

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: P893720

Luminaire Tested: 4MB-6SL-ASML-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893720
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-6SL-ASML-UNV-L950
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

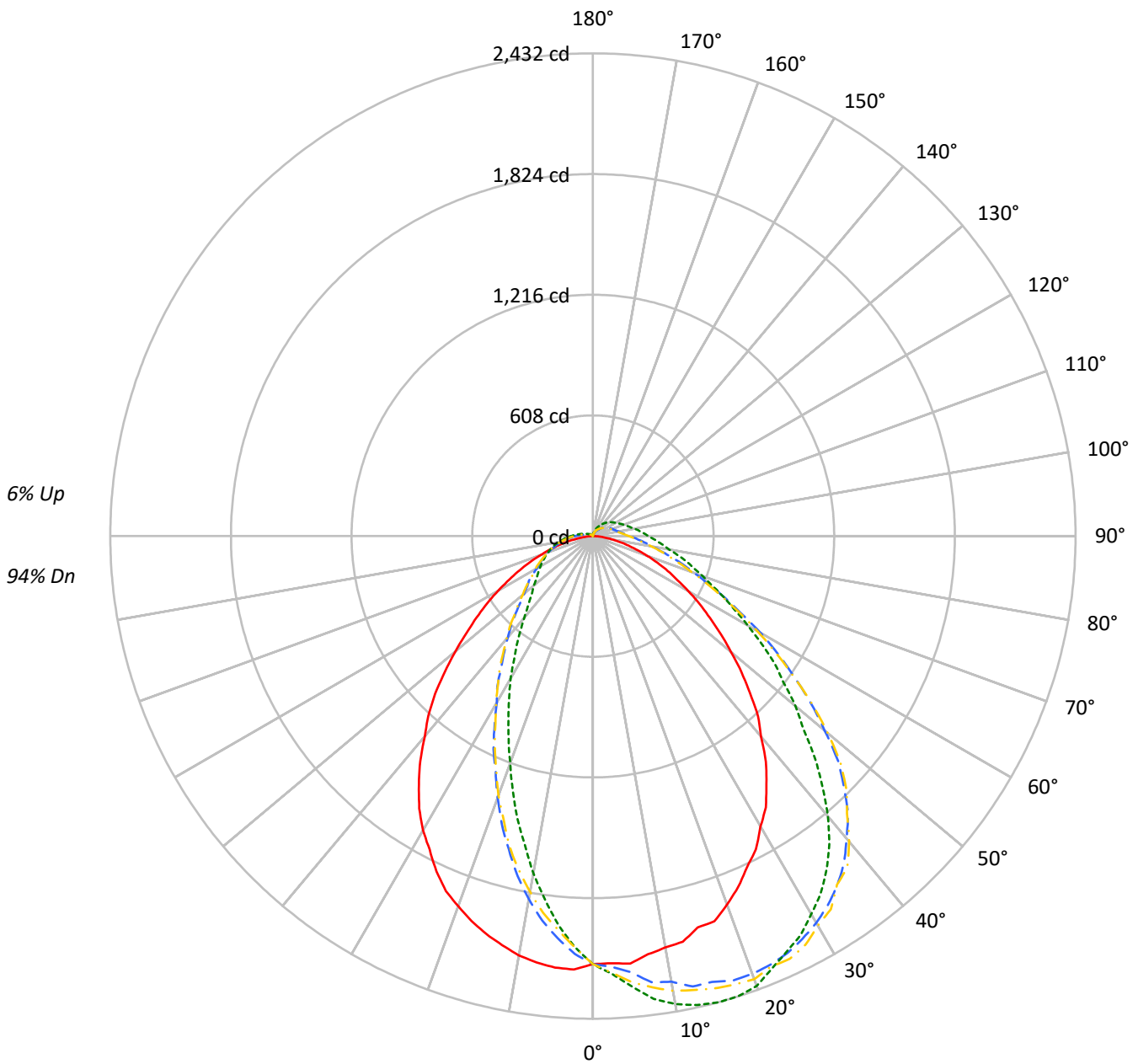
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5374.0 lumens
Efficiency: N/A
Efficacy: 121.0 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): 44.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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	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°	21958	21958	21958	21958
5°	22040	22377	22249	19341
10°	21644	22855	22065	16483
15°	21341	22772	21702	13782
20°	21174	22322	21266	11276
25°	20368	21286	20650	9278
30°	19514	20343	19767	7665
35°	18552	19199	18603	6246
40°	17073	17563	17064	5121
45°	15616	15503	15696	4363
50°	13887	13530	13823	3942
55°	12237	11853	12154	3621
60°	10733	10110	10638	3423
65°	9403	8705	9182	3252
70°	7993	7628	7722	3108
75°	6516	6934	6340	2994
80°	5028	6241	4570	2788
85°	3456	6027	2794	2612

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 21722 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.6	3.8
10°-20°	563.1	10.5
20°-30°	809.9	15.1
30°-40°	919.1	17.1
40°-50°	878.4	16.3
50°-60°	713.8	13.3
60°-70°	498.0	9.3
70°-80°	308.5	5.7
80°-90°	177.0	3.3
90°-100°	105.8	2.0
100°-110°	69.4	1.3
110°-120°	48.7	0.9
120°-130°	35.3	0.7
130°-140°	23.4	0.4
140°-150°	13.2	0.2
150°-160°	5.9	0.1
160°-170°	1.7	0.0
170°-180°	0.1	0.0
0°-30°	1575.6	29.3
0°-40°	2494.8	46.4
0°-60°	4086.9	76.1
0°-90°	5070.5	94.4
90°-120°	223.9	4.2
90°-150°	295.8	5.5
90°-180°	304.0	5.7
0°-180°	5374.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2156	2156	2156	2156	2156	
5°	2162	2279	2182	1970	2162	204
15°	2041	2432	2076	1472	2041	580
25°	1839	2310	1865	1007	1839	848
35°	1525	2053	1529	668	1525	951
45°	1118	1583	1124	446	1118	863
55°	720	1116	715	341	720	648
65°	416	726	407	271	416	413
75°	185	486	180	210	185	200
85°	40	329	32	143	40	45
90°	1	278	0	109	1	3
95°	2	242	0	83	2	2
105°	1	186	0	45	1	1
115°	1	148	0	25	1	1
125°	1	121	0	16	1	1
135°	1	96	0	13	1	1
145°	1	68	0	8	1	1
155°	2	42	0	5	2	1
165°	2	20	0	2	2	1
175°	2	1	0	0	2	0
180°	1	1	1	1	1	



TEST NUMBER: P893720

CATALOG NUMBER: 4MB-6SL-ASML-UNV-L950

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1
2.5°	2154.0	2170.3	2171.7	2222.5	2207.7	2226.7	2202.7	2207.0	2185.8	2180.1	2106.7
5°	2161.8	2196.4	2205.6	2293.1	2279.0	2288.9	2255.7	2231.7	2182.3	2152.6	2034.0
7.5°	2125.1	2216.2	2267.0	2329.1	2352.4	2360.2	2293.1	2248.6	2166.7	2094.0	1954.9
10°	2104.6	2230.3	2279.7	2372.9	2393.4	2378.5	2326.3	2252.9	2145.5	2028.4	1857.5
12.5°	2093.3	2238.0	2324.2	2419.5	2420.2	2404.7	2343.2	2264.2	2111.0	1957.8	1754.4
15°	2041.1	2236.6	2324.9	2421.6	2432.2	2422.3	2359.5	2256.4	2075.7	1870.2	1635.8
17.5°	2035.4	2233.1	2347.5	2449.1	2431.5	2424.4	2369.4	2252.9	2033.3	1781.3	1524.3
20°	1976.1	2225.3	2347.5	2418.1	2412.4	2415.2	2375.7	2247.9	1984.6	1685.2	1402.1
22.5°	1913.3	2216.2	2337.6	2391.2	2357.4	2408.9	2347.5	2234.5	1935.2	1585.0	1280.7
25°	1839.1	2201.3	2318.5	2353.1	2310.0	2350.3	2349.6	2214.0	1864.6	1477.0	1184.7
27.5°	1779.1	2178.0	2287.5	2339.7	2266.3	2300.9	2320.6	2189.3	1781.3	1370.4	1071.7
30°	1689.5	2148.4	2250.0	2257.8	2199.9	2243.7	2266.3	2158.3	1711.4	1249.6	968.6
32.5°	1621.0	2114.5	2204.1	2193.6	2135.7	2193.6	2230.3	2127.2	1628.0	1143.7	895.9
35°	1525.0	2073.5	2147.0	2091.2	2053.1	2101.1	2144.1	2094.0	1529.2	1030.8	802.7
37.5°	1431.8	2037.5	2078.5	2009.3	1957.0	2010.7	2105.3	2031.9	1429.7	941.1	733.5
40°	1318.1	1954.9	1988.8	1894.9	1842.7	1921.7	2008.6	1978.2	1317.4	847.9	666.5
42.5°	1232.0	1893.5	1903.4	1774.9	1712.8	1796.8	1895.6	1902.0	1226.3	763.9	607.2
45°	1118.3	1807.4	1789.0	1647.8	1582.9	1658.4	1806.7	1823.6	1124.0	691.2	549.3
47.5°	1015.9	1711.4	1675.4	1510.1	1437.4	1527.1	1691.6	1736.1	1009.6	624.1	494.9
50°	909.3	1604.0	1524.3	1381.7	1332.9	1377.4	1545.4	1618.9	905.1	557.7	453.3
52.5°	811.9	1485.4	1386.6	1258.8	1210.1	1246.8	1392.2	1502.4	801.3	502.0	416.5
55°	720.1	1366.8	1239.0	1126.1	1116.2	1127.5	1236.9	1363.3	715.2	452.5	393.2
57.5°	638.2	1222.8	1106.3	1023.0	1005.4	1014.5	1090.1	1220.0	631.9	403.1	359.4
60°	555.6	1075.2	975.0	910.7	900.9	907.9	956.6	1080.2	550.7	361.5	327.6
62.5°	480.8	927.0	838.0	814.0	807.0	807.0	827.4	940.4	474.4	319.1	303.6
65°	416.5	799.9	732.8	723.7	725.8	725.1	712.4	785.1	406.7	281.7	282.4
67.5°	351.6	665.1	627.6	638.9	647.4	643.9	617.0	653.1	343.1	247.8	263.3
70°	291.6	549.3	542.2	567.6	587.4	569.0	530.2	533.7	281.7	214.6	238.6
72.5°	235.1	444.1	476.6	511.9	530.9	510.4	456.8	441.3	226.6	184.3	216.0
75°	185.0	357.2	408.8	461.0	485.7	459.6	397.5	344.5	180.0	155.3	197.7
77.5°	141.2	283.1	349.5	410.2	434.2	411.6	345.9	269.0	132.0	130.6	177.9
80°	101.0	223.8	309.9	368.5	390.4	368.5	300.1	212.5	91.8	104.5	156.7
82.5°	66.4	173.0	269.7	335.4	359.4	332.5	260.5	163.8	58.6	84.7	141.2
85°	40.2	137.0	235.1	301.5	329.0	302.9	228.0	124.3	32.5	65.0	122.8
87.5°	17.7	105.9	209.7	278.2	302.9	278.9	203.3	97.4	13.4	50.8	105.2
90°	1.4	84.0	185.0	256.3	278.2	255.6	180.0	79.1	0.0	36.7	90.4
92.5°	1.4	72.0	169.4	237.2	261.9	236.5	162.4	65.0	0.0	26.8	76.2
95°	2.1	60.7	153.9	222.4	242.2	220.3	148.3	55.8	0.0	18.4	64.2
97.5°	2.1	55.1	141.2	207.6	229.5	206.2	135.6	50.1	0.0	13.4	52.2
100°	1.4	50.8	131.3	193.4	213.9	192.0	125.7	45.2	0.0	8.5	42.4
102.5°	1.4	47.3	122.8	181.4	197.7	179.3	117.2	42.4	0.0	7.1	34.6
105°	1.4	45.2	115.1	167.3	186.4	167.3	110.1	39.5	0.0	5.6	26.8
107.5°	1.4	42.4	109.4	159.6	175.1	158.1	104.5	37.4	0.0	5.6	21.9
110°	1.4	40.2	104.5	148.3	165.9	149.7	99.5	33.9	0.0	3.5	17.7



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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°	1.4	36.7	99.5	140.5	157.4	141.2	95.3	31.1	0.0	3.5	15.5
115°	1.4	33.2	95.3	135.6	148.3	134.1	91.1	27.5	0.0	2.8	14.1
117.5°	1.4	31.1	92.5	129.2	141.9	127.8	87.5	26.1	0.0	2.8	13.4
120°	1.4	29.7	88.3	122.8	132.7	121.4	83.3	24.7	0.0	2.8	12.7
122.5°	1.4	28.2	84.7	117.2	127.8	116.5	79.8	24.0	0.0	2.1	11.3
125°	1.4	26.8	79.8	110.8	120.7	109.4	73.4	23.3	0.0	1.4	9.9
127.5°	1.4	25.4	74.8	105.9	115.1	104.5	69.2	22.6	0.0	1.4	9.2
130°	1.4	24.7	68.5	99.5	108.7	98.1	64.2	22.6	0.0	1.4	8.5
132.5°	1.4	24.0	61.4	93.2	103.1	91.8	59.3	21.9	0.0	1.4	7.1
135°	1.4	23.3	54.4	86.8	96.0	85.4	55.1	21.2	0.0	1.4	6.4
137.5°	1.4	21.9	48.0	79.8	89.0	78.4	52.2	19.8	0.0	1.4	5.6
140°	1.4	20.5	43.1	74.1	81.9	72.0	48.0	18.4	0.0	0.7	4.2
142.5°	1.4	18.4	38.8	67.1	74.8	65.7	43.1	15.5	0.0	0.7	4.2
145°	1.4	16.2	35.3	58.6	67.8	58.6	40.2	14.1	0.0	0.7	3.5
147.5°	1.4	14.8	31.8	49.4	61.4	53.7	36.0	12.0	0.0	0.7	2.8
150°	1.4	13.4	27.5	41.7	54.4	47.3	33.2	10.6	0.0	0.0	2.1
152.5°	1.4	12.0	24.0	34.6	48.7	43.1	29.7	9.2	0.0	0.0	1.4
155°	2.1	11.3	20.5	30.4	42.4	37.4	24.7	7.8	0.0	0.0	1.4
157.5°	2.1	9.9	16.9	24.7	37.4	32.5	19.8	6.4	0.0	0.0	0.7
160°	2.1	9.2	14.1	19.1	31.1	26.8	16.2	4.9	0.0	0.0	0.7
162.5°	2.1	8.5	12.0	14.1	25.4	21.2	12.7	3.5	0.0	0.0	0.7
165°	2.1	7.1	10.6	9.9	19.8	16.2	9.9	2.1	0.0	0.0	0.0
167.5°	2.1	6.4	8.5	7.1	14.8	12.0	7.1	1.4	0.0	0.0	0.0
170°	2.1	4.9	7.1	4.9	4.2	7.8	4.2	0.7	0.0	0.0	0.0
172.5°	2.1	4.2	5.6	3.5	1.4	4.2	2.1	0.0	0.0	0.0	0.0
175°	2.1	3.5	3.5	2.1	0.7	1.4	0.0	0.0	0.0	0.0	0.0
177.5°	2.1	2.8	2.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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CATALOG NUMBER: 4MB-6SL-ASML-UNV-L950

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2156.1	2156.1	2156.1	2156.1	2156.1	2156.1
2.5°	2096.8	2073.5	2052.4	2074.9	2091.2	2154.0
5°	1994.5	1969.8	1972.6	1993.1	2047.4	2161.8
7.5°	1888.6	1847.6	1857.5	1914.7	1995.2	2125.1
10°	1763.6	1726.2	1735.4	1821.5	1934.5	2104.6
12.5°	1652.1	1589.2	1642.9	1724.1	1863.9	2093.3
15°	1521.4	1472.0	1501.0	1621.0	1796.1	2041.1
17.5°	1380.2	1342.1	1376.7	1496.0	1712.8	2035.4
20°	1271.5	1218.6	1259.5	1390.8	1609.7	1976.1
22.5°	1149.4	1109.1	1152.2	1272.9	1504.5	1913.3
25°	1049.1	1006.8	1049.8	1169.9	1411.3	1839.1
27.5°	951.7	912.9	951.7	1061.8	1318.8	1779.1
30°	866.3	828.9	868.4	974.3	1210.8	1689.5
32.5°	786.5	738.5	789.3	891.7	1115.5	1621.0
35°	703.9	667.9	706.0	819.7	1009.6	1525.0
37.5°	635.4	598.0	643.2	740.6	919.9	1431.8
40°	570.5	537.3	573.3	677.1	843.7	1318.1
42.5°	519.6	486.4	523.1	619.2	766.7	1232.0
45°	470.2	445.5	475.1	555.6	689.1	1118.3
47.5°	434.2	413.0	437.7	509.0	624.1	1015.9
50°	403.1	388.3	406.0	462.4	557.0	909.3
52.5°	375.6	360.8	381.2	426.4	504.1	811.9
55°	354.4	341.0	356.5	392.5	451.1	720.1
57.5°	331.1	322.6	334.6	356.5	409.5	638.2
60°	314.2	305.0	317.7	335.4	362.2	555.6
62.5°	295.1	290.2	297.9	312.1	326.2	480.8
65°	278.2	271.1	281.0	285.9	284.5	416.5
67.5°	259.8	257.7	263.3	264.0	253.5	351.6
70°	240.7	239.3	246.4	242.2	220.3	291.6
72.5°	225.2	225.2	229.5	221.0	192.0	235.1
75°	208.3	209.7	213.2	203.3	161.7	185.0
77.5°	192.7	194.2	194.9	181.4	135.6	141.2
80°	175.1	174.4	181.4	164.5	110.1	101.0
82.5°	159.6	156.7	161.0	144.0	89.0	66.4
85°	141.9	142.6	145.4	125.7	71.3	40.2
87.5°	127.8	127.8	130.6	110.8	53.7	17.7
90°	110.8	109.4	113.7	93.9	40.2	1.4
92.5°	96.7	96.7	99.5	80.5	29.7	1.4
95°	82.6	83.3	85.4	66.4	22.6	2.1
97.5°	70.6	71.3	74.1	56.5	16.2	2.1
100°	60.0	60.7	62.1	45.2	12.7	1.4
102.5°	50.1	52.2	52.2	37.4	9.9	1.4
105°	42.4	45.2	43.8	30.4	9.2	1.4
107.5°	35.3	38.1	38.1	24.7	9.2	1.4
110°	28.9	33.2	32.5	21.2	7.1	1.4



TEST NUMBER: P893720

CATALOG NUMBER: 4MB-6SL-ASML-UNV-L950

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	24.7	28.2	26.1	18.4	7.1	1.4
115°	21.2	24.7	23.3	16.9	6.4	1.4
117.5°	19.1	21.2	21.2	16.2	6.4	1.4
120°	17.7	19.8	19.1	15.5	6.4	1.4
122.5°	16.2	17.7	17.7	14.1	5.6	1.4
125°	15.5	16.2	16.9	12.7	5.6	1.4
127.5°	14.8	16.2	16.2	12.0	4.9	1.4
130°	13.4	14.8	14.8	11.3	4.9	1.4
132.5°	12.0	13.4	13.4	10.6	4.9	1.4
135°	11.3	12.7	12.7	9.9	4.9	1.4
137.5°	10.6	11.3	11.3	9.2	4.9	1.4
140°	9.2	10.6	10.6	8.5	4.9	1.4
142.5°	8.5	9.9	9.9	7.8	4.2	1.4
145°	7.8	8.5	9.2	7.1	4.2	1.4
147.5°	6.4	7.8	8.5	6.4	4.2	1.4
150°	4.9	7.1	7.1	6.4	4.2	1.4
152.5°	3.5	6.4	6.4	5.6	3.5	1.4
155°	2.8	4.9	5.6	4.9	3.5	2.1
157.5°	2.1	4.2	4.9	4.9	3.5	2.1
160°	1.4	3.5	4.2	4.2	2.8	2.1
162.5°	0.7	2.8	3.5	4.2	2.8	2.1
165°	0.0	2.1	2.8	3.5	2.8	2.1
167.5°	0.0	1.4	2.1	2.8	2.1	2.1
170°	0.0	0.7	1.4	2.1	2.1	2.1
172.5°	0.0	0.0	0.7	1.4	1.4	2.1
175°	0.0	0.0	0.0	0.7	1.4	2.1
177.5°	0.0	0.0	0.0	0.7	1.4	2.1
180°	0.7	0.7	0.7	0.7	0.7	0.7



TEST NUMBER: P893720
 CATALOG NUMBER: 4MB-6SL-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	19.65	21.11	20.10	21.54	22.00	21.91	23.37	22.36	23.80	24.25
	3H	20.47	21.79	20.94	22.23	22.73	23.61	24.93	24.08	25.37	25.87
	4H	20.68	21.92	21.16	22.38	22.89	24.45	25.69	24.94	26.15	26.66
	6H	20.77	21.92	21.27	22.39	22.92	25.32	26.48	25.82	26.95	27.48
	8H	20.77	21.87	21.28	22.37	22.90	25.80	26.90	26.31	27.39	27.93
	12H	20.76	21.81	21.28	22.30	22.86	26.34	27.39	26.86	27.88	28.45
4H	2H	20.09	21.33	20.57	21.79	22.30	22.27	23.52	22.76	23.98	24.49
	3H	21.18	22.23	21.68	22.73	23.27	24.16	25.20	24.66	25.71	26.24
	4H	21.52	22.47	22.04	22.99	23.56	25.13	26.08	25.65	26.60	27.16
	6H	21.71	22.54	22.26	23.09	23.67	26.17	27.00	26.71	27.55	28.13
	8H	21.74	22.52	22.29	23.06	23.66	26.73	27.51	27.28	28.06	28.65
	12H	21.75	22.45	22.32	23.02	23.62	27.39	28.09	27.96	28.67	29.27
8H	4H	21.85	22.63	22.40	23.17	23.77	25.27	26.05	25.82	26.59	27.19
	6H	22.17	22.83	22.75	23.41	24.02	26.44	27.10	27.02	27.69	28.29
	8H	22.26	22.85	22.86	23.45	24.06	27.12	27.71	27.72	28.31	28.93
	12H	22.32	22.84	22.91	23.43	24.11	27.94	28.46	28.53	29.05	29.73
12H	4H	21.93	22.63	22.50	23.21	23.80	25.26	25.97	25.83	26.54	27.14
	6H	22.31	22.90	22.91	23.50	24.11	26.46	27.05	27.05	27.65	28.26
	8H	22.47	22.99	23.06	23.58	24.26	27.19	27.72	27.79	28.30	28.99