

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: P401752

Luminaire Tested: **ENT-SA1E-827-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401752
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1E-827-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4951 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

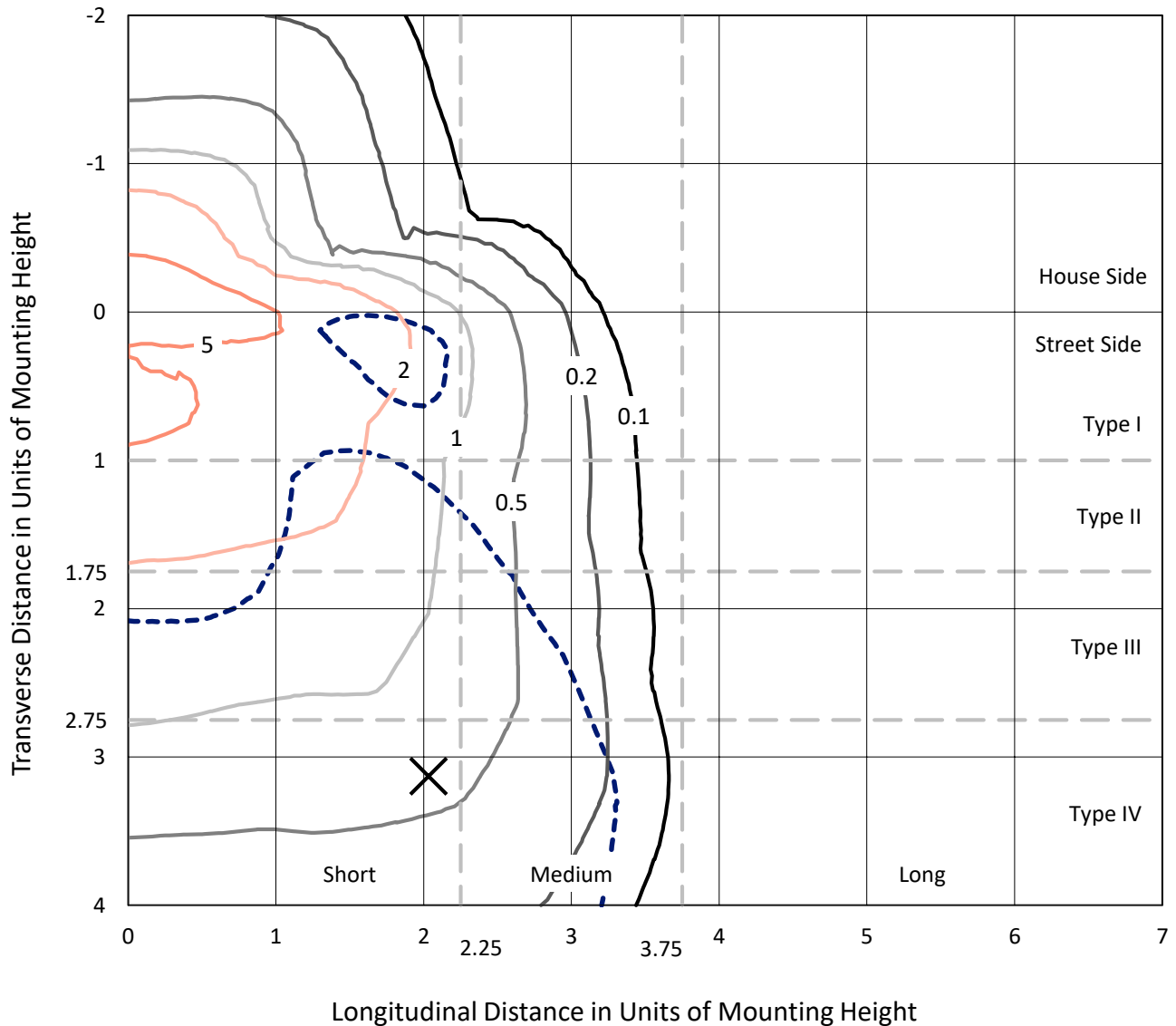
Input Watts (W): 57.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

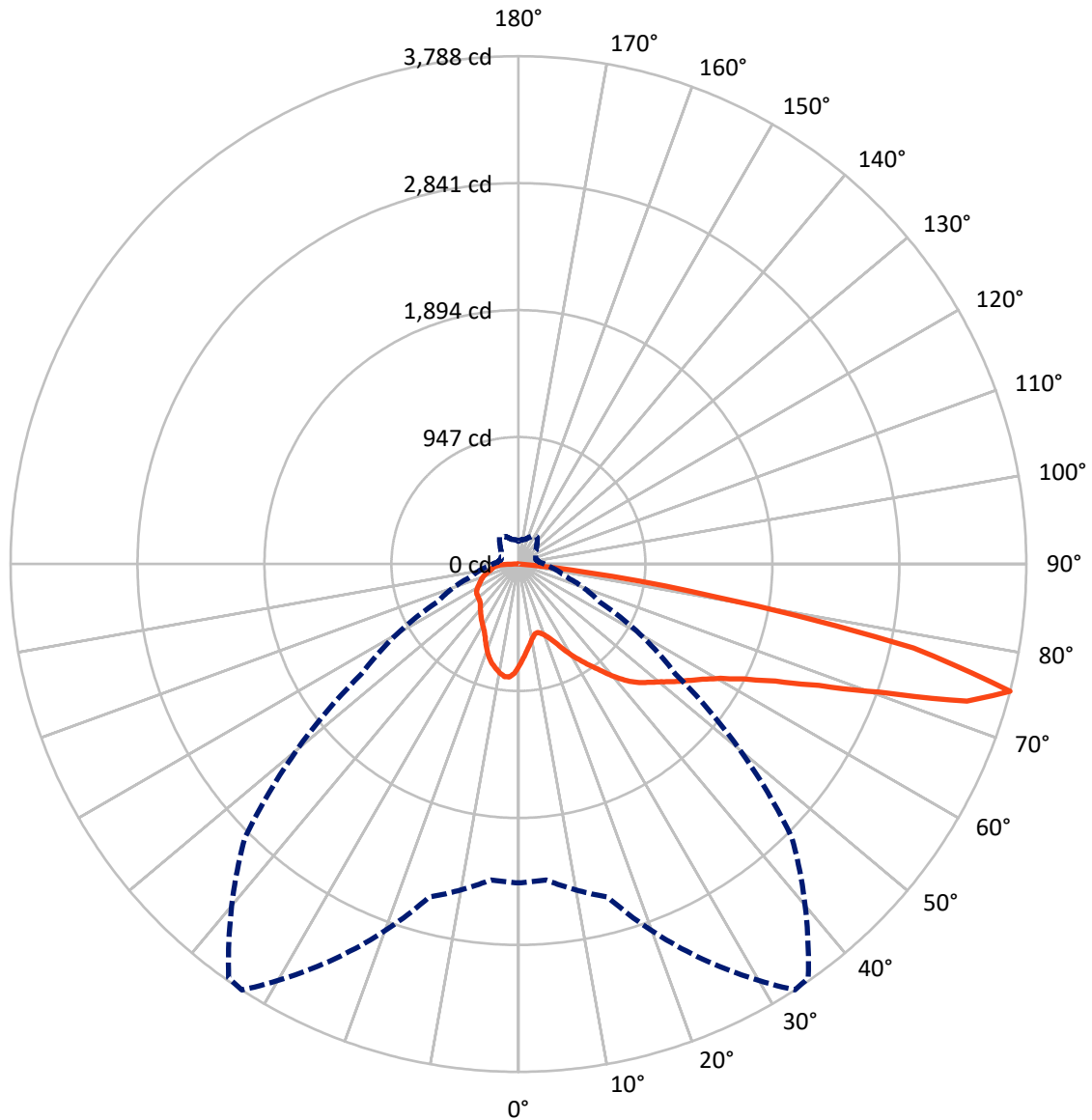


Based on 10 foot mounting height. Maximum calculated value = 8.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1202.7 | 0.0 | 1202.7 |
| | % Fixture | 24.3 | 0.0 | 24.3 |
| Street Side | Lumens | 3748.3 | 0.0 | 3748.3 |
| | % Fixture | 75.7 | 0.0 | 75.7 |
| Total | Lumens | 4951.0 | 0.0 | 4951.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 70.9 | 1.4 |
| 10°-20° | 199.3 | 4.0 |
| 20°-30° | 331.4 | 6.7 |
| 30°-40° | 494.5 | 10.0 |
| 40°-50° | 690.7 | 14.0 |
| 50°-60° | 922.0 | 18.6 |
| 60°-70° | 1143.2 | 23.1 |
| 70°-80° | 988.4 | 20.0 |
| 80°-90° | 110.5 | 2.2 |
| 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° | 4951.0 | 100.0 |
| 0°-180° | 4951.0 | 100.0 |



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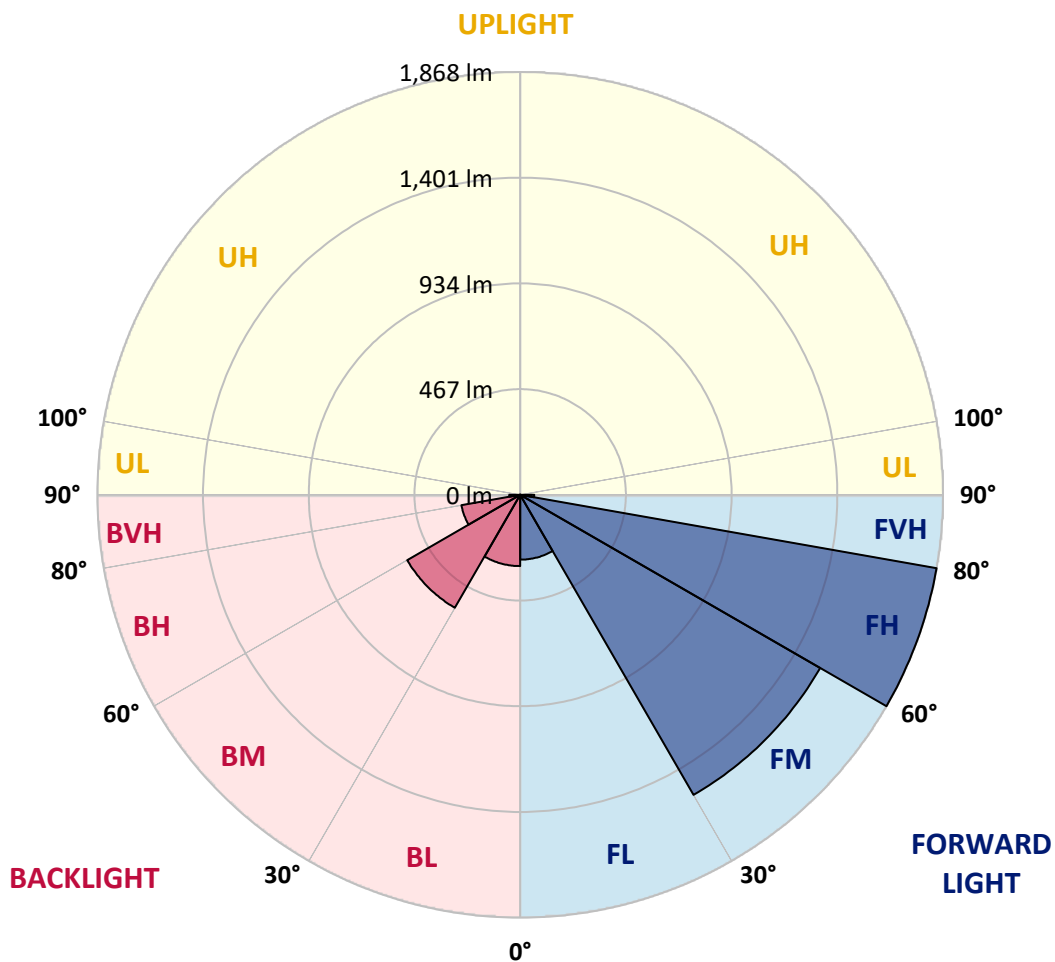
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 286.7 | 5.8 | | | |
| FM | (30°-60°) | 1530.9 | 30.9 | | | |
| FH | (60°-80°) | 1868.3 | 37.7 | | | G2/5000 |
| FVH | (80°-90°) | 62.4 | 1.3 | | | G1/100 |
| BL | (0°-30°) | 315.0 | 6.4 | B1/500 | | |
| BM | (30°-60°) | 576.3 | 11.6 | B1/1000 | | |
| BH | (60°-80°) | 263.4 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 48.1 | 1.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 |
| 2.5° | 688.1 | 689.5 | 694.0 | 699.1 | 702.0 | 702.0 | 710.1 | 719.7 | 731.4 | 741.7 | 752.8 |
| 5° | 630.7 | 632.9 | 636.6 | 643.2 | 651.3 | 652.8 | 669.0 | 685.9 | 707.2 | 730.0 | 752.0 |
| 7.5° | 574.1 | 578.5 | 585.9 | 594.7 | 607.2 | 610.1 | 632.9 | 655.7 | 685.1 | 719.7 | 755.7 |
| 10° | 530.8 | 533.7 | 537.4 | 549.9 | 565.3 | 570.5 | 600.6 | 629.3 | 669.7 | 712.3 | 760.1 |
| 12.5° | 519.0 | 519.0 | 519.0 | 524.9 | 537.4 | 541.8 | 573.4 | 610.1 | 655.7 | 707.2 | 766.7 |
| 15° | 535.9 | 535.2 | 527.1 | 522.7 | 530.0 | 533.7 | 560.9 | 596.9 | 648.4 | 708.7 | 779.2 |
| 17.5° | 574.1 | 571.9 | 552.8 | 538.1 | 543.3 | 545.5 | 563.1 | 594.0 | 646.2 | 714.5 | 797.6 |
| 20° | 624.1 | 619.0 | 589.6 | 567.5 | 566.8 | 568.2 | 581.5 | 602.8 | 649.8 | 724.8 | 817.5 |
| 22.5° | 690.3 | 687.3 | 644.0 | 610.1 | 604.3 | 604.3 | 610.1 | 623.4 | 659.4 | 736.6 | 844.7 |
| 25° | 775.5 | 767.5 | 715.3 | 669.7 | 656.5 | 652.8 | 652.0 | 652.0 | 676.3 | 754.2 | 878.5 |
| 27.5° | 863.0 | 853.5 | 800.5 | 738.8 | 721.2 | 714.5 | 702.8 | 694.0 | 698.4 | 773.3 | 918.9 |
| 30° | 941.7 | 928.5 | 883.6 | 819.7 | 793.2 | 782.9 | 761.6 | 743.2 | 731.4 | 799.8 | 972.6 |
| 32.5° | 985.1 | 979.9 | 949.0 | 891.0 | 860.8 | 856.4 | 821.1 | 796.9 | 776.3 | 834.4 | 1044.6 |
| 35° | 1043.1 | 1036.5 | 1016.7 | 968.9 | 932.9 | 921.8 | 895.4 | 866.7 | 833.6 | 880.7 | 1135.8 |
| 37.5° | 1096.8 | 1093.1 | 1085.8 | 1052.7 | 1014.5 | 1003.4 | 979.2 | 949.0 | 904.2 | 949.0 | 1237.9 |
| 40° | 1151.2 | 1146.8 | 1143.8 | 1132.1 | 1104.9 | 1097.5 | 1085.8 | 1050.5 | 990.2 | 1024.0 | 1338.6 |
| 42.5° | 1230.6 | 1221.0 | 1190.2 | 1189.4 | 1191.6 | 1197.5 | 1198.2 | 1159.3 | 1084.3 | 1117.4 | 1426.9 |
| 45° | 1334.2 | 1307.8 | 1238.7 | 1236.5 | 1262.2 | 1277.6 | 1315.1 | 1282.0 | 1182.1 | 1212.9 | 1525.4 |
| 47.5° | 1387.2 | 1360.0 | 1288.7 | 1284.3 | 1318.1 | 1340.9 | 1433.5 | 1401.1 | 1283.5 | 1320.3 | 1627.6 |
| 50° | 1412.9 | 1395.3 | 1332.8 | 1346.7 | 1381.3 | 1403.3 | 1546.0 | 1520.2 | 1388.6 | 1436.4 | 1756.2 |
| 52.5° | 1448.9 | 1419.5 | 1375.4 | 1404.8 | 1456.3 | 1479.1 | 1646.7 | 1642.3 | 1477.6 | 1562.9 | 1897.3 |
| 55° | 1436.4 | 1421.0 | 1429.1 | 1468.8 | 1533.5 | 1567.3 | 1748.1 | 1748.1 | 1568.0 | 1698.1 | 2037.0 |
| 57.5° | 1446.7 | 1436.4 | 1503.3 | 1538.6 | 1620.2 | 1668.7 | 1870.1 | 1837.8 | 1644.5 | 1811.3 | 2131.1 |
| 60° | 1534.2 | 1504.8 | 1557.0 | 1626.8 | 1731.9 | 1779.0 | 2009.8 | 1931.9 | 1706.9 | 1909.1 | 2148.0 |
| 62.5° | 1688.6 | 1665.0 | 1670.2 | 1750.3 | 1886.3 | 1940.7 | 2148.0 | 2015.0 | 1748.8 | 1950.3 | 2084.8 |
| 65° | 1944.4 | 1933.4 | 1870.1 | 1918.7 | 2106.1 | 2155.4 | 2320.8 | 2087.0 | 1737.1 | 1919.4 | 1917.9 |
| 67.5° | 2288.4 | 2244.3 | 2159.0 | 2202.4 | 2418.5 | 2468.5 | 2528.8 | 2114.2 | 1660.6 | 1734.9 | 1541.5 |
| 70° | 2573.6 | 2536.9 | 2497.9 | 2611.9 | 2860.3 | 2887.5 | 2745.7 | 2088.5 | 1474.6 | 1357.8 | 1033.6 |
| 72.5° | 2755.2 | 2728.8 | 2764.8 | 3100.0 | 3497.7 | 3446.2 | 2959.6 | 1908.4 | 1150.5 | 831.4 | 516.8 |
| 75° | 2378.1 | 2365.6 | 2571.4 | 3251.4 | 3788.1 | 3768.9 | 2885.3 | 1428.3 | 667.5 | 366.1 | 235.2 |
| 77.5° | 1196.0 | 1332.0 | 1548.9 | 2306.8 | 3014.0 | 3017.7 | 2102.4 | 686.6 | 280.8 | 205.1 | 161.7 |
| 80° | 336.7 | 341.1 | 516.8 | 951.2 | 1504.8 | 1603.3 | 795.4 | 233.0 | 160.3 | 152.9 | 120.6 |
| 82.5° | 80.1 | 74.2 | 132.3 | 281.6 | 505.0 | 525.6 | 238.9 | 83.8 | 89.7 | 95.6 | 74.2 |
| 85° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 1.5 | 8.8 | 8.8 | 21.3 | 27.2 | 21.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 | 758.6 |
| 2.5° | 757.9 | 765.3 | 777.0 | 787.3 | 796.1 | 802.7 | 813.0 | 814.5 | 817.5 | 818.9 | 820.4 |
| 5° | 764.5 | 778.5 | 800.5 | 819.7 | 832.9 | 836.6 | 845.4 | 844.7 | 845.4 | 845.4 | 844.7 |
| 7.5° | 773.3 | 792.5 | 823.3 | 844.7 | 852.0 | 849.8 | 847.6 | 839.5 | 832.9 | 829.9 | 826.3 |
| 10° | 784.4 | 806.4 | 842.4 | 857.9 | 854.2 | 842.4 | 828.5 | 813.8 | 802.0 | 796.1 | 794.7 |
| 12.5° | 795.4 | 824.1 | 857.9 | 862.3 | 847.6 | 826.3 | 802.7 | 786.6 | 771.1 | 763.1 | 763.1 |
| 15° | 813.8 | 845.4 | 870.4 | 861.6 | 835.1 | 807.9 | 775.5 | 753.5 | 735.9 | 724.8 | 724.1 |
| 17.5° | 835.8 | 869.6 | 883.6 | 857.9 | 819.7 | 781.4 | 742.5 | 713.8 | 691.0 | 680.0 | 673.4 |
| 20° | 863.0 | 894.6 | 890.2 | 846.1 | 796.9 | 749.8 | 701.3 | 666.8 | 643.2 | 631.5 | 629.3 |
| 22.5° | 893.9 | 920.4 | 892.4 | 827.0 | 766.0 | 705.7 | 652.8 | 618.2 | 602.8 | 594.0 | 594.7 |
| 25° | 931.4 | 952.0 | 893.2 | 804.2 | 721.9 | 647.6 | 601.3 | 585.2 | 582.9 | 579.3 | 580.7 |
| 27.5° | 978.4 | 985.1 | 890.2 | 773.3 | 665.3 | 586.6 | 559.4 | 566.0 | 571.9 | 569.7 | 571.2 |
| 30° | 1034.3 | 1024.8 | 883.6 | 728.5 | 595.4 | 530.8 | 532.2 | 546.9 | 555.0 | 552.8 | 553.5 |
| 32.5° | 1099.7 | 1064.5 | 871.1 | 674.1 | 529.3 | 496.9 | 508.7 | 523.4 | 531.5 | 531.5 | 532.2 |
| 35° | 1173.2 | 1112.2 | 846.9 | 603.5 | 483.0 | 476.4 | 486.6 | 498.4 | 503.6 | 500.6 | 502.8 |
| 37.5° | 1250.4 | 1153.4 | 807.9 | 524.9 | 448.4 | 460.2 | 466.1 | 469.0 | 468.3 | 463.9 | 461.7 |
| 40° | 1322.5 | 1185.7 | 738.1 | 447.0 | 419.8 | 443.3 | 446.2 | 438.1 | 428.6 | 420.5 | 415.3 |
| 42.5° | 1377.6 | 1202.7 | 641.0 | 390.3 | 392.6 | 424.2 | 426.4 | 410.2 | 391.8 | 379.3 | 376.4 |
| 45° | 1434.2 | 1208.5 | 544.7 | 344.8 | 363.1 | 405.0 | 410.9 | 388.9 | 363.9 | 349.2 | 347.0 |
| 47.5° | 1498.9 | 1223.2 | 449.9 | 313.2 | 338.2 | 391.8 | 401.4 | 374.2 | 346.2 | 324.2 | 320.5 |
| 50° | 1585.6 | 1251.2 | 378.6 | 288.9 | 320.5 | 385.2 | 398.4 | 362.4 | 327.1 | 302.9 | 299.9 |
| 52.5° | 1695.9 | 1292.3 | 312.4 | 269.8 | 306.5 | 374.9 | 394.0 | 350.7 | 313.2 | 283.8 | 279.3 |
| 55° | 1790.7 | 1307.8 | 269.8 | 253.6 | 291.8 | 362.4 | 390.3 | 346.2 | 297.7 | 264.6 | 259.5 |
| 57.5° | 1834.1 | 1263.7 | 239.6 | 237.4 | 276.4 | 347.0 | 383.0 | 331.5 | 280.8 | 255.1 | 250.7 |
| 60° | 1814.3 | 1154.1 | 216.9 | 222.7 | 258.8 | 327.1 | 363.9 | 316.8 | 269.1 | 247.7 | 243.3 |
| 62.5° | 1726.1 | 1027.7 | 200.0 | 208.8 | 238.9 | 302.1 | 341.8 | 303.6 | 258.8 | 239.6 | 233.8 |
| 65° | 1570.9 | 888.8 | 187.5 | 196.3 | 221.3 | 277.9 | 324.2 | 288.2 | 247.0 | 227.9 | 222.7 |
| 67.5° | 1282.0 | 707.2 | 174.2 | 183.8 | 206.6 | 258.0 | 308.0 | 275.7 | 233.8 | 221.3 | 216.9 |
| 70° | 848.3 | 475.6 | 161.7 | 171.3 | 191.9 | 238.9 | 291.1 | 262.4 | 221.3 | 213.2 | 207.3 |
| 72.5° | 389.6 | 255.8 | 148.5 | 158.1 | 175.0 | 217.6 | 269.8 | 242.6 | 204.4 | 199.2 | 190.4 |
| 75° | 192.6 | 157.3 | 132.3 | 141.1 | 154.4 | 191.9 | 244.8 | 225.7 | 188.9 | 180.1 | 169.8 |
| 77.5° | 140.4 | 117.6 | 113.9 | 122.8 | 133.8 | 169.8 | 218.3 | 208.0 | 173.5 | 161.0 | 155.1 |
| 80° | 104.4 | 91.2 | 95.6 | 104.4 | 114.7 | 153.6 | 204.4 | 194.8 | 160.3 | 147.8 | 143.3 |
| 82.5° | 64.0 | 61.0 | 73.5 | 83.8 | 96.3 | 141.1 | 194.8 | 177.9 | 144.1 | 132.3 | 127.2 |
| 85° | 18.4 | 22.1 | 37.5 | 54.4 | 68.4 | 113.9 | 181.6 | 155.8 | 121.3 | 101.4 | 97.8 |
| 87.5° | 0.0 | 2.2 | 11.8 | 25.0 | 40.4 | 75.7 | 139.7 | 122.0 | 92.6 | 75.0 | 72.0 |
| 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)