

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: P401407

Luminaire Tested: **ENT-SA1C-830-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401407
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1C-830-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2754 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 33.3
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

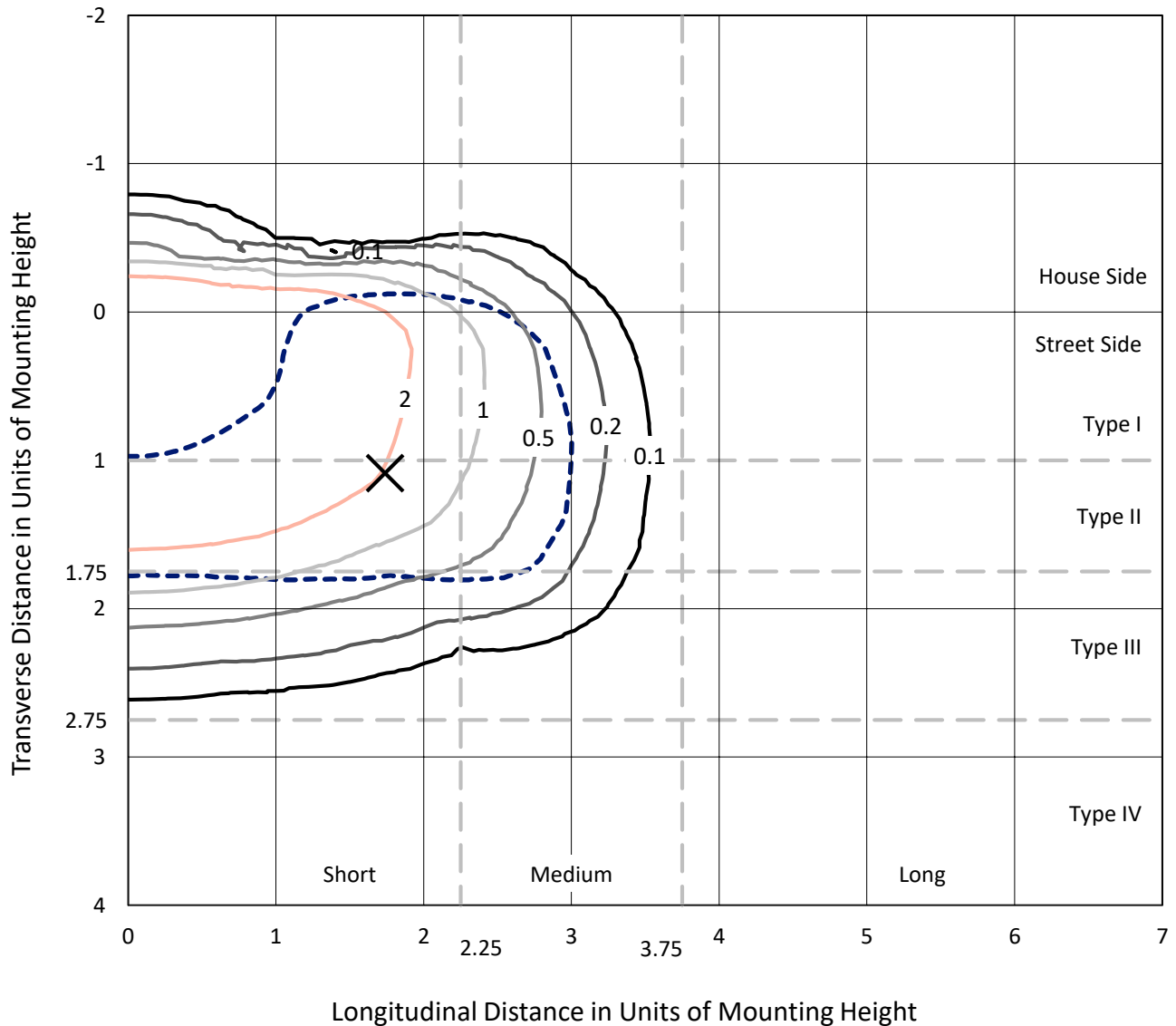


REPORT NUMBER: P401407

CATALOG NUMBER: ENT-SA1C-830-U-T3-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

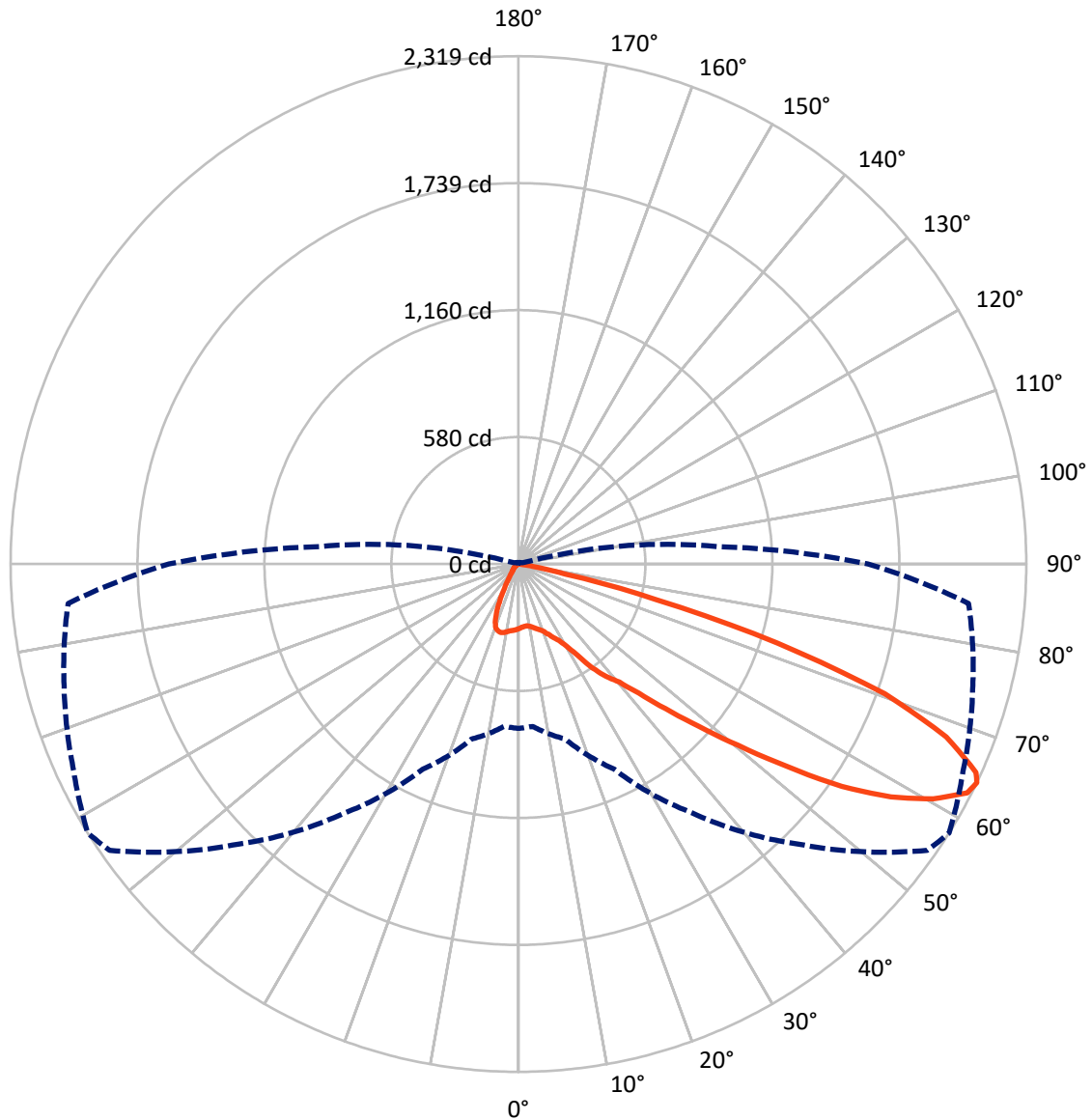


Based on 10 foot mounting height. Maximum calculated value = 4.4 fc
 Type III - Short - Full Cutoff

REPORT NUMBER: P401407

CATALOG NUMBER: ENT-SA1C-830-U-T3-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

REPORT NUMBER: P401407

CATALOG NUMBER: ENT-SA1C-830-U-T3-HSS

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 328.3 | 0.0 | 328.3 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| Street Side | Lumens | 2425.7 | 0.0 | 2425.7 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| Total | Lumens | 2754.0 | 0.0 | 2754.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 27.9 | 1.0 |
| 10°-20° | 81.3 | 3.0 |
| 20°-30° | 146.0 | 5.3 |
| 30°-40° | 255.9 | 9.3 |
| 40°-50° | 468.0 | 17.0 |
| 50°-60° | 800.5 | 29.1 |
| 60°-70° | 776.6 | 28.2 |
| 70°-80° | 192.4 | 7.0 |
| 80°-90° | 5.5 | 0.2 |
| 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° | 2754.0 | 100.0 |
| 0°-180° | 2754.0 | 100.0 |



REPORT NUMBER: P401407

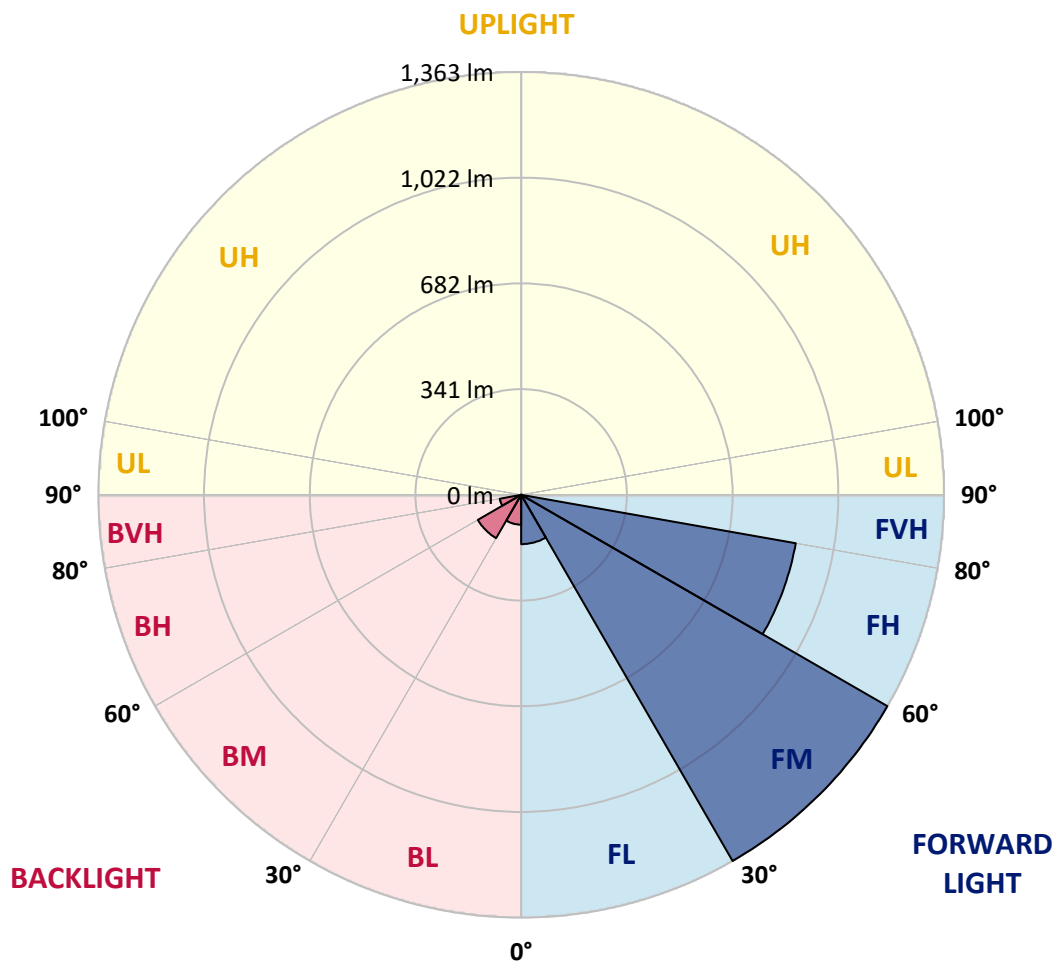
CATALOG NUMBER: ENT-SA1C-830-U-T3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 159.0 | 5.8 | | | |
| FM (30°-60°) | 1363.2 | 49.5 | | | |
| FH (60°-80°) | 898.8 | 32.6 | | | G1/1800 |
| FVH (80°-90°) | 4.6 | 0.2 | | | G0/10 |
| BL (0°-30°) | 96.1 | 3.5 | B0/110 | | |
| BM (30°-60°) | 161.3 | 5.9 | B0/220 | | |
| BH (60°-80°) | 70.1 | 2.5 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.8 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type III Short





REPORT NUMBER: P401407

CATALOG NUMBER: ENT-SA1C-830-U-T3-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 |
| 2.5° | 282.8 | 282.8 | 283.8 | 284.3 | 285.8 | 287.4 | 289.4 | 289.9 | 290.9 | 293.5 | 294.5 |
| 5° | 267.5 | 268.0 | 269.0 | 271.6 | 275.1 | 279.2 | 284.3 | 285.8 | 289.9 | 295.0 | 298.6 |
| 7.5° | 261.4 | 261.9 | 263.4 | 266.5 | 271.1 | 277.2 | 283.3 | 285.3 | 290.9 | 299.1 | 304.2 |
| 10° | 260.4 | 260.4 | 262.4 | 267.0 | 272.6 | 280.2 | 286.8 | 289.4 | 297.0 | 306.7 | 314.9 |
| 12.5° | 260.4 | 260.4 | 262.9 | 268.5 | 275.1 | 284.8 | 294.0 | 297.5 | 306.2 | 318.4 | 328.6 |
| 15° | 264.9 | 266.0 | 267.5 | 271.1 | 278.7 | 289.4 | 302.1 | 306.2 | 316.9 | 331.7 | 344.4 |
| 17.5° | 297.5 | 296.5 | 291.4 | 286.8 | 285.3 | 294.5 | 309.8 | 315.4 | 331.2 | 350.0 | 363.8 |
| 20° | 360.7 | 360.2 | 351.0 | 328.6 | 308.8 | 303.7 | 321.5 | 328.1 | 351.0 | 376.0 | 386.2 |
| 22.5° | 437.1 | 439.7 | 425.4 | 395.4 | 354.6 | 328.6 | 338.8 | 348.0 | 377.5 | 407.6 | 413.7 |
| 25° | 513.1 | 516.1 | 502.9 | 465.2 | 415.2 | 369.9 | 362.8 | 370.9 | 404.5 | 434.6 | 432.1 |
| 27.5° | 602.7 | 600.2 | 586.9 | 544.1 | 486.1 | 425.4 | 394.9 | 396.4 | 422.4 | 456.0 | 447.8 |
| 30° | 668.5 | 664.9 | 652.2 | 623.1 | 568.6 | 499.3 | 440.7 | 436.1 | 443.8 | 481.0 | 472.3 |
| 32.5° | 728.6 | 731.1 | 721.4 | 682.7 | 631.3 | 575.2 | 509.5 | 497.3 | 494.2 | 525.8 | 511.5 |
| 35° | 788.2 | 787.7 | 784.1 | 750.0 | 699.5 | 646.6 | 591.5 | 582.9 | 581.8 | 612.4 | 573.7 |
| 37.5° | 859.5 | 856.0 | 849.3 | 814.7 | 774.4 | 724.0 | 665.4 | 651.6 | 649.1 | 655.2 | 609.9 |
| 40° | 935.9 | 940.5 | 929.8 | 893.7 | 849.8 | 812.1 | 730.1 | 709.2 | 691.9 | 709.7 | 680.7 |
| 42.5° | 1049.6 | 1053.1 | 1034.3 | 1009.3 | 952.8 | 917.6 | 834.6 | 806.0 | 797.9 | 824.9 | 792.3 |
| 45° | 1192.2 | 1185.6 | 1172.9 | 1155.5 | 1108.7 | 1055.2 | 968.6 | 941.6 | 932.9 | 979.3 | 925.8 |
| 47.5° | 1303.3 | 1302.3 | 1302.8 | 1299.2 | 1292.1 | 1227.9 | 1125.0 | 1106.6 | 1098.0 | 1164.7 | 1105.6 |
| 50° | 1373.6 | 1377.7 | 1395.0 | 1439.3 | 1471.9 | 1444.9 | 1324.2 | 1301.8 | 1295.1 | 1364.4 | 1284.4 |
| 52.5° | 1426.6 | 1436.3 | 1465.3 | 1552.9 | 1657.4 | 1666.6 | 1566.7 | 1535.1 | 1519.8 | 1539.2 | 1428.1 |
| 55° | 1453.6 | 1458.2 | 1502.5 | 1631.9 | 1795.5 | 1861.2 | 1819.4 | 1792.9 | 1731.3 | 1694.6 | 1596.8 |
| 57.5° | 1390.4 | 1383.3 | 1459.7 | 1624.3 | 1866.8 | 2018.1 | 2036.0 | 2005.9 | 1907.0 | 1878.5 | 1801.6 |
| 60° | 1224.8 | 1221.8 | 1307.9 | 1505.6 | 1804.6 | 2054.8 | 2196.4 | 2177.6 | 2086.9 | 2019.1 | 1946.8 |
| 62.5° | 934.4 | 939.5 | 1030.7 | 1232.0 | 1583.0 | 1949.3 | 2285.6 | 2300.9 | 2204.6 | 2103.7 | 2054.3 |
| 64° | 750.5 | 744.4 | 827.9 | 1032.8 | 1388.9 | 1808.7 | 2279.0 | 2319.2 | 2240.3 | 2148.0 | 2064.0 |
| 65° | 630.2 | 617.0 | 697.0 | 882.4 | 1224.8 | 1706.8 | 2232.1 | 2296.8 | 2242.8 | 2158.7 | 2028.8 |
| 67.5° | 331.7 | 338.8 | 373.0 | 536.0 | 826.9 | 1290.6 | 2010.0 | 2107.8 | 2129.7 | 2012.5 | 1768.0 |
| 70° | 148.8 | 149.8 | 171.7 | 273.6 | 457.5 | 837.1 | 1616.6 | 1775.1 | 1787.3 | 1653.3 | 1280.9 |
| 72.5° | 49.4 | 49.9 | 75.9 | 109.5 | 192.1 | 387.7 | 1091.9 | 1236.0 | 1262.5 | 1072.0 | 695.0 |
| 75° | 30.6 | 31.6 | 40.3 | 59.1 | 89.2 | 135.5 | 553.3 | 651.1 | 656.7 | 475.4 | 252.7 |
| 77.5° | 19.4 | 20.4 | 24.5 | 35.2 | 48.9 | 51.5 | 181.4 | 219.6 | 248.6 | 171.2 | 78.5 |
| 80° | 12.2 | 12.2 | 15.8 | 21.4 | 25.5 | 21.9 | 49.4 | 65.2 | 78.5 | 57.6 | 26.5 |
| 82.5° | 4.6 | 4.6 | 8.2 | 11.7 | 10.7 | 7.6 | 13.2 | 17.3 | 30.1 | 28.5 | 12.7 |
| 85° | 0.0 | 0.0 | 0.5 | 1.0 | 0.5 | 1.0 | 2.5 | 3.6 | 5.6 | 8.2 | 4.1 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 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: P401407

CATALOG NUMBER: ENT-SA1C-830-U-T3-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 | 295.0 |
| 2.5° | 296.0 | 297.0 | 299.1 | 299.6 | 300.1 | 298.6 | 300.1 | 298.6 | 299.6 | 299.6 | 299.6 |
| 5° | 300.6 | 302.1 | 303.7 | 304.2 | 303.7 | 300.1 | 301.1 | 298.6 | 298.1 | 298.1 | 298.1 |
| 7.5° | 306.7 | 308.2 | 310.8 | 309.3 | 306.2 | 301.1 | 300.6 | 297.0 | 295.5 | 295.5 | 296.0 |
| 10° | 317.9 | 319.5 | 320.5 | 317.4 | 311.3 | 303.7 | 298.1 | 290.4 | 286.8 | 285.3 | 285.3 |
| 12.5° | 332.2 | 333.7 | 333.2 | 328.1 | 316.9 | 301.1 | 285.3 | 270.5 | 259.8 | 255.8 | 251.7 |
| 15° | 347.5 | 349.5 | 348.5 | 337.8 | 316.4 | 288.4 | 257.8 | 223.2 | 201.8 | 188.0 | 185.5 |
| 17.5° | 365.3 | 367.3 | 362.3 | 342.9 | 308.8 | 261.4 | 203.3 | 156.4 | 125.3 | 113.6 | 113.1 |
| 20° | 387.2 | 386.2 | 374.0 | 343.4 | 295.0 | 211.4 | 136.0 | 97.8 | 84.6 | 81.5 | 81.0 |
| 22.5° | 412.2 | 407.6 | 385.2 | 340.3 | 257.3 | 143.7 | 87.6 | 77.4 | 75.9 | 74.9 | 74.9 |
| 25° | 426.4 | 418.3 | 389.3 | 331.7 | 198.2 | 91.7 | 74.4 | 72.3 | 70.3 | 68.3 | 67.8 |
| 27.5° | 437.7 | 425.4 | 390.8 | 303.2 | 132.0 | 70.3 | 67.3 | 65.2 | 62.2 | 59.1 | 58.6 |
| 30° | 458.0 | 439.7 | 393.3 | 253.2 | 81.0 | 60.1 | 58.6 | 55.0 | 50.4 | 47.4 | 46.4 |
| 32.5° | 494.7 | 468.2 | 403.5 | 189.5 | 59.1 | 53.0 | 48.9 | 44.3 | 39.2 | 36.2 | 36.2 |
| 35° | 534.0 | 495.2 | 408.6 | 124.8 | 51.5 | 46.4 | 40.3 | 34.6 | 30.1 | 27.5 | 27.0 |
| 37.5° | 570.1 | 534.0 | 407.1 | 76.4 | 45.9 | 39.7 | 33.1 | 27.5 | 23.4 | 21.4 | 21.4 |
| 40° | 644.0 | 601.7 | 386.2 | 52.5 | 40.3 | 33.6 | 27.0 | 21.4 | 18.9 | 17.3 | 17.3 |
| 42.5° | 749.5 | 676.1 | 339.8 | 44.8 | 35.2 | 28.0 | 21.4 | 17.8 | 15.8 | 14.3 | 14.3 |
| 45° | 867.7 | 758.1 | 271.1 | 40.3 | 30.6 | 23.4 | 17.8 | 14.8 | 12.7 | 12.2 | 12.2 |
| 47.5° | 1022.6 | 857.5 | 199.2 | 36.2 | 26.5 | 19.9 | 14.8 | 12.2 | 11.2 | 10.7 | 10.7 |
| 50° | 1158.1 | 938.0 | 136.0 | 31.6 | 23.4 | 16.8 | 12.7 | 11.2 | 10.2 | 9.7 | 9.7 |
| 52.5° | 1281.4 | 994.0 | 89.7 | 27.5 | 20.9 | 13.8 | 11.7 | 10.2 | 9.7 | 9.2 | 9.2 |
| 55° | 1426.6 | 1036.8 | 60.6 | 23.9 | 18.3 | 12.7 | 11.2 | 10.2 | 9.2 | 9.2 | 8.7 |
| 57.5° | 1549.9 | 1062.3 | 43.3 | 20.4 | 16.3 | 11.7 | 10.7 | 9.7 | 8.7 | 8.2 | 8.2 |
| 60° | 1621.7 | 1032.2 | 31.6 | 17.8 | 14.3 | 10.7 | 9.7 | 8.7 | 8.2 | 7.6 | 7.6 |
| 62.5° | 1641.6 | 974.2 | 24.5 | 15.3 | 12.2 | 9.7 | 8.7 | 7.6 | 7.1 | 6.6 | 6.6 |
| 64° | 1595.7 | 912.0 | 20.9 | 13.2 | 10.7 | 8.7 | 8.2 | 7.1 | 6.1 | 5.1 | 5.1 |
| 65° | 1531.0 | 854.4 | 18.9 | 12.2 | 9.7 | 8.2 | 7.6 | 6.6 | 5.1 | 4.1 | 4.1 |
| 67.5° | 1275.8 | 681.2 | 15.3 | 10.2 | 7.6 | 7.1 | 6.1 | 5.1 | 3.6 | 2.5 | 2.5 |
| 70° | 905.9 | 476.4 | 11.7 | 8.2 | 6.6 | 6.6 | 5.6 | 4.1 | 2.0 | 1.0 | 1.0 |
| 72.5° | 479.4 | 247.6 | 9.7 | 6.6 | 5.1 | 5.1 | 4.6 | 2.5 | 1.5 | 1.0 | 0.5 |
| 75° | 167.6 | 81.5 | 8.2 | 5.6 | 4.6 | 3.6 | 3.1 | 2.0 | 1.5 | 1.0 | 0.5 |
| 77.5° | 50.9 | 27.0 | 7.1 | 5.6 | 4.1 | 3.1 | 3.6 | 3.1 | 3.1 | 2.0 | 1.5 |
| 80° | 16.3 | 9.7 | 4.1 | 3.6 | 4.1 | 4.1 | 3.6 | 3.1 | 3.6 | 2.5 | 2.0 |
| 82.5° | 6.1 | 3.6 | 1.5 | 2.0 | 2.0 | 2.5 | 2.5 | 2.0 | 1.5 | 0.5 | 0.0 |
| 85° | 2.0 | 1.5 | 1.0 | 1.5 | 1.5 | 1.5 | 1.0 | 1.0 | 0.5 | 0.0 | 0.0 |
| 87.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 | 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 |

(END OF REPORT)