

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: P301873

Luminaire Tested: **GLNA-AF-03-LED-E1-SL4-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301873
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4-7030-800-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 3000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10471.9 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 124
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

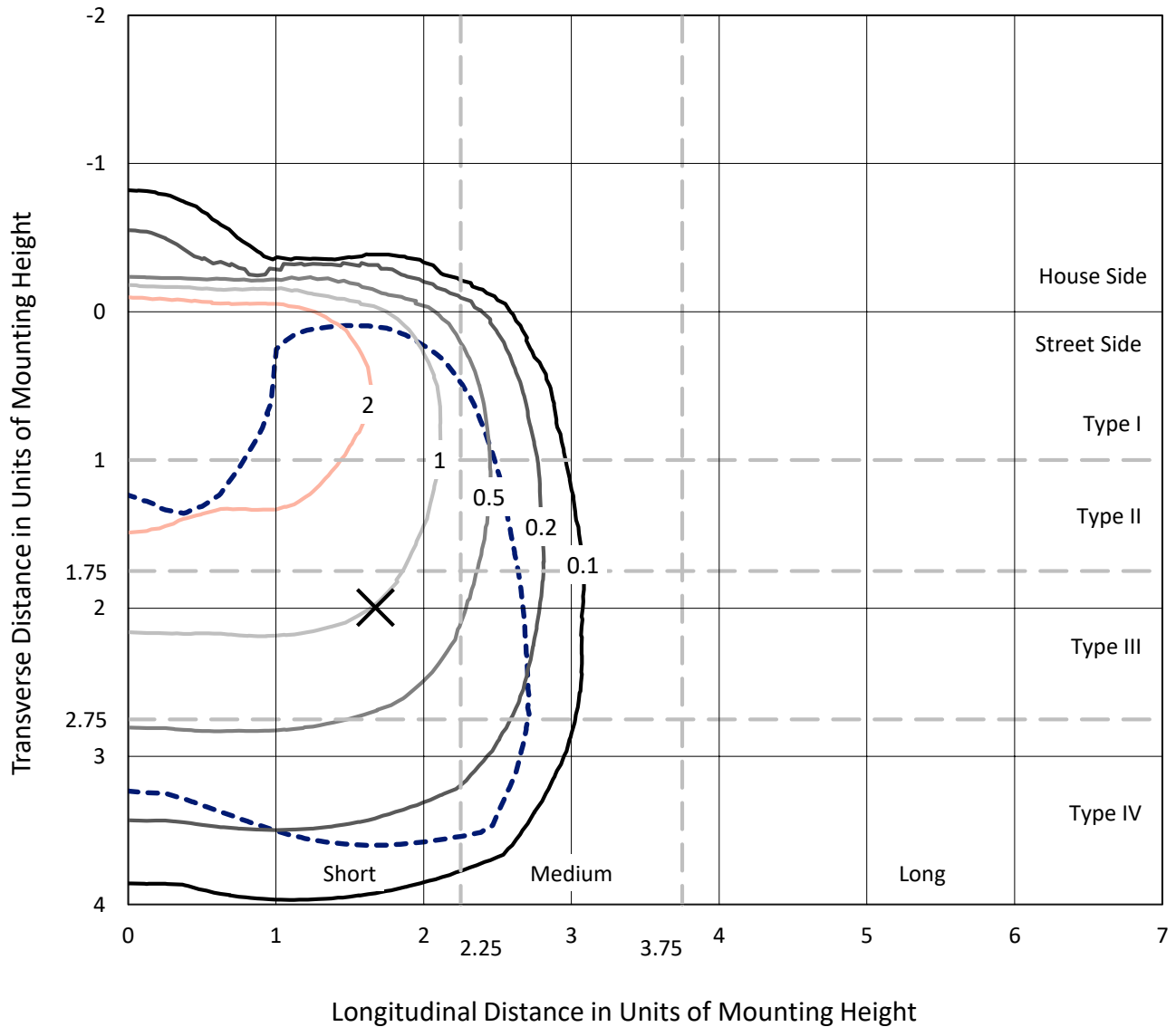


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

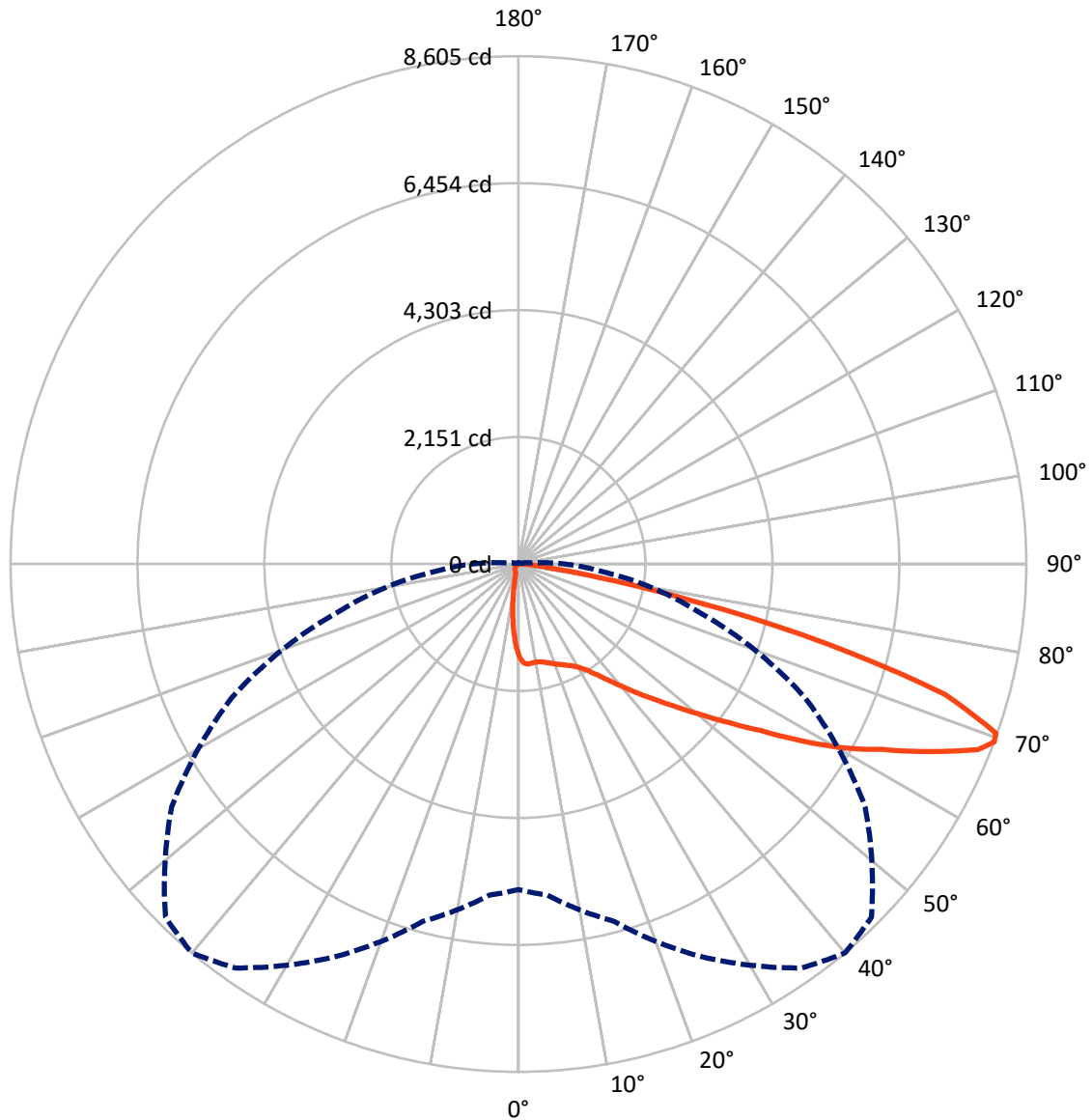


Based on 20 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 612.7 | 0.0 | 612.7 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 9859.2 | 0.0 | 9859.2 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 10471.9 | 0.0 | 10471.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 126.9 | 1.2 |
| 10°-20° | 312.0 | 3.0 |
| 20°-30° | 525.4 | 5.0 |
| 30°-40° | 860.2 | 8.2 |
| 40°-50° | 1489.4 | 14.2 |
| 50°-60° | 2345.9 | 22.4 |
| 60°-70° | 3063.6 | 29.3 |
| 70°-80° | 1577.9 | 15.1 |
| 80°-90° | 170.7 | 1.6 |
| 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° | 10471.9 | 100.0 |
| 0°-180° | 10471.9 | 100.0 |



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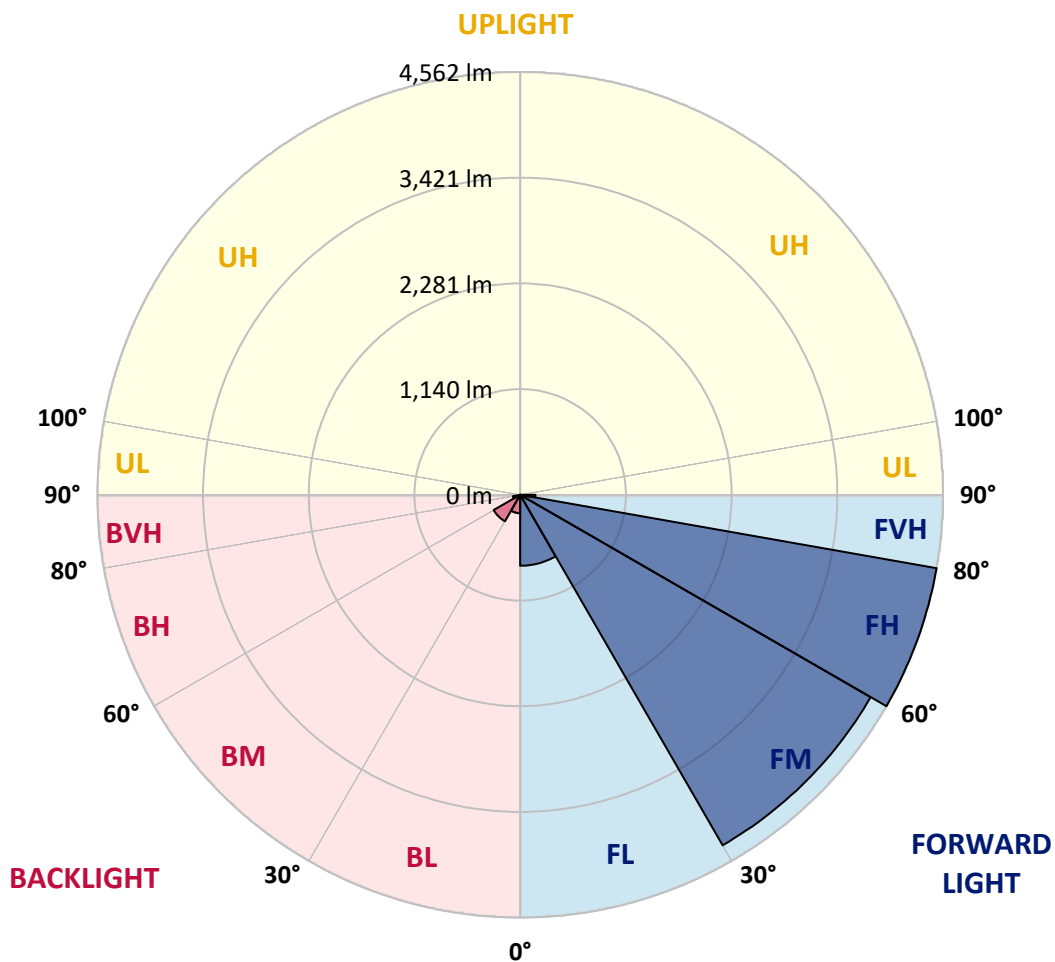
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 765.8 | 7.3 | | | |
| FM | (30°-60°) | 4366.1 | 41.7 | | | |
| FH | (60°-80°) | 4562.0 | 43.6 | | | G2/5000 |
| FVH | (80°-90°) | 165.3 | 1.6 | | | G2/225 |
| BL | (0°-30°) | 198.5 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 329.3 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 79.6 | 0.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 5.4 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 |
| 2.5° | 1717.9 | 1708.5 | 1702.9 | 1695.5 | 1686.1 | 1678.0 | 1674.9 | 1651.8 | 1630.0 | 1600.1 | 1565.8 |
| 5° | 1749.7 | 1746.6 | 1736.6 | 1726.6 | 1715.4 | 1702.9 | 1696.1 | 1668.6 | 1637.5 | 1593.8 | 1534.0 |
| 7.5° | 1752.8 | 1749.1 | 1736.6 | 1722.9 | 1707.3 | 1692.3 | 1680.5 | 1653.1 | 1624.4 | 1580.1 | 1507.2 |
| 10° | 1747.8 | 1743.4 | 1734.1 | 1719.1 | 1699.8 | 1685.5 | 1673.6 | 1647.5 | 1623.1 | 1583.3 | 1502.2 |
| 12.5° | 1742.2 | 1737.8 | 1733.5 | 1726.0 | 1709.2 | 1699.2 | 1689.2 | 1664.3 | 1642.5 | 1608.8 | 1520.3 |
| 15° | 1747.8 | 1745.3 | 1750.3 | 1747.2 | 1737.8 | 1729.1 | 1719.1 | 1696.7 | 1676.8 | 1648.7 | 1553.3 |
| 17.5° | 1771.5 | 1771.5 | 1787.1 | 1788.9 | 1780.2 | 1767.8 | 1753.4 | 1731.0 | 1714.2 | 1690.5 | 1592.6 |
| 20° | 1827.0 | 1825.1 | 1845.0 | 1848.8 | 1827.6 | 1808.3 | 1787.1 | 1759.7 | 1746.6 | 1731.6 | 1631.2 |
| 22.5° | 1922.3 | 1913.6 | 1925.5 | 1921.7 | 1880.0 | 1850.0 | 1823.9 | 1790.2 | 1783.3 | 1776.5 | 1674.3 |
| 25° | 2046.4 | 2041.4 | 2049.5 | 2012.7 | 1939.2 | 1898.7 | 1867.5 | 1829.5 | 1829.5 | 1836.3 | 1722.9 |
| 27.5° | 2226.5 | 2207.8 | 2180.4 | 2115.6 | 2005.2 | 1953.5 | 1919.8 | 1879.3 | 1889.9 | 1915.5 | 1787.1 |
| 30° | 2411.0 | 2390.5 | 2327.5 | 2227.8 | 2085.7 | 2031.4 | 1992.2 | 1949.8 | 1974.7 | 2021.5 | 1873.1 |
| 32.5° | 2593.0 | 2570.0 | 2480.8 | 2354.9 | 2201.0 | 2146.7 | 2108.7 | 2062.0 | 2103.7 | 2182.3 | 1999.0 |
| 35° | 2769.4 | 2748.9 | 2646.0 | 2497.7 | 2354.3 | 2309.4 | 2274.5 | 2234.0 | 2287.6 | 2397.3 | 2176.7 |
| 37.5° | 2967.7 | 2945.2 | 2819.9 | 2659.1 | 2540.7 | 2508.3 | 2482.7 | 2442.2 | 2535.7 | 2696.5 | 2424.1 |
| 40° | 3211.4 | 3173.4 | 3004.4 | 2844.2 | 2756.4 | 2740.8 | 2723.3 | 2717.7 | 2862.9 | 3085.5 | 2753.9 |
| 42.5° | 3490.6 | 3428.3 | 3197.7 | 3039.3 | 2993.2 | 3004.4 | 3000.1 | 3025.0 | 3272.5 | 3569.2 | 3155.3 |
| 45° | 3769.9 | 3689.5 | 3412.7 | 3247.5 | 3253.8 | 3293.0 | 3317.3 | 3417.1 | 3785.5 | 4123.9 | 3587.2 |
| 47.5° | 4006.7 | 3927.6 | 3619.0 | 3472.6 | 3547.4 | 3624.6 | 3690.7 | 3879.6 | 4312.8 | 4670.0 | 3923.2 |
| 50° | 4209.3 | 4134.5 | 3837.8 | 3720.0 | 3888.3 | 4013.0 | 4120.2 | 4400.1 | 4880.0 | 5085.7 | 4158.8 |
| 52.5° | 4375.1 | 4325.3 | 4064.7 | 4003.6 | 4277.9 | 4460.5 | 4617.6 | 4953.0 | 5382.4 | 5423.6 | 4342.1 |
| 55° | 4536.6 | 4501.0 | 4308.4 | 4340.9 | 4735.4 | 4984.1 | 5183.0 | 5539.5 | 5815.0 | 5705.3 | 4517.9 |
| 57.5° | 4722.3 | 4689.9 | 4586.4 | 4768.5 | 5336.9 | 5649.8 | 5866.8 | 6059.4 | 6195.9 | 5993.3 | 4683.7 |
| 60° | 4911.8 | 4893.1 | 4895.6 | 5243.4 | 6027.6 | 6328.0 | 6447.7 | 6497.6 | 6569.9 | 6264.4 | 4693.0 |
| 62.5° | 5092.6 | 5128.1 | 5249.0 | 5772.0 | 6688.9 | 6919.6 | 6980.0 | 7029.3 | 6944.5 | 6307.4 | 4335.9 |
| 65° | 5398.6 | 5456.6 | 5745.2 | 6479.5 | 7416.3 | 7663.2 | 7725.5 | 7556.6 | 7003.7 | 5751.4 | 3526.8 |
| 67.5° | 5548.2 | 5654.2 | 6169.1 | 7139.0 | 8122.0 | 8396.2 | 8373.2 | 7590.9 | 6285.0 | 4385.7 | 2263.3 |
| 69° | 5517.1 | 5629.9 | 6266.9 | 7340.9 | 8356.3 | 8605.0 | 8458.6 | 7171.4 | 5354.4 | 3177.1 | 1389.4 |
| 70° | 5393.7 | 5507.7 | 6216.4 | 7333.4 | 8386.2 | 8583.2 | 8300.2 | 6653.4 | 4527.2 | 2323.1 | 868.9 |
| 72.5° | 4504.2 | 4602.6 | 5518.9 | 6628.5 | 7725.5 | 7565.3 | 6943.9 | 4609.5 | 2206.0 | 632.7 | 195.7 |
| 75° | 2772.6 | 2827.4 | 3960.0 | 4993.5 | 5835.0 | 5423.6 | 4626.3 | 2293.2 | 657.6 | 178.9 | 108.5 |
| 77.5° | 1464.8 | 1489.8 | 2167.9 | 2943.4 | 3698.8 | 3060.5 | 2371.1 | 894.5 | 302.9 | 112.2 | 78.5 |
| 80° | 865.8 | 884.5 | 1167.5 | 1345.8 | 1600.7 | 1337.0 | 948.1 | 549.2 | 216.9 | 70.4 | 69.8 |
| 82.5° | 495.5 | 507.4 | 846.5 | 748.0 | 630.8 | 538.6 | 471.9 | 520.5 | 130.3 | 47.4 | 72.3 |
| 85° | 182.0 | 184.5 | 476.2 | 569.1 | 375.2 | 223.2 | 234.4 | 431.3 | 34.9 | 29.9 | 56.7 |
| 87.5° | 84.8 | 82.9 | 245.0 | 348.4 | 219.4 | 141.5 | 182.6 | 94.7 | 13.7 | 19.3 | 15.6 |
| 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° | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 |
| 2.5° | 1545.9 | 1522.8 | 1481.0 | 1438.0 | 1394.4 | 1360.7 | 1327.7 | 1301.5 | 1292.8 | 1276.6 | 1277.8 |
| 5° | 1498.5 | 1456.1 | 1368.8 | 1280.3 | 1188.1 | 1112.0 | 1040.3 | 982.4 | 954.3 | 925.6 | 925.6 |
| 7.5° | 1457.3 | 1395.6 | 1259.1 | 1115.1 | 966.2 | 840.9 | 728.0 | 643.3 | 596.5 | 559.1 | 558.5 |
| 10° | 1441.8 | 1358.2 | 1167.5 | 961.2 | 753.6 | 582.8 | 448.8 | 362.8 | 318.5 | 289.8 | 288.6 |
| 12.5° | 1448.6 | 1345.1 | 1097.1 | 819.1 | 558.5 | 374.6 | 259.9 | 204.5 | 185.8 | 177.0 | 177.0 |
| 15° | 1468.6 | 1341.4 | 1026.6 | 680.1 | 394.6 | 234.4 | 172.7 | 157.7 | 156.5 | 156.5 | 156.5 |
| 17.5° | 1492.9 | 1342.6 | 954.3 | 544.8 | 268.7 | 167.7 | 149.0 | 147.1 | 148.4 | 148.4 | 148.4 |
| 20° | 1517.8 | 1343.3 | 876.4 | 419.5 | 189.5 | 145.9 | 140.2 | 139.6 | 140.9 | 140.9 | 141.5 |
| 22.5° | 1548.3 | 1346.4 | 798.5 | 313.5 | 156.5 | 137.8 | 133.4 | 133.4 | 134.0 | 134.0 | 133.4 |
| 25° | 1583.3 | 1352.6 | 717.4 | 232.5 | 142.7 | 132.1 | 128.4 | 127.8 | 128.4 | 127.8 | 127.2 |
| 27.5° | 1626.9 | 1361.3 | 627.1 | 182.0 | 136.5 | 126.5 | 123.4 | 123.4 | 122.8 | 122.2 | 121.5 |
| 30° | 1681.7 | 1371.3 | 525.5 | 154.6 | 130.3 | 121.5 | 118.4 | 117.8 | 117.2 | 115.9 | 115.9 |
| 32.5° | 1765.3 | 1393.1 | 425.1 | 140.2 | 123.4 | 114.7 | 112.2 | 112.2 | 111.0 | 109.7 | 109.1 |
| 35° | 1893.7 | 1436.1 | 335.4 | 131.5 | 115.9 | 107.2 | 104.1 | 104.1 | 102.8 | 102.2 | 101.6 |
| 37.5° | 2071.3 | 1501.6 | 260.6 | 123.4 | 108.5 | 99.1 | 96.0 | 95.4 | 94.1 | 92.9 | 92.3 |
| 40° | 2307.6 | 1582.6 | 205.1 | 115.9 | 101.0 | 91.0 | 88.5 | 87.3 | 84.8 | 82.9 | 82.9 |
| 42.5° | 2604.3 | 1674.9 | 166.4 | 107.8 | 92.3 | 83.5 | 81.7 | 79.8 | 75.4 | 73.6 | 72.9 |
| 45° | 2914.7 | 1757.8 | 140.9 | 98.5 | 83.5 | 76.0 | 74.8 | 71.7 | 66.1 | 64.2 | 64.2 |
| 47.5° | 3138.5 | 1777.1 | 124.0 | 89.8 | 75.4 | 67.9 | 67.3 | 61.7 | 56.7 | 55.5 | 54.9 |
| 50° | 3278.1 | 1739.1 | 110.3 | 81.0 | 67.9 | 60.5 | 58.6 | 51.7 | 48.6 | 47.4 | 46.7 |
| 52.5° | 3372.2 | 1671.1 | 99.1 | 73.6 | 61.1 | 53.6 | 49.2 | 44.3 | 41.8 | 40.5 | 40.5 |
| 55° | 3447.6 | 1575.1 | 87.9 | 66.7 | 55.5 | 48.0 | 41.8 | 38.0 | 35.5 | 34.3 | 34.3 |
| 57.5° | 3468.8 | 1444.9 | 76.7 | 61.1 | 49.9 | 42.4 | 35.5 | 33.0 | 29.9 | 29.3 | 29.3 |
| 60° | 3314.9 | 1209.9 | 67.9 | 54.2 | 44.9 | 36.8 | 31.2 | 28.0 | 24.9 | 24.3 | 23.7 |
| 62.5° | 2909.1 | 936.2 | 59.8 | 48.0 | 39.3 | 31.8 | 26.8 | 23.1 | 20.6 | 20.6 | 20.6 |
| 65° | 2219.0 | 627.7 | 52.4 | 41.8 | 34.3 | 26.8 | 23.1 | 18.7 | 17.5 | 17.5 | 18.1 |
| 67.5° | 1328.3 | 341.6 | 44.9 | 35.5 | 29.3 | 22.4 | 19.3 | 16.2 | 15.6 | 16.2 | 16.2 |
| 69° | 778.5 | 200.7 | 40.5 | 31.8 | 25.6 | 19.9 | 16.8 | 14.3 | 15.6 | 16.2 | 16.2 |
| 70° | 480.6 | 135.3 | 37.4 | 28.7 | 23.1 | 18.1 | 15.6 | 13.7 | 15.0 | 15.6 | 15.6 |
| 72.5° | 134.0 | 69.8 | 29.9 | 22.4 | 18.7 | 15.0 | 12.5 | 12.5 | 14.3 | 15.0 | 15.0 |
| 75° | 87.3 | 51.7 | 23.1 | 16.8 | 14.3 | 11.8 | 10.6 | 11.8 | 13.7 | 14.3 | 14.3 |
| 77.5° | 72.3 | 42.4 | 18.7 | 13.7 | 11.8 | 11.2 | 10.0 | 10.6 | 12.5 | 13.1 | 13.1 |
| 80° | 66.1 | 29.9 | 15.0 | 12.5 | 10.6 | 10.0 | 9.3 | 8.7 | 11.2 | 11.8 | 11.8 |
| 82.5° | 63.0 | 23.7 | 13.1 | 11.2 | 10.0 | 8.7 | 8.1 | 8.7 | 10.0 | 10.6 | 11.2 |
| 85° | 39.3 | 15.6 | 11.8 | 10.6 | 8.7 | 8.1 | 8.1 | 8.1 | 9.3 | 10.0 | 10.0 |
| 87.5° | 14.3 | 12.5 | 10.6 | 8.7 | 7.5 | 7.5 | 7.5 | 7.5 | 8.1 | 9.3 | 9.3 |
| 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)