

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: P453028

Luminaire Tested: **GALN-SA4A-730-U-T4FT-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P453028
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-29)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA4A-730-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11864 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

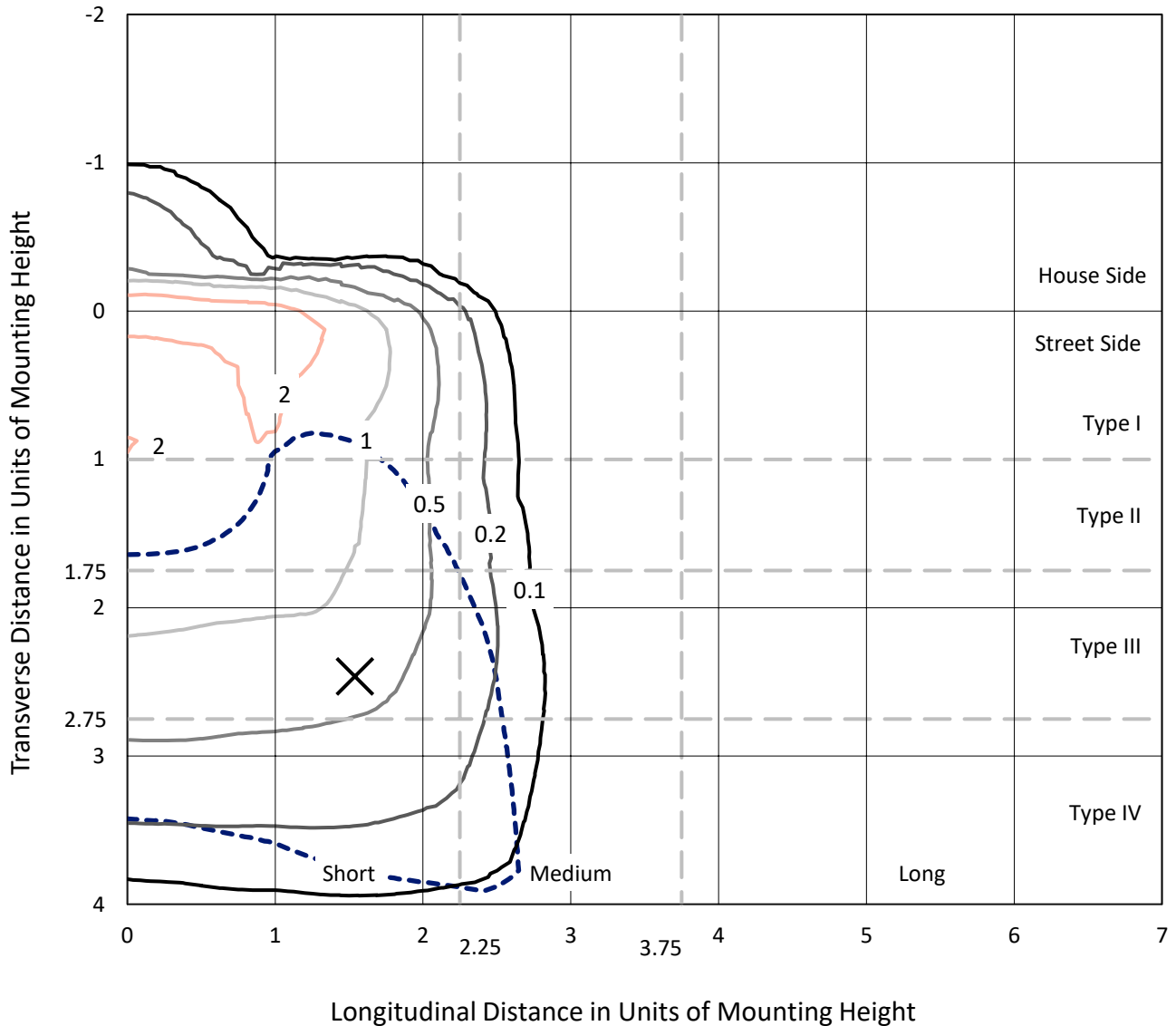
Input Watts (W): 121
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

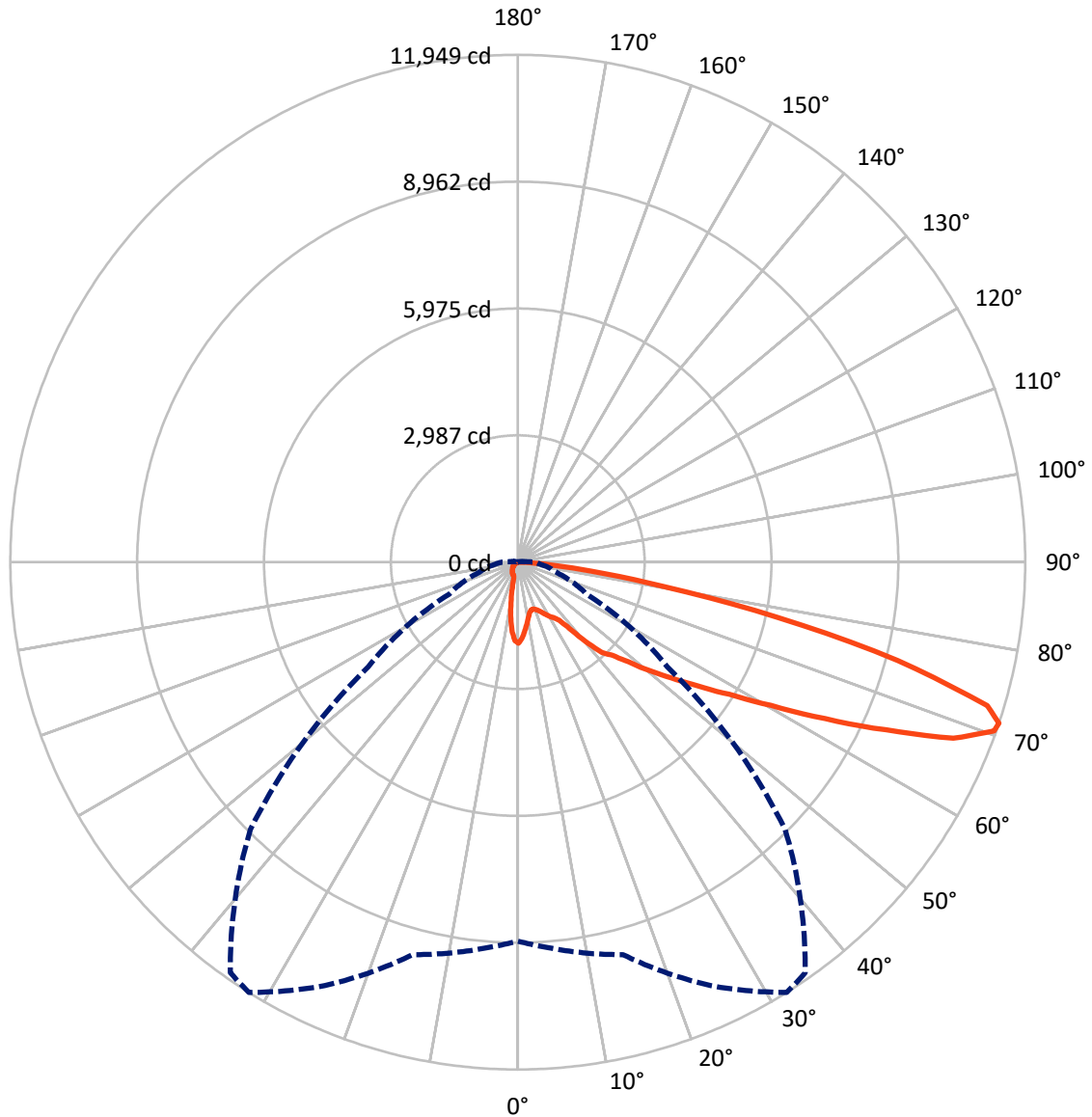
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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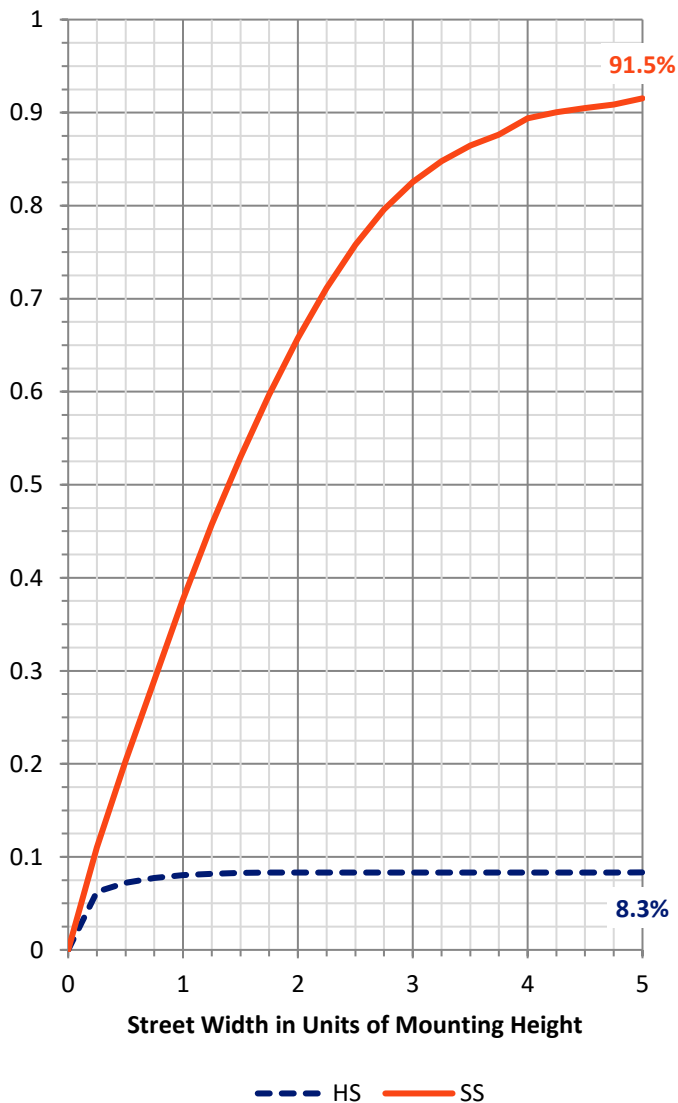
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 993.7 | 0.0 | 993.7 |
| | % Fixture | 8.4 | 0.0 | 8.4 |
| Street Side | Lumens | 10870.3 | 0.0 | 10870.3 |
| | % Fixture | 91.6 | 0.0 | 91.6 |
| Total | Lumens | 11864.0 | 0.0 | 11864.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 155.1 | 1.3 |
| 10°-20° | 336.7 | 2.8 |
| 20°-30° | 523.8 | 4.4 |
| 30°-40° | 872.7 | 7.4 |
| 40°-50° | 1623.3 | 13.7 |
| 50°-60° | 2606.2 | 22.0 |
| 60°-70° | 3505.5 | 29.5 |
| 70°-80° | 2079.9 | 17.5 |
| 80°-90° | 160.8 | 1.4 |
| 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° | 11864.0 | 100.0 |
| 0°-180° | 11864.0 | 100.0 |

Coefficient of Utilization



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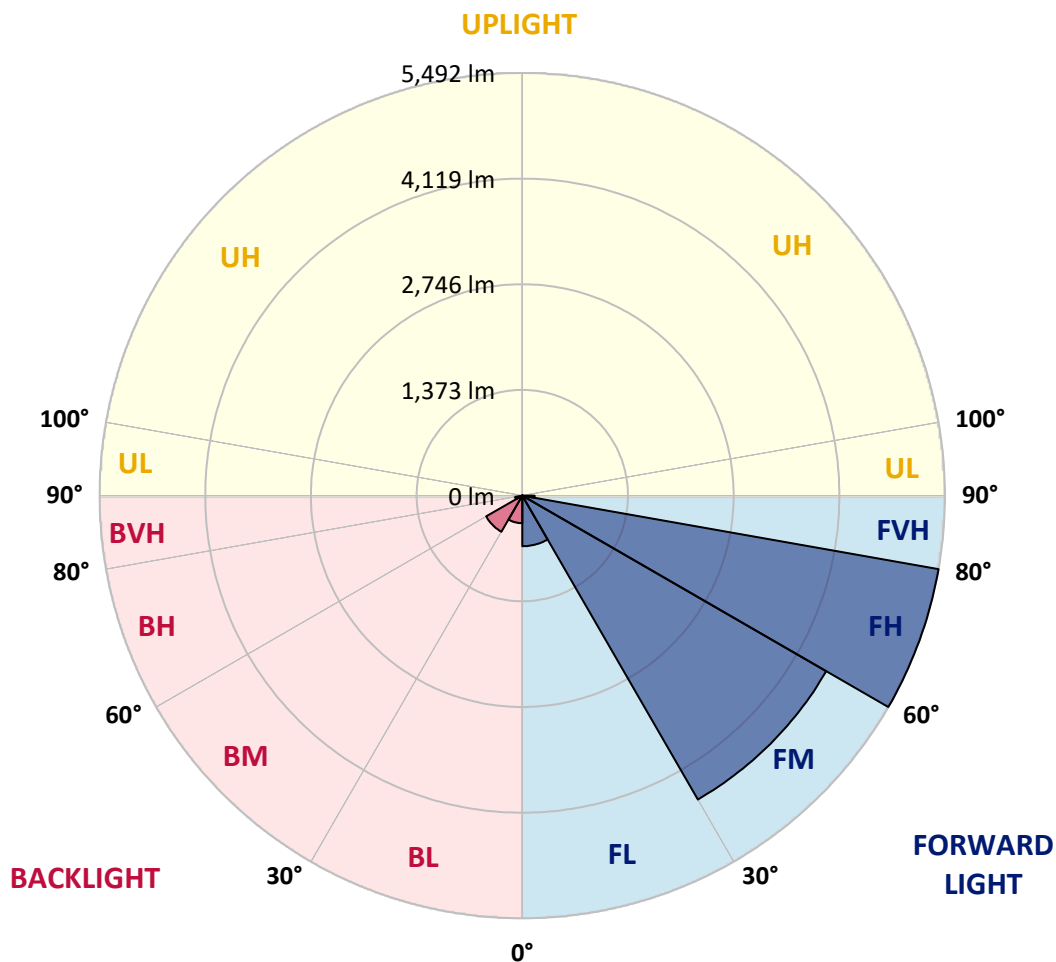
CATALOG NUMBER: GALN-SA4A-730-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 657.6 | 5.5 | | | |
| FM (30°-60°) | 4560.1 | 38.4 | | | |
| FH (60°-80°) | 5492.5 | 46.3 | | | G3/7500 |
| FVH (80°-90°) | 160.1 | 1.3 | | | G2/225 |
| BL (0°-30°) | 358.1 | 3.0 | B1/500 | | |
| BM (30°-60°) | 542.1 | 4.6 | B1/1000 | | |
| BH (60°-80°) | 92.9 | 0.8 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.6 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 |
| 2.5° | 1769.5 | 1787.7 | 1785.0 | 1791.3 | 1806.8 | 1813.2 | 1830.5 | 1849.6 | 1876.0 | 1894.3 | 1906.1 |
| 5° | 1584.6 | 1598.3 | 1600.1 | 1632.0 | 1647.5 | 1664.8 | 1715.8 | 1771.3 | 1833.2 | 1882.4 | 1915.2 |
| 7.5° | 1387.0 | 1394.3 | 1408.9 | 1450.7 | 1489.9 | 1507.2 | 1584.6 | 1681.2 | 1778.6 | 1870.6 | 1929.8 |
| 10° | 1224.0 | 1232.2 | 1258.6 | 1303.2 | 1339.6 | 1362.4 | 1469.9 | 1591.0 | 1727.6 | 1864.2 | 1950.7 |
| 12.5° | 1131.1 | 1135.6 | 1145.7 | 1185.7 | 1232.2 | 1256.8 | 1372.4 | 1510.9 | 1686.6 | 1866.9 | 1986.2 |
| 15° | 1124.7 | 1122.9 | 1111.1 | 1127.4 | 1169.3 | 1194.8 | 1307.8 | 1456.2 | 1650.2 | 1876.0 | 2028.1 |
| 17.5° | 1158.4 | 1153.9 | 1125.6 | 1125.6 | 1160.2 | 1181.2 | 1280.4 | 1427.1 | 1632.0 | 1897.0 | 2087.3 |
| 20° | 1210.3 | 1203.0 | 1156.6 | 1152.9 | 1186.6 | 1208.5 | 1296.8 | 1428.9 | 1635.6 | 1936.1 | 2166.6 |
| 22.5° | 1275.9 | 1267.7 | 1197.6 | 1199.4 | 1235.8 | 1257.7 | 1344.2 | 1461.7 | 1658.4 | 1984.4 | 2251.3 |
| 25° | 1361.5 | 1352.4 | 1269.5 | 1265.9 | 1304.1 | 1323.2 | 1414.3 | 1520.0 | 1690.3 | 2044.5 | 2362.4 |
| 27.5° | 1475.3 | 1456.2 | 1356.9 | 1351.5 | 1392.5 | 1417.0 | 1499.0 | 1598.3 | 1746.7 | 2127.4 | 2511.7 |
| 30° | 1569.1 | 1548.2 | 1453.5 | 1438.9 | 1482.6 | 1501.7 | 1586.4 | 1703.9 | 1857.8 | 2272.2 | 2718.4 |
| 32.5° | 1692.1 | 1661.1 | 1550.0 | 1511.8 | 1558.2 | 1582.8 | 1713.0 | 1900.6 | 2022.7 | 2425.2 | 2964.3 |
| 35° | 1968.9 | 1949.8 | 1814.1 | 1680.2 | 1677.5 | 1708.5 | 1899.7 | 2099.2 | 2192.1 | 2663.8 | 3299.5 |
| 37.5° | 2365.1 | 2351.4 | 2207.5 | 2028.1 | 1976.2 | 1961.6 | 2126.5 | 2317.7 | 2462.5 | 2991.6 | 3689.2 |
| 40° | 2825.0 | 2793.1 | 2661.1 | 2509.0 | 2441.6 | 2398.8 | 2394.2 | 2642.9 | 2815.9 | 3437.0 | 4095.4 |
| 42.5° | 3154.7 | 3096.4 | 2936.1 | 2925.2 | 2910.6 | 2866.0 | 2736.7 | 3118.2 | 3272.1 | 3916.0 | 4529.8 |
| 45° | 3500.7 | 3412.4 | 3173.8 | 3132.8 | 3127.3 | 3124.6 | 3253.9 | 3681.0 | 3769.4 | 4435.1 | 4976.1 |
| 47.5° | 3769.4 | 3699.3 | 3503.5 | 3485.2 | 3508.0 | 3569.9 | 3937.9 | 4278.5 | 4260.3 | 4897.7 | 5350.4 |
| 50° | 4127.3 | 4074.5 | 3856.8 | 3891.4 | 4008.9 | 4110.0 | 4709.2 | 4929.6 | 4663.7 | 5262.0 | 5622.7 |
| 52.5° | 4549.9 | 4452.4 | 4250.2 | 4344.0 | 4524.4 | 4692.8 | 5527.9 | 5499.7 | 4946.9 | 5536.1 | 5825.7 |
| 55° | 4916.0 | 4846.7 | 4777.5 | 4875.0 | 5144.5 | 5354.9 | 6267.4 | 5926.8 | 5152.7 | 5756.5 | 5915.0 |
| 57.5° | 5535.2 | 5518.8 | 5447.8 | 5547.1 | 5874.0 | 6092.6 | 6929.5 | 6258.3 | 5284.8 | 5871.3 | 5810.3 |
| 60° | 6451.4 | 6425.0 | 6292.9 | 6419.5 | 6845.7 | 7189.1 | 7539.7 | 6556.1 | 5314.8 | 5826.7 | 5508.8 |
| 62.5° | 7553.3 | 7463.2 | 7350.3 | 7537.0 | 8121.6 | 8272.8 | 8114.3 | 6732.8 | 5202.8 | 5471.5 | 4782.1 |
| 65° | 8582.4 | 8489.5 | 8492.3 | 8885.7 | 9522.3 | 9625.2 | 8784.6 | 6706.4 | 4875.0 | 4581.7 | 3527.1 |
| 67.5° | 9370.2 | 9354.7 | 9465.8 | 10233.5 | 11065.9 | 10994.9 | 9383.9 | 6311.2 | 3903.3 | 2969.8 | 1874.2 |
| 70° | 9410.3 | 9440.3 | 9759.1 | 11055.0 | 11900.1 | 11787.2 | 9332.9 | 5130.0 | 2433.4 | 1366.1 | 738.6 |
| 71° | 8925.8 | 9127.9 | 9568.7 | 11029.5 | 11949.3 | 11802.7 | 8903.0 | 4296.7 | 1785.0 | 952.6 | 532.8 |
| 72.5° | 7606.2 | 7712.7 | 8665.3 | 10380.2 | 11560.4 | 11247.1 | 7812.9 | 3011.7 | 1142.9 | 582.8 | 306.0 |
| 75° | 4189.2 | 4451.5 | 5803.0 | 8143.5 | 9246.3 | 8971.3 | 5091.7 | 1430.7 | 570.1 | 318.7 | 126.6 |
| 77.5° | 1994.4 | 1943.4 | 2831.4 | 4843.1 | 6269.3 | 6254.7 | 2565.4 | 635.7 | 332.4 | 215.8 | 63.7 |
| 80° | 570.1 | 641.1 | 1083.7 | 2302.2 | 3480.7 | 3518.9 | 985.4 | 306.9 | 230.4 | 168.5 | 32.8 |
| 82.5° | 172.1 | 175.8 | 398.0 | 1018.2 | 1731.2 | 1632.0 | 369.7 | 156.6 | 165.7 | 133.9 | 19.1 |
| 85° | 30.1 | 37.3 | 117.5 | 358.8 | 660.3 | 500.9 | 92.9 | 74.7 | 109.3 | 88.3 | 10.9 |
| 87.5° | 1.8 | 2.7 | 39.2 | 41.0 | 58.3 | 33.7 | 16.4 | 10.9 | 23.7 | 23.7 | 6.4 |
| 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° | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 | 1907.9 |
| 2.5° | 1914.3 | 1919.8 | 1916.1 | 1907.9 | 1894.3 | 1877.9 | 1856.0 | 1837.8 | 1822.3 | 1814.1 | 1824.1 |
| 5° | 1926.1 | 1933.4 | 1915.2 | 1874.2 | 1812.3 | 1744.9 | 1668.4 | 1609.2 | 1562.8 | 1548.2 | 1542.7 |
| 7.5° | 1944.3 | 1948.9 | 1899.7 | 1808.7 | 1677.5 | 1518.1 | 1378.8 | 1261.3 | 1170.2 | 1142.9 | 1102.9 |
| 10° | 1968.0 | 1965.3 | 1872.4 | 1703.0 | 1472.6 | 1233.1 | 1017.3 | 857.0 | 735.8 | 692.1 | 688.5 |
| 12.5° | 2004.5 | 1989.9 | 1837.8 | 1559.1 | 1228.5 | 915.3 | 648.4 | 507.3 | 430.8 | 405.3 | 399.8 |
| 15° | 2050.0 | 2015.4 | 1783.2 | 1390.6 | 940.8 | 591.0 | 399.8 | 357.0 | 347.0 | 345.2 | 343.3 |
| 17.5° | 2103.7 | 2049.1 | 1711.2 | 1183.9 | 661.2 | 383.4 | 334.2 | 333.3 | 334.2 | 332.4 | 331.5 |
| 20° | 2176.6 | 2084.6 | 1625.6 | 938.9 | 437.1 | 323.3 | 318.7 | 318.7 | 319.7 | 318.7 | 318.7 |
| 22.5° | 2254.0 | 2126.5 | 1520.0 | 716.7 | 329.7 | 306.9 | 306.0 | 307.8 | 309.6 | 308.7 | 308.7 |
| 25° | 2349.6 | 2181.1 | 1380.6 | 490.9 | 295.1 | 293.2 | 294.2 | 297.8 | 301.4 | 302.4 | 301.4 |
| 27.5° | 2488.0 | 2248.5 | 1231.3 | 337.9 | 270.5 | 272.3 | 281.4 | 290.5 | 296.0 | 296.9 | 296.9 |
| 30° | 2643.8 | 2323.2 | 1036.4 | 274.1 | 250.4 | 250.4 | 261.4 | 278.7 | 290.5 | 292.3 | 293.2 |
| 32.5° | 2844.1 | 2409.7 | 820.5 | 246.8 | 231.3 | 229.5 | 239.5 | 260.5 | 282.3 | 288.7 | 288.7 |
| 35° | 3091.8 | 2511.7 | 610.2 | 229.5 | 217.7 | 213.1 | 218.6 | 235.9 | 264.1 | 282.3 | 284.1 |
| 37.5° | 3382.3 | 2608.2 | 446.2 | 214.0 | 204.9 | 198.5 | 202.2 | 215.8 | 238.6 | 265.9 | 273.2 |
| 40° | 3651.0 | 2693.9 | 333.3 | 201.3 | 192.2 | 187.6 | 190.3 | 196.7 | 215.8 | 241.3 | 245.9 |
| 42.5° | 3944.2 | 2760.3 | 265.0 | 187.6 | 179.4 | 177.6 | 177.6 | 180.3 | 193.1 | 207.6 | 208.6 |
| 45° | 4236.6 | 2784.0 | 222.2 | 171.2 | 165.7 | 167.6 | 166.7 | 164.8 | 170.3 | 168.5 | 168.5 |
| 47.5° | 4445.1 | 2755.8 | 184.0 | 155.7 | 155.7 | 158.5 | 153.9 | 147.5 | 144.8 | 133.9 | 134.8 |
| 50° | 4588.1 | 2652.9 | 151.2 | 137.5 | 144.8 | 148.4 | 139.3 | 129.3 | 119.3 | 107.5 | 104.7 |
| 52.5° | 4647.3 | 2469.8 | 123.9 | 113.8 | 128.4 | 133.0 | 122.0 | 110.2 | 94.7 | 84.7 | 82.0 |
| 55° | 4609.1 | 2244.0 | 102.9 | 92.9 | 108.4 | 113.8 | 102.9 | 89.2 | 71.9 | 61.0 | 59.2 |
| 57.5° | 4440.6 | 1974.4 | 87.4 | 73.8 | 86.5 | 90.2 | 82.9 | 68.3 | 51.0 | 40.1 | 40.1 |
| 60° | 4149.1 | 1695.7 | 71.0 | 58.3 | 64.7 | 70.1 | 62.8 | 49.2 | 34.6 | 24.6 | 22.8 |
| 62.5° | 3558.1 | 1377.0 | 57.4 | 45.5 | 45.5 | 50.1 | 43.7 | 35.5 | 21.9 | 12.7 | 11.8 |
| 65° | 2569.1 | 944.4 | 45.5 | 33.7 | 32.8 | 32.8 | 27.3 | 23.7 | 12.7 | 5.5 | 3.6 |
| 67.5° | 1396.1 | 532.8 | 36.4 | 25.5 | 22.8 | 21.9 | 17.3 | 13.7 | 5.5 | 0.9 | 0.0 |
| 70° | 549.2 | 204.9 | 28.2 | 17.3 | 14.6 | 13.7 | 9.1 | 6.4 | 3.6 | 0.0 | 0.0 |
| 71° | 372.5 | 141.2 | 24.6 | 14.6 | 11.8 | 10.0 | 7.3 | 5.5 | 2.7 | 0.0 | 0.0 |
| 72.5° | 213.1 | 87.4 | 19.1 | 10.9 | 9.1 | 7.3 | 5.5 | 3.6 | 2.7 | 0.0 | 0.0 |
| 75° | 92.9 | 44.6 | 11.8 | 8.2 | 6.4 | 4.6 | 3.6 | 2.7 | 0.9 | 0.0 | 0.0 |
| 77.5° | 47.4 | 24.6 | 8.2 | 6.4 | 3.6 | 2.7 | 1.8 | 0.9 | 0.0 | 0.0 | 0.0 |
| 80° | 26.4 | 12.7 | 5.5 | 3.6 | 2.7 | 1.8 | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 82.5° | 14.6 | 7.3 | 2.7 | 1.8 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 9.1 | 4.6 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 4.6 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.9 | 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 |

(END OF REPORT)