

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: P400921

Luminaire Tested: **ENV-SA1A-730-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400921
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: ENV-SA1A-730-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 350mA 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: 1913 lumens
Efficiency: N/A
Efficacy: 95.2 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 - G0

Input Watts (W): 20.1
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

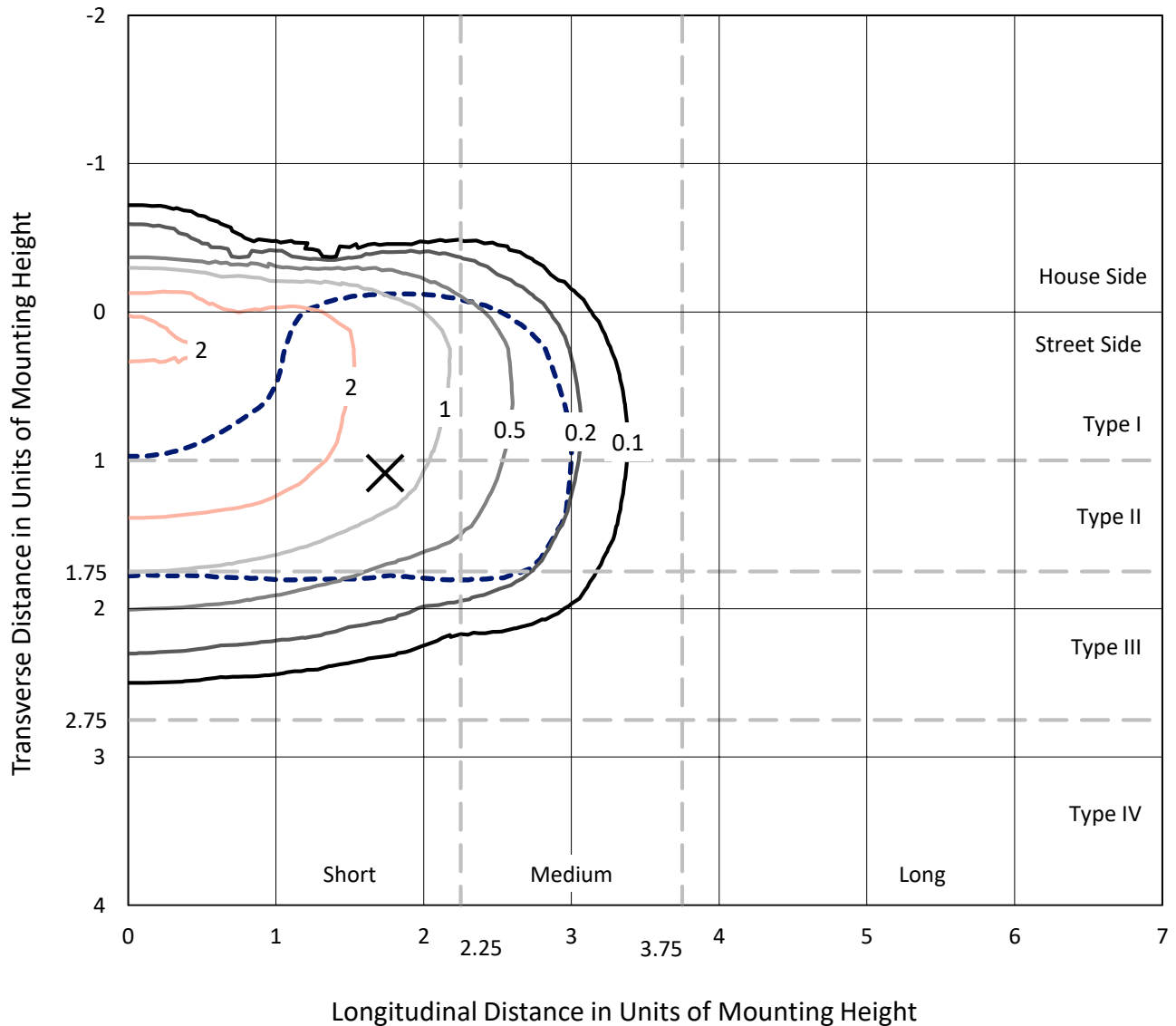


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

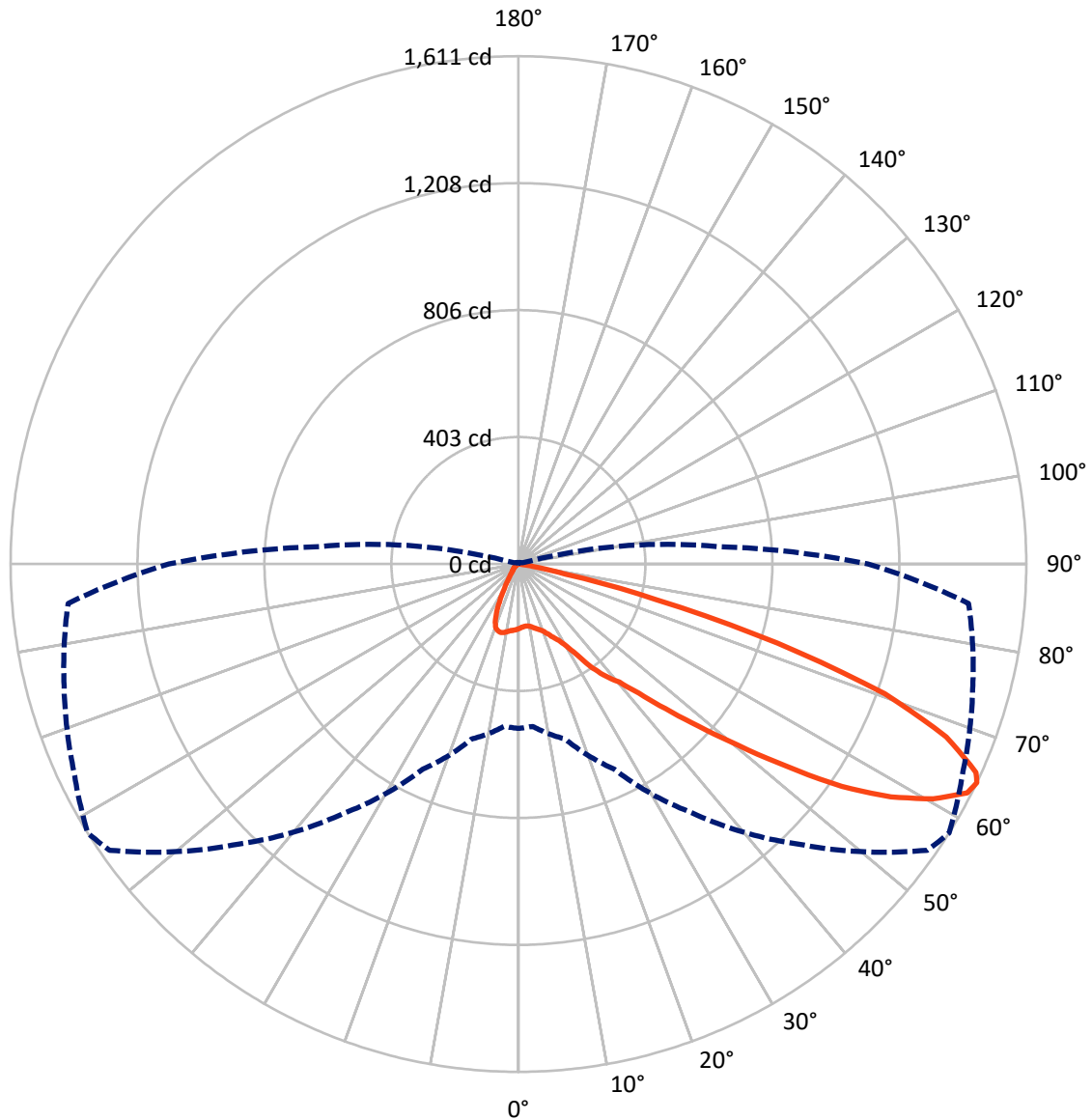


Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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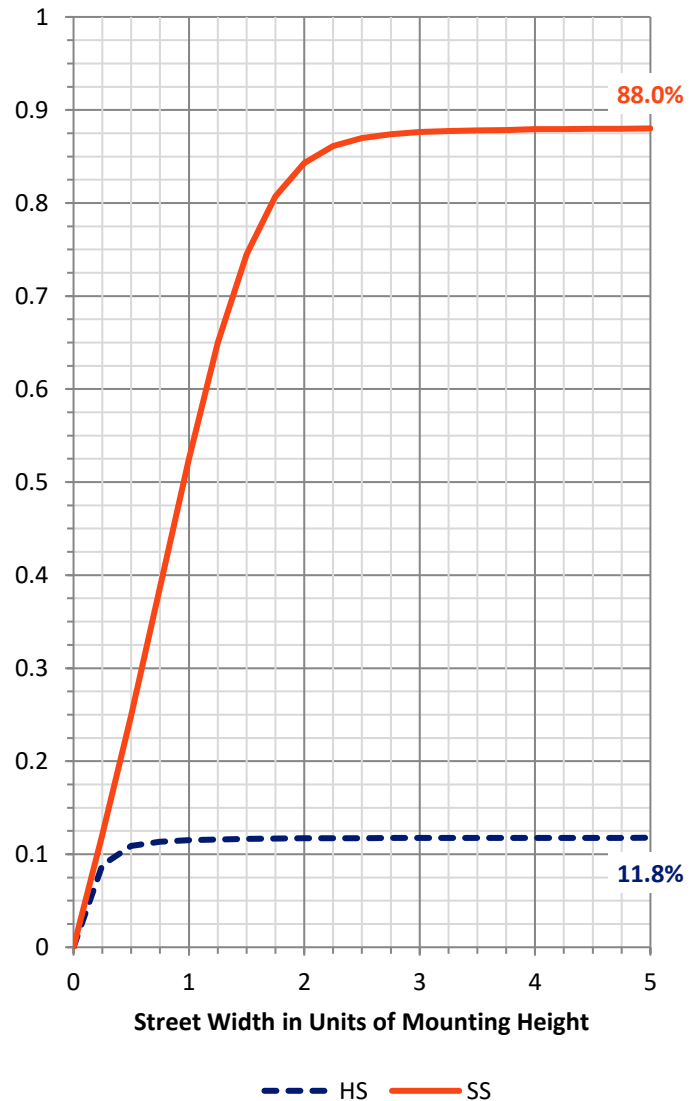
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 228.1 | 0.0 | 228.1 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| Street Side | Lumens | 1684.9 | 0.0 | 1684.9 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| Total | Lumens | 1913.0 | 0.0 | 1913.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 19.4 | 1.0 |
| 10°-20° | 56.4 | 3.0 |
| 20°-30° | 101.4 | 5.3 |
| 30°-40° | 177.8 | 9.3 |
| 40°-50° | 325.1 | 17.0 |
| 50°-60° | 556.1 | 29.1 |
| 60°-70° | 539.4 | 28.2 |
| 70°-80° | 133.6 | 7.0 |
| 80°-90° | 3.8 | 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° | 1913.0 | 100.0 |
| 0°-180° | 1913.0 | 100.0 |



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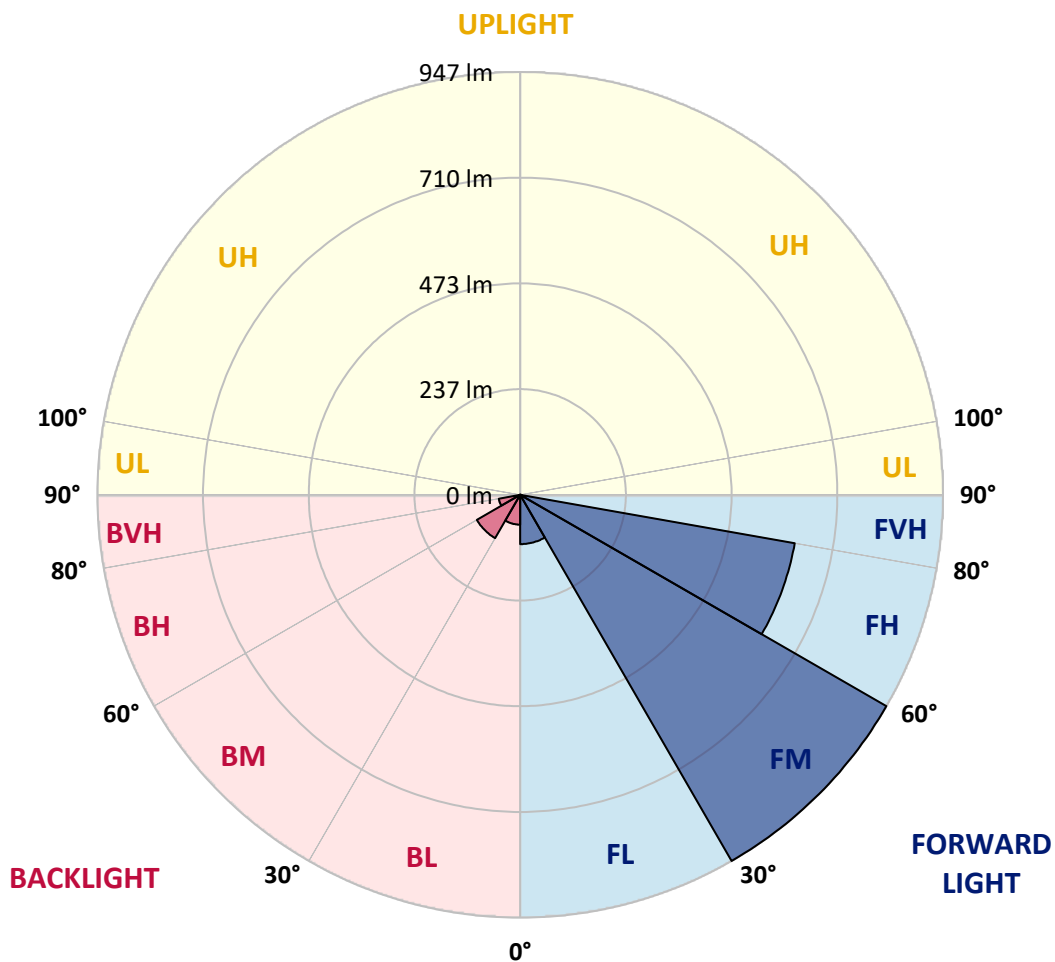
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 110.5 | 5.8 | | | |
| FM (30°-60°) | 946.9 | 49.5 | | | |
| FH (60°-80°) | 624.3 | 32.6 | | | G0/660 |
| FVH (80°-90°) | 3.2 | 0.2 | | | G0/10 |
| BL (0°-30°) | 66.8 | 3.5 | B0/110 | | |
| BM (30°-60°) | 112.0 | 5.9 | B0/220 | | |
| BH (60°-80°) | 48.7 | 2.5 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.6 | 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-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 |
| 2.5° | 196.4 | 196.4 | 197.1 | 197.5 | 198.5 | 199.6 | 201.0 | 201.4 | 202.1 | 203.9 | 204.6 |
| 5° | 185.8 | 186.2 | 186.9 | 188.6 | 191.1 | 193.9 | 197.5 | 198.5 | 201.4 | 204.9 | 207.4 |
| 7.5° | 181.6 | 181.9 | 183.0 | 185.1 | 188.3 | 192.5 | 196.8 | 198.2 | 202.1 | 207.7 | 211.3 |
| 10° | 180.8 | 180.8 | 182.3 | 185.4 | 189.3 | 194.7 | 199.3 | 201.0 | 206.3 | 213.1 | 218.7 |
| 12.5° | 180.8 | 180.8 | 182.6 | 186.5 | 191.1 | 197.8 | 204.2 | 206.7 | 212.7 | 221.2 | 228.3 |
| 15° | 184.0 | 184.7 | 185.8 | 188.3 | 193.6 | 201.0 | 209.9 | 212.7 | 220.1 | 230.4 | 239.2 |
| 17.5° | 206.7 | 206.0 | 202.4 | 199.3 | 198.2 | 204.6 | 215.2 | 219.1 | 230.0 | 243.1 | 252.7 |
| 20° | 250.6 | 250.2 | 243.8 | 228.3 | 214.5 | 210.9 | 223.3 | 227.9 | 243.8 | 261.2 | 268.3 |
| 22.5° | 303.7 | 305.4 | 295.5 | 274.6 | 246.3 | 228.3 | 235.4 | 241.7 | 262.2 | 283.1 | 287.4 |
| 25° | 356.4 | 358.5 | 349.3 | 323.1 | 288.4 | 256.9 | 252.0 | 257.6 | 281.0 | 301.9 | 300.1 |
| 27.5° | 418.7 | 416.9 | 407.7 | 378.0 | 337.6 | 295.5 | 274.3 | 275.3 | 293.4 | 316.7 | 311.1 |
| 30° | 464.3 | 461.9 | 453.0 | 432.8 | 395.0 | 346.8 | 306.1 | 302.9 | 308.3 | 334.1 | 328.1 |
| 32.5° | 506.1 | 507.9 | 501.1 | 474.2 | 438.5 | 399.6 | 353.9 | 345.4 | 343.3 | 365.2 | 355.3 |
| 35° | 547.5 | 547.1 | 544.7 | 521.0 | 485.9 | 449.1 | 410.9 | 404.9 | 404.2 | 425.4 | 398.5 |
| 37.5° | 597.0 | 594.6 | 590.0 | 565.9 | 537.9 | 502.9 | 462.2 | 452.7 | 450.9 | 455.1 | 423.6 |
| 40° | 650.1 | 653.3 | 645.9 | 620.8 | 590.3 | 564.1 | 507.2 | 492.6 | 480.6 | 493.0 | 472.8 |
| 42.5° | 729.1 | 731.5 | 718.4 | 701.1 | 661.8 | 637.4 | 579.7 | 559.9 | 554.2 | 573.0 | 550.3 |
| 45° | 828.1 | 823.5 | 814.7 | 802.7 | 770.1 | 732.9 | 672.8 | 654.0 | 648.0 | 680.2 | 643.1 |
| 47.5° | 905.3 | 904.6 | 904.9 | 902.5 | 897.5 | 852.9 | 781.4 | 768.7 | 762.7 | 809.0 | 768.0 |
| 50° | 954.1 | 957.0 | 969.0 | 999.8 | 1022.4 | 1003.7 | 919.8 | 904.2 | 899.6 | 947.8 | 892.2 |
| 52.5° | 990.9 | 997.7 | 1017.8 | 1078.7 | 1151.3 | 1157.6 | 1088.3 | 1066.3 | 1055.7 | 1069.2 | 992.0 |
| 55° | 1009.7 | 1012.9 | 1043.7 | 1133.6 | 1247.2 | 1292.8 | 1263.8 | 1245.4 | 1202.6 | 1177.1 | 1109.2 |
| 57.5° | 965.8 | 960.9 | 1014.0 | 1128.3 | 1296.7 | 1401.8 | 1414.2 | 1393.3 | 1324.7 | 1304.9 | 1251.4 |
| 60° | 850.8 | 848.7 | 908.5 | 1045.8 | 1253.5 | 1427.3 | 1525.7 | 1512.6 | 1449.6 | 1402.5 | 1352.3 |
| 62.5° | 649.1 | 652.6 | 716.0 | 855.8 | 1099.6 | 1354.1 | 1587.6 | 1598.3 | 1531.4 | 1461.3 | 1427.0 |
| 64° | 521.3 | 517.1 | 575.1 | 717.4 | 964.8 | 1256.4 | 1583.0 | 1611.0 | 1556.1 | 1492.1 | 1433.7 |
| 65° | 437.8 | 428.6 | 484.1 | 613.0 | 850.8 | 1185.6 | 1550.5 | 1595.4 | 1557.9 | 1499.5 | 1409.3 |
| 67.5° | 230.4 | 235.4 | 259.1 | 372.3 | 574.4 | 896.5 | 1396.2 | 1464.1 | 1479.3 | 1397.9 | 1228.1 |
| 70° | 103.3 | 104.0 | 119.3 | 190.0 | 317.8 | 581.5 | 1123.0 | 1233.0 | 1241.5 | 1148.4 | 889.7 |
| 72.5° | 34.3 | 34.7 | 52.7 | 76.1 | 133.4 | 269.3 | 758.4 | 858.6 | 877.0 | 744.6 | 482.7 |
| 75° | 21.2 | 21.9 | 28.0 | 41.1 | 61.9 | 94.1 | 384.3 | 452.3 | 456.2 | 330.2 | 175.5 |
| 77.5° | 13.4 | 14.2 | 17.0 | 24.4 | 34.0 | 35.7 | 126.0 | 152.5 | 172.7 | 118.9 | 54.5 |
| 80° | 8.5 | 8.5 | 11.0 | 14.9 | 17.7 | 15.2 | 34.3 | 45.3 | 54.5 | 40.0 | 18.4 |
| 82.5° | 3.2 | 3.2 | 5.7 | 8.1 | 7.4 | 5.3 | 9.2 | 12.0 | 20.9 | 19.8 | 8.8 |
| 85° | 0.0 | 0.0 | 0.4 | 0.7 | 0.4 | 0.7 | 1.8 | 2.5 | 3.9 | 5.7 | 2.8 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 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° | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 | 204.9 |
| 2.5° | 205.6 | 206.3 | 207.7 | 208.1 | 208.5 | 207.4 | 208.5 | 207.4 | 208.1 | 208.1 | 208.1 |
| 5° | 208.8 | 209.9 | 210.9 | 211.3 | 210.9 | 208.5 | 209.2 | 207.4 | 207.0 | 207.0 | 207.0 |
| 7.5° | 213.1 | 214.1 | 215.9 | 214.8 | 212.7 | 209.2 | 208.8 | 206.3 | 205.3 | 205.3 | 205.6 |
| 10° | 220.8 | 221.9 | 222.6 | 220.5 | 216.2 | 210.9 | 207.0 | 201.7 | 199.3 | 198.2 | 198.2 |
| 12.5° | 230.7 | 231.8 | 231.5 | 227.9 | 220.1 | 209.2 | 198.2 | 187.9 | 180.5 | 177.7 | 174.8 |
| 15° | 241.4 | 242.8 | 242.1 | 234.6 | 219.8 | 200.3 | 179.1 | 155.0 | 140.1 | 130.6 | 128.8 |
| 17.5° | 253.8 | 255.2 | 251.6 | 238.2 | 214.5 | 181.6 | 141.2 | 108.7 | 87.1 | 78.9 | 78.6 |
| 20° | 269.0 | 268.3 | 259.8 | 238.5 | 204.9 | 146.9 | 94.5 | 68.0 | 58.7 | 56.6 | 56.3 |
| 22.5° | 286.3 | 283.1 | 267.6 | 236.4 | 178.7 | 99.8 | 60.9 | 53.8 | 52.7 | 52.0 | 52.0 |
| 25° | 296.2 | 290.6 | 270.4 | 230.4 | 137.7 | 63.7 | 51.7 | 50.3 | 48.8 | 47.4 | 47.1 |
| 27.5° | 304.0 | 295.5 | 271.4 | 210.6 | 91.7 | 48.8 | 46.7 | 45.3 | 43.2 | 41.1 | 40.7 |
| 30° | 318.2 | 305.4 | 273.2 | 175.9 | 56.3 | 41.8 | 40.7 | 38.2 | 35.0 | 32.9 | 32.2 |
| 32.5° | 343.6 | 325.2 | 280.3 | 131.7 | 41.1 | 36.8 | 34.0 | 30.8 | 27.3 | 25.1 | 25.1 |
| 35° | 370.9 | 344.0 | 283.8 | 86.7 | 35.7 | 32.2 | 28.0 | 24.1 | 20.9 | 19.1 | 18.8 |
| 37.5° | 396.0 | 370.9 | 282.8 | 53.1 | 31.9 | 27.6 | 23.0 | 19.1 | 16.3 | 14.9 | 14.9 |
| 40° | 447.3 | 418.0 | 268.3 | 36.5 | 28.0 | 23.4 | 18.8 | 14.9 | 13.1 | 12.0 | 12.0 |
| 42.5° | 520.6 | 469.6 | 236.1 | 31.1 | 24.4 | 19.5 | 14.9 | 12.4 | 11.0 | 9.9 | 9.9 |
| 45° | 602.7 | 526.6 | 188.3 | 28.0 | 21.2 | 16.3 | 12.4 | 10.3 | 8.8 | 8.5 | 8.5 |
| 47.5° | 710.3 | 595.6 | 138.4 | 25.1 | 18.4 | 13.8 | 10.3 | 8.5 | 7.8 | 7.4 | 7.4 |
| 50° | 804.4 | 651.5 | 94.5 | 21.9 | 16.3 | 11.7 | 8.8 | 7.8 | 7.1 | 6.7 | 6.7 |
| 52.5° | 890.1 | 690.5 | 62.3 | 19.1 | 14.5 | 9.6 | 8.1 | 7.1 | 6.7 | 6.4 | 6.4 |
| 55° | 990.9 | 720.2 | 42.1 | 16.6 | 12.7 | 8.8 | 7.8 | 7.1 | 6.4 | 6.4 | 6.0 |
| 57.5° | 1076.6 | 737.9 | 30.1 | 14.2 | 11.3 | 8.1 | 7.4 | 6.7 | 6.0 | 5.7 | 5.7 |
| 60° | 1126.5 | 717.0 | 21.9 | 12.4 | 9.9 | 7.4 | 6.7 | 6.0 | 5.7 | 5.3 | 5.3 |
| 62.5° | 1140.3 | 676.7 | 17.0 | 10.6 | 8.5 | 6.7 | 6.0 | 5.3 | 5.0 | 4.6 | 4.6 |
| 64° | 1108.4 | 633.5 | 14.5 | 9.2 | 7.4 | 6.0 | 5.7 | 5.0 | 4.2 | 3.5 | 3.5 |
| 65° | 1063.5 | 593.5 | 13.1 | 8.5 | 6.7 | 5.7 | 5.3 | 4.6 | 3.5 | 2.8 | 2.8 |
| 67.5° | 886.2 | 473.2 | 10.6 | 7.1 | 5.3 | 5.0 | 4.2 | 3.5 | 2.5 | 1.8 | 1.8 |
| 70° | 629.3 | 330.9 | 8.1 | 5.7 | 4.6 | 4.6 | 3.9 | 2.8 | 1.4 | 0.7 | 0.7 |
| 72.5° | 333.0 | 172.0 | 6.7 | 4.6 | 3.5 | 3.5 | 3.2 | 1.8 | 1.1 | 0.7 | 0.4 |
| 75° | 116.4 | 56.6 | 5.7 | 3.9 | 3.2 | 2.5 | 2.1 | 1.4 | 1.1 | 0.7 | 0.4 |
| 77.5° | 35.4 | 18.8 | 5.0 | 3.9 | 2.8 | 2.1 | 2.5 | 2.1 | 2.1 | 1.4 | 1.1 |
| 80° | 11.3 | 6.7 | 2.8 | 2.5 | 2.8 | 2.8 | 2.5 | 2.1 | 2.5 | 1.8 | 1.4 |
| 82.5° | 4.2 | 2.5 | 1.1 | 1.4 | 1.4 | 1.8 | 1.8 | 1.4 | 1.1 | 0.4 | 0.0 |
| 85° | 1.4 | 1.1 | 0.7 | 1.1 | 1.1 | 1.1 | 0.7 | 0.7 | 0.4 | 0.0 | 0.0 |
| 87.5° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.4 | 0.4 | 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)