

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: P893719

Luminaire Tested: 4MB-6SL-ASML-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893719
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-L940
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

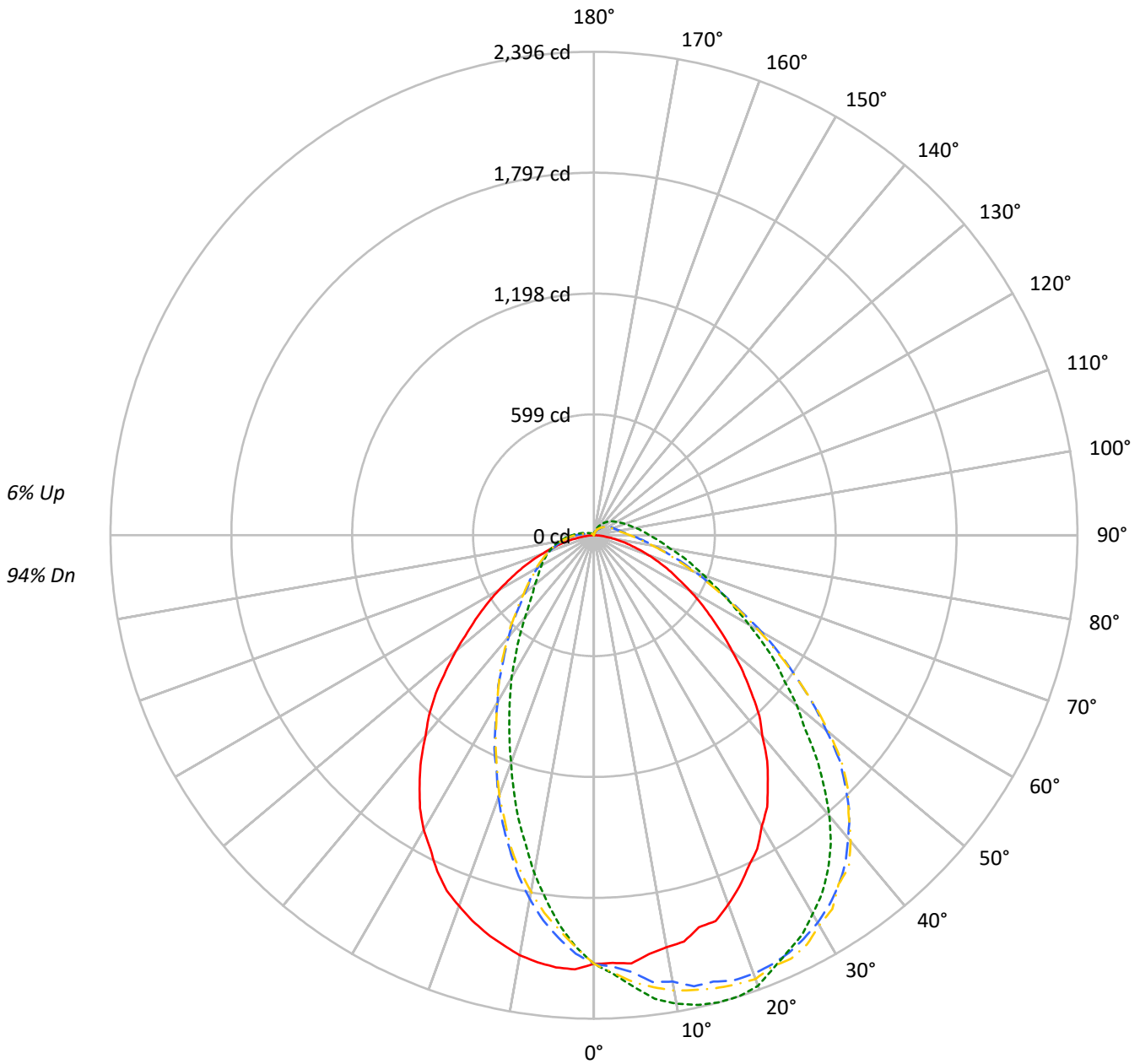
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5294.0 lumens
Efficiency: N/A
Efficacy: 119.2 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°	21631	21631	21631	21631
5°	21711	22044	21917	19053
10°	21323	22514	21737	16238
15°	21023	22433	21379	13577
20°	20859	21990	20948	11107
25°	20065	20970	20342	9139
30°	19223	20041	19473	7550
35°	18276	18913	18325	6152
40°	16820	17301	16811	5045
45°	15384	15271	15461	4298
50°	13681	13329	13617	3883
55°	12055	11677	11972	3567
60°	10574	9959	10480	3372
65°	9263	8576	9044	3204
70°	7872	7515	7606	3062
75°	6417	6831	6248	2949
80°	4953	6148	4500	2746
85°	3405	5937	2751	2574

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 21400 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.6	3.8
10°-20°	554.7	10.5
20°-30°	797.9	15.1
30°-40°	905.5	17.1
40°-50°	865.3	16.3
50°-60°	703.1	13.3
60°-70°	490.6	9.3
70°-80°	303.9	5.7
80°-90°	174.3	3.3
90°-100°	104.2	2.0
100°-110°	68.4	1.3
110°-120°	47.9	0.9
120°-130°	34.7	0.7
130°-140°	23.1	0.4
140°-150°	13.0	0.2
150°-160°	5.8	0.1
160°-170°	1.7	0.0
170°-180°	0.1	0.0
0°-30°	1552.2	29.3
0°-40°	2457.6	46.4
0°-60°	4026.1	76.0
0°-90°	4995.0	94.4
90°-120°	220.6	4.2
90°-150°	291.4	5.5
90°-180°	299.0	5.6
0°-180°	5294.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2124	2124	2124	2124	2124	
5°	2130	2245	2150	1940	2130	201
15°	2011	2396	2045	1450	2011	571
25°	1812	2276	1837	992	1812	836
35°	1502	2022	1506	658	1502	936
45°	1102	1559	1107	439	1102	850
55°	709	1100	704	336	709	638
65°	410	715	401	267	410	407
75°	182	478	177	207	182	197
85°	40	324	32	140	40	44
90°	1	274	0	108	1	3
95°	2	239	0	82	2	2
105°	1	184	0	44	1	1
115°	1	146	0	24	1	1
125°	1	119	0	16	1	1
135°	1	95	0	12	1	1
145°	1	67	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0
2.5°	2122.0	2138.0	2139.3	2189.4	2174.8	2193.6	2169.9	2174.1	2153.3	2147.7	2075.4
5°	2129.6	2163.7	2172.7	2259.0	2245.1	2254.8	2222.1	2198.5	2149.8	2120.6	2003.7
7.5°	2093.4	2183.2	2233.2	2294.4	2317.4	2325.0	2259.0	2215.2	2134.5	2062.8	1925.8
10°	2073.3	2197.1	2245.8	2337.6	2357.7	2343.1	2291.7	2219.3	2113.6	1998.2	1829.8
12.5°	2062.1	2204.7	2289.6	2383.5	2384.2	2368.9	2308.3	2230.5	2079.5	1928.6	1728.3
15°	2010.7	2203.3	2290.3	2385.5	2396.0	2386.2	2324.3	2222.8	2044.8	1842.4	1611.5
17.5°	2005.1	2199.9	2312.5	2412.7	2395.3	2388.3	2334.1	2219.3	2003.0	1754.7	1501.6
20°	1946.7	2192.2	2312.5	2382.1	2376.5	2379.3	2340.3	2214.5	1955.0	1660.1	1381.3
22.5°	1884.8	2183.2	2302.8	2355.6	2322.3	2373.0	2312.5	2201.2	1906.4	1561.4	1261.6
25°	1811.8	2168.6	2284.0	2318.1	2275.7	2315.3	2314.6	2181.1	1836.8	1455.0	1167.0
27.5°	1752.6	2145.6	2253.4	2304.9	2232.5	2266.6	2286.1	2156.7	1754.7	1350.0	1055.8
30°	1664.3	2116.4	2216.5	2224.2	2167.2	2210.3	2232.5	2126.1	1685.9	1231.0	954.2
32.5°	1596.9	2083.0	2171.3	2160.9	2103.9	2160.9	2197.1	2095.5	1603.8	1126.7	882.6
35°	1502.3	2042.7	2115.0	2060.1	2022.5	2069.8	2112.2	2062.8	1506.4	1015.4	790.8
37.5°	1410.5	2007.2	2047.5	1979.4	1927.9	1980.8	2074.0	2001.6	1408.4	927.1	722.6
40°	1298.5	1925.8	1959.2	1866.7	1815.2	1893.1	1978.7	1948.8	1297.8	835.3	656.5
42.5°	1213.6	1865.3	1875.1	1748.5	1687.3	1770.0	1867.4	1873.7	1208.1	752.5	598.1
45°	1101.7	1780.5	1762.4	1623.3	1559.3	1633.7	1779.8	1796.5	1107.2	680.9	541.1
47.5°	1000.8	1685.9	1650.4	1487.7	1416.0	1504.4	1666.4	1710.2	994.6	614.8	487.5
50°	895.8	1580.2	1501.6	1361.1	1313.1	1356.9	1522.4	1594.8	891.6	549.4	446.5
52.5°	799.8	1463.3	1366.0	1240.1	1192.1	1228.2	1371.5	1480.0	789.4	494.5	410.3
55°	709.4	1346.5	1220.6	1109.3	1099.6	1110.7	1218.5	1343.0	704.5	445.8	387.4
57.5°	628.7	1204.6	1089.8	1007.8	990.4	999.4	1073.8	1201.8	622.5	397.1	354.0
60°	547.4	1059.2	960.5	897.2	887.5	894.4	942.4	1064.1	542.5	356.1	322.7
62.5°	473.6	913.2	825.6	801.9	795.0	795.0	815.1	926.4	467.4	314.4	299.1
65°	410.3	788.0	721.9	712.9	715.0	714.3	701.8	773.4	400.6	277.5	278.2
67.5°	346.4	655.2	618.3	629.4	637.8	634.3	607.9	643.3	338.0	244.1	259.4
70°	287.2	541.1	534.1	559.2	578.7	560.6	522.3	525.8	277.5	211.4	235.1
72.5°	231.6	437.5	469.5	504.2	523.0	502.8	450.0	434.7	223.3	181.5	212.8
75°	182.2	351.9	402.7	454.2	478.5	452.8	391.6	339.4	177.4	153.0	194.7
77.5°	139.1	278.9	344.3	404.1	427.7	405.5	340.8	265.0	130.1	128.7	175.3
80°	99.5	220.5	305.3	363.0	384.6	363.0	295.6	209.3	90.4	102.9	154.4
82.5°	65.4	170.4	265.7	330.4	354.0	327.6	256.6	161.4	57.7	83.5	139.1
85°	39.6	134.9	231.6	297.0	324.1	298.4	224.6	122.4	32.0	64.0	121.0
87.5°	17.4	104.3	206.6	274.0	298.4	274.7	200.3	96.0	13.2	50.1	103.6
90°	1.4	82.8	182.2	252.5	274.0	251.8	177.4	77.9	0.0	36.2	89.0
92.5°	1.4	70.9	166.9	233.7	258.0	233.0	160.0	64.0	0.0	26.4	75.1
95°	2.1	59.8	151.6	219.1	238.6	217.0	146.1	54.9	0.0	18.1	63.3
97.5°	2.1	54.2	139.1	204.5	226.0	203.1	133.5	49.4	0.0	13.2	51.5
100°	1.4	50.1	129.4	190.6	210.7	189.2	123.8	44.5	0.0	8.3	41.7
102.5°	1.4	46.6	121.0	178.7	194.7	176.7	115.5	41.7	0.0	7.0	34.1
105°	1.4	44.5	113.4	164.8	183.6	164.8	108.5	38.9	0.0	5.6	26.4
107.5°	1.4	41.7	107.8	157.2	172.5	155.8	102.9	36.9	0.0	5.6	21.6
110°	1.4	39.6	102.9	146.1	163.4	147.4	98.1	33.4	0.0	3.5	17.4



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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	36.2	98.1	138.4	155.1	139.1	93.9	30.6	0.0	3.5	15.3
115°	1.4	32.7	93.9	133.5	146.1	132.1	89.7	27.1	0.0	2.8	13.9
117.5°	1.4	30.6	91.1	127.3	139.8	125.9	86.2	25.7	0.0	2.8	13.2
120°	1.4	29.2	86.9	121.0	130.8	119.6	82.1	24.3	0.0	2.8	12.5
122.5°	1.4	27.8	83.5	115.5	125.9	114.8	78.6	23.6	0.0	2.1	11.1
125°	1.4	26.4	78.6	109.2	118.9	107.8	72.3	23.0	0.0	1.4	9.7
127.5°	1.4	25.0	73.7	104.3	113.4	102.9	68.2	22.3	0.0	1.4	9.0
130°	1.4	24.3	67.5	98.1	107.1	96.7	63.3	22.3	0.0	1.4	8.3
132.5°	1.4	23.6	60.5	91.8	101.5	90.4	58.4	21.6	0.0	1.4	7.0
135°	1.4	23.0	53.6	85.5	94.6	84.2	54.2	20.9	0.0	1.4	6.3
137.5°	1.4	21.6	47.3	78.6	87.6	77.2	51.5	19.5	0.0	1.4	5.6
140°	1.4	20.2	42.4	73.0	80.7	70.9	47.3	18.1	0.0	0.7	4.2
142.5°	1.4	18.1	38.3	66.1	73.7	64.7	42.4	15.3	0.0	0.7	4.2
145°	1.4	16.0	34.8	57.7	66.8	57.7	39.6	13.9	0.0	0.7	3.5
147.5°	1.4	14.6	31.3	48.7	60.5	52.9	35.5	11.8	0.0	0.7	2.8
150°	1.4	13.2	27.1	41.0	53.6	46.6	32.7	10.4	0.0	0.0	2.1
152.5°	1.4	11.8	23.6	34.1	48.0	42.4	29.2	9.0	0.0	0.0	1.4
155°	2.1	11.1	20.2	29.9	41.7	36.9	24.3	7.7	0.0	0.0	1.4
157.5°	2.1	9.7	16.7	24.3	36.9	32.0	19.5	6.3	0.0	0.0	0.7
160°	2.1	9.0	13.9	18.8	30.6	26.4	16.0	4.9	0.0	0.0	0.7
162.5°	2.1	8.3	11.8	13.9	25.0	20.9	12.5	3.5	0.0	0.0	0.7
165°	2.1	7.0	10.4	9.7	19.5	16.0	9.7	2.1	0.0	0.0	0.0
167.5°	2.1	6.3	8.3	7.0	14.6	11.8	7.0	1.4	0.0	0.0	0.0
170°	2.1	4.9	7.0	4.9	4.2	7.7	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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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2124.0	2124.0	2124.0	2124.0	2124.0	2124.0
2.5°	2065.6	2042.7	2021.8	2044.1	2060.1	2122.0
5°	1964.8	1940.4	1943.2	1963.4	2016.9	2129.6
7.5°	1860.4	1820.1	1829.8	1886.2	1965.5	2093.4
10°	1737.3	1700.5	1709.5	1794.4	1905.7	2073.3
12.5°	1627.5	1565.6	1618.4	1698.4	1836.1	2062.1
15°	1498.8	1450.1	1478.6	1596.9	1769.3	2010.7
17.5°	1359.7	1322.1	1356.2	1473.8	1687.3	2005.1
20°	1252.6	1200.4	1240.8	1370.1	1585.7	1946.7
22.5°	1132.3	1092.6	1135.0	1254.0	1482.1	1884.8
25°	1033.5	991.8	1034.2	1152.4	1390.3	1811.8
27.5°	937.5	899.3	937.5	1046.0	1299.2	1752.6
30°	853.4	816.5	855.5	959.8	1192.8	1664.3
32.5°	774.8	727.5	777.6	878.4	1098.9	1596.9
35°	693.4	657.9	695.5	807.5	994.6	1502.3
37.5°	625.9	589.1	633.6	729.6	906.2	1410.5
40°	562.0	529.3	564.7	667.0	831.1	1298.5
42.5°	511.9	479.2	515.4	609.9	755.3	1213.6
45°	463.2	438.9	468.1	547.4	678.8	1101.7
47.5°	427.7	406.9	431.2	501.5	614.8	1000.8
50°	397.1	382.5	399.9	455.5	548.7	895.8
52.5°	370.0	355.4	375.6	420.1	496.6	799.8
55°	349.1	335.9	351.2	386.7	444.4	709.4
57.5°	326.2	317.8	329.7	351.2	403.4	628.7
60°	309.5	300.5	313.0	330.4	356.8	547.4
62.5°	290.7	285.8	293.5	307.4	321.3	473.6
65°	274.0	267.1	276.8	281.7	280.3	410.3
67.5°	255.9	253.9	259.4	260.1	249.7	346.4
70°	237.2	235.8	242.7	238.6	217.0	287.2
72.5°	221.9	221.9	226.0	217.7	189.2	231.6
75°	205.2	206.6	210.0	200.3	159.3	182.2
77.5°	189.9	191.3	192.0	178.7	133.5	139.1
80°	172.5	171.8	178.7	162.1	108.5	99.5
82.5°	157.2	154.4	158.6	141.9	87.6	65.4
85°	139.8	140.5	143.3	123.8	70.2	39.6
87.5°	125.9	125.9	128.7	109.2	52.9	17.4
90°	109.2	107.8	112.0	92.5	39.6	1.4
92.5°	95.3	95.3	98.1	79.3	29.2	1.4
95°	81.4	82.1	84.2	65.4	22.3	2.1
97.5°	69.5	70.2	73.0	55.6	16.0	2.1
100°	59.1	59.8	61.2	44.5	12.5	1.4
102.5°	49.4	51.5	51.5	36.9	9.7	1.4
105°	41.7	44.5	43.1	29.9	9.0	1.4
107.5°	34.8	37.6	37.6	24.3	9.0	1.4
110°	28.5	32.7	32.0	20.9	7.0	1.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	24.3	27.8	25.7	18.1	7.0	1.4
115°	20.9	24.3	23.0	16.7	6.3	1.4
117.5°	18.8	20.9	20.9	16.0	6.3	1.4
120°	17.4	19.5	18.8	15.3	6.3	1.4
122.5°	16.0	17.4	17.4	13.9	5.6	1.4
125°	15.3	16.0	16.7	12.5	5.6	1.4
127.5°	14.6	16.0	16.0	11.8	4.9	1.4
130°	13.2	14.6	14.6	11.1	4.9	1.4
132.5°	11.8	13.2	13.2	10.4	4.9	1.4
135°	11.1	12.5	12.5	9.7	4.9	1.4
137.5°	10.4	11.1	11.1	9.0	4.9	1.4
140°	9.0	10.4	10.4	8.3	4.9	1.4
142.5°	8.3	9.7	9.7	7.7	4.2	1.4
145°	7.7	8.3	9.0	7.0	4.2	1.4
147.5°	6.3	7.7	8.3	6.3	4.2	1.4
150°	4.9	7.0	7.0	6.3	4.2	1.4
152.5°	3.5	6.3	6.3	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: P893719
 CATALOG NUMBER: 4MB-6SL-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	19.60	21.06	20.05	21.49	21.94	21.86	23.32	22.31	23.75	24.20
	3H	20.42	21.74	20.89	22.18	22.68	23.56	24.88	24.02	25.32	25.82
	4H	20.62	21.87	21.11	22.33	22.84	24.40	25.64	24.88	26.10	26.61
	6H	20.71	21.87	21.22	22.34	22.87	25.27	26.42	25.77	26.90	27.43
	8H	20.72	21.82	21.23	22.31	22.85	25.74	26.84	26.26	27.34	27.88
	12H	20.70	21.76	21.22	22.25	22.81	26.29	27.34	26.81	27.83	28.39
4H	2H	20.03	21.28	20.52	21.74	22.25	22.22	23.47	22.71	23.93	24.44
	3H	21.13	22.18	21.63	22.68	23.22	24.11	25.15	24.61	25.66	26.19
	4H	21.47	22.42	21.99	22.94	23.50	25.08	26.03	25.60	26.54	27.11
	6H	21.66	22.49	22.20	23.04	23.62	26.12	26.95	26.66	27.49	28.08
	8H	21.69	22.47	22.24	23.01	23.61	26.68	27.46	27.23	28.01	28.60
	12H	21.70	22.40	22.26	22.97	23.57	27.34	28.04	27.91	28.62	29.21
8H	4H	21.80	22.58	22.35	23.12	23.72	25.22	26.00	25.77	26.54	27.14
	6H	22.12	22.77	22.70	23.36	23.96	26.39	27.05	26.97	27.63	28.23
	8H	22.21	22.80	22.80	23.40	24.01	27.07	27.66	27.67	28.26	28.87
	12H	22.27	22.79	22.86	23.38	24.06	27.89	28.41	28.48	29.00	29.68
12H	4H	21.88	22.58	22.45	23.15	23.75	25.21	25.91	25.78	26.49	27.09
	6H	22.26	22.85	22.85	23.45	24.06	26.40	26.99	27.00	27.59	28.21
	8H	22.42	22.94	23.01	23.53	24.21	27.14	27.67	27.74	28.25	28.93