

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P197413

Luminaire Tested: **8WSL-LD2-70-UPL8-UNV-L830-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P197413  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28106)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U  
Description: 8FT. Linear Wavestream System, 8% Uplight, L830  
Light Source: (476) 3000K CCT, 80 CRI LEDS  
EL236N0119D830  
Ballast/Driver: OSRAM  
OT85W1202772A0DIML

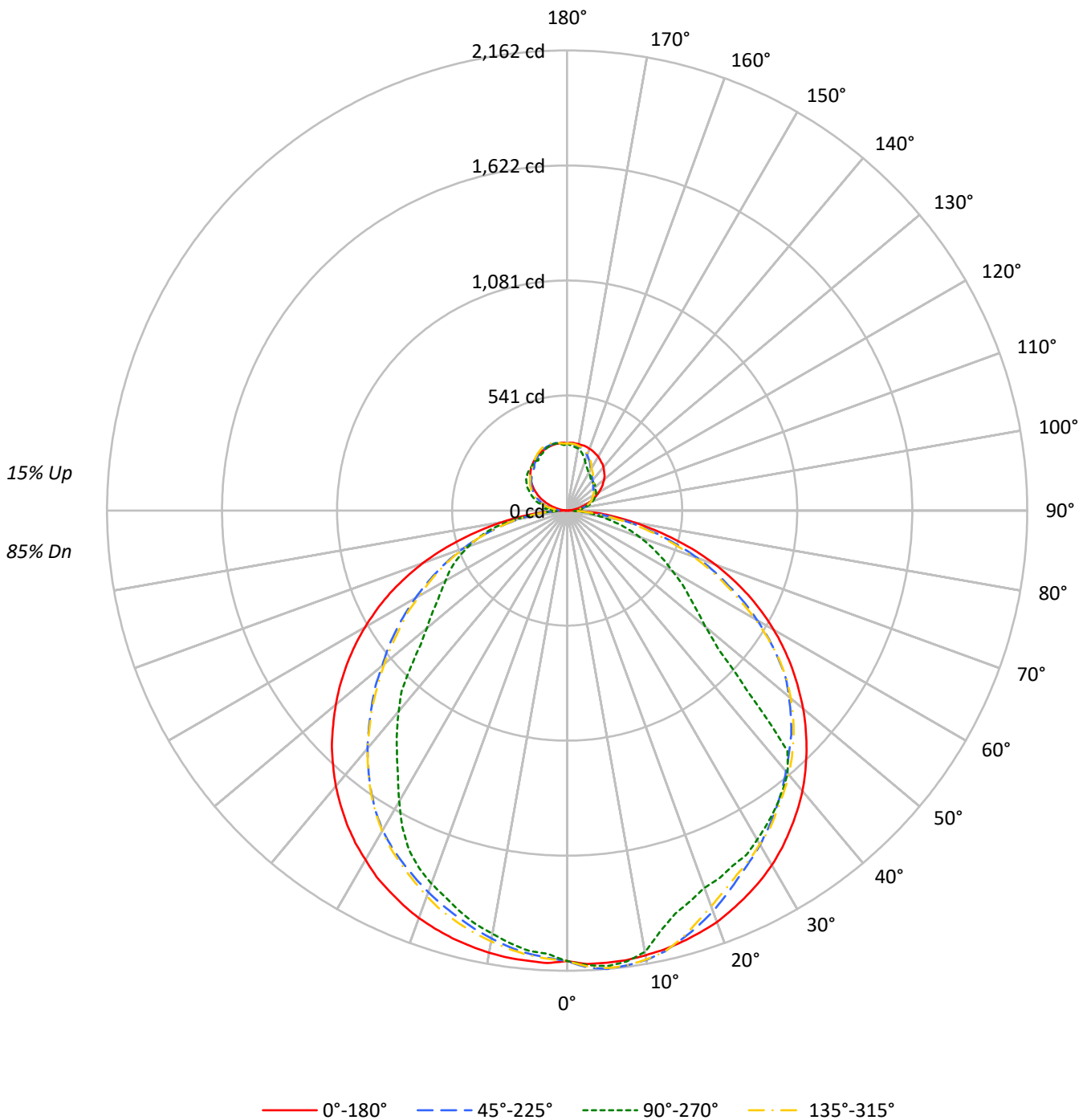
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7020.8 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36  
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 63.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

TEST NUMBER: P197413

CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P197413

CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|
| RF  | 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   | 115 | 115 | 115 | 115 | 111 | 111 | 111 | 111 | 103 | 103 | 103 | 95 | 95 | 95 | 88 | 88 | 88 | 85 |
| 1   | 105 | 101 | 96  | 92  | 101 | 97  | 93  | 90  | 90  | 87  | 84  | 83 | 81 | 79 | 78 | 76 | 74 | 71 |
| 2   | 96  | 88  | 81  | 75  | 92  | 84  | 78  | 73  | 78  | 73  | 69  | 73 | 69 | 65 | 68 | 65 | 62 | 59 |
| 3   | 87  | 77  | 69  | 62  | 83  | 74  | 67  | 61  | 69  | 63  | 58  | 64 | 59 | 55 | 60 | 56 | 52 | 50 |
| 4   | 80  | 68  | 59  | 53  | 76  | 66  | 58  | 52  | 61  | 55  | 49  | 57 | 52 | 47 | 53 | 49 | 45 | 42 |
| 5   | 73  | 61  | 52  | 45  | 70  | 59  | 51  | 44  | 55  | 48  | 43  | 51 | 45 | 41 | 48 | 43 | 39 | 37 |
| 6   | 68  | 55  | 46  | 40  | 65  | 53  | 45  | 39  | 50  | 43  | 37  | 47 | 40 | 36 | 44 | 38 | 34 | 32 |
| 7   | 63  | 49  | 41  | 35  | 60  | 48  | 40  | 34  | 45  | 38  | 33  | 42 | 36 | 32 | 40 | 35 | 31 | 28 |
| 8   | 58  | 45  | 37  | 31  | 56  | 44  | 36  | 30  | 41  | 34  | 29  | 39 | 33 | 28 | 37 | 31 | 27 | 25 |
| 9   | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 27  | 38  | 31  | 26  | 36 | 30 | 26 | 34 | 29 | 25 | 23 |
| 10  | 51  | 38  | 30  | 25  | 49  | 37  | 30  | 25  | 35  | 28  | 24  | 33 | 27 | 23 | 31 | 26 | 22 | 21 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 90°  | 180° | 270° |
|-----|------|------|------|------|
| 0°  | 5996 | 5996 | 5996 | 5996 |
| 5°  | 6064 | 6109 | 6038 | 5903 |
| 10° | 6101 | 6055 | 6069 | 5808 |
| 15° | 6147 | 5749 | 6101 | 5716 |
| 20° | 6203 | 5684 | 6142 | 5622 |
| 25° | 6240 | 5751 | 6169 | 5496 |
| 30° | 6293 | 5841 | 6197 | 5159 |
| 35° | 6324 | 5901 | 6230 | 4819 |
| 40° | 6360 | 5958 | 6251 | 4550 |
| 45° | 6373 | 4793 | 6264 | 4158 |
| 50° | 6381 | 3725 | 6252 | 3795 |
| 55° | 6368 | 3447 | 6245 | 3682 |
| 60° | 6355 | 3248 | 6214 | 3736 |
| 65° | 6288 | 3114 | 6152 | 3919 |
| 70° | 6119 | 3003 | 5969 | 4091 |
| 75° | 5729 | 2828 | 5555 | 4315 |
| 80° | 5212 | 2587 | 4990 | 4104 |
| 85° | 5083 | 2798 | 4566 | 3682 |



TEST NUMBER: P197413

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 201.2  | 2.9       |
| 10°-20°   | 571.4  | 8.1       |
| 20°-30°   | 865.0  | 12.3      |
| 30°-40°   | 1044.5 | 14.9      |
| 40°-50°   | 1066.4 | 15.2      |
| 50°-60°   | 932.3  | 13.3      |
| 60°-70°   | 722.6  | 10.3      |
| 70°-80°   | 434.4  | 6.2       |
| 80°-90°   | 134.1  | 1.9       |
| 90°-100°  | 56.6   | 0.8       |
| 100°-110° | 108.1  | 1.5       |
| 110°-120° | 146.9  | 2.1       |
| 120°-130° | 167.0  | 2.4       |
| 130°-140° | 169.4  | 2.4       |
| 140°-150° | 155.9  | 2.2       |
| 150°-160° | 128.6  | 1.8       |
| 160°-170° | 86.5   | 1.2       |
| 170°-180° | 30.1   | 0.4       |
| 0°-30°    | 1637.6 | 23.3      |
| 0°-40°    | 2682.1 | 38.2      |
| 0°-60°    | 4680.7 | 66.7      |
| 0°-90°    | 5971.9 | 85.1      |
| 90°-120°  | 311.5  | 4.4       |
| 90°-150°  | 803.7  | 11.4      |
| 90°-180°  | 1049.0 | 14.9      |
| 0°-180°   | 7020.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 90°  | 180° | 270° | 360° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 2117 | 2117 | 2117 | 2117 | 2117 |      |
| 5°   | 2132 | 2148 | 2124 | 2076 | 2132 | 203  |
| 15°  | 2096 | 1960 | 2080 | 1949 | 2096 | 593  |
| 25°  | 1997 | 1840 | 1974 | 1759 | 1997 | 921  |
| 35°  | 1829 | 1706 | 1802 | 1394 | 1829 | 1145 |
| 45°  | 1591 | 1197 | 1564 | 1038 | 1591 | 1227 |
| 55°  | 1290 | 698  | 1265 | 746  | 1290 | 1153 |
| 65°  | 938  | 465  | 918  | 585  | 938  | 926  |
| 75°  | 524  | 258  | 508  | 394  | 524  | 555  |
| 85°  | 156  | 86   | 140  | 113  | 156  | 158  |
| 90°  | 2    | 48   | 2    | 54   | 2    | 10   |
| 95°  | 14   | 66   | 14   | 104  | 14   | 17   |
| 105° | 72   | 111  | 70   | 140  | 72   | 78   |
| 115° | 140  | 143  | 138  | 190  | 140  | 139  |
| 125° | 202  | 163  | 197  | 233  | 202  | 179  |
| 135° | 247  | 179  | 245  | 258  | 247  | 191  |
| 145° | 279  | 190  | 276  | 274  | 279  | 175  |
| 155° | 301  | 222  | 299  | 290  | 301  | 139  |
| 165° | 315  | 276  | 313  | 315  | 315  | 89   |
| 175° | 320  | 304  | 320  | 313  | 320  | 30   |
| 180° | 315  | 315  | 315  | 315  | 315  |      |



TEST NUMBER: P197413

CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 |
| 2.5°   | 2132.5 | 2121.2 | 2148.4 | 2152.9 | 2137.1 | 2141.6 | 2143.9 | 2118.9 | 2128.0 | 2094.0 | 2103.1 |
| 5°     | 2132.5 | 2130.3 | 2162.0 | 2157.5 | 2148.4 | 2150.7 | 2157.5 | 2128.0 | 2123.5 | 2082.7 | 2089.5 |
| 7.5°   | 2130.3 | 2134.8 | 2155.2 | 2150.7 | 2137.1 | 2143.9 | 2155.2 | 2132.5 | 2118.9 | 2071.3 | 2069.1 |
| 10°    | 2121.2 | 2128.0 | 2143.9 | 2130.3 | 2105.3 | 2116.7 | 2141.6 | 2128.0 | 2109.9 | 2053.2 | 2041.9 |
| 12.5°  | 2112.1 | 2116.7 | 2121.2 | 2064.5 | 2023.8 | 2050.9 | 2121.2 | 2116.7 | 2096.3 | 2032.8 | 2012.4 |
| 15°    | 2096.3 | 2103.1 | 2084.9 | 2003.4 | 1960.3 | 1987.5 | 2080.4 | 2098.5 | 2080.4 | 2003.4 | 1978.4 |
| 17.5°  | 2078.1 | 2084.9 | 2046.4 | 1955.8 | 1924.0 | 1937.6 | 2028.3 | 2075.9 | 2060.0 | 1976.2 | 1944.4 |
| 20°    | 2057.7 | 2064.5 | 2003.4 | 1905.9 | 1885.5 | 1896.8 | 1978.4 | 2050.9 | 2037.4 | 1944.4 | 1908.2 |
| 22.5°  | 2028.3 | 2039.6 | 1953.5 | 1871.9 | 1869.6 | 1869.6 | 1930.8 | 2021.5 | 2007.9 | 1905.9 | 1867.4 |
| 25°    | 1996.6 | 2007.9 | 1903.6 | 1840.2 | 1840.2 | 1840.2 | 1887.8 | 1983.0 | 1973.9 | 1865.1 | 1826.6 |
| 27.5°  | 1962.6 | 1973.9 | 1858.3 | 1817.5 | 1824.3 | 1813.0 | 1851.5 | 1939.9 | 1939.9 | 1824.3 | 1783.5 |
| 30°    | 1924.0 | 1935.4 | 1813.0 | 1781.3 | 1785.8 | 1781.3 | 1810.7 | 1894.6 | 1894.6 | 1776.7 | 1733.7 |
| 32.5°  | 1878.7 | 1890.0 | 1763.1 | 1738.2 | 1747.3 | 1742.7 | 1772.2 | 1849.3 | 1851.5 | 1726.9 | 1674.8 |
| 35°    | 1828.9 | 1842.5 | 1711.0 | 1697.4 | 1706.5 | 1699.7 | 1720.1 | 1801.7 | 1801.7 | 1672.5 | 1606.8 |
| 37.5°  | 1776.7 | 1790.3 | 1656.6 | 1652.1 | 1661.2 | 1654.4 | 1670.2 | 1751.8 | 1747.3 | 1615.8 | 1534.2 |
| 40°    | 1720.1 | 1735.9 | 1600.0 | 1600.0 | 1611.3 | 1606.8 | 1620.4 | 1699.7 | 1690.6 | 1559.2 | 1459.5 |
| 42.5°  | 1656.6 | 1677.0 | 1543.3 | 1545.6 | 1532.0 | 1550.1 | 1563.7 | 1645.3 | 1627.2 | 1495.7 | 1377.9 |
| 45°    | 1590.9 | 1615.8 | 1488.9 | 1448.1 | 1196.6 | 1432.3 | 1504.8 | 1590.9 | 1563.7 | 1432.3 | 1298.6 |
| 47.5°  | 1520.6 | 1552.4 | 1425.5 | 1275.9 | 963.2  | 1255.5 | 1441.3 | 1522.9 | 1491.2 | 1364.3 | 1221.5 |
| 50°    | 1448.1 | 1484.4 | 1359.7 | 1128.6 | 845.3  | 1105.9 | 1371.1 | 1454.9 | 1418.7 | 1294.0 | 1133.1 |
| 52.5°  | 1368.8 | 1409.6 | 1296.3 | 999.4  | 766.0  | 979.0  | 1298.6 | 1389.2 | 1343.9 | 1219.2 | 1060.6 |
| 55°    | 1289.5 | 1332.5 | 1210.2 | 888.4  | 698.0  | 870.2  | 1214.7 | 1305.4 | 1264.6 | 1142.2 | 981.3  |
| 57.5°  | 1207.9 | 1251.0 | 1124.1 | 790.9  | 639.1  | 772.8  | 1119.5 | 1228.3 | 1183.0 | 1062.9 | 902.0  |
| 60°    | 1121.8 | 1164.8 | 1031.1 | 702.5  | 573.4  | 688.9  | 1022.1 | 1142.2 | 1096.9 | 981.3  | 824.9  |
| 62.5°  | 1031.1 | 1074.2 | 942.8  | 621.0  | 519.0  | 609.6  | 915.6  | 1058.3 | 1008.5 | 895.2  | 745.6  |
| 65°    | 938.2  | 970.0  | 838.5  | 543.9  | 464.6  | 534.8  | 820.4  | 954.1  | 917.8  | 804.5  | 670.8  |
| 67.5°  | 840.8  | 872.5  | 747.9  | 475.9  | 412.5  | 466.8  | 727.5  | 861.2  | 820.4  | 716.1  | 596.0  |
| 70°    | 738.8  | 766.0  | 652.7  | 410.2  | 362.6  | 403.4  | 630.0  | 756.9  | 720.7  | 623.2  | 516.7  |
| 72.5°  | 634.5  | 659.5  | 550.7  | 349.0  | 310.5  | 344.5  | 528.0  | 652.7  | 616.4  | 525.8  | 444.2  |
| 75°    | 523.5  | 548.4  | 455.5  | 287.8  | 258.4  | 283.3  | 435.1  | 541.6  | 507.6  | 432.9  | 369.4  |
| 77.5°  | 419.3  | 448.7  | 360.3  | 226.6  | 206.2  | 222.1  | 342.2  | 437.4  | 403.4  | 346.7  | 296.9  |
| 80°    | 319.5  | 344.5  | 267.4  | 172.2  | 158.6  | 170.0  | 249.3  | 333.1  | 305.9  | 267.4  | 231.2  |
| 82.5°  | 231.2  | 244.8  | 183.6  | 126.9  | 120.1  | 124.6  | 170.0  | 235.7  | 222.1  | 192.6  | 170.0  |
| 85°    | 156.4  | 154.1  | 113.3  | 88.4   | 86.1   | 88.4   | 102.0  | 142.8  | 140.5  | 129.2  | 108.8  |
| 87.5°  | 65.7   | 61.2   | 52.1   | 36.3   | 31.7   | 34.0   | 40.8   | 54.4   | 52.1   | 54.4   | 52.1   |
| 90°    | 2.3    | 22.7   | 36.3   | 45.3   | 47.6   | 45.3   | 36.3   | 22.7   | 2.3    | 24.9   | 40.8   |
| 92.5°  | 4.5    | 29.5   | 43.1   | 49.9   | 54.4   | 49.9   | 40.8   | 29.5   | 4.5    | 38.5   | 40.8   |
| 95°    | 13.6   | 40.8   | 49.9   | 61.2   | 65.7   | 61.2   | 49.9   | 38.5   | 13.6   | 34.0   | 61.2   |
| 97.5°  | 27.2   | 52.1   | 58.9   | 68.0   | 70.3   | 65.7   | 56.7   | 52.1   | 24.9   | 61.2   | 63.5   |
| 100°   | 40.8   | 65.7   | 77.1   | 77.1   | 79.3   | 77.1   | 74.8   | 63.5   | 38.5   | 68.0   | 77.1   |
| 102.5° | 56.7   | 74.8   | 88.4   | 95.2   | 95.2   | 95.2   | 88.4   | 74.8   | 52.1   | 83.9   | 106.5  |
| 105°   | 72.5   | 81.6   | 97.4   | 106.5  | 111.0  | 106.5  | 97.4   | 83.9   | 70.3   | 97.4   | 113.3  |
| 107.5° | 90.6   | 88.4   | 106.5  | 115.6  | 120.1  | 115.6  | 106.5  | 90.6   | 86.1   | 108.8  | 126.9  |
| 110°   | 108.8  | 97.4   | 115.6  | 124.6  | 126.9  | 124.6  | 115.6  | 97.4   | 104.2  | 122.4  | 140.5  |



TEST NUMBER: P197413

CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 112.5° | 124.6 | 104.2 | 124.6 | 133.7 | 136.0 | 133.7  | 124.6 | 106.5  | 120.1 | 131.4  | 154.1 |
| 115°   | 140.5 | 111.0 | 129.2 | 140.5 | 142.8 | 140.5  | 129.2 | 113.3  | 138.2 | 142.8  | 165.4 |
| 117.5° | 156.4 | 120.1 | 133.7 | 147.3 | 149.6 | 147.3  | 136.0 | 122.4  | 154.1 | 156.4  | 176.8 |
| 120°   | 172.2 | 131.4 | 140.5 | 151.8 | 156.4 | 154.1  | 140.5 | 133.7  | 167.7 | 167.7  | 185.8 |
| 122.5° | 185.8 | 140.5 | 147.3 | 156.4 | 160.9 | 156.4  | 147.3 | 145.0  | 183.6 | 179.0  | 197.2 |
| 125°   | 201.7 | 149.6 | 151.8 | 160.9 | 163.2 | 160.9  | 154.1 | 151.8  | 197.2 | 188.1  | 204.0 |
| 127.5° | 213.0 | 160.9 | 156.4 | 165.4 | 167.7 | 165.4  | 158.6 | 163.2  | 210.8 | 206.2  | 210.8 |
| 130°   | 226.6 | 172.2 | 160.9 | 170.0 | 172.2 | 172.2  | 160.9 | 176.8  | 222.1 | 219.8  | 219.8 |
| 132.5° | 238.0 | 183.6 | 165.4 | 174.5 | 176.8 | 176.8  | 167.7 | 185.8  | 233.4 | 231.2  | 226.6 |
| 135°   | 247.0 | 199.4 | 174.5 | 174.5 | 179.0 | 179.0  | 176.8 | 201.7  | 244.8 | 242.5  | 238.0 |
| 137.5° | 256.1 | 213.0 | 181.3 | 176.8 | 179.0 | 179.0  | 185.8 | 215.3  | 253.8 | 253.8  | 244.8 |
| 140°   | 265.2 | 226.6 | 185.8 | 181.3 | 181.3 | 185.8  | 192.6 | 228.9  | 262.9 | 262.9  | 247.0 |
| 142.5° | 274.2 | 238.0 | 192.6 | 188.1 | 183.6 | 192.6  | 199.4 | 242.5  | 269.7 | 271.9  | 253.8 |
| 145°   | 278.7 | 249.3 | 201.7 | 194.9 | 190.4 | 201.7  | 210.8 | 253.8  | 276.5 | 281.0  | 267.4 |
| 147.5° | 285.5 | 260.6 | 213.0 | 199.4 | 199.4 | 206.2  | 219.8 | 262.9  | 283.3 | 287.8  | 274.2 |
| 150°   | 292.3 | 269.7 | 222.1 | 206.2 | 201.7 | 213.0  | 228.9 | 271.9  | 290.1 | 294.6  | 283.3 |
| 152.5° | 296.9 | 278.7 | 235.7 | 215.3 | 210.8 | 224.4  | 244.8 | 278.7  | 294.6 | 299.1  | 292.3 |
| 155°   | 301.4 | 285.5 | 251.6 | 224.4 | 222.1 | 233.4  | 258.4 | 285.5  | 299.1 | 303.7  | 299.1 |
| 157.5° | 305.9 | 292.3 | 262.9 | 238.0 | 228.9 | 247.0  | 269.7 | 294.6  | 303.7 | 308.2  | 305.9 |
| 160°   | 308.2 | 296.9 | 276.5 | 251.6 | 247.0 | 262.9  | 281.0 | 296.9  | 305.9 | 312.7  | 310.5 |
| 162.5° | 312.7 | 301.4 | 285.5 | 267.4 | 262.9 | 276.5  | 290.1 | 303.7  | 310.5 | 315.0  | 315.0 |
| 165°   | 315.0 | 305.9 | 294.6 | 281.0 | 276.5 | 290.1  | 296.9 | 308.2  | 312.7 | 315.0  | 317.3 |
| 167.5° | 315.0 | 310.5 | 301.4 | 290.1 | 287.8 | 299.1  | 305.9 | 312.7  | 315.0 | 315.0  | 319.5 |
| 170°   | 317.3 | 312.7 | 305.9 | 299.1 | 296.9 | 305.9  | 308.2 | 315.0  | 317.3 | 315.0  | 321.8 |
| 172.5° | 317.3 | 315.0 | 310.5 | 303.7 | 299.1 | 310.5  | 312.7 | 315.0  | 317.3 | 315.0  | 319.5 |
| 175°   | 319.5 | 315.0 | 315.0 | 310.5 | 303.7 | 315.0  | 315.0 | 315.0  | 319.5 | 315.0  | 317.3 |
| 177.5° | 319.5 | 315.0 | 315.0 | 312.7 | 308.2 | 315.0  | 315.0 | 315.0  | 319.5 | 315.0  | 317.3 |
| 180°   | 315.0 | 315.0 | 315.0 | 315.0 | 315.0 | 315.0  | 315.0 | 315.0  | 315.0 | 315.0  | 315.0 |



TEST NUMBER: P197413

CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 | 2116.7 |
| 2.5°   | 2100.8 | 2084.9 | 2089.5 | 2107.6 | 2100.8 | 2132.5 |
| 5°     | 2084.9 | 2075.9 | 2075.9 | 2096.3 | 2094.0 | 2132.5 |
| 7.5°   | 2060.0 | 2050.9 | 2055.5 | 2078.1 | 2082.7 | 2130.3 |
| 10°    | 2030.6 | 2019.2 | 2023.8 | 2055.5 | 2066.8 | 2121.2 |
| 12.5°  | 1998.8 | 1989.8 | 1994.3 | 2030.6 | 2046.4 | 2112.1 |
| 15°    | 1962.6 | 1949.0 | 1962.6 | 2001.1 | 2021.5 | 2096.3 |
| 17.5°  | 1921.8 | 1903.6 | 1919.5 | 1969.4 | 1994.3 | 2078.1 |
| 20°    | 1881.0 | 1865.1 | 1874.2 | 1928.6 | 1964.8 | 2057.7 |
| 22.5°  | 1840.2 | 1817.5 | 1826.6 | 1883.2 | 1928.6 | 2028.3 |
| 25°    | 1792.6 | 1758.6 | 1776.7 | 1837.9 | 1890.0 | 1996.6 |
| 27.5°  | 1729.1 | 1677.0 | 1715.5 | 1792.6 | 1844.7 | 1962.6 |
| 30°    | 1645.3 | 1577.3 | 1634.0 | 1738.2 | 1797.1 | 1924.0 |
| 32.5°  | 1552.4 | 1479.9 | 1543.3 | 1677.0 | 1747.3 | 1878.7 |
| 35°    | 1459.5 | 1393.7 | 1450.4 | 1609.0 | 1695.1 | 1828.9 |
| 37.5°  | 1371.1 | 1314.4 | 1366.5 | 1536.5 | 1640.8 | 1776.7 |
| 40°    | 1287.2 | 1230.6 | 1285.0 | 1457.2 | 1581.8 | 1720.1 |
| 42.5°  | 1203.4 | 1151.3 | 1203.4 | 1373.3 | 1520.6 | 1656.6 |
| 45°    | 1119.5 | 1037.9 | 1115.0 | 1291.8 | 1454.9 | 1590.9 |
| 47.5°  | 1028.9 | 933.7  | 1022.1 | 1203.4 | 1384.7 | 1520.6 |
| 50°    | 942.8  | 861.2  | 938.2  | 1121.8 | 1312.2 | 1448.1 |
| 52.5°  | 868.0  | 802.2  | 863.4  | 1037.9 | 1237.4 | 1368.8 |
| 55°    | 797.7  | 745.6  | 797.7  | 956.4  | 1158.0 | 1289.5 |
| 57.5°  | 734.3  | 700.3  | 736.5  | 886.1  | 1076.5 | 1207.9 |
| 60°    | 679.9  | 659.5  | 682.1  | 800.0  | 994.9  | 1121.8 |
| 62.5°  | 627.7  | 625.5  | 630.0  | 732.0  | 908.8  | 1031.1 |
| 65°    | 573.4  | 584.7  | 573.4  | 659.5  | 822.6  | 938.2  |
| 67.5°  | 519.0  | 541.6  | 523.5  | 587.0  | 729.7  | 840.8  |
| 70°    | 469.1  | 494.0  | 469.1  | 512.2  | 636.8  | 738.8  |
| 72.5°  | 412.5  | 444.2  | 412.5  | 441.9  | 539.4  | 634.5  |
| 75°    | 358.1  | 394.3  | 360.3  | 369.4  | 446.4  | 523.5  |
| 77.5°  | 299.1  | 333.1  | 305.9  | 299.1  | 360.3  | 419.3  |
| 80°    | 238.0  | 251.6  | 238.0  | 235.7  | 278.7  | 319.5  |
| 82.5°  | 165.4  | 176.8  | 165.4  | 172.2  | 204.0  | 231.2  |
| 85°    | 108.8  | 113.3  | 108.8  | 111.0  | 136.0  | 156.4  |
| 87.5°  | 45.3   | 45.3   | 45.3   | 56.7   | 61.2   | 65.7   |
| 90°    | 49.9   | 54.4   | 49.9   | 40.8   | 24.9   | 2.3    |
| 92.5°  | 52.1   | 56.7   | 52.1   | 45.3   | 29.5   | 4.5    |
| 95°    | 92.9   | 104.2  | 88.4   | 56.7   | 47.6   | 13.6   |
| 97.5°  | 74.8   | 81.6   | 77.1   | 65.7   | 58.9   | 27.2   |
| 100°   | 88.4   | 95.2   | 88.4   | 92.9   | 72.5   | 40.8   |
| 102.5° | 104.2  | 108.8  | 106.5  | 108.8  | 88.4   | 56.7   |
| 105°   | 136.0  | 140.5  | 136.0  | 117.8  | 102.0  | 72.5   |
| 107.5° | 145.0  | 156.4  | 147.3  | 131.4  | 115.6  | 90.6   |
| 110°   | 156.4  | 165.4  | 158.6  | 145.0  | 126.9  | 108.8  |





TEST NUMBER: P197413

CATALOG NUMBER: 8WSL-LD2-70-UPL8-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|--------|--------|-------|--------|-------|--------|-------|
| 112.5° | 167.7  | 179.0 | 172.2  | 160.9 | 136.0  | 124.6 |
| 115°   | 181.3  | 190.4 | 185.8  | 172.2 | 149.6  | 140.5 |
| 117.5° | 194.9  | 201.7 | 197.2  | 181.3 | 163.2  | 156.4 |
| 120°   | 206.2  | 215.3 | 210.8  | 192.6 | 174.5  | 172.2 |
| 122.5° | 215.3  | 224.4 | 219.8  | 204.0 | 185.8  | 185.8 |
| 125°   | 224.4  | 233.4 | 228.9  | 213.0 | 194.9  | 201.7 |
| 127.5° | 231.2  | 242.5 | 238.0  | 219.8 | 215.3  | 213.0 |
| 130°   | 240.2  | 247.0 | 244.8  | 226.6 | 226.6  | 226.6 |
| 132.5° | 244.8  | 253.8 | 249.3  | 235.7 | 240.2  | 238.0 |
| 135°   | 247.0  | 258.4 | 253.8  | 247.0 | 251.6  | 247.0 |
| 137.5° | 251.6  | 260.6 | 258.4  | 253.8 | 262.9  | 256.1 |
| 140°   | 258.4  | 262.9 | 265.2  | 258.4 | 271.9  | 265.2 |
| 142.5° | 265.2  | 267.4 | 271.9  | 265.2 | 281.0  | 274.2 |
| 145°   | 269.7  | 274.2 | 278.7  | 278.7 | 287.8  | 278.7 |
| 147.5° | 269.7  | 276.5 | 276.5  | 283.3 | 296.9  | 285.5 |
| 150°   | 276.5  | 271.9 | 285.5  | 292.3 | 301.4  | 292.3 |
| 152.5° | 285.5  | 283.3 | 294.6  | 301.4 | 305.9  | 296.9 |
| 155°   | 287.8  | 290.1 | 296.9  | 308.2 | 310.5  | 301.4 |
| 157.5° | 296.9  | 294.6 | 305.9  | 315.0 | 315.0  | 305.9 |
| 160°   | 303.7  | 303.7 | 315.0  | 319.5 | 317.3  | 308.2 |
| 162.5° | 310.5  | 310.5 | 321.8  | 321.8 | 319.5  | 312.7 |
| 165°   | 315.0  | 315.0 | 326.3  | 324.1 | 319.5  | 315.0 |
| 167.5° | 317.3  | 319.5 | 328.6  | 326.3 | 319.5  | 315.0 |
| 170°   | 319.5  | 319.5 | 328.6  | 324.1 | 319.5  | 317.3 |
| 172.5° | 319.5  | 317.3 | 326.3  | 321.8 | 317.3  | 317.3 |
| 175°   | 317.3  | 312.7 | 321.8  | 317.3 | 317.3  | 319.5 |
| 177.5° | 315.0  | 308.2 | 315.0  | 315.0 | 317.3  | 319.5 |
| 180°   | 315.0  | 315.0 | 315.0  | 315.0 | 315.0  | 315.0 |

(END OF REPORT)