

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: P529359

Luminaire Tested: **GALN-SA4C-730-U-T2R-GRSBK**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P529359
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-057-9)
Test Lab: INNOVATION CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA4C-730-U-T2R-GRSBK
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS WITH BLACK GLARE REDUCTION SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16751 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Short
BUG Rating: B2 - U0 - G1

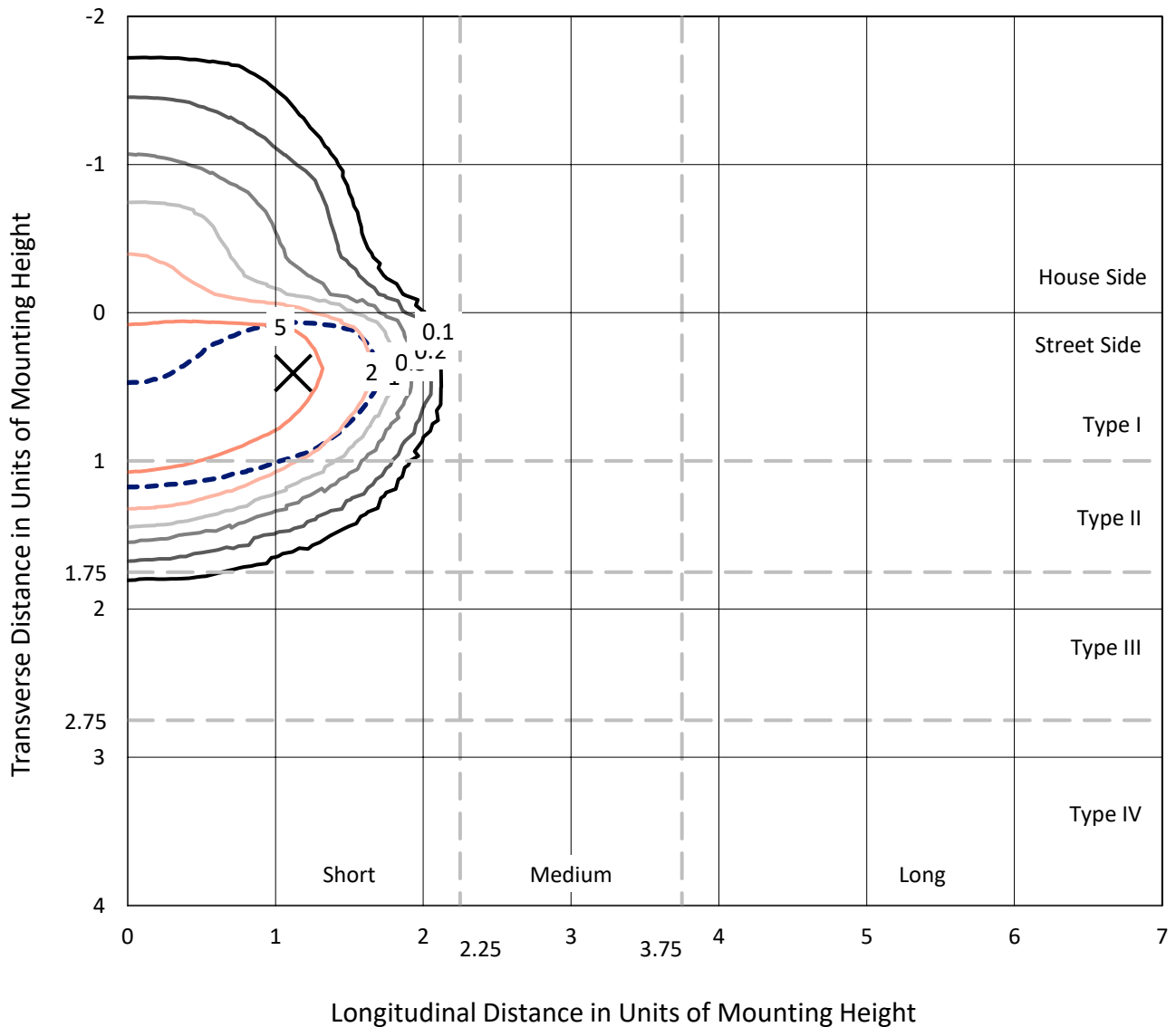
Input Watts (W): 213
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

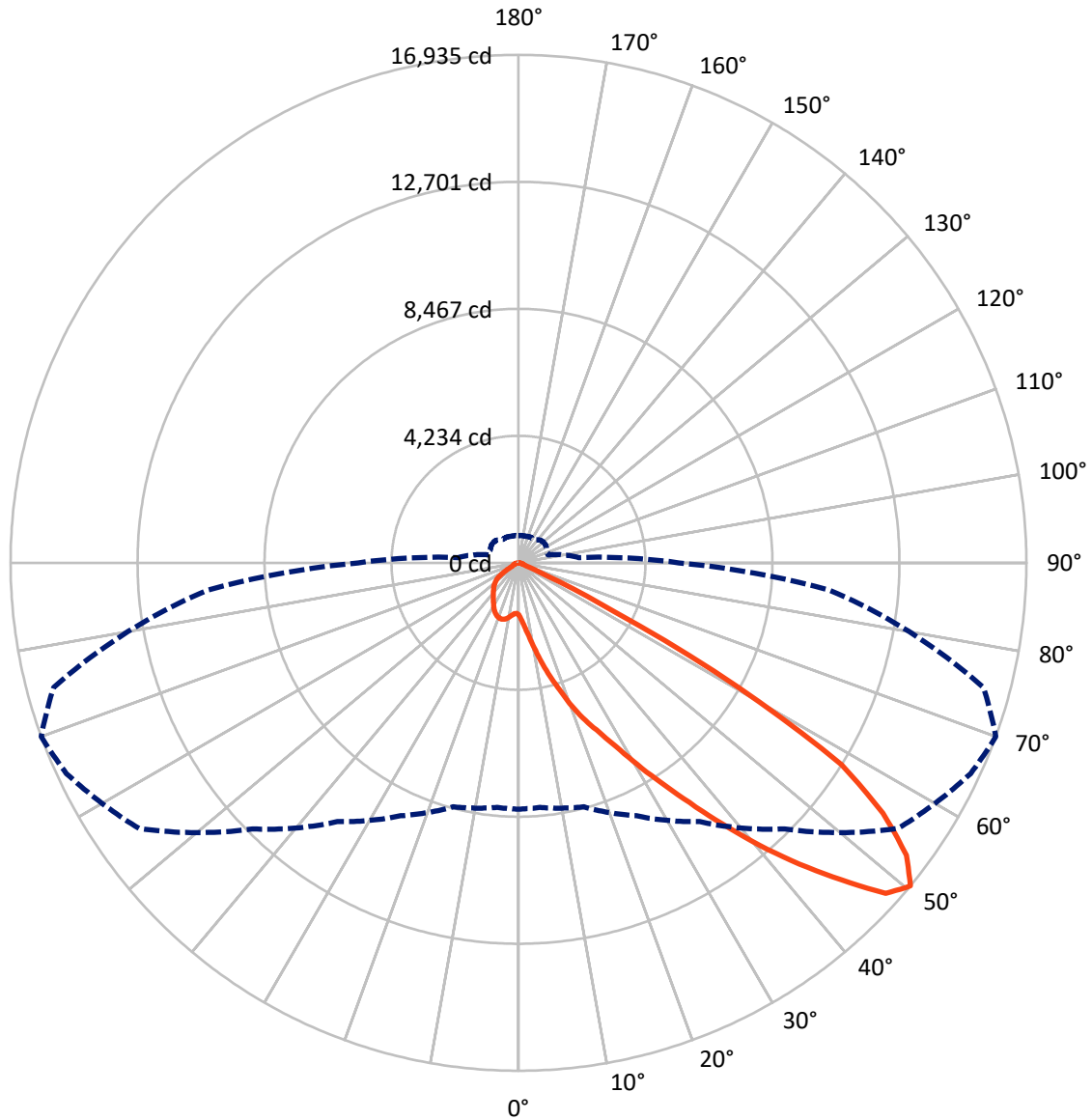
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.9 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical

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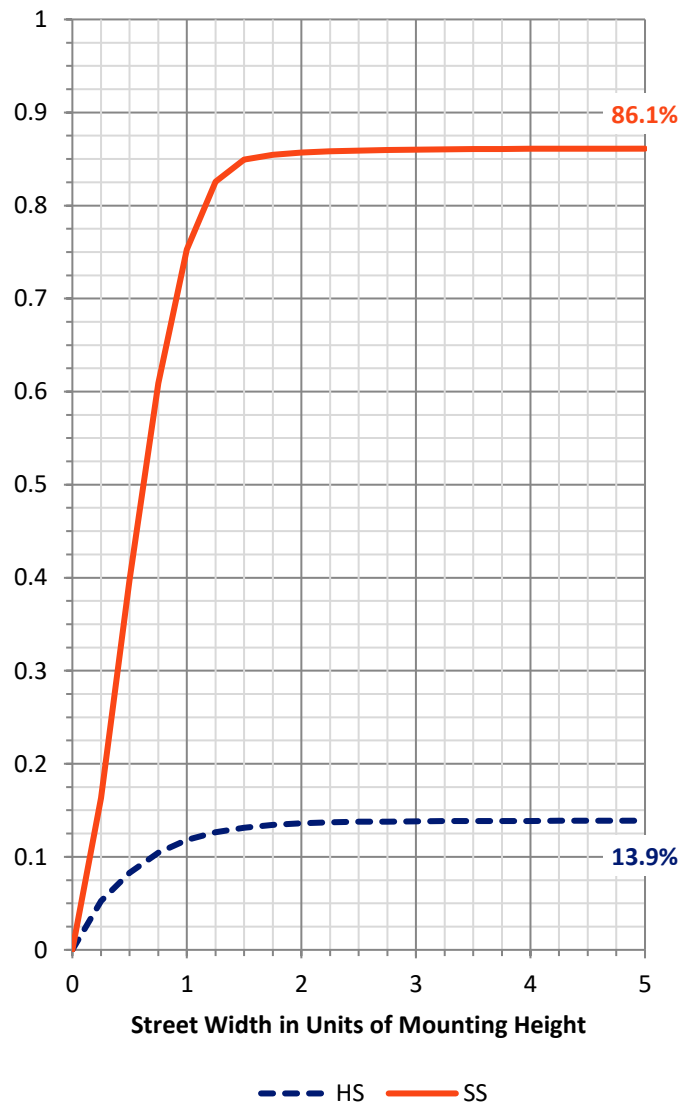
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2339.4 | 0.0 | 2339.4 |
| | % Fixture | 14.0 | 0.0 | 14.0 |
| Street Side | Lumens | 14411.6 | 0.0 | 14411.6 |
| | % Fixture | 86.0 | 0.0 | 86.0 |
| Total | Lumens | 16751.0 | 0.0 | 16751.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 225.6 | 1.3 |
| 10°-20° | 976.0 | 5.8 |
| 20°-30° | 2047.4 | 12.2 |
| 30°-40° | 3529.0 | 21.1 |
| 40°-50° | 5157.7 | 30.8 |
| 50°-60° | 4017.0 | 24.0 |
| 60°-70° | 680.6 | 4.1 |
| 70°-80° | 93.5 | 0.6 |
| 80°-90° | 24.2 | 0.1 |
| 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° | 16751.0 | 100.0 |
| 0°-180° | 16751.0 | 100.0 |

Coefficient of Utilization



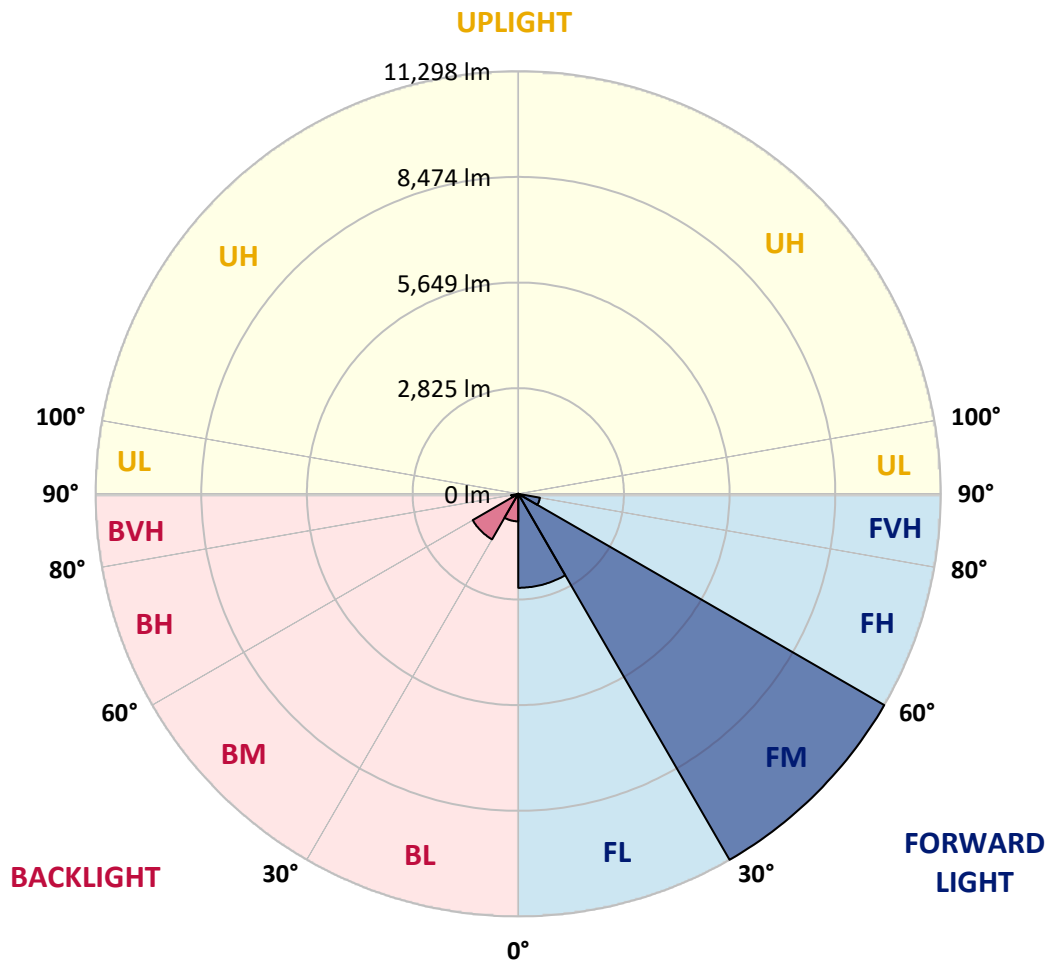
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 2512.8 | 15.0 | | | |
| FM (30°-60°) | 11298.3 | 67.4 | | | |
| FH (60°-80°) | 589.3 | 3.5 | | | G0/660 |
| FVH (80°-90°) | 11.2 | 0.1 | | | G1/100 |
| BL (0°-30°) | 736.1 | 4.4 | B2/1000 | | |
| BM (30°-60°) | 1405.4 | 8.4 | B2/2500 | | |
| BH (60°-80°) | 184.8 | 1.1 | B1/500 | | G1/500 |
| BVH (80°-90°) | 13.0 | 0.1 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G1

Type I Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 70° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 |
| 2.5° | 2272.1 | 2255.6 | 2219.8 | 2153.7 | 2126.2 | 2060.1 | 2021.5 | 1947.1 | 1900.3 | 1848.0 | 1790.2 |
| 5° | 3200.2 | 3114.9 | 3062.5 | 2988.2 | 2770.6 | 2635.7 | 2412.6 | 2222.5 | 2134.4 | 2038.0 | 1905.8 |
| 7.5° | 4158.7 | 4103.6 | 4032.0 | 3872.2 | 3723.5 | 3442.6 | 3059.8 | 2641.2 | 2462.2 | 2296.9 | 2035.3 |
| 10° | 4951.8 | 4797.6 | 4789.4 | 4670.9 | 4508.4 | 4172.4 | 3712.5 | 3192.0 | 2872.5 | 2630.2 | 2219.8 |
| 12.5° | 5505.4 | 5365.0 | 5428.3 | 5414.5 | 5263.1 | 4954.6 | 4423.1 | 3734.5 | 3401.3 | 3024.0 | 2409.8 |
| 15° | 6009.4 | 5951.6 | 5932.3 | 5915.8 | 5855.2 | 5626.6 | 5150.1 | 4395.5 | 3913.6 | 3459.1 | 2624.6 |
| 17.5° | 6502.4 | 6353.7 | 6425.3 | 6439.1 | 6433.5 | 6227.0 | 5780.8 | 5023.5 | 4456.1 | 3919.1 | 2850.5 |
| 20° | 6940.3 | 6954.1 | 6857.7 | 6838.4 | 6821.9 | 6813.6 | 6378.5 | 5645.9 | 5122.6 | 4401.0 | 3145.2 |
| 22.5° | 7502.1 | 7405.7 | 7491.1 | 7436.0 | 7328.6 | 7262.5 | 6929.3 | 6196.7 | 5701.0 | 4982.1 | 3445.4 |
| 25° | 8165.9 | 8243.0 | 8041.9 | 8019.9 | 7901.5 | 7672.9 | 7372.7 | 6813.6 | 6257.3 | 5521.9 | 3770.3 |
| 27.5° | 8983.8 | 8848.9 | 8796.5 | 8675.4 | 8460.6 | 8364.2 | 8011.6 | 7449.8 | 6929.3 | 6089.3 | 4084.3 |
| 30° | 9686.1 | 9650.3 | 9388.7 | 9245.5 | 9058.2 | 9055.4 | 8562.5 | 8311.8 | 7805.1 | 6978.9 | 4516.7 |
| 32.5° | 10259.0 | 10102.0 | 10005.6 | 9906.4 | 9755.0 | 9796.3 | 9380.4 | 9248.2 | 8738.7 | 7805.1 | 5026.2 |
| 35° | 10641.8 | 10528.9 | 10471.0 | 10319.6 | 10275.5 | 10460.0 | 10286.5 | 10231.4 | 9812.8 | 8967.3 | 5623.8 |
| 37.5° | 10763.0 | 10798.8 | 10787.8 | 10597.7 | 10691.4 | 11189.8 | 11412.9 | 11269.7 | 11049.4 | 10192.9 | 6271.1 |
| 40° | 10870.4 | 10895.2 | 10840.1 | 11063.2 | 11330.3 | 11897.6 | 12704.6 | 12467.7 | 12385.1 | 11435.0 | 7171.6 |
| 42.5° | 10931.0 | 10911.7 | 10911.7 | 11297.3 | 11702.1 | 12842.3 | 13952.2 | 13795.2 | 13731.9 | 12756.9 | 8212.7 |
| 45° | 10669.3 | 10482.0 | 10683.1 | 11206.4 | 12021.6 | 13307.7 | 14949.2 | 15166.7 | 15075.9 | 14329.5 | 9430.0 |
| 47.5° | 9691.6 | 9807.3 | 9920.2 | 10619.8 | 11633.3 | 13164.5 | 15560.6 | 16301.4 | 16469.4 | 15651.5 | 10228.7 |
| 50° | 8212.7 | 8187.9 | 8422.0 | 9303.3 | 10534.4 | 12547.6 | 15442.2 | 16629.2 | 16934.9 | 16048.1 | 10396.7 |
| 52.5° | 5973.6 | 6155.4 | 6408.8 | 7284.6 | 8744.2 | 10950.2 | 13913.6 | 15783.7 | 16191.3 | 15560.6 | 10286.5 |
| 55° | 3478.4 | 3277.4 | 3847.5 | 4588.3 | 5965.3 | 8259.5 | 11762.7 | 13990.8 | 14745.4 | 14673.8 | 9730.2 |
| 57.5° | 1393.6 | 1349.5 | 1545.0 | 2082.1 | 3112.1 | 5119.8 | 8554.2 | 11495.6 | 12704.6 | 13439.9 | 8551.4 |
| 60° | 611.4 | 597.6 | 702.3 | 848.3 | 1272.4 | 2360.3 | 4679.2 | 7149.6 | 8411.0 | 9391.4 | 5885.5 |
| 62.5° | 440.7 | 435.1 | 487.5 | 539.8 | 672.0 | 1027.3 | 1966.4 | 2880.8 | 3591.3 | 4337.7 | 2635.7 |
| 65° | 355.3 | 369.0 | 404.9 | 432.4 | 495.7 | 570.1 | 694.0 | 801.4 | 983.2 | 1019.0 | 581.1 |
| 67.5° | 289.2 | 300.2 | 333.2 | 363.5 | 374.6 | 308.5 | 319.5 | 280.9 | 280.9 | 250.6 | 201.0 |
| 70° | 212.1 | 214.8 | 253.4 | 289.2 | 231.3 | 123.9 | 217.6 | 217.6 | 195.5 | 187.3 | 170.8 |
| 72.5° | 157.0 | 159.7 | 190.0 | 179.0 | 90.9 | 77.1 | 159.7 | 176.3 | 159.7 | 151.5 | 137.7 |
| 75° | 115.7 | 118.4 | 99.1 | 41.3 | 38.6 | 49.6 | 93.6 | 121.2 | 115.7 | 112.9 | 104.7 |
| 77.5° | 22.0 | 16.5 | 13.8 | 19.3 | 27.5 | 41.3 | 60.6 | 74.4 | 77.1 | 82.6 | 77.1 |
| 80° | 2.8 | 2.8 | 8.3 | 16.5 | 30.3 | 44.1 | 63.3 | 71.6 | 74.4 | 77.1 | 71.6 |
| 82.5° | 0.0 | 2.8 | 8.3 | 16.5 | 30.3 | 41.3 | 55.1 | 63.3 | 68.9 | 71.6 | 68.9 |
| 85° | 0.0 | 2.8 | 5.5 | 13.8 | 24.8 | 30.3 | 27.5 | 19.3 | 16.5 | 19.3 | 13.8 |
| 87.5° | 0.0 | 0.0 | 2.8 | 2.8 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| 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° | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 | 1735.1 |
| 2.5° | 1757.1 | 1746.1 | 1707.5 | 1666.2 | 1630.4 | 1646.9 | 1630.4 | 1616.6 | 1622.2 | 1616.6 | 1611.1 |
| 5° | 1853.5 | 1803.9 | 1721.3 | 1685.5 | 1655.2 | 1652.5 | 1644.2 | 1641.4 | 1644.2 | 1644.2 | 1619.4 |
| 7.5° | 1944.4 | 1864.5 | 1776.4 | 1737.8 | 1702.0 | 1704.8 | 1685.5 | 1685.5 | 1682.7 | 1669.0 | 1663.5 |
| 10° | 2082.1 | 1974.7 | 1861.8 | 1792.9 | 1748.8 | 1740.6 | 1721.3 | 1702.0 | 1702.0 | 1702.0 | 1674.5 |
| 12.5° | 2233.6 | 2098.6 | 1944.4 | 1864.5 | 1812.2 | 1770.9 | 1740.6 | 1735.1 | 1704.8 | 1699.3 | 1685.5 |
| 15° | 2365.8 | 2195.0 | 1999.5 | 1889.3 | 1823.2 | 1768.1 | 1721.3 | 1691.0 | 1677.2 | 1669.0 | 1658.0 |
| 17.5° | 2495.2 | 2277.6 | 2029.8 | 1889.3 | 1817.7 | 1754.4 | 1704.8 | 1677.2 | 1644.2 | 1649.7 | 1627.7 |
| 20° | 2668.7 | 2365.8 | 2038.0 | 1853.5 | 1765.4 | 1704.8 | 1638.7 | 1624.9 | 1605.6 | 1589.1 | 1594.6 |
| 22.5° | 2836.7 | 2429.1 | 2013.2 | 1809.4 | 1682.7 | 1611.1 | 1578.1 | 1561.6 | 1553.3 | 1539.5 | 1520.3 |
| 25° | 2988.2 | 2498.0 | 1974.7 | 1729.6 | 1594.6 | 1542.3 | 1512.0 | 1509.2 | 1490.0 | 1490.0 | 1454.2 |
| 27.5° | 3142.4 | 2522.7 | 1908.6 | 1635.9 | 1517.5 | 1487.2 | 1473.4 | 1467.9 | 1459.7 | 1440.4 | 1415.6 |
| 30° | 3318.7 | 2531.0 | 1812.2 | 1539.5 | 1448.6 | 1415.6 | 1434.9 | 1448.6 | 1412.8 | 1377.0 | 1388.1 |
| 32.5° | 3464.6 | 2511.7 | 1696.5 | 1448.6 | 1399.1 | 1382.6 | 1421.1 | 1434.9 | 1393.6 | 1355.0 | 1335.7 |
| 35° | 3640.9 | 2464.9 | 1583.6 | 1377.0 | 1349.5 | 1382.6 | 1415.6 | 1415.6 | 1333.0 | 1286.2 | 1275.1 |
| 37.5° | 3908.0 | 2412.6 | 1478.9 | 1316.5 | 1297.2 | 1366.0 | 1410.1 | 1379.8 | 1250.4 | 1192.5 | 1178.7 |
| 40° | 4194.5 | 2379.5 | 1377.0 | 1255.9 | 1269.6 | 1338.5 | 1363.3 | 1269.6 | 1137.4 | 1101.6 | 1090.6 |
| 42.5° | 4610.3 | 2313.4 | 1286.2 | 1203.5 | 1244.8 | 1299.9 | 1299.9 | 1131.9 | 1082.4 | 1063.1 | 1060.3 |
| 45° | 5128.1 | 2266.6 | 1206.3 | 1159.5 | 1209.0 | 1222.8 | 1178.7 | 1060.3 | 1024.5 | 1019.0 | 1021.8 |
| 47.5° | 5381.5 | 2175.7 | 1123.7 | 1107.1 | 1142.9 | 1145.7 | 1030.0 | 1002.5 | 972.2 | 963.9 | 958.4 |
| 50° | 5342.9 | 2013.2 | 1016.3 | 1038.3 | 1087.9 | 1060.3 | 939.1 | 944.7 | 917.1 | 914.4 | 900.6 |
| 52.5° | 5073.0 | 1757.1 | 908.8 | 961.2 | 1016.3 | 936.4 | 864.8 | 859.3 | 859.3 | 823.5 | 809.7 |
| 55° | 4497.4 | 1415.6 | 779.4 | 845.5 | 911.6 | 787.7 | 768.4 | 762.9 | 749.1 | 716.1 | 707.8 |
| 57.5° | 3561.0 | 1038.3 | 586.6 | 658.2 | 773.9 | 669.2 | 666.5 | 641.7 | 605.9 | 581.1 | 581.1 |
| 60° | 2117.9 | 597.6 | 369.0 | 402.1 | 512.3 | 542.6 | 603.1 | 592.1 | 531.5 | 493.0 | 482.0 |
| 62.5° | 966.7 | 308.5 | 234.1 | 239.6 | 275.4 | 352.5 | 473.7 | 548.1 | 462.7 | 396.6 | 391.1 |
| 65° | 325.0 | 228.6 | 192.8 | 184.5 | 190.0 | 212.1 | 283.7 | 388.3 | 369.0 | 305.7 | 294.7 |
| 67.5° | 198.3 | 203.8 | 181.8 | 168.0 | 168.0 | 165.2 | 162.5 | 176.3 | 217.6 | 212.1 | 214.8 |
| 70° | 170.8 | 187.3 | 168.0 | 151.5 | 146.0 | 137.7 | 115.7 | 96.4 | 82.6 | 96.4 | 101.9 |
| 72.5° | 137.7 | 148.7 | 143.2 | 129.4 | 115.7 | 104.7 | 82.6 | 63.3 | 46.8 | 41.3 | 41.3 |
| 75° | 101.9 | 110.2 | 115.7 | 99.1 | 88.1 | 74.4 | 60.6 | 41.3 | 24.8 | 16.5 | 16.5 |
| 77.5° | 74.4 | 82.6 | 85.4 | 77.1 | 66.1 | 52.3 | 38.6 | 27.5 | 13.8 | 5.5 | 5.5 |
| 80° | 63.3 | 74.4 | 82.6 | 77.1 | 68.9 | 49.6 | 35.8 | 19.3 | 11.0 | 2.8 | 2.8 |
| 82.5° | 60.6 | 74.4 | 82.6 | 74.4 | 66.1 | 46.8 | 35.8 | 22.0 | 8.3 | 2.8 | 2.8 |
| 85° | 13.8 | 19.3 | 24.8 | 30.3 | 35.8 | 35.8 | 27.5 | 16.5 | 8.3 | 2.8 | 2.8 |
| 87.5° | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 2.8 | 2.8 | 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)