

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: P401214

Luminaire Tested: **ENC-SA1B-827-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401214
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: ENC-SA1B-827-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2520 lumens
Efficiency: N/A
Efficacy: 99.2 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): 25.4
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

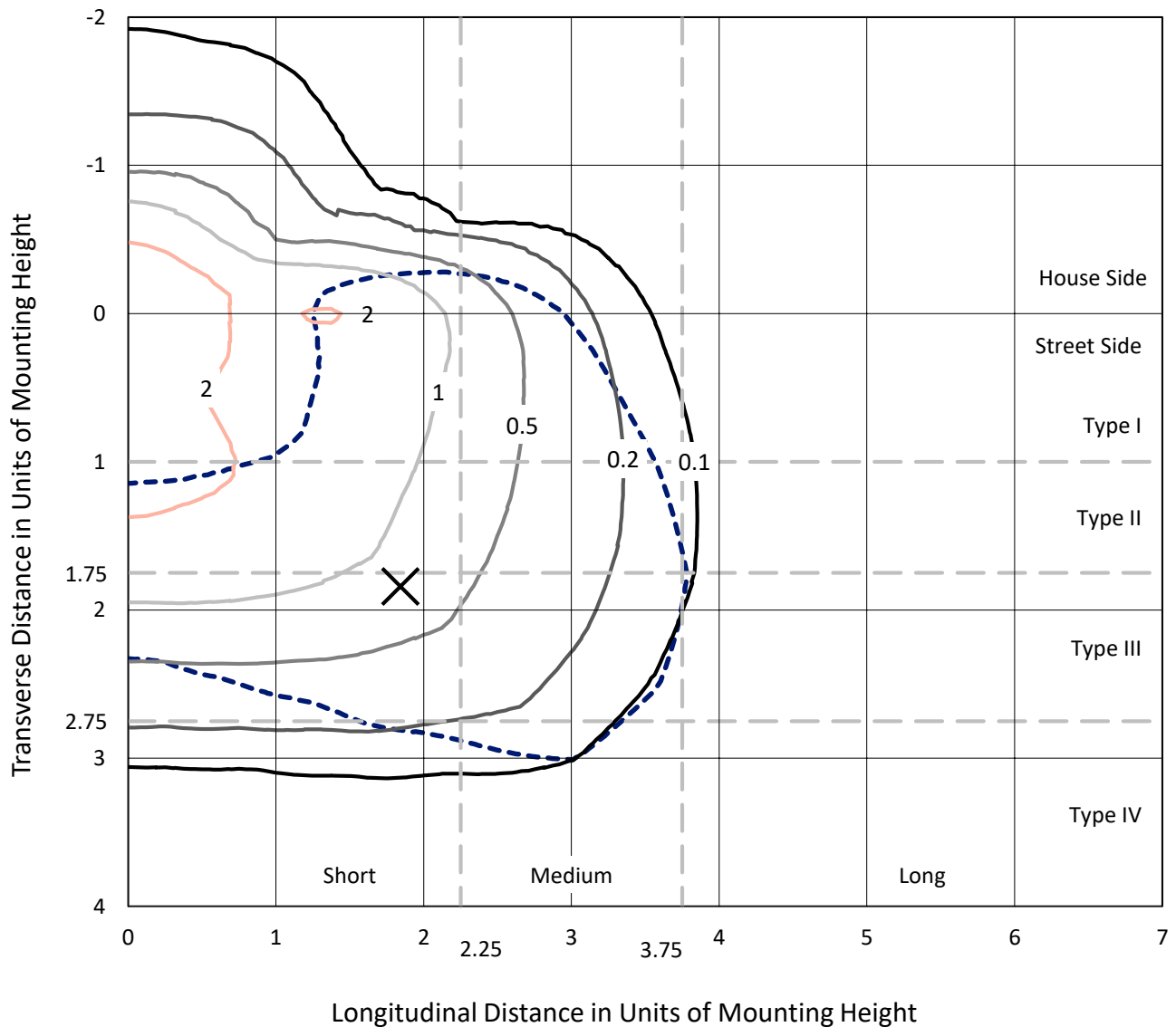


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

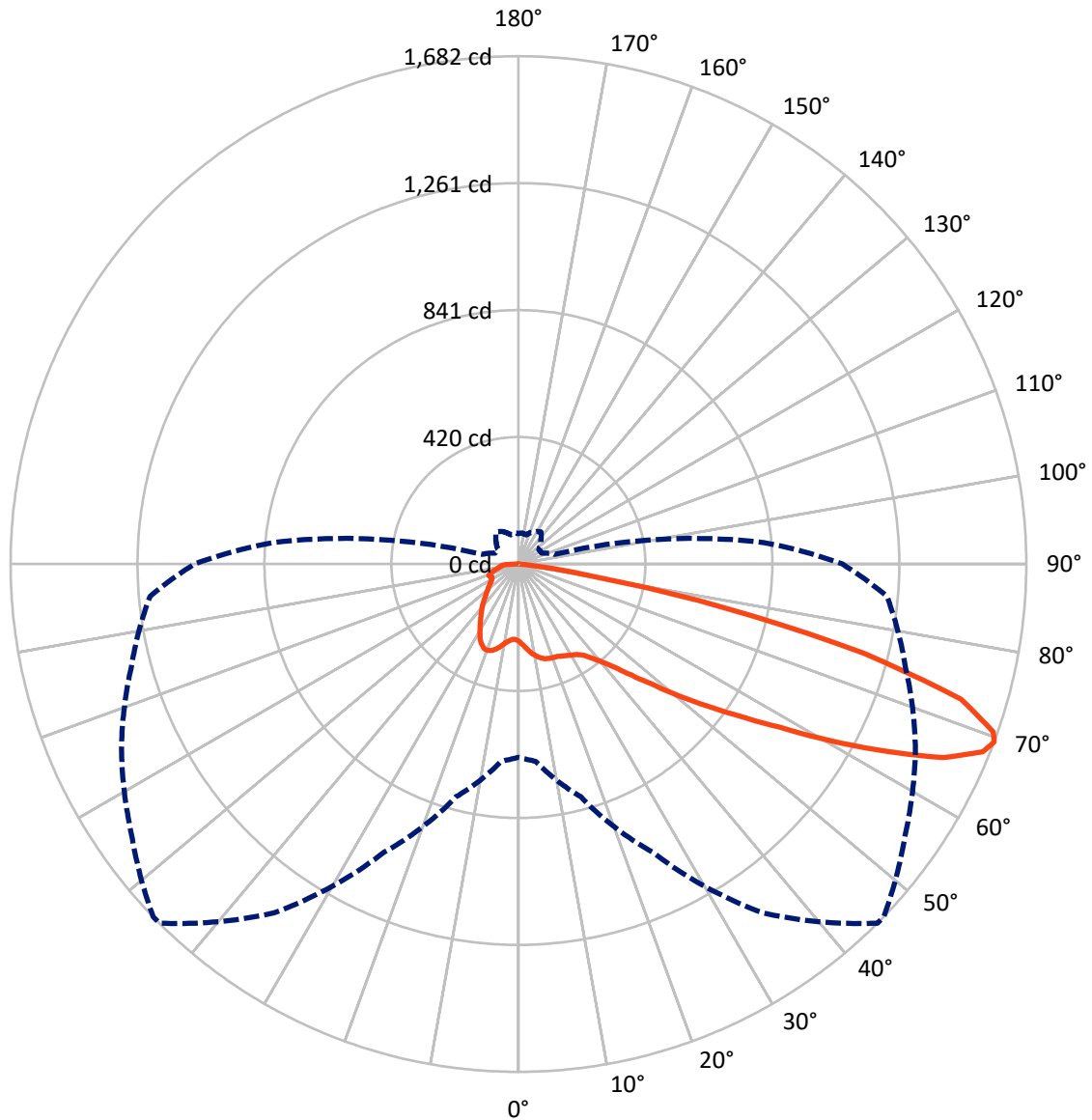


Based on 10 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - Semi-Cutoff

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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 | 593.3 | 0.0 | 593.3 |
| | % Fixture | 23.5 | 0.0 | 23.5 |
| Street Side | Lumens | 1926.7 | 0.0 | 1926.7 |
| | % Fixture | 76.5 | 0.0 | 76.5 |
| Total | Lumens | 2520.0 | 0.0 | 2520.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 26.0 | 1.0 |
| 10°-20° | 86.4 | 3.4 |
| 20°-30° | 145.9 | 5.8 |
| 30°-40° | 211.2 | 8.4 |
| 40°-50° | 318.8 | 12.7 |
| 50°-60° | 537.6 | 21.3 |
| 60°-70° | 739.6 | 29.3 |
| 70°-80° | 409.8 | 16.3 |
| 80°-90° | 44.6 | 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° | 2520.0 | 100.0 |
| 0°-180° | 2520.0 | 100.0 |

Coefficient of Utilization



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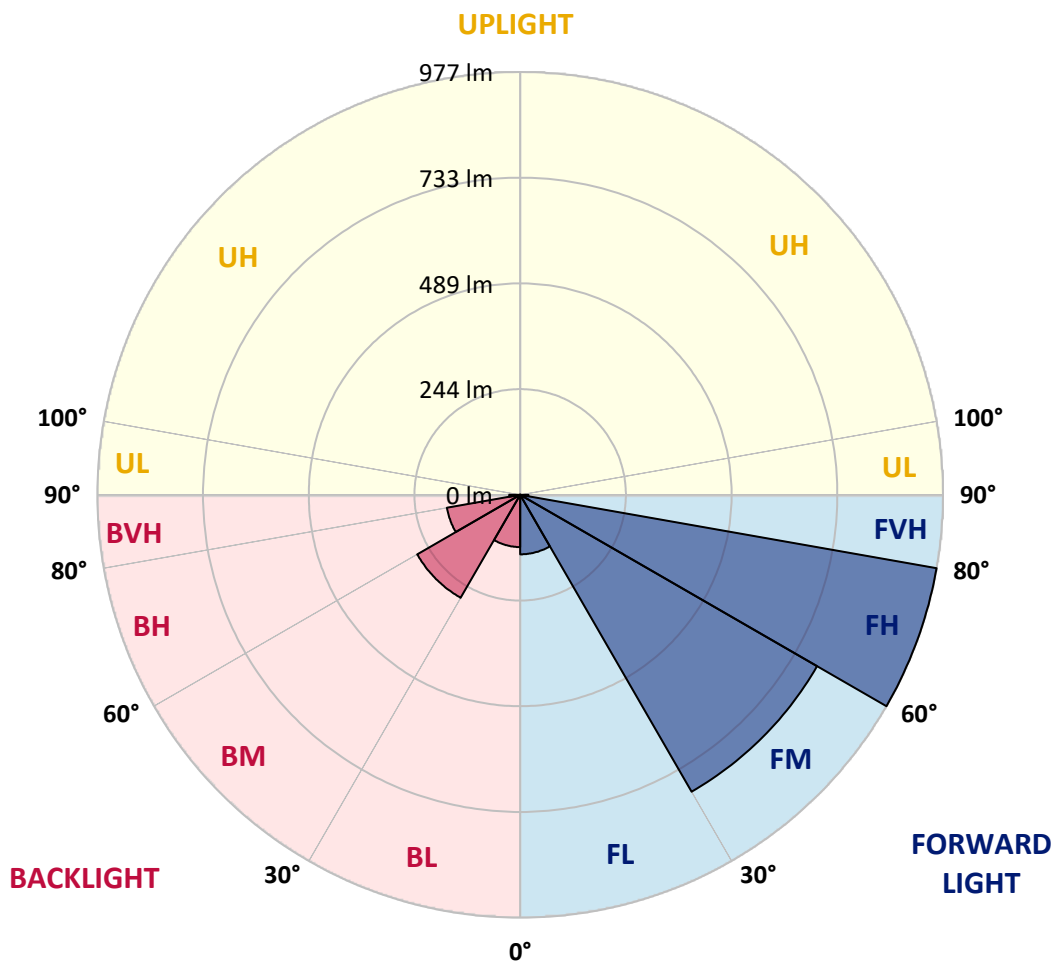
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 137.5 | 5.5 | | | |
| FM | (30°-60°) | 792.6 | 31.5 | | | |
| FH | (60°-80°) | 977.5 | 38.8 | | | G1/1800 |
| FVH | (80°-90°) | 19.1 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 120.8 | 4.8 | B1/500 | | |
| BM | (30°-60°) | 275.0 | 10.9 | B1/1000 | | |
| BH | (60°-80°) | 172.0 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 25.5 | 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-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 |
| 2.5° | 271.9 | 271.5 | 271.9 | 270.5 | 269.0 | 266.9 | 266.2 | 263.7 | 261.9 | 259.4 | 257.2 |
| 5° | 292.0 | 293.0 | 292.7 | 290.9 | 285.2 | 280.9 | 280.9 | 275.5 | 269.8 | 264.4 | 259.4 |
| 7.5° | 313.8 | 313.8 | 311.7 | 308.1 | 302.4 | 295.9 | 295.2 | 288.0 | 279.8 | 272.3 | 264.4 |
| 10° | 329.6 | 330.3 | 327.1 | 322.1 | 314.9 | 308.1 | 307.4 | 299.1 | 291.3 | 281.6 | 271.9 |
| 12.5° | 340.7 | 340.7 | 337.8 | 333.2 | 324.6 | 318.1 | 317.4 | 309.9 | 301.6 | 291.6 | 280.5 |
| 15° | 346.4 | 345.7 | 343.2 | 338.2 | 330.7 | 325.3 | 324.2 | 317.8 | 311.0 | 300.9 | 289.1 |
| 17.5° | 345.3 | 345.3 | 343.2 | 338.2 | 332.8 | 328.5 | 327.8 | 323.1 | 318.1 | 308.4 | 296.6 |
| 20° | 340.7 | 340.3 | 339.6 | 335.7 | 332.1 | 330.3 | 329.6 | 327.4 | 324.2 | 316.0 | 304.9 |
| 22.5° | 336.4 | 336.0 | 335.0 | 332.5 | 331.0 | 332.1 | 332.1 | 331.7 | 331.4 | 324.9 | 314.2 |
| 25° | 338.9 | 338.5 | 336.4 | 332.8 | 332.5 | 337.5 | 337.8 | 338.9 | 339.6 | 334.2 | 323.1 |
| 27.5° | 356.5 | 355.4 | 349.3 | 340.0 | 336.7 | 343.2 | 343.9 | 347.1 | 346.4 | 340.7 | 331.0 |
| 30° | 390.8 | 391.2 | 377.6 | 357.5 | 346.8 | 349.6 | 350.0 | 353.6 | 352.5 | 347.9 | 340.0 |
| 32.5° | 442.8 | 442.8 | 420.6 | 390.1 | 362.9 | 357.2 | 356.1 | 359.3 | 363.6 | 357.5 | 349.6 |
| 35° | 508.7 | 506.9 | 480.0 | 433.1 | 390.5 | 370.1 | 369.3 | 367.9 | 375.4 | 369.7 | 358.2 |
| 37.5° | 575.0 | 568.5 | 542.4 | 490.8 | 429.2 | 395.1 | 392.3 | 388.0 | 392.3 | 380.1 | 370.1 |
| 40° | 628.4 | 627.3 | 605.8 | 553.5 | 475.0 | 425.6 | 423.4 | 404.5 | 407.3 | 397.7 | 393.7 |
| 42.5° | 687.1 | 687.8 | 673.5 | 620.8 | 529.8 | 466.8 | 461.1 | 431.7 | 439.9 | 436.3 | 434.5 |
| 45° | 751.6 | 750.9 | 740.1 | 685.0 | 596.8 | 524.1 | 516.9 | 480.8 | 497.6 | 495.5 | 505.5 |
| 47.5° | 801.0 | 805.0 | 798.9 | 759.8 | 676.4 | 593.6 | 588.2 | 544.2 | 569.6 | 586.8 | 605.8 |
| 50° | 868.4 | 868.0 | 851.5 | 835.4 | 768.8 | 682.5 | 677.1 | 628.0 | 664.5 | 689.6 | 724.4 |
| 52.5° | 951.9 | 949.0 | 915.0 | 909.2 | 881.3 | 779.5 | 774.9 | 723.7 | 776.0 | 797.8 | 868.4 |
| 55° | 1004.2 | 1003.8 | 986.2 | 996.3 | 997.0 | 887.7 | 882.0 | 836.5 | 895.6 | 920.7 | 1027.4 |
| 57.5° | 1047.9 | 1048.2 | 1062.9 | 1098.0 | 1121.7 | 1019.2 | 1017.1 | 961.5 | 1021.4 | 1056.5 | 1182.6 |
| 60° | 1081.5 | 1088.7 | 1129.9 | 1210.1 | 1249.6 | 1186.9 | 1177.5 | 1118.8 | 1158.9 | 1172.9 | 1301.1 |
| 62.5° | 1067.9 | 1077.2 | 1158.2 | 1276.4 | 1377.8 | 1364.5 | 1361.3 | 1276.4 | 1276.1 | 1268.9 | 1389.6 |
| 65° | 960.5 | 980.5 | 1108.0 | 1273.9 | 1462.4 | 1545.1 | 1540.4 | 1425.1 | 1385.0 | 1349.1 | 1416.1 |
| 67.5° | 786.0 | 790.3 | 944.0 | 1176.5 | 1461.6 | 1658.7 | 1653.7 | 1533.3 | 1452.7 | 1364.9 | 1338.4 |
| 69° | 639.8 | 655.6 | 797.8 | 1053.2 | 1410.0 | 1681.6 | 1681.6 | 1563.4 | 1450.2 | 1327.3 | 1224.5 |
| 70° | 553.5 | 554.2 | 691.4 | 955.1 | 1339.8 | 1668.0 | 1671.2 | 1563.4 | 1429.7 | 1278.2 | 1123.5 |
| 72.5° | 259.4 | 275.5 | 362.2 | 623.3 | 1082.3 | 1533.3 | 1541.2 | 1460.2 | 1311.2 | 1101.2 | 842.9 |
| 75° | 77.7 | 80.6 | 120.7 | 295.6 | 620.1 | 1181.1 | 1198.7 | 1214.8 | 1067.9 | 810.7 | 519.1 |
| 77.5° | 46.2 | 45.9 | 58.4 | 100.3 | 287.0 | 700.4 | 708.2 | 777.0 | 692.8 | 450.7 | 235.7 |
| 80° | 22.6 | 23.3 | 31.2 | 48.7 | 107.5 | 254.4 | 279.8 | 363.3 | 307.0 | 176.3 | 86.3 |
| 82.5° | 7.5 | 8.2 | 12.9 | 19.7 | 45.5 | 82.0 | 90.6 | 113.9 | 98.2 | 64.1 | 36.9 |
| 85° | 0.0 | 0.0 | 0.4 | 0.7 | 2.5 | 6.1 | 6.1 | 13.6 | 20.4 | 22.6 | 12.2 |
| 87.5° | 0.0 | 0.0 | 0.4 | 0.4 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 1.1 |
| 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: ENC-SA1B-827-U-T4W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 | 255.8 |
| 2.5° | 256.1 | 255.4 | 254.0 | 252.6 | 251.8 | 250.1 | 250.4 | 249.7 | 249.3 | 249.3 | 249.7 |
| 5° | 256.9 | 255.8 | 253.6 | 252.2 | 250.8 | 250.1 | 251.8 | 252.6 | 253.3 | 253.3 | 253.6 |
| 7.5° | 261.2 | 259.0 | 256.5 | 254.7 | 255.1 | 256.1 | 259.0 | 261.2 | 262.2 | 263.0 | 263.7 |
| 10° | 268.3 | 265.8 | 262.2 | 261.9 | 262.6 | 265.5 | 269.4 | 272.6 | 275.5 | 277.3 | 277.3 |
| 12.5° | 275.8 | 272.6 | 269.8 | 270.5 | 273.7 | 278.0 | 281.9 | 285.5 | 288.0 | 289.8 | 290.2 |
| 15° | 284.1 | 280.9 | 278.0 | 279.8 | 285.2 | 290.2 | 293.8 | 295.2 | 296.3 | 298.1 | 298.4 |
| 17.5° | 291.6 | 288.7 | 286.2 | 290.9 | 295.6 | 299.5 | 300.6 | 299.8 | 298.4 | 299.5 | 300.2 |
| 20° | 299.5 | 297.0 | 295.6 | 300.6 | 303.8 | 304.1 | 301.3 | 298.1 | 294.5 | 294.5 | 294.8 |
| 22.5° | 309.2 | 305.9 | 305.2 | 307.7 | 306.7 | 302.4 | 295.2 | 290.2 | 285.2 | 284.4 | 285.5 |
| 25° | 318.5 | 315.3 | 314.9 | 313.1 | 303.8 | 292.7 | 283.0 | 277.3 | 273.3 | 273.7 | 275.8 |
| 27.5° | 327.8 | 325.6 | 326.0 | 316.3 | 295.6 | 278.7 | 265.8 | 261.2 | 262.2 | 263.0 | 265.1 |
| 30° | 337.1 | 337.1 | 338.5 | 316.3 | 284.1 | 259.0 | 246.8 | 246.5 | 249.3 | 251.5 | 254.0 |
| 32.5° | 347.9 | 351.1 | 348.6 | 312.4 | 268.7 | 238.9 | 229.3 | 230.0 | 233.2 | 236.8 | 238.9 |
| 35° | 358.2 | 365.8 | 358.6 | 303.4 | 247.5 | 220.7 | 212.8 | 211.7 | 214.2 | 217.5 | 218.5 |
| 37.5° | 374.7 | 386.9 | 367.2 | 289.5 | 225.7 | 204.6 | 196.7 | 193.8 | 191.3 | 193.8 | 193.5 |
| 40° | 403.4 | 418.1 | 373.6 | 266.2 | 204.6 | 189.5 | 181.3 | 175.9 | 169.8 | 164.4 | 164.4 |
| 42.5° | 449.2 | 458.9 | 377.2 | 237.9 | 183.4 | 174.5 | 166.2 | 158.3 | 149.0 | 139.4 | 139.4 |
| 45° | 524.1 | 526.3 | 378.7 | 207.8 | 164.1 | 159.4 | 150.8 | 143.3 | 131.1 | 121.4 | 119.3 |
| 47.5° | 624.1 | 614.7 | 382.2 | 178.8 | 147.2 | 146.2 | 139.0 | 130.4 | 117.1 | 108.2 | 107.1 |
| 50° | 758.4 | 718.3 | 398.0 | 155.5 | 133.6 | 134.7 | 129.3 | 119.3 | 106.8 | 100.3 | 98.9 |
| 52.5° | 909.6 | 849.0 | 410.2 | 136.8 | 121.8 | 125.0 | 121.1 | 111.4 | 100.7 | 95.3 | 94.2 |
| 55° | 1074.7 | 974.8 | 407.3 | 124.3 | 112.8 | 116.4 | 115.0 | 106.8 | 97.1 | 92.4 | 91.4 |
| 57.5° | 1209.4 | 1063.3 | 382.2 | 113.2 | 103.9 | 108.9 | 110.3 | 103.9 | 94.9 | 90.6 | 89.6 |
| 60° | 1310.5 | 1111.6 | 330.7 | 103.9 | 96.7 | 102.8 | 106.8 | 102.1 | 94.6 | 92.1 | 91.0 |
| 62.5° | 1356.3 | 1107.3 | 263.7 | 96.7 | 91.4 | 98.5 | 107.1 | 105.0 | 99.9 | 101.7 | 102.1 |
| 65° | 1330.5 | 1053.2 | 197.8 | 91.4 | 88.1 | 99.2 | 113.2 | 113.2 | 105.7 | 108.9 | 109.3 |
| 67.5° | 1198.3 | 911.7 | 144.0 | 87.4 | 84.9 | 102.8 | 124.7 | 117.5 | 103.2 | 105.7 | 104.6 |
| 69° | 1072.6 | 815.7 | 123.6 | 85.3 | 82.4 | 104.6 | 129.7 | 118.2 | 100.3 | 103.2 | 100.3 |
| 70° | 980.2 | 729.0 | 111.1 | 83.5 | 81.3 | 104.6 | 131.1 | 117.5 | 98.9 | 101.0 | 97.8 |
| 72.5° | 697.5 | 506.2 | 91.4 | 79.9 | 77.4 | 96.7 | 128.6 | 113.6 | 94.9 | 92.4 | 86.3 |
| 75° | 405.5 | 279.8 | 77.7 | 75.9 | 68.4 | 84.9 | 122.2 | 109.3 | 91.0 | 86.3 | 82.0 |
| 77.5° | 170.2 | 125.0 | 66.3 | 69.1 | 60.5 | 75.6 | 114.3 | 105.0 | 86.3 | 79.9 | 77.7 |
| 80° | 69.1 | 62.3 | 55.2 | 59.8 | 52.7 | 66.6 | 105.3 | 97.8 | 79.5 | 73.1 | 69.9 |
| 82.5° | 36.2 | 34.4 | 42.3 | 48.4 | 43.7 | 61.3 | 99.2 | 92.8 | 73.8 | 67.3 | 63.4 |
| 85° | 10.7 | 14.3 | 24.0 | 33.0 | 33.3 | 55.2 | 96.4 | 86.0 | 64.1 | 55.5 | 54.8 |
| 87.5° | 0.7 | 2.9 | 8.2 | 17.2 | 21.9 | 42.3 | 78.1 | 70.6 | 51.9 | 43.7 | 44.1 |
| 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)