

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: P401751

Luminaire Tested: **ENV-SA1E-827-U-T4FT-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401751
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1E-827-U-T4FT-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3662 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

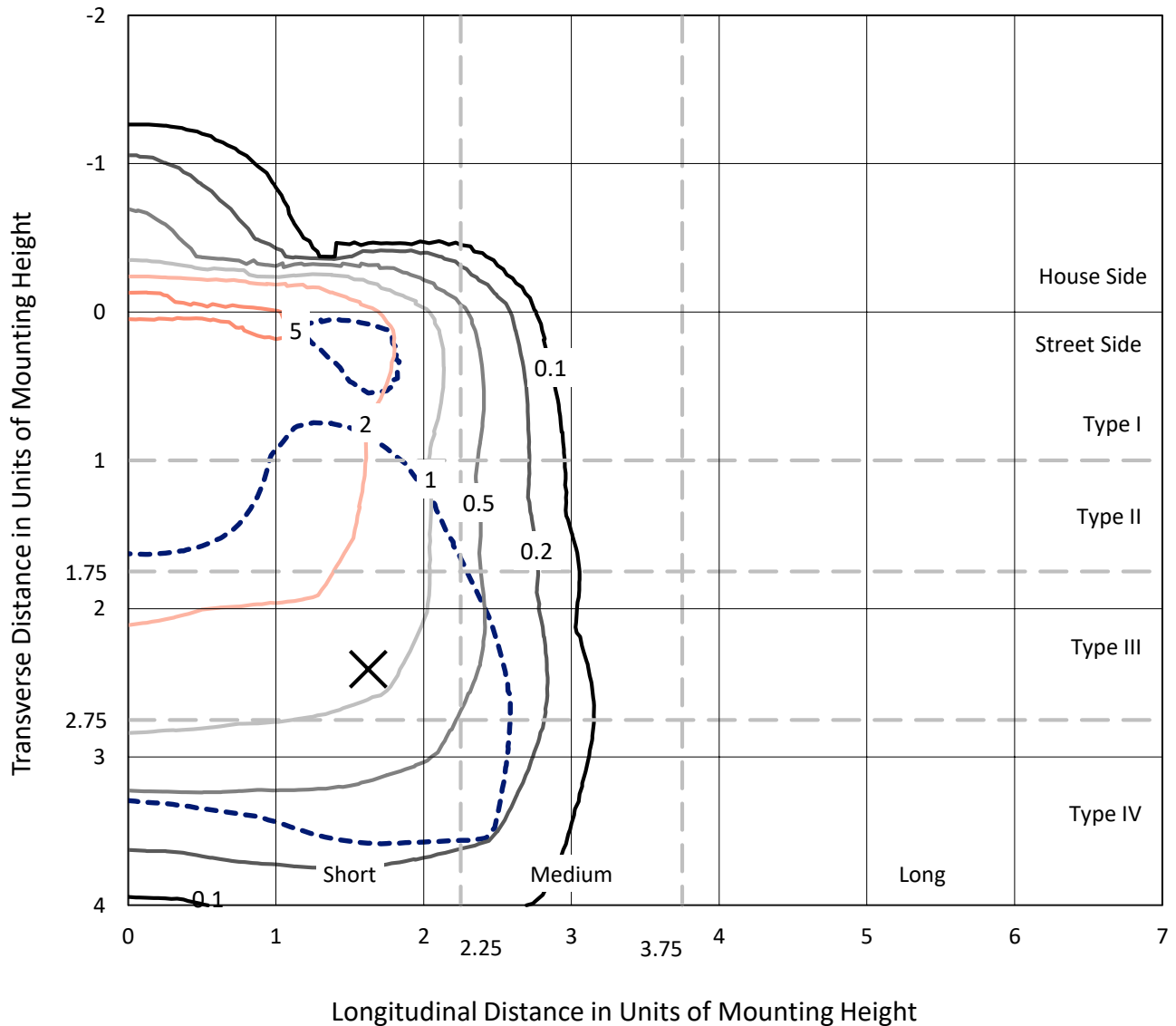
Input Watts (W): 57.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P401751
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Iso-Footcandle Lines of Horizontal Illumination

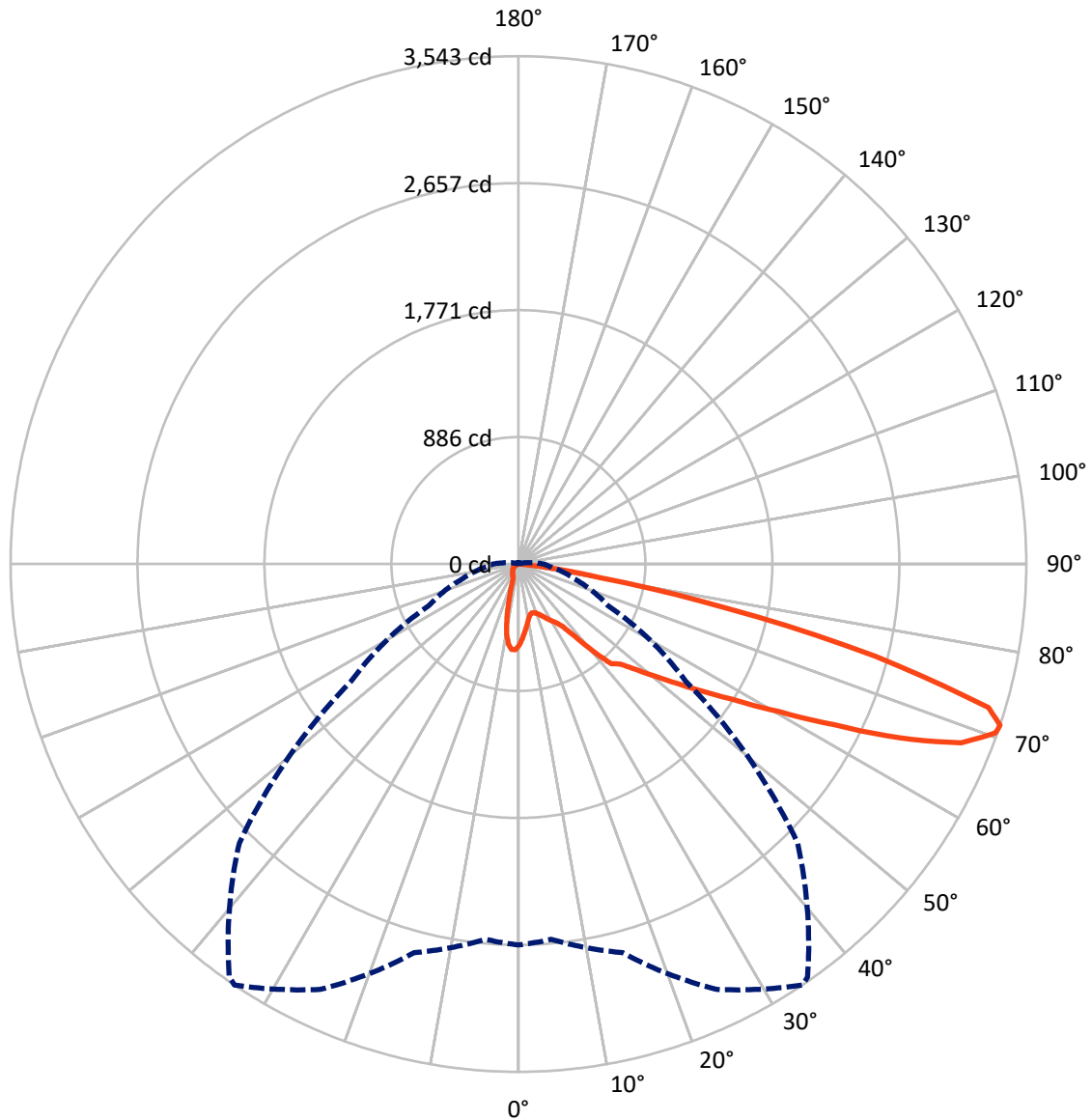
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P401751
CATALOG NUMBER: ENV-SA1E-827-U-T4FT-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 34-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 404.9 | 0.0 | 404.9 |
| | % Fixture | 11.1 | 0.0 | 11.1 |
| Street Side | Lumens | 3257.1 | 0.0 | 3257.1 |
| | % Fixture | 88.9 | 0.0 | 88.9 |
| Total | Lumens | 3662.0 | 0.0 | 3662.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 50.0 | 1.4 |
| 10°-20° | 114.6 | 3.1 |
| 20°-30° | 171.1 | 4.7 |
| 30°-40° | 285.7 | 7.8 |
| 40°-50° | 516.1 | 14.1 |
| 50°-60° | 818.8 | 22.4 |
| 60°-70° | 1100.3 | 30.0 |
| 70°-80° | 583.8 | 15.9 |
| 80°-90° | 21.5 | 0.6 |
| 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° | 3662.0 | 100.0 |
| 0°-180° | 3662.0 | 100.0 |



REPORT NUMBER: P401751

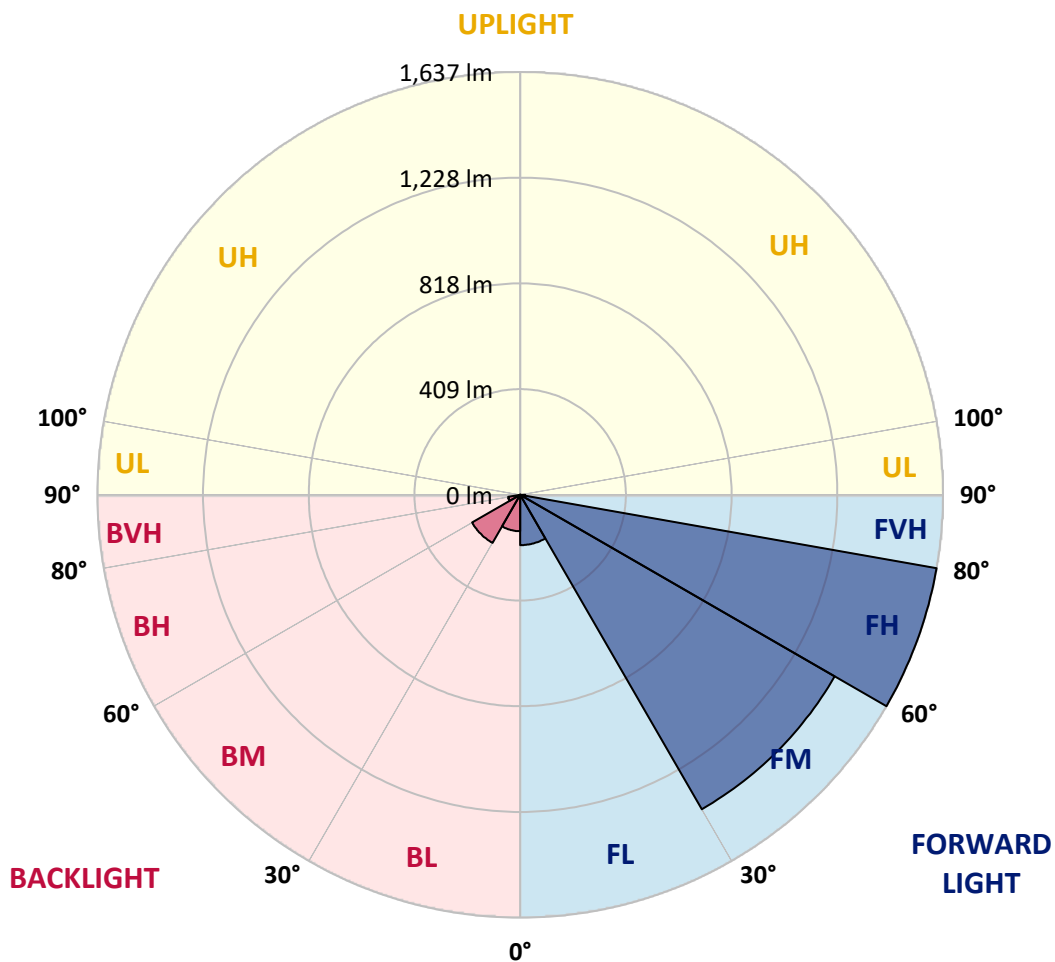
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 194.9 | 5.3 | | | |
| FM | (30°-60°) | 1405.7 | 38.4 | | | |
| FH | (60°-80°) | 1636.9 | 44.7 | | | G1/1800 |
| FVH | (80°-90°) | 19.6 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 140.8 | 3.8 | B1/500 | | |
| BM | (30°-60°) | 214.9 | 5.9 | B0/220 | | |
| BH | (60°-80°) | 47.3 | 1.3 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.9 | 0.1 | | | 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 IV Short





REPORT NUMBER: P401751

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 |
| 2.5° | 516.7 | 510.1 | 516.0 | 518.9 | 521.1 | 524.0 | 528.5 | 536.5 | 545.4 | 555.6 | 561.5 |
| 5° | 450.5 | 454.2 | 456.4 | 464.5 | 472.6 | 474.1 | 488.0 | 504.2 | 524.8 | 545.4 | 563.0 |
| 7.5° | 396.9 | 396.9 | 403.5 | 416.0 | 429.2 | 430.7 | 455.0 | 476.3 | 505.7 | 537.3 | 565.9 |
| 10° | 354.3 | 355.7 | 360.9 | 373.4 | 390.3 | 394.0 | 421.1 | 450.5 | 487.3 | 528.5 | 568.9 |
| 12.5° | 340.3 | 339.6 | 338.8 | 347.6 | 361.6 | 365.3 | 395.4 | 430.7 | 474.1 | 524.0 | 576.2 |
| 15° | 349.1 | 346.9 | 341.8 | 343.2 | 352.1 | 355.7 | 382.2 | 417.5 | 466.0 | 523.3 | 588.7 |
| 17.5° | 363.1 | 360.1 | 350.6 | 347.6 | 357.2 | 360.9 | 382.9 | 413.8 | 463.0 | 527.0 | 603.4 |
| 20° | 380.0 | 377.0 | 362.3 | 358.7 | 368.2 | 371.2 | 394.0 | 420.4 | 464.5 | 534.3 | 623.3 |
| 22.5° | 404.2 | 400.6 | 379.3 | 374.8 | 384.4 | 387.3 | 411.6 | 435.8 | 473.3 | 547.6 | 650.5 |
| 25° | 433.6 | 429.2 | 402.0 | 396.2 | 407.9 | 410.9 | 435.1 | 457.9 | 488.0 | 565.2 | 685.0 |
| 27.5° | 466.0 | 460.8 | 432.2 | 420.4 | 433.6 | 438.1 | 460.8 | 485.8 | 509.3 | 587.3 | 730.6 |
| 30° | 495.4 | 489.5 | 461.6 | 448.3 | 461.6 | 463.8 | 491.0 | 518.9 | 543.9 | 624.7 | 797.5 |
| 32.5° | 577.0 | 562.3 | 518.9 | 480.7 | 489.5 | 493.9 | 527.0 | 571.1 | 608.6 | 669.6 | 883.5 |
| 35° | 699.0 | 687.2 | 634.3 | 568.1 | 537.3 | 538.7 | 581.4 | 637.2 | 654.1 | 721.8 | 990.0 |
| 37.5° | 816.6 | 806.3 | 760.0 | 699.0 | 640.2 | 642.4 | 649.7 | 703.4 | 723.2 | 812.2 | 1120.1 |
| 40° | 945.2 | 929.0 | 892.3 | 834.2 | 793.8 | 784.2 | 748.2 | 785.7 | 829.1 | 926.1 | 1262.0 |
| 42.5° | 1004.7 | 989.3 | 951.1 | 954.7 | 950.3 | 933.4 | 862.1 | 914.3 | 962.8 | 1091.5 | 1418.5 |
| 45° | 1103.2 | 1073.1 | 994.4 | 1000.3 | 994.4 | 995.9 | 1013.5 | 1089.2 | 1131.1 | 1266.4 | 1595.6 |
| 47.5° | 1194.3 | 1159.8 | 1077.5 | 1071.6 | 1097.3 | 1110.6 | 1205.4 | 1297.2 | 1300.9 | 1418.5 | 1734.6 |
| 50° | 1277.4 | 1252.4 | 1176.7 | 1177.4 | 1224.5 | 1239.2 | 1428.8 | 1512.6 | 1438.4 | 1535.4 | 1843.3 |
| 52.5° | 1387.6 | 1352.4 | 1284.8 | 1309.0 | 1382.5 | 1395.7 | 1651.5 | 1701.5 | 1537.6 | 1641.2 | 1928.6 |
| 55° | 1489.8 | 1470.7 | 1420.7 | 1456.7 | 1569.2 | 1603.7 | 1877.9 | 1847.0 | 1607.4 | 1735.3 | 1969.8 |
| 57.5° | 1657.4 | 1639.0 | 1625.8 | 1644.2 | 1794.8 | 1838.2 | 2107.2 | 1949.9 | 1661.8 | 1797.8 | 1950.6 |
| 60° | 1936.7 | 1918.3 | 1878.6 | 1895.5 | 2091.8 | 2113.8 | 2287.3 | 2054.3 | 1683.1 | 1815.4 | 1875.7 |
| 62.5° | 2281.4 | 2258.6 | 2194.7 | 2272.6 | 2469.5 | 2468.8 | 2474.0 | 2109.4 | 1655.9 | 1763.2 | 1678.0 |
| 65° | 2592.3 | 2560.7 | 2527.6 | 2686.4 | 2926.0 | 2892.9 | 2672.4 | 2116.0 | 1569.9 | 1511.1 | 1298.0 |
| 67.5° | 2818.7 | 2806.2 | 2824.5 | 3072.2 | 3330.2 | 3297.1 | 2865.0 | 2024.9 | 1306.8 | 1090.7 | 801.9 |
| 70° | 2809.8 | 2784.1 | 2901.0 | 3296.4 | 3530.9 | 3503.7 | 2856.9 | 1664.0 | 871.7 | 577.7 | 335.9 |
| 71° | 2657.7 | 2628.3 | 2806.2 | 3274.4 | 3542.6 | 3516.9 | 2754.0 | 1423.7 | 689.4 | 407.9 | 221.2 |
| 72.5° | 2053.5 | 2142.5 | 2425.4 | 3038.4 | 3429.4 | 3396.4 | 2474.0 | 1090.0 | 436.6 | 235.9 | 111.0 |
| 75° | 868.8 | 917.3 | 1439.8 | 2168.9 | 2572.4 | 2555.5 | 1667.7 | 503.5 | 200.7 | 106.6 | 42.6 |
| 77.5° | 223.4 | 220.5 | 441.0 | 930.5 | 1497.9 | 1524.4 | 768.8 | 172.7 | 104.4 | 75.7 | 24.3 |
| 80° | 43.4 | 47.0 | 125.7 | 323.4 | 571.8 | 587.3 | 250.6 | 75.7 | 69.8 | 59.5 | 12.5 |
| 82.5° | 4.4 | 5.1 | 22.0 | 100.0 | 191.8 | 185.2 | 55.1 | 28.7 | 42.6 | 40.4 | 5.9 |
| 85° | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 2.9 | 10.3 | 11.0 | 1.5 |
| 87.5° | 0.0 | 0.0 | 0.7 | 0.7 | 0.0 | 0.0 | 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° | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 | 567.4 |
| 2.5° | 565.9 | 572.6 | 579.9 | 585.0 | 590.2 | 590.9 | 598.3 | 596.8 | 599.0 | 599.7 | 599.0 |
| 5° | 572.6 | 581.4 | 595.3 | 602.7 | 605.6 | 600.5 | 599.0 | 590.9 | 588.0 | 584.3 | 580.6 |
| 7.5° | 579.9 | 590.9 | 607.1 | 610.8 | 600.5 | 581.4 | 565.9 | 546.1 | 527.7 | 516.0 | 517.4 |
| 10° | 588.0 | 602.0 | 615.2 | 605.6 | 579.2 | 541.7 | 498.3 | 454.2 | 415.3 | 400.6 | 405.7 |
| 12.5° | 598.3 | 615.2 | 621.1 | 594.6 | 543.2 | 467.4 | 388.8 | 321.9 | 281.5 | 257.2 | 254.3 |
| 15° | 613.7 | 630.6 | 624.0 | 577.0 | 485.8 | 367.5 | 269.7 | 202.1 | 163.2 | 150.7 | 144.1 |
| 17.5° | 632.8 | 649.0 | 624.0 | 545.4 | 404.2 | 263.1 | 163.9 | 122.7 | 110.2 | 107.3 | 108.0 |
| 20° | 656.3 | 671.8 | 621.1 | 497.6 | 311.6 | 161.7 | 109.5 | 101.4 | 101.4 | 101.4 | 100.7 |
| 22.5° | 687.9 | 696.0 | 616.7 | 434.4 | 214.6 | 109.5 | 97.0 | 96.3 | 97.0 | 97.0 | 97.0 |
| 25° | 726.2 | 724.7 | 608.6 | 358.7 | 135.2 | 93.3 | 92.6 | 92.6 | 93.3 | 94.1 | 94.1 |
| 27.5° | 776.9 | 761.4 | 594.6 | 268.3 | 95.5 | 86.7 | 88.2 | 89.7 | 91.1 | 92.6 | 92.6 |
| 30° | 847.4 | 810.0 | 571.8 | 181.5 | 80.8 | 80.1 | 83.1 | 87.5 | 89.7 | 91.1 | 91.1 |
| 32.5° | 923.1 | 859.9 | 532.9 | 116.1 | 74.2 | 73.5 | 76.4 | 83.1 | 88.9 | 90.4 | 90.4 |
| 35° | 1018.7 | 913.6 | 474.8 | 83.8 | 69.8 | 68.4 | 71.3 | 77.2 | 86.0 | 90.4 | 90.4 |
| 37.5° | 1119.4 | 970.9 | 390.3 | 70.6 | 65.4 | 63.9 | 66.1 | 70.6 | 80.8 | 88.9 | 89.7 |
| 40° | 1226.7 | 1021.6 | 293.3 | 65.4 | 61.0 | 60.3 | 61.0 | 65.4 | 73.5 | 84.5 | 86.7 |
| 42.5° | 1334.7 | 1064.3 | 205.1 | 60.3 | 57.3 | 55.9 | 57.3 | 60.3 | 67.6 | 77.2 | 78.6 |
| 45° | 1453.8 | 1111.3 | 136.7 | 55.9 | 54.4 | 52.9 | 54.4 | 56.6 | 61.7 | 66.9 | 67.6 |
| 47.5° | 1540.5 | 1128.2 | 94.1 | 50.7 | 50.0 | 50.7 | 51.4 | 52.9 | 55.9 | 56.6 | 55.9 |
| 50° | 1597.9 | 1119.4 | 67.6 | 45.6 | 46.3 | 48.5 | 48.5 | 49.2 | 49.2 | 47.0 | 46.3 |
| 52.5° | 1639.7 | 1087.0 | 52.2 | 39.0 | 43.4 | 45.6 | 45.6 | 44.1 | 42.6 | 39.7 | 39.0 |
| 55° | 1644.2 | 1014.3 | 41.2 | 33.8 | 39.0 | 42.6 | 41.9 | 39.0 | 36.0 | 33.1 | 33.1 |
| 57.5° | 1588.3 | 904.0 | 33.8 | 28.7 | 33.8 | 37.5 | 36.0 | 33.1 | 29.4 | 27.2 | 27.2 |
| 60° | 1497.9 | 790.8 | 28.7 | 24.3 | 27.9 | 31.6 | 29.4 | 27.2 | 23.5 | 21.3 | 21.3 |
| 62.5° | 1331.1 | 679.1 | 23.5 | 19.8 | 22.8 | 25.0 | 24.3 | 22.0 | 18.4 | 16.9 | 16.2 |
| 65° | 1020.2 | 516.7 | 17.6 | 15.4 | 17.6 | 20.6 | 19.1 | 16.9 | 14.7 | 12.5 | 11.8 |
| 67.5° | 613.0 | 310.9 | 14.0 | 11.8 | 14.0 | 16.2 | 14.7 | 12.5 | 10.3 | 8.8 | 8.8 |
| 70° | 259.4 | 133.0 | 11.0 | 8.8 | 10.3 | 12.5 | 11.8 | 10.3 | 8.1 | 7.3 | 7.3 |
| 71° | 176.4 | 94.8 | 9.6 | 8.1 | 9.6 | 11.8 | 11.0 | 9.6 | 8.1 | 7.3 | 7.3 |
| 72.5° | 90.4 | 48.5 | 8.1 | 6.6 | 8.8 | 10.3 | 10.3 | 8.8 | 7.3 | 7.3 | 7.3 |
| 75° | 32.3 | 20.6 | 6.6 | 5.9 | 7.3 | 7.3 | 8.1 | 8.1 | 8.1 | 8.1 | 7.3 |
| 77.5° | 18.4 | 12.5 | 5.9 | 5.9 | 5.9 | 6.6 | 8.1 | 8.8 | 9.6 | 9.6 | 8.8 |
| 80° | 10.3 | 6.6 | 3.7 | 4.4 | 5.9 | 6.6 | 8.1 | 8.8 | 10.3 | 10.3 | 9.6 |
| 82.5° | 5.1 | 2.2 | 0.7 | 2.2 | 3.7 | 5.9 | 6.6 | 7.3 | 8.8 | 8.1 | 8.1 |
| 85° | 0.7 | 0.0 | 0.0 | 0.7 | 2.2 | 2.9 | 4.4 | 5.9 | 7.3 | 7.3 | 6.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 1.5 | 2.2 | 3.7 | 5.1 | 5.9 | 5.1 |
| 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)