

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: P401828

Luminaire Tested: **ENV-SA1F-735-U-SL2**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1F-735-U-SL2
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7224 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 66.1
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

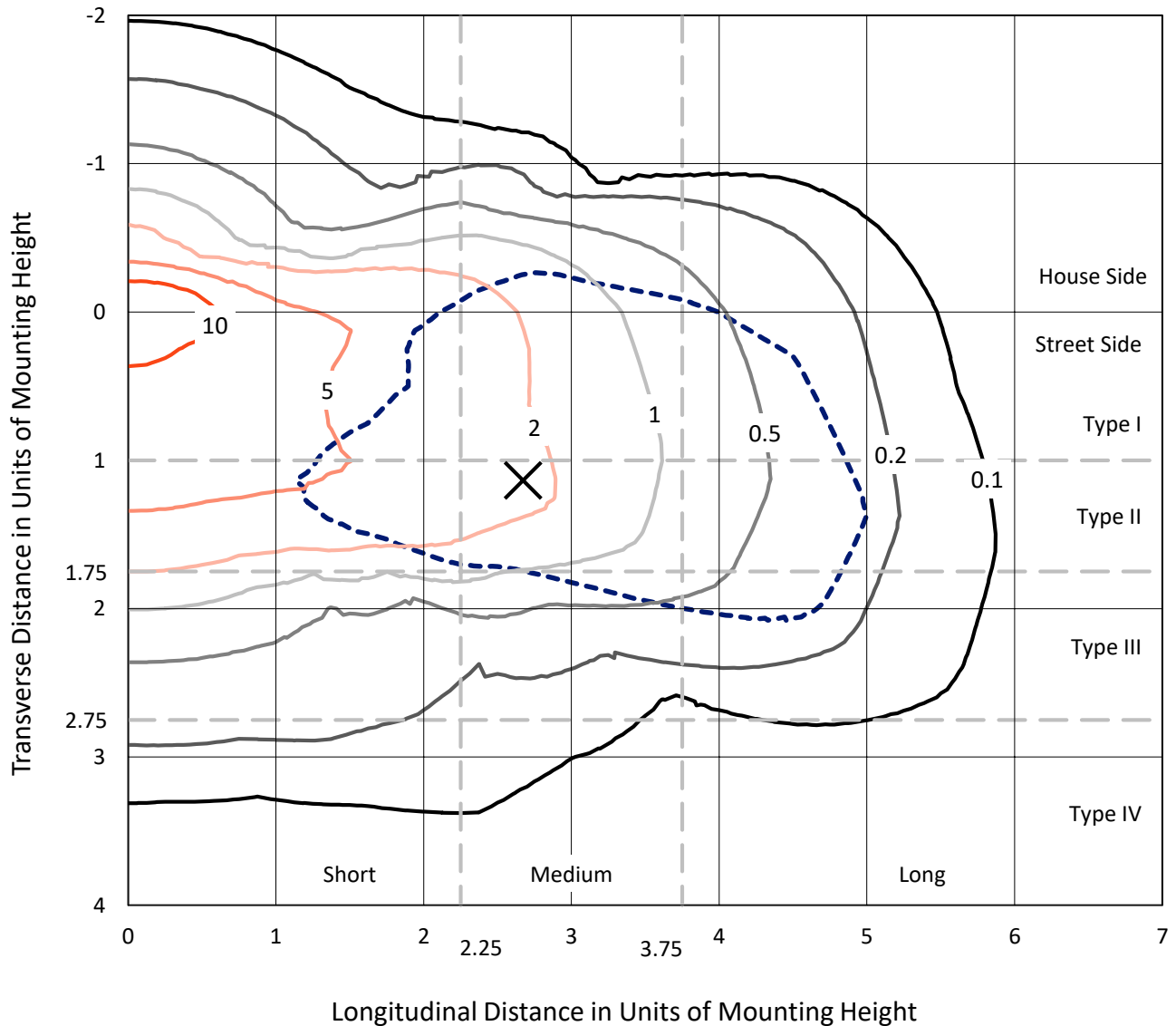


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

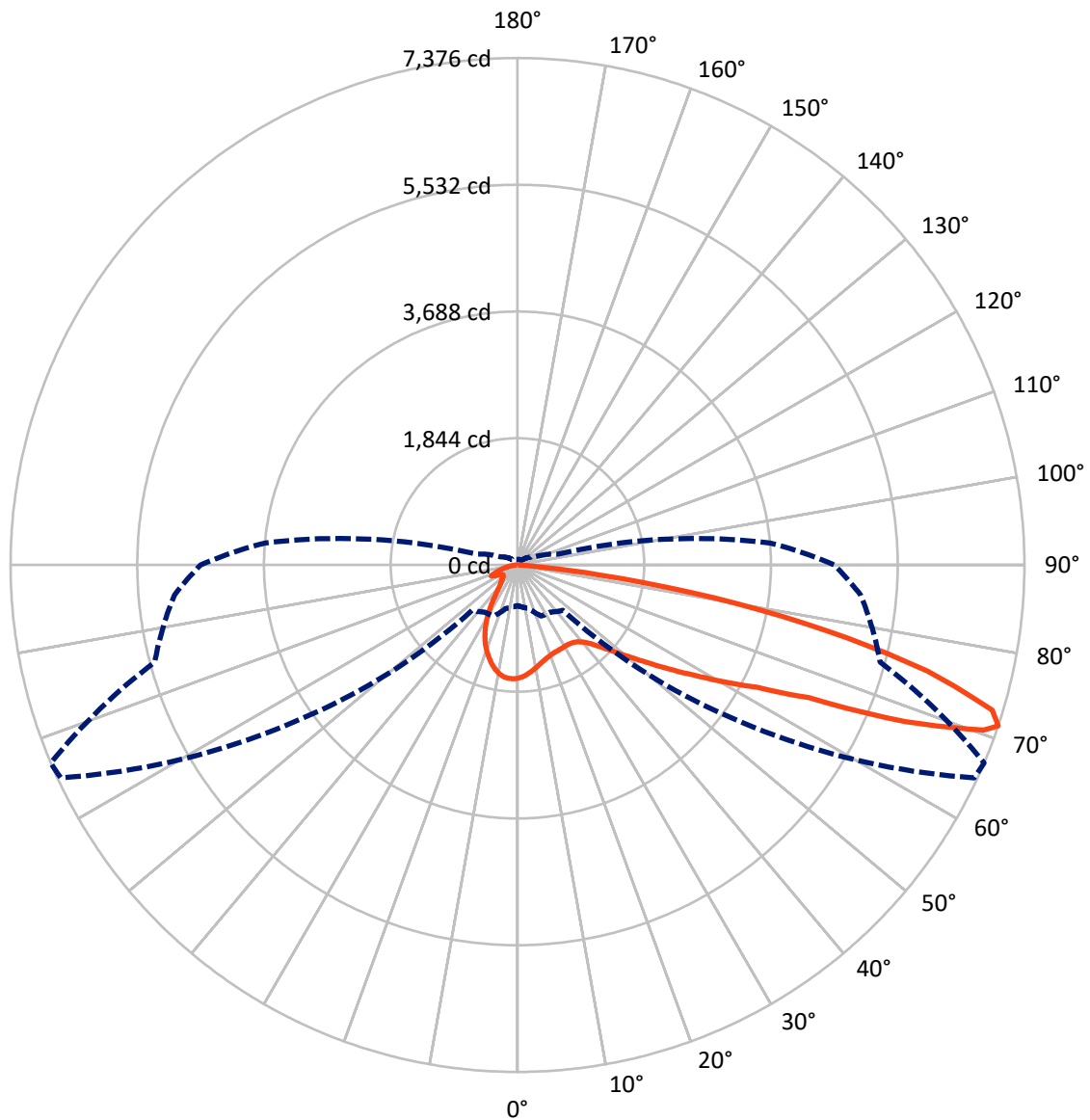


Based on 10 foot mounting height. Maximum calculated value = 16.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1480.0 | 0.0 | 1480.0 |
| | % Fixture | 20.5 | 0.0 | 20.5 |
| Street Side | Lumens | 5744.0 | 0.0 | 5744.0 |
| | % Fixture | 79.5 | 0.0 | 79.5 |
| Total | Lumens | 7224.0 | 0.0 | 7224.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 146.0 | 2.0 |
| 10°-20° | 358.7 | 5.0 |
| 20°-30° | 484.3 | 6.7 |
| 30°-40° | 637.9 | 8.8 |
| 40°-50° | 908.6 | 12.6 |
| 50°-60° | 1388.0 | 19.2 |
| 60°-70° | 1733.1 | 24.0 |
| 70°-80° | 1398.9 | 19.4 |
| 80°-90° | 168.6 | 2.3 |
| 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° | 7224.0 | 100.0 |
| 0°-180° | 7224.0 | 100.0 |



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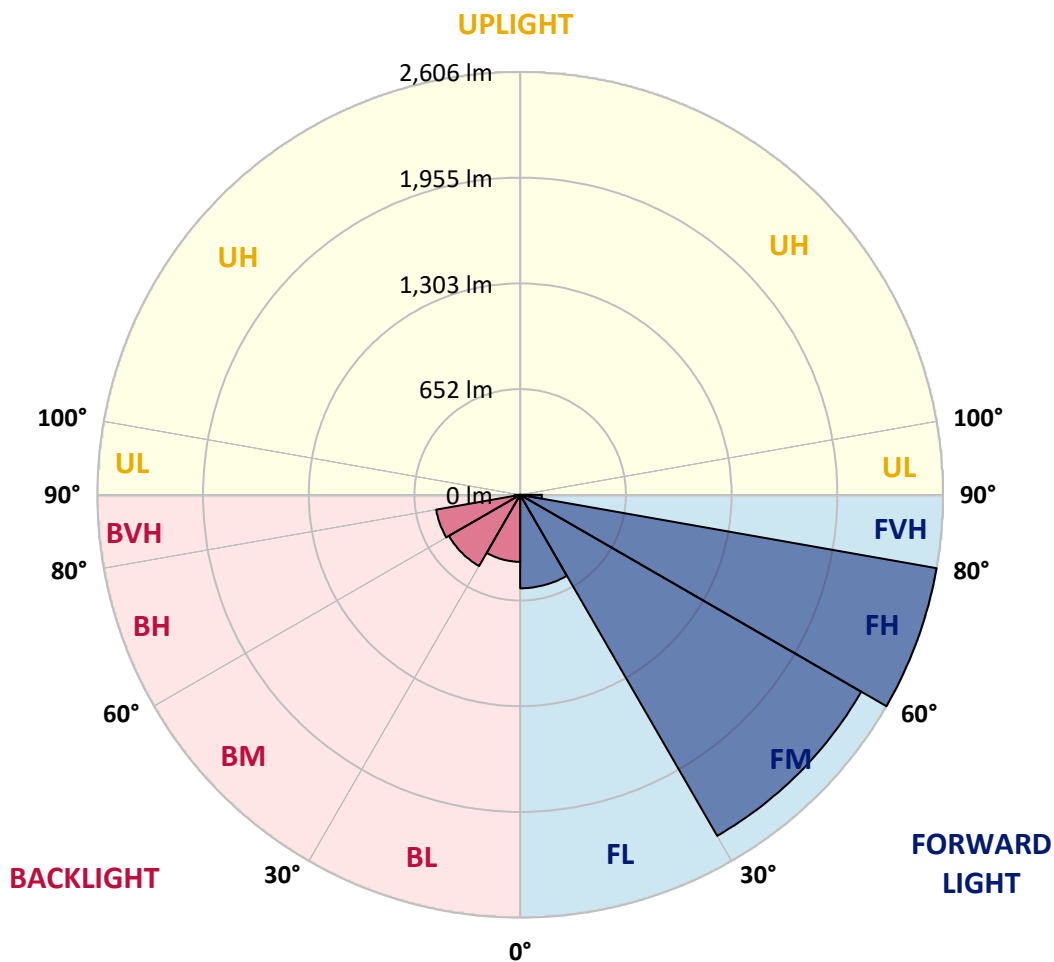
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 576.1 | 8.0 | | | |
| FM | (30°-60°) | 2427.4 | 33.6 | | | |
| FH | (60°-80°) | 2606.1 | 36.1 | | | G2/5000 |
| FVH | (80°-90°) | 134.5 | 1.9 | | | G2/225 |
| BL | (0°-30°) | 412.9 | 5.7 | B1/500 | | |
| BM | (30°-60°) | 507.0 | 7.0 | B1/1000 | | |
| BH | (60°-80°) | 525.9 | 7.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 34.1 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 |
| 2.5° | 1553.7 | 1560.9 | 1562.0 | 1576.5 | 1581.7 | 1598.4 | 1607.7 | 1623.3 | 1625.4 | 1634.8 | 1641.0 |
| 5° | 1452.8 | 1453.8 | 1460.1 | 1472.6 | 1492.3 | 1522.5 | 1545.3 | 1583.8 | 1591.1 | 1618.1 | 1642.1 |
| 7.5° | 1362.3 | 1367.5 | 1377.9 | 1396.6 | 1419.5 | 1454.9 | 1490.2 | 1543.3 | 1553.7 | 1597.3 | 1643.1 |
| 10° | 1301.0 | 1306.2 | 1314.5 | 1335.3 | 1358.2 | 1397.7 | 1440.3 | 1501.7 | 1513.1 | 1573.4 | 1640.0 |
| 12.5° | 1252.1 | 1257.3 | 1263.5 | 1286.4 | 1311.4 | 1350.9 | 1394.6 | 1463.2 | 1474.6 | 1544.3 | 1632.7 |
| 15° | 1219.8 | 1220.9 | 1229.2 | 1247.9 | 1276.0 | 1314.5 | 1358.2 | 1428.9 | 1442.4 | 1521.4 | 1630.6 |
| 17.5° | 1200.1 | 1202.2 | 1209.4 | 1224.0 | 1249.0 | 1286.4 | 1329.0 | 1400.8 | 1416.4 | 1502.7 | 1631.7 |
| 20° | 1201.1 | 1203.2 | 1207.4 | 1212.6 | 1230.2 | 1262.5 | 1307.2 | 1380.0 | 1395.6 | 1491.3 | 1638.9 |
| 22.5° | 1223.0 | 1224.0 | 1225.0 | 1217.8 | 1224.0 | 1246.9 | 1290.6 | 1365.4 | 1382.1 | 1486.1 | 1647.3 |
| 25° | 1264.6 | 1264.6 | 1262.5 | 1245.8 | 1232.3 | 1241.7 | 1281.2 | 1360.2 | 1376.9 | 1481.9 | 1655.6 |
| 27.5° | 1321.8 | 1325.9 | 1315.5 | 1295.8 | 1264.6 | 1249.0 | 1279.1 | 1356.1 | 1372.7 | 1481.9 | 1659.7 |
| 30° | 1399.8 | 1401.8 | 1397.7 | 1371.7 | 1320.7 | 1278.1 | 1285.4 | 1353.0 | 1369.6 | 1479.8 | 1660.8 |
| 32.5° | 1478.8 | 1485.0 | 1490.2 | 1467.4 | 1406.0 | 1330.1 | 1310.3 | 1357.1 | 1371.7 | 1478.8 | 1657.7 |
| 35° | 1558.9 | 1563.0 | 1588.0 | 1583.8 | 1517.3 | 1408.1 | 1350.9 | 1373.8 | 1386.2 | 1484.0 | 1659.7 |
| 37.5° | 1627.5 | 1636.9 | 1673.3 | 1701.3 | 1649.3 | 1514.2 | 1420.6 | 1410.2 | 1417.4 | 1510.0 | 1671.2 |
| 40° | 1701.3 | 1714.9 | 1768.9 | 1822.0 | 1799.1 | 1647.3 | 1519.4 | 1475.7 | 1473.6 | 1557.8 | 1699.3 |
| 42.5° | 1784.5 | 1800.1 | 1869.8 | 1946.8 | 1954.0 | 1816.8 | 1651.4 | 1568.2 | 1566.1 | 1640.0 | 1760.6 |
| 45° | 1882.3 | 1896.8 | 1991.5 | 2083.0 | 2127.7 | 2006.0 | 1813.7 | 1699.3 | 1700.3 | 1754.4 | 1858.4 |
| 47.5° | 2002.9 | 2025.8 | 2117.3 | 2233.8 | 2313.9 | 2219.2 | 2010.2 | 1882.3 | 1874.0 | 1927.0 | 2018.5 |
| 50° | 2172.4 | 2191.2 | 2267.1 | 2380.4 | 2520.8 | 2477.1 | 2257.7 | 2102.8 | 2096.5 | 2121.5 | 2232.7 |
| 52.5° | 2350.3 | 2356.5 | 2392.9 | 2510.4 | 2746.5 | 2790.2 | 2562.4 | 2376.3 | 2352.3 | 2365.9 | 2499.0 |
| 55° | 2360.7 | 2374.2 | 2398.1 | 2546.8 | 2949.3 | 3165.6 | 2898.3 | 2698.6 | 2667.4 | 2658.1 | 2801.6 |
| 57.5° | 2144.4 | 2166.2 | 2197.4 | 2389.8 | 2957.6 | 3599.2 | 3375.6 | 3075.1 | 3018.9 | 2972.1 | 3125.0 |
| 60° | 1685.7 | 1713.8 | 1771.0 | 2007.1 | 2746.5 | 3846.7 | 4172.2 | 3497.3 | 3447.4 | 3288.3 | 3441.2 |
| 62.5° | 1218.8 | 1230.2 | 1285.4 | 1391.4 | 2179.7 | 3861.3 | 5002.1 | 4048.5 | 3924.7 | 3596.1 | 3713.6 |
| 65° | 981.7 | 1000.4 | 1017.1 | 1016.0 | 1290.6 | 3424.5 | 5553.3 | 5029.1 | 4655.8 | 3940.3 | 4013.1 |
| 67.5° | 809.1 | 815.3 | 855.9 | 926.6 | 877.7 | 2115.2 | 5608.4 | 6462.2 | 6083.6 | 4404.1 | 4368.8 |
| 70° | 676.0 | 678.0 | 718.6 | 845.5 | 840.3 | 1091.9 | 4702.6 | 7286.9 | 7195.3 | 5165.4 | 4925.2 |
| 71° | 591.7 | 609.4 | 654.1 | 818.4 | 836.1 | 932.8 | 3995.4 | 7330.5 | 7376.3 | 5463.8 | 5011.5 |
| 72.5° | 465.9 | 465.9 | 529.3 | 750.8 | 843.4 | 861.1 | 2944.1 | 7092.4 | 7224.5 | 5802.9 | 4861.7 |
| 75° | 273.5 | 271.4 | 305.7 | 523.1 | 862.1 | 857.9 | 1607.7 | 5894.4 | 6161.6 | 5864.2 | 4499.8 |
| 77.5° | 153.9 | 157.0 | 175.7 | 291.2 | 684.3 | 823.6 | 923.5 | 4291.8 | 4606.9 | 4905.4 | 3805.1 |
| 80° | 70.7 | 74.9 | 88.4 | 141.4 | 403.5 | 711.3 | 659.3 | 2787.0 | 2906.6 | 2948.2 | 1798.1 |
| 82.5° | 18.7 | 20.8 | 27.0 | 54.1 | 156.0 | 484.6 | 487.7 | 1166.8 | 1205.3 | 696.8 | 385.8 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 59.3 | 138.3 | 210.1 | 174.7 | 92.6 | 79.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 3.1 | 4.2 | 4.2 | 4.2 | 5.2 |
| 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° | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 | 1647.3 |
| 2.5° | 1646.2 | 1650.4 | 1657.7 | 1656.6 | 1654.5 | 1642.1 | 1649.3 | 1642.1 | 1641.0 | 1637.9 | 1638.9 |
| 5° | 1650.4 | 1656.6 | 1660.8 | 1651.4 | 1635.8 | 1608.8 | 1599.4 | 1575.5 | 1559.9 | 1551.6 | 1547.4 |
| 7.5° | 1656.6 | 1660.8 | 1658.7 | 1632.7 | 1592.1 | 1541.2 | 1497.5 | 1463.2 | 1426.8 | 1420.6 | 1418.5 |
| 10° | 1656.6 | 1660.8 | 1644.1 | 1594.2 | 1524.6 | 1444.5 | 1377.9 | 1321.8 | 1265.6 | 1244.8 | 1247.9 |
| 12.5° | 1652.5 | 1654.5 | 1616.1 | 1536.0 | 1435.1 | 1325.9 | 1232.3 | 1139.8 | 1068.0 | 1024.3 | 1016.0 |
| 15° | 1649.3 | 1646.2 | 1578.6 | 1463.2 | 1329.0 | 1193.9 | 1052.4 | 927.6 | 842.4 | 785.2 | 777.9 |
| 17.5° | 1649.3 | 1637.9 | 1533.9 | 1380.0 | 1213.6 | 1027.5 | 840.3 | 705.1 | 610.4 | 577.2 | 576.1 |
| 20° | 1651.4 | 1626.5 | 1486.1 | 1293.7 | 1070.1 | 829.9 | 627.1 | 511.7 | 476.3 | 471.1 | 472.1 |
| 22.5° | 1653.5 | 1610.9 | 1434.1 | 1195.9 | 909.9 | 618.8 | 448.2 | 406.6 | 409.7 | 422.2 | 421.2 |
| 25° | 1651.4 | 1590.1 | 1372.7 | 1086.7 | 735.2 | 446.1 | 361.9 | 351.5 | 370.2 | 384.8 | 388.9 |
| 27.5° | 1646.2 | 1563.0 | 1307.2 | 956.7 | 560.5 | 351.5 | 316.1 | 315.1 | 333.8 | 347.3 | 346.3 |
| 30° | 1630.6 | 1530.8 | 1231.3 | 819.5 | 404.5 | 299.5 | 284.9 | 288.1 | 300.5 | 313.0 | 313.0 |
| 32.5° | 1614.0 | 1494.4 | 1151.2 | 669.7 | 310.9 | 271.4 | 266.2 | 267.3 | 275.6 | 284.9 | 283.9 |
| 35° | 1596.3 | 1459.0 | 1069.1 | 513.7 | 272.5 | 254.8 | 252.7 | 251.7 | 254.8 | 256.9 | 256.9 |
| 37.5° | 1585.9 | 1427.8 | 978.6 | 386.9 | 251.7 | 244.4 | 240.2 | 236.1 | 235.0 | 232.9 | 230.9 |
| 40° | 1590.1 | 1407.0 | 891.2 | 299.5 | 239.2 | 232.9 | 226.7 | 220.5 | 216.3 | 214.2 | 213.2 |
| 42.5° | 1619.2 | 1400.8 | 794.5 | 257.9 | 227.7 | 222.5 | 214.2 | 203.8 | 199.7 | 199.7 | 198.6 |
| 45° | 1686.8 | 1419.5 | 704.0 | 237.1 | 217.3 | 211.1 | 197.6 | 190.3 | 187.2 | 188.2 | 188.2 |
| 47.5° | 1792.9 | 1472.6 | 622.9 | 226.7 | 210.1 | 200.7 | 185.1 | 177.8 | 175.7 | 176.8 | 176.8 |
| 50° | 1952.0 | 1572.4 | 539.7 | 217.3 | 201.7 | 189.3 | 175.7 | 167.4 | 164.3 | 164.3 | 164.3 |
| 52.5° | 2184.9 | 1736.7 | 479.4 | 211.1 | 194.5 | 179.9 | 166.4 | 157.0 | 152.9 | 152.9 | 151.8 |
| 55° | 2468.8 | 1950.9 | 456.5 | 206.9 | 185.1 | 171.6 | 157.0 | 147.7 | 141.4 | 139.4 | 140.4 |
| 57.5° | 2779.8 | 2228.6 | 489.8 | 205.9 | 174.7 | 162.2 | 147.7 | 136.2 | 130.0 | 129.0 | 127.9 |
| 60° | 3100.1 | 2504.2 | 585.5 | 200.7 | 166.4 | 150.8 | 137.3 | 126.9 | 120.6 | 118.6 | 117.5 |
| 62.5° | 3376.7 | 2778.7 | 743.6 | 196.5 | 160.2 | 140.4 | 125.8 | 116.5 | 111.3 | 108.2 | 108.2 |
| 65° | 3710.5 | 3093.8 | 984.8 | 201.7 | 157.0 | 130.0 | 115.4 | 107.1 | 103.0 | 99.8 | 99.8 |
| 67.5° | 4166.0 | 3560.8 | 1167.9 | 226.7 | 164.3 | 121.7 | 104.0 | 97.8 | 94.6 | 92.6 | 92.6 |
| 70° | 4614.2 | 3822.8 | 812.2 | 266.2 | 183.0 | 114.4 | 93.6 | 89.4 | 87.4 | 85.3 | 85.3 |
| 71° | 4608.0 | 3682.4 | 610.4 | 275.6 | 189.3 | 112.3 | 89.4 | 86.3 | 84.2 | 83.2 | 82.2 |
| 72.5° | 4377.1 | 3347.6 | 437.8 | 267.3 | 186.1 | 106.1 | 84.2 | 81.1 | 79.0 | 79.0 | 78.0 |
| 75° | 3925.8 | 2950.3 | 342.1 | 223.6 | 156.0 | 94.6 | 74.9 | 72.8 | 70.7 | 69.7 | 70.7 |
| 77.5° | 3216.5 | 2360.7 | 269.3 | 176.8 | 118.6 | 78.0 | 66.6 | 63.4 | 62.4 | 61.4 | 62.4 |
| 80° | 1477.8 | 1028.5 | 196.5 | 137.3 | 88.4 | 62.4 | 56.2 | 55.1 | 54.1 | 53.0 | 53.0 |
| 82.5° | 355.7 | 288.1 | 105.0 | 91.5 | 60.3 | 47.8 | 44.7 | 44.7 | 44.7 | 43.7 | 43.7 |
| 85° | 78.0 | 78.0 | 42.6 | 42.6 | 36.4 | 33.3 | 35.4 | 35.4 | 35.4 | 33.3 | 33.3 |
| 87.5° | 4.2 | 12.5 | 13.5 | 19.8 | 20.8 | 19.8 | 23.9 | 25.0 | 23.9 | 22.9 | 21.8 |
| 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)