

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: McGRAW-EDISON

Report Number: P299225

Luminaire Tested: **GLNA-AF-02-LED-E1-T3-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299225
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-02-LED-E1-T3-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7996.7 lumens
Efficiency: N/A
Efficacy: 121.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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

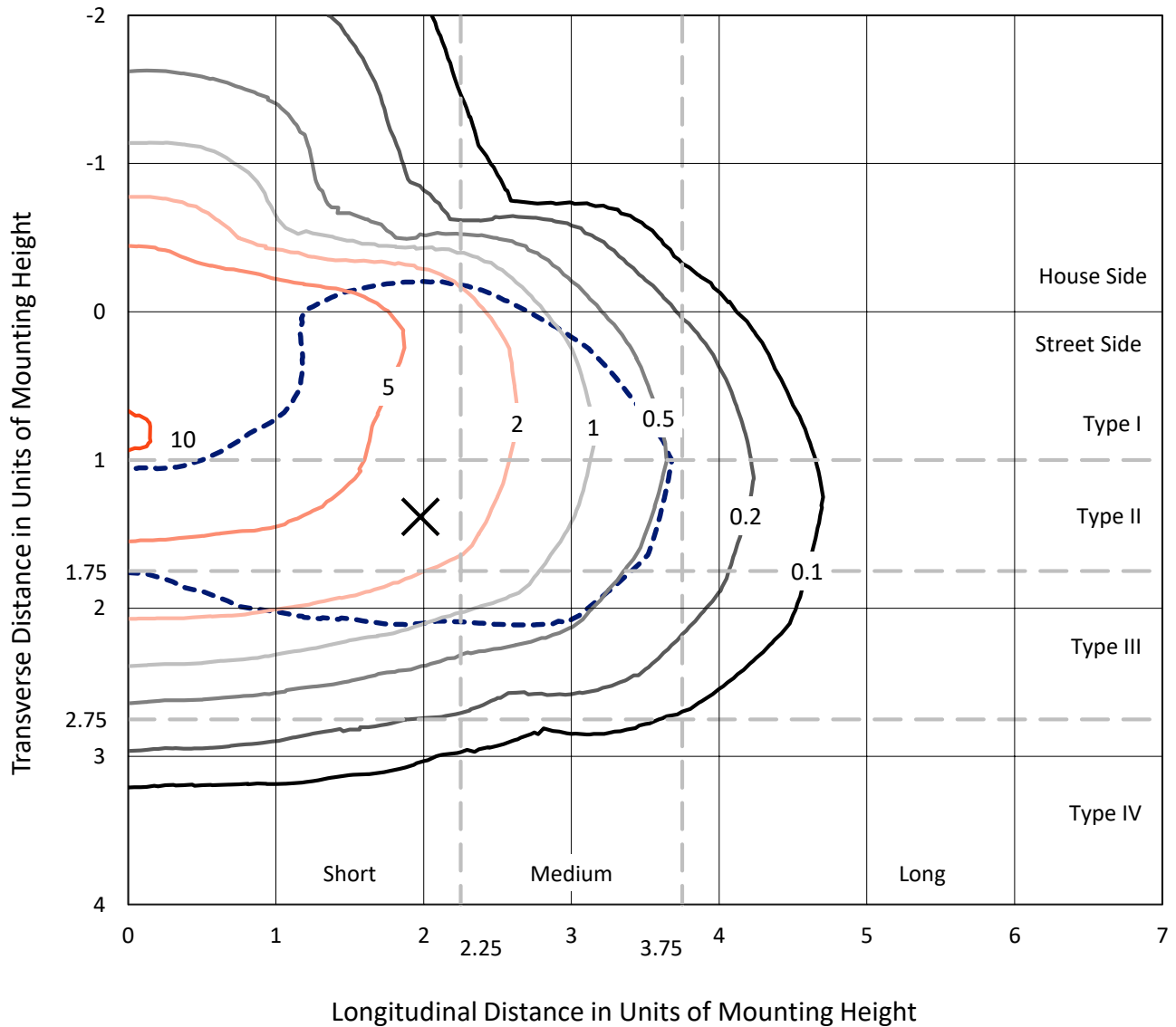


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

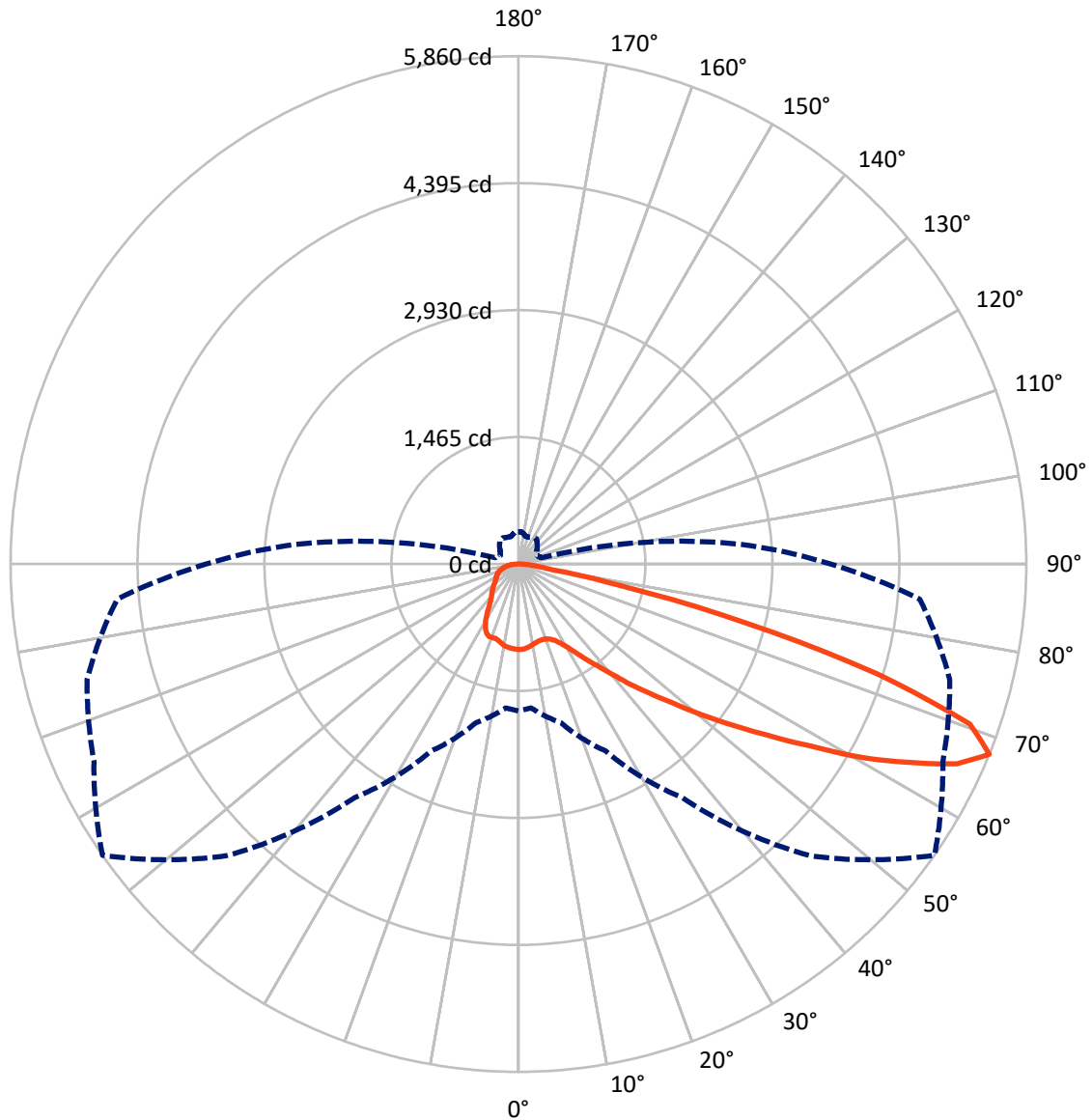


Based on 10 foot mounting height. Maximum calculated value = 10.2 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1727.5 | 0.0 | 1727.5 |
| | % Fixture | 21.6 | 0.0 | 21.6 |
| Street Side | Lumens | 6269.3 | 0.0 | 6269.3 |
| | % Fixture | 78.4 | 0.0 | 78.4 |
| Total | Lumens | 7996.7 | 0.0 | 7996.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 92.0 | 1.2 |
| 10°-20° | 260.7 | 3.3 |
| 20°-30° | 436.7 | 5.5 |
| 30°-40° | 718.1 | 9.0 |
| 40°-50° | 1208.7 | 15.1 |
| 50°-60° | 1902.4 | 23.8 |
| 60°-70° | 2270.3 | 28.4 |
| 70°-80° | 974.9 | 12.2 |
| 80°-90° | 132.9 | 1.7 |
| 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° | 7996.7 | 100.0 |
| 0°-180° | 7996.7 | 100.0 |



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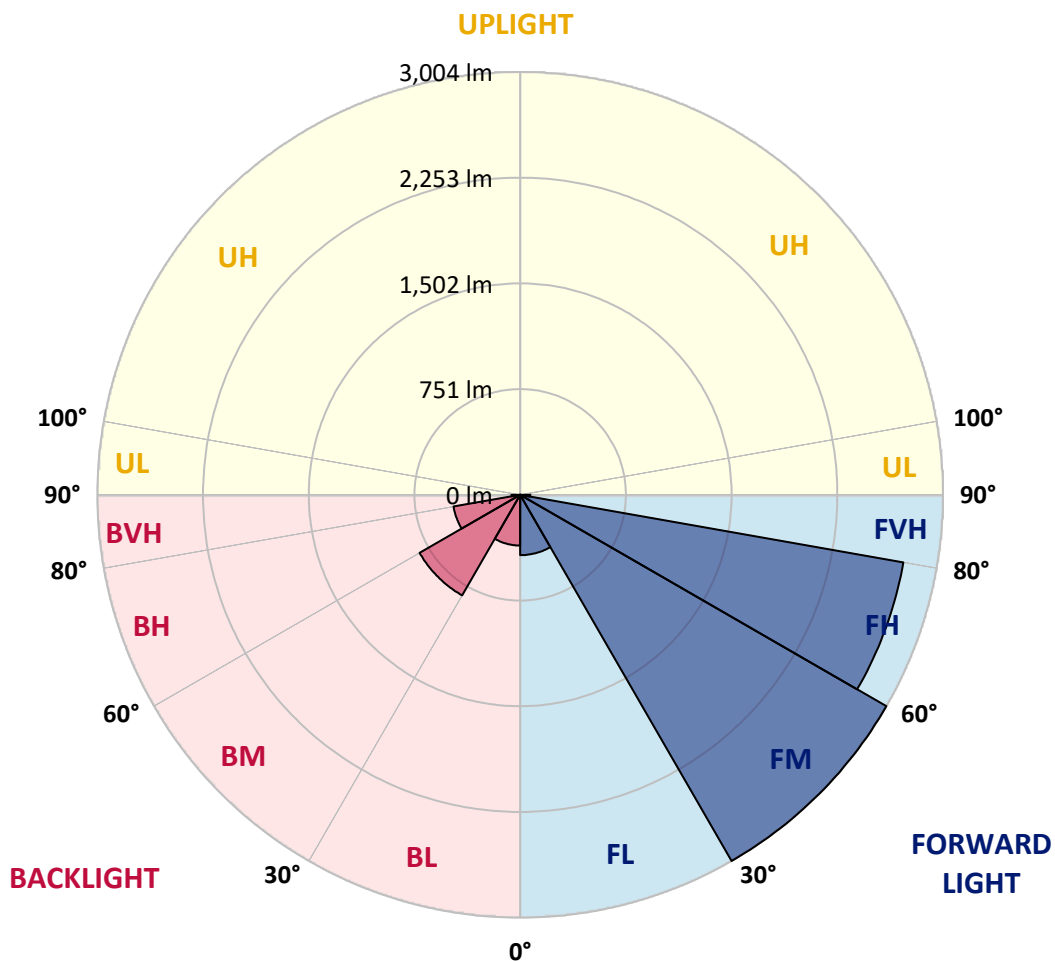
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 428.6 | 5.4 | | | |
| FM (30°-60°) | 3004.2 | 37.6 | | | |
| FH (60°-80°) | 2764.5 | 34.6 | | | G2/5000 |
| FVH (80°-90°) | 71.9 | 0.9 | | | G1/100 |
| BL (0°-30°) | 360.7 | 4.5 | B1/500 | | |
| BM (30°-60°) | 825.0 | 10.3 | B1/1000 | | |
| BH (60°-80°) | 480.7 | 6.0 | B1/500 | | G1/500 |
| BVH (80°-90°) | 61.0 | 0.8 | | | 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 III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 |
| 2.5° | 977.6 | 978.0 | 978.7 | 981.8 | 984.5 | 983.8 | 984.2 | 982.6 | 982.2 | 979.9 | 982.2 |
| 5° | 965.2 | 966.4 | 966.8 | 971.8 | 974.9 | 975.7 | 974.5 | 972.6 | 970.2 | 967.9 | 969.1 |
| 7.5° | 937.0 | 940.1 | 940.5 | 947.5 | 952.5 | 959.0 | 959.4 | 959.8 | 958.7 | 957.1 | 959.4 |
| 10° | 919.3 | 920.0 | 919.6 | 924.7 | 928.5 | 935.9 | 940.1 | 947.5 | 950.5 | 951.3 | 952.9 |
| 12.5° | 918.1 | 917.3 | 916.2 | 916.2 | 915.0 | 918.1 | 925.8 | 936.3 | 943.6 | 945.9 | 947.8 |
| 15° | 930.5 | 930.1 | 926.2 | 920.4 | 913.1 | 910.8 | 917.3 | 928.9 | 938.6 | 943.6 | 945.5 |
| 17.5° | 958.3 | 956.0 | 949.8 | 936.6 | 920.8 | 914.6 | 915.4 | 925.1 | 936.3 | 942.8 | 944.8 |
| 20° | 1009.3 | 1009.3 | 996.1 | 971.4 | 943.2 | 928.5 | 921.6 | 927.4 | 938.2 | 947.1 | 949.8 |
| 22.5° | 1097.3 | 1098.1 | 1076.1 | 1035.5 | 988.0 | 956.7 | 939.3 | 938.2 | 950.9 | 961.0 | 964.1 |
| 25° | 1222.1 | 1219.0 | 1188.1 | 1130.2 | 1057.9 | 1006.2 | 976.0 | 969.1 | 979.9 | 991.1 | 995.0 |
| 27.5° | 1367.3 | 1356.1 | 1319.4 | 1249.5 | 1156.0 | 1080.3 | 1034.0 | 1022.8 | 1033.2 | 1046.0 | 1049.8 |
| 30° | 1511.0 | 1499.4 | 1455.8 | 1379.3 | 1275.4 | 1179.6 | 1113.2 | 1095.0 | 1109.7 | 1127.8 | 1130.2 |
| 32.5° | 1654.7 | 1654.7 | 1606.0 | 1516.8 | 1403.6 | 1298.2 | 1218.6 | 1197.0 | 1221.3 | 1243.3 | 1248.3 |
| 35° | 1826.6 | 1827.3 | 1780.2 | 1672.8 | 1551.2 | 1439.5 | 1351.9 | 1336.0 | 1372.7 | 1388.2 | 1400.1 |
| 37.5° | 2037.8 | 2042.1 | 1981.4 | 1851.7 | 1718.4 | 1601.0 | 1496.7 | 1475.1 | 1511.8 | 1553.9 | 1592.5 |
| 40° | 2266.1 | 2271.5 | 2204.7 | 2044.8 | 1911.5 | 1788.7 | 1675.9 | 1636.9 | 1697.9 | 1778.3 | 1828.1 |
| 42.5° | 2483.9 | 2511.8 | 2447.2 | 2282.7 | 2139.4 | 2012.3 | 1898.0 | 1841.2 | 1917.7 | 2039.0 | 2082.2 |
| 45° | 2798.7 | 2818.8 | 2706.4 | 2557.3 | 2422.5 | 2280.4 | 2129.0 | 2069.1 | 2176.1 | 2329.1 | 2337.9 |
| 47.5° | 3008.5 | 2993.4 | 2936.2 | 2843.5 | 2758.2 | 2625.3 | 2397.4 | 2331.8 | 2473.9 | 2653.9 | 2604.1 |
| 50° | 3120.1 | 3124.7 | 3117.0 | 3122.4 | 3125.5 | 3042.1 | 2726.5 | 2636.5 | 2806.1 | 3023.5 | 2908.8 |
| 52.5° | 3224.4 | 3193.5 | 3219.0 | 3345.7 | 3498.6 | 3467.7 | 3084.6 | 2990.7 | 3162.2 | 3433.7 | 3230.9 |
| 55° | 3222.1 | 3174.9 | 3258.0 | 3481.6 | 3813.4 | 3848.9 | 3486.6 | 3378.5 | 3538.8 | 3873.7 | 3572.4 |
| 57.5° | 3108.1 | 3110.4 | 3238.3 | 3531.1 | 4032.8 | 4207.4 | 3953.2 | 3791.0 | 3938.2 | 4319.4 | 3884.1 |
| 60° | 2951.3 | 2972.5 | 3156.8 | 3522.9 | 4208.5 | 4501.3 | 4525.6 | 4235.6 | 4329.4 | 4724.5 | 4142.1 |
| 62.5° | 2698.3 | 2720.7 | 2974.9 | 3438.7 | 4181.9 | 4784.4 | 5043.2 | 4740.0 | 4738.5 | 4970.2 | 4217.8 |
| 65° | 2299.3 | 2292.8 | 2559.6 | 3123.9 | 3958.2 | 4993.8 | 5557.3 | 5176.1 | 5046.7 | 4974.1 | 4065.6 |
| 67.5° | 1695.6 | 1666.3 | 1895.3 | 2379.3 | 3290.0 | 4759.3 | 5859.7 | 5403.2 | 5151.7 | 4646.9 | 3600.6 |
| 70° | 879.9 | 850.5 | 1035.9 | 1389.3 | 2163.7 | 3714.5 | 5524.8 | 5285.8 | 4919.6 | 3895.3 | 2820.7 |
| 72.5° | 376.2 | 371.2 | 446.5 | 609.5 | 1046.7 | 2142.5 | 4332.1 | 4575.1 | 4221.3 | 2902.2 | 1939.3 |
| 75° | 253.0 | 251.4 | 279.6 | 332.2 | 470.8 | 869.4 | 2711.1 | 3247.5 | 3088.4 | 1799.5 | 1090.8 |
| 77.5° | 198.5 | 196.6 | 213.2 | 238.7 | 305.1 | 343.0 | 1203.2 | 1743.5 | 1613.7 | 783.3 | 477.4 |
| 80° | 155.3 | 153.7 | 164.2 | 178.1 | 219.4 | 216.3 | 395.9 | 693.7 | 536.9 | 300.1 | 232.1 |
| 82.5° | 122.4 | 122.4 | 130.9 | 131.3 | 155.7 | 147.5 | 206.6 | 305.5 | 268.1 | 175.0 | 142.1 |
| 85° | 112.0 | 112.0 | 120.9 | 98.1 | 101.6 | 93.1 | 128.2 | 181.1 | 169.9 | 71.8 | 61.8 |
| 87.5° | 56.4 | 54.8 | 101.6 | 86.9 | 55.2 | 49.4 | 62.6 | 87.7 | 94.2 | 39.8 | 30.9 |
| 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 | 986.1 |
| 2.5° | 981.4 | 981.1 | 981.8 | 982.2 | 985.3 | 989.6 | 991.5 | 994.2 | 995.7 | 995.0 |
| 5° | 969.9 | 970.6 | 973.7 | 976.0 | 981.4 | 988.4 | 992.3 | 995.4 | 998.1 | 996.9 |
| 7.5° | 960.2 | 962.1 | 966.8 | 968.7 | 971.8 | 973.7 | 973.3 | 974.5 | 976.8 | 974.1 |
| 10° | 954.8 | 957.1 | 960.6 | 957.9 | 950.5 | 940.1 | 930.5 | 925.4 | 927.0 | 925.1 |
| 12.5° | 949.4 | 952.5 | 949.8 | 937.0 | 916.6 | 903.0 | 895.7 | 896.5 | 900.0 | 900.7 |
| 15° | 946.3 | 947.5 | 935.9 | 911.9 | 891.1 | 889.1 | 893.0 | 892.2 | 892.6 | 892.6 |
| 17.5° | 946.3 | 943.2 | 921.6 | 897.6 | 888.7 | 885.3 | 873.3 | 858.2 | 851.7 | 849.4 |
| 20° | 951.3 | 943.2 | 916.9 | 901.1 | 881.8 | 852.1 | 820.4 | 792.6 | 780.2 | 776.7 |
| 22.5° | 966.4 | 952.5 | 930.1 | 902.7 | 847.8 | 798.0 | 747.8 | 714.6 | 692.2 | 688.3 |
| 25° | 996.9 | 981.4 | 956.0 | 882.2 | 793.7 | 722.7 | 665.5 | 628.4 | 606.0 | 602.9 |
| 27.5° | 1050.2 | 1040.2 | 969.9 | 837.0 | 721.9 | 645.8 | 592.9 | 564.3 | 547.7 | 546.5 |
| 30° | 1130.5 | 1125.5 | 962.9 | 770.2 | 633.4 | 571.3 | 545.8 | 529.2 | 516.8 | 516.4 |
| 32.5° | 1258.8 | 1218.2 | 940.1 | 688.7 | 552.7 | 518.3 | 507.9 | 497.9 | 488.2 | 488.2 |
| 35° | 1423.7 | 1293.1 | 896.9 | 601.4 | 503.7 | 489.0 | 475.9 | 460.0 | 447.3 | 446.5 |
| 37.5° | 1617.6 | 1339.5 | 819.2 | 531.1 | 480.5 | 469.3 | 450.0 | 426.4 | 404.0 | 400.1 |
| 40° | 1813.4 | 1353.4 | 709.9 | 487.8 | 465.8 | 449.6 | 426.0 | 398.2 | 376.6 | 375.4 |
| 42.5° | 1993.0 | 1326.8 | 594.0 | 458.1 | 451.1 | 429.5 | 404.8 | 380.1 | 363.1 | 362.7 |
| 45° | 2143.7 | 1257.6 | 496.7 | 429.9 | 435.7 | 411.4 | 389.3 | 369.3 | 356.1 | 353.4 |
| 47.5° | 2285.4 | 1159.9 | 428.3 | 400.1 | 420.2 | 401.3 | 382.8 | 363.8 | 351.1 | 349.2 |
| 50° | 2450.0 | 1054.4 | 380.5 | 371.2 | 406.7 | 397.8 | 388.2 | 368.5 | 347.2 | 344.9 |
| 52.5° | 2649.3 | 963.3 | 343.0 | 345.7 | 396.3 | 402.5 | 402.1 | 381.6 | 344.5 | 341.4 |
| 55° | 2871.7 | 862.1 | 314.8 | 324.8 | 392.0 | 411.0 | 405.6 | 394.0 | 346.8 | 342.2 |
| 57.5° | 3090.7 | 743.9 | 295.1 | 309.0 | 385.9 | 410.2 | 388.9 | 372.3 | 352.3 | 345.7 |
| 60° | 3254.9 | 585.2 | 280.0 | 295.1 | 372.3 | 397.4 | 370.8 | 348.8 | 351.1 | 346.1 |
| 62.5° | 3265.7 | 452.3 | 261.9 | 283.1 | 351.9 | 384.7 | 358.8 | 338.4 | 356.1 | 351.5 |
| 65° | 3073.7 | 341.8 | 244.5 | 268.8 | 329.9 | 376.6 | 347.2 | 332.6 | 366.5 | 361.5 |
| 67.5° | 2587.8 | 275.0 | 229.8 | 254.1 | 307.8 | 359.6 | 336.8 | 327.1 | 375.8 | 366.9 |
| 70° | 1868.3 | 234.5 | 215.5 | 236.4 | 288.1 | 340.3 | 327.5 | 317.5 | 350.7 | 336.8 |
| 72.5° | 1150.2 | 203.2 | 199.3 | 212.8 | 273.1 | 320.2 | 313.6 | 299.3 | 315.9 | 304.7 |
| 75° | 574.3 | 176.1 | 181.1 | 189.6 | 251.8 | 297.4 | 290.5 | 276.2 | 278.5 | 276.2 |
| 77.5° | 275.0 | 150.6 | 159.9 | 166.5 | 224.4 | 271.5 | 264.2 | 249.5 | 246.8 | 247.2 |
| 80° | 174.2 | 125.9 | 134.8 | 139.4 | 200.5 | 241.4 | 234.1 | 219.4 | 250.3 | 232.1 |
| 82.5° | 108.9 | 102.4 | 104.7 | 113.2 | 174.6 | 210.1 | 200.5 | 187.3 | 225.6 | 178.4 |
| 85° | 60.3 | 71.5 | 74.5 | 81.9 | 134.4 | 175.7 | 166.1 | 149.5 | 134.0 | 131.7 |
| 87.5° | 35.9 | 42.5 | 43.6 | 49.1 | 90.4 | 127.1 | 112.4 | 106.6 | 88.5 | 88.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)