

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: P300670

Luminaire Tested: **GLNA-AF-03-LED-E1-RW-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300670
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24166)
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-RW-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Rectangular
Wide Type I OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12195.2 lumens
Efficiency: N/A
Efficacy: 127.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

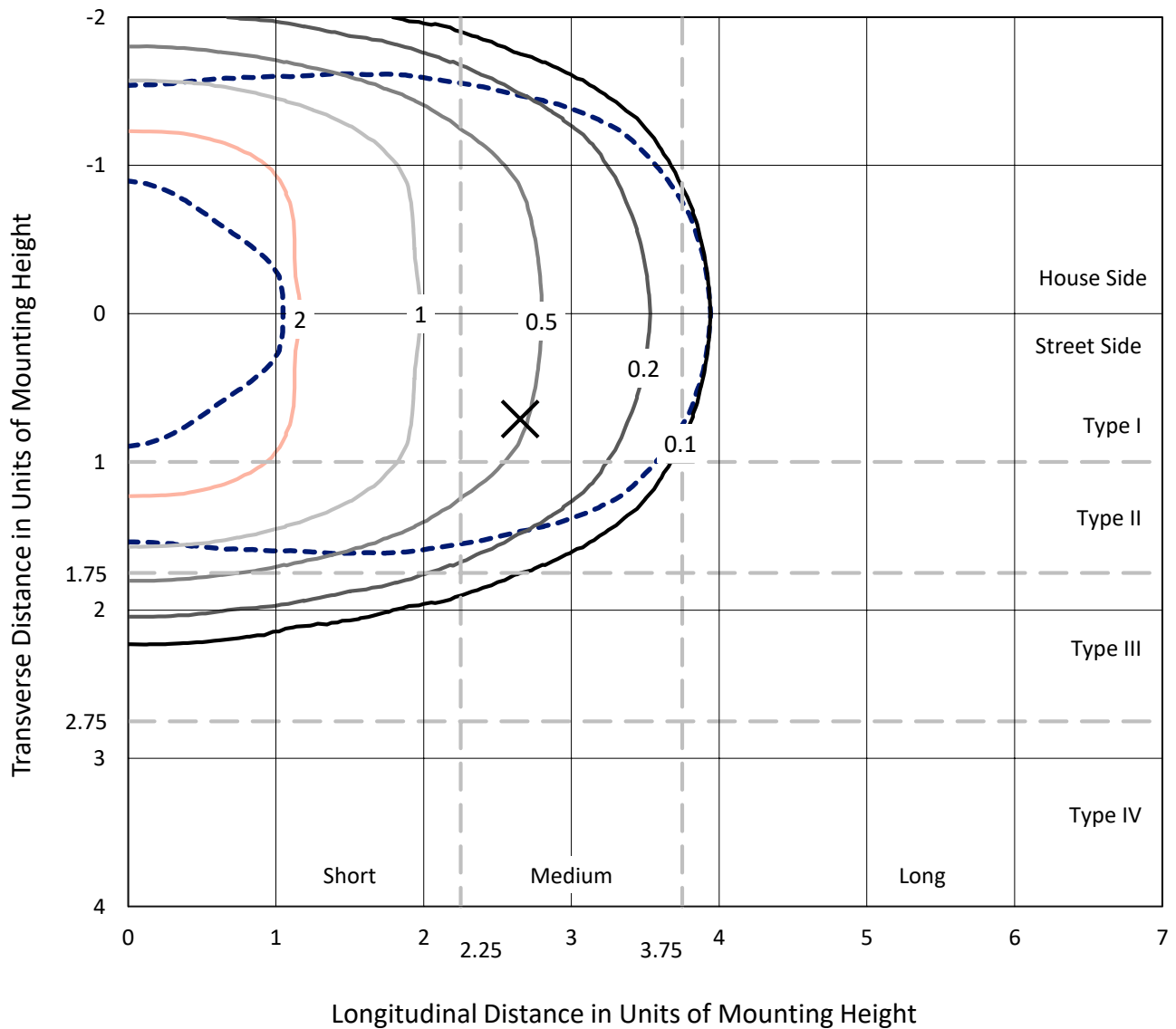
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

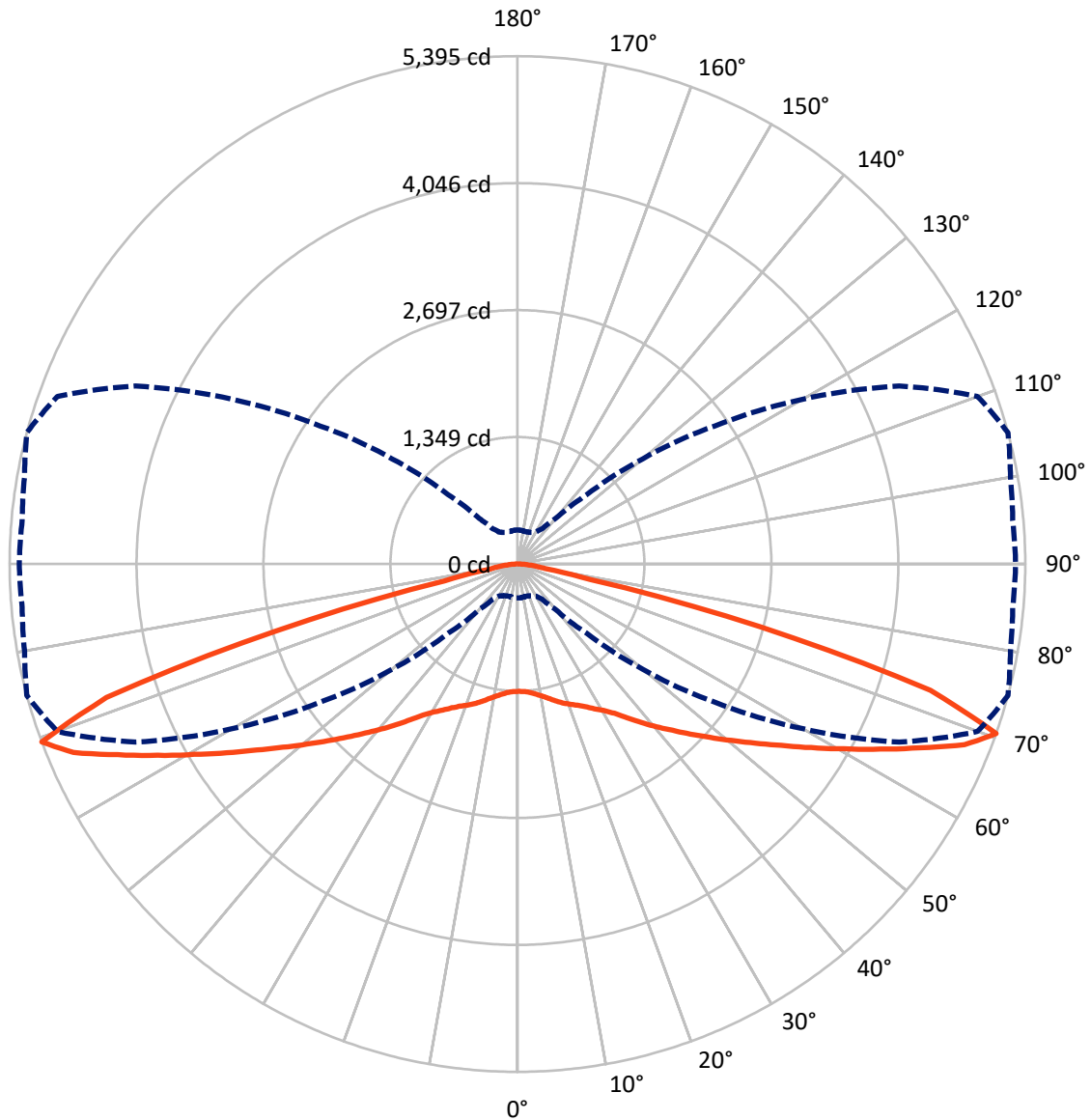
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6097.6 | 0.0 | 6097.6 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 6097.6 | 0.0 | 6097.6 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 12195.2 | 0.0 | 12195.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 129.7 | 1.1 |
| 10°-20° | 403.1 | 3.3 |
| 20°-30° | 758.7 | 6.2 |
| 30°-40° | 1343.6 | 11.0 |
| 40°-50° | 2246.9 | 18.4 |
| 50°-60° | 3131.0 | 25.7 |
| 60°-70° | 2903.5 | 23.8 |
| 70°-80° | 1157.1 | 9.5 |
| 80°-90° | 121.6 | 1.0 |
| 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° | 12195.2 | 100.0 |
| 0°-180° | 12195.2 | 100.0 |



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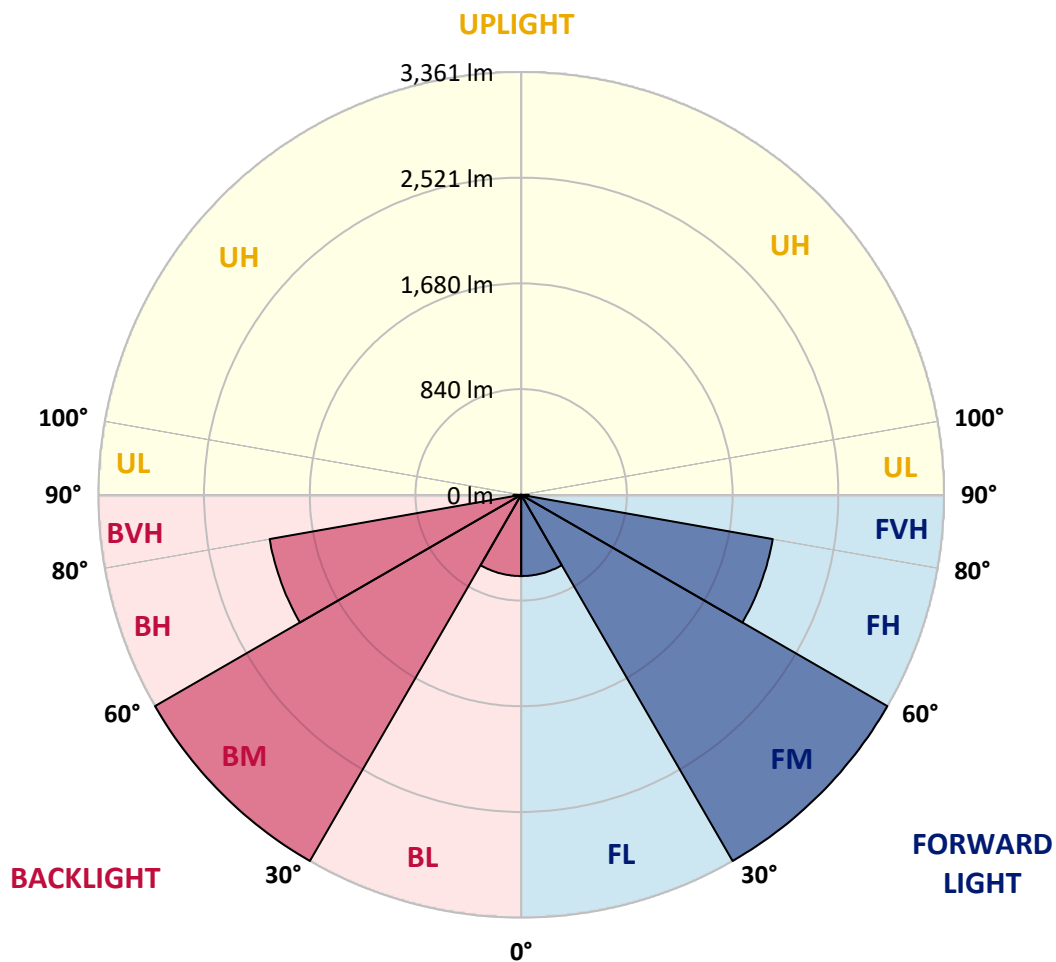
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 645.8 | 5.3 | | | |
| FM | (30°-60°) | 3360.7 | 27.6 | | | |
| FH | (60°-80°) | 2030.3 | 16.6 | | | G2/5000 |
| FVH | (80°-90°) | 60.8 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 645.8 | 5.3 | B2/1000 | | |
| BM | (30°-60°) | 3360.7 | 27.6 | B3/5000 | | |
| BH | (60°-80°) | 2030.3 | 16.6 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 60.8 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 |
| 2.5° | 1350.4 | 1349.3 | 1350.4 | 1349.9 | 1351.0 | 1351.0 | 1352.2 | 1354.5 | 1354.5 | 1356.2 | 1355.6 |
| 5° | 1337.2 | 1336.6 | 1338.3 | 1340.1 | 1341.8 | 1345.2 | 1348.7 | 1353.9 | 1357.9 | 1360.8 | 1363.7 |
| 7.5° | 1311.2 | 1311.2 | 1313.5 | 1317.6 | 1321.6 | 1329.1 | 1337.2 | 1347.5 | 1357.9 | 1366.6 | 1374.1 |
| 10° | 1289.9 | 1291.1 | 1293.9 | 1300.9 | 1307.8 | 1319.3 | 1330.3 | 1345.2 | 1359.7 | 1374.1 | 1385.6 |
| 12.5° | 1277.2 | 1279.0 | 1284.1 | 1294.5 | 1306.0 | 1321.6 | 1338.3 | 1357.3 | 1373.5 | 1390.8 | 1402.3 |
| 15° | 1281.3 | 1282.4 | 1289.9 | 1302.6 | 1317.6 | 1337.2 | 1359.7 | 1382.1 | 1401.1 | 1419.6 | 1435.2 |
| 17.5° | 1303.7 | 1305.5 | 1314.1 | 1328.5 | 1344.1 | 1367.1 | 1391.4 | 1416.7 | 1440.3 | 1461.1 | 1480.1 |
| 20° | 1344.1 | 1345.8 | 1356.8 | 1372.3 | 1390.8 | 1414.4 | 1438.6 | 1465.1 | 1491.6 | 1513.5 | 1534.9 |
| 22.5° | 1401.1 | 1404.0 | 1414.4 | 1430.0 | 1450.7 | 1476.1 | 1504.9 | 1533.1 | 1558.5 | 1578.7 | 1597.7 |
| 25° | 1476.1 | 1482.4 | 1492.2 | 1509.5 | 1531.4 | 1554.5 | 1585.6 | 1614.4 | 1638.6 | 1657.6 | 1671.5 |
| 27.5° | 1582.1 | 1590.8 | 1598.3 | 1615.0 | 1636.3 | 1658.2 | 1689.3 | 1714.7 | 1737.7 | 1756.2 | 1766.6 |
| 30° | 1722.8 | 1731.4 | 1738.9 | 1755.0 | 1774.6 | 1795.4 | 1824.8 | 1847.3 | 1861.7 | 1876.1 | 1875.5 |
| 32.5° | 1893.4 | 1902.6 | 1905.5 | 1922.8 | 1942.9 | 1965.4 | 1991.9 | 2004.6 | 2016.1 | 2017.9 | 2007.5 |
| 35° | 2084.1 | 2088.8 | 2100.3 | 2123.3 | 2146.4 | 2164.8 | 2190.2 | 2196.5 | 2196.5 | 2187.9 | 2164.8 |
| 37.5° | 2293.4 | 2296.2 | 2312.4 | 2338.3 | 2362.0 | 2381.0 | 2398.3 | 2410.9 | 2404.6 | 2386.2 | 2347.5 |
| 40° | 2522.8 | 2527.9 | 2551.0 | 2574.1 | 2600.6 | 2618.4 | 2636.9 | 2639.2 | 2632.8 | 2605.8 | 2553.3 |
| 42.5° | 2741.8 | 2746.4 | 2769.4 | 2805.8 | 2840.3 | 2865.1 | 2882.4 | 2885.9 | 2865.7 | 2840.9 | 2775.8 |
| 45° | 2930.3 | 2942.4 | 2972.3 | 3015.0 | 3065.1 | 3100.3 | 3123.9 | 3133.7 | 3115.8 | 3083.6 | 3008.1 |
| 47.5° | 3079.5 | 3091.6 | 3134.3 | 3185.0 | 3247.3 | 3304.3 | 3343.5 | 3364.3 | 3359.6 | 3335.4 | 3253.0 |
| 50° | 3189.0 | 3200.6 | 3246.7 | 3308.9 | 3381.5 | 3452.4 | 3519.3 | 3568.9 | 3586.2 | 3575.2 | 3499.7 |
| 52.5° | 3201.7 | 3220.7 | 3274.9 | 3358.5 | 3453.0 | 3549.8 | 3644.9 | 3729.1 | 3786.2 | 3794.8 | 3738.9 |
| 55° | 3024.8 | 3043.8 | 3118.7 | 3242.6 | 3383.3 | 3541.2 | 3693.4 | 3835.1 | 3947.5 | 4005.2 | 3975.8 |
| 57.5° | 2607.5 | 2641.5 | 2720.5 | 2865.7 | 3072.6 | 3308.9 | 3551.6 | 3803.4 | 4032.3 | 4185.0 | 4214.4 |
| 60° | 1998.3 | 2038.6 | 2118.2 | 2272.6 | 2503.2 | 2785.0 | 3108.9 | 3481.3 | 3885.3 | 4228.8 | 4434.0 |
| 62.5° | 1281.8 | 1319.9 | 1403.5 | 1537.7 | 1725.6 | 2031.1 | 2378.7 | 2820.7 | 3363.7 | 3906.0 | 4394.8 |
| 65° | 658.8 | 679.5 | 723.3 | 804.6 | 951.0 | 1179.2 | 1491.1 | 1932.0 | 2552.7 | 3221.9 | 3928.5 |
| 67.5° | 417.3 | 421.3 | 431.1 | 442.7 | 480.1 | 559.1 | 704.3 | 979.2 | 1489.9 | 2187.9 | 3015.0 |
| 70° | 360.8 | 360.8 | 356.2 | 354.5 | 359.1 | 370.0 | 392.5 | 456.5 | 628.8 | 1038.6 | 1738.9 |
| 72.5° | 330.3 | 326.8 | 318.7 | 312.4 | 311.2 | 311.2 | 315.8 | 325.6 | 353.3 | 423.1 | 680.7 |
| 75° | 304.3 | 294.5 | 283.6 | 276.1 | 273.2 | 270.3 | 269.7 | 271.5 | 277.2 | 288.2 | 325.1 |
| 77.5° | 272.6 | 259.9 | 247.3 | 239.8 | 236.3 | 232.3 | 228.8 | 224.8 | 221.9 | 225.4 | 241.5 |
| 80° | 234.6 | 220.2 | 210.4 | 205.8 | 202.3 | 196.5 | 189.0 | 182.1 | 175.8 | 174.6 | 184.4 |
| 82.5° | 189.0 | 172.3 | 172.9 | 174.6 | 168.3 | 160.2 | 152.2 | 144.7 | 133.7 | 128.0 | 133.7 |
| 85° | 152.7 | 144.1 | 140.1 | 151.0 | 141.8 | 129.7 | 117.0 | 103.7 | 86.5 | 72.6 | 79.0 |
| 87.5° | 59.4 | 59.4 | 88.8 | 136.6 | 122.8 | 100.3 | 85.9 | 73.2 | 45.5 | 35.2 | 35.7 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 | 1352.7 |
| 2.5° | 1355.0 | 1356.2 | 1355.6 | 1355.0 | 1355.0 | 1354.5 | 1355.0 | 1355.0 |
| 5° | 1365.4 | 1368.3 | 1368.3 | 1369.4 | 1369.4 | 1370.0 | 1370.6 | 1370.0 |
| 7.5° | 1381.0 | 1386.2 | 1389.6 | 1393.7 | 1394.2 | 1394.8 | 1396.0 | 1394.8 |
| 10° | 1396.5 | 1406.9 | 1414.4 | 1421.9 | 1425.4 | 1426.5 | 1427.7 | 1427.7 |
| 12.5° | 1416.1 | 1430.5 | 1443.8 | 1457.1 | 1463.4 | 1466.9 | 1466.9 | 1469.2 |
| 15° | 1448.4 | 1462.8 | 1478.4 | 1496.3 | 1507.2 | 1513.0 | 1514.7 | 1514.7 |
| 17.5° | 1493.9 | 1506.6 | 1519.9 | 1537.2 | 1551.0 | 1558.5 | 1560.2 | 1559.7 |
| 20° | 1547.0 | 1559.1 | 1566.6 | 1577.5 | 1589.6 | 1598.3 | 1600.6 | 1600.6 |
| 22.5° | 1607.5 | 1614.4 | 1615.6 | 1619.0 | 1628.8 | 1640.3 | 1645.5 | 1646.7 |
| 25° | 1674.3 | 1676.1 | 1671.5 | 1671.5 | 1677.8 | 1688.8 | 1693.9 | 1694.5 |
| 27.5° | 1760.8 | 1752.2 | 1740.6 | 1736.6 | 1740.6 | 1753.3 | 1759.7 | 1762.0 |
| 30° | 1868.6 | 1847.8 | 1821.3 | 1806.9 | 1804.6 | 1821.3 | 1832.8 | 1834.6 |
| 32.5° | 1991.9 | 1962.0 | 1926.8 | 1897.4 | 1889.9 | 1900.3 | 1914.1 | 1913.5 |
| 35° | 2138.3 | 2102.6 | 2059.9 | 2022.5 | 2005.2 | 2015.6 | 2035.2 | 2037.5 |
| 37.5° | 2307.2 | 2260.5 | 2211.5 | 2164.3 | 2137.2 | 2140.1 | 2160.8 | 2167.7 |
| 40° | 2495.7 | 2435.2 | 2373.5 | 2310.1 | 2271.5 | 2264.0 | 2289.3 | 2293.4 |
| 42.5° | 2697.4 | 2619.6 | 2541.8 | 2463.4 | 2413.8 | 2402.3 | 2431.7 | 2430.0 |
| 45° | 2912.4 | 2813.3 | 2722.2 | 2635.7 | 2576.9 | 2559.6 | 2583.9 | 2583.9 |
| 47.5° | 3143.5 | 3021.3 | 2913.0 | 2815.0 | 2751.0 | 2726.2 | 2749.3 | 2751.0 |
| 50° | 3388.5 | 3258.8 | 3131.4 | 3022.5 | 2945.8 | 2914.1 | 2944.1 | 2948.7 |
| 52.5° | 3632.3 | 3506.0 | 3377.5 | 3253.0 | 3160.2 | 3121.6 | 3156.2 | 3171.2 |
| 55° | 3879.5 | 3755.6 | 3632.8 | 3511.2 | 3401.1 | 3355.6 | 3392.5 | 3411.5 |
| 57.5° | 4140.6 | 4025.9 | 3908.9 | 3786.2 | 3680.1 | 3609.2 | 3648.4 | 3673.8 |
| 60° | 4446.7 | 4348.7 | 4227.1 | 4091.6 | 3984.4 | 3912.4 | 3934.9 | 3957.3 |
| 62.5° | 4688.8 | 4726.8 | 4623.6 | 4466.8 | 4329.1 | 4236.9 | 4258.8 | 4282.4 |
| 65° | 4571.7 | 4961.9 | 5053.6 | 4895.1 | 4704.3 | 4560.8 | 4551.6 | 4563.7 |
| 67.5° | 3821.3 | 4579.2 | 5132.0 | 5283.0 | 5123.3 | 4923.9 | 4887.0 | 4904.9 |
| 70° | 2556.2 | 3500.3 | 4475.5 | 5201.7 | 5394.8 | 5317.6 | 5281.3 | 5292.2 |
| 72.5° | 1227.7 | 2038.6 | 3036.3 | 4001.7 | 4589.6 | 4859.4 | 4945.8 | 4987.9 |
| 75° | 449.0 | 809.2 | 1463.4 | 2205.2 | 2662.2 | 3081.8 | 3355.6 | 3467.4 |
| 77.5° | 270.9 | 326.8 | 467.4 | 703.7 | 797.1 | 892.2 | 855.3 | 873.8 |
| 80° | 200.6 | 226.5 | 256.5 | 288.2 | 298.6 | 298.6 | 287.0 | 277.8 |
| 82.5° | 140.6 | 157.3 | 171.8 | 189.0 | 193.7 | 185.0 | 152.2 | 121.0 |
| 85° | 90.5 | 98.0 | 104.3 | 115.3 | 112.4 | 107.2 | 72.0 | 64.0 |
| 87.5° | 41.5 | 47.3 | 49.6 | 54.8 | 52.4 | 50.1 | 35.7 | 30.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)