798	348	796	496
45°	584	826	586	232	584	450
55°	376	582	373	178	376	338
65°	217	379	212	142	217	216
75°	96	253	94	109	96	104
85°	21	172	17	74	21	24
90°	1	145	0	57	1	2
95°	1	126	0	44	1	1
105°	1	97	0	24	1	1
115°	1	77	0	13	1	1
125°	1	63	0	8	1	1
135°	1	50	0	7	1	1
145°	1	35	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0
2.5°	1123.9	1132.4	1133.1	1159.6	1151.9	1161.8	1149.3	1151.5	1140.5	1137.5	1099.2
5°	1128.0	1146.0	1150.8	1196.5	1189.1	1194.3	1177.0	1164.4	1138.6	1123.2	1061.3
7.5°	1108.8	1156.3	1182.8	1215.3	1227.4	1231.5	1196.5	1173.3	1130.5	1092.6	1020.0
10°	1098.1	1163.7	1189.5	1238.1	1248.8	1241.0	1213.8	1175.5	1119.5	1058.3	969.2
12.5°	1092.2	1167.7	1212.7	1262.4	1262.8	1254.7	1222.6	1181.4	1101.4	1021.5	915.4
15°	1065.0	1167.0	1213.1	1263.5	1269.0	1263.9	1231.1	1177.3	1083.0	975.8	853.5
17.5°	1062.0	1165.2	1224.8	1277.9	1268.7	1265.0	1236.3	1175.5	1060.9	929.4	795.3
20°	1031.1	1161.1	1224.8	1261.7	1258.7	1260.2	1239.6	1172.9	1035.5	879.3	731.6
22.5°	998.3	1156.3	1219.7	1247.7	1230.0	1256.9	1224.8	1165.9	1009.7	827.0	668.2
25°	959.6	1148.6	1209.7	1227.8	1205.3	1226.3	1225.9	1155.2	972.9	770.6	618.1
27.5°	928.3	1136.4	1193.5	1220.8	1182.5	1200.5	1210.8	1142.3	929.4	715.0	559.2
30°	881.5	1121.0	1174.0	1178.1	1147.9	1170.7	1182.5	1126.1	892.9	652.0	505.4
32.5°	845.8	1103.3	1150.1	1144.5	1114.3	1144.5	1163.7	1109.9	849.5	596.8	467.5
35°	795.7	1081.9	1120.2	1091.1	1071.2	1096.3	1118.7	1092.6	797.9	537.8	418.8
37.5°	747.1	1063.1	1084.5	1048.4	1021.1	1049.1	1098.5	1060.2	746.0	491.0	382.7
40°	687.8	1020.0	1037.7	988.7	961.5	1002.7	1048.0	1032.2	687.4	442.4	347.7
42.5°	642.8	988.0	993.1	926.1	893.7	937.5	989.1	992.4	639.9	398.6	316.8
45°	583.5	943.0	933.5	859.8	825.9	865.3	942.7	951.5	586.5	360.6	286.6
47.5°	530.1	892.9	874.2	788.0	750.0	796.8	882.6	905.8	526.8	325.6	258.2
50°	474.5	836.9	795.3	720.9	695.5	718.7	806.4	844.7	472.3	291.0	236.5
52.5°	423.6	775.1	723.5	656.8	631.4	650.5	726.4	783.9	418.1	261.9	217.3
55°	375.7	713.2	646.5	587.6	582.4	588.3	645.4	711.3	373.2	236.1	205.2
57.5°	333.0	638.0	577.2	533.8	524.6	529.4	568.8	636.5	329.7	210.3	187.5
60°	289.9	561.0	508.7	475.2	470.0	473.7	499.1	563.6	287.3	188.6	170.9
62.5°	250.9	483.7	437.3	424.7	421.1	421.1	431.7	490.7	247.5	166.5	158.4
65°	217.3	417.4	382.4	377.6	378.7	378.3	371.7	409.6	212.2	147.0	147.3
67.5°	183.4	347.0	327.5	333.4	337.8	336.0	322.0	340.7	179.0	129.3	137.4
70°	152.1	286.6	282.9	296.2	306.5	296.9	276.6	278.5	147.0	112.0	124.5
72.5°	122.7	231.7	248.7	267.1	277.0	266.3	238.3	230.2	118.2	96.1	112.7
75°	96.5	186.4	213.3	240.5	253.4	239.8	207.4	179.8	93.9	81.0	103.1
77.5°	73.7	147.7	182.3	214.0	226.5	214.8	180.5	140.4	68.9	68.1	92.8
80°	52.7	116.8	161.7	192.3	203.7	192.3	156.6	110.9	47.9	54.5	81.8
82.5°	34.6	90.3	140.7	175.0	187.5	173.5	135.9	85.5	30.6	44.2	73.7
85°	21.0	71.5	122.7	157.3	171.7	158.0	119.0	64.8	16.9	33.9	64.1
87.5°	9.2	55.3	109.4	145.1	158.0	145.5	106.1	50.8	7.0	26.5	54.9
90°	0.7	43.8	96.5	133.7	145.1	133.4	93.9	41.3	0.0	19.2	47.2
92.5°	0.7	37.6	88.4	123.8	136.7	123.4	84.7	33.9	0.0	14.0	39.8
95°	1.1	31.7	80.3	116.0	126.4	114.9	77.4	29.1	0.0	9.6	33.5
97.5°	1.1	28.7	73.7	108.3	119.7	107.6	70.7	26.2	0.0	7.0	27.3
100°	0.7	26.5	68.5	100.9	111.6	100.2	65.6	23.6	0.0	4.4	22.1
102.5°	0.7	24.7	64.1	94.7	103.1	93.6	61.1	22.1	0.0	3.7	18.1
105°	0.7	23.6	60.0	87.3	97.3	87.3	57.5	20.6	0.0	2.9	14.0
107.5°	0.7	22.1	57.1	83.3	91.4	82.5	54.5	19.5	0.0	2.9	11.4
110°	0.7	21.0	54.5	77.4	86.6	78.1	51.9	17.7	0.0	1.8	9.2



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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	19.2	51.9	73.3	82.1	73.7	49.7	16.2	0.0	1.8	8.1
115°	0.7	17.3	49.7	70.7	77.4	70.0	47.5	14.4	0.0	1.5	7.4
117.5°	0.7	16.2	48.3	67.4	74.0	66.7	45.7	13.6	0.0	1.5	7.0
120°	0.7	15.5	46.0	64.1	69.3	63.4	43.5	12.9	0.0	1.5	6.6
122.5°	0.7	14.7	44.2	61.1	66.7	60.8	41.6	12.5	0.0	1.1	5.9
125°	0.7	14.0	41.6	57.8	63.0	57.1	38.3	12.2	0.0	0.7	5.2
127.5°	0.7	13.3	39.0	55.3	60.0	54.5	36.1	11.8	0.0	0.7	4.8
130°	0.7	12.9	35.7	51.9	56.7	51.2	33.5	11.8	0.0	0.7	4.4
132.5°	0.7	12.5	32.0	48.6	53.8	47.9	30.9	11.4	0.0	0.7	3.7
135°	0.7	12.2	28.4	45.3	50.1	44.6	28.7	11.1	0.0	0.7	3.3
137.5°	0.7	11.4	25.0	41.6	46.4	40.9	27.3	10.3	0.0	0.7	2.9
140°	0.7	10.7	22.5	38.7	42.7	37.6	25.0	9.6	0.0	0.4	2.2
142.5°	0.7	9.6	20.3	35.0	39.0	34.3	22.5	8.1	0.0	0.4	2.2
145°	0.7	8.5	18.4	30.6	35.4	30.6	21.0	7.4	0.0	0.4	1.8
147.5°	0.7	7.7	16.6	25.8	32.0	28.0	18.8	6.3	0.0	0.4	1.5
150°	0.7	7.0	14.4	21.7	28.4	24.7	17.3	5.5	0.0	0.0	1.1
152.5°	0.7	6.3	12.5	18.1	25.4	22.5	15.5	4.8	0.0	0.0	0.7
155°	1.1	5.9	10.7	15.8	22.1	19.5	12.9	4.1	0.0	0.0	0.7
157.5°	1.1	5.2	8.8	12.9	19.5	16.9	10.3	3.3	0.0	0.0	0.4
160°	1.1	4.8	7.4	9.9	16.2	14.0	8.5	2.6	0.0	0.0	0.4
162.5°	1.1	4.4	6.3	7.4	13.3	11.1	6.6	1.8	0.0	0.0	0.4
165°	1.1	3.7	5.5	5.2	10.3	8.5	5.2	1.1	0.0	0.0	0.0
167.5°	1.1	3.3	4.4	3.7	7.7	6.3	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	2.9	1.8	0.7	2.2	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	1.5	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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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1125.0	1125.0	1125.0	1125.0	1125.0	1125.0
2.5°	1094.1	1081.9	1070.9	1082.6	1091.1	1123.9
5°	1040.7	1027.8	1029.2	1039.9	1068.3	1128.0
7.5°	985.4	964.0	969.2	999.0	1041.0	1108.8
10°	920.2	900.7	905.5	950.4	1009.3	1098.1
12.5°	862.0	829.2	857.2	899.6	972.5	1092.2
15°	793.8	768.1	783.2	845.8	937.1	1065.0
17.5°	720.2	700.3	718.3	780.6	893.7	1062.0
20°	663.4	635.8	657.2	725.7	839.9	1031.1
22.5°	599.7	578.7	601.2	664.2	785.0	998.3
25°	547.4	525.3	547.8	610.4	736.4	959.6
27.5°	496.6	476.3	496.6	554.0	688.1	928.3
30°	452.0	432.5	453.1	508.4	631.8	881.5
32.5°	410.4	385.3	411.8	465.3	582.0	845.8
35°	367.3	348.5	368.4	427.7	526.8	795.7
37.5°	331.5	312.0	335.6	386.4	480.0	747.1
40°	297.6	280.3	299.1	353.3	440.2	687.8
42.5°	271.1	253.8	273.0	323.1	400.1	642.8
45°	245.3	232.4	247.9	289.9	359.5	583.5
47.5°	226.5	215.5	228.4	265.6	325.6	530.1
50°	210.3	202.6	211.8	241.3	290.6	474.5
52.5°	196.0	188.2	198.9	222.5	263.0	423.6
55°	184.9	177.9	186.0	204.8	235.4	375.7
57.5°	172.8	168.3	174.6	186.0	213.7	333.0
60°	163.9	159.1	165.8	175.0	189.0	289.9
62.5°	154.0	151.4	155.5	162.8	170.2	250.9
65°	145.1	141.5	146.6	149.2	148.5	217.3
67.5°	135.6	134.5	137.4	137.8	132.2	183.4
70°	125.6	124.9	128.6	126.4	114.9	152.1
72.5°	117.5	117.5	119.7	115.3	100.2	122.7
75°	108.7	109.4	111.2	106.1	84.4	96.5
77.5°	100.6	101.3	101.7	94.7	70.7	73.7
80°	91.4	91.0	94.7	85.8	57.5	52.7
82.5°	83.3	81.8	84.0	75.1	46.4	34.6
85°	74.0	74.4	75.9	65.6	37.2	21.0
87.5°	66.7	66.7	68.1	57.8	28.0	9.2
90°	57.8	57.1	59.3	49.0	21.0	0.7
92.5°	50.5	50.5	51.9	42.0	15.5	0.7
95°	43.1	43.5	44.6	34.6	11.8	1.1
97.5°	36.8	37.2	38.7	29.5	8.5	1.1
100°	31.3	31.7	32.4	23.6	6.6	0.7
102.5°	26.2	27.3	27.3	19.5	5.2	0.7
105°	22.1	23.6	22.8	15.8	4.8	0.7
107.5°	18.4	19.9	19.9	12.9	4.8	0.7
110°	15.1	17.3	16.9	11.1	3.7	0.7



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 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L940

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	12.9	14.7	13.6	9.6	3.7	0.7
115°	11.1	12.9	12.2	8.8	3.3	0.7
117.5°	9.9	11.1	11.1	8.5	3.3	0.7
120°	9.2	10.3	9.9	8.1	3.3	0.7
122.5°	8.5	9.2	9.2	7.4	2.9	0.7
125°	8.1	8.5	8.8	6.6	2.9	0.7
127.5°	7.7	8.5	8.5	6.3	2.6	0.7
130°	7.0	7.7	7.7	5.9	2.6	0.7
132.5°	6.3	7.0	7.0	5.5	2.6	0.7
135°	5.9	6.6	6.6	5.2	2.6	0.7
137.5°	5.5	5.9	5.9	4.8	2.6	0.7
140°	4.8	5.5	5.5	4.4	2.6	0.7
142.5°	4.4	5.2	5.2	4.1	2.2	0.7
145°	4.1	4.4	4.8	3.7	2.2	0.7
147.5°	3.3	4.1	4.4	3.3	2.2	0.7
150°	2.6	3.7	3.7	3.3	2.2	0.7
152.5°	1.8	3.3	3.3	2.9	1.8	0.7
155°	1.5	2.6	2.9	2.6	1.8	1.1
157.5°	1.1	2.2	2.6	2.6	1.8	1.1
160°	0.7	1.8	2.2	2.2	1.5	1.1
162.5°	0.4	1.5	1.8	2.2	1.5	1.1
165°	0.0	1.1	1.5	1.8	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: P893383
 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L940

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	17.39	18.85	17.84	19.28	19.74	19.65	21.11	20.10	21.54	21.99
	3H	18.21	19.53	18.68	19.97	20.47	21.35	22.67	21.82	23.11	23.61
	4H	18.42	19.66	18.90	20.12	20.63	22.19	23.43	22.68	23.89	24.40
	6H	18.51	19.66	19.01	20.13	20.66	23.06	24.22	23.56	24.69	25.22
	8H	18.51	19.61	19.02	20.11	20.64	23.54	24.64	24.05	25.13	25.67
	12H	18.50	19.55	19.02	20.04	20.60	24.08	25.13	24.60	25.62	26.19
4H	2H	17.83	19.07	18.31	19.53	20.04	20.01	21.26	20.50	21.72	22.23
	3H	18.92	19.97	19.42	20.47	21.01	21.90	22.94	22.40	23.45	23.98
	4H	19.26	20.21	19.78	20.73	21.30	22.87	23.82	23.39	24.34	24.90
	6H	19.45	20.28	20.00	20.83	21.41	23.91	24.74	24.45	25.28	25.87
	8H	19.48	20.26	20.03	20.80	21.40	24.47	25.25	25.02	25.80	26.39
	12H	19.49	20.19	20.06	20.76	21.36	25.13	25.83	25.70	26.41	27.01
8H	4H	19.59	20.37	20.14	20.91	21.51	23.01	23.79	23.56	24.33	24.93
	6H	19.91	20.57	20.49	21.15	21.76	24.18	24.84	24.76	25.42	26.03
	8H	20.00	20.59	20.60	21.19	21.80	24.86	25.45	25.46	26.05	26.67
	12H	20.06	20.58	20.65	21.17	21.85	25.68	26.20	26.27	26.79	27.47
12H	4H	19.67	20.37	20.24	20.94	21.54	23.00	23.71	23.57	24.28	24.88
	6H	20.05	20.64	20.65	21.24	21.85	24.20	24.79	24.79	25.39	26.00
	8H	20.21	20.73	20.80	21.32	22.00	24.93	25.46	25.53	26.04	26.73