

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: P401914

Luminaire Tested: **ENT-SA1F-760-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-760-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7455 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

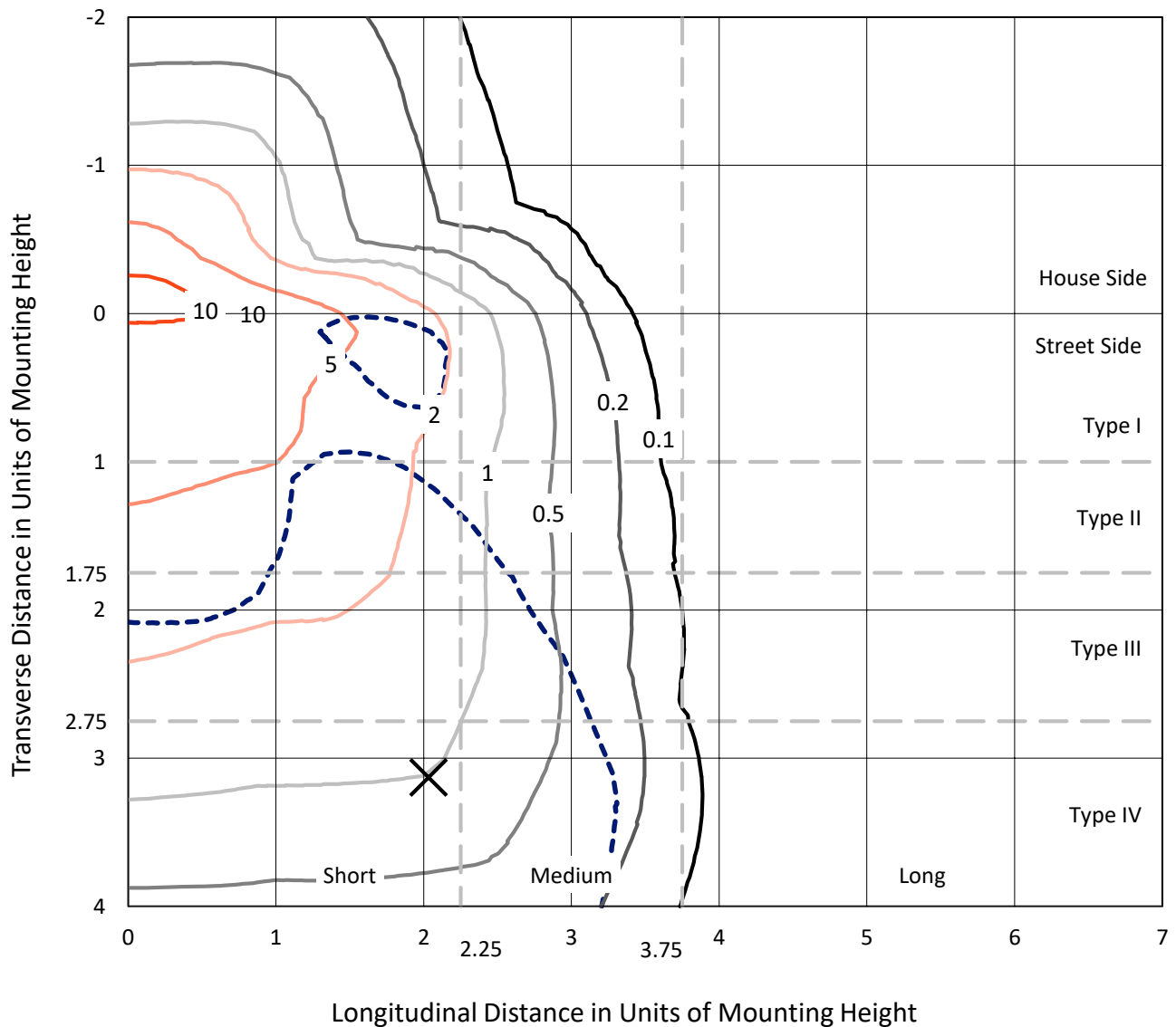
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

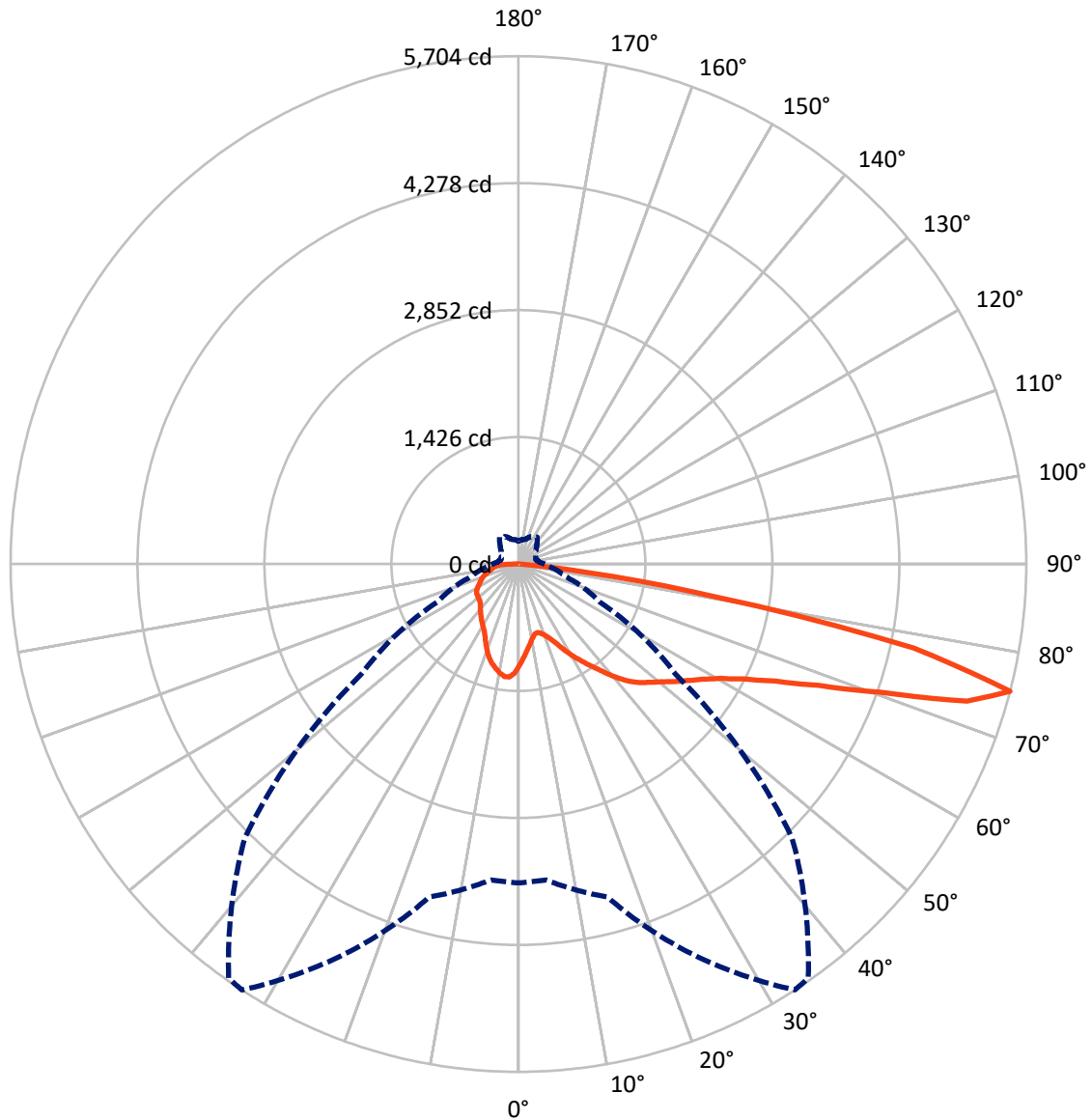
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1811.0 | 0.0 | 1811.0 |
| | % Fixture | 24.3 | 0.0 | 24.3 |
| Street Side | Lumens | 5644.0 | 0.0 | 5644.0 |
| | % Fixture | 75.7 | 0.0 | 75.7 |
| Total | Lumens | 7455.0 | 0.0 | 7455.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 106.7 | 1.4 |
| 10°-20° | 300.2 | 4.0 |
| 20°-30° | 499.1 | 6.7 |
| 30°-40° | 744.5 | 10.0 |
| 40°-50° | 1040.1 | 14.0 |
| 50°-60° | 1388.3 | 18.6 |
| 60°-70° | 1721.4 | 23.1 |
| 70°-80° | 1488.3 | 20.0 |
| 80°-90° | 166.4 | 2.2 |
| 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° | 7455.0 | 100.0 |
| 0°-180° | 7455.0 | 100.0 |



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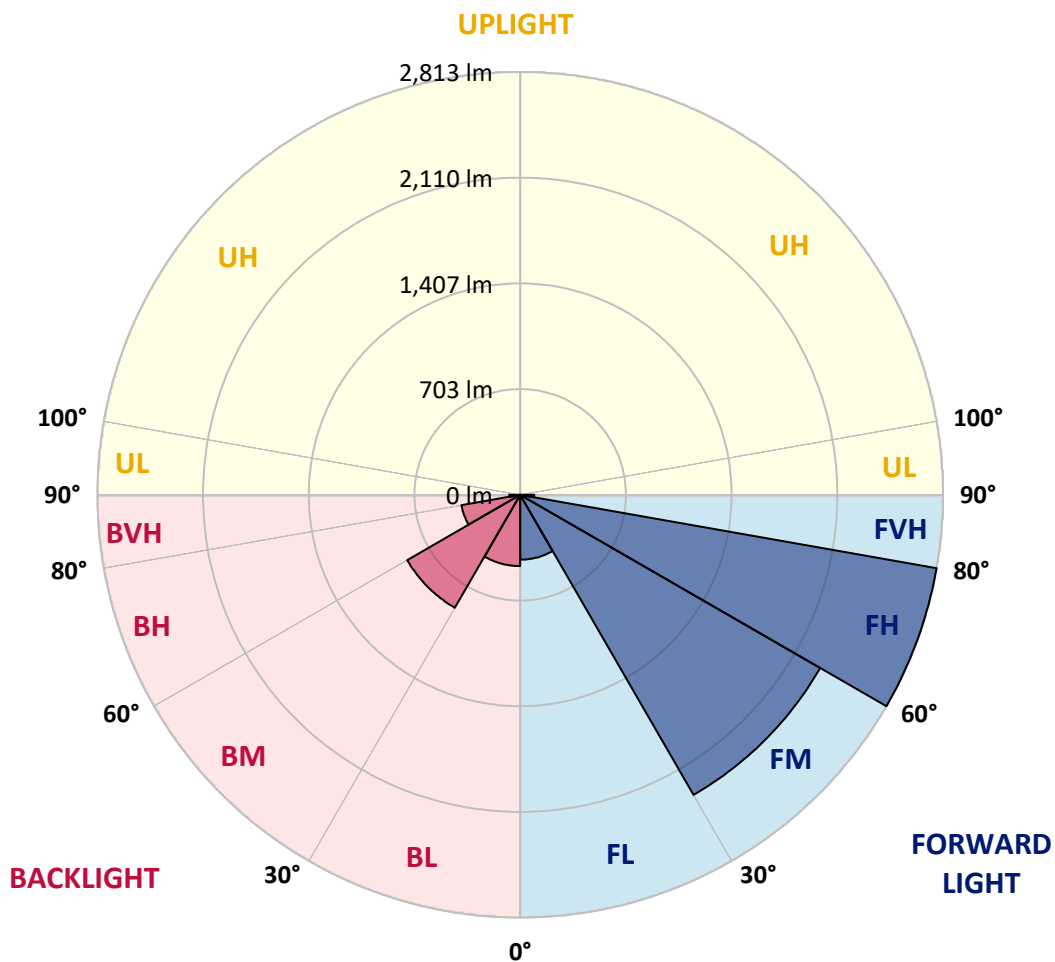
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 431.6 | 5.8 | | | |
| FM | (30°-60°) | 2305.1 | 30.9 | | | |
| FH | (60°-80°) | 2813.2 | 37.7 | | | G2/5000 |
| FVH | (80°-90°) | 94.0 | 1.3 | | | G1/100 |
| BL | (0°-30°) | 474.3 | 6.4 | B1/500 | | |
| BM | (30°-60°) | 867.8 | 11.6 | B1/1000 | | |
| BH | (60°-80°) | 396.5 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 72.4 | 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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 |
| 2.5° | 1036.1 | 1038.3 | 1044.9 | 1052.7 | 1057.1 | 1057.1 | 1069.3 | 1083.7 | 1101.4 | 1116.9 | 1133.5 |
| 5° | 949.7 | 953.0 | 958.6 | 968.5 | 980.7 | 982.9 | 1007.3 | 1032.7 | 1064.8 | 1099.2 | 1132.4 |
| 7.5° | 864.5 | 871.1 | 882.2 | 895.5 | 914.3 | 918.7 | 953.0 | 987.4 | 1031.6 | 1083.7 | 1137.9 |
| 10° | 799.2 | 803.6 | 809.1 | 828.0 | 851.2 | 859.0 | 904.3 | 947.5 | 1008.4 | 1072.6 | 1144.5 |
| 12.5° | 781.5 | 781.5 | 781.5 | 790.3 | 809.1 | 815.8 | 863.4 | 918.7 | 987.4 | 1064.8 | 1154.5 |
| 15° | 806.9 | 805.8 | 793.7 | 787.0 | 798.1 | 803.6 | 844.6 | 898.8 | 976.3 | 1067.1 | 1173.3 |
| 17.5° | 864.5 | 861.2 | 832.4 | 810.3 | 818.0 | 821.3 | 847.9 | 894.4 | 973.0 | 1075.9 | 1201.0 |
| 20° | 939.8 | 932.0 | 887.7 | 854.5 | 853.4 | 855.6 | 875.6 | 907.7 | 978.5 | 1091.4 | 1230.9 |
| 22.5° | 1039.4 | 1035.0 | 969.7 | 918.7 | 909.9 | 909.9 | 918.7 | 938.7 | 992.9 | 1109.1 | 1271.8 |
| 25° | 1167.8 | 1155.6 | 1077.0 | 1008.4 | 988.5 | 982.9 | 981.8 | 981.8 | 1018.4 | 1135.7 | 1322.8 |
| 27.5° | 1299.5 | 1285.1 | 1205.4 | 1112.4 | 1085.9 | 1075.9 | 1058.2 | 1044.9 | 1051.6 | 1164.5 | 1383.6 |
| 30° | 1417.9 | 1398.0 | 1330.5 | 1234.2 | 1194.4 | 1178.9 | 1146.8 | 1119.1 | 1101.4 | 1204.3 | 1464.4 |
| 32.5° | 1483.3 | 1475.5 | 1429.0 | 1341.6 | 1296.2 | 1289.5 | 1236.4 | 1199.9 | 1168.9 | 1256.3 | 1572.9 |
| 35° | 1570.7 | 1560.7 | 1530.9 | 1458.9 | 1404.7 | 1388.1 | 1348.2 | 1305.0 | 1255.2 | 1326.1 | 1710.2 |
| 37.5° | 1651.5 | 1646.0 | 1634.9 | 1585.1 | 1527.5 | 1510.9 | 1474.4 | 1429.0 | 1361.5 | 1429.0 | 1864.0 |
| 40° | 1733.4 | 1726.8 | 1722.3 | 1704.6 | 1663.7 | 1652.6 | 1634.9 | 1581.8 | 1491.0 | 1541.9 | 2015.7 |
| 42.5° | 1853.0 | 1838.6 | 1792.1 | 1791.0 | 1794.3 | 1803.2 | 1804.3 | 1745.6 | 1632.7 | 1682.5 | 2148.5 |
| 45° | 2009.0 | 1969.2 | 1865.1 | 1861.8 | 1900.6 | 1923.8 | 1980.3 | 1930.4 | 1779.9 | 1826.4 | 2296.8 |
| 47.5° | 2088.7 | 2047.8 | 1940.4 | 1933.8 | 1984.7 | 2019.0 | 2158.5 | 2109.8 | 1932.7 | 1988.0 | 2450.7 |
| 50° | 2127.5 | 2100.9 | 2006.8 | 2027.9 | 2079.9 | 2113.1 | 2327.8 | 2289.1 | 2090.9 | 2162.9 | 2644.4 |
| 52.5° | 2181.7 | 2137.4 | 2071.0 | 2115.3 | 2192.8 | 2227.1 | 2479.5 | 2472.8 | 2224.9 | 2353.3 | 2856.9 |
| 55° | 2162.9 | 2139.7 | 2151.8 | 2211.6 | 2309.0 | 2359.9 | 2632.2 | 2632.2 | 2361.0 | 2557.0 | 3067.2 |
| 57.5° | 2178.4 | 2162.9 | 2263.6 | 2316.8 | 2439.6 | 2512.7 | 2816.0 | 2767.3 | 2476.2 | 2727.4 | 3208.9 |
| 60° | 2310.1 | 2265.8 | 2344.4 | 2449.6 | 2607.9 | 2678.7 | 3026.3 | 2909.0 | 2570.2 | 2874.6 | 3234.4 |
| 62.5° | 2542.6 | 2507.1 | 2514.9 | 2635.5 | 2840.3 | 2922.2 | 3234.4 | 3034.0 | 2633.3 | 2936.6 | 3139.2 |
| 65° | 2927.8 | 2911.2 | 2816.0 | 2889.0 | 3171.3 | 3245.5 | 3494.5 | 3142.5 | 2615.6 | 2890.1 | 2887.9 |
| 67.5° | 3445.8 | 3379.4 | 3251.0 | 3316.3 | 3641.7 | 3717.0 | 3807.8 | 3183.5 | 2500.5 | 2612.3 | 2321.2 |
| 70° | 3875.3 | 3819.9 | 3761.3 | 3932.8 | 4307.0 | 4347.9 | 4134.3 | 3144.7 | 2220.5 | 2044.5 | 1556.3 |
| 72.5° | 4148.7 | 4108.8 | 4163.1 | 4667.8 | 5266.7 | 5189.2 | 4456.4 | 2873.5 | 1732.3 | 1251.9 | 778.2 |
| 75° | 3580.8 | 3562.0 | 3872.0 | 4895.9 | 5703.9 | 5675.1 | 4344.6 | 2150.7 | 1005.1 | 551.2 | 354.2 |
| 77.5° | 1800.9 | 2005.7 | 2332.3 | 3473.5 | 4538.3 | 4543.9 | 3165.8 | 1033.9 | 422.8 | 308.8 | 243.5 |
| 80° | 507.0 | 513.6 | 778.2 | 1432.3 | 2265.8 | 2414.2 | 1197.7 | 350.9 | 241.3 | 230.2 | 181.5 |
| 82.5° | 120.7 | 111.8 | 199.2 | 423.9 | 760.4 | 791.4 | 359.7 | 126.2 | 135.0 | 143.9 | 111.8 |
| 85° | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 2.2 | 13.3 | 13.3 | 32.1 | 41.0 | 32.1 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 | 1.1 | 0.0 | 0.0 | 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 |



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CATALOG NUMBER: ENT-SA1F-760-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 | 1142.3 |
| 2.5° | 1141.2 | 1152.3 | 1170.0 | 1185.5 | 1198.8 | 1208.7 | 1224.2 | 1226.5 | 1230.9 | 1233.1 | 1235.3 |
| 5° | 1151.2 | 1172.2 | 1205.4 | 1234.2 | 1254.1 | 1259.7 | 1272.9 | 1271.8 | 1272.9 | 1272.9 | 1271.8 |
| 7.5° | 1164.5 | 1193.2 | 1239.7 | 1271.8 | 1282.9 | 1279.6 | 1276.3 | 1264.1 | 1254.1 | 1249.7 | 1244.2 |
| 10° | 1181.1 | 1214.3 | 1268.5 | 1291.8 | 1286.2 | 1268.5 | 1247.5 | 1225.3 | 1207.6 | 1198.8 | 1196.6 |
| 12.5° | 1197.7 | 1240.8 | 1291.8 | 1298.4 | 1276.3 | 1244.2 | 1208.7 | 1184.4 | 1161.1 | 1149.0 | 1149.0 |
| 15° | 1225.3 | 1272.9 | 1310.6 | 1297.3 | 1257.4 | 1216.5 | 1167.8 | 1134.6 | 1108.0 | 1091.4 | 1090.3 |
| 17.5° | 1258.6 | 1309.5 | 1330.5 | 1291.8 | 1234.2 | 1176.6 | 1118.0 | 1074.8 | 1040.5 | 1023.9 | 1013.9 |
| 20° | 1299.5 | 1347.1 | 1340.5 | 1274.1 | 1199.9 | 1129.0 | 1056.0 | 1004.0 | 968.5 | 950.8 | 947.5 |
| 22.5° | 1346.0 | 1385.8 | 1343.8 | 1245.3 | 1153.4 | 1062.6 | 982.9 | 930.9 | 907.7 | 894.4 | 895.5 |
| 25° | 1402.5 | 1433.4 | 1344.9 | 1211.0 | 1087.0 | 975.2 | 905.5 | 881.1 | 877.8 | 872.2 | 874.5 |
| 27.5° | 1473.3 | 1483.3 | 1340.5 | 1164.5 | 1001.8 | 883.3 | 842.4 | 852.3 | 861.2 | 857.9 | 860.1 |
| 30° | 1557.4 | 1543.0 | 1330.5 | 1096.9 | 896.6 | 799.2 | 801.4 | 823.5 | 835.7 | 832.4 | 833.5 |
| 32.5° | 1655.9 | 1602.8 | 1311.7 | 1015.0 | 797.0 | 748.3 | 766.0 | 788.1 | 800.3 | 800.3 | 801.4 |
| 35° | 1766.6 | 1674.8 | 1275.2 | 908.8 | 727.2 | 717.3 | 732.8 | 750.5 | 758.2 | 753.8 | 757.1 |
| 37.5° | 1882.9 | 1736.7 | 1216.5 | 790.3 | 675.2 | 692.9 | 701.8 | 706.2 | 705.1 | 698.5 | 695.1 |
| 40° | 1991.3 | 1785.4 | 1111.3 | 673.0 | 632.0 | 667.5 | 671.9 | 659.7 | 645.3 | 633.2 | 625.4 |
| 42.5° | 2074.3 | 1810.9 | 965.2 | 587.8 | 591.1 | 638.7 | 642.0 | 617.7 | 590.0 | 571.2 | 566.7 |
| 45° | 2159.6 | 1819.8 | 820.2 | 519.1 | 546.8 | 609.9 | 618.8 | 585.6 | 547.9 | 525.8 | 522.5 |
| 47.5° | 2257.0 | 1841.9 | 677.4 | 471.5 | 509.2 | 590.0 | 604.4 | 563.4 | 521.4 | 488.1 | 482.6 |
| 50° | 2387.6 | 1884.0 | 570.1 | 435.0 | 482.6 | 580.0 | 599.9 | 545.7 | 492.6 | 456.0 | 451.6 |
| 52.5° | 2553.6 | 1945.9 | 470.4 | 406.2 | 461.6 | 564.5 | 593.3 | 528.0 | 471.5 | 427.3 | 420.6 |
| 55° | 2696.4 | 1969.2 | 406.2 | 381.9 | 439.4 | 545.7 | 587.8 | 521.4 | 448.3 | 398.5 | 390.7 |
| 57.5° | 2761.7 | 1902.8 | 360.9 | 357.5 | 416.2 | 522.5 | 576.7 | 499.2 | 422.8 | 384.1 | 377.5 |
| 60° | 2731.8 | 1737.8 | 326.5 | 335.4 | 389.6 | 492.6 | 547.9 | 477.1 | 405.1 | 373.0 | 366.4 |
| 62.5° | 2599.0 | 1547.5 | 301.1 | 314.4 | 359.7 | 454.9 | 514.7 | 457.2 | 389.6 | 360.9 | 352.0 |
| 65° | 2365.5 | 1338.3 | 282.3 | 295.5 | 333.2 | 418.4 | 488.1 | 433.9 | 371.9 | 343.1 | 335.4 |
| 67.5° | 1930.4 | 1064.8 | 262.3 | 276.7 | 311.0 | 388.5 | 463.8 | 415.1 | 352.0 | 333.2 | 326.5 |
| 70° | 1277.4 | 716.2 | 243.5 | 257.9 | 288.9 | 359.7 | 438.3 | 395.2 | 333.2 | 321.0 | 312.1 |
| 72.5° | 586.7 | 385.2 | 223.6 | 238.0 | 263.4 | 327.6 | 406.2 | 365.3 | 307.7 | 300.0 | 286.7 |
| 75° | 290.0 | 236.9 | 199.2 | 212.5 | 232.5 | 288.9 | 368.6 | 339.8 | 284.5 | 271.2 | 255.7 |
| 77.5° | 211.4 | 177.1 | 171.6 | 184.9 | 201.5 | 255.7 | 328.8 | 313.3 | 261.2 | 242.4 | 233.6 |
| 80° | 157.2 | 137.3 | 143.9 | 157.2 | 172.7 | 231.3 | 307.7 | 293.3 | 241.3 | 222.5 | 215.8 |
| 82.5° | 96.3 | 91.9 | 110.7 | 126.2 | 145.0 | 212.5 | 293.3 | 267.9 | 217.0 | 199.2 | 191.5 |
| 85° | 27.7 | 33.2 | 56.5 | 81.9 | 102.9 | 171.6 | 273.4 | 234.7 | 182.6 | 152.8 | 147.2 |
| 87.5° | 0.0 | 3.3 | 17.7 | 37.6 | 60.9 | 114.0 | 210.3 | 183.7 | 139.5 | 112.9 | 108.5 |
| 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)