

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: P894160

Luminaire Tested: 4MB-SC3-ASML-UNV-CC83-MID-4000K

Issue Date: 11/11/2024

**Test Information**

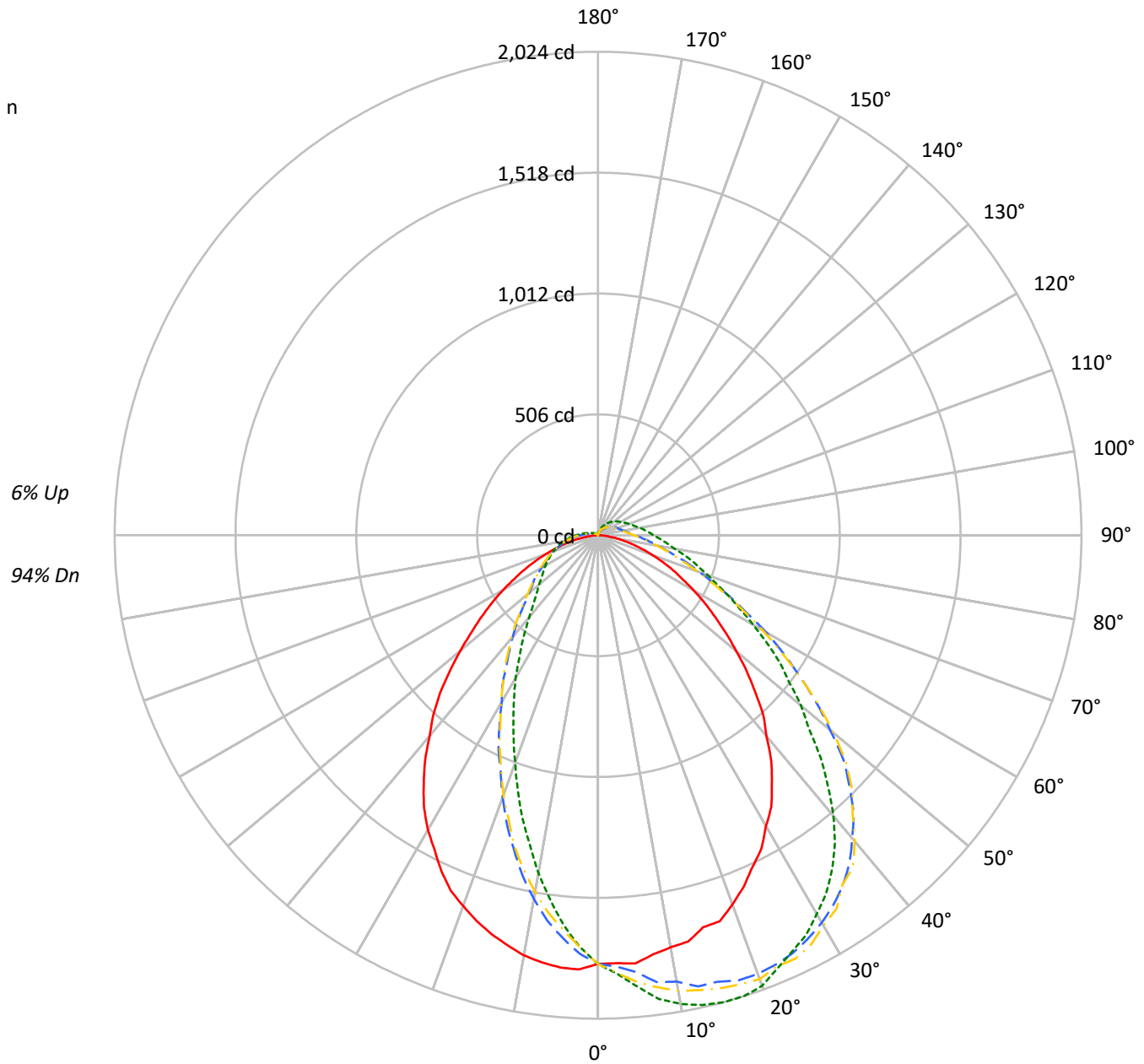
Test Method: LM-79-2019  
Report Number: P894160  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASML-UNV-CC83-MID-4000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 4000K CCT, MID lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4473.0 lumens  
Efficiency: N/A  
Efficacy: 133.5 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: P894160  
CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-MID-4000K

### 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°	18277	18277	18277	18277
5°	18344	18625	18518	16098
10°	18015	19023	18366	13720
15°	17763	18954	18064	11471
20°	17625	18580	17700	9385
25°	16953	17718	17187	7722
30°	16242	16933	16452	6380
35°	15441	15979	15484	5198
40°	14211	14618	14203	4262
45°	12998	12903	13063	3632
50°	11559	11262	11506	3281
55°	10186	9866	10116	3014
60°	8934	8414	8855	2849
65°	7827	7246	7642	2707
70°	6653	6349	6428	2587
75°	5424	5772	5276	2491
80°	4181	5195	3803	2320
85°	2880	5016	2321	2174

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 18081 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.6	3.8
10°-20°	468.7	10.5
20°-30°	674.1	15.1
30°-40°	765.0	17.1
40°-50°	731.1	16.3
50°-60°	594.1	13.3
60°-70°	414.5	9.3
70°-80°	256.8	5.7
80°-90°	147.3	3.3
90°-100°	88.1	2.0
100°-110°	57.8	1.3
110°-120°	40.5	0.9
120°-130°	29.4	0.7
130°-140°	19.5	0.4
140°-150°	11.0	0.2
150°-160°	4.9	0.1
160°-170°	1.4	0.0
170°-180°	0.1	0.0
0°-30°	1311.5	29.3
0°-40°	2076.5	46.4
0°-60°	3401.7	76.0
0°-90°	4220.3	94.4
90°-120°	186.4	4.2
90°-150°	246.2	5.5
90°-180°	253.0	5.7
0°-180°	4473.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1795	1795	1795	1795	1795	
5°	1799	1897	1816	1640	1799	170
15°	1699	2024	1728	1225	1699	483
25°	1531	1923	1552	838	1531	706
35°	1269	1709	1273	556	1269	791
45°	931	1318	936	371	931	718
55°	599	929	595	284	599	539
65°	347	604	338	226	347	344
75°	154	404	150	174	154	166
85°	34	274	27	119	34	38
90°	1	232	0	91	1	3
95°	2	202	0	69	2	1
105°	1	155	0	38	1	1
115°	1	123	0	21	1	1
125°	1	100	0	14	1	1
135°	1	80	0	11	1	1
145°	1	56	0	7	1	1
155°	2	35	0	4	2	1
165°	2	16	0	2	2	1
175°	2	1	0	0	2	0
180°	1	1	1	1	1	



TEST NUMBER: P894160  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-MID-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6
2.5°	1792.9	1806.4	1807.6	1849.9	1837.5	1853.4	1833.4	1837.0	1819.3	1814.6	1753.5
5°	1799.3	1828.1	1835.8	1908.6	1896.9	1905.1	1877.5	1857.5	1816.4	1791.7	1693.0
7.5°	1768.8	1844.6	1886.9	1938.6	1958.0	1964.5	1908.6	1871.6	1803.5	1742.9	1627.2
10°	1751.7	1856.3	1897.5	1975.0	1992.1	1979.7	1936.3	1875.1	1785.8	1688.3	1546.1
12.5°	1742.3	1862.8	1934.5	2013.8	2014.4	2001.5	1950.4	1884.6	1757.0	1629.5	1460.3
15°	1698.9	1861.6	1935.1	2015.6	2024.4	2016.2	1963.9	1878.1	1727.7	1556.7	1361.6
17.5°	1694.2	1858.7	1953.9	2038.5	2023.8	2017.9	1972.1	1875.1	1692.4	1482.6	1268.7
20°	1644.8	1852.2	1953.9	2012.7	2008.0	2010.3	1977.4	1871.0	1651.8	1402.7	1167.0
22.5°	1592.5	1844.6	1945.7	1990.3	1962.1	2005.0	1953.9	1859.9	1610.7	1319.2	1066.0
25°	1530.8	1832.3	1929.8	1958.6	1922.7	1956.2	1955.7	1842.8	1551.9	1229.3	986.1
27.5°	1480.8	1812.9	1903.9	1947.4	1886.3	1915.1	1931.6	1822.3	1482.6	1140.6	892.0
30°	1406.2	1788.2	1872.8	1879.3	1831.1	1867.5	1886.3	1796.4	1424.4	1040.1	806.2
32.5°	1349.2	1760.0	1834.6	1825.8	1777.6	1825.8	1856.3	1770.6	1355.1	952.0	745.7
35°	1269.3	1725.9	1787.0	1740.6	1708.8	1748.8	1784.7	1742.9	1272.8	857.9	668.1
37.5°	1191.7	1695.9	1730.0	1672.4	1628.9	1673.6	1752.3	1691.2	1190.0	783.3	610.6
40°	1097.1	1627.2	1655.4	1577.2	1533.7	1599.5	1671.8	1646.6	1096.5	705.8	554.7
42.5°	1025.4	1576.0	1584.3	1477.3	1425.6	1495.5	1577.8	1583.1	1020.7	635.8	505.4
45°	930.8	1504.4	1489.1	1371.5	1317.5	1380.4	1503.8	1517.9	935.5	575.3	457.2
47.5°	845.6	1424.4	1394.5	1257.0	1196.4	1271.1	1408.0	1445.0	840.3	519.5	411.9
50°	756.9	1335.1	1268.7	1150.0	1109.5	1146.5	1286.3	1347.5	753.4	464.2	377.3
52.5°	675.8	1236.4	1154.1	1047.8	1007.2	1037.8	1158.8	1250.5	667.0	417.8	346.7
55°	599.4	1137.7	1031.3	937.3	929.1	938.5	1029.5	1134.7	595.3	376.7	327.3
57.5°	531.2	1017.8	920.8	851.5	836.8	844.4	907.3	1015.4	525.9	335.5	299.1
60°	462.5	895.0	811.5	758.1	749.8	755.7	796.2	899.1	458.4	300.9	272.7
62.5°	400.2	771.6	697.5	677.5	671.7	671.7	688.7	782.7	394.9	265.6	252.7
65°	346.7	665.8	610.0	602.3	604.1	603.5	592.9	653.5	338.5	234.5	235.1
67.5°	292.6	553.6	522.4	531.8	538.9	535.9	513.6	543.6	285.6	206.3	219.2
70°	242.7	457.2	451.3	472.5	488.9	473.6	441.3	444.3	234.5	178.6	198.6
72.5°	195.7	369.6	396.7	426.0	441.9	424.9	380.2	367.3	188.6	153.4	179.8
75°	154.0	297.3	340.2	383.7	404.3	382.6	330.8	286.8	149.8	129.3	164.5
77.5°	117.5	235.6	290.9	341.4	361.4	342.6	287.9	223.9	109.9	108.7	148.1
80°	84.0	186.3	258.0	306.7	325.0	306.7	249.7	176.9	76.4	87.0	130.5
82.5°	55.2	144.0	224.5	279.1	299.1	276.8	216.8	136.3	48.8	70.5	117.5
85°	33.5	114.0	195.7	250.9	273.8	252.1	189.8	103.4	27.0	54.1	102.2
87.5°	14.7	88.1	174.5	231.5	252.1	232.1	169.2	81.1	11.2	42.3	87.6
90°	1.2	69.9	154.0	213.3	231.5	212.7	149.8	65.8	0.0	30.6	75.2
92.5°	1.2	59.9	141.0	197.4	218.0	196.9	135.2	54.1	0.0	22.3	63.5
95°	1.8	50.5	128.1	185.1	201.6	183.3	123.4	46.4	0.0	15.3	53.5
97.5°	1.8	45.8	117.5	172.8	191.0	171.6	112.8	41.7	0.0	11.2	43.5
100°	1.2	42.3	109.3	161.0	178.1	159.8	104.6	37.6	0.0	7.1	35.3
102.5°	1.2	39.4	102.2	151.0	164.5	149.3	97.5	35.3	0.0	5.9	28.8
105°	1.2	37.6	95.8	139.3	155.1	139.3	91.7	32.9	0.0	4.7	22.3
107.5°	1.2	35.3	91.1	132.8	145.7	131.6	87.0	31.1	0.0	4.7	18.2
110°	1.2	33.5	87.0	123.4	138.1	124.6	82.9	28.2	0.0	2.9	14.7



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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°	1.2	30.6	82.9	116.9	131.0	117.5	79.3	25.9	0.0	2.9	12.9
115°	1.2	27.6	79.3	112.8	123.4	111.7	75.8	22.9	0.0	2.4	11.8
117.5°	1.2	25.9	77.0	107.5	118.1	106.4	72.9	21.7	0.0	2.4	11.2
120°	1.2	24.7	73.5	102.2	110.5	101.1	69.3	20.6	0.0	2.4	10.6
122.5°	1.2	23.5	70.5	97.5	106.4	97.0	66.4	20.0	0.0	1.8	9.4
125°	1.2	22.3	66.4	92.3	100.5	91.1	61.1	19.4	0.0	1.2	8.2
127.5°	1.2	21.2	62.3	88.1	95.8	87.0	57.6	18.8	0.0	1.2	7.6
130°	1.2	20.6	57.0	82.9	90.5	81.7	53.5	18.8	0.0	1.2	7.1
132.5°	1.2	20.0	51.1	77.6	85.8	76.4	49.4	18.2	0.0	1.2	5.9
135°	1.2	19.4	45.2	72.3	79.9	71.1	45.8	17.6	0.0	1.2	5.3
137.5°	1.2	18.2	40.0	66.4	74.0	65.2	43.5	16.5	0.0	1.2	4.7
140°	1.2	17.0	35.8	61.7	68.2	59.9	40.0	15.3	0.0	0.6	3.5
142.5°	1.2	15.3	32.3	55.8	62.3	54.7	35.8	12.9	0.0	0.6	3.5
145°	1.2	13.5	29.4	48.8	56.4	48.8	33.5	11.8	0.0	0.6	2.9
147.5°	1.2	12.3	26.4	41.1	51.1	44.7	30.0	10.0	0.0	0.6	2.4
150°	1.2	11.2	22.9	34.7	45.2	39.4	27.6	8.8	0.0	0.0	1.8
152.5°	1.2	10.0	20.0	28.8	40.5	35.8	24.7	7.6	0.0	0.0	1.2
155°	1.8	9.4	17.0	25.3	35.3	31.1	20.6	6.5	0.0	0.0	1.2
157.5°	1.8	8.2	14.1	20.6	31.1	27.0	16.5	5.3	0.0	0.0	0.6
160°	1.8	7.6	11.8	15.9	25.9	22.3	13.5	4.1	0.0	0.0	0.6
162.5°	1.8	7.1	10.0	11.8	21.2	17.6	10.6	2.9	0.0	0.0	0.6
165°	1.8	5.9	8.8	8.2	16.5	13.5	8.2	1.8	0.0	0.0	0.0
167.5°	1.8	5.3	7.1	5.9	12.3	10.0	5.9	1.2	0.0	0.0	0.0
170°	1.8	4.1	5.9	4.1	3.5	6.5	3.5	0.6	0.0	0.0	0.0
172.5°	1.8	3.5	4.7	2.9	1.2	3.5	1.8	0.0	0.0	0.0	0.0
175°	1.8	2.9	2.9	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°	1794.6	1794.6	1794.6	1794.6	1794.6	1794.6
2.5°	1745.3	1725.9	1708.3	1727.1	1740.6	1792.9
5°	1660.1	1639.5	1641.9	1658.9	1704.1	1799.3
7.5°	1571.9	1537.8	1546.1	1593.7	1660.7	1768.8
10°	1467.9	1436.8	1444.4	1516.1	1610.1	1751.7
12.5°	1375.1	1322.8	1367.4	1435.0	1551.4	1742.3
15°	1266.4	1225.2	1249.3	1349.2	1494.9	1698.9
17.5°	1148.8	1117.1	1145.9	1245.2	1425.6	1694.2
20°	1058.3	1014.3	1048.3	1157.6	1339.8	1644.8
22.5°	956.7	923.2	959.0	1059.5	1252.3	1592.5
25°	873.2	838.0	873.8	973.7	1174.7	1530.8
27.5°	792.1	759.8	792.1	883.8	1097.7	1480.8
30°	721.0	689.9	722.8	810.9	1007.8	1406.2
32.5°	654.6	614.7	657.0	742.2	928.5	1349.2
35°	585.9	555.9	587.6	682.2	840.3	1269.3
37.5°	528.9	497.7	535.3	616.4	765.7	1191.7
40°	474.8	447.2	477.2	563.5	702.2	1097.1
42.5°	432.5	404.9	435.4	515.4	638.2	1025.4
45°	391.4	370.8	395.5	462.5	573.5	930.8
47.5°	361.4	343.8	364.3	423.7	519.5	845.6
50°	335.5	323.2	337.9	384.9	463.6	756.9
52.5°	312.6	300.3	317.3	354.9	419.6	675.8
55°	295.0	283.8	296.8	326.7	375.5	599.4
57.5°	275.6	268.6	278.5	296.8	340.8	531.2
60°	261.5	253.9	264.4	279.1	301.5	462.5
62.5°	245.6	241.5	248.0	259.7	271.5	400.2
65°	231.5	225.7	233.9	238.0	236.8	346.7
67.5°	216.3	214.5	219.2	219.8	211.0	292.6
70°	200.4	199.2	205.1	201.6	183.3	242.7
72.5°	187.5	187.5	191.0	183.9	159.8	195.7
75°	173.4	174.5	177.5	169.2	134.6	154.0
77.5°	160.4	161.6	162.2	151.0	112.8	117.5
80°	145.7	145.1	151.0	136.9	91.7	84.0
82.5°	132.8	130.5	134.0	119.9	74.0	55.2
85°	118.1	118.7	121.1	104.6	59.4	33.5
87.5°	106.4	106.4	108.7	92.3	44.7	14.7
90°	92.3	91.1	94.6	78.2	33.5	1.2
92.5°	80.5	80.5	82.9	67.0	24.7	1.2
95°	68.8	69.3	71.1	55.2	18.8	1.8
97.5°	58.8	59.4	61.7	47.0	13.5	1.8
100°	49.9	50.5	51.7	37.6	10.6	1.2
102.5°	41.7	43.5	43.5	31.1	8.2	1.2
105°	35.3	37.6	36.4	25.3	7.6	1.2
107.5°	29.4	31.7	31.7	20.6	7.6	1.2
110°	24.1	27.6	27.0	17.6	5.9	1.2





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	20.6	23.5	21.7	15.3	5.9	1.2
115°	17.6	20.6	19.4	14.1	5.3	1.2
117.5°	15.9	17.6	17.6	13.5	5.3	1.2
120°	14.7	16.5	15.9	12.9	5.3	1.2
122.5°	13.5	14.7	14.7	11.8	4.7	1.2
125°	12.9	13.5	14.1	10.6	4.7	1.2
127.5°	12.3	13.5	13.5	10.0	4.1	1.2
130°	11.2	12.3	12.3	9.4	4.1	1.2
132.5°	10.0	11.2	11.2	8.8	4.1	1.2
135°	9.4	10.6	10.6	8.2	4.1	1.2
137.5°	8.8	9.4	9.4	7.6	4.1	1.2
140°	7.6	8.8	8.8	7.1	4.1	1.2
142.5°	7.1	8.2	8.2	6.5	3.5	1.2
145°	6.5	7.1	7.6	5.9	3.5	1.2
147.5°	5.3	6.5	7.1	5.3	3.5	1.2
150°	4.1	5.9	5.9	5.3	3.5	1.2
152.5°	2.9	5.3	5.3	4.7	2.9	1.2
155°	2.4	4.1	4.7	4.1	2.9	1.8
157.5°	1.8	3.5	4.1	4.1	2.9	1.8
160°	1.2	2.9	3.5	3.5	2.4	1.8
162.5°	0.6	2.4	2.9	3.5	2.4	1.8
165°	0.0	1.8	2.4	2.9	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: P894160  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-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	19.01	20.47	19.47	20.90	21.36	21.27	22.73	21.73	23.16	23.62
	3H	19.83	21.15	20.30	21.60	22.09	22.97	24.29	23.44	24.73	25.23
	4H	20.04	21.28	20.53	21.74	22.25	23.81	25.05	24.30	25.51	26.03
	6H	20.13	21.28	20.63	21.76	22.28	24.69	25.84	25.19	26.31	26.84
	8H	20.13	21.23	20.65	21.73	22.26	25.16	26.26	25.67	26.76	27.29
	12H	20.12	21.17	20.64	21.66	22.23	25.70	26.75	26.22	27.25	27.81
4H	2H	19.45	20.69	19.94	21.15	21.66	21.64	22.88	22.13	23.34	23.85
	3H	20.55	21.59	21.05	22.10	22.63	23.52	24.56	24.02	25.07	25.61
	4H	20.88	21.83	21.41	22.35	22.92	24.49	25.44	25.01	25.96	26.53
	6H	21.08	21.91	21.62	22.45	23.04	25.53	26.36	26.08	26.91	27.49
	8H	21.10	21.88	21.65	22.43	23.02	26.10	26.88	26.65	27.42	28.01
	12H	21.11	21.81	21.68	22.39	22.99	26.75	27.46	27.32	28.03	28.63
8H	4H	21.21	21.99	21.76	22.54	23.13	24.63	25.41	25.18	25.96	26.55
	6H	21.53	22.19	22.12	22.78	23.38	25.81	26.46	26.39	27.05	27.65
	8H	21.62	22.21	22.22	22.81	23.43	26.49	27.07	27.08	27.67	28.29
	12H	21.68	22.20	22.27	22.79	23.47	27.30	27.83	27.90	28.41	29.10
12H	4H	21.29	21.99	21.86	22.57	23.17	24.63	25.33	25.20	25.90	26.50
	6H	21.67	22.26	22.27	22.86	23.48	25.82	26.41	26.41	27.01	27.62
	8H	21.83	22.36	22.43	22.94	23.62	26.56	27.08	27.15	27.67	28.35