

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: P401393

Luminaire Tested: **ENT-SA1C-827-U-T4W-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401393
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1C-827-U-T4W-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2473 lumens
Efficiency: N/A
Efficacy: 74.3 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

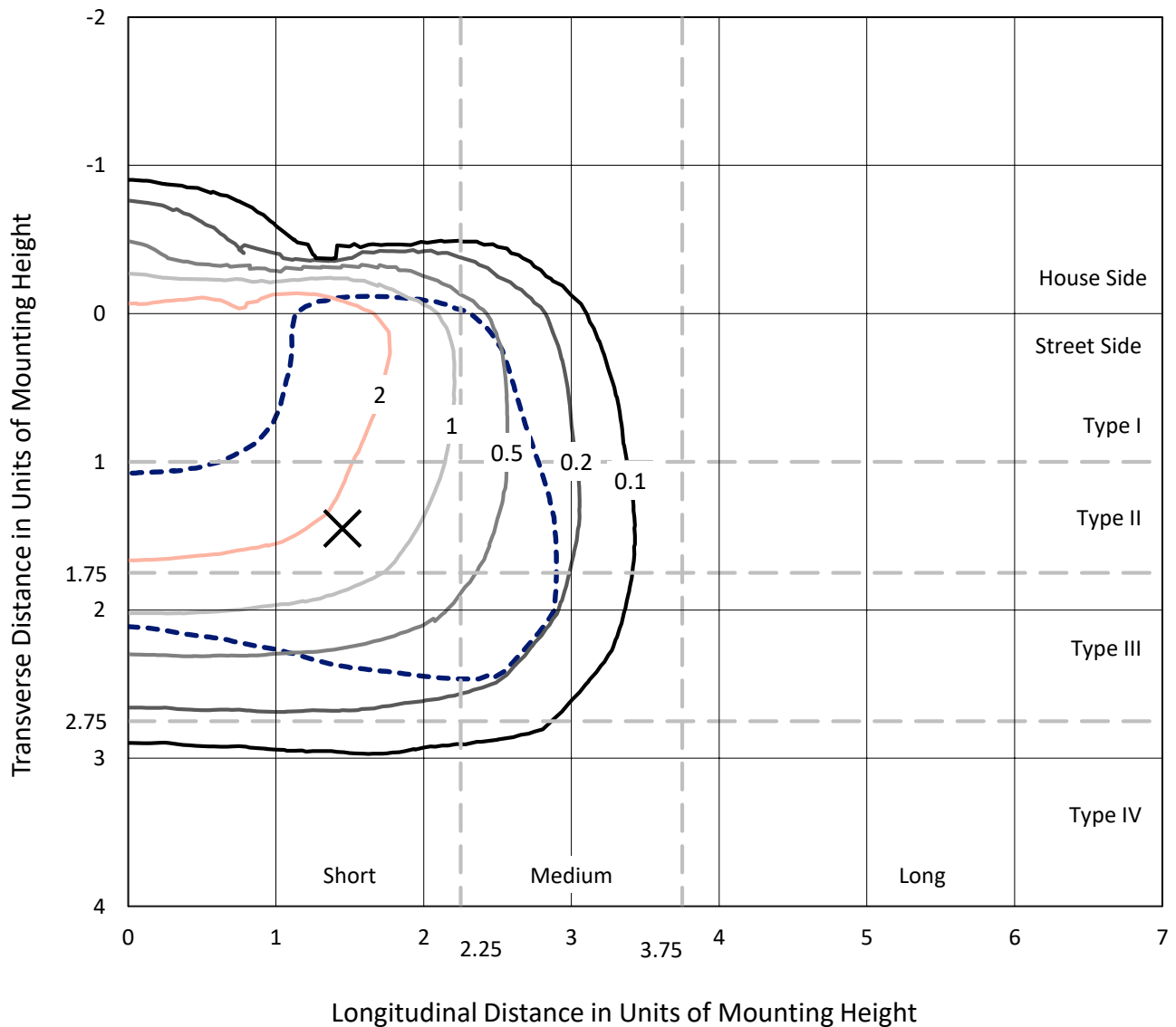
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

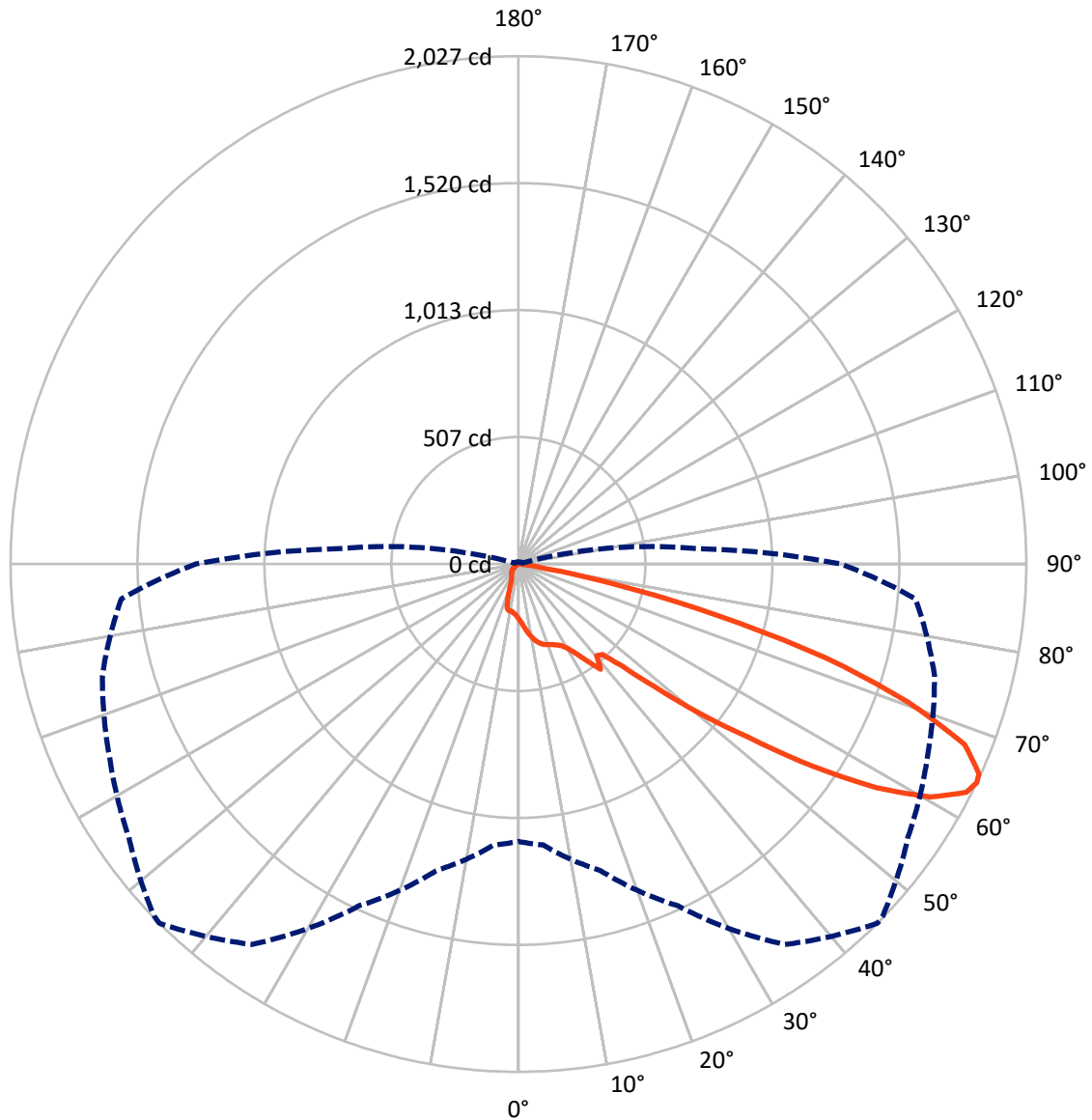
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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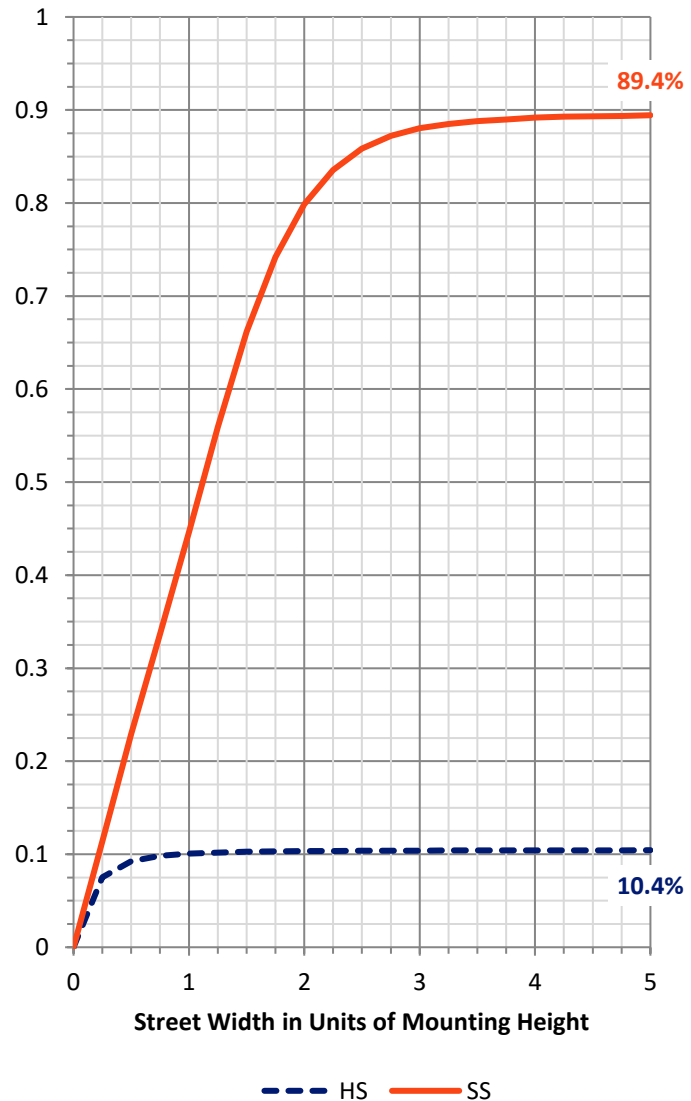
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 260.9 | 0.0 | 260.9 |
| | % Fixture | 10.6 | 0.0 | 10.6 |
| Street Side | Lumens | 2212.1 | 0.0 | 2212.1 |
| | % Fixture | 89.4 | 0.0 | 89.4 |
| Total | Lumens | 2473.0 | 0.0 | 2473.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 22.2 | 0.9 |
| 10°-20° | 69.3 | 2.8 |
| 20°-30° | 112.9 | 4.6 |
| 30°-40° | 179.3 | 7.2 |
| 40°-50° | 341.5 | 13.8 |
| 50°-60° | 703.7 | 28.5 |
| 60°-70° | 785.9 | 31.8 |
| 70°-80° | 248.2 | 10.0 |
| 80°-90° | 10.1 | 0.4 |
| 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° | 2473.0 | 100.0 |
| 0°-180° | 2473.0 | 100.0 |



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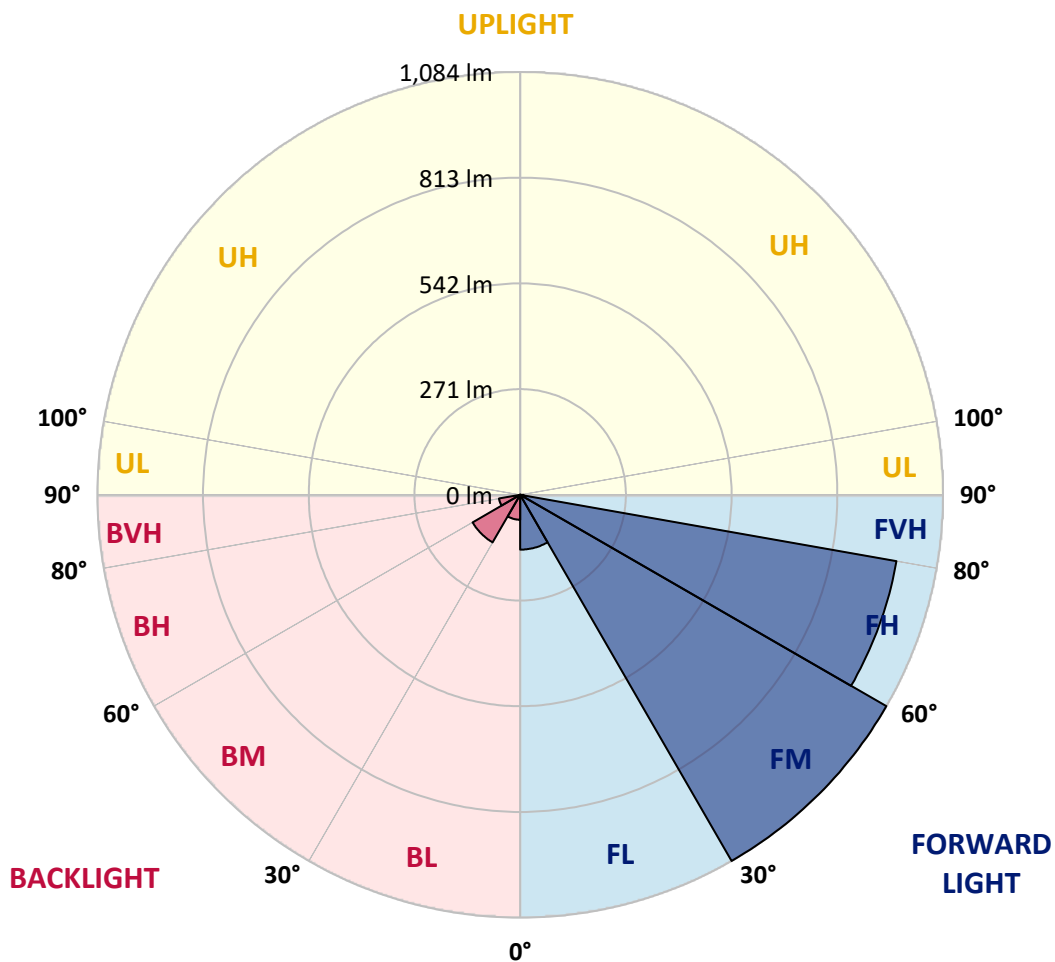
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 140.5 | 5.7 | | | |
| FM | (30°-60°) | 1083.6 | 43.8 | | | |
| FH | (60°-80°) | 979.1 | 39.6 | | | G1/1800 |
| FVH | (80°-90°) | 8.9 | 0.4 | | | G0/10 |
| BL | (0°-30°) | 63.9 | 2.6 | B0/110 | | |
| BM | (30°-60°) | 140.8 | 5.7 | B0/220 | | |
| BH | (60°-80°) | 55.0 | 2.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.2 | 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





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 |
| 2.5° | 241.8 | 242.8 | 241.4 | 239.5 | 237.6 | 234.3 | 234.8 | 230.5 | 227.2 | 224.9 | 221.1 |
| 5° | 272.5 | 272.0 | 269.2 | 264.9 | 260.7 | 254.6 | 253.6 | 247.0 | 239.9 | 232.4 | 225.3 |
| 7.5° | 303.6 | 302.2 | 299.3 | 293.7 | 285.7 | 277.7 | 275.3 | 265.9 | 255.5 | 244.2 | 231.9 |
| 10° | 329.0 | 328.1 | 324.8 | 318.7 | 309.2 | 297.0 | 297.0 | 283.8 | 270.1 | 256.4 | 241.8 |
| 12.5° | 349.8 | 348.8 | 345.1 | 337.5 | 326.2 | 315.4 | 314.0 | 302.2 | 287.1 | 271.1 | 253.1 |
| 15° | 362.5 | 361.6 | 357.3 | 348.8 | 338.9 | 329.0 | 327.6 | 316.3 | 302.6 | 284.3 | 263.5 |
| 17.5° | 365.8 | 364.9 | 361.6 | 354.0 | 346.5 | 338.0 | 336.1 | 326.2 | 314.4 | 295.6 | 274.4 |
| 20° | 364.4 | 362.5 | 360.6 | 354.5 | 348.4 | 342.7 | 341.8 | 334.7 | 324.3 | 308.3 | 285.7 |
| 22.5° | 360.6 | 358.7 | 357.3 | 353.1 | 349.8 | 349.3 | 348.4 | 344.1 | 337.5 | 323.9 | 302.6 |
| 25° | 359.2 | 357.8 | 356.4 | 353.5 | 353.1 | 357.8 | 357.3 | 356.8 | 354.0 | 342.2 | 320.1 |
| 27.5° | 367.2 | 366.7 | 363.4 | 358.7 | 361.1 | 369.1 | 369.6 | 371.9 | 370.0 | 362.5 | 345.5 |
| 30° | 395.5 | 393.1 | 385.6 | 375.2 | 381.4 | 391.7 | 393.6 | 401.2 | 401.6 | 402.6 | 379.5 |
| 32.5° | 433.7 | 429.9 | 417.2 | 404.0 | 407.8 | 427.1 | 427.6 | 439.3 | 464.3 | 448.8 | 397.9 |
| 35° | 460.1 | 455.4 | 436.0 | 429.0 | 447.8 | 478.5 | 482.7 | 506.8 | 508.6 | 452.1 | 396.4 |
| 37.5° | 534.1 | 527.0 | 491.7 | 448.8 | 467.2 | 533.2 | 537.9 | 533.6 | 494.0 | 447.4 | 416.7 |
| 40° | 633.1 | 626.5 | 594.9 | 522.8 | 470.9 | 480.8 | 483.2 | 495.9 | 503.5 | 480.4 | 481.8 |
| 42.5° | 761.8 | 753.3 | 720.8 | 632.6 | 529.9 | 493.6 | 498.3 | 524.2 | 573.7 | 584.5 | 640.2 |
| 45° | 893.3 | 888.6 | 855.6 | 760.4 | 637.3 | 580.3 | 582.6 | 614.2 | 702.9 | 771.2 | 818.3 |
| 47.5° | 1022.0 | 1022.9 | 994.6 | 914.0 | 793.8 | 730.7 | 727.8 | 768.8 | 881.0 | 929.6 | 977.7 |
| 50° | 1203.5 | 1202.5 | 1152.1 | 1102.1 | 1008.3 | 933.4 | 928.7 | 951.8 | 1059.7 | 1077.6 | 1152.1 |
| 52.5° | 1410.0 | 1409.0 | 1333.1 | 1309.5 | 1269.9 | 1149.3 | 1162.0 | 1142.2 | 1220.0 | 1252.0 | 1357.6 |
| 55° | 1508.0 | 1499.5 | 1467.5 | 1497.2 | 1544.3 | 1423.1 | 1421.3 | 1345.8 | 1406.7 | 1434.0 | 1532.5 |
| 57.5° | 1498.1 | 1501.4 | 1532.0 | 1630.6 | 1785.2 | 1683.8 | 1686.7 | 1546.7 | 1582.0 | 1599.0 | 1671.1 |
| 60° | 1442.0 | 1444.4 | 1515.5 | 1679.6 | 1905.4 | 1887.9 | 1878.0 | 1734.3 | 1711.2 | 1704.1 | 1738.5 |
| 62.5° | 1281.7 | 1282.7 | 1398.2 | 1608.9 | 1904.4 | 2005.8 | 1996.4 | 1866.3 | 1794.1 | 1748.9 | 1686.2 |
| 64° | 1107.3 | 1125.2 | 1266.6 | 1504.7 | 1853.1 | 2026.5 | 2021.4 | 1898.3 | 1801.7 | 1718.7 | 1590.0 |
| 65° | 964.0 | 990.9 | 1162.0 | 1412.3 | 1795.1 | 2019.5 | 2013.3 | 1892.7 | 1791.3 | 1662.1 | 1490.6 |
| 67.5° | 657.6 | 671.7 | 825.4 | 1111.6 | 1574.0 | 1920.0 | 1918.1 | 1820.1 | 1678.6 | 1435.9 | 1169.5 |
| 70° | 388.0 | 398.3 | 511.9 | 775.9 | 1209.6 | 1649.4 | 1674.4 | 1639.0 | 1393.5 | 1031.4 | 744.8 |
| 72.5° | 120.7 | 126.8 | 225.8 | 430.9 | 792.9 | 1285.0 | 1317.6 | 1292.1 | 1014.4 | 644.4 | 412.9 |
| 75° | 45.3 | 47.1 | 74.5 | 187.1 | 394.6 | 821.6 | 831.5 | 861.2 | 618.0 | 340.3 | 180.5 |
| 77.5° | 25.0 | 25.5 | 36.8 | 70.2 | 173.5 | 403.5 | 412.9 | 409.2 | 328.6 | 160.7 | 57.5 |
| 80° | 12.3 | 12.7 | 17.9 | 31.1 | 67.4 | 114.1 | 135.3 | 178.7 | 116.0 | 79.2 | 18.4 |
| 82.5° | 4.2 | 3.8 | 8.0 | 14.1 | 22.6 | 30.6 | 34.4 | 49.5 | 48.6 | 43.4 | 6.6 |
| 85° | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.9 | 0.9 | 6.1 | 12.3 | 14.1 | 1.9 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.9 | 0.9 |
| 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° | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 | 219.2 |
| 2.5° | 219.2 | 218.3 | 215.0 | 211.7 | 209.3 | 206.5 | 206.0 | 204.1 | 203.6 | 203.6 | 203.6 |
| 5° | 221.6 | 218.7 | 212.6 | 207.4 | 202.7 | 198.5 | 196.6 | 194.7 | 193.3 | 192.8 | 192.8 |
| 7.5° | 226.7 | 222.5 | 212.6 | 205.1 | 198.0 | 192.8 | 190.0 | 188.1 | 186.7 | 186.7 | 186.7 |
| 10° | 234.3 | 227.7 | 215.4 | 205.1 | 196.6 | 190.0 | 185.7 | 182.9 | 181.0 | 180.5 | 181.0 |
| 12.5° | 243.7 | 235.2 | 220.1 | 207.4 | 197.5 | 189.0 | 180.1 | 163.6 | 152.7 | 146.6 | 145.7 |
| 15° | 252.7 | 242.8 | 225.3 | 210.7 | 198.9 | 180.1 | 147.5 | 122.1 | 105.1 | 99.9 | 99.0 |
| 17.5° | 262.6 | 252.2 | 232.4 | 215.4 | 193.7 | 145.2 | 105.1 | 83.9 | 80.6 | 81.6 | 81.6 |
| 20° | 274.8 | 262.6 | 239.9 | 220.1 | 166.9 | 103.2 | 76.8 | 74.0 | 75.0 | 76.8 | 76.8 |
| 22.5° | 289.0 | 275.8 | 250.3 | 217.3 | 127.3 | 75.4 | 70.2 | 70.7 | 71.7 | 73.5 | 73.5 |
| 25° | 307.4 | 293.7 | 261.6 | 196.1 | 88.6 | 66.0 | 66.5 | 66.9 | 68.4 | 70.2 | 70.7 |
| 27.5° | 334.7 | 318.2 | 275.3 | 164.5 | 66.9 | 61.3 | 61.8 | 63.2 | 64.6 | 66.9 | 66.9 |
| 30° | 363.9 | 343.6 | 287.6 | 126.8 | 58.5 | 56.1 | 56.6 | 58.0 | 60.3 | 62.2 | 63.2 |
| 32.5° | 376.6 | 358.7 | 289.9 | 86.7 | 54.2 | 51.9 | 50.9 | 52.3 | 54.2 | 56.1 | 56.6 |
| 35° | 383.7 | 376.2 | 278.6 | 62.7 | 50.9 | 48.1 | 46.2 | 45.7 | 46.2 | 47.6 | 47.6 |
| 37.5° | 418.6 | 413.4 | 256.0 | 53.7 | 47.6 | 44.8 | 42.0 | 39.6 | 38.7 | 38.2 | 38.7 |
| 40° | 485.5 | 474.2 | 226.3 | 49.5 | 44.8 | 41.5 | 37.7 | 33.9 | 30.6 | 29.2 | 29.2 |
| 42.5° | 633.1 | 576.0 | 183.8 | 46.7 | 42.0 | 38.2 | 32.5 | 27.3 | 23.6 | 22.6 | 22.6 |
| 45° | 791.9 | 702.4 | 138.1 | 44.3 | 39.1 | 34.4 | 27.3 | 21.7 | 18.4 | 17.4 | 17.4 |
| 47.5° | 944.7 | 795.7 | 96.6 | 41.5 | 35.8 | 30.2 | 22.6 | 17.4 | 15.1 | 14.6 | 14.6 |
| 50° | 1105.0 | 876.8 | 67.4 | 38.2 | 32.5 | 25.9 | 18.4 | 14.1 | 12.7 | 12.7 | 12.7 |
| 52.5° | 1261.0 | 936.7 | 49.5 | 34.9 | 28.3 | 21.7 | 15.6 | 12.7 | 11.8 | 11.8 | 11.8 |
| 55° | 1378.8 | 959.8 | 37.7 | 30.6 | 24.0 | 18.4 | 14.1 | 12.3 | 11.3 | 10.8 | 10.8 |
| 57.5° | 1457.6 | 940.4 | 30.6 | 25.5 | 20.3 | 16.0 | 12.7 | 11.3 | 10.4 | 9.9 | 9.9 |
| 60° | 1455.7 | 876.3 | 24.5 | 20.7 | 16.5 | 13.7 | 11.8 | 10.4 | 9.4 | 9.0 | 9.0 |
| 62.5° | 1370.4 | 772.1 | 19.3 | 16.5 | 13.7 | 11.8 | 10.4 | 9.4 | 8.5 | 8.0 | 7.5 |
| 64° | 1286.9 | 707.6 | 16.5 | 14.1 | 12.3 | 10.8 | 9.4 | 8.5 | 7.5 | 6.6 | 6.6 |
| 65° | 1196.4 | 646.3 | 15.1 | 12.7 | 10.8 | 9.9 | 9.0 | 8.0 | 6.6 | 5.7 | 5.7 |
| 67.5° | 909.8 | 478.5 | 12.3 | 9.9 | 8.5 | 8.0 | 7.1 | 6.1 | 4.7 | 3.8 | 3.8 |
| 70° | 590.7 | 309.7 | 10.4 | 8.0 | 7.1 | 7.1 | 6.6 | 5.2 | 3.8 | 3.3 | 2.8 |
| 72.5° | 302.6 | 154.1 | 8.5 | 6.6 | 6.1 | 6.1 | 5.7 | 4.2 | 3.3 | 2.8 | 2.4 |
| 75° | 128.2 | 62.7 | 7.1 | 5.7 | 5.2 | 4.7 | 4.2 | 3.8 | 2.8 | 2.4 | 2.4 |
| 77.5° | 44.8 | 23.6 | 6.6 | 5.7 | 4.2 | 3.8 | 3.8 | 3.8 | 3.8 | 3.3 | 2.8 |
| 80° | 15.1 | 9.0 | 4.2 | 4.2 | 4.7 | 5.2 | 5.2 | 4.7 | 5.2 | 4.2 | 3.3 |
| 82.5° | 6.1 | 3.3 | 1.4 | 1.9 | 3.3 | 3.8 | 4.2 | 4.2 | 4.2 | 3.3 | 2.8 |
| 85° | 1.4 | 0.9 | 0.9 | 1.4 | 1.4 | 1.9 | 1.9 | 2.4 | 2.4 | 1.9 | 1.9 |
| 87.5° | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 1.4 | 0.9 | 1.4 | 1.4 | 1.4 |
| 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)