

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: INVUE

Report Number: P401577

Luminaire Tested: **ENV-SA1D-830-U-SL3-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401577  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1D-830-U-SL3-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3759 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 43.1  
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

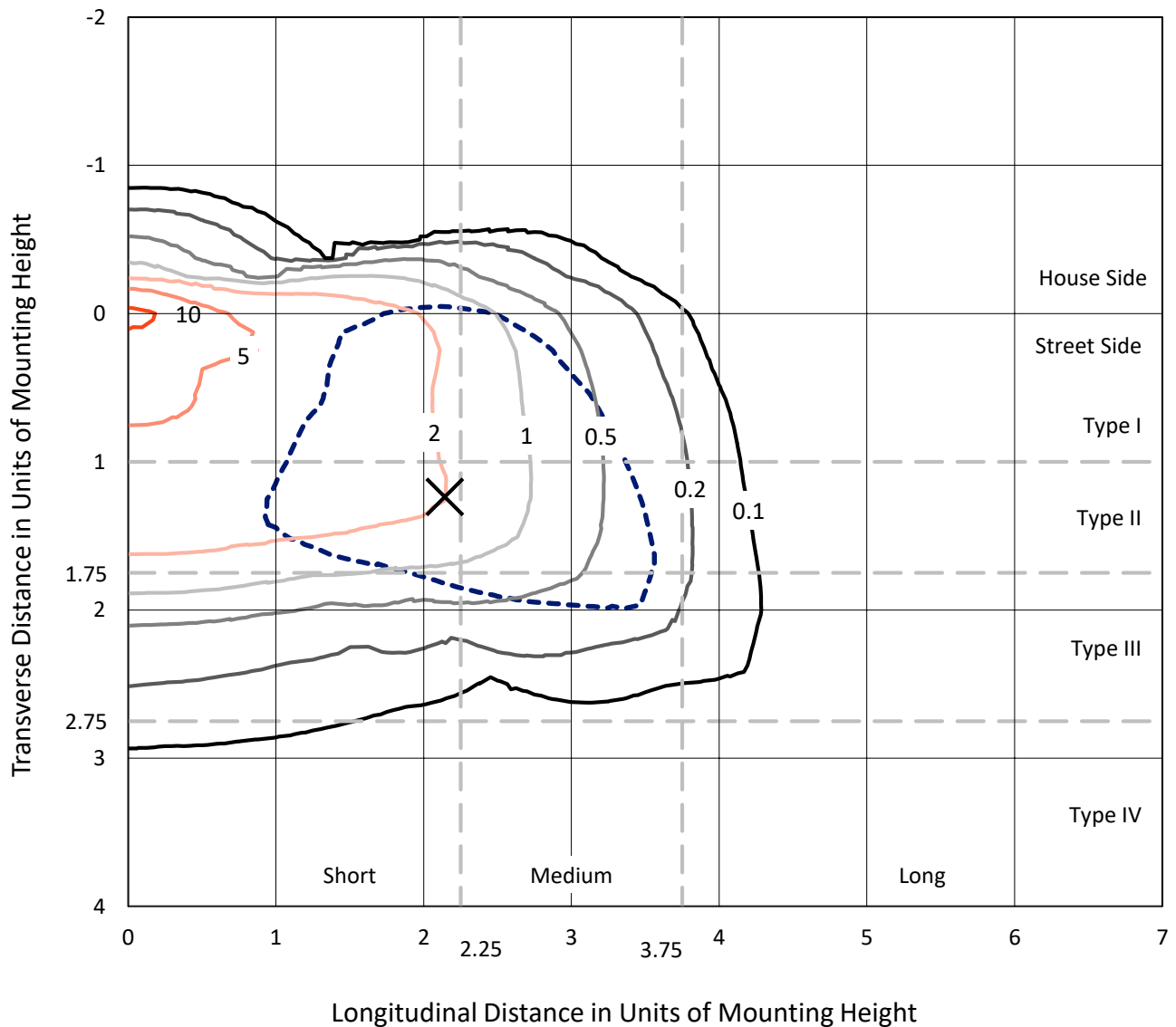


REPORT NUMBER: P401577

CATALOG NUMBER: ENV-SA1D-830-U-SL3-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

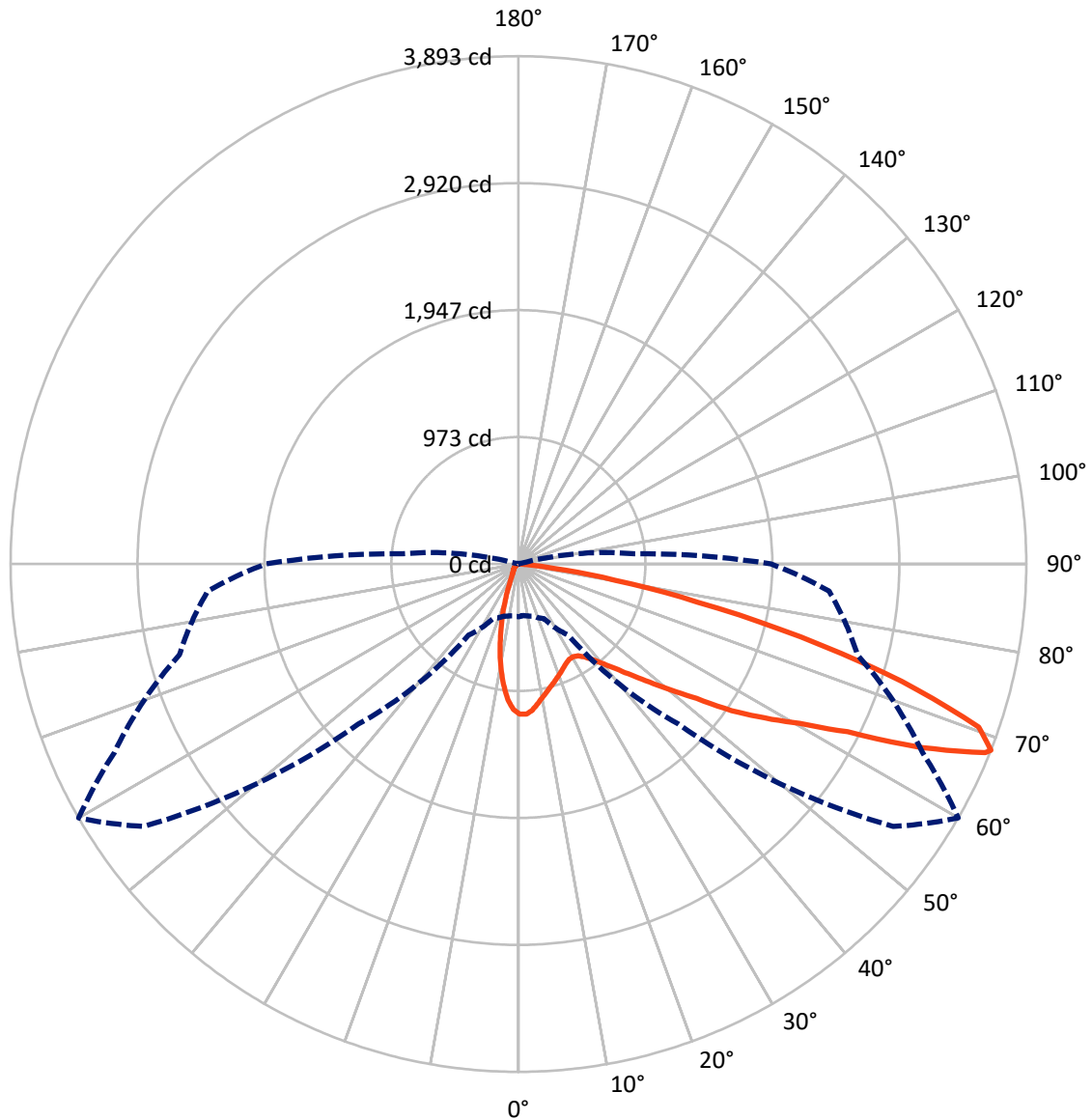


Based on 10 foot mounting height. Maximum calculated value = 11.5 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P401577

CATALOG NUMBER: ENV-SA1D-830-U-SL3-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P401577

CATALOG NUMBER: ENV-SA1D-830-U-SL3-HSS

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 420.3    | 0.0    | 420.3  |
|                    | % Fixture | 11.2     | 0.0    | 11.2   |
| <b>Street Side</b> | Lumens    | 3338.7   | 0.0    | 3338.7 |
|                    | % Fixture | 88.8     | 0.0    | 88.8   |
| <b>Total</b>       | Lumens    | 3759.0   | 0.0    | 3759.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 93.4   | 2.5       |
| 10°-20°   | 190.4  | 5.1       |
| 20°-30°   | 250.7  | 6.7       |
| 30°-40°   | 346.0  | 9.2       |
| 40°-50°   | 524.5  | 14.0      |
| 50°-60°   | 846.4  | 22.5      |
| 60°-70°   | 1005.4 | 26.7      |
| 70°-80°   | 473.9  | 12.6      |
| 80°-90°   | 28.3   | 0.8       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 3759.0 | 100.0     |
| 0°-180°   | 3759.0 | 100.0     |



REPORT NUMBER: P401577

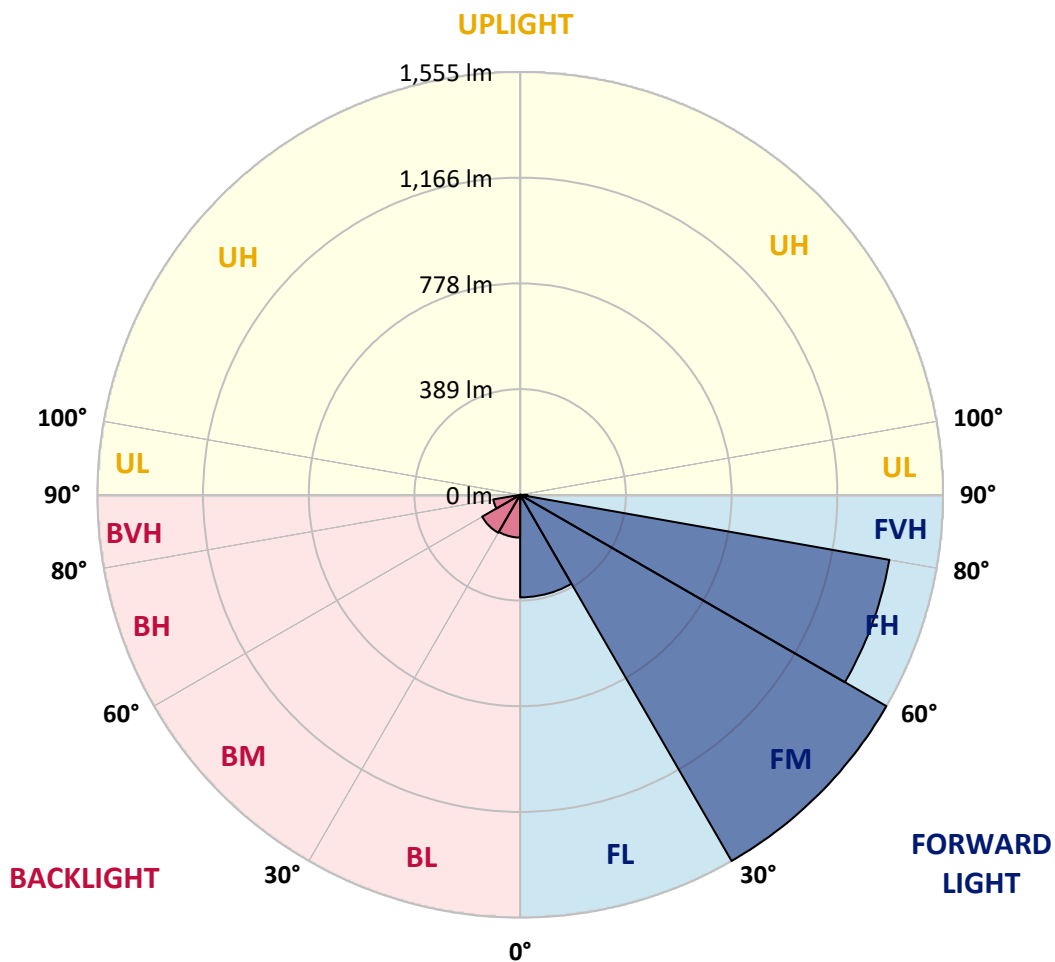
CATALOG NUMBER: ENV-SA1D-830-U-SL3-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 377.3  | 10.0      |                         |      |         |
| FM   | (30°-60°)   | 1555.3 | 41.4      |                         |      |         |
| FH   | (60°-80°)   | 1379.1 | 36.7      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 27.1   | 0.7       |                         |      | G1/100  |
| BL   | (0°-30°)    | 157.3  | 4.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 161.6  | 4.3       | B0/220                  |      |         |
| BH   | (60°-80°)   | 100.3  | 2.7       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 1.2    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type III Short





REPORT NUMBER: P401577

CATALOG NUMBER: ENV-SA1D-830-U-SL3-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 60°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 |
| 2.5°  | 1140.4 | 1137.8 | 1144.8 | 1146.8 | 1148.7 | 1152.5 | 1151.9 | 1152.5 | 1153.1 | 1151.9 | 1144.2 |
| 5°    | 1062.6 | 1067.0 | 1073.4 | 1081.7 | 1090.0 | 1109.1 | 1116.8 | 1124.4 | 1129.5 | 1133.4 | 1126.4 |
| 7.5°  | 986.0  | 995.0  | 1000.1 | 1015.4 | 1028.1 | 1047.9 | 1064.5 | 1077.9 | 1090.6 | 1104.7 | 1097.7 |
| 10°   | 924.8  | 928.0  | 932.5  | 946.5  | 965.6  | 995.6  | 1017.3 | 1033.9 | 1049.2 | 1072.8 | 1067.0 |
| 12.5° | 864.9  | 866.8  | 875.7  | 891.0  | 910.8  | 947.8  | 976.5  | 995.6  | 1012.8 | 1042.2 | 1042.8 |
| 15°   | 820.8  | 821.5  | 827.2  | 841.3  | 864.2  | 903.8  | 940.8  | 961.8  | 986.0  | 1021.8 | 1023.7 |
| 17.5° | 792.1  | 791.5  | 792.8  | 801.7  | 823.4  | 861.0  | 905.7  | 930.5  | 959.2  | 1005.2 | 1007.1 |
| 20°   | 783.2  | 781.9  | 779.4  | 777.5  | 790.9  | 823.4  | 873.8  | 901.2  | 935.0  | 993.1  | 993.7  |
| 22.5° | 790.9  | 788.3  | 782.6  | 771.7  | 775.6  | 796.6  | 838.7  | 871.9  | 913.3  | 986.7  | 982.2  |
| 25°   | 809.4  | 809.4  | 801.7  | 784.5  | 775.6  | 780.0  | 813.8  | 845.7  | 891.6  | 983.5  | 973.9  |
| 27.5° | 840.0  | 838.7  | 828.5  | 810.6  | 794.1  | 781.9  | 798.5  | 828.5  | 875.7  | 987.3  | 970.1  |
| 30°   | 877.0  | 873.1  | 862.3  | 849.5  | 829.1  | 803.0  | 801.7  | 824.0  | 868.0  | 999.4  | 972.6  |
| 32.5° | 912.1  | 912.1  | 907.6  | 895.5  | 875.7  | 841.3  | 821.5  | 839.3  | 877.6  | 1019.2 | 980.9  |
| 35°   | 955.4  | 954.8  | 956.1  | 951.6  | 934.4  | 898.0  | 866.1  | 875.1  | 906.9  | 1052.4 | 1000.7 |
| 37.5° | 989.9  | 990.5  | 1001.3 | 1009.0 | 1001.3 | 963.1  | 929.9  | 929.9  | 956.7  | 1102.1 | 1034.5 |
| 40°   | 1023.7 | 1024.9 | 1045.4 | 1067.7 | 1069.6 | 1039.0 | 1007.1 | 1006.4 | 1021.8 | 1163.3 | 1086.8 |
| 42.5° | 1054.3 | 1059.4 | 1088.7 | 1127.0 | 1149.3 | 1128.9 | 1105.3 | 1097.7 | 1105.3 | 1255.8 | 1171.6 |
| 45°   | 1086.8 | 1097.0 | 1137.8 | 1193.3 | 1229.7 | 1230.3 | 1221.4 | 1212.5 | 1216.3 | 1359.8 | 1285.2 |
| 47.5° | 1128.9 | 1140.4 | 1191.4 | 1259.7 | 1328.5 | 1346.4 | 1354.7 | 1351.5 | 1341.3 | 1491.2 | 1431.9 |
| 50°   | 1197.1 | 1208.0 | 1255.8 | 1332.4 | 1426.8 | 1491.2 | 1513.5 | 1517.3 | 1503.9 | 1636.6 | 1598.3 |
| 52.5° | 1313.2 | 1319.6 | 1364.3 | 1424.8 | 1530.7 | 1651.3 | 1709.9 | 1710.6 | 1680.6 | 1806.9 | 1778.2 |
| 55°   | 1437.6 | 1454.2 | 1506.5 | 1576.6 | 1685.7 | 1820.9 | 1967.6 | 1983.6 | 1891.1 | 1956.1 | 1909.6 |
| 57.5° | 1439.5 | 1455.5 | 1542.2 | 1676.8 | 1905.1 | 2084.3 | 2215.1 | 2226.6 | 2123.9 | 2076.0 | 2033.3 |
| 60°   | 1287.7 | 1296.0 | 1416.5 | 1613.6 | 1983.6 | 2439.6 | 2497.0 | 2479.8 | 2287.1 | 2199.8 | 2188.3 |
| 62.5° | 908.9  | 912.7  | 1055.6 | 1315.1 | 1810.1 | 2609.2 | 2926.2 | 2833.7 | 2519.3 | 2382.2 | 2420.4 |
| 65°   | 572.1  | 570.2  | 629.5  | 836.8  | 1346.4 | 2442.1 | 3456.9 | 3389.3 | 2946.0 | 2610.5 | 2601.6 |
| 67.5° | 422.2  | 412.0  | 428.0  | 492.4  | 769.2  | 1917.2 | 3554.4 | 3859.3 | 3352.3 | 2705.5 | 2444.7 |
| 68°   | 405.0  | 396.1  | 412.7  | 462.4  | 665.2  | 1735.4 | 3507.3 | 3893.1 | 3416.7 | 2690.2 | 2391.1 |
| 70°   | 343.8  | 335.5  | 349.5  | 387.1  | 463.0  | 1126.4 | 3094.6 | 3743.2 | 3475.4 | 2560.1 | 2107.3 |
| 72.5° | 244.3  | 248.7  | 285.7  | 332.3  | 392.2  | 577.8  | 2278.9 | 3074.2 | 2989.4 | 2276.9 | 1603.4 |
| 75°   | 144.8  | 153.1  | 201.5  | 267.9  | 360.4  | 381.4  | 1470.1 | 2234.8 | 2193.4 | 1576.6 | 868.7  |
| 77.5° | 51.0   | 54.2   | 100.1  | 178.6  | 297.2  | 302.3  | 818.9  | 1405.1 | 1306.8 | 644.2  | 256.4  |
| 80°   | 18.5   | 18.5   | 37.0   | 99.5   | 192.0  | 230.9  | 435.0  | 750.1  | 516.0  | 167.1  | 70.8   |
| 82.5° | 3.2    | 3.2    | 8.3    | 33.8   | 84.8   | 123.1  | 202.2  | 266.6  | 153.1  | 37.0   | 35.1   |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 1.3    | 1.3    | 59.3   | 60.0   | 28.1   | 5.1    | 15.3   |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.6    | 1.3    | 1.3    | 1.3    | 1.3    | 1.9    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P401577

CATALOG NUMBER: ENV-SA1D-830-U-SL3-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 | 1150.6 |
| 2.5°  | 1141.0 | 1139.7 | 1132.7 | 1120.0 | 1109.1 | 1091.3 | 1088.1 | 1070.9 | 1064.5 | 1059.4 | 1064.5 |
| 5°    | 1121.2 | 1114.2 | 1090.6 | 1061.9 | 1023.0 | 977.1  | 950.3  | 913.3  | 905.7  | 885.3  | 897.4  |
| 7.5°  | 1088.7 | 1072.8 | 1028.8 | 966.9  | 895.5  | 825.3  | 771.7  | 720.1  | 676.1  | 660.8  | 656.3  |
| 10°   | 1054.3 | 1032.0 | 958.0  | 862.3  | 759.0  | 651.2  | 571.5  | 496.8  | 455.4  | 416.5  | 415.2  |
| 12.5° | 1021.8 | 987.9  | 880.8  | 747.5  | 603.4  | 475.2  | 371.8  | 293.4  | 244.3  | 217.5  | 224.5  |
| 15°   | 995.6  | 950.3  | 803.0  | 632.7  | 450.3  | 306.1  | 210.5  | 160.1  | 142.9  | 134.6  | 135.9  |
| 17.5° | 970.1  | 910.1  | 727.7  | 512.8  | 320.8  | 188.8  | 136.5  | 119.3  | 114.2  | 112.3  | 111.0  |
| 20°   | 947.1  | 871.2  | 648.6  | 404.4  | 211.7  | 130.7  | 112.3  | 106.5  | 104.6  | 103.3  | 103.3  |
| 22.5° | 924.2  | 830.4  | 569.6  | 299.8  | 144.8  | 107.2  | 100.8  | 98.2   | 96.9   | 95.0   | 95.0   |
| 25°   | 903.1  | 790.9  | 490.5  | 209.8  | 111.0  | 95.7   | 91.2   | 88.7   | 86.1   | 84.2   | 84.2   |
| 27.5° | 887.2  | 760.9  | 417.1  | 148.6  | 93.1   | 86.1   | 81.6   | 77.2   | 74.0   | 71.4   | 71.4   |
| 30°   | 877.0  | 731.6  | 346.3  | 112.3  | 82.9   | 76.5   | 70.8   | 65.1   | 60.0   | 56.8   | 56.1   |
| 32.5° | 871.2  | 707.3  | 280.6  | 91.8   | 74.0   | 67.0   | 60.0   | 53.6   | 47.8   | 44.0   | 44.0   |
| 35°   | 873.8  | 688.2  | 214.9  | 77.8   | 67.0   | 58.7   | 51.0   | 43.4   | 38.3   | 35.1   | 34.4   |
| 37.5° | 890.4  | 677.3  | 160.1  | 68.9   | 60.0   | 51.0   | 43.4   | 35.7   | 30.6   | 28.1   | 27.4   |
| 40°   | 921.6  | 679.9  | 121.8  | 62.5   | 54.9   | 44.6   | 35.7   | 29.3   | 24.9   | 22.3   | 22.3   |
| 42.5° | 984.8  | 698.4  | 96.3   | 57.4   | 49.1   | 38.3   | 30.0   | 24.2   | 20.4   | 18.5   | 17.9   |
| 45°   | 1068.3 | 733.5  | 79.1   | 52.9   | 43.4   | 32.5   | 25.5   | 20.4   | 16.6   | 14.7   | 14.7   |
| 47.5° | 1194.6 | 789.6  | 68.2   | 48.5   | 37.6   | 27.4   | 21.0   | 16.6   | 12.8   | 11.5   | 10.8   |
| 50°   | 1340.7 | 868.0  | 60.0   | 43.4   | 33.2   | 23.0   | 17.9   | 12.8   | 10.2   | 8.3    | 8.3    |
| 52.5° | 1489.9 | 955.4  | 54.2   | 38.9   | 28.7   | 19.8   | 14.0   | 9.6    | 7.0    | 5.7    | 5.7    |
| 55°   | 1627.0 | 1028.8 | 48.5   | 35.1   | 24.2   | 16.6   | 11.5   | 7.7    | 5.1    | 3.8    | 3.8    |
| 57.5° | 1759.7 | 1095.7 | 42.1   | 30.6   | 19.8   | 13.4   | 8.9    | 5.7    | 3.8    | 2.6    | 2.6    |
| 60°   | 1926.2 | 1182.5 | 36.4   | 26.1   | 15.9   | 10.8   | 7.0    | 4.5    | 2.6    | 1.9    | 1.3    |
| 62.5° | 2127.1 | 1245.6 | 30.6   | 21.0   | 12.8   | 8.3    | 5.1    | 3.2    | 1.9    | 0.6    | 0.6    |
| 65°   | 2201.0 | 1162.1 | 25.5   | 17.2   | 10.2   | 6.4    | 3.8    | 2.6    | 1.3    | 0.6    | 0.6    |
| 67.5° | 1994.4 | 936.3  | 20.4   | 13.4   | 7.7    | 4.5    | 3.2    | 1.9    | 1.3    | 0.6    | 0.6    |
| 68°   | 1937.0 | 890.4  | 19.8   | 12.8   | 7.0    | 4.5    | 2.6    | 1.9    | 0.6    | 0.6    | 0.0    |
| 70°   | 1635.3 | 715.0  | 15.9   | 9.6    | 5.7    | 3.8    | 2.6    | 1.3    | 0.6    | 0.6    | 0.0    |
| 72.5° | 1212.5 | 493.0  | 11.5   | 6.4    | 3.8    | 2.6    | 1.9    | 1.3    | 0.6    | 0.6    | 0.0    |
| 75°   | 639.7  | 192.0  | 8.9    | 5.1    | 3.2    | 2.6    | 1.9    | 1.9    | 1.3    | 0.6    | 0.6    |
| 77.5° | 183.7  | 60.6   | 7.0    | 3.8    | 3.2    | 3.2    | 3.2    | 2.6    | 2.6    | 1.9    | 1.3    |
| 80°   | 53.6   | 19.8   | 4.5    | 2.6    | 3.2    | 3.2    | 3.8    | 3.2    | 3.2    | 2.6    | 2.6    |
| 82.5° | 28.7   | 7.7    | 2.6    | 1.9    | 1.9    | 2.6    | 3.2    | 2.6    | 1.9    | 1.3    | 0.6    |
| 85°   | 12.1   | 2.6    | 1.9    | 1.3    | 1.3    | 1.3    | 1.3    | 1.3    | 1.3    | 0.6    | 0.6    |
| 87.5° | 0.6    | 1.3    | 1.3    | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)