

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: P894169

Luminaire Tested: 4MB-SC3-ASML-UNV-CC93-MID-4000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894169
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-4000K
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 4000K CCT, MID lumen setting
Light Source: -
Ballast/Driver: -

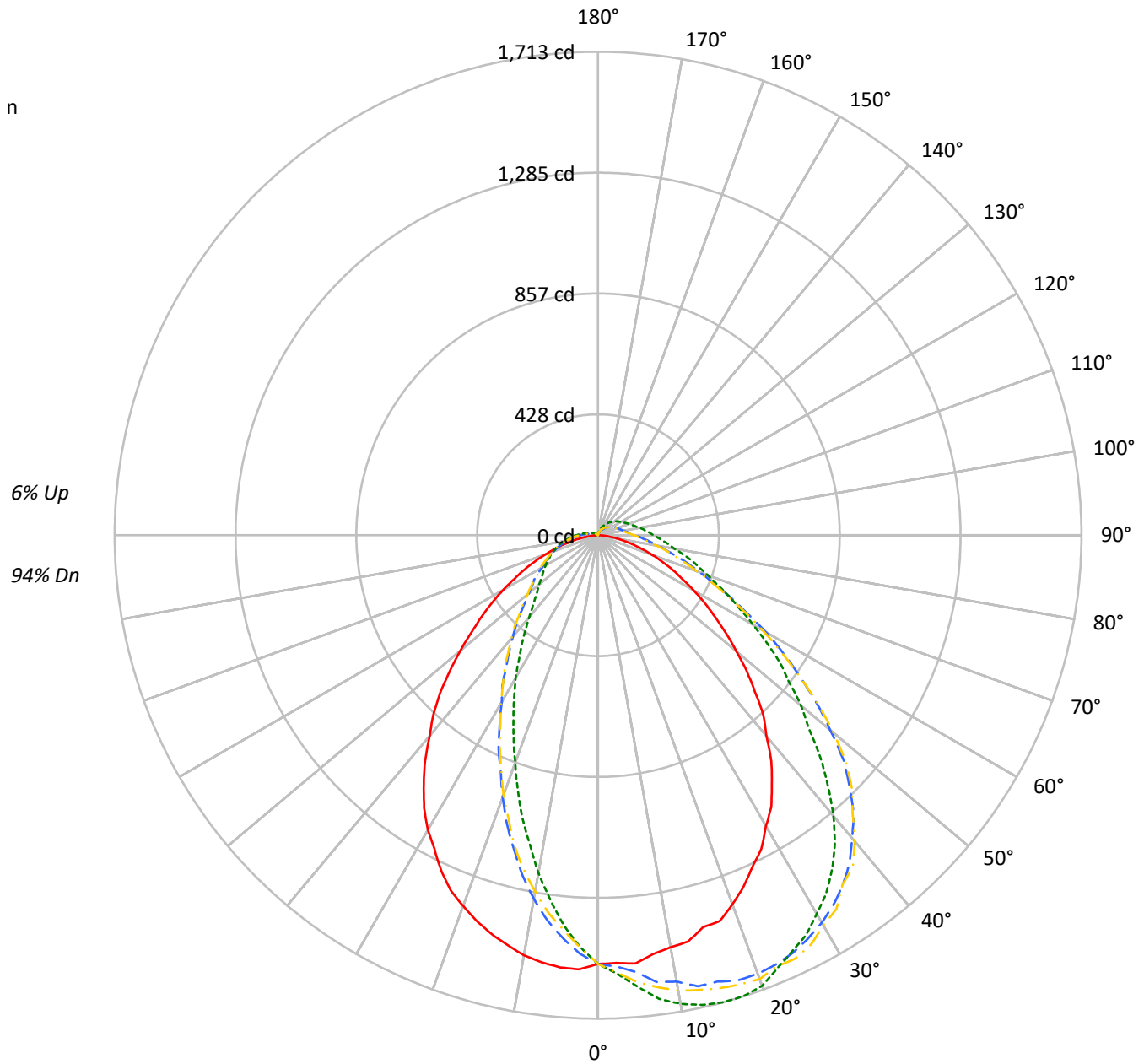
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3785.0 lumens
Efficiency: N/A
Efficacy: 113.0 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): 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: P894169
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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°	15466	15466	15466	15466
5°	15523	15760	15670	13622
10°	15244	16097	15541	11610
15°	15031	16039	15285	9707
20°	14914	15722	14978	7942
25°	14345	14993	14543	6534
30°	13744	14328	13921	5399
35°	13066	13522	13102	4399
40°	12026	12369	12019	3607
45°	10998	10918	11054	3073
50°	9782	9530	9736	2776
55°	8619	8349	8559	2551
60°	7559	7120	7493	2410
65°	6624	6131	6466	2290
70°	5630	5372	5438	2189
75°	4589	4884	4466	2109
80°	3539	4396	3216	1963
85°	2433	4244	1969	1839

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 15299 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	3.8
10°-20°	396.6	10.5
20°-30°	570.5	15.1
30°-40°	647.4	17.1
40°-50°	618.7	16.3
50°-60°	502.7	13.3
60°-70°	350.8	9.3
70°-80°	217.3	5.7
80°-90°	124.6	3.3
90°-100°	74.5	2.0
100°-110°	48.9	1.3
110°-120°	34.3	0.9
120°-130°	24.8	0.7
130°-140°	16.5	0.4
140°-150°	9.3	0.2
150°-160°	4.2	0.1
160°-170°	1.2	0.0
170°-180°	0.1	0.0
0°-30°	1109.7	29.3
0°-40°	1757.1	46.4
0°-60°	2878.5	76.0
0°-90°	3571.2	94.4
90°-120°	157.7	4.2
90°-150°	208.4	5.5
90°-180°	214.0	5.7
0°-180°	3785.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1519	1519	1519	1519	1519	
5°	1523	1605	1537	1387	1523	143
15°	1438	1713	1462	1037	1438	409
25°	1295	1627	1313	709	1295	598
35°	1074	1446	1077	470	1074	669
45°	788	1115	792	314	788	608
55°	507	786	504	240	507	456
65°	293	511	286	191	293	291
75°	130	342	127	148	130	141
85°	28	232	23	100	28	32
90°	1	196	0	77	1	2
95°	2	171	0	59	2	1
105°	1	131	0	32	1	1
115°	1	104	0	17	1	1
125°	1	85	0	11	1	1
135°	1	68	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: P894169
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-MID-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6
2.5°	1517.1	1528.6	1529.5	1565.3	1554.9	1568.3	1551.4	1554.4	1539.5	1535.5	1483.8
5°	1522.6	1546.9	1553.4	1615.1	1605.1	1612.1	1588.7	1571.8	1537.0	1516.1	1432.6
7.5°	1496.7	1560.9	1596.7	1640.4	1656.8	1662.3	1615.1	1583.7	1526.1	1474.8	1376.9
10°	1482.3	1570.8	1605.6	1671.3	1685.7	1675.2	1638.4	1586.7	1511.1	1428.6	1308.3
12.5°	1474.4	1576.3	1637.0	1704.1	1704.6	1693.6	1650.4	1594.7	1486.8	1378.9	1235.7
15°	1437.6	1575.3	1637.4	1705.6	1713.0	1706.1	1661.8	1589.2	1461.9	1317.2	1152.1
17.5°	1433.6	1572.8	1653.4	1725.0	1712.5	1707.6	1668.8	1586.7	1432.1	1254.6	1073.6
20°	1391.8	1567.3	1653.4	1703.1	1699.1	1701.1	1673.3	1583.2	1397.8	1186.9	987.5
22.5°	1347.6	1560.9	1646.4	1684.2	1660.3	1696.6	1653.4	1573.8	1363.0	1116.3	902.0
25°	1295.3	1550.4	1633.0	1657.3	1627.0	1655.4	1654.9	1559.4	1313.2	1040.3	834.4
27.5°	1253.1	1534.0	1611.1	1647.9	1596.2	1620.5	1634.5	1542.0	1254.6	965.2	754.8
30°	1189.9	1513.1	1584.7	1590.2	1549.4	1580.3	1596.2	1520.1	1205.3	880.1	682.2
32.5°	1141.7	1489.3	1552.4	1545.0	1504.2	1545.0	1570.8	1498.2	1146.7	805.5	631.0
35°	1074.1	1460.4	1512.1	1472.9	1446.0	1479.8	1510.2	1474.8	1077.0	726.0	565.4
37.5°	1008.4	1435.1	1463.9	1415.2	1378.4	1416.2	1482.8	1431.1	1006.9	662.8	516.6
40°	928.4	1376.9	1400.8	1334.6	1297.8	1353.5	1414.7	1393.3	927.9	597.2	469.4
42.5°	867.7	1333.6	1340.6	1250.1	1206.3	1265.5	1335.1	1339.6	863.7	538.0	427.6
45°	787.6	1273.0	1260.0	1160.6	1114.8	1168.0	1272.5	1284.4	791.6	486.8	386.9
47.5°	715.5	1205.3	1180.0	1063.6	1012.4	1075.6	1191.4	1222.7	711.1	439.6	348.6
50°	640.5	1129.8	1073.6	973.1	938.8	970.1	1088.5	1140.2	637.5	392.8	319.2
52.5°	571.8	1046.2	976.6	886.6	852.3	878.1	980.6	1058.2	564.4	353.5	293.4
55°	507.2	962.7	872.7	793.1	786.2	794.1	871.2	960.2	503.7	318.7	277.0
57.5°	449.5	861.2	779.2	720.5	708.1	714.6	767.8	859.3	445.0	283.9	253.1
60°	391.3	757.3	686.7	641.5	634.5	639.5	673.8	760.8	387.9	254.6	230.7
62.5°	338.6	652.9	590.2	573.3	568.4	568.4	582.8	662.3	334.2	224.8	213.8
65°	293.4	563.4	516.1	509.7	511.2	510.7	501.7	552.9	286.4	198.4	198.9
67.5°	247.6	468.4	442.1	450.0	456.0	453.5	434.6	460.0	241.7	174.5	185.5
70°	205.4	386.9	381.9	399.8	413.7	400.8	373.4	375.9	198.4	151.2	168.1
72.5°	165.6	312.8	335.6	360.5	373.9	359.5	321.7	310.8	159.6	129.8	152.2
75°	130.3	251.6	287.9	324.7	342.1	323.7	280.0	242.7	126.8	109.4	139.2
77.5°	99.5	199.4	246.1	288.9	305.8	289.9	243.7	189.5	93.0	92.0	125.3
80°	71.1	157.6	218.3	259.6	275.0	259.6	211.3	149.7	64.6	73.6	110.4
82.5°	46.7	121.8	190.0	236.2	253.1	234.2	183.5	115.4	41.3	59.7	99.5
85°	28.3	96.5	165.6	212.3	231.7	213.3	160.6	87.5	22.9	45.7	86.5
87.5°	12.4	74.6	147.7	195.9	213.3	196.4	143.2	68.6	9.4	35.8	74.1
90°	1.0	59.2	130.3	180.5	195.9	180.0	126.8	55.7	0.0	25.9	63.6
92.5°	1.0	50.7	119.3	167.1	184.5	166.6	114.4	45.7	0.0	18.9	53.7
95°	1.5	42.8	108.4	156.6	170.6	155.1	104.4	39.3	0.0	12.9	45.2
97.5°	1.5	38.8	99.5	146.2	161.6	145.2	95.5	35.3	0.0	9.4	36.8
100°	1.0	35.8	92.5	136.2	150.7	135.3	88.5	31.8	0.0	6.0	29.8
102.5°	1.0	33.3	86.5	127.8	139.2	126.3	82.5	29.8	0.0	5.0	24.4
105°	1.0	31.8	81.1	117.8	131.3	117.8	77.6	27.8	0.0	4.0	18.9
107.5°	1.0	29.8	77.1	112.4	123.3	111.4	73.6	26.4	0.0	4.0	15.4
110°	1.0	28.3	73.6	104.4	116.9	105.4	70.1	23.9	0.0	2.5	12.4



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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°	1.0	25.9	70.1	99.0	110.9	99.5	67.1	21.9	0.0	2.5	10.9
115°	1.0	23.4	67.1	95.5	104.4	94.5	64.1	19.4	0.0	2.0	9.9
117.5°	1.0	21.9	65.1	91.0	99.9	90.0	61.7	18.4	0.0	2.0	9.4
120°	1.0	20.9	62.2	86.5	93.5	85.5	58.7	17.4	0.0	2.0	9.0
122.5°	1.0	19.9	59.7	82.5	90.0	82.0	56.2	16.9	0.0	1.5	8.0
125°	1.0	18.9	56.2	78.1	85.0	77.1	51.7	16.4	0.0	1.0	7.0
127.5°	1.0	17.9	52.7	74.6	81.1	73.6	48.7	15.9	0.0	1.0	6.5
130°	1.0	17.4	48.2	70.1	76.6	69.1	45.2	15.9	0.0	1.0	6.0
132.5°	1.0	16.9	43.3	65.6	72.6	64.6	41.8	15.4	0.0	1.0	5.0
135°	1.0	16.4	38.3	61.2	67.6	60.2	38.8	14.9	0.0	1.0	4.5
137.5°	1.0	15.4	33.8	56.2	62.7	55.2	36.8	13.9	0.0	1.0	4.0
140°	1.0	14.4	30.3	52.2	57.7	50.7	33.8	12.9	0.0	0.5	3.0
142.5°	1.0	12.9	27.3	47.2	52.7	46.2	30.3	10.9	0.0	0.5	3.0
145°	1.0	11.4	24.9	41.3	47.7	41.3	28.3	9.9	0.0	0.5	2.5
147.5°	1.0	10.4	22.4	34.8	43.3	37.8	25.4	8.5	0.0	0.5	2.0
150°	1.0	9.4	19.4	29.3	38.3	33.3	23.4	7.5	0.0	0.0	1.5
152.5°	1.0	8.5	16.9	24.4	34.3	30.3	20.9	6.5	0.0	0.0	1.0
155°	1.5	8.0	14.4	21.4	29.8	26.4	17.4	5.5	0.0	0.0	1.0
157.5°	1.5	7.0	11.9	17.4	26.4	22.9	13.9	4.5	0.0	0.0	0.5
160°	1.5	6.5	9.9	13.4	21.9	18.9	11.4	3.5	0.0	0.0	0.5
162.5°	1.5	6.0	8.5	9.9	17.9	14.9	9.0	2.5	0.0	0.0	0.5
165°	1.5	5.0	7.5	7.0	13.9	11.4	7.0	1.5	0.0	0.0	0.0
167.5°	1.5	4.5	6.0	5.0	10.4	8.5	5.0	1.0	0.0	0.0	0.0
170°	1.5	3.5	5.0	3.5	3.0	5.5	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°	1518.6	1518.6	1518.6	1518.6	1518.6	1518.6
2.5°	1476.8	1460.4	1445.5	1461.4	1472.9	1517.1
5°	1404.7	1387.3	1389.3	1403.7	1442.0	1522.6
7.5°	1330.1	1301.3	1308.3	1348.5	1405.2	1496.7
10°	1242.1	1215.8	1222.2	1282.9	1362.5	1482.3
12.5°	1163.6	1119.3	1157.1	1214.3	1312.7	1474.4
15°	1071.6	1036.8	1057.2	1141.7	1265.0	1437.6
17.5°	972.1	945.3	969.6	1053.7	1206.3	1433.6
20°	895.5	858.3	887.1	979.6	1133.7	1391.8
22.5°	809.5	781.2	811.5	896.5	1059.6	1347.6
25°	738.9	709.1	739.4	823.9	994.0	1295.3
27.5°	670.3	642.9	670.3	747.9	928.9	1253.1
30°	610.1	583.8	611.6	686.2	852.8	1189.9
32.5°	553.9	520.1	555.9	628.0	785.7	1141.7
35°	495.8	470.4	497.3	577.3	711.1	1074.1
37.5°	447.5	421.2	453.0	521.6	647.9	1008.4
40°	401.8	378.4	403.8	476.9	594.2	928.4
42.5°	366.0	342.6	368.5	436.1	540.0	867.7
45°	331.2	313.8	334.7	391.3	485.3	787.6
47.5°	305.8	290.9	308.3	358.5	439.6	715.5
50°	283.9	273.5	285.9	325.7	392.3	640.5
52.5°	264.5	254.1	268.5	300.3	355.0	571.8
55°	249.6	240.2	251.1	276.5	317.7	507.2
57.5°	233.2	227.2	235.7	251.1	288.4	449.5
60°	221.3	214.8	223.8	236.2	255.1	391.3
62.5°	207.9	204.4	209.8	219.8	229.7	338.6
65°	195.9	190.9	197.9	201.4	200.4	293.4
67.5°	183.0	181.5	185.5	186.0	178.5	247.6
70°	169.6	168.6	173.5	170.6	155.1	205.4
72.5°	158.6	158.6	161.6	155.6	135.3	165.6
75°	146.7	147.7	150.2	143.2	113.9	130.3
77.5°	135.7	136.7	137.2	127.8	95.5	99.5
80°	123.3	122.8	127.8	115.9	77.6	71.1
82.5°	112.4	110.4	113.4	101.4	62.7	46.7
85°	99.9	100.4	102.4	88.5	50.2	28.3
87.5°	90.0	90.0	92.0	78.1	37.8	12.4
90°	78.1	77.1	80.1	66.1	28.3	1.0
92.5°	68.1	68.1	70.1	56.7	20.9	1.0
95°	58.2	58.7	60.2	46.7	15.9	1.5
97.5°	49.7	50.2	52.2	39.8	11.4	1.5
100°	42.3	42.8	43.8	31.8	9.0	1.0
102.5°	35.3	36.8	36.8	26.4	7.0	1.0
105°	29.8	31.8	30.8	21.4	6.5	1.0
107.5°	24.9	26.9	26.9	17.4	6.5	1.0
110°	20.4	23.4	22.9	14.9	5.0	1.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	17.4	19.9	18.4	12.9	5.0	1.0
115°	14.9	17.4	16.4	11.9	4.5	1.0
117.5°	13.4	14.9	14.9	11.4	4.5	1.0
120°	12.4	13.9	13.4	10.9	4.5	1.0
122.5°	11.4	12.4	12.4	9.9	4.0	1.0
125°	10.9	11.4	11.9	9.0	4.0	1.0
127.5°	10.4	11.4	11.4	8.5	3.5	1.0
130°	9.4	10.4	10.4	8.0	3.5	1.0
132.5°	8.5	9.4	9.4	7.5	3.5	1.0
135°	8.0	9.0	9.0	7.0	3.5	1.0
137.5°	7.5	8.0	8.0	6.5	3.5	1.0
140°	6.5	7.5	7.5	6.0	3.5	1.0
142.5°	6.0	7.0	7.0	5.5	3.0	1.0
145°	5.5	6.0	6.5	5.0	3.0	1.0
147.5°	4.5	5.5	6.0	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: P894169
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-MID-4000K

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	18.43	19.89	18.89	20.32	20.78	20.69	22.15	21.15	22.58	23.04
	3H	19.25	20.57	19.72	21.01	21.51	22.39	23.71	22.86	24.15	24.65
	4H	19.46	20.70	19.95	21.16	21.67	23.23	24.47	23.72	24.93	25.45
	6H	19.55	20.70	20.05	21.18	21.70	24.11	25.26	24.61	25.73	26.26
	8H	19.55	20.65	20.06	21.15	21.68	24.58	25.68	25.09	26.18	26.71
	12H	19.54	20.59	20.06	21.08	21.65	25.12	26.17	25.64	26.67	27.23
4H	2H	18.87	20.11	19.36	20.57	21.08	21.06	22.30	21.55	22.76	23.27
	3H	19.97	21.01	20.47	21.52	22.05	22.94	23.98	23.44	24.49	25.03
	4H	20.30	21.25	20.83	21.77	22.34	23.91	24.86	24.43	25.38	25.95
	6H	20.50	21.33	21.04	21.87	22.46	24.95	25.78	25.50	26.33	26.91
	8H	20.52	21.30	21.07	21.85	22.44	25.52	26.30	26.07	26.84	27.43
	12H	20.53	21.23	21.10	21.81	22.41	26.17	26.88	26.74	27.45	28.05
8H	4H	20.63	21.41	21.18	21.96	22.55	24.05	24.83	24.60	25.38	25.97
	6H	20.95	21.61	21.54	22.20	22.80	25.23	25.88	25.81	26.47	27.07
	8H	21.04	21.63	21.64	22.23	22.85	25.90	26.49	26.50	27.09	27.71
	12H	21.10	21.62	21.69	22.21	22.89	26.72	27.25	27.32	27.83	28.52
12H	4H	20.71	21.41	21.28	21.99	22.59	24.05	24.75	24.62	25.32	25.92
	6H	21.09	21.68	21.69	22.28	22.90	25.24	25.83	25.83	26.43	27.04
	8H	21.25	21.77	21.84	22.36	23.04	25.98	26.50	26.57	27.09	27.77