

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: P401556

Luminaire Tested: **ENT-SA1D-760-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-760-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5700K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5646 lumens
Efficiency: N/A
Efficacy: 131.0 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 - G2

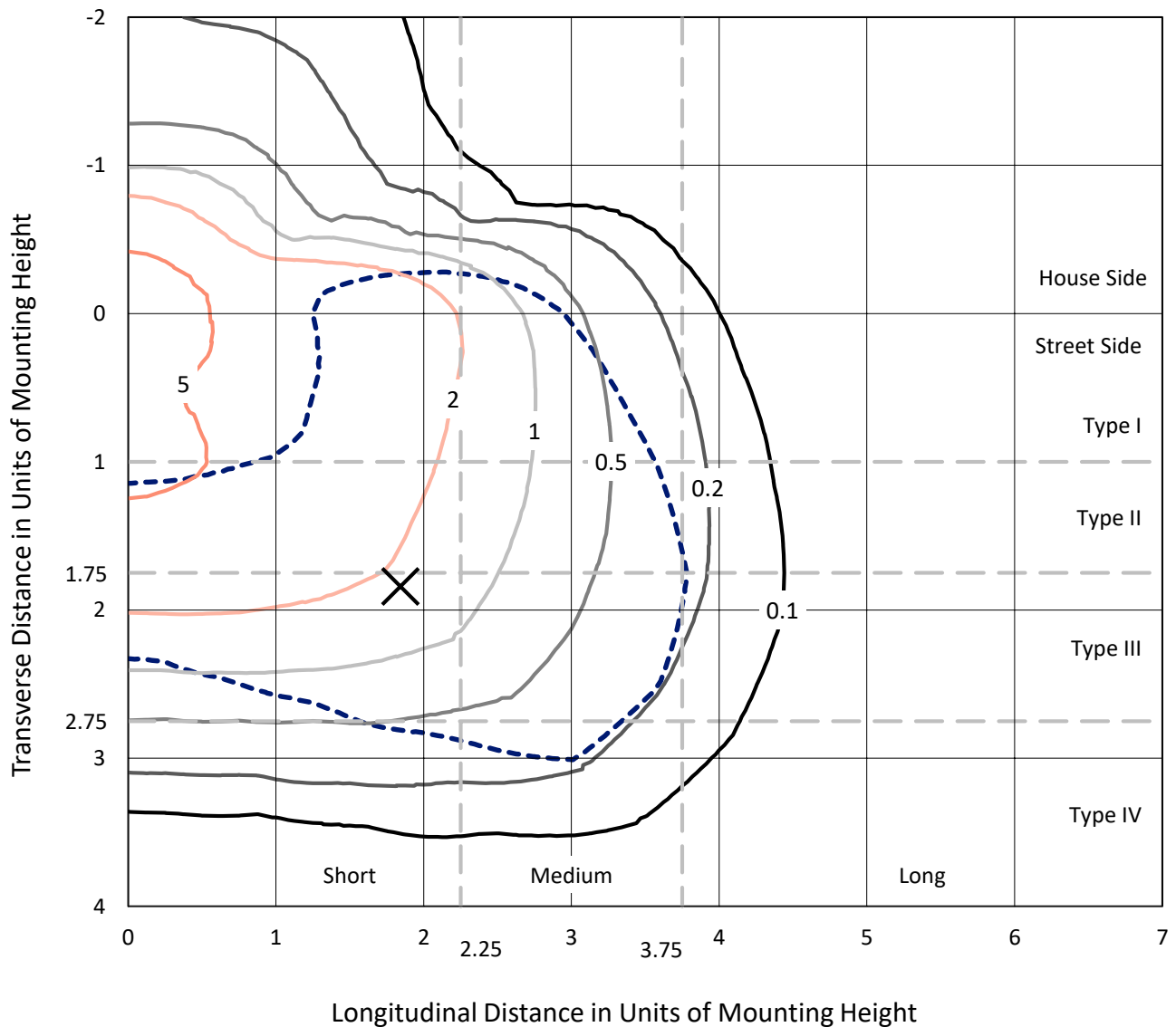
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

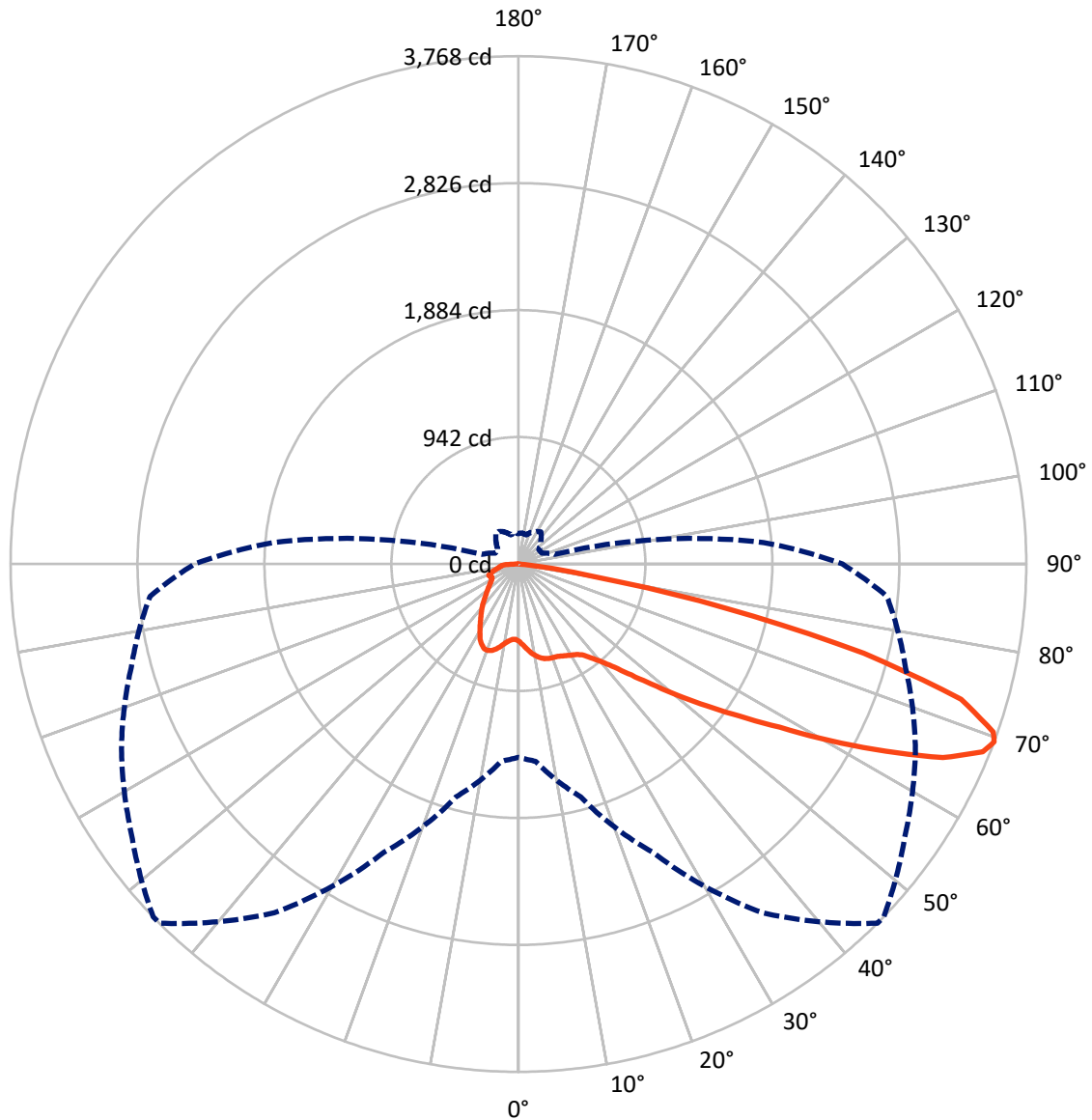
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1329.3 | 0.0 | 1329.3 |
| | % Fixture | 23.5 | 0.0 | 23.5 |
| Street Side | Lumens | 4316.7 | 0.0 | 4316.7 |
| | % Fixture | 76.5 | 0.0 | 76.5 |
| Total | Lumens | 5646.0 | 0.0 | 5646.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.4 | 1.0 |
| 10°-20° | 193.5 | 3.4 |
| 20°-30° | 327.0 | 5.8 |
| 30°-40° | 473.1 | 8.4 |
| 40°-50° | 714.3 | 12.7 |
| 50°-60° | 1204.5 | 21.3 |
| 60°-70° | 1657.1 | 29.3 |
| 70°-80° | 918.2 | 16.3 |
| 80°-90° | 100.0 | 1.8 |
| 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° | 5646.0 | 100.0 |
| 0°-180° | 5646.0 | 100.0 |



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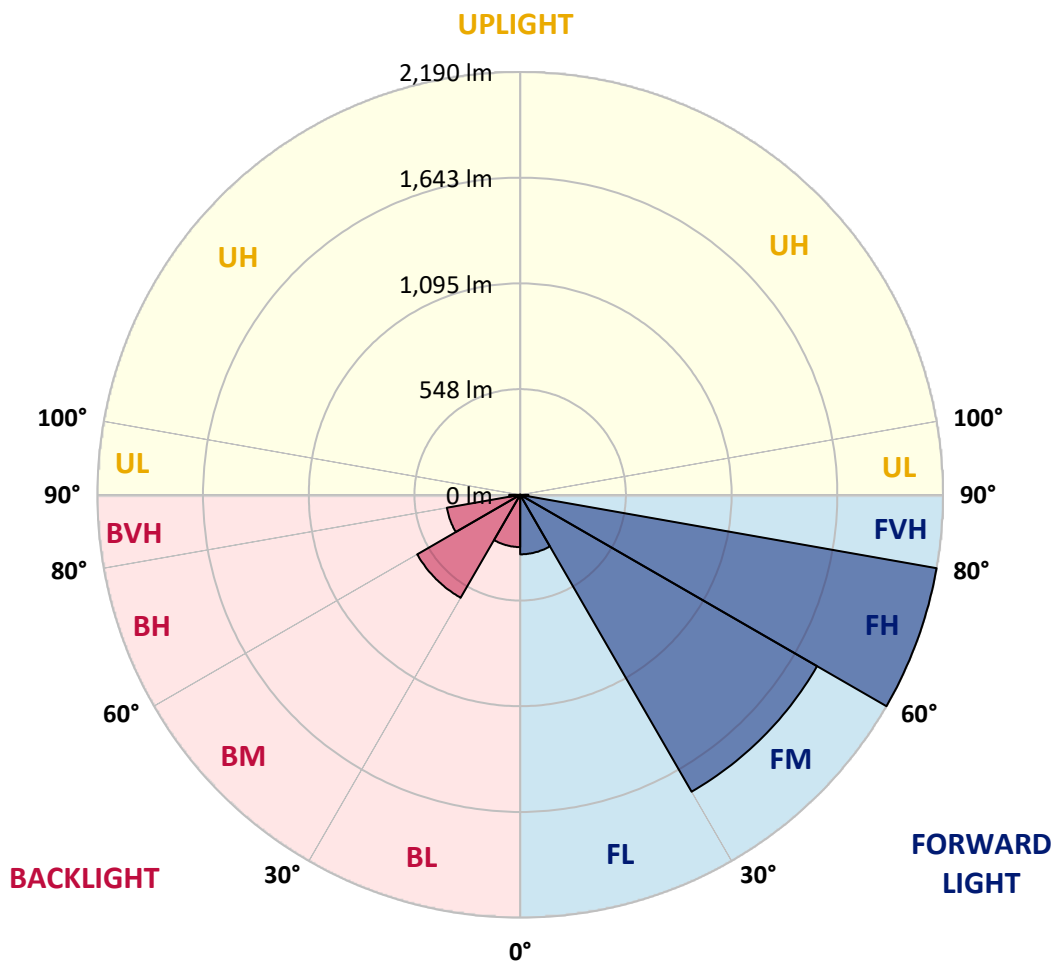
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 308.2 | 5.5 | | | |
| FM | (30°-60°) | 1775.7 | 31.5 | | | |
| FH | (60°-80°) | 2190.0 | 38.8 | | | G2/5000 |
| FVH | (80°-90°) | 42.8 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 270.7 | 4.8 | B1/500 | | |
| BM | (30°-60°) | 616.2 | 10.9 | B1/1000 | | |
| BH | (60°-80°) | 385.3 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 57.2 | 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° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 |
| 2.5° | 609.2 | 608.4 | 609.2 | 606.0 | 602.8 | 598.0 | 596.4 | 590.7 | 586.7 | 581.1 | 576.3 |
| 5° | 654.1 | 656.6 | 655.8 | 651.7 | 638.9 | 629.3 | 629.3 | 617.2 | 604.4 | 592.3 | 581.1 |
| 7.5° | 703.1 | 703.1 | 698.3 | 690.3 | 677.4 | 663.0 | 661.4 | 645.3 | 626.9 | 610.0 | 592.3 |
| 10° | 738.4 | 740.0 | 732.8 | 721.6 | 705.5 | 690.3 | 688.7 | 670.2 | 652.5 | 630.9 | 609.2 |
| 12.5° | 763.3 | 763.3 | 756.9 | 746.5 | 727.2 | 712.7 | 711.1 | 694.3 | 675.8 | 653.3 | 628.5 |
| 15° | 776.1 | 774.5 | 768.9 | 757.7 | 740.8 | 728.8 | 726.4 | 711.9 | 696.7 | 674.2 | 647.7 |
| 17.5° | 773.7 | 773.7 | 768.9 | 757.7 | 745.6 | 736.0 | 734.4 | 724.0 | 712.7 | 691.1 | 664.6 |
| 20° | 763.3 | 762.5 | 760.9 | 752.1 | 744.0 | 740.0 | 738.4 | 733.6 | 726.4 | 707.9 | 683.0 |
| 22.5° | 753.7 | 752.9 | 750.5 | 744.8 | 741.6 | 744.0 | 744.0 | 743.2 | 742.4 | 728.0 | 703.9 |
| 25° | 759.3 | 758.5 | 753.7 | 745.6 | 744.8 | 756.1 | 756.9 | 759.3 | 760.9 | 748.9 | 724.0 |
| 27.5° | 798.6 | 796.2 | 782.6 | 761.7 | 754.5 | 768.9 | 770.5 | 777.8 | 776.1 | 763.3 | 741.6 |
| 30° | 875.7 | 876.5 | 846.0 | 801.0 | 777.0 | 783.4 | 784.2 | 792.2 | 789.8 | 779.4 | 761.7 |
| 32.5° | 992.1 | 992.1 | 942.3 | 874.1 | 813.1 | 800.2 | 797.8 | 805.0 | 814.7 | 801.0 | 783.4 |
| 35° | 1139.7 | 1135.7 | 1075.5 | 970.4 | 874.9 | 829.1 | 827.5 | 824.3 | 841.2 | 828.3 | 802.6 |
| 37.5° | 1288.2 | 1273.8 | 1215.2 | 1099.6 | 961.6 | 885.3 | 878.9 | 869.3 | 878.9 | 851.6 | 829.1 |
| 40° | 1407.8 | 1405.4 | 1357.3 | 1240.1 | 1064.3 | 953.5 | 948.7 | 906.2 | 912.6 | 890.9 | 882.1 |
| 42.5° | 1539.5 | 1541.1 | 1509.0 | 1391.0 | 1187.1 | 1045.8 | 1033.0 | 967.2 | 985.6 | 977.6 | 973.6 |
| 45° | 1683.9 | 1682.3 | 1658.2 | 1534.6 | 1337.2 | 1174.3 | 1158.2 | 1077.1 | 1114.9 | 1110.0 | 1132.5 |
| 47.5° | 1794.7 | 1803.5 | 1789.9 | 1702.4 | 1515.4 | 1330.0 | 1317.9 | 1219.2 | 1276.2 | 1314.7 | 1357.3 |
| 50° | 1945.6 | 1944.8 | 1907.9 | 1871.7 | 1722.5 | 1529.0 | 1517.0 | 1407.0 | 1488.9 | 1545.1 | 1622.9 |
| 52.5° | 2132.6 | 2126.2 | 2049.9 | 2037.1 | 1974.5 | 1746.5 | 1736.1 | 1621.3 | 1738.5 | 1787.5 | 1945.6 |
| 55° | 2249.8 | 2249.0 | 2209.7 | 2232.1 | 2233.7 | 1988.9 | 1976.1 | 1874.2 | 2006.6 | 2062.8 | 2302.0 |
| 57.5° | 2347.7 | 2348.5 | 2381.4 | 2460.1 | 2513.1 | 2283.5 | 2278.7 | 2154.3 | 2288.3 | 2367.0 | 2649.5 |
| 60° | 2423.2 | 2439.2 | 2531.5 | 2711.3 | 2799.6 | 2659.1 | 2638.3 | 2506.6 | 2596.5 | 2627.8 | 2915.2 |
| 62.5° | 2392.7 | 2413.5 | 2594.9 | 2859.8 | 3086.9 | 3057.2 | 3050.0 | 2859.8 | 2859.0 | 2842.9 | 3113.4 |
| 65° | 2151.9 | 2196.8 | 2482.6 | 2854.2 | 3276.4 | 3461.8 | 3451.3 | 3192.9 | 3103.0 | 3022.7 | 3172.8 |
| 67.5° | 1761.0 | 1770.6 | 2114.9 | 2635.9 | 3274.8 | 3716.2 | 3705.0 | 3435.3 | 3254.7 | 3058.0 | 2998.6 |
| 69° | 1433.5 | 1468.8 | 1787.5 | 2359.8 | 3159.2 | 3767.6 | 3767.6 | 3502.7 | 3249.1 | 2973.8 | 2743.4 |
| 70° | 1240.1 | 1241.7 | 1549.1 | 2139.8 | 3001.9 | 3737.1 | 3744.3 | 3502.7 | 3203.3 | 2863.8 | 2517.1 |
| 72.5° | 581.1 | 617.2 | 811.5 | 1396.6 | 2424.8 | 3435.3 | 3452.9 | 3271.5 | 2937.6 | 2467.3 | 1888.6 |
| 75° | 174.2 | 180.6 | 270.5 | 662.2 | 1389.4 | 2646.3 | 2685.6 | 2721.7 | 2392.7 | 1816.4 | 1163.0 |
| 77.5° | 103.5 | 102.7 | 130.8 | 224.7 | 642.9 | 1569.2 | 1586.8 | 1740.9 | 1552.3 | 1009.7 | 528.1 |
| 80° | 50.6 | 52.2 | 69.8 | 109.2 | 240.8 | 569.9 | 626.9 | 813.9 | 687.9 | 394.9 | 193.4 |
| 82.5° | 16.9 | 18.5 | 28.9 | 44.1 | 101.9 | 183.8 | 203.1 | 255.2 | 219.9 | 143.7 | 82.7 |
| 85° | 0.0 | 0.0 | 0.8 | 1.6 | 5.6 | 13.6 | 13.6 | 30.5 | 45.8 | 50.6 | 27.3 |
| 87.5° | 0.0 | 0.0 | 0.8 | 0.8 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 2.4 |
| 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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CATALOG NUMBER: ENT-SA1D-760-U-T4W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 | 573.1 |
| 2.5° | 573.9 | 572.3 | 569.1 | 565.9 | 564.3 | 560.2 | 561.0 | 559.4 | 558.6 | 558.6 | 559.4 |
| 5° | 575.5 | 573.1 | 568.3 | 565.1 | 561.8 | 560.2 | 564.3 | 565.9 | 567.5 | 567.5 | 568.3 |
| 7.5° | 585.1 | 580.3 | 574.7 | 570.7 | 571.5 | 573.9 | 580.3 | 585.1 | 587.5 | 589.1 | 590.7 |
| 10° | 601.2 | 595.6 | 587.5 | 586.7 | 588.3 | 594.8 | 603.6 | 610.8 | 617.2 | 621.2 | 621.2 |
| 12.5° | 618.0 | 610.8 | 604.4 | 606.0 | 613.2 | 622.8 | 631.7 | 639.7 | 645.3 | 649.3 | 650.1 |
| 15° | 636.5 | 629.3 | 622.8 | 626.9 | 638.9 | 650.1 | 658.2 | 661.4 | 663.8 | 667.8 | 668.6 |
| 17.5° | 653.3 | 646.9 | 641.3 | 651.7 | 662.2 | 671.0 | 673.4 | 671.8 | 668.6 | 671.0 | 672.6 |
| 20° | 671.0 | 665.4 | 662.2 | 673.4 | 680.6 | 681.4 | 675.0 | 667.8 | 659.8 | 659.8 | 660.6 |
| 22.5° | 692.7 | 685.5 | 683.8 | 689.5 | 687.1 | 677.4 | 661.4 | 650.1 | 638.9 | 637.3 | 639.7 |
| 25° | 713.5 | 706.3 | 705.5 | 701.5 | 680.6 | 655.8 | 634.1 | 621.2 | 612.4 | 613.2 | 618.0 |
| 27.5° | 734.4 | 729.6 | 730.4 | 708.7 | 662.2 | 624.5 | 595.6 | 585.1 | 587.5 | 589.1 | 594.0 |
| 30° | 755.3 | 755.3 | 758.5 | 708.7 | 636.5 | 580.3 | 553.0 | 552.2 | 558.6 | 563.5 | 569.1 |
| 32.5° | 779.4 | 786.6 | 781.0 | 699.9 | 602.0 | 535.4 | 513.7 | 515.3 | 522.5 | 530.5 | 535.4 |
| 35° | 802.6 | 819.5 | 803.4 | 679.8 | 554.6 | 494.4 | 476.8 | 474.4 | 480.0 | 487.2 | 489.6 |
| 37.5° | 839.6 | 866.8 | 822.7 | 648.5 | 505.7 | 458.3 | 440.6 | 434.2 | 428.6 | 434.2 | 433.4 |
| 40° | 903.8 | 936.7 | 837.1 | 596.4 | 458.3 | 424.6 | 406.1 | 394.1 | 380.4 | 368.4 | 368.4 |
| 42.5° | 1006.5 | 1028.2 | 845.2 | 533.0 | 410.9 | 390.9 | 372.4 | 354.8 | 333.9 | 312.2 | 312.2 |
| 45° | 1174.3 | 1179.1 | 848.4 | 465.5 | 367.6 | 357.2 | 337.9 | 321.1 | 293.8 | 272.1 | 267.3 |
| 47.5° | 1398.2 | 1377.3 | 856.4 | 400.5 | 329.9 | 327.5 | 311.4 | 292.2 | 262.5 | 242.4 | 240.0 |
| 50° | 1699.2 | 1609.3 | 891.7 | 348.3 | 299.4 | 301.8 | 289.8 | 267.3 | 239.2 | 224.7 | 221.5 |
| 52.5° | 2037.9 | 1902.2 | 919.0 | 306.6 | 272.9 | 280.1 | 271.3 | 249.6 | 225.5 | 213.5 | 211.1 |
| 55° | 2407.9 | 2184.0 | 912.6 | 278.5 | 252.8 | 260.9 | 257.6 | 239.2 | 217.5 | 207.1 | 204.7 |
| 57.5° | 2709.7 | 2382.2 | 856.4 | 253.6 | 232.8 | 244.0 | 247.2 | 232.8 | 212.7 | 203.1 | 200.7 |
| 60° | 2936.0 | 2490.6 | 740.8 | 232.8 | 216.7 | 230.4 | 239.2 | 228.8 | 211.9 | 206.3 | 203.9 |
| 62.5° | 3038.8 | 2480.9 | 590.7 | 216.7 | 204.7 | 220.7 | 240.0 | 235.2 | 223.9 | 227.9 | 228.8 |
| 65° | 2981.0 | 2359.8 | 443.1 | 204.7 | 197.4 | 222.3 | 253.6 | 253.6 | 236.8 | 244.0 | 244.8 |
| 67.5° | 2684.8 | 2042.7 | 322.7 | 195.8 | 190.2 | 230.4 | 279.3 | 263.3 | 231.2 | 236.8 | 234.4 |
| 69° | 2403.1 | 1827.6 | 276.9 | 191.0 | 184.6 | 234.4 | 290.6 | 264.9 | 224.7 | 231.2 | 224.7 |
| 70° | 2196.0 | 1633.4 | 248.8 | 187.0 | 182.2 | 234.4 | 293.8 | 263.3 | 221.5 | 226.3 | 219.1 |
| 72.5° | 1562.7 | 1134.1 | 204.7 | 179.0 | 173.4 | 216.7 | 288.1 | 254.4 | 212.7 | 207.1 | 193.4 |
| 75° | 908.6 | 626.9 | 174.2 | 170.2 | 153.3 | 190.2 | 273.7 | 244.8 | 203.9 | 193.4 | 183.8 |
| 77.5° | 381.3 | 280.1 | 148.5 | 154.9 | 135.6 | 169.4 | 256.0 | 235.2 | 193.4 | 179.0 | 174.2 |
| 80° | 154.9 | 139.7 | 123.6 | 134.0 | 118.0 | 149.3 | 236.0 | 219.1 | 178.2 | 163.7 | 156.5 |
| 82.5° | 81.1 | 77.1 | 94.7 | 108.4 | 97.9 | 137.3 | 222.3 | 207.9 | 165.3 | 150.9 | 142.1 |
| 85° | 24.1 | 32.1 | 53.8 | 73.8 | 74.6 | 123.6 | 215.9 | 192.6 | 143.7 | 124.4 | 122.8 |
| 87.5° | 1.6 | 6.4 | 18.5 | 38.5 | 49.0 | 94.7 | 175.0 | 158.1 | 116.4 | 97.9 | 98.7 |
| 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)