

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: P894161

Luminaire Tested: 4MB-SC3-ASML-UNV-CC83-MID-5000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894161
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-CC83-MID-5000K
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 5000K CCT, MID lumen setting
Light Source: -
Ballast/Driver: -

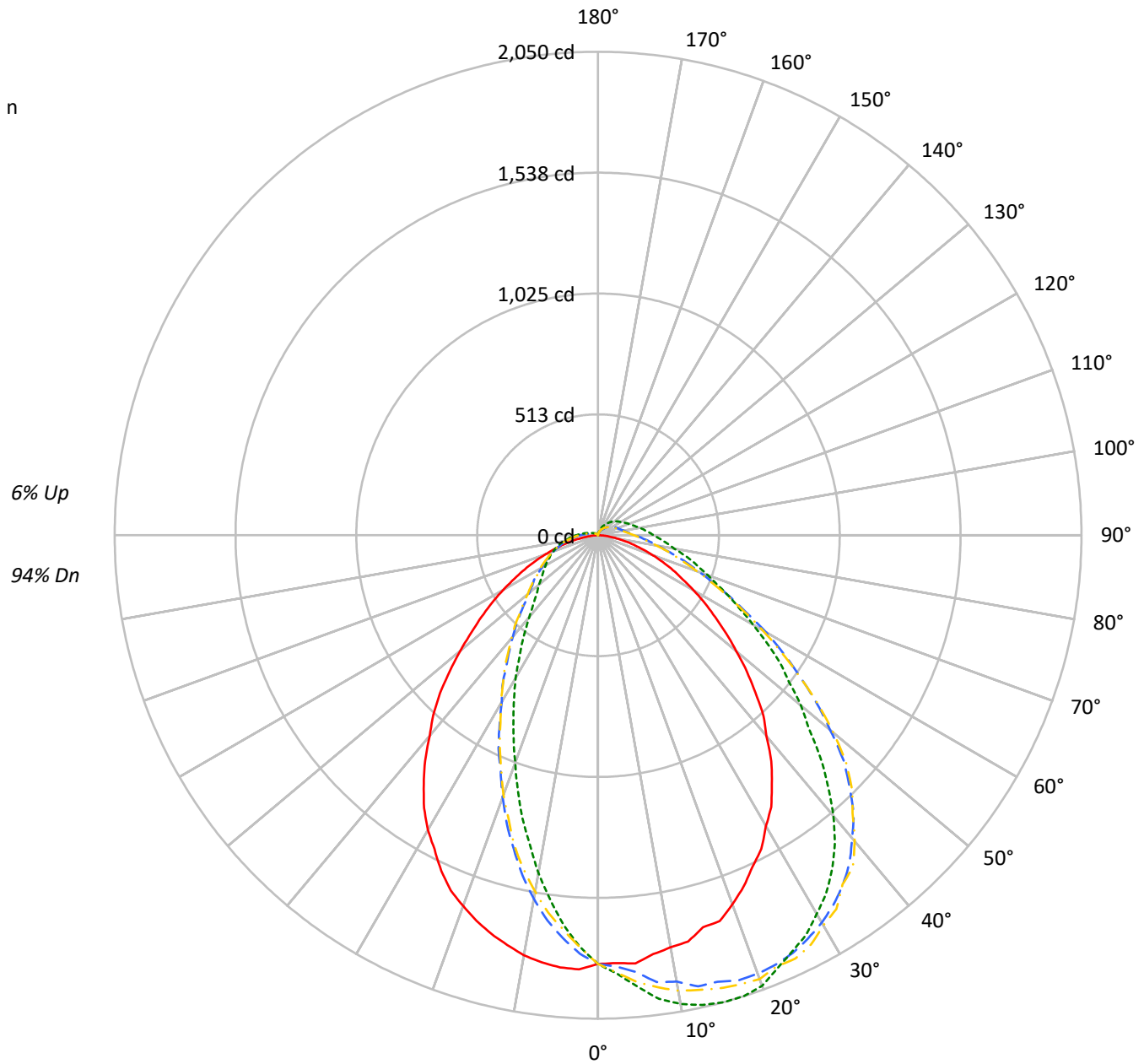
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4530.0 lumens
Efficiency: N/A
Efficacy: 135.2 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): 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

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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°	18510	18510	18510	18510
5°	18579	18863	18754	16303
10°	18245	19265	18600	13895
15°	17989	19196	18294	11617
20°	17850	18816	17926	9505
25°	17169	17944	17406	7820
30°	16449	17148	16662	6461
35°	15638	16183	15681	5265
40°	14392	14805	14384	4317
45°	13164	13068	13229	3678
50°	11706	11406	11653	3322
55°	10315	9991	10245	3052
60°	9048	8522	8967	2885
65°	7927	7338	7739	2741
70°	6738	6430	6510	2619
75°	5491	5845	5346	2524
80°	4236	5261	3853	2350
85°	2915	5080	2356	2202

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 18311 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.8	3.8
10°-20°	474.7	10.5
20°-30°	682.7	15.1
30°-40°	774.8	17.1
40°-50°	740.5	16.3
50°-60°	601.7	13.3
60°-70°	419.8	9.3
70°-80°	260.1	5.7
80°-90°	149.2	3.3
90°-100°	89.2	2.0
100°-110°	58.5	1.3
110°-120°	41.0	0.9
120°-130°	29.7	0.7
130°-140°	19.8	0.4
140°-150°	11.1	0.2
150°-160°	5.0	0.1
160°-170°	1.4	0.0
170°-180°	0.1	0.0
0°-30°	1328.2	29.3
0°-40°	2103.0	46.4
0°-60°	3445.1	76.0
0°-90°	4274.1	94.4
90°-120°	188.7	4.2
90°-150°	249.4	5.5
90°-180°	256.0	5.7
0°-180°	4530.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1818	1818	1818	1818	1818	
5°	1822	1921	1840	1660	1822	172
15°	1720	2050	1750	1241	1720	489
25°	1550	1947	1572	849	1550	715
35°	1286	1731	1289	563	1286	801
45°	943	1334	947	376	943	727
55°	607	941	603	287	607	546
65°	351	612	343	228	351	348
75°	156	409	152	177	156	168
85°	34	277	27	120	34	38
90°	1	234	0	92	1	3
95°	2	204	0	70	2	1
105°	1	157	0	38	1	1
115°	1	125	0	21	1	1
125°	1	102	0	14	1	1
135°	1	81	0	11	1	1
145°	1	57	0	7	1	1
155°	2	36	0	4	2	1
165°	2	17	0	2	2	1
175°	2	1	0	0	2	0
180°	1	1	1	1	1	



TEST NUMBER: P894161
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5
2.5°	1815.7	1829.4	1830.6	1873.5	1861.0	1877.0	1856.8	1860.4	1842.5	1837.7	1775.9
5°	1822.3	1851.4	1859.2	1933.0	1921.1	1929.4	1901.4	1881.2	1839.5	1814.5	1714.6
7.5°	1791.3	1868.1	1910.9	1963.3	1983.0	1989.5	1933.0	1895.5	1826.4	1765.1	1647.9
10°	1774.1	1880.0	1921.7	2000.2	2017.5	2005.0	1960.9	1899.0	1808.6	1709.8	1565.8
12.5°	1764.5	1886.5	1959.2	2039.5	2040.1	2027.0	1975.2	1908.6	1779.4	1650.3	1478.9
15°	1720.5	1885.4	1959.7	2041.3	2050.2	2041.9	1988.9	1902.0	1749.7	1576.5	1378.9
17.5°	1715.7	1882.4	1978.8	2064.5	2049.6	2043.7	1997.2	1899.0	1714.0	1501.5	1284.9
20°	1665.8	1875.8	1978.8	2038.3	2033.5	2035.9	2002.6	1894.9	1672.9	1420.6	1181.9
22.5°	1612.8	1868.1	1970.5	2015.7	1987.1	2030.6	1978.8	1883.6	1631.2	1336.1	1079.6
25°	1550.3	1855.6	1954.4	1983.6	1947.3	1981.2	1980.6	1866.3	1571.7	1245.0	998.6
27.5°	1499.7	1836.0	1928.2	1972.2	1910.4	1939.5	1956.2	1845.5	1501.5	1155.1	903.4
30°	1424.1	1811.0	1896.7	1903.2	1854.4	1891.3	1910.4	1819.3	1442.6	1053.4	816.5
32.5°	1366.4	1782.4	1858.0	1849.1	1800.3	1849.1	1880.0	1793.1	1372.4	964.1	755.2
35°	1285.5	1747.9	1809.8	1762.8	1730.6	1771.1	1807.4	1765.1	1289.0	868.9	676.7
37.5°	1206.9	1717.5	1752.0	1693.7	1649.7	1694.9	1774.7	1712.8	1205.1	793.3	618.3
40°	1111.1	1647.9	1676.5	1597.3	1553.3	1619.9	1693.1	1667.5	1110.5	714.7	561.8
42.5°	1038.5	1596.1	1604.5	1496.1	1443.8	1514.6	1597.9	1603.3	1033.7	643.9	511.8
45°	942.7	1523.5	1508.0	1389.0	1334.3	1397.9	1522.9	1537.2	947.4	582.6	463.0
47.5°	856.4	1442.6	1412.2	1273.0	1211.7	1287.3	1425.9	1463.4	851.0	526.1	417.2
50°	766.5	1352.1	1284.9	1164.7	1123.6	1161.1	1302.7	1364.6	763.0	470.1	382.1
52.5°	684.4	1252.1	1168.8	1061.1	1020.0	1051.0	1173.6	1266.4	675.5	423.1	351.1
55°	607.0	1152.2	1044.4	949.2	940.9	950.4	1042.7	1149.2	602.9	381.5	331.5
57.5°	538.0	1030.8	932.6	862.3	847.5	855.2	918.9	1028.4	532.6	339.8	302.9
60°	468.4	906.4	821.9	767.7	759.4	765.3	806.4	910.5	464.2	304.7	276.1
62.5°	405.3	781.4	706.4	686.2	680.2	680.2	697.5	792.7	399.9	269.0	255.9
65°	351.1	674.3	617.7	610.0	611.8	611.2	600.5	661.8	342.8	237.5	238.1
67.5°	296.4	560.6	529.1	538.6	545.7	542.8	520.1	550.5	289.2	208.9	222.0
70°	245.8	463.0	457.1	478.5	495.1	479.7	446.9	449.9	237.5	180.9	201.2
72.5°	198.2	374.3	401.7	431.5	447.5	430.3	385.0	372.0	191.0	155.3	182.1
75°	155.9	301.1	344.6	388.6	409.4	387.4	335.1	290.4	151.8	130.9	166.6
77.5°	119.0	238.6	294.6	345.8	366.0	347.0	291.6	226.7	111.3	110.1	150.0
80°	85.1	188.7	261.3	310.7	329.1	310.7	252.9	179.1	77.4	88.1	132.1
82.5°	55.9	145.8	227.3	282.7	302.9	280.3	219.6	138.1	49.4	71.4	119.0
85°	33.9	115.5	198.2	254.1	277.3	255.3	192.2	104.7	27.4	54.8	103.6
87.5°	14.9	89.3	176.8	234.5	255.3	235.1	171.4	82.1	11.3	42.8	88.7
90°	1.2	70.8	155.9	216.0	234.5	215.4	151.8	66.7	0.0	30.9	76.2
92.5°	1.2	60.7	142.8	200.0	220.8	199.4	136.9	54.8	0.0	22.6	64.3
95°	1.8	51.2	129.7	187.5	204.1	185.7	125.0	47.0	0.0	15.5	54.2
97.5°	1.8	46.4	119.0	175.0	193.4	173.8	114.3	42.3	0.0	11.3	44.0
100°	1.2	42.8	110.7	163.1	180.3	161.9	105.9	38.1	0.0	7.1	35.7
102.5°	1.2	39.9	103.6	152.9	166.6	151.2	98.8	35.7	0.0	6.0	29.2
105°	1.2	38.1	97.0	141.0	157.1	141.0	92.8	33.3	0.0	4.8	22.6
107.5°	1.2	35.7	92.2	134.5	147.6	133.3	88.1	31.5	0.0	4.8	18.4
110°	1.2	33.9	88.1	125.0	139.9	126.2	83.9	28.6	0.0	3.0	14.9



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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°	1.2	30.9	83.9	118.4	132.7	119.0	80.3	26.2	0.0	3.0	13.1
115°	1.2	28.0	80.3	114.3	125.0	113.1	76.8	23.2	0.0	2.4	11.9
117.5°	1.2	26.2	78.0	108.9	119.6	107.7	73.8	22.0	0.0	2.4	11.3
120°	1.2	25.0	74.4	103.6	111.9	102.4	70.2	20.8	0.0	2.4	10.7
122.5°	1.2	23.8	71.4	98.8	107.7	98.2	67.2	20.2	0.0	1.8	9.5
125°	1.2	22.6	67.2	93.4	101.8	92.2	61.9	19.6	0.0	1.2	8.3
127.5°	1.2	21.4	63.1	89.3	97.0	88.1	58.3	19.0	0.0	1.2	7.7
130°	1.2	20.8	57.7	83.9	91.6	82.7	54.2	19.0	0.0	1.2	7.1
132.5°	1.2	20.2	51.8	78.6	86.9	77.4	50.0	18.4	0.0	1.2	6.0
135°	1.2	19.6	45.8	73.2	80.9	72.0	46.4	17.9	0.0	1.2	5.4
137.5°	1.2	18.4	40.5	67.2	75.0	66.1	44.0	16.7	0.0	1.2	4.8
140°	1.2	17.3	36.3	62.5	69.0	60.7	40.5	15.5	0.0	0.6	3.6
142.5°	1.2	15.5	32.7	56.5	63.1	55.3	36.3	13.1	0.0	0.6	3.6
145°	1.2	13.7	29.8	49.4	57.1	49.4	33.9	11.9	0.0	0.6	3.0
147.5°	1.2	12.5	26.8	41.7	51.8	45.2	30.4	10.1	0.0	0.6	2.4
150°	1.2	11.3	23.2	35.1	45.8	39.9	28.0	8.9	0.0	0.0	1.8
152.5°	1.2	10.1	20.2	29.2	41.1	36.3	25.0	7.7	0.0	0.0	1.2
155°	1.8	9.5	17.3	25.6	35.7	31.5	20.8	6.5	0.0	0.0	1.2
157.5°	1.8	8.3	14.3	20.8	31.5	27.4	16.7	5.4	0.0	0.0	0.6
160°	1.8	7.7	11.9	16.1	26.2	22.6	13.7	4.2	0.0	0.0	0.6
162.5°	1.8	7.1	10.1	11.9	21.4	17.9	10.7	3.0	0.0	0.0	0.6
165°	1.8	6.0	8.9	8.3	16.7	13.7	8.3	1.8	0.0	0.0	0.0
167.5°	1.8	5.4	7.1	6.0	12.5	10.1	6.0	1.2	0.0	0.0	0.0
170°	1.8	4.2	6.0	4.2	3.6	6.5	3.6	0.6	0.0	0.0	0.0
172.5°	1.8	3.6	4.8	3.0	1.2	3.6	1.8	0.0	0.0	0.0	0.0
175°	1.8	3.0	3.0	1.8	0.6	1.2	0.0	0.0	0.0	0.0	0.0
177.5°	1.8	2.4	1.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1817.5	1817.5	1817.5	1817.5	1817.5	1817.5
2.5°	1767.5	1747.9	1730.0	1749.1	1762.8	1815.7
5°	1681.2	1660.4	1662.8	1680.0	1725.9	1822.3
7.5°	1592.0	1557.4	1565.8	1614.0	1681.8	1791.3
10°	1486.6	1455.1	1462.8	1535.4	1630.6	1774.1
12.5°	1392.6	1339.6	1384.9	1453.3	1571.1	1764.5
15°	1282.5	1240.8	1265.2	1366.4	1514.0	1720.5
17.5°	1163.5	1131.3	1160.5	1261.1	1443.8	1715.7
20°	1071.8	1027.2	1061.7	1172.4	1356.9	1665.8
22.5°	968.9	934.9	971.2	1073.0	1268.2	1612.8
25°	884.4	848.6	885.0	986.1	1189.7	1550.3
27.5°	802.2	769.5	802.2	895.1	1111.7	1499.7
30°	730.2	698.7	732.0	821.3	1020.6	1424.1
32.5°	663.0	622.5	665.4	751.6	940.3	1366.4
35°	593.3	563.0	595.1	690.9	851.0	1285.5
37.5°	535.6	504.1	542.2	624.3	775.4	1206.9
40°	480.9	452.9	483.2	570.7	711.2	1111.1
42.5°	438.0	410.0	441.0	521.9	646.3	1038.5
45°	396.4	375.5	400.5	468.4	580.8	942.7
47.5°	366.0	348.1	369.0	429.1	526.1	856.4
50°	339.8	327.3	342.2	389.8	469.6	766.5
52.5°	316.6	304.1	321.4	359.5	424.9	684.4
55°	298.8	287.4	300.5	330.9	380.3	607.0
57.5°	279.1	272.0	282.1	300.5	345.2	538.0
60°	264.8	257.1	267.8	282.7	305.3	468.4
62.5°	248.8	244.6	251.1	263.0	274.9	405.3
65°	234.5	228.5	236.9	241.0	239.8	351.1
67.5°	219.0	217.2	222.0	222.6	213.6	296.4
70°	202.9	201.7	207.7	204.1	185.7	245.8
72.5°	189.8	189.8	193.4	186.3	161.9	198.2
75°	175.6	176.8	179.7	171.4	136.3	155.9
77.5°	162.5	163.7	164.3	152.9	114.3	119.0
80°	147.6	147.0	152.9	138.7	92.8	85.1
82.5°	134.5	132.1	135.7	121.4	75.0	55.9
85°	119.6	120.2	122.6	105.9	60.1	33.9
87.5°	107.7	107.7	110.1	93.4	45.2	14.9
90°	93.4	92.2	95.8	79.2	33.9	1.2
92.5°	81.5	81.5	83.9	67.8	25.0	1.2
95°	69.6	70.2	72.0	55.9	19.0	1.8
97.5°	59.5	60.1	62.5	47.6	13.7	1.8
100°	50.6	51.2	52.4	38.1	10.7	1.2
102.5°	42.3	44.0	44.0	31.5	8.3	1.2
105°	35.7	38.1	36.9	25.6	7.7	1.2
107.5°	29.8	32.1	32.1	20.8	7.7	1.2
110°	24.4	28.0	27.4	17.9	6.0	1.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	20.8	23.8	22.0	15.5	6.0	1.2
115°	17.9	20.8	19.6	14.3	5.4	1.2
117.5°	16.1	17.9	17.9	13.7	5.4	1.2
120°	14.9	16.7	16.1	13.1	5.4	1.2
122.5°	13.7	14.9	14.9	11.9	4.8	1.2
125°	13.1	13.7	14.3	10.7	4.8	1.2
127.5°	12.5	13.7	13.7	10.1	4.2	1.2
130°	11.3	12.5	12.5	9.5	4.2	1.2
132.5°	10.1	11.3	11.3	8.9	4.2	1.2
135°	9.5	10.7	10.7	8.3	4.2	1.2
137.5°	8.9	9.5	9.5	7.7	4.2	1.2
140°	7.7	8.9	8.9	7.1	4.2	1.2
142.5°	7.1	8.3	8.3	6.5	3.6	1.2
145°	6.5	7.1	7.7	6.0	3.6	1.2
147.5°	5.4	6.5	7.1	5.4	3.6	1.2
150°	4.2	6.0	6.0	5.4	3.6	1.2
152.5°	3.0	5.4	5.4	4.8	3.0	1.2
155°	2.4	4.2	4.8	4.2	3.0	1.8
157.5°	1.8	3.6	4.2	4.2	3.0	1.8
160°	1.2	3.0	3.6	3.6	2.4	1.8
162.5°	0.6	2.4	3.0	3.6	2.4	1.8
165°	0.0	1.8	2.4	3.0	2.4	1.8
167.5°	0.0	1.2	1.8	2.4	1.8	1.8
170°	0.0	0.6	1.2	1.8	1.8	1.8
172.5°	0.0	0.0	0.6	1.2	1.2	1.8
175°	0.0	0.0	0.0	0.6	1.2	1.8
177.5°	0.0	0.0	0.0	0.6	1.2	1.8
180°	0.6	0.6	0.6	0.6	0.6	0.6



TEST NUMBER: P894161
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-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	19.06	20.52	19.51	20.95	21.40	21.32	22.77	21.77	23.21	23.66
	3H	19.88	21.20	20.35	21.64	22.14	23.02	24.33	23.48	24.78	25.27
	4H	20.08	21.32	20.57	21.79	22.30	23.85	25.10	24.34	25.56	26.07
	6H	20.17	21.32	20.67	21.80	22.33	24.73	25.88	25.23	26.36	26.88
	8H	20.17	21.27	20.69	21.77	22.31	25.20	26.30	25.72	26.80	27.33
	12H	20.16	21.22	20.68	21.71	22.27	25.74	26.80	26.26	27.29	27.85
4H	2H	19.49	20.74	19.98	21.20	21.71	21.68	22.92	22.17	23.38	23.90
	3H	20.59	21.63	21.09	22.14	22.67	23.56	24.61	24.07	25.12	25.65
	4H	20.93	21.88	21.45	22.39	22.96	24.54	25.48	25.06	26.00	26.57
	6H	21.12	21.95	21.66	22.49	23.08	25.58	26.41	26.12	26.95	27.54
	8H	21.15	21.93	21.70	22.47	23.07	26.14	26.92	26.69	27.46	28.06
	12H	21.15	21.86	21.72	22.43	23.03	26.80	27.50	27.37	28.07	28.67
8H	4H	21.26	22.04	21.81	22.58	23.18	24.68	25.46	25.23	26.00	26.60
	6H	21.58	22.23	22.16	22.82	23.42	25.85	26.50	26.43	27.09	27.69
	8H	21.67	22.26	22.26	22.86	23.47	26.53	27.12	27.12	27.72	28.33
	12H	21.72	22.25	22.32	22.83	23.52	27.35	27.87	27.94	28.46	29.14
12H	4H	21.34	22.04	21.90	22.61	23.21	24.67	25.37	25.24	25.95	26.55
	6H	21.72	22.31	22.31	22.91	23.52	25.86	26.45	26.46	27.05	27.67
	8H	21.87	22.40	22.47	22.99	23.67	26.60	27.12	27.19	27.71	28.39