

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: P299227

Luminaire Tested: **GLNA-AF-03-LED-E1-T3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299227
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-03-LED-E1-T3-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10367.4 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 96
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

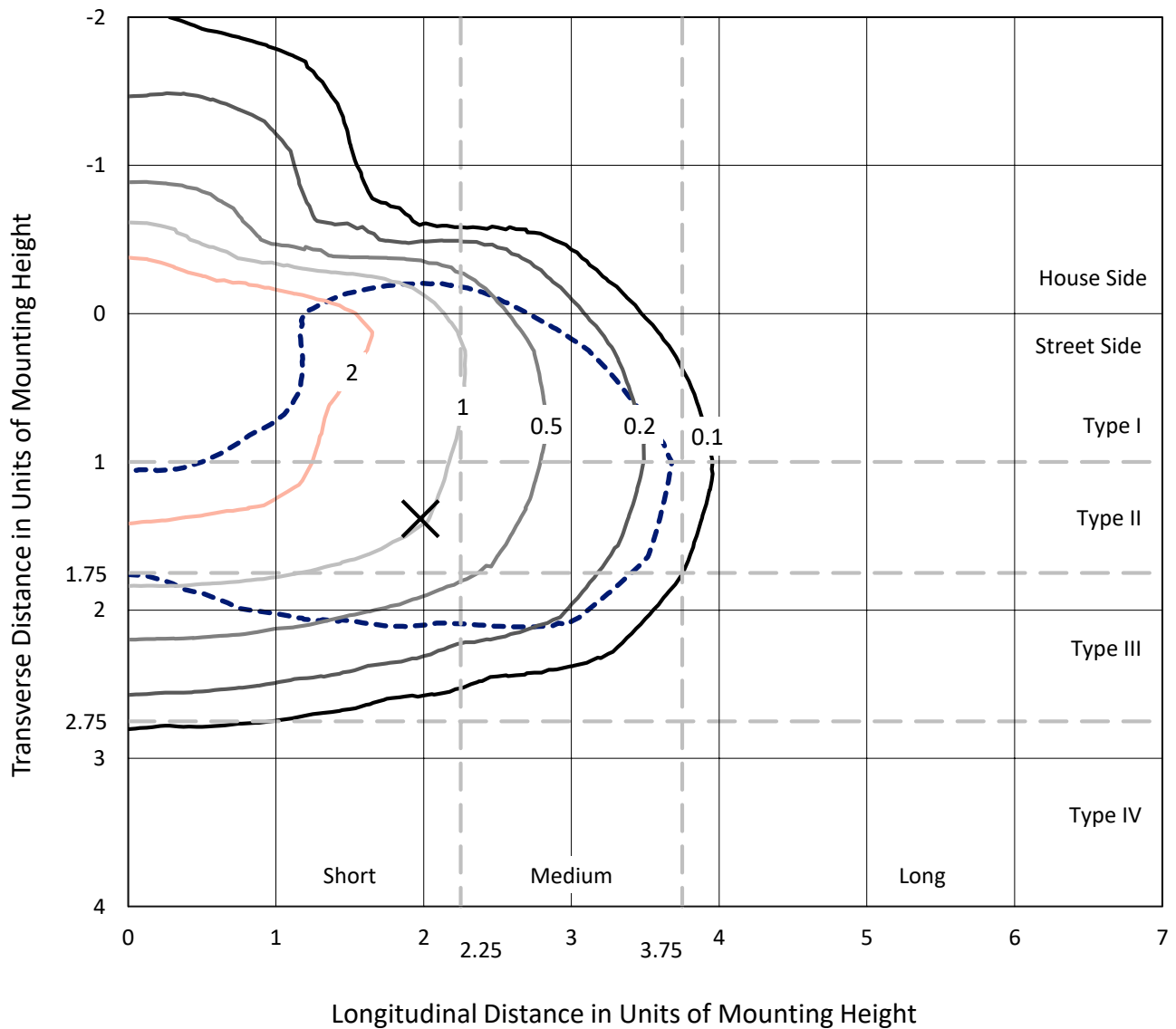


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

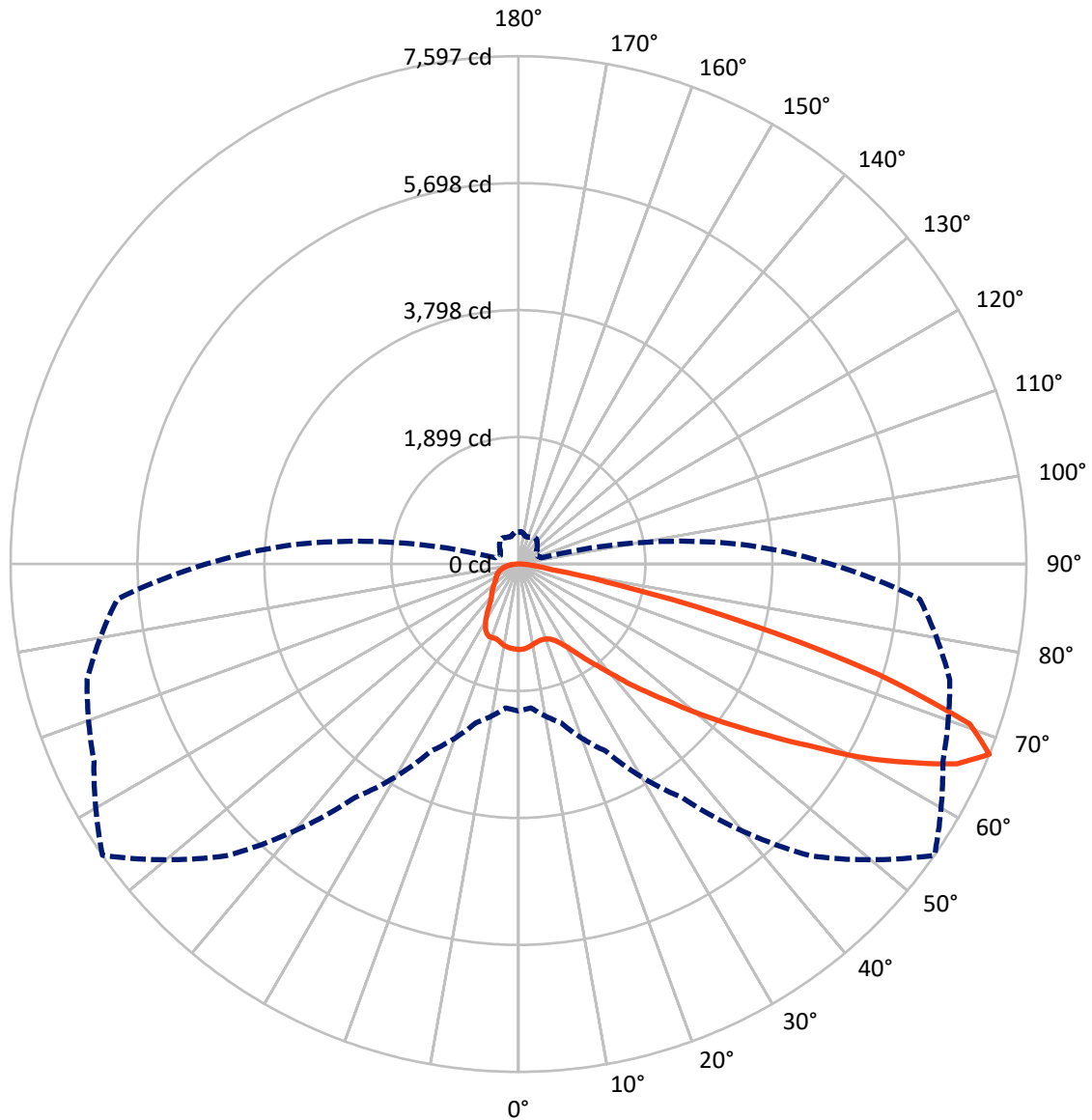


Based on 20 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - Full Cutoff

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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 | 2239.6 | 0.0 | 2239.6 |
| | % Fixture | 21.6 | 0.0 | 21.6 |
| Street Side | Lumens | 8127.8 | 0.0 | 8127.8 |
| | % Fixture | 78.4 | 0.0 | 78.4 |
| Total | Lumens | 10367.4 | 0.0 | 10367.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 119.3 | 1.2 |
| 10°-20° | 337.9 | 3.3 |
| 20°-30° | 566.1 | 5.5 |
| 30°-40° | 930.9 | 9.0 |
| 40°-50° | 1567.0 | 15.1 |
| 50°-60° | 2466.4 | 23.8 |
| 60°-70° | 2943.4 | 28.4 |
| 70°-80° | 1263.9 | 12.2 |
| 80°-90° | 172.3 | 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° | 10367.4 | 100.0 |
| 0°-180° | 10367.4 | 100.0 |



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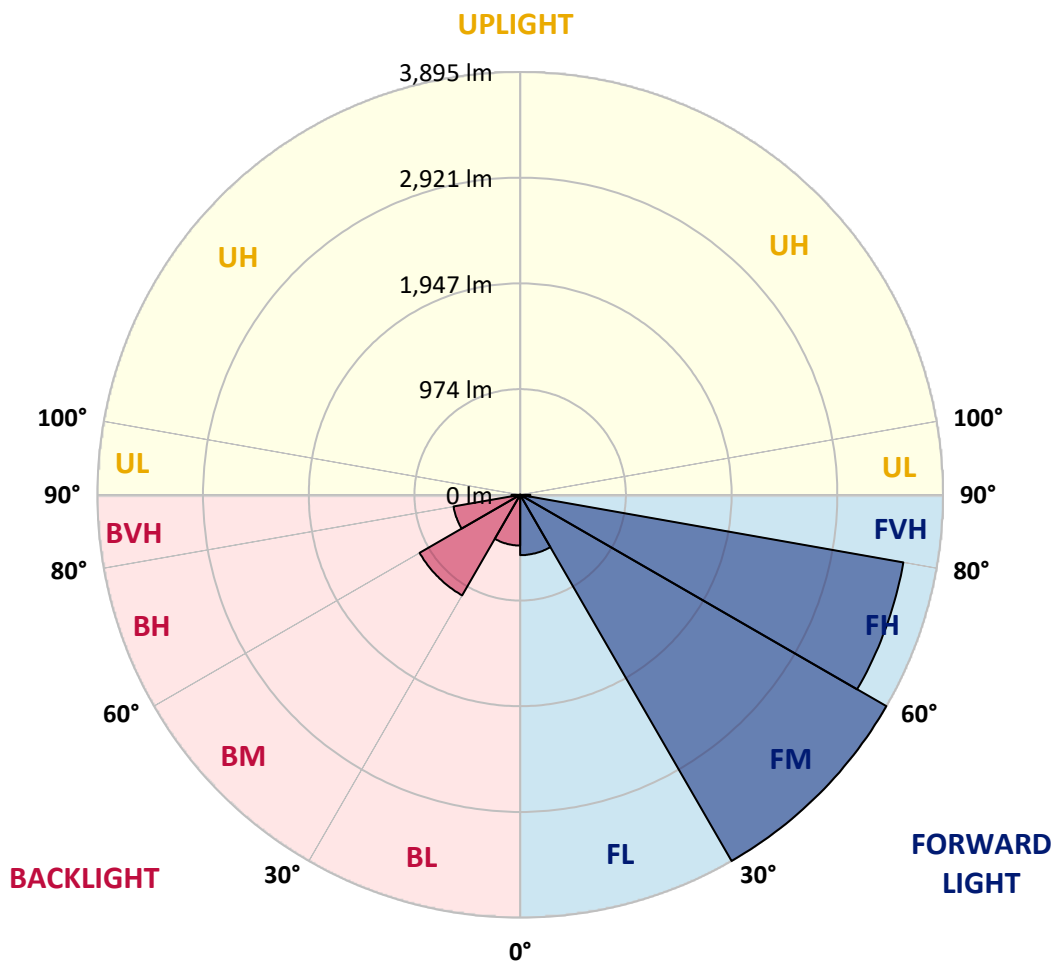
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 555.7 | 5.4 | | | |
| FM | (30°-60°) | 3894.8 | 37.6 | | | |
| FH | (60°-80°) | 3584.1 | 34.6 | | | G2/5000 |
| FVH | (80°-90°) | 93.3 | 0.9 | | | G1/100 |
| BL | (0°-30°) | 467.7 | 4.5 | B1/500 | | |
| BM | (30°-60°) | 1069.6 | 10.3 | B2/2500 | | |
| BH | (60°-80°) | 623.3 | 6.0 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 79.0 | 0.8 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 |
| 2.5° | 1267.4 | 1267.9 | 1268.9 | 1272.9 | 1276.4 | 1275.4 | 1275.9 | 1273.9 | 1273.4 | 1270.4 | 1273.4 |
| 5° | 1251.4 | 1252.9 | 1253.4 | 1259.9 | 1263.9 | 1264.9 | 1263.4 | 1260.9 | 1257.9 | 1254.9 | 1256.4 |
| 7.5° | 1214.8 | 1218.8 | 1219.3 | 1228.3 | 1234.9 | 1243.4 | 1243.9 | 1244.4 | 1242.9 | 1240.9 | 1243.9 |
| 10° | 1191.8 | 1192.8 | 1192.3 | 1198.8 | 1203.8 | 1213.3 | 1218.8 | 1228.3 | 1232.3 | 1233.4 | 1235.4 |
| 12.5° | 1190.3 | 1189.3 | 1187.8 | 1187.8 | 1186.3 | 1190.3 | 1200.3 | 1213.8 | 1223.3 | 1226.3 | 1228.8 |
| 15° | 1206.3 | 1205.8 | 1200.8 | 1193.3 | 1183.8 | 1180.8 | 1189.3 | 1204.3 | 1216.8 | 1223.3 | 1225.8 |
| 17.5° | 1242.4 | 1239.4 | 1231.3 | 1214.3 | 1193.8 | 1185.8 | 1186.8 | 1199.3 | 1213.8 | 1222.3 | 1224.8 |
| 20° | 1308.5 | 1308.5 | 1291.4 | 1259.4 | 1222.8 | 1203.8 | 1194.8 | 1202.3 | 1216.3 | 1227.8 | 1231.3 |
| 22.5° | 1422.6 | 1423.6 | 1395.1 | 1342.5 | 1280.9 | 1240.4 | 1217.8 | 1216.3 | 1232.8 | 1245.9 | 1249.9 |
| 25° | 1584.4 | 1580.4 | 1540.3 | 1465.2 | 1371.6 | 1304.5 | 1265.4 | 1256.4 | 1270.4 | 1284.9 | 1289.9 |
| 27.5° | 1772.7 | 1758.1 | 1710.6 | 1619.9 | 1498.7 | 1400.6 | 1340.5 | 1326.0 | 1339.5 | 1356.0 | 1361.0 |
| 30° | 1958.9 | 1943.9 | 1887.3 | 1788.2 | 1653.5 | 1529.3 | 1443.2 | 1419.6 | 1438.7 | 1462.2 | 1465.2 |
| 32.5° | 2145.2 | 2145.2 | 2082.1 | 1966.5 | 1819.7 | 1683.0 | 1579.9 | 1551.8 | 1583.4 | 1611.9 | 1618.4 |
| 35° | 2368.1 | 2369.1 | 2308.0 | 2168.8 | 2011.0 | 1866.3 | 1752.6 | 1732.1 | 1779.7 | 1799.7 | 1815.2 |
| 37.5° | 2642.0 | 2647.5 | 2568.9 | 2400.6 | 2227.8 | 2075.6 | 1940.4 | 1912.4 | 1959.9 | 2014.5 | 2064.6 |
| 40° | 2937.9 | 2944.9 | 2858.3 | 2651.0 | 2478.2 | 2319.0 | 2172.8 | 2122.2 | 2201.3 | 2305.5 | 2370.1 |
| 42.5° | 3220.3 | 3256.4 | 3172.8 | 2959.4 | 2773.7 | 2608.9 | 2460.7 | 2387.1 | 2486.2 | 2643.5 | 2699.6 |
| 45° | 3628.4 | 3654.5 | 3508.8 | 3315.5 | 3140.7 | 2956.4 | 2760.1 | 2682.5 | 2821.2 | 3019.5 | 3031.0 |
| 47.5° | 3900.4 | 3880.8 | 3806.7 | 3686.5 | 3575.9 | 3403.6 | 3108.2 | 3023.0 | 3207.3 | 3440.7 | 3376.1 |
| 50° | 4045.1 | 4051.1 | 4041.1 | 4048.1 | 4052.1 | 3943.9 | 3534.8 | 3418.1 | 3638.0 | 3919.9 | 3771.2 |
| 52.5° | 4180.3 | 4140.2 | 4173.3 | 4337.5 | 4535.8 | 4495.7 | 3999.0 | 3877.3 | 4099.7 | 4451.7 | 4188.8 |
| 55° | 4177.3 | 4116.2 | 4223.8 | 4513.8 | 4943.9 | 4990.0 | 4520.3 | 4380.1 | 4587.9 | 5022.0 | 4631.4 |
| 57.5° | 4029.5 | 4032.6 | 4198.3 | 4577.9 | 5228.3 | 5454.7 | 5125.2 | 4914.9 | 5105.7 | 5599.9 | 5035.6 |
| 60° | 3826.2 | 3853.8 | 4092.6 | 4567.4 | 5456.2 | 5835.8 | 5867.3 | 5491.2 | 5612.9 | 6125.2 | 5370.1 |
| 62.5° | 3498.2 | 3527.3 | 3856.8 | 4458.2 | 5421.6 | 6202.8 | 6538.3 | 6145.2 | 6143.2 | 6443.7 | 5468.2 |
| 65° | 2981.0 | 2972.5 | 3318.5 | 4050.1 | 5131.7 | 6474.2 | 7204.8 | 6710.6 | 6542.8 | 6448.7 | 5270.9 |
| 67.5° | 2198.3 | 2160.2 | 2457.2 | 3084.6 | 4265.4 | 6170.3 | 7596.9 | 7005.0 | 6679.0 | 6024.5 | 4668.0 |
| 70° | 1140.7 | 1102.7 | 1343.0 | 1801.2 | 2805.2 | 4815.7 | 7162.7 | 6852.8 | 6378.1 | 5050.1 | 3657.0 |
| 72.5° | 487.7 | 481.2 | 578.9 | 790.2 | 1357.0 | 2777.7 | 5616.4 | 5931.4 | 5472.7 | 3762.6 | 2514.3 |
| 75° | 328.0 | 326.0 | 362.5 | 430.6 | 610.4 | 1127.2 | 3514.8 | 4210.3 | 4004.0 | 2333.0 | 1414.1 |
| 77.5° | 257.4 | 254.9 | 276.4 | 309.5 | 395.6 | 444.7 | 1559.8 | 2260.4 | 2092.1 | 1015.5 | 618.9 |
| 80° | 201.3 | 199.3 | 212.8 | 230.8 | 284.4 | 280.4 | 513.3 | 899.3 | 696.0 | 389.1 | 301.0 |
| 82.5° | 158.7 | 158.7 | 169.8 | 170.3 | 201.8 | 191.3 | 267.9 | 396.1 | 347.5 | 226.8 | 184.3 |
| 85° | 145.2 | 145.2 | 156.7 | 127.2 | 131.7 | 120.7 | 166.2 | 234.9 | 220.3 | 93.1 | 80.1 |
| 87.5° | 73.1 | 71.1 | 131.7 | 112.7 | 71.6 | 64.1 | 81.1 | 113.7 | 122.2 | 51.6 | 40.1 |
| 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° | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 | 1278.4 |
| 2.5° | 1272.4 | 1271.9 | 1272.9 | 1273.4 | 1277.4 | 1282.9 | 1285.4 | 1288.9 | 1290.9 | 1289.9 |
| 5° | 1257.4 | 1258.4 | 1262.4 | 1265.4 | 1272.4 | 1281.4 | 1286.4 | 1290.4 | 1293.9 | 1292.4 |
| 7.5° | 1244.9 | 1247.4 | 1253.4 | 1255.9 | 1259.9 | 1262.4 | 1261.9 | 1263.4 | 1266.4 | 1262.9 |
| 10° | 1237.9 | 1240.9 | 1245.4 | 1241.9 | 1232.3 | 1218.8 | 1206.3 | 1199.8 | 1201.8 | 1199.3 |
| 12.5° | 1230.8 | 1234.9 | 1231.3 | 1214.8 | 1188.3 | 1170.8 | 1161.2 | 1162.2 | 1166.8 | 1167.8 |
| 15° | 1226.8 | 1228.3 | 1213.3 | 1182.3 | 1155.2 | 1152.7 | 1157.7 | 1156.7 | 1157.2 | 1157.2 |
| 17.5° | 1226.8 | 1222.8 | 1194.8 | 1163.7 | 1152.2 | 1147.7 | 1132.2 | 1112.7 | 1104.2 | 1101.2 |
| 20° | 1233.4 | 1222.8 | 1188.8 | 1168.3 | 1143.2 | 1104.7 | 1063.6 | 1027.5 | 1011.5 | 1007.0 |
| 22.5° | 1252.9 | 1234.9 | 1205.8 | 1170.3 | 1099.1 | 1034.6 | 969.5 | 926.4 | 897.3 | 892.3 |
| 25° | 1292.4 | 1272.4 | 1239.4 | 1143.7 | 1029.0 | 936.9 | 862.8 | 814.7 | 785.7 | 781.7 |
| 27.5° | 1361.5 | 1348.5 | 1257.4 | 1085.1 | 935.9 | 837.3 | 768.7 | 731.6 | 710.1 | 708.6 |
| 30° | 1465.7 | 1459.2 | 1248.4 | 998.5 | 821.2 | 740.6 | 707.6 | 686.0 | 670.0 | 669.5 |
| 32.5° | 1631.9 | 1579.4 | 1218.8 | 892.8 | 716.6 | 672.0 | 658.5 | 645.5 | 632.9 | 632.9 |
| 35° | 1845.8 | 1676.5 | 1162.7 | 779.7 | 653.0 | 634.0 | 616.9 | 596.4 | 579.9 | 578.9 |
| 37.5° | 2097.1 | 1736.6 | 1062.1 | 688.5 | 622.9 | 608.4 | 583.4 | 552.8 | 523.8 | 518.8 |
| 40° | 2351.0 | 1754.6 | 920.4 | 632.4 | 603.9 | 582.9 | 552.3 | 516.3 | 488.2 | 486.7 |
| 42.5° | 2583.9 | 1720.1 | 770.2 | 593.9 | 584.9 | 556.8 | 524.8 | 492.7 | 470.7 | 470.2 |
| 45° | 2779.2 | 1630.4 | 644.0 | 557.3 | 564.8 | 533.3 | 504.8 | 478.7 | 461.7 | 458.2 |
| 47.5° | 2962.9 | 1503.8 | 555.3 | 518.8 | 544.8 | 520.3 | 496.2 | 471.7 | 455.2 | 452.7 |
| 50° | 3176.3 | 1367.1 | 493.2 | 481.2 | 527.3 | 515.8 | 503.3 | 477.7 | 450.2 | 447.2 |
| 52.5° | 3434.7 | 1248.9 | 444.7 | 448.2 | 513.8 | 521.8 | 521.3 | 494.7 | 446.7 | 442.7 |
| 55° | 3723.1 | 1117.7 | 408.1 | 421.1 | 508.3 | 532.8 | 525.8 | 510.8 | 449.7 | 443.7 |
| 57.5° | 4007.0 | 964.4 | 382.6 | 400.6 | 500.3 | 531.8 | 504.3 | 482.7 | 456.7 | 448.2 |
| 60° | 4219.8 | 758.6 | 363.0 | 382.6 | 482.7 | 515.3 | 480.7 | 452.2 | 455.2 | 448.7 |
| 62.5° | 4233.9 | 586.4 | 339.5 | 367.1 | 456.2 | 498.7 | 465.2 | 438.7 | 461.7 | 455.7 |
| 65° | 3985.0 | 443.2 | 317.0 | 348.5 | 427.6 | 488.2 | 450.2 | 431.1 | 475.2 | 468.7 |
| 67.5° | 3355.0 | 356.5 | 297.9 | 329.5 | 399.1 | 466.2 | 436.7 | 424.1 | 487.2 | 475.7 |
| 70° | 2422.1 | 304.0 | 279.4 | 306.5 | 373.6 | 441.2 | 424.6 | 411.6 | 454.7 | 436.7 |
| 72.5° | 1491.2 | 263.4 | 258.4 | 275.9 | 354.0 | 415.1 | 406.6 | 388.1 | 409.6 | 395.1 |
| 75° | 744.6 | 228.3 | 234.9 | 245.9 | 326.5 | 385.6 | 376.6 | 358.0 | 361.0 | 358.0 |
| 77.5° | 356.5 | 195.3 | 207.3 | 215.8 | 290.9 | 352.0 | 342.5 | 323.5 | 320.0 | 320.5 |
| 80° | 225.8 | 163.2 | 174.8 | 180.8 | 259.9 | 313.0 | 303.5 | 284.4 | 324.5 | 301.0 |
| 82.5° | 141.2 | 132.7 | 135.7 | 146.7 | 226.3 | 272.4 | 259.9 | 242.9 | 292.4 | 231.3 |
| 85° | 78.1 | 92.6 | 96.6 | 106.2 | 174.3 | 227.8 | 215.3 | 193.8 | 173.8 | 170.8 |
| 87.5° | 46.6 | 55.1 | 56.6 | 63.6 | 117.2 | 164.7 | 145.7 | 138.2 | 114.7 | 114.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)