

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: P894170

Luminaire Tested: 4MB-SC3-ASML-UNV-CC93-MID-5000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894170
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-SC3-ASML-UNV-CC93-MID-5000K
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 5000K CCT, MID lumen setting
Light Source: -
Ballast/Driver: -

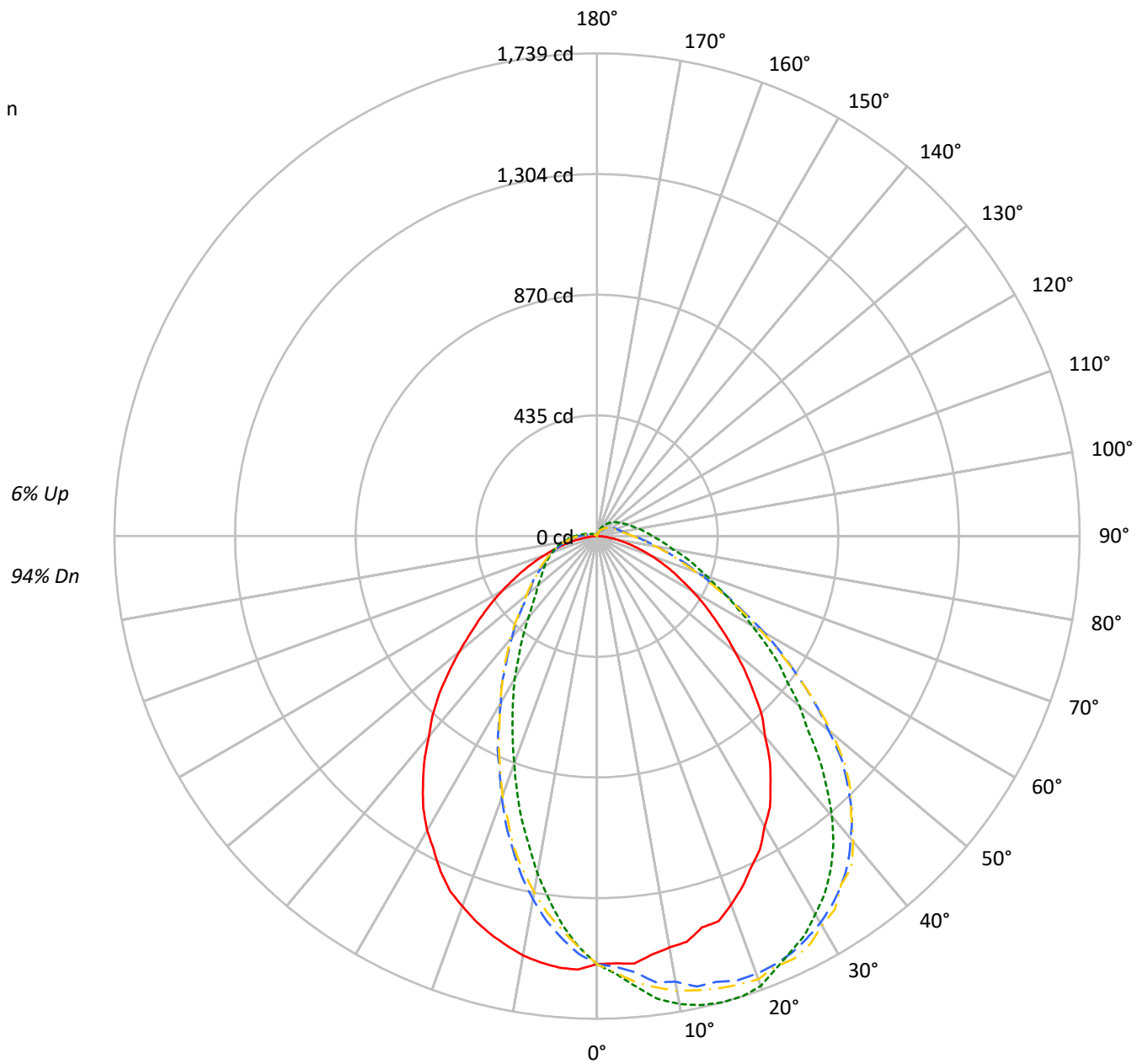
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3843.0 lumens
Efficiency: N/A
Efficacy: 114.7 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): 33.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9948
Total Harmonic Distortion (THDi): 5.65231997856897
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P894170
CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-MID-5000K

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	0		
RCR																				
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94		
1	107	103	98	94	104	100	96	92	95	91	88	90	87	85	85	83	81	79		
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	66		
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	57		
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	49		
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	43		
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	38		
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	34		
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	30		
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	28		
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	25		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15703	15703	15703	15703
5°	15761	16002	15910	13831
10°	15478	16343	15779	11787
15°	15261	16285	15519	9856
20°	15142	15962	15207	8063
25°	14566	15222	14767	6634
30°	13955	14548	14135	5481
35°	13266	13730	13304	4466
40°	12210	12559	12203	3662
45°	11167	11086	11224	3120
50°	9931	9676	9884	2819
55°	8752	8476	8690	2590
60°	7675	7229	7607	2447
65°	6726	6225	6565	2326
70°	5715	5456	5521	2223
75°	4660	4960	4533	2140
80°	3594	4463	3266	1993
85°	2476	4310	1995	1868

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 15534 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.9	3.8
10°-20°	402.7	10.5
20°-30°	579.2	15.1
30°-40°	657.3	17.1
40°-50°	628.2	16.3
50°-60°	510.4	13.3
60°-70°	356.1	9.3
70°-80°	220.6	5.7
80°-90°	126.6	3.3
90°-100°	75.7	2.0
100°-110°	49.7	1.3
110°-120°	34.8	0.9
120°-130°	25.2	0.7
130°-140°	16.8	0.4
140°-150°	9.5	0.2
150°-160°	4.2	0.1
160°-170°	1.2	0.0
170°-180°	0.1	0.0
0°-30°	1126.7	29.3
0°-40°	1784.0	46.4
0°-60°	2922.6	76.1
0°-90°	3625.9	94.4
90°-120°	160.1	4.2
90°-150°	211.5	5.5
90°-180°	217.0	5.6
0°-180°	3843.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1542	1542	1542	1542	1542	
5°	1546	1630	1561	1409	1546	146
15°	1460	1739	1484	1053	1460	415
25°	1315	1652	1333	720	1315	607
35°	1090	1468	1094	478	1090	680
45°	800	1132	804	319	800	617
55°	515	798	511	244	515	463
65°	298	519	291	194	298	296
75°	132	347	129	150	132	143
85°	29	235	23	102	29	32
90°	1	199	0	78	1	2
95°	2	173	0	60	2	1
105°	1	133	0	32	1	1
115°	1	106	0	18	1	1
125°	1	86	0	12	1	1
135°	1	69	0	9	1	1
145°	1	48	0	6	1	1
155°	2	30	0	4	2	1
165°	2	14	0	2	2	0
175°	2	0	0	0	2	0
180°	0	0	0	0	0	



TEST NUMBER: P894170
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-MID-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9
2.5°	1540.4	1552.0	1553.0	1589.3	1578.7	1592.4	1575.2	1578.2	1563.1	1559.0	1506.5
5°	1545.9	1570.7	1577.2	1639.8	1629.7	1636.8	1613.1	1595.9	1560.6	1539.4	1454.5
7.5°	1519.7	1584.8	1621.1	1665.6	1682.2	1687.8	1639.8	1608.0	1549.4	1497.4	1398.0
10°	1505.0	1594.9	1630.2	1696.9	1711.5	1700.9	1663.6	1611.0	1534.3	1450.5	1328.3
12.5°	1496.9	1600.4	1662.0	1730.2	1730.7	1719.6	1675.7	1619.1	1509.6	1400.0	1254.6
15°	1459.6	1599.4	1662.5	1731.7	1739.3	1732.2	1687.3	1613.6	1484.3	1337.4	1169.8
17.5°	1455.5	1596.9	1678.7	1751.4	1738.8	1733.7	1694.3	1611.0	1454.0	1273.8	1090.0
20°	1413.1	1591.4	1678.7	1729.2	1725.1	1727.2	1698.9	1607.5	1419.2	1205.1	1002.7
22.5°	1368.2	1584.8	1671.6	1710.0	1685.8	1722.6	1678.7	1597.9	1383.9	1133.4	915.8
25°	1315.2	1574.2	1658.0	1682.7	1651.9	1680.7	1680.2	1583.3	1333.4	1056.2	847.2
27.5°	1272.3	1557.5	1635.8	1673.1	1620.6	1645.4	1659.5	1565.6	1273.8	980.0	766.4
30°	1208.2	1536.3	1609.0	1614.6	1573.2	1604.5	1620.6	1543.4	1223.8	893.6	692.7
32.5°	1159.2	1512.1	1576.2	1568.6	1527.2	1568.6	1594.9	1521.2	1164.2	817.9	640.7
35°	1090.5	1482.8	1535.3	1495.4	1468.2	1502.5	1533.3	1497.4	1093.6	737.1	574.0
37.5°	1023.9	1457.1	1486.3	1436.9	1399.5	1437.9	1505.5	1453.0	1022.4	673.0	524.6
40°	942.6	1398.0	1422.2	1355.1	1317.7	1374.3	1436.4	1414.6	942.1	606.4	476.6
42.5°	881.0	1354.1	1361.1	1269.2	1224.8	1284.9	1355.6	1360.1	877.0	546.3	434.2
45°	799.7	1292.5	1279.3	1178.4	1131.9	1185.9	1292.0	1304.1	803.8	494.3	392.8
47.5°	726.5	1223.8	1198.1	1079.9	1027.9	1092.0	1209.7	1241.5	722.0	446.3	353.9
50°	650.3	1147.1	1090.0	988.0	953.2	985.0	1105.2	1157.7	647.2	398.8	324.1
52.5°	580.6	1062.2	991.6	900.2	865.3	891.6	995.6	1074.4	573.0	359.0	297.9
55°	515.0	977.4	886.0	805.3	798.2	806.3	884.5	974.9	511.4	323.6	281.2
57.5°	456.4	874.4	791.1	731.6	718.9	725.5	779.5	872.4	451.9	288.3	257.0
60°	397.3	768.9	697.2	651.3	644.2	649.3	684.1	772.5	393.8	258.5	234.3
62.5°	343.8	662.9	599.3	582.1	577.1	577.1	591.7	672.5	339.3	228.2	217.1
65°	297.9	572.0	524.1	517.5	519.0	518.5	509.4	561.4	290.8	201.4	201.9
67.5°	251.4	475.6	448.8	456.9	463.0	460.4	441.3	467.0	245.4	177.2	188.3
70°	208.5	392.8	387.7	405.9	420.1	406.9	379.2	381.7	201.4	153.5	170.6
72.5°	168.1	317.6	340.8	366.0	379.7	365.0	326.7	315.5	162.1	131.8	154.5
75°	132.3	255.5	292.3	329.7	347.4	328.7	284.2	246.4	128.7	111.1	141.4
77.5°	101.0	202.5	249.9	293.3	310.5	294.3	247.4	192.4	94.4	93.4	127.2
80°	72.2	160.0	221.6	263.5	279.2	263.5	214.6	152.0	65.6	74.7	112.1
82.5°	47.5	123.7	192.9	239.8	257.0	237.8	186.3	117.1	41.9	60.6	101.0
85°	28.8	97.9	168.1	215.6	235.3	216.6	163.1	88.9	23.2	46.4	87.8
87.5°	12.6	75.7	149.9	198.9	216.6	199.4	145.4	69.7	9.6	36.4	75.2
90°	1.0	60.1	132.3	183.3	198.9	182.8	128.7	56.5	0.0	26.3	64.6
92.5°	1.0	51.5	121.2	169.6	187.3	169.1	116.1	46.4	0.0	19.2	54.5
95°	1.5	43.4	110.1	159.0	173.2	157.5	106.0	39.9	0.0	13.1	45.9
97.5°	1.5	39.4	101.0	148.4	164.1	147.4	96.9	35.8	0.0	9.6	37.4
100°	1.0	36.4	93.9	138.3	153.0	137.3	89.9	32.3	0.0	6.1	30.3
102.5°	1.0	33.8	87.8	129.8	141.4	128.2	83.8	30.3	0.0	5.0	24.7
105°	1.0	32.3	82.3	119.7	133.3	119.7	78.8	28.3	0.0	4.0	19.2
107.5°	1.0	30.3	78.3	114.1	125.2	113.1	74.7	26.8	0.0	4.0	15.7
110°	1.0	28.8	74.7	106.0	118.6	107.0	71.2	24.2	0.0	2.5	12.6



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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°	1.0	26.3	71.2	100.5	112.6	101.0	68.2	22.2	0.0	2.5	11.1
115°	1.0	23.7	68.2	96.9	106.0	95.9	65.1	19.7	0.0	2.0	10.1
117.5°	1.0	22.2	66.1	92.4	101.5	91.4	62.6	18.7	0.0	2.0	9.6
120°	1.0	21.2	63.1	87.8	94.9	86.8	59.6	17.7	0.0	2.0	9.1
122.5°	1.0	20.2	60.6	83.8	91.4	83.3	57.1	17.2	0.0	1.5	8.1
125°	1.0	19.2	57.1	79.3	86.3	78.3	52.5	16.7	0.0	1.0	7.1
127.5°	1.0	18.2	53.5	75.7	82.3	74.7	49.5	16.2	0.0	1.0	6.6
130°	1.0	17.7	49.0	71.2	77.8	70.2	45.9	16.2	0.0	1.0	6.1
132.5°	1.0	17.2	43.9	66.6	73.7	65.6	42.4	15.7	0.0	1.0	5.0
135°	1.0	16.7	38.9	62.1	68.7	61.1	39.4	15.1	0.0	1.0	4.5
137.5°	1.0	15.7	34.3	57.1	63.6	56.0	37.4	14.1	0.0	1.0	4.0
140°	1.0	14.6	30.8	53.0	58.6	51.5	34.3	13.1	0.0	0.5	3.0
142.5°	1.0	13.1	27.8	48.0	53.5	47.0	30.8	11.1	0.0	0.5	3.0
145°	1.0	11.6	25.2	41.9	48.5	41.9	28.8	10.1	0.0	0.5	2.5
147.5°	1.0	10.6	22.7	35.3	43.9	38.4	25.7	8.6	0.0	0.5	2.0
150°	1.0	9.6	19.7	29.8	38.9	33.8	23.7	7.6	0.0	0.0	1.5
152.5°	1.0	8.6	17.2	24.7	34.8	30.8	21.2	6.6	0.0	0.0	1.0
155°	1.5	8.1	14.6	21.7	30.3	26.8	17.7	5.6	0.0	0.0	1.0
157.5°	1.5	7.1	12.1	17.7	26.8	23.2	14.1	4.5	0.0	0.0	0.5
160°	1.5	6.6	10.1	13.6	22.2	19.2	11.6	3.5	0.0	0.0	0.5
162.5°	1.5	6.1	8.6	10.1	18.2	15.1	9.1	2.5	0.0	0.0	0.5
165°	1.5	5.0	7.6	7.1	14.1	11.6	7.1	1.5	0.0	0.0	0.0
167.5°	1.5	4.5	6.1	5.0	10.6	8.6	5.0	1.0	0.0	0.0	0.0
170°	1.5	3.5	5.0	3.5	3.0	5.6	3.0	0.5	0.0	0.0	0.0
172.5°	1.5	3.0	4.0	2.5	1.0	3.0	1.5	0.0	0.0	0.0	0.0
175°	1.5	2.5	2.5	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.5	2.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1541.9	1541.9	1541.9	1541.9	1541.9	1541.9
2.5°	1499.5	1482.8	1467.7	1483.8	1495.4	1540.4
5°	1426.3	1408.6	1410.6	1425.3	1464.1	1545.9
7.5°	1350.5	1321.2	1328.3	1369.2	1426.8	1519.7
10°	1261.2	1234.4	1241.0	1302.6	1383.3	1505.0
12.5°	1181.4	1136.5	1174.8	1232.9	1332.9	1496.9
15°	1088.0	1052.7	1073.4	1159.2	1284.4	1459.6
17.5°	987.0	959.8	984.5	1069.8	1224.8	1455.5
20°	909.3	871.4	900.7	994.6	1151.1	1413.1
22.5°	821.9	793.2	823.9	910.3	1075.9	1368.2
25°	750.2	719.9	750.7	836.6	1009.2	1315.2
27.5°	680.6	652.8	680.6	759.3	943.1	1272.3
30°	619.5	592.7	621.0	696.7	865.9	1208.2
32.5°	562.4	528.1	564.4	637.7	797.7	1159.2
35°	503.4	477.6	504.9	586.2	722.0	1090.5
37.5°	454.4	427.6	459.9	529.6	657.8	1023.9
40°	407.9	384.2	410.0	484.2	603.3	942.6
42.5°	371.6	347.9	374.1	442.8	548.3	881.0
45°	336.2	318.6	339.8	397.3	492.8	799.7
47.5°	310.5	295.3	313.0	364.0	446.3	726.5
50°	288.3	277.7	290.3	330.7	398.3	650.3
52.5°	268.6	258.0	272.6	304.9	360.5	580.6
55°	253.4	243.9	255.0	280.7	322.6	515.0
57.5°	236.8	230.7	239.3	255.0	292.8	456.4
60°	224.7	218.1	227.2	239.8	259.0	397.3
62.5°	211.0	207.5	213.1	223.2	233.3	343.8
65°	198.9	193.9	200.9	204.5	203.5	297.9
67.5°	185.8	184.3	188.3	188.8	181.2	251.4
70°	172.2	171.2	176.2	173.2	157.5	208.5
72.5°	161.1	161.1	164.1	158.0	137.3	168.1
75°	148.9	149.9	152.5	145.4	115.6	132.3
77.5°	137.8	138.8	139.3	129.8	96.9	101.0
80°	125.2	124.7	129.8	117.6	78.8	72.2
82.5°	114.1	112.1	115.1	103.0	63.6	47.5
85°	101.5	102.0	104.0	89.9	51.0	28.8
87.5°	91.4	91.4	93.4	79.3	38.4	12.6
90°	79.3	78.3	81.3	67.1	28.8	1.0
92.5°	69.2	69.2	71.2	57.6	21.2	1.0
95°	59.1	59.6	61.1	47.5	16.2	1.5
97.5°	50.5	51.0	53.0	40.4	11.6	1.5
100°	42.9	43.4	44.4	32.3	9.1	1.0
102.5°	35.8	37.4	37.4	26.8	7.1	1.0
105°	30.3	32.3	31.3	21.7	6.6	1.0
107.5°	25.2	27.3	27.3	17.7	6.6	1.0
110°	20.7	23.7	23.2	15.1	5.0	1.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	17.7	20.2	18.7	13.1	5.0	1.0
115°	15.1	17.7	16.7	12.1	4.5	1.0
117.5°	13.6	15.1	15.1	11.6	4.5	1.0
120°	12.6	14.1	13.6	11.1	4.5	1.0
122.5°	11.6	12.6	12.6	10.1	4.0	1.0
125°	11.1	11.6	12.1	9.1	4.0	1.0
127.5°	10.6	11.6	11.6	8.6	3.5	1.0
130°	9.6	10.6	10.6	8.1	3.5	1.0
132.5°	8.6	9.6	9.6	7.6	3.5	1.0
135°	8.1	9.1	9.1	7.1	3.5	1.0
137.5°	7.6	8.1	8.1	6.6	3.5	1.0
140°	6.6	7.6	7.6	6.1	3.5	1.0
142.5°	6.1	7.1	7.1	5.6	3.0	1.0
145°	5.6	6.1	6.6	5.0	3.0	1.0
147.5°	4.5	5.6	6.1	4.5	3.0	1.0
150°	3.5	5.0	5.0	4.5	3.0	1.0
152.5°	2.5	4.5	4.5	4.0	2.5	1.0
155°	2.0	3.5	4.0	3.5	2.5	1.5
157.5°	1.5	3.0	3.5	3.5	2.5	1.5
160°	1.0	2.5	3.0	3.0	2.0	1.5
162.5°	0.5	2.0	2.5	3.0	2.0	1.5
165°	0.0	1.5	2.0	2.5	2.0	1.5
167.5°	0.0	1.0	1.5	2.0	1.5	1.5
170°	0.0	0.5	1.0	1.5	1.5	1.5
172.5°	0.0	0.0	0.5	1.0	1.0	1.5
175°	0.0	0.0	0.0	0.5	1.0	1.5
177.5°	0.0	0.0	0.0	0.5	1.0	1.5
180°	0.5	0.5	0.5	0.5	0.5	0.5



TEST NUMBER: P894170
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-MID-5000K

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	18.49	19.95	18.94	20.38	20.83	20.74	22.20	21.20	22.63	23.09
	3H	19.31	20.62	19.77	21.07	21.57	22.44	23.76	22.91	24.21	24.70
	4H	19.51	20.75	20.00	21.21	21.73	23.28	24.53	23.77	24.99	25.50
	6H	19.60	20.75	20.10	21.23	21.76	24.16	25.31	24.66	25.79	26.31
	8H	19.60	20.70	20.12	21.20	21.74	24.63	25.73	25.15	26.23	26.76
	12H	19.59	20.64	20.11	21.14	21.70	25.17	26.23	25.69	26.72	27.28
4H	2H	18.92	20.16	19.41	20.62	21.14	21.11	22.35	21.60	22.81	23.33
	3H	20.02	21.06	20.52	21.57	22.10	22.99	24.04	23.49	24.54	25.08
	4H	20.36	21.31	20.88	21.82	22.39	23.97	24.91	24.49	25.43	26.00
	6H	20.55	21.38	21.09	21.92	22.51	25.01	25.84	25.55	26.38	26.97
	8H	20.58	21.36	21.13	21.90	22.49	25.57	26.35	26.12	26.89	27.49
	12H	20.58	21.29	21.15	21.86	22.46	26.23	26.93	26.80	27.50	28.10
8H	4H	20.69	21.47	21.24	22.01	22.60	24.11	24.89	24.66	25.43	26.02
	6H	21.01	21.66	21.59	22.25	22.85	25.28	25.93	25.86	26.52	27.12
	8H	21.10	21.69	21.69	22.29	22.90	25.96	26.55	26.55	27.15	27.76
	12H	21.15	21.68	21.75	22.26	22.95	26.77	27.30	27.37	27.88	28.57
12H	4H	20.76	21.47	21.33	22.04	22.64	24.10	24.80	24.67	25.38	25.97
	6H	21.14	21.73	21.74	22.33	22.95	25.29	25.88	25.89	26.48	27.09
	8H	21.30	21.83	21.90	22.41	23.10	26.03	26.55	26.62	27.14	27.82