

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: P893379

Luminaire Tested: 4MB-3SL-ASML-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893379
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-L840
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

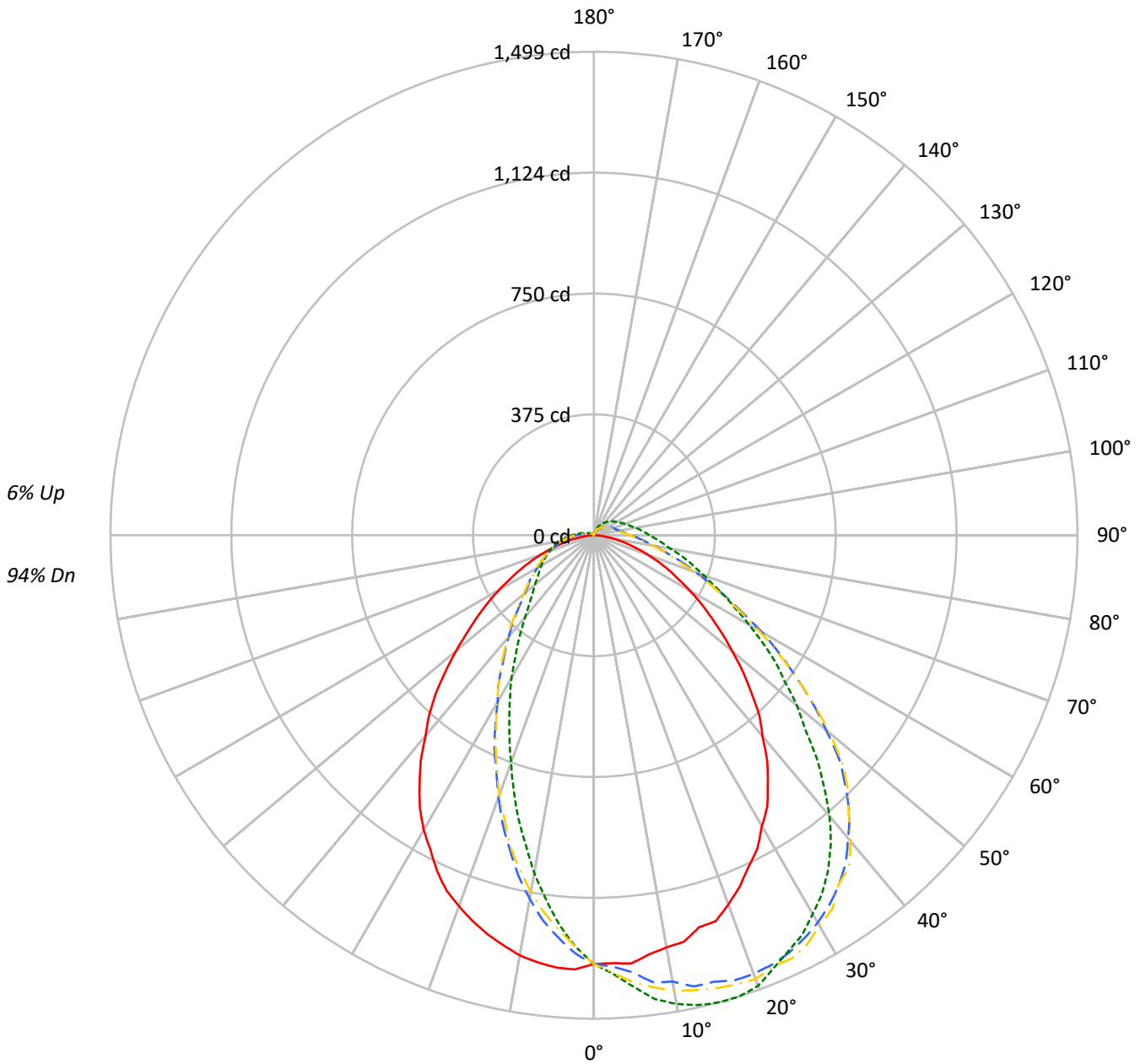
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3313.0 lumens
Efficiency: N/A
Efficacy: 157.0 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_{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

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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°	13537	13537	13537	13537
5°	13587	13795	13715	11923
10°	13344	14090	13603	10162
15°	13156	14039	13379	8497
20°	13053	13761	13110	6951
25°	12557	13123	12730	5720
30°	12030	12541	12185	4725
35°	11436	11836	11468	3850
40°	10526	10827	10521	3157
45°	9627	9557	9676	2689
50°	8562	8341	8522	2430
55°	7543	7307	7492	2232
60°	6616	6233	6558	2110
65°	5798	5366	5660	2004
70°	4928	4702	4761	1915
75°	4015	4274	3909	1846
80°	3096	3848	2818	1718
85°	2132	3715	1720	1610

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 13391 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.9	3.8
10°-20°	347.1	10.5
20°-30°	499.3	15.1
30°-40°	566.6	17.1
40°-50°	541.5	16.3
50°-60°	440.0	13.3
60°-70°	307.0	9.3
70°-80°	190.2	5.7
80°-90°	109.1	3.3
90°-100°	65.2	2.0
100°-110°	42.8	1.3
110°-120°	30.0	0.9
120°-130°	21.7	0.7
130°-140°	14.5	0.4
140°-150°	8.1	0.2
150°-160°	3.6	0.1
160°-170°	1.0	0.0
170°-180°	0.1	0.0
0°-30°	971.3	29.3
0°-40°	1538.0	46.4
0°-60°	2519.5	76.0
0°-90°	3125.9	94.4
90°-120°	138.1	4.2
90°-150°	182.4	5.5
90°-180°	187.0	5.6
0°-180°	3313.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1329	1329	1329	1329	1329	
5°	1333	1405	1345	1214	1333	126
15°	1258	1499	1280	908	1258	358
25°	1134	1424	1150	621	1134	523
35°	940	1266	943	412	940	586
45°	689	976	693	275	689	532
55°	444	688	441	210	444	399
65°	257	447	251	167	257	255
75°	114	299	111	129	114	123
85°	25	203	20	88	25	28
90°	1	172	0	68	1	2
95°	1	149	0	51	1	1
105°	1	115	0	28	1	1
115°	1	91	0	15	1	1
125°	1	74	0	10	1	1
135°	1	59	0	8	1	1
145°	1	42	0	5	1	1
155°	1	26	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°	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2
2.5°	1327.9	1337.9	1338.8	1370.1	1361.0	1372.8	1358.0	1360.6	1347.5	1344.0	1298.8
5°	1332.7	1354.0	1359.7	1413.7	1405.0	1411.1	1390.6	1375.8	1345.3	1327.1	1253.9
7.5°	1310.1	1366.2	1397.6	1435.9	1450.2	1455.0	1413.7	1386.2	1335.8	1290.9	1205.2
10°	1297.5	1374.9	1405.4	1462.9	1475.5	1466.3	1434.1	1388.9	1322.7	1250.5	1145.1
12.5°	1290.5	1379.7	1432.8	1491.6	1492.0	1482.4	1444.6	1395.8	1301.4	1206.9	1081.6
15°	1258.3	1378.8	1433.3	1492.9	1499.4	1493.3	1454.6	1391.0	1279.6	1153.0	1008.5
17.5°	1254.8	1376.7	1447.2	1509.9	1499.0	1494.6	1460.7	1388.9	1253.5	1098.1	939.7
20°	1218.2	1371.9	1447.2	1490.7	1487.2	1489.0	1464.6	1385.8	1223.5	1038.9	864.4
22.5°	1179.5	1366.2	1441.1	1474.2	1453.3	1485.0	1447.2	1377.5	1193.0	977.1	789.5
25°	1133.8	1357.1	1429.3	1450.7	1424.1	1448.9	1448.5	1364.9	1149.5	910.5	730.3
27.5°	1096.8	1342.7	1410.2	1442.4	1397.1	1418.5	1430.6	1349.7	1098.1	844.8	660.7
30°	1041.5	1324.4	1387.1	1391.9	1356.2	1383.2	1397.1	1330.5	1055.0	770.4	597.2
32.5°	999.3	1303.6	1358.8	1352.3	1316.6	1352.3	1374.9	1311.4	1003.7	705.1	552.3
35°	940.1	1278.3	1323.6	1289.2	1265.7	1295.3	1321.8	1290.9	942.7	635.5	494.9
37.5°	882.7	1256.1	1281.4	1238.7	1206.5	1239.6	1297.9	1252.6	881.4	580.2	452.2
40°	812.6	1205.2	1226.1	1168.2	1136.0	1184.7	1238.3	1219.6	812.2	522.7	410.9
42.5°	759.5	1167.3	1173.4	1094.2	1055.9	1107.7	1168.6	1172.5	756.0	470.9	374.3
45°	689.4	1114.2	1102.9	1015.9	975.8	1022.4	1113.8	1124.2	692.9	426.1	338.6
47.5°	626.3	1055.0	1032.8	931.0	886.2	941.4	1042.8	1070.3	622.4	384.8	305.1
50°	560.6	988.9	939.7	851.8	821.7	849.2	952.7	998.0	558.0	343.8	279.4
52.5°	500.5	915.8	854.8	776.0	746.0	768.6	858.3	926.2	494.0	309.5	256.8
55°	443.9	842.6	763.9	694.2	688.1	695.1	762.5	840.5	440.9	279.0	242.4
57.5°	393.5	753.8	682.0	630.7	619.8	625.4	672.0	752.1	389.5	248.5	221.5
60°	342.5	662.9	601.1	561.5	555.4	559.7	589.8	665.9	339.5	222.8	202.0
62.5°	296.4	571.5	516.6	501.8	497.5	497.5	510.1	579.7	292.5	196.7	187.2
65°	256.8	493.1	451.8	446.1	447.4	447.0	439.2	484.0	250.7	173.7	174.1
67.5°	216.8	410.0	386.9	393.9	399.1	396.9	380.4	402.6	211.5	152.8	162.3
70°	179.8	338.6	334.3	349.9	362.1	350.8	326.9	329.0	173.7	132.3	147.1
72.5°	144.9	273.8	293.8	315.6	327.3	314.7	281.6	272.0	139.7	113.6	133.2
75°	114.0	220.2	252.0	284.2	299.4	283.3	245.0	212.4	111.0	95.8	121.9
77.5°	87.0	174.5	215.4	252.9	267.7	253.7	213.3	165.8	81.4	80.5	109.7
80°	62.2	138.0	191.1	227.2	240.7	227.2	185.0	131.0	56.6	64.4	96.6
82.5°	40.9	106.6	166.3	206.7	221.5	205.0	160.6	101.0	36.1	52.2	87.0
85°	24.8	84.4	144.9	185.8	202.8	186.7	140.6	76.6	20.0	40.0	75.7
87.5°	10.9	65.3	129.3	171.5	186.7	171.9	125.3	60.1	8.3	31.3	64.9
90°	0.9	51.8	114.0	158.0	171.5	157.6	111.0	48.7	0.0	22.6	55.7
92.5°	0.9	44.4	104.5	146.2	161.5	145.8	100.1	40.0	0.0	16.5	47.0
95°	1.3	37.4	94.9	137.1	149.3	135.8	91.4	34.4	0.0	11.3	39.6
97.5°	1.3	33.9	87.0	128.0	141.5	127.1	83.6	30.9	0.0	8.3	32.2
100°	0.9	31.3	81.0	119.3	131.9	118.4	77.5	27.9	0.0	5.2	26.1
102.5°	0.9	29.2	75.7	111.9	121.9	110.6	72.3	26.1	0.0	4.4	21.3
105°	0.9	27.9	70.9	103.2	114.9	103.2	67.9	24.4	0.0	3.5	16.5
107.5°	0.9	26.1	67.5	98.4	107.9	97.5	64.4	23.1	0.0	3.5	13.5
110°	0.9	24.8	64.4	91.4	102.3	92.3	61.4	20.9	0.0	2.2	10.9



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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°	0.9	22.6	61.4	86.6	97.1	87.0	58.8	19.2	0.0	2.2	9.6
115°	0.9	20.5	58.8	83.6	91.4	82.7	56.1	17.0	0.0	1.7	8.7
117.5°	0.9	19.2	57.0	79.6	87.5	78.8	54.0	16.1	0.0	1.7	8.3
120°	0.9	18.3	54.4	75.7	81.8	74.9	51.4	15.2	0.0	1.7	7.8
122.5°	0.9	17.4	52.2	72.3	78.8	71.8	49.2	14.8	0.0	1.3	7.0
125°	0.9	16.5	49.2	68.3	74.4	67.5	45.3	14.4	0.0	0.9	6.1
127.5°	0.9	15.7	46.1	65.3	70.9	64.4	42.7	13.9	0.0	0.9	5.7
130°	0.9	15.2	42.2	61.4	67.0	60.5	39.6	13.9	0.0	0.9	5.2
132.5°	0.9	14.8	37.9	57.5	63.5	56.6	36.6	13.5	0.0	0.9	4.4
135°	0.9	14.4	33.5	53.5	59.2	52.7	33.9	13.1	0.0	0.9	3.9
137.5°	0.9	13.5	29.6	49.2	54.8	48.3	32.2	12.2	0.0	0.9	3.5
140°	0.9	12.6	26.5	45.7	50.5	44.4	29.6	11.3	0.0	0.4	2.6
142.5°	0.9	11.3	23.9	41.3	46.1	40.5	26.5	9.6	0.0	0.4	2.6
145°	0.9	10.0	21.8	36.1	41.8	36.1	24.8	8.7	0.0	0.4	2.2
147.5°	0.9	9.1	19.6	30.5	37.9	33.1	22.2	7.4	0.0	0.4	1.7
150°	0.9	8.3	17.0	25.7	33.5	29.2	20.5	6.5	0.0	0.0	1.3
152.5°	0.9	7.4	14.8	21.3	30.0	26.5	18.3	5.7	0.0	0.0	0.9
155°	1.3	7.0	12.6	18.7	26.1	23.1	15.2	4.8	0.0	0.0	0.9
157.5°	1.3	6.1	10.4	15.2	23.1	20.0	12.2	3.9	0.0	0.0	0.4
160°	1.3	5.7	8.7	11.8	19.2	16.5	10.0	3.0	0.0	0.0	0.4
162.5°	1.3	5.2	7.4	8.7	15.7	13.1	7.8	2.2	0.0	0.0	0.4
165°	1.3	4.4	6.5	6.1	12.2	10.0	6.1	1.3	0.0	0.0	0.0
167.5°	1.3	3.9	5.2	4.4	9.1	7.4	4.4	0.9	0.0	0.0	0.0
170°	1.3	3.0	4.4	3.0	2.6	4.8	2.6	0.4	0.0	0.0	0.0
172.5°	1.3	2.6	3.5	2.2	0.9	2.6	1.3	0.0	0.0	0.0	0.0
175°	1.3	2.2	2.2	1.3	0.4	0.9	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°	1329.2	1329.2	1329.2	1329.2	1329.2	1329.2
2.5°	1292.7	1278.3	1265.3	1279.2	1289.2	1327.9
5°	1229.6	1214.3	1216.1	1228.7	1262.2	1332.7
7.5°	1164.3	1139.0	1145.1	1180.4	1230.0	1310.1
10°	1087.2	1064.2	1069.8	1122.9	1192.6	1297.5
12.5°	1018.5	979.7	1012.8	1062.9	1149.0	1290.5
15°	937.9	907.5	925.3	999.3	1107.3	1258.3
17.5°	850.9	827.4	848.7	922.3	1055.9	1254.8
20°	783.9	751.2	776.5	857.4	992.4	1218.2
22.5°	708.6	683.8	710.3	784.7	927.5	1179.5
25°	646.8	620.7	647.2	721.2	870.1	1133.8
27.5°	586.7	562.8	586.7	654.6	813.0	1096.8
30°	534.0	511.0	535.3	600.6	746.4	1041.5
32.5°	484.9	455.3	486.6	549.7	687.7	999.3
35°	433.9	411.7	435.2	505.3	622.4	940.1
37.5°	391.7	368.7	396.5	456.6	567.1	882.7
40°	351.7	331.2	353.4	417.4	520.1	812.6
42.5°	320.3	299.9	322.5	381.7	472.7	759.5
45°	289.9	274.6	292.9	342.5	424.8	689.4
47.5°	267.7	254.6	269.9	313.8	384.8	626.3
50°	248.5	239.4	250.3	285.1	343.4	560.6
52.5°	231.5	222.4	235.0	262.9	310.8	500.5
55°	218.5	210.2	219.8	242.0	278.1	443.9
57.5°	204.1	198.9	206.3	219.8	252.4	393.5
60°	193.7	188.0	195.9	206.7	223.3	342.5
62.5°	181.9	178.9	183.7	192.4	201.1	296.4
65°	171.5	167.1	173.2	176.3	175.4	256.8
67.5°	160.2	158.9	162.3	162.8	156.3	216.8
70°	148.4	147.5	151.9	149.3	135.8	179.8
72.5°	138.8	138.8	141.5	136.2	118.4	144.9
75°	128.4	129.3	131.4	125.3	99.7	114.0
77.5°	118.8	119.7	120.1	111.9	83.6	87.0
80°	107.9	107.5	111.9	101.4	67.9	62.2
82.5°	98.4	96.6	99.2	88.8	54.8	40.9
85°	87.5	87.9	89.7	77.5	44.0	24.8
87.5°	78.8	78.8	80.5	68.3	33.1	10.9
90°	68.3	67.5	70.1	57.9	24.8	0.9
92.5°	59.6	59.6	61.4	49.6	18.3	0.9
95°	50.9	51.4	52.7	40.9	13.9	1.3
97.5°	43.5	44.0	45.7	34.8	10.0	1.3
100°	37.0	37.4	38.3	27.9	7.8	0.9
102.5°	30.9	32.2	32.2	23.1	6.1	0.9
105°	26.1	27.9	27.0	18.7	5.7	0.9
107.5°	21.8	23.5	23.5	15.2	5.7	0.9
110°	17.8	20.5	20.0	13.1	4.4	0.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	15.2	17.4	16.1	11.3	4.4	0.9
115°	13.1	15.2	14.4	10.4	3.9	0.9
117.5°	11.8	13.1	13.1	10.0	3.9	0.9
120°	10.9	12.2	11.8	9.6	3.9	0.9
122.5°	10.0	10.9	10.9	8.7	3.5	0.9
125°	9.6	10.0	10.4	7.8	3.5	0.9
127.5°	9.1	10.0	10.0	7.4	3.0	0.9
130°	8.3	9.1	9.1	7.0	3.0	0.9
132.5°	7.4	8.3	8.3	6.5	3.0	0.9
135°	7.0	7.8	7.8	6.1	3.0	0.9
137.5°	6.5	7.0	7.0	5.7	3.0	0.9
140°	5.7	6.5	6.5	5.2	3.0	0.9
142.5°	5.2	6.1	6.1	4.8	2.6	0.9
145°	4.8	5.2	5.7	4.4	2.6	0.9
147.5°	3.9	4.8	5.2	3.9	2.6	0.9
150°	3.0	4.4	4.4	3.9	2.6	0.9
152.5°	2.2	3.9	3.9	3.5	2.2	0.9
155°	1.7	3.0	3.5	3.0	2.2	1.3
157.5°	1.3	2.6	3.0	3.0	2.2	1.3
160°	0.9	2.2	2.6	2.6	1.7	1.3
162.5°	0.4	1.7	2.2	2.6	1.7	1.3
165°	0.0	1.3	1.7	2.2	1.7	1.3
167.5°	0.0	0.9	1.3	1.7	1.3	1.3
170°	0.0	0.4	0.9	1.3	1.3	1.3
172.5°	0.0	0.0	0.4	0.9	0.9	1.3
175°	0.0	0.0	0.0	0.4	0.9	1.3
177.5°	0.0	0.0	0.0	0.4	0.9	1.3
180°	0.4	0.4	0.4	0.4	0.4	0.4



TEST NUMBER: P893379
 CATALOG NUMBER: 4MB-3SL-ASML-UNV-L840

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	17.97	19.43	18.42	19.86	20.32	20.23	21.69	20.68	22.12	22.57
	3H	18.79	20.11	19.26	20.55	21.05	21.93	23.25	22.40	23.69	24.19
	4H	18.99	20.24	19.48	20.70	21.21	22.77	24.01	23.26	24.47	24.98
	6H	19.09	20.24	19.59	20.71	21.24	23.64	24.79	24.14	25.27	25.80
	8H	19.09	20.19	19.60	20.69	21.22	24.11	25.21	24.63	25.71	26.25
	12H	19.08	20.13	19.59	20.62	21.18	24.66	25.71	25.18	26.20	26.76
4H	2H	18.41	19.65	18.89	20.11	20.62	20.59	21.84	21.08	22.30	22.81
	3H	19.50	20.55	20.00	21.05	21.59	22.48	23.52	22.98	24.03	24.56
	4H	19.84	20.79	20.36	21.31	21.88	23.45	24.40	23.97	24.92	25.48
	6H	20.03	20.86	20.58	21.41	21.99	24.49	25.32	25.03	25.86	26.45
	8H	20.06	20.84	20.61	21.38	21.98	25.05	25.83	25.60	26.38	26.97
	12H	20.07	20.77	20.64	21.34	21.94	25.71	26.41	26.28	26.99	27.59
8H	4H	20.17	20.95	20.72	21.49	22.09	23.59	24.37	24.14	24.91	25.51
	6H	20.49	21.15	21.07	21.73	22.33	24.76	25.42	25.34	26.00	26.61
	8H	20.58	21.17	21.18	21.77	22.38	25.44	26.03	26.04	26.63	27.24
	12H	20.64	21.16	21.23	21.75	22.43	26.26	26.78	26.85	27.37	28.05
12H	4H	20.25	20.95	20.82	21.52	22.12	23.58	24.29	24.15	24.86	25.46
	6H	20.63	21.22	21.22	21.82	22.43	24.78	25.37	25.37	25.97	26.58
	8H	20.79	21.31	21.38	21.90	22.58	25.51	26.04	26.11	26.62	27.31