

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: P401411

Luminaire Tested: **ENC-SA1C-830-U-T4W-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401411
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: ENC-SA1C-830-U-T4W-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 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: 2673 lumens
Efficiency: N/A
Efficacy: 80.3 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

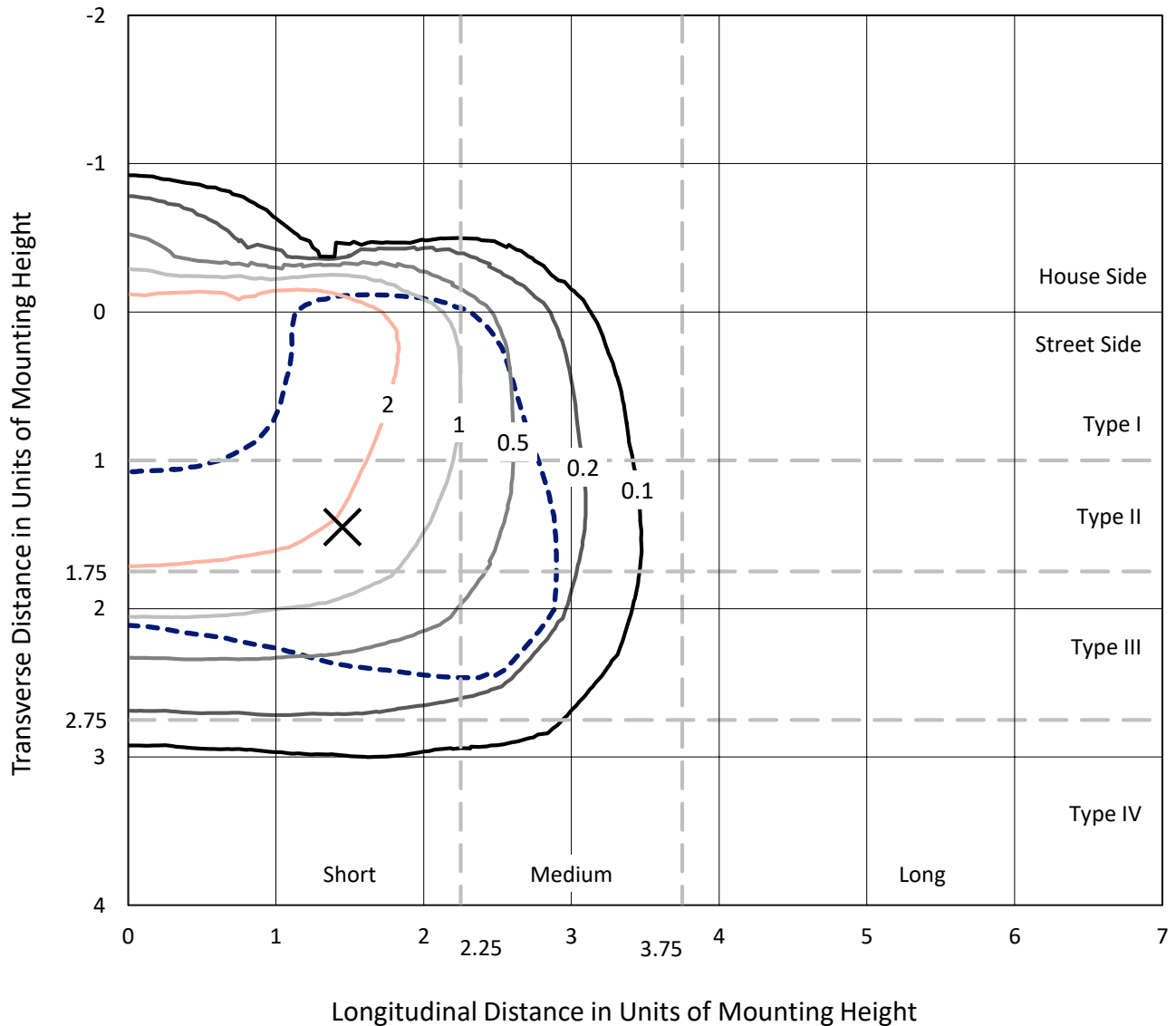
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

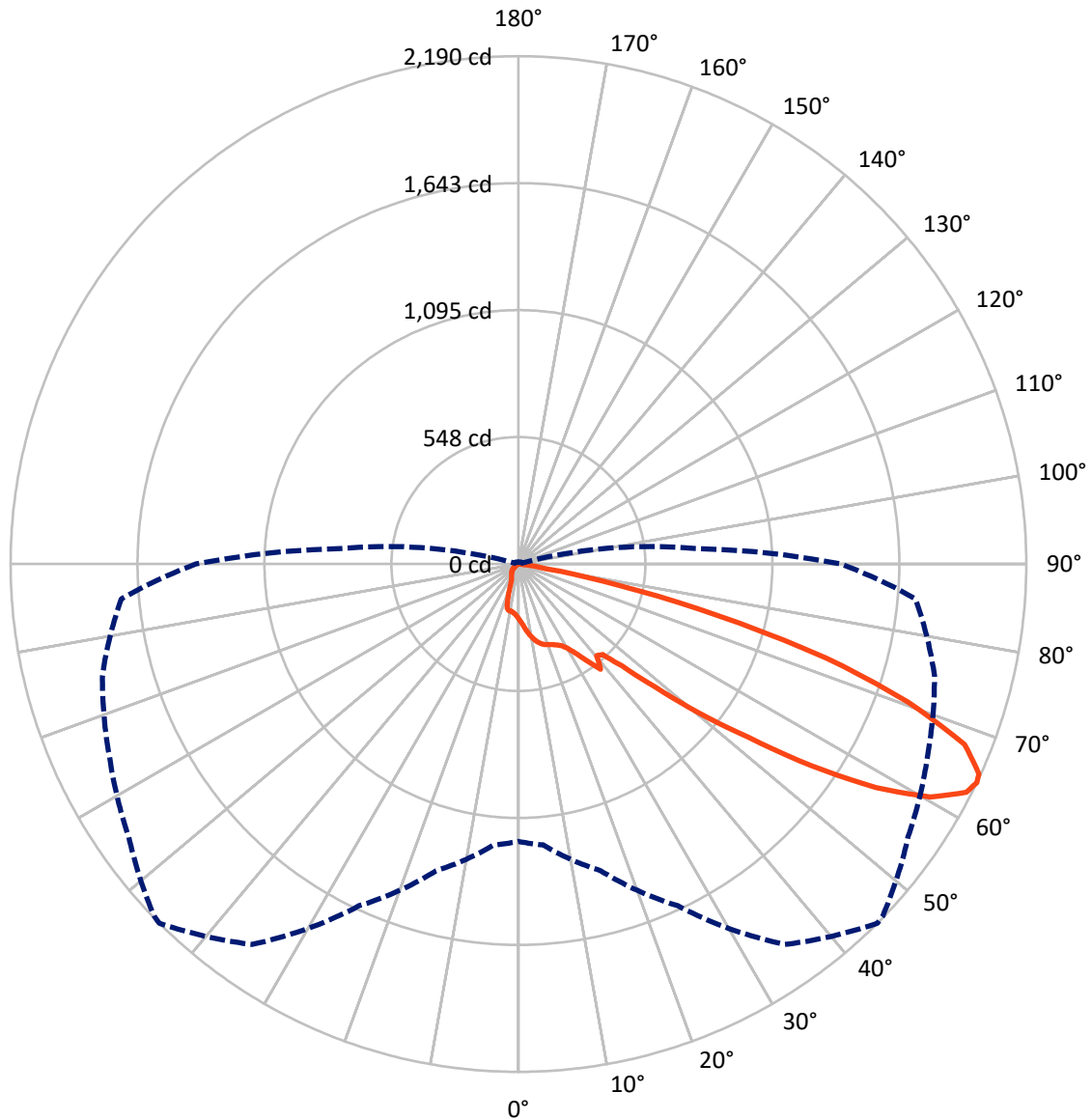
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.5 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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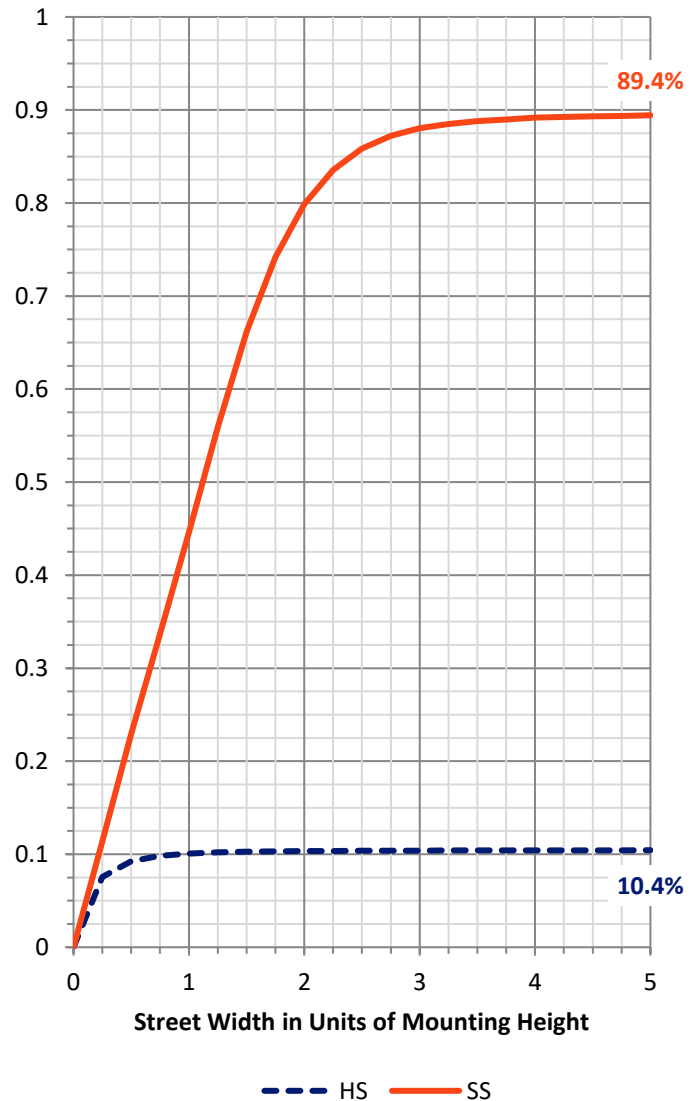
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 282.1 | 0.0 | 282.1 |
| | % Fixture | 10.6 | 0.0 | 10.6 |
| Street Side | Lumens | 2391.0 | 0.0 | 2391.0 |
| | % Fixture | 89.4 | 0.0 | 89.4 |
| Total | Lumens | 2673.0 | 0.0 | 2673.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 24.0 | 0.9 |
| 10°-20° | 74.9 | 2.8 |
| 20°-30° | 122.0 | 4.6 |
| 30°-40° | 193.8 | 7.2 |
| 40°-50° | 369.1 | 13.8 |
| 50°-60° | 760.6 | 28.5 |
| 60°-70° | 849.4 | 31.8 |
| 70°-80° | 268.3 | 10.0 |
| 80°-90° | 10.9 | 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° | 2673.0 | 100.0 |
| 0°-180° | 2673.0 | 100.0 |



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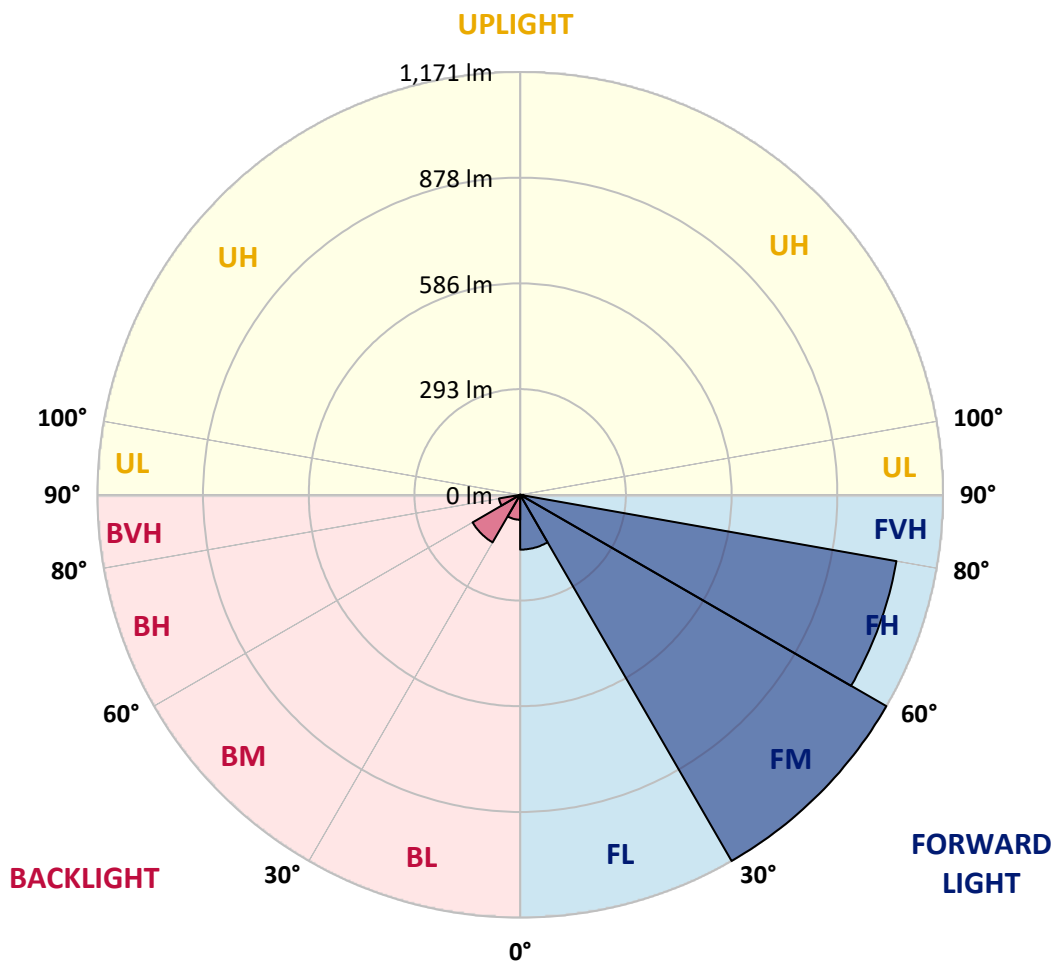
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 151.8 | 5.7 | | | |
| FM | (30°-60°) | 1171.2 | 43.8 | | | |
| FH | (60°-80°) | 1058.3 | 39.6 | | | G1/1800 |
| FVH | (80°-90°) | 9.6 | 0.4 | | | G0/10 |
| BL | (0°-30°) | 69.1 | 2.6 | B0/110 | | |
| BM | (30°-60°) | 152.2 | 5.7 | B0/220 | | |
| BH | (60°-80°) | 59.5 | 2.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.3 | 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° | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 |
| 2.5° | 261.4 | 262.4 | 260.9 | 258.8 | 256.8 | 253.2 | 253.7 | 249.2 | 245.6 | 243.0 | 239.0 |
| 5° | 294.5 | 294.0 | 290.9 | 286.4 | 281.8 | 275.1 | 274.1 | 267.0 | 259.3 | 251.2 | 243.6 |
| 7.5° | 328.1 | 326.6 | 323.5 | 317.4 | 308.8 | 300.1 | 297.6 | 287.4 | 276.2 | 263.9 | 250.7 |
| 10° | 355.6 | 354.6 | 351.1 | 344.4 | 334.2 | 321.0 | 321.0 | 306.7 | 292.0 | 277.2 | 261.4 |
| 12.5° | 378.1 | 377.0 | 373.0 | 364.8 | 352.6 | 340.9 | 339.3 | 326.6 | 310.3 | 293.0 | 273.6 |
| 15° | 391.8 | 390.8 | 386.2 | 377.0 | 366.3 | 355.6 | 354.1 | 341.9 | 327.1 | 307.2 | 284.8 |
| 17.5° | 395.4 | 394.4 | 390.8 | 382.7 | 374.5 | 365.3 | 363.3 | 352.6 | 339.9 | 319.5 | 296.5 |
| 20° | 393.9 | 391.8 | 389.8 | 383.2 | 376.5 | 370.4 | 369.4 | 361.8 | 350.6 | 333.2 | 308.8 |
| 22.5° | 389.8 | 387.7 | 386.2 | 381.6 | 378.1 | 377.6 | 376.5 | 372.0 | 364.8 | 350.0 | 327.1 |
| 25° | 388.3 | 386.7 | 385.2 | 382.1 | 381.6 | 386.7 | 386.2 | 385.7 | 382.7 | 369.9 | 346.0 |
| 27.5° | 396.9 | 396.4 | 392.8 | 387.7 | 390.3 | 399.0 | 399.5 | 402.0 | 400.0 | 391.8 | 373.5 |
| 30° | 427.5 | 424.9 | 416.8 | 405.6 | 412.2 | 423.4 | 425.5 | 433.6 | 434.1 | 435.1 | 410.2 |
| 32.5° | 468.8 | 464.7 | 450.9 | 436.7 | 440.7 | 461.6 | 462.1 | 474.9 | 501.9 | 485.1 | 430.0 |
| 35° | 497.3 | 492.2 | 471.3 | 463.7 | 484.0 | 517.2 | 521.7 | 547.7 | 549.8 | 488.6 | 428.5 |
| 37.5° | 577.3 | 569.6 | 531.4 | 485.1 | 504.9 | 576.3 | 581.4 | 576.8 | 534.0 | 483.5 | 450.4 |
| 40° | 684.3 | 677.2 | 643.0 | 565.1 | 509.0 | 519.7 | 522.3 | 536.0 | 544.2 | 519.2 | 520.7 |
| 42.5° | 823.4 | 814.2 | 779.1 | 683.8 | 572.7 | 533.5 | 538.6 | 566.6 | 620.1 | 631.8 | 691.9 |
| 45° | 965.5 | 960.4 | 924.8 | 821.9 | 688.9 | 627.2 | 629.8 | 663.9 | 759.7 | 833.6 | 884.5 |
| 47.5° | 1104.6 | 1105.7 | 1075.1 | 988.0 | 858.0 | 789.8 | 786.7 | 831.0 | 952.3 | 1004.8 | 1056.7 |
| 50° | 1300.8 | 1299.8 | 1245.3 | 1191.3 | 1089.9 | 1008.9 | 1003.8 | 1028.7 | 1145.4 | 1164.8 | 1245.3 |
| 52.5° | 1524.0 | 1523.0 | 1440.9 | 1415.4 | 1372.6 | 1242.2 | 1256.0 | 1234.6 | 1318.6 | 1353.3 | 1467.4 |
| 55° | 1630.0 | 1620.8 | 1586.1 | 1618.2 | 1669.2 | 1538.2 | 1536.2 | 1454.7 | 1520.4 | 1550.0 | 1656.5 |
| 57.5° | 1619.3 | 1622.8 | 1655.9 | 1762.4 | 1929.6 | 1820.0 | 1823.1 | 1671.7 | 1710.0 | 1728.3 | 1806.3 |
| 60° | 1558.6 | 1561.2 | 1638.1 | 1815.4 | 2059.5 | 2040.6 | 2029.9 | 1874.5 | 1849.6 | 1841.9 | 1879.1 |
| 62.5° | 1385.4 | 1386.4 | 1511.2 | 1739.0 | 2058.5 | 2168.0 | 2157.8 | 2017.2 | 1939.2 | 1890.3 | 1822.6 |
| 64° | 1196.9 | 1216.2 | 1369.1 | 1626.4 | 2002.9 | 2190.4 | 2184.8 | 2051.8 | 1947.4 | 1857.7 | 1718.6 |
| 65° | 1042.0 | 1071.0 | 1256.0 | 1526.5 | 1940.3 | 2182.8 | 2176.2 | 2045.7 | 1936.2 | 1796.6 | 1611.1 |
| 67.5° | 710.8 | 726.1 | 892.2 | 1201.5 | 1701.3 | 2075.3 | 2073.2 | 1967.3 | 1814.4 | 1552.0 | 1264.1 |
| 70° | 419.3 | 430.5 | 553.3 | 838.7 | 1307.4 | 1782.8 | 1809.8 | 1771.6 | 1506.1 | 1114.8 | 805.0 |
| 72.5° | 130.4 | 137.1 | 244.1 | 465.7 | 857.0 | 1389.0 | 1424.1 | 1396.6 | 1096.5 | 696.5 | 446.3 |
| 75° | 48.9 | 51.0 | 80.5 | 202.3 | 426.5 | 888.1 | 898.8 | 930.9 | 668.0 | 367.9 | 195.1 |
| 77.5° | 27.0 | 27.5 | 39.7 | 75.9 | 187.5 | 436.2 | 446.3 | 442.3 | 355.1 | 173.7 | 62.2 |
| 80° | 13.2 | 13.8 | 19.4 | 33.6 | 72.9 | 123.3 | 146.2 | 193.1 | 125.3 | 85.6 | 19.9 |
| 82.5° | 4.6 | 4.1 | 8.7 | 15.3 | 24.5 | 33.1 | 37.2 | 53.5 | 52.5 | 46.9 | 7.1 |
| 85° | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 1.0 | 1.0 | 6.6 | 13.2 | 15.3 | 2.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 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 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 |
| 2.5° | 236.9 | 235.9 | 232.3 | 228.8 | 226.2 | 223.2 | 222.7 | 220.6 | 220.1 | 220.1 | 220.1 |
| 5° | 239.5 | 236.4 | 229.8 | 224.2 | 219.1 | 214.5 | 212.5 | 210.4 | 208.9 | 208.4 | 208.4 |
| 7.5° | 245.1 | 240.5 | 229.8 | 221.6 | 214.0 | 208.4 | 205.3 | 203.3 | 201.8 | 201.8 | 201.8 |
| 10° | 253.2 | 246.1 | 232.9 | 221.6 | 212.5 | 205.3 | 200.8 | 197.7 | 195.7 | 195.1 | 195.7 |
| 12.5° | 263.4 | 254.3 | 237.9 | 224.2 | 213.5 | 204.3 | 194.6 | 176.8 | 165.1 | 158.5 | 157.4 |
| 15° | 273.1 | 262.4 | 243.6 | 227.8 | 215.0 | 194.6 | 159.5 | 132.0 | 113.6 | 108.0 | 107.0 |
| 17.5° | 283.8 | 272.6 | 251.2 | 232.9 | 209.4 | 156.9 | 113.6 | 90.7 | 87.1 | 88.1 | 88.1 |
| 20° | 297.1 | 283.8 | 259.3 | 237.9 | 180.4 | 111.6 | 83.1 | 80.0 | 81.0 | 83.1 | 83.1 |
| 22.5° | 312.3 | 298.1 | 270.6 | 234.9 | 137.6 | 81.5 | 75.9 | 76.4 | 77.4 | 79.5 | 79.5 |
| 25° | 332.2 | 317.4 | 282.8 | 212.0 | 95.8 | 71.3 | 71.8 | 72.4 | 73.9 | 75.9 | 76.4 |
| 27.5° | 361.8 | 343.9 | 297.6 | 177.8 | 72.4 | 66.2 | 66.7 | 68.3 | 69.8 | 72.4 | 72.4 |
| 30° | 393.4 | 371.4 | 310.8 | 137.1 | 63.2 | 60.6 | 61.1 | 62.7 | 65.2 | 67.3 | 68.3 |
| 32.5° | 407.1 | 387.7 | 313.4 | 93.8 | 58.6 | 56.0 | 55.0 | 56.6 | 58.6 | 60.6 | 61.1 |
| 35° | 414.8 | 406.6 | 301.1 | 67.8 | 55.0 | 52.0 | 49.9 | 49.4 | 49.9 | 51.5 | 51.5 |
| 37.5° | 452.5 | 446.9 | 276.7 | 58.1 | 51.5 | 48.4 | 45.3 | 42.8 | 41.8 | 41.3 | 41.8 |
| 40° | 524.8 | 512.6 | 244.6 | 53.5 | 48.4 | 44.8 | 40.8 | 36.7 | 33.1 | 31.6 | 31.6 |
| 42.5° | 684.3 | 622.6 | 198.7 | 50.4 | 45.3 | 41.3 | 35.2 | 29.6 | 25.5 | 24.5 | 24.5 |
| 45° | 856.0 | 759.2 | 149.3 | 47.9 | 42.3 | 37.2 | 29.6 | 23.4 | 19.9 | 18.9 | 18.9 |
| 47.5° | 1021.1 | 860.1 | 104.5 | 44.8 | 38.7 | 32.6 | 24.5 | 18.9 | 16.3 | 15.8 | 15.8 |
| 50° | 1194.3 | 947.7 | 72.9 | 41.3 | 35.2 | 28.0 | 19.9 | 15.3 | 13.8 | 13.8 | 13.8 |
| 52.5° | 1363.0 | 1012.4 | 53.5 | 37.7 | 30.6 | 23.4 | 16.8 | 13.8 | 12.7 | 12.7 | 12.7 |
| 55° | 1490.3 | 1037.4 | 40.8 | 33.1 | 26.0 | 19.9 | 15.3 | 13.2 | 12.2 | 11.7 | 11.7 |
| 57.5° | 1575.4 | 1016.5 | 33.1 | 27.5 | 21.9 | 17.3 | 13.8 | 12.2 | 11.2 | 10.7 | 10.7 |
| 60° | 1573.4 | 947.2 | 26.5 | 22.4 | 17.8 | 14.8 | 12.7 | 11.2 | 10.2 | 9.7 | 9.7 |
| 62.5° | 1481.2 | 834.6 | 20.9 | 17.8 | 14.8 | 12.7 | 11.2 | 10.2 | 9.2 | 8.7 | 8.2 |
| 64° | 1391.0 | 764.8 | 17.8 | 15.3 | 13.2 | 11.7 | 10.2 | 9.2 | 8.2 | 7.1 | 7.1 |
| 65° | 1293.2 | 698.6 | 16.3 | 13.8 | 11.7 | 10.7 | 9.7 | 8.7 | 7.1 | 6.1 | 6.1 |
| 67.5° | 983.4 | 517.2 | 13.2 | 10.7 | 9.2 | 8.7 | 7.6 | 6.6 | 5.1 | 4.1 | 4.1 |
| 70° | 638.4 | 334.8 | 11.2 | 8.7 | 7.6 | 7.6 | 7.1 | 5.6 | 4.1 | 3.6 | 3.1 |
| 72.5° | 327.1 | 166.6 | 9.2 | 7.1 | 6.6 | 6.6 | 6.1 | 4.6 | 3.6 | 3.1 | 2.5 |
| 75° | 138.6 | 67.8 | 7.6 | 6.1 | 5.6 | 5.1 | 4.6 | 4.1 | 3.1 | 2.5 | 2.5 |
| 77.5° | 48.4 | 25.5 | 7.1 | 6.1 | 4.6 | 4.1 | 4.1 | 4.1 | 4.1 | 3.6 | 3.1 |
| 80° | 16.3 | 9.7 | 4.6 | 4.6 | 5.1 | 5.6 | 5.6 | 5.1 | 5.6 | 4.6 | 3.6 |
| 82.5° | 6.6 | 3.6 | 1.5 | 2.0 | 3.6 | 4.1 | 4.6 | 4.6 | 4.6 | 3.6 | 3.1 |
| 85° | 1.5 | 1.0 | 1.0 | 1.5 | 1.5 | 2.0 | 2.0 | 2.5 | 2.5 | 2.0 | 2.0 |
| 87.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 1.5 | 1.5 | 1.5 |
| 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)