

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: P591350

Luminaire Tested: **CTN-CA8-230-730-U-T2-SSS-HM-EX120**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591350
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA8-230-730-U-T2-SSS-HM-EX120
Description: CELESTEON HIGH MAST LUMINAIRE, 120D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21557 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

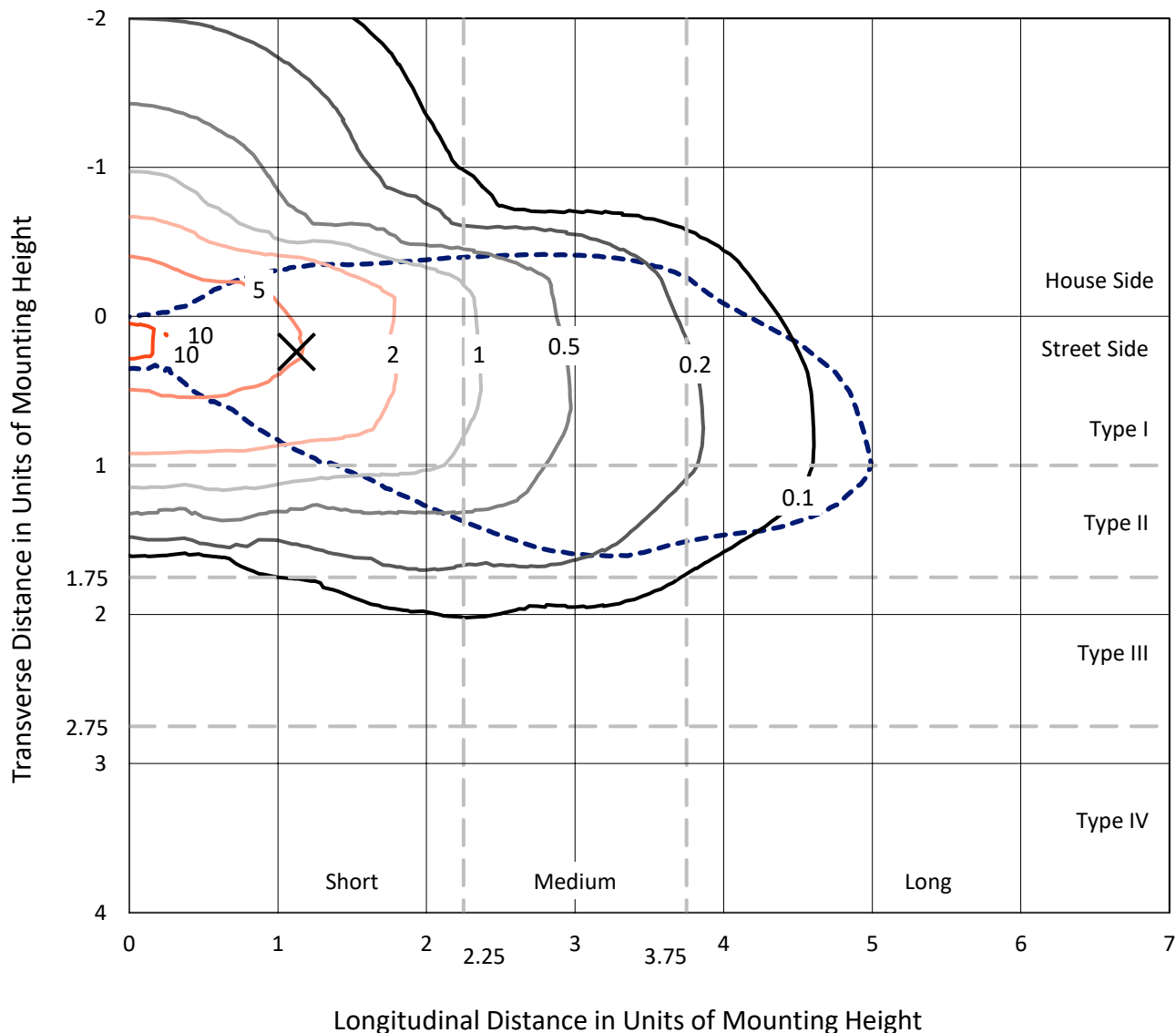
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

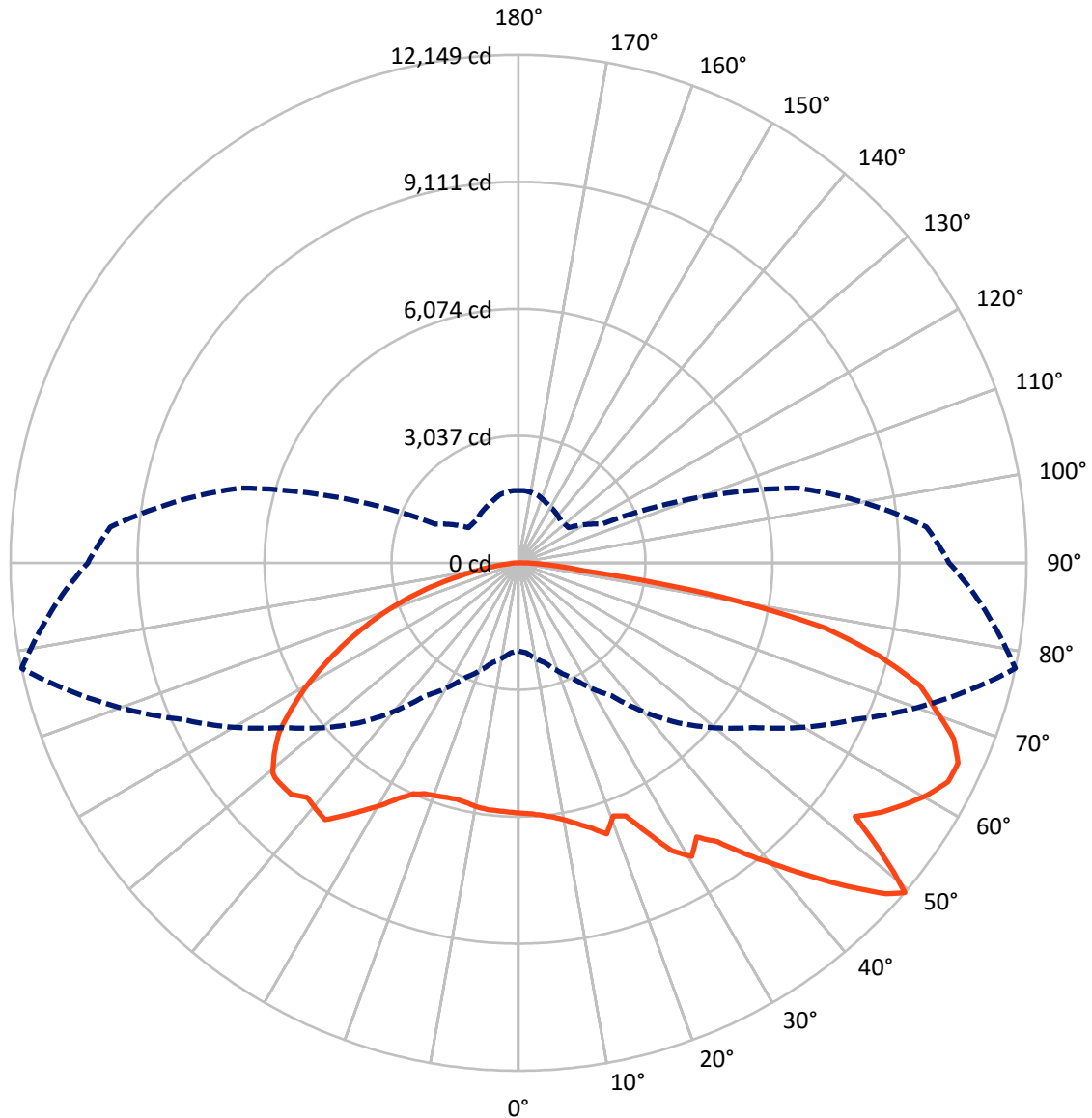
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.9 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 49-Deg Vertical

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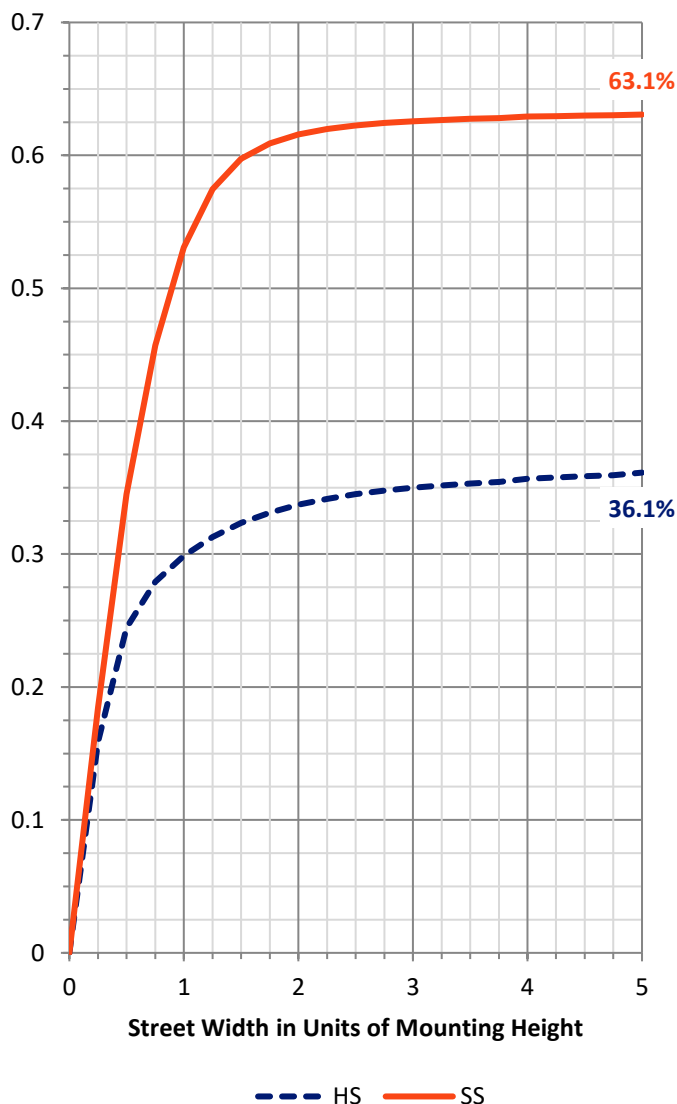
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7981.8 | 0.0 | 7981.8 |
| | % Fixture | 37.0 | 0.0 | 37.0 |
| Street Side | Lumens | 13575.2 | 0.0 | 13575.2 |
| | % Fixture | 63.0 | 0.0 | 63.0 |
| Total | Lumens | 21557.0 | 0.0 | 21557.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 580.2 | 2.7 |
| 10°-20° | 1707.6 | 7.9 |
| 20°-30° | 2437.6 | 11.3 |
| 30°-40° | 3138.0 | 14.6 |
| 40°-50° | 3680.9 | 17.1 |
| 50°-60° | 3797.3 | 17.6 |
| 60°-70° | 3447.9 | 16.0 |
| 70°-80° | 2289.8 | 10.6 |
| 80°-90° | 477.5 | 2.2 |
| 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° | 21557.0 | 100.0 |
| 0°-180° | 21557.0 | 100.0 |

Coefficient of Utilization

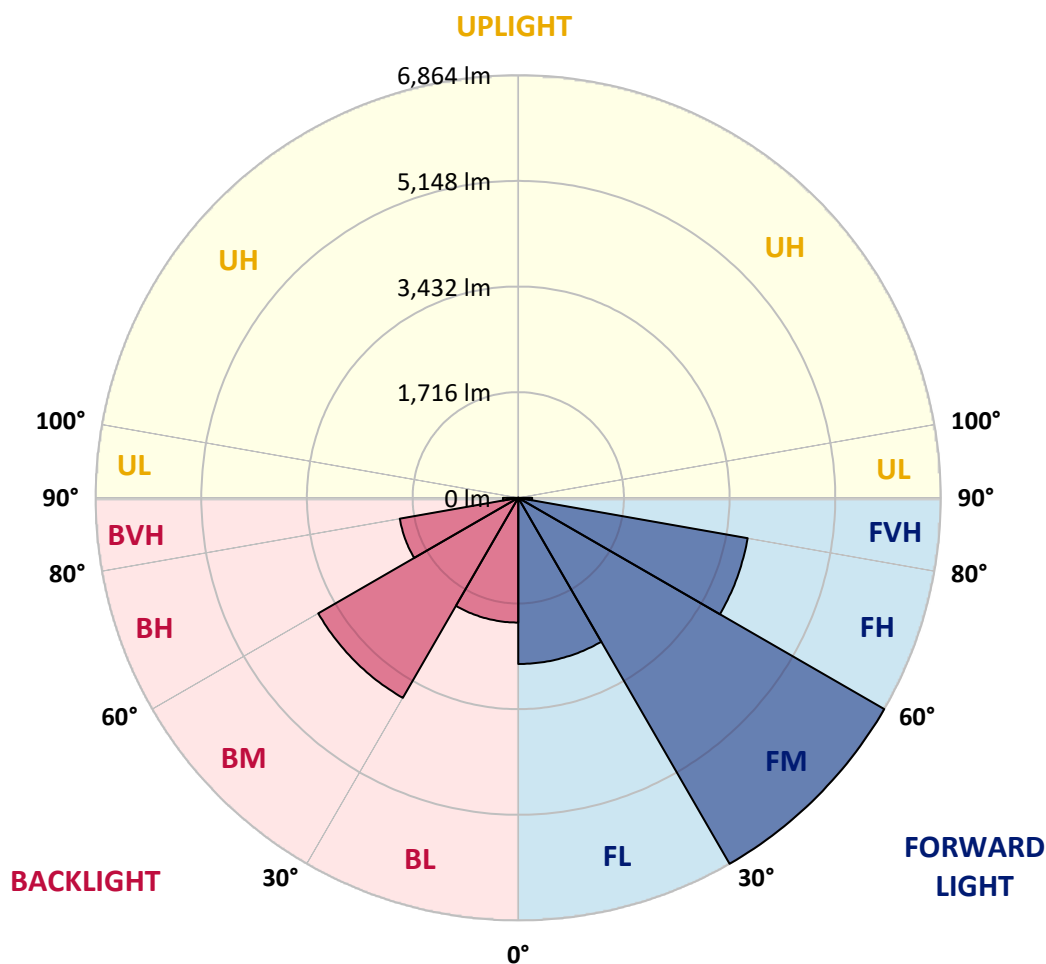


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2699.2 | 12.5 | | | |
| FM (30°-60°) | 6864.4 | 31.8 | | | |
| FH (60°-80°) | 3784.1 | 17.6 | | | G2/5000 |
| FVH (80°-90°) | 227.6 | 1.1 | | | G3/500 |
| BL (0°-30°) | 2026.2 | 9.4 | B3/2500 | | |
| BM (30°-60°) | 3751.9 | 17.4 | B3/5000 | | |
| BH (60°-80°) | 1953.7 | 9.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 249.9 | 1.2 | | | G3/500 |
| 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 Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 |
| 2.5° | 6230.9 | 6183.1 | 6198.3 | 6224.4 | 6105.8 | 6131.9 | 6080.8 | 6101.5 | 6038.4 | 6014.4 | 6025.3 |
| 5° | 6671.5 | 6620.3 | 6638.8 | 6647.5 | 6475.7 | 6406.0 | 6246.1 | 6212.4 | 6113.4 | 6069.9 | 6065.6 |
| 7.5° | 6889.0 | 6833.6 | 6837.9 | 6843.3 | 6706.3 | 6716.1 | 6571.4 | 6398.4 | 6214.6 | 6148.2 | 6118.9 |
| 10° | 7246.9 | 7169.7 | 7143.6 | 7132.7 | 6947.8 | 6870.5 | 6744.4 | 6649.7 | 6362.5 | 6262.5 | 6187.4 |
| 12.5° | 7467.7 | 7411.2 | 7411.2 | 7400.3 | 7204.5 | 7144.7 | 6919.5 | 6819.4 | 6536.6 | 6418.0 | 6288.6 |
| 15° | 7508.0 | 7469.9 | 7518.9 | 7509.1 | 7380.7 | 7311.1 | 7211.0 | 7002.2 | 6712.8 | 6589.9 | 6437.6 |
| 17.5° | 7053.3 | 6952.1 | 6758.5 | 6787.9 | 6789.0 | 6930.4 | 6861.8 | 7005.4 | 6920.6 | 6820.5 | 6656.2 |
| 20° | 5792.5 | 5827.3 | 6137.4 | 6062.3 | 6034.0 | 6334.3 | 6641.0 | 6649.7 | 6481.1 | 6464.8 | 6686.7 |
| 22.5° | 5046.3 | 4922.3 | 5267.1 | 5768.6 | 5800.1 | 6201.5 | 6559.4 | 6990.2 | 6720.4 | 6575.7 | 6406.0 |
| 25° | 4297.9 | 4343.6 | 4863.6 | 5513.0 | 5972.0 | 6061.2 | 6472.4 | 7159.9 | 7275.2 | 7141.4 | 6786.8 |
| 27.5° | 4168.4 | 4166.3 | 4392.5 | 5112.7 | 6054.7 | 6389.7 | 6525.7 | 7064.2 | 7868.1 | 7793.0 | 7344.8 |
| 30° | 4140.2 | 4122.8 | 4241.3 | 4839.6 | 5670.7 | 6685.6 | 6944.5 | 7137.1 | 7821.3 | 8155.2 | 7969.2 |
| 32.5° | 4016.2 | 4000.9 | 4127.1 | 4440.4 | 5362.9 | 6902.1 | 7343.7 | 7630.9 | 7662.5 | 7820.2 | 8628.4 |
| 35° | 3821.4 | 3833.4 | 4008.5 | 4349.0 | 4917.9 | 6382.1 | 7752.7 | 8186.8 | 8301.0 | 8192.2 | 8304.3 |
| 37.5° | 3622.4 | 3635.4 | 3807.3 | 4193.5 | 4840.7 | 6164.6 | 8017.1 | 8724.1 | 8961.3 | 8844.9 | 8327.1 |
| 40° | 3375.4 | 3396.1 | 3595.2 | 4029.2 | 4751.5 | 5674.0 | 7474.3 | 9334.4 | 9656.4 | 9504.1 | 8927.6 |
| 42.5° | 3094.8 | 3103.5 | 3329.8 | 3779.0 | 4638.4 | 5703.3 | 6914.1 | 9897.9 | 10330.8 | 10247.1 | 9519.3 |
| 45° | 2851.1 | 2851.1 | 3056.7 | 3457.0 | 4380.6 | 5647.9 | 6676.9 | 9478.0 | 11158.6 | 11040.1 | 10112.2 |
| 47.5° | 2519.3 | 2548.7 | 2790.2 | 3187.3 | 4077.1 | 5519.5 | 6812.9 | 8534.9 | 11929.9 | 11830.9 | 10707.2 |
| 49° | 2110.3 | 2160.4 | 2479.1 | 3039.3 | 3882.4 | 5412.9 | 6867.3 | 8867.7 | 11398.0 | 12148.5 | 11093.4 |
| 50° | 1942.8 | 1968.9 | 1972.2 | 2933.8 | 3737.7 | 5316.1 | 6892.3 | 9123.4 | 10500.5 | 11636.2 | 11364.2 |
| 52.5° | 1681.7 | 1517.5 | 1348.9 | 2641.2 | 3447.2 | 4958.2 | 6907.5 | 9817.4 | 10285.1 | 10081.7 | 11153.2 |
| 55° | 710.3 | 930.1 | 1182.4 | 2160.4 | 3133.9 | 4515.5 | 6857.5 | 10579.9 | 10758.3 | 10534.2 | 9562.8 |
| 57.5° | 537.4 | 572.2 | 635.3 | 1676.3 | 2245.2 | 4010.7 | 6688.9 | 11062.9 | 11157.6 | 10903.0 | 9951.2 |
| 60° | 78.3 | 80.5 | 113.1 | 679.9 | 1285.8 | 2863.1 | 6081.9 | 11048.8 | 11454.5 | 11258.7 | 10286.2 |
| 62.5° | 32.6 | 33.7 | 43.5 | 557.0 | 991.0 | 2203.9 | 5552.1 | 10863.9 | 11742.8 | 11532.8 | 10600.6 |
| 65° | 5.4 | 6.5 | 18.5 | 492.8 | 819.1 | 2059.2 | 4971.2 | 10900.8 | 11640.5 | 11553.5 | 10722.4 |
| 67.5° | 4.4 | 5.4 | 17.4 | 442.7 | 675.5 | 1885.2 | 4398.0 | 10312.3 | 11267.4 | 11229.4 | 10397.2 |
| 70° | 4.4 | 5.4 | 18.5 | 400.3 | 584.1 | 1661.1 | 3689.8 | 9497.6 | 10583.2 | 10598.4 | 9851.1 |
| 72.5° | 5.4 | 5.4 | 18.5 | 357.9 | 508.0 | 1419.6 | 2919.7 | 8409.8 | 9962.1 | 10045.8 | 9074.4 |
| 75° | 5.4 | 5.4 | 17.4 | 311.1 | 436.2 | 1183.5 | 2102.7 | 6184.1 | 8934.1 | 8909.1 | 7958.3 |
| 77.5° | 5.4 | 5.4 | 17.4 | 246.9 | 362.2 | 973.6 | 1369.5 | 3483.1 | 7398.1 | 7503.6 | 6654.1 |
| 80° | 5.4 | 5.4 | 17.4 | 180.6 | 283.9 | 729.9 | 830.0 | 1782.9 | 3949.8 | 4889.7 | 4577.5 |
| 82.5° | 5.4 | 5.4 | 17.4 | 121.8 | 194.7 | 421.0 | 478.6 | 902.9 | 1418.5 | 1554.5 | 1818.8 |
| 85° | 4.4 | 4.4 | 13.1 | 72.9 | 100.1 | 149.0 | 230.6 | 480.8 | 775.6 | 810.4 | 790.8 |
| 87.5° | 2.2 | 2.2 | 6.5 | 26.1 | 43.5 | 54.4 | 103.3 | 193.6 | 285.0 | 291.5 | 253.5 |
| 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° | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 | 5986.2 |
| 2.5° | 6025.3 | 5990.5 | 5959.0 | 5964.4 | 5897.0 | 5877.4 | 5802.3 | 5841.5 | 5803.4 | 5769.7 | 5801.2 |
| 5° | 6035.1 | 5992.7 | 5935.0 | 5879.6 | 5725.1 | 5653.3 | 5563.0 | 5585.8 | 5534.7 | 5494.5 | 5529.3 |
| 7.5° | 6063.4 | 6011.2 | 5922.0 | 5764.2 | 5580.4 | 5466.2 | 5363.9 | 5464.0 | 5452.0 | 5421.6 | 5457.5 |
| 10° | 6076.4 | 6031.8 | 5878.5 | 5693.5 | 5436.8 | 5365.0 | 5272.6 | 5271.5 | 5274.7 | 5280.2 | 5316.1 |
| 12.5° | 6111.3 | 6043.8 | 5801.2 | 5585.8 | 5347.6 | 5201.9 | 5134.4 | 5188.8 | 5090.9 | 5033.2 | 5058.3 |
| 15° | 6193.9 | 6071.0 | 5749.0 | 5434.6 | 5209.5 | 5088.7 | 4873.3 | 4891.8 | 4871.2 | 4814.6 | 4839.6 |
| 17.5° | 6357.1 | 6147.2 | 5746.8 | 5338.9 | 5033.2 | 4836.4 | 4648.2 | 4559.0 | 4530.7 | 4535.0 | 4556.8 |
| 20° | 6557.3 | 6282.0 | 5751.2 | 5216.0 | 4849.4 | 4621.0 | 4330.5 | 4268.5 | 4175.0 | 4177.1 | 4182.6 |
| 22.5° | 6430.0 | 6437.6 | 5753.4 | 5075.7 | 4619.9 | 4333.8 | 4025.9 | 3904.1 | 3832.3 | 3813.8 | 3841.0 |
| 25° | 6774.8 | 6740.0 | 5787.1 | 5000.6 | 4378.4 | 3994.4 | 3672.4 | 3516.9 | 3409.2 | 3400.5 | 3430.9 |
| 27.5° | 7233.9 | 7170.8 | 5961.1 | 4838.5 | 4122.8 | 3587.6 | 3238.4 | 3120.9 | 3028.4 | 2995.8 | 3017.6 |
| 30° | 7791.9 | 7717.9 | 6201.5 | 4712.3 | 3777.9 | 3150.3 | 2851.1 | 2770.6 | 2679.2 | 2619.4 | 2624.9 |
| 32.5° | 8375.0 | 8217.2 | 6448.5 | 4605.7 | 3424.4 | 2767.4 | 2511.7 | 2439.9 | 2332.2 | 2255.0 | 2273.5 |
| 35° | 8962.4 | 8738.3 | 6723.7 | 4417.6 | 2992.5 | 2430.1 | 2223.5 | 2126.6 | 2038.5 | 1968.9 | 1957.0 |
| 37.5° | 8497.9 | 9347.5 | 6990.2 | 4242.4 | 2654.2 | 2173.4 | 1939.5 | 1871.0 | 1818.8 | 1764.4 | 1763.3 |
| 40° | 8536.0 | 8730.7 | 7147.9 | 3932.4 | 2276.8 | 1910.2 | 1675.2 | 1699.1 | 1720.9 | 1679.6 | 1679.6 |
| 42.5° | 8913.4 | 8636.0 | 7084.8 | 3521.2 | 1996.1 | 1646.9 | 1539.2 | 1636.1 | 1704.6 | 1675.2 | 1674.1 |
| 45° | 9445.4 | 9085.3 | 7192.5 | 3057.8 | 1723.1 | 1484.8 | 1501.2 | 1619.7 | 1708.9 | 1703.5 | 1701.3 |
| 47.5° | 10009.9 | 9596.6 | 6985.8 | 2507.4 | 1534.9 | 1434.8 | 1501.2 | 1595.8 | 1702.4 | 1727.4 | 1722.0 |
| 49° | 10300.4 | 9798.9 | 6903.2 | 2186.5 | 1459.8 | 1428.3 | 1503.3 | 1576.2 | 1690.4 | 1728.5 | 1723.1 |
| 50° | 10477.7 | 9907.7 | 6796.6 | 2003.7 | 1419.6 | 1429.4 | 1507.7 | 1564.3 | 1679.6 | 1722.0 | 1718.7 |
| 52.5° | 10876.9 | 10073.0 | 6267.9 | 1686.1 | 1354.3 | 1432.6 | 1536.0 | 1552.3 | 1639.3 | 1685.0 | 1708.9 |
| 55° | 10470.1 | 10450.5 | 5593.5 | 1540.3 | 1319.5 | 1425.0 | 1547.9 | 1563.2 | 1605.6 | 1630.6 | 1649.1 |
| 57.5° | 10407.0 | 10614.7 | 4743.9 | 1462.0 | 1289.0 | 1414.1 | 1533.8 | 1562.1 | 1587.1 | 1582.7 | 1575.1 |
| 60° | 10607.1 | 10758.3 | 3868.2 | 1384.8 | 1254.2 | 1396.7 | 1487.0 | 1528.4 | 1536.0 | 1525.1 | 1507.7 |
| 62.5° | 10638.7 | 10797.5 | 2973.0 | 1306.4 | 1216.2 | 1354.3 | 1418.5 | 1459.8 | 1459.8 | 1432.6 | 1426.1 |
| 65° | 10491.8 | 10552.7 | 2190.8 | 1216.2 | 1170.5 | 1305.4 | 1338.0 | 1368.5 | 1382.6 | 1346.7 | 1348.9 |
| 67.5° | 10070.8 | 9718.4 | 1663.2 | 1108.5 | 1115.0 | 1237.9 | 1260.8 | 1281.4 | 1284.7 | 1264.0 | 1261.8 |
| 70° | 9224.5 | 8785.1 | 1189.0 | 945.3 | 1013.8 | 1131.3 | 1166.1 | 1197.7 | 1186.8 | 1150.9 | 1145.5 |
| 72.5° | 7948.5 | 7558.0 | 808.2 | 757.1 | 892.0 | 1029.1 | 1050.8 | 1051.9 | 1030.1 | 1056.3 | 1074.7 |
| 75° | 6837.9 | 5903.5 | 602.6 | 603.7 | 714.7 | 887.6 | 955.1 | 960.5 | 970.3 | 1113.9 | 1143.3 |
| 77.5° | 5433.6 | 3846.5 | 513.4 | 476.5 | 548.3 | 738.6 | 845.2 | 884.4 | 1173.7 | 1272.7 | 1259.7 |
| 80° | 3337.4 | 2309.4 | 398.1 | 377.5 | 446.0 | 567.8 | 726.6 | 904.0 | 1197.7 | 1125.9 | 1087.8 |
| 82.5° | 1563.2 | 1054.1 | 287.2 | 289.4 | 331.8 | 414.5 | 574.4 | 1051.9 | 1034.5 | 853.9 | 843.0 |
| 85° | 604.8 | 364.4 | 174.0 | 196.9 | 223.0 | 280.7 | 440.6 | 1037.8 | 803.9 | 723.4 | 670.1 |
| 87.5° | 155.6 | 70.7 | 76.1 | 80.5 | 99.0 | 147.9 | 240.4 | 543.9 | 423.2 | 370.9 | 364.4 |
| 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)