

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: P453115

Luminaire Tested: **GALN-SA4A-760-U-T4FT-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P453115
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-760-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5700K, 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: 13027 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

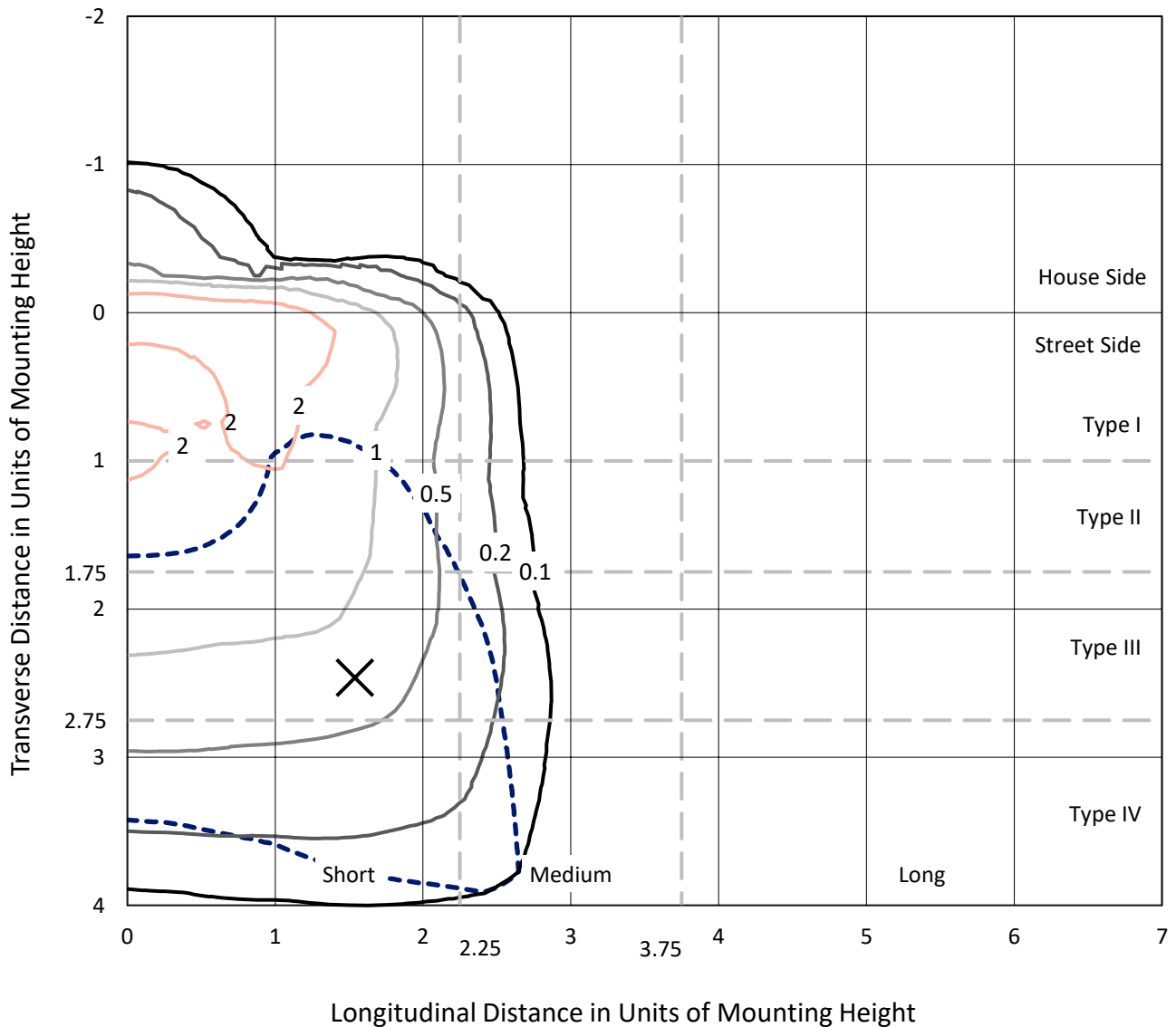
Input Watts (W): 121
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

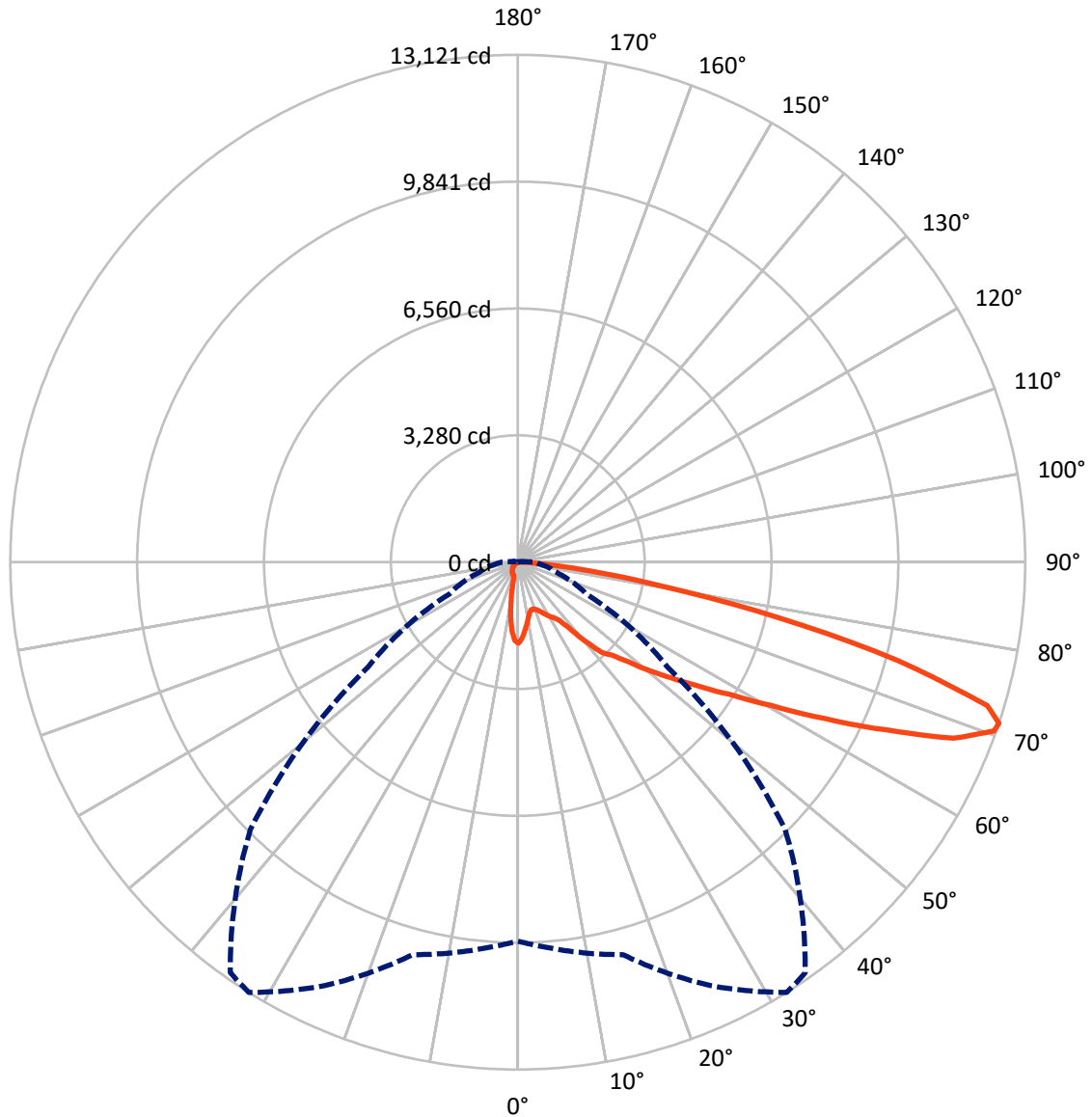
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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 | 1091.2 | 0.0 | 1091.2 |
| | % Fixture | 8.4 | 0.0 | 8.4 |
| Street Side | Lumens | 11935.9 | 0.0 | 11935.9 |
| | % Fixture | 91.6 | 0.0 | 91.6 |
| Total | Lumens | 13027.0 | 0.0 | 13027.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 170.3 | 1.3 |
| 10°-20° | 369.7 | 2.8 |
| 20°-30° | 575.2 | 4.4 |
| 30°-40° | 958.2 | 7.4 |
| 40°-50° | 1782.4 | 13.7 |
| 50°-60° | 2861.7 | 22.0 |
| 60°-70° | 3849.2 | 29.5 |
| 70°-80° | 2283.8 | 17.5 |
| 80°-90° | 176.5 | 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° | 13027.0 | 100.0 |
| 0°-180° | 13027.0 | 100.0 |



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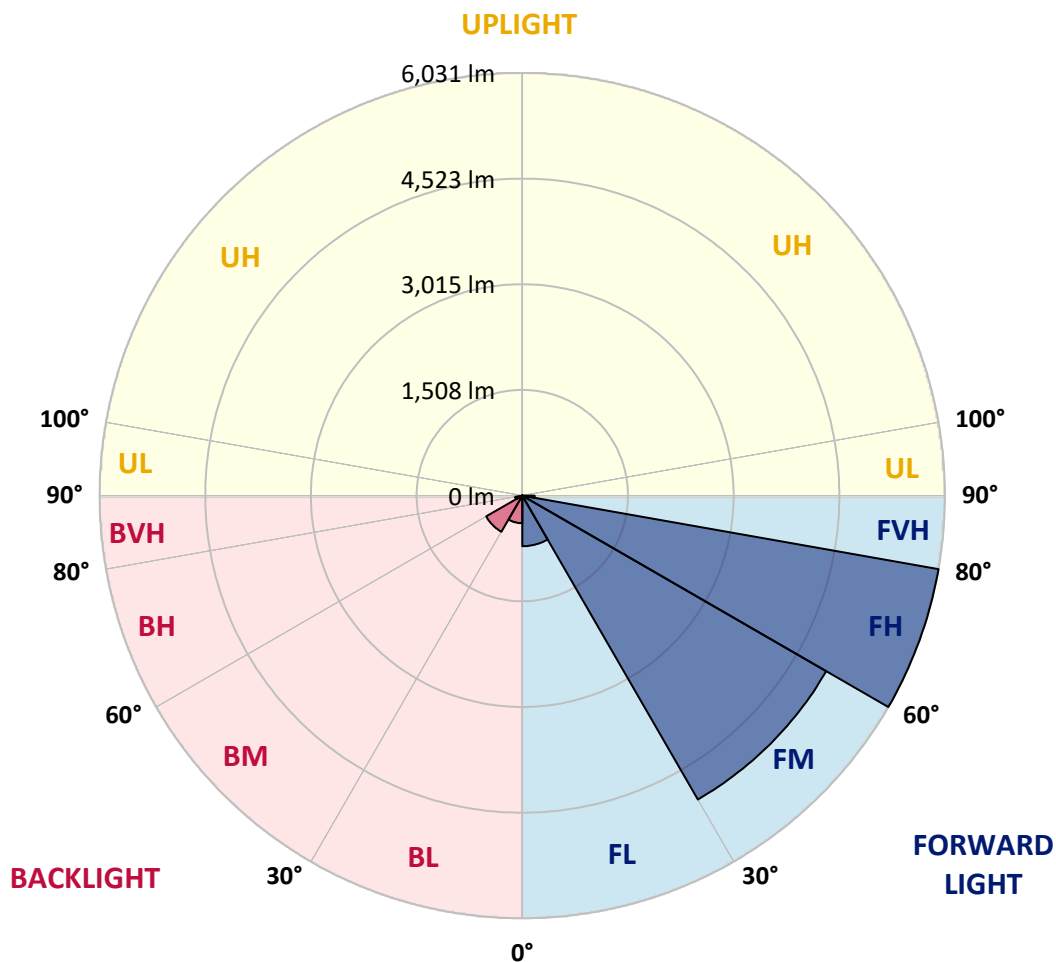
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 722.1 | 5.5 | | | |
| FM (30°-60°) | 5007.1 | 38.4 | | | |
| FH (60°-80°) | 6030.9 | 46.3 | | | G3/7500 |
| FVH (80°-90°) | 175.8 | 1.3 | | | G2/225 |
| BL (0°-30°) | 393.2 | 3.0 | B1/500 | | |
| BM (30°-60°) | 595.3 | 4.6 | B1/1000 | | |
| BH (60°-80°) | 102.1 | 0.8 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.7 | 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° | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 |
| 2.5° | 1942.9 | 1962.9 | 1959.9 | 1966.9 | 1983.9 | 1990.9 | 2009.9 | 2030.9 | 2059.9 | 2079.9 | 2092.9 |
| 5° | 1740.0 | 1755.0 | 1757.0 | 1792.0 | 1809.0 | 1828.0 | 1884.0 | 1944.9 | 2012.9 | 2066.9 | 2102.9 |
| 7.5° | 1523.0 | 1531.0 | 1547.0 | 1593.0 | 1636.0 | 1655.0 | 1740.0 | 1846.0 | 1952.9 | 2053.9 | 2118.9 |
| 10° | 1344.0 | 1353.0 | 1382.0 | 1431.0 | 1471.0 | 1496.0 | 1614.0 | 1747.0 | 1897.0 | 2046.9 | 2141.9 |
| 12.5° | 1242.0 | 1247.0 | 1258.0 | 1302.0 | 1353.0 | 1380.0 | 1507.0 | 1659.0 | 1852.0 | 2049.9 | 2180.9 |
| 15° | 1235.0 | 1233.0 | 1220.0 | 1238.0 | 1284.0 | 1312.0 | 1436.0 | 1599.0 | 1812.0 | 2059.9 | 2226.9 |
| 17.5° | 1272.0 | 1267.0 | 1236.0 | 1236.0 | 1274.0 | 1297.0 | 1406.0 | 1567.0 | 1792.0 | 2082.9 | 2291.9 |
| 20° | 1329.0 | 1321.0 | 1270.0 | 1266.0 | 1303.0 | 1327.0 | 1424.0 | 1569.0 | 1796.0 | 2125.9 | 2378.9 |
| 22.5° | 1401.0 | 1392.0 | 1315.0 | 1317.0 | 1357.0 | 1381.0 | 1476.0 | 1605.0 | 1821.0 | 2178.9 | 2471.9 |
| 25° | 1495.0 | 1485.0 | 1394.0 | 1390.0 | 1432.0 | 1453.0 | 1553.0 | 1669.0 | 1856.0 | 2244.9 | 2593.9 |
| 27.5° | 1620.0 | 1599.0 | 1490.0 | 1484.0 | 1529.0 | 1556.0 | 1646.0 | 1755.0 | 1917.9 | 2335.9 | 2757.9 |
| 30° | 1723.0 | 1700.0 | 1596.0 | 1580.0 | 1628.0 | 1649.0 | 1742.0 | 1871.0 | 2039.9 | 2494.9 | 2984.9 |
| 32.5° | 1858.0 | 1824.0 | 1702.0 | 1660.0 | 1711.0 | 1738.0 | 1881.0 | 2086.9 | 2220.9 | 2662.9 | 3254.9 |
| 35° | 2161.9 | 2140.9 | 1991.9 | 1845.0 | 1842.0 | 1876.0 | 2085.9 | 2304.9 | 2406.9 | 2924.9 | 3622.9 |
| 37.5° | 2596.9 | 2581.9 | 2423.9 | 2226.9 | 2169.9 | 2153.9 | 2334.9 | 2544.9 | 2703.9 | 3284.9 | 4050.9 |
| 40° | 3101.9 | 3066.9 | 2921.9 | 2754.9 | 2680.9 | 2633.9 | 2628.9 | 2901.9 | 3091.9 | 3773.9 | 4496.9 |
| 42.5° | 3463.9 | 3399.9 | 3223.9 | 3211.9 | 3195.9 | 3146.9 | 3004.9 | 3423.9 | 3592.9 | 4299.9 | 4973.9 |
| 45° | 3843.9 | 3746.9 | 3484.9 | 3439.9 | 3433.9 | 3430.9 | 3572.9 | 4041.9 | 4138.9 | 4869.9 | 5463.9 |
| 47.5° | 4138.9 | 4061.9 | 3846.9 | 3826.9 | 3851.9 | 3919.9 | 4323.9 | 4697.9 | 4677.9 | 5377.9 | 5874.8 |
| 50° | 4531.9 | 4473.9 | 4234.9 | 4272.9 | 4401.9 | 4512.9 | 5170.9 | 5412.9 | 5120.9 | 5777.8 | 6173.8 |
| 52.5° | 4995.9 | 4888.9 | 4666.9 | 4769.9 | 4967.9 | 5152.9 | 6069.8 | 6038.8 | 5431.9 | 6078.8 | 6396.8 |
| 55° | 5397.9 | 5321.9 | 5245.9 | 5352.9 | 5648.9 | 5879.8 | 6881.8 | 6507.8 | 5657.9 | 6320.8 | 6494.8 |
| 57.5° | 6077.8 | 6059.8 | 5981.8 | 6090.8 | 6449.8 | 6689.8 | 7608.8 | 6871.8 | 5802.8 | 6446.8 | 6379.8 |
| 60° | 7083.8 | 7054.8 | 6909.8 | 7048.8 | 7516.8 | 7893.8 | 8278.8 | 7198.8 | 5835.8 | 6397.8 | 6048.8 |
| 62.5° | 8293.8 | 8194.8 | 8070.8 | 8275.8 | 8917.8 | 9083.8 | 8909.8 | 7392.8 | 5712.9 | 6007.8 | 5250.9 |
| 65° | 9423.8 | 9321.8 | 9324.8 | 9756.7 | 10455.7 | 10568.7 | 9645.7 | 7363.8 | 5352.9 | 5030.9 | 3872.9 |
| 67.5° | 10288.7 | 10271.7 | 10393.7 | 11236.7 | 12150.7 | 12072.7 | 10303.7 | 6929.8 | 4285.9 | 3260.9 | 2057.9 |
| 70° | 10332.7 | 10365.7 | 10715.7 | 12138.7 | 13066.7 | 12942.7 | 10247.7 | 5632.9 | 2671.9 | 1500.0 | 811.0 |
| 71° | 9800.7 | 10022.7 | 10506.7 | 12110.7 | 13120.7 | 12959.7 | 9775.7 | 4717.9 | 1959.9 | 1046.0 | 585.0 |
| 72.5° | 8351.8 | 8468.8 | 9514.8 | 11397.7 | 12693.7 | 12349.7 | 8578.8 | 3306.9 | 1255.0 | 640.0 | 336.0 |
| 75° | 4599.9 | 4887.9 | 6371.8 | 8941.8 | 10152.7 | 9850.7 | 5590.9 | 1571.0 | 626.0 | 350.0 | 139.0 |
| 77.5° | 2189.9 | 2133.9 | 3108.9 | 5317.9 | 6883.8 | 6867.8 | 2816.9 | 698.0 | 365.0 | 237.0 | 70.0 |
| 80° | 626.0 | 704.0 | 1190.0 | 2527.9 | 3821.9 | 3863.9 | 1082.0 | 337.0 | 253.0 | 185.0 | 36.0 |
| 82.5° | 189.0 | 193.0 | 437.0 | 1118.0 | 1901.0 | 1792.0 | 406.0 | 172.0 | 182.0 | 147.0 | 21.0 |
| 85° | 33.0 | 41.0 | 129.0 | 394.0 | 725.0 | 550.0 | 102.0 | 82.0 | 120.0 | 97.0 | 12.0 |
| 87.5° | 2.0 | 3.0 | 43.0 | 45.0 | 64.0 | 37.0 | 18.0 | 12.0 | 26.0 | 26.0 | 7.0 |
| 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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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 | 2094.9 |
| 2.5° | 2101.9 | 2107.9 | 2103.9 | 2094.9 | 2079.9 | 2061.9 | 2037.9 | 2017.9 | 2000.9 | 1991.9 | 2002.9 |
| 5° | 2114.9 | 2122.9 | 2102.9 | 2057.9 | 1989.9 | 1915.9 | 1832.0 | 1767.0 | 1716.0 | 1700.0 | 1694.0 |
| 7.5° | 2134.9 | 2139.9 | 2085.9 | 1985.9 | 1842.0 | 1667.0 | 1514.0 | 1385.0 | 1285.0 | 1255.0 | 1211.0 |
| 10° | 2160.9 | 2157.9 | 2055.9 | 1870.0 | 1617.0 | 1354.0 | 1117.0 | 941.0 | 808.0 | 760.0 | 756.0 |
| 12.5° | 2200.9 | 2184.9 | 2017.9 | 1712.0 | 1349.0 | 1005.0 | 712.0 | 557.0 | 473.0 | 445.0 | 439.0 |
| 15° | 2250.9 | 2212.9 | 1957.9 | 1527.0 | 1033.0 | 649.0 | 439.0 | 392.0 | 381.0 | 379.0 | 377.0 |
| 17.5° | 2309.9 | 2249.9 | 1879.0 | 1300.0 | 726.0 | 421.0 | 367.0 | 366.0 | 367.0 | 365.0 | 364.0 |
| 20° | 2389.9 | 2288.9 | 1785.0 | 1031.0 | 480.0 | 355.0 | 350.0 | 350.0 | 351.0 | 350.0 | 350.0 |
| 22.5° | 2474.9 | 2334.9 | 1669.0 | 787.0 | 362.0 | 337.0 | 336.0 | 338.0 | 340.0 | 339.0 | 339.0 |
| 25° | 2579.9 | 2394.9 | 1516.0 | 539.0 | 324.0 | 322.0 | 323.0 | 327.0 | 331.0 | 332.0 | 331.0 |
| 27.5° | 2731.9 | 2468.9 | 1352.0 | 371.0 | 297.0 | 299.0 | 309.0 | 319.0 | 325.0 | 326.0 | 326.0 |
| 30° | 2902.9 | 2550.9 | 1138.0 | 301.0 | 275.0 | 275.0 | 287.0 | 306.0 | 319.0 | 321.0 | 322.0 |
| 32.5° | 3122.9 | 2645.9 | 901.0 | 271.0 | 254.0 | 252.0 | 263.0 | 286.0 | 310.0 | 317.0 | 317.0 |
| 35° | 3394.9 | 2757.9 | 670.0 | 252.0 | 239.0 | 234.0 | 240.0 | 259.0 | 290.0 | 310.0 | 312.0 |
| 37.5° | 3713.9 | 2863.9 | 490.0 | 235.0 | 225.0 | 218.0 | 222.0 | 237.0 | 262.0 | 292.0 | 300.0 |
| 40° | 4008.9 | 2957.9 | 366.0 | 221.0 | 211.0 | 206.0 | 209.0 | 216.0 | 237.0 | 265.0 | 270.0 |
| 42.5° | 4330.9 | 3030.9 | 291.0 | 206.0 | 197.0 | 195.0 | 195.0 | 198.0 | 212.0 | 228.0 | 229.0 |
| 45° | 4651.9 | 3056.9 | 244.0 | 188.0 | 182.0 | 184.0 | 183.0 | 181.0 | 187.0 | 185.0 | 185.0 |
| 47.5° | 4880.9 | 3025.9 | 202.0 | 171.0 | 171.0 | 174.0 | 169.0 | 162.0 | 159.0 | 147.0 | 148.0 |
| 50° | 5037.9 | 2912.9 | 166.0 | 151.0 | 159.0 | 163.0 | 153.0 | 142.0 | 131.0 | 118.0 | 115.0 |
| 52.5° | 5102.9 | 2711.9 | 136.0 | 125.0 | 141.0 | 146.0 | 134.0 | 121.0 | 104.0 | 93.0 | 90.0 |
| 55° | 5060.9 | 2463.9 | 113.0 | 102.0 | 119.0 | 125.0 | 113.0 | 98.0 | 79.0 | 67.0 | 65.0 |
| 57.5° | 4875.9 | 2167.9 | 96.0 | 81.0 | 95.0 | 99.0 | 91.0 | 75.0 | 56.0 | 44.0 | 44.0 |
| 60° | 4555.9 | 1862.0 | 78.0 | 64.0 | 71.0 | 77.0 | 69.0 | 54.0 | 38.0 | 27.0 | 25.0 |
| 62.5° | 3906.9 | 1512.0 | 63.0 | 50.0 | 50.0 | 55.0 | 48.0 | 39.0 | 24.0 | 14.0 | 13.0 |
| 65° | 2820.9 | 1037.0 | 50.0 | 37.0 | 36.0 | 36.0 | 30.0 | 26.0 | 14.0 | 6.0 | 4.0 |
| 67.5° | 1533.0 | 585.0 | 40.0 | 28.0 | 25.0 | 24.0 | 19.0 | 15.0 | 6.0 | 1.0 | 0.0 |
| 70° | 603.0 | 225.0 | 31.0 | 19.0 | 16.0 | 15.0 | 10.0 | 7.0 | 4.0 | 0.0 | 0.0 |
| 71° | 409.0 | 155.0 | 27.0 | 16.0 | 13.0 | 11.0 | 8.0 | 6.0 | 3.0 | 0.0 | 0.0 |
| 72.5° | 234.0 | 96.0 | 21.0 | 12.0 | 10.0 | 8.0 | 6.0 | 4.0 | 3.0 | 0.0 | 0.0 |
| 75° | 102.0 | 49.0 | 13.0 | 9.0 | 7.0 | 5.0 | 4.0 | 3.0 | 1.0 | 0.0 | 0.0 |
| 77.5° | 52.0 | 27.0 | 9.0 | 7.0 | 4.0 | 3.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 80° | 29.0 | 14.0 | 6.0 | 4.0 | 3.0 | 2.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 16.0 | 8.0 | 3.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 10.0 | 5.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 5.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 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 |

(END OF REPORT)