

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: STREETWORKS

Report Number: P299389

Luminaire Tested: **GAA-AF-10-LED-U-5NQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299389
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-10-LED-U-5NQ-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 52621.3 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G4

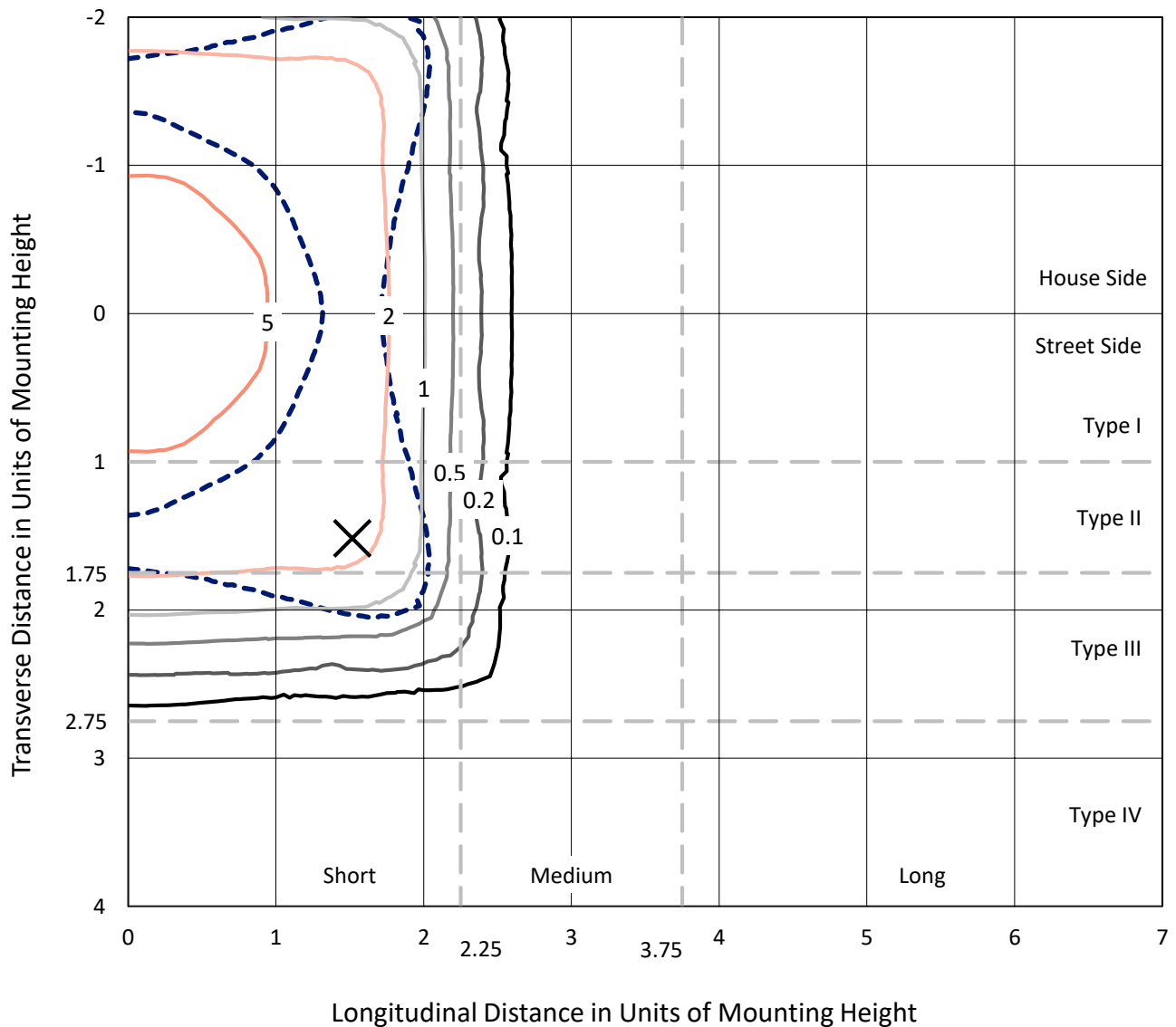
Input Watts (W): 558
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

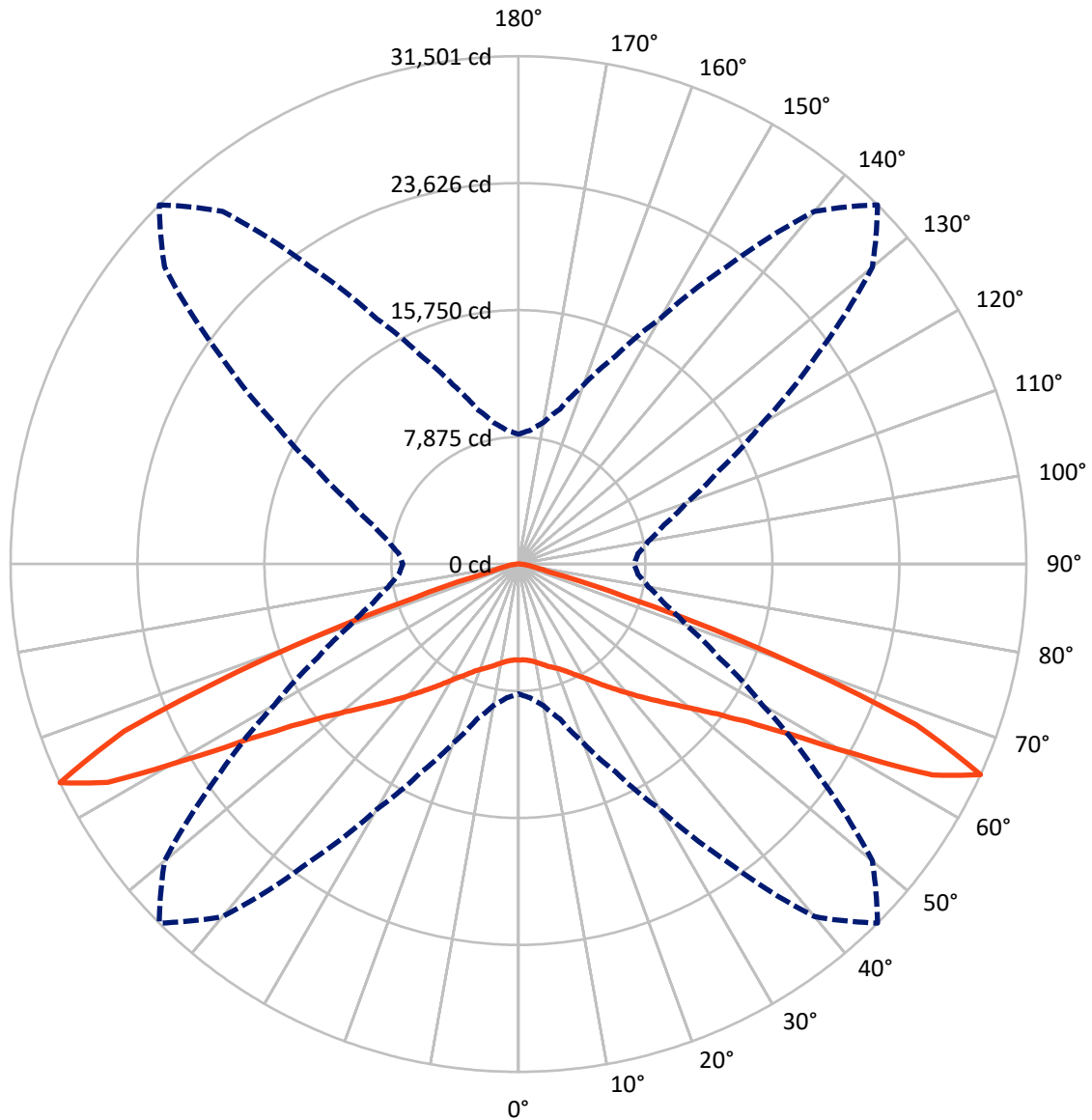
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.6 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 26310.6 | 0.0 | 26310.6 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 26310.6 | 0.0 | 26310.6 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 52621.3 | 0.0 | 52621.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 580.3 | 1.1 |
| 10°-20° | 1861.2 | 3.5 |
| 20°-30° | 3480.2 | 6.6 |
| 30°-40° | 5885.9 | 11.2 |
| 40°-50° | 9624.1 | 18.3 |
| 50°-60° | 15303.9 | 29.1 |
| 60°-70° | 13833.7 | 26.3 |
| 70°-80° | 1750.7 | 3.3 |
| 80°-90° | 301.2 | 0.6 |
| 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° | 52621.3 | 100.0 |
| 0°-180° | 52621.3 | 100.0 |



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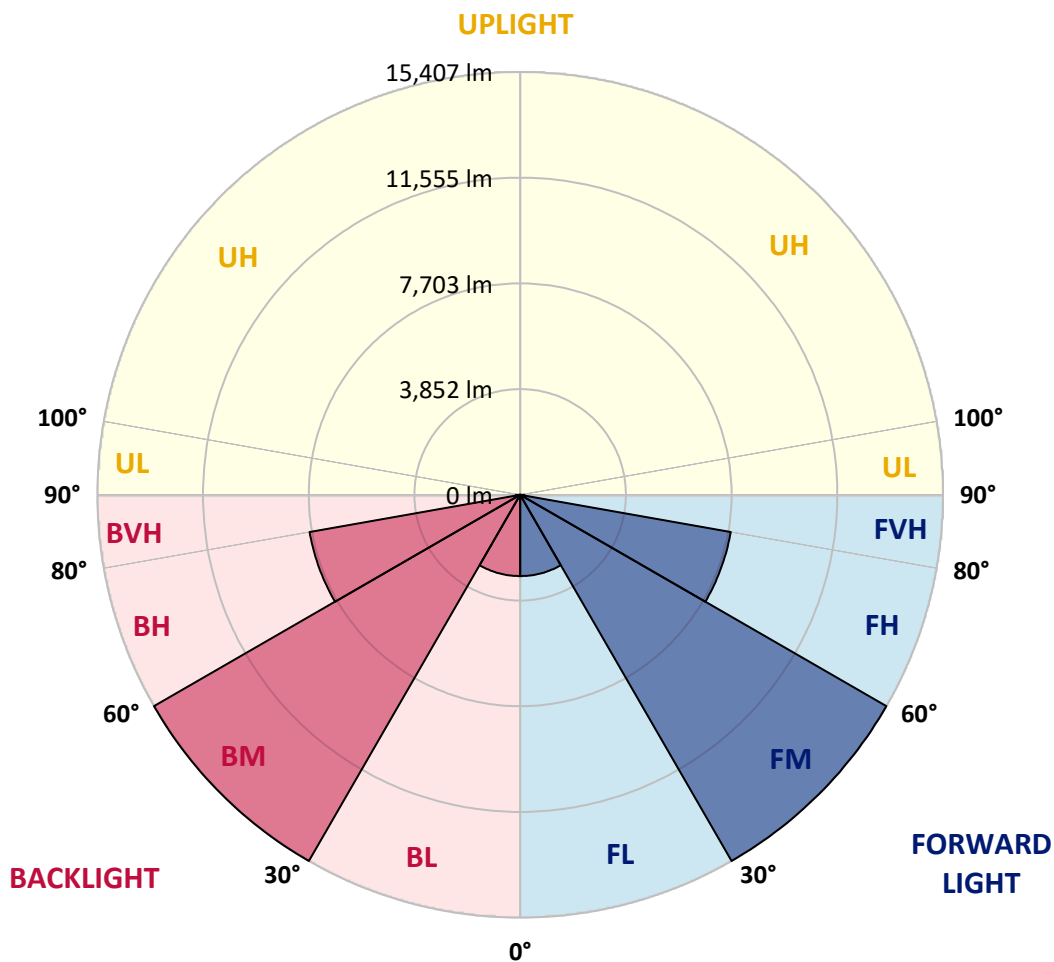
CATALOG NUMBER: GAA-AF-10-LED-U-5NQ-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 2960.9 | 5.6 | | | |
| FM | (30°-60°) | 15407.0 | 29.3 | | | |
| FH | (60°-80°) | 7792.2 | 14.8 | | | G4/12000 |
| FVH | (80°-90°) | 150.6 | 0.3 | | | G2/225 |
| BL | (0°-30°) | 2960.9 | 5.6 | B4/5000 | | |
| BM | (30°-60°) | 15407.0 | 29.3 | B5 | | |
| BH | (60°-80°) | 7792.2 | 14.8 | B5 | | G4/12000 |
| BVH | (80°-90°) | 150.6 | 0.3 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 |
| 2.5° | 5959.1 | 5964.0 | 5968.9 | 5964.0 | 5968.9 | 5961.5 | 5956.6 | 5964.0 | 5956.6 | 5949.2 | 5954.1 |
| 5° | 6010.8 | 6013.3 | 6013.3 | 6005.9 | 6013.3 | 6008.3 | 6000.9 | 6010.8 | 6003.4 | 5996.0 | 6000.9 |
| 7.5° | 6097.1 | 6106.9 | 6099.5 | 6092.1 | 6097.1 | 6092.1 | 6087.2 | 6089.7 | 6087.2 | 6079.8 | 6082.3 |
| 10° | 6212.9 | 6220.3 | 6215.4 | 6212.9 | 6217.8 | 6215.4 | 6210.4 | 6208.0 | 6210.4 | 6203.0 | 6203.0 |
| 12.5° | 6353.4 | 6350.9 | 6348.4 | 6350.9 | 6358.3 | 6358.3 | 6355.8 | 6358.3 | 6363.2 | 6365.7 | 6360.8 |
| 15° | 6491.4 | 6496.3 | 6496.3 | 6496.3 | 6511.1 | 6523.4 | 6530.8 | 6535.7 | 6545.6 | 6548.1 | 6538.2 |
| 17.5° | 6663.9 | 6663.9 | 6661.4 | 6663.9 | 6678.7 | 6698.4 | 6705.8 | 6715.6 | 6725.5 | 6732.9 | 6720.6 |
| 20° | 6856.1 | 6861.0 | 6861.0 | 6866.0 | 6885.7 | 6907.9 | 6907.9 | 6912.8 | 6907.9 | 6912.8 | 6905.4 |
| 22.5° | 7090.2 | 7105.0 | 7105.0 | 7107.5 | 7127.2 | 7154.3 | 7146.9 | 7154.3 | 7142.0 | 7151.8 | 7142.0 |
| 25° | 7395.8 | 7418.0 | 7413.1 | 7413.1 | 7427.9 | 7445.1 | 7447.6 | 7462.4 | 7459.9 | 7472.2 | 7464.8 |
| 27.5° | 7740.9 | 7775.4 | 7785.2 | 7782.7 | 7792.6 | 7809.9 | 7814.8 | 7832.0 | 7822.2 | 7832.0 | 7827.1 |
| 30° | 8154.9 | 8169.7 | 8189.4 | 8196.8 | 8209.1 | 8226.4 | 8226.4 | 8228.8 | 8216.5 | 8231.3 | 8238.7 |
| 32.5° | 8583.7 | 8610.8 | 8630.5 | 8674.9 | 8697.1 | 8709.4 | 8706.9 | 8711.8 | 8699.5 | 8719.2 | 8734.0 |
| 35° | 9150.5 | 9170.2 | 9202.3 | 9236.8 | 9266.4 | 9263.9 | 9256.5 | 9259.0 | 9259.0 | 9276.2 | 9291.0 |
| 37.5° | 9833.2 | 9838.1 | 9880.0 | 9929.3 | 9944.1 | 9929.3 | 9884.9 | 9875.1 | 9852.9 | 9875.1 | 9899.7 |
| 40° | 10555.3 | 10572.5 | 10656.3 | 10688.3 | 10695.7 | 10668.6 | 10604.6 | 10567.6 | 10518.3 | 10545.4 | 10579.9 |
| 42.5° | 11311.8 | 11346.4 | 11422.7 | 11479.4 | 11504.1 | 11486.8 | 11398.1 | 11341.4 | 11277.3 | 11292.1 | 11326.6 |
| 45° | 12149.8 | 12191.7 | 12300.1 | 12354.3 | 12401.1 | 12374.0 | 12287.8 | 12201.5 | 12100.5 | 12107.9 | 12162.1 |
| 47.5° | 13086.3 | 13128.2 | 13268.6 | 13359.8 | 13384.5 | 13379.5 | 13283.4 | 13165.1 | 13027.1 | 13022.2 | 13069.0 |
| 50° | 14136.1 | 14178.0 | 14353.0 | 14493.5 | 14564.9 | 14557.5 | 14444.2 | 14276.6 | 14109.0 | 14111.5 | 14170.6 |
| 52.5° | 15161.3 | 15213.1 | 15395.5 | 15637.0 | 15777.4 | 15878.5 | 15809.5 | 15651.8 | 15447.2 | 15452.1 | 15506.4 |
| 55° | 16122.5 | 16208.7 | 16418.2 | 16746.0 | 17007.2 | 17290.6 | 17371.9 | 17367.0 | 17243.8 | 17278.3 | 17332.5 |
| 57.5° | 16588.2 | 16716.4 | 17039.2 | 17556.8 | 18089.1 | 18665.8 | 19153.7 | 19518.5 | 19673.7 | 19907.9 | 19853.6 |
| 60° | 15706.0 | 15910.5 | 16386.2 | 17147.7 | 18200.0 | 19402.7 | 20691.6 | 21950.9 | 23025.4 | 23836.2 | 23370.4 |
| 62.5° | 12859.5 | 13125.7 | 13702.4 | 14678.3 | 16270.3 | 18195.1 | 20662.0 | 23639.1 | 26882.3 | 28839.1 | 27441.7 |
| 65° | 8046.4 | 8322.5 | 8909.0 | 9953.9 | 11817.1 | 14210.0 | 17556.8 | 22490.6 | 28550.7 | 31500.7 | 28656.7 |
| 67.5° | 3137.3 | 3287.6 | 3605.5 | 4273.4 | 5673.2 | 7802.5 | 11161.5 | 16760.8 | 24008.7 | 26593.9 | 23562.7 |
| 70° | 1572.3 | 1587.1 | 1646.3 | 1769.5 | 2070.1 | 2688.7 | 4091.0 | 7770.4 | 13768.9 | 16630.1 | 13273.6 |
| 72.5° | 1136.1 | 1138.6 | 1168.2 | 1222.4 | 1318.5 | 1456.5 | 1722.7 | 2378.2 | 4477.9 | 6843.8 | 4197.0 |
| 75° | 870.0 | 879.8 | 897.1 | 926.6 | 978.4 | 1047.4 | 1143.5 | 1370.2 | 1698.0 | 1969.1 | 1656.1 |
| 77.5° | 670.3 | 690.0 | 702.4 | 729.5 | 761.5 | 808.3 | 835.5 | 921.7 | 1072.0 | 1128.7 | 1111.5 |
| 80° | 510.1 | 527.4 | 554.5 | 576.7 | 598.9 | 621.0 | 611.2 | 650.6 | 729.5 | 776.3 | 751.7 |
| 82.5° | 325.3 | 345.0 | 423.9 | 443.6 | 453.5 | 468.2 | 451.0 | 453.5 | 488.0 | 517.5 | 488.0 |
| 85° | 209.5 | 221.8 | 268.6 | 293.3 | 295.7 | 305.6 | 298.2 | 280.9 | 280.9 | 256.3 | 288.3 |
| 87.5° | 96.1 | 98.6 | 120.8 | 142.9 | 147.9 | 133.1 | 130.6 | 125.7 | 101.0 | 96.1 | 103.5 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 | 5954.1 |
| 2.5° | 5951.7 | 5956.6 | 5959.1 | 5966.4 | 5968.9 | 5968.9 | 5971.4 | 5976.3 |
| 5° | 5998.5 | 6005.9 | 6008.3 | 6018.2 | 6020.7 | 6018.2 | 6023.1 | 6025.6 |
| 7.5° | 6082.3 | 6094.6 | 6099.5 | 6109.4 | 6102.0 | 6111.8 | 6114.3 | 6114.3 |
| 10° | 6205.5 | 6217.8 | 6220.3 | 6230.1 | 6225.2 | 6230.1 | 6230.1 | 6225.2 |
| 12.5° | 6368.2 | 6370.6 | 6363.2 | 6370.6 | 6360.8 | 6365.7 | 6358.3 | 6353.4 |
| 15° | 6548.1 | 6540.7 | 6523.4 | 6523.4 | 6508.6 | 6511.1 | 6508.6 | 6506.2 |
| 17.5° | 6723.0 | 6708.2 | 6695.9 | 6691.0 | 6678.7 | 6676.2 | 6668.8 | 6668.8 |
| 20° | 6915.3 | 6907.9 | 6900.5 | 6890.6 | 6878.3 | 6866.0 | 6863.5 | 6868.4 |
| 22.5° | 7146.9 | 7144.5 | 7144.5 | 7139.5 | 7122.3 | 7110.0 | 7102.6 | 7102.6 |
| 25° | 7457.4 | 7435.3 | 7435.3 | 7432.8 | 7425.4 | 7418.0 | 7403.2 | 7410.6 |
| 27.5° | 7807.4 | 7795.1 | 7804.9 | 7802.5 | 7795.1 | 7795.1 | 7785.2 | 7785.2 |
| 30° | 8238.7 | 8233.7 | 8248.5 | 8236.2 | 8211.6 | 8209.1 | 8199.2 | 8186.9 |
| 32.5° | 8736.5 | 8731.6 | 8753.7 | 8739.0 | 8699.5 | 8677.3 | 8657.6 | 8647.8 |
| 35° | 9291.0 | 9293.5 | 9320.6 | 9310.7 | 9266.4 | 9251.6 | 9217.1 | 9212.1 |
| 37.5° | 9897.3 | 9936.7 | 9983.5 | 9993.4 | 9956.4 | 9946.5 | 9909.6 | 9889.9 |
| 40° | 10609.5 | 10661.2 | 10732.7 | 10750.0 | 10710.5 | 10703.1 | 10651.4 | 10624.3 |
| 42.5° | 11368.5 | 11457.3 | 11546.0 | 11560.8 | 11521.3 | 11481.9 | 11432.6 | 11412.9 |
| 45° | 12216.3 | 12322.3 | 12438.1 | 12467.7 | 12408.5 | 12361.7 | 12297.6 | 12297.6 |
| 47.5° | 13167.6 | 13300.7 | 13431.3 | 13512.6 | 13458.4 | 13409.1 | 13332.7 | 13283.4 |
| 50° | 14291.4 | 14473.7 | 14643.8 | 14727.6 | 14641.3 | 14547.7 | 14414.6 | 14370.2 |
| 52.5° | 15701.0 | 15898.2 | 16046.1 | 16001.7 | 15868.6 | 15738.0 | 15592.6 | 15533.5 |
| 55° | 17500.1 | 17566.6 | 17566.6 | 17399.1 | 17132.9 | 16913.6 | 16684.4 | 16608.0 |
| 57.5° | 19750.1 | 19493.8 | 19099.5 | 18599.2 | 17970.8 | 17423.7 | 17054.0 | 16879.1 |
| 60° | 22394.5 | 21162.3 | 19769.9 | 18402.1 | 17278.3 | 16351.7 | 15802.1 | 15550.7 |
| 62.5° | 24156.6 | 20933.1 | 18143.3 | 15947.5 | 14330.8 | 13214.4 | 12455.4 | 12159.6 |
| 65° | 22576.9 | 17458.2 | 13722.1 | 11095.0 | 9332.9 | 8196.8 | 7445.1 | 7169.1 |
| 67.5° | 16536.5 | 10939.7 | 7307.1 | 5237.0 | 3837.2 | 3060.9 | 2752.8 | 2624.6 |
| 70° | 7422.9 | 3851.9 | 2360.9 | 1843.4 | 1589.6 | 1459.0 | 1402.3 | 1382.6 |
| 72.5° | 2237.7 | 1619.1 | 1365.3 | 1232.2 | 1131.2 | 1067.1 | 1020.3 | 1015.4 |
| 75° | 1350.5 | 1123.8 | 998.1 | 919.2 | 855.2 | 803.4 | 778.8 | 771.4 |
| 77.5° | 943.9 | 825.6 | 766.4 | 709.8 | 660.5 | 621.0 | 598.9 | 581.6 |
| 80° | 662.9 | 606.3 | 579.1 | 547.1 | 515.1 | 478.1 | 446.1 | 431.3 |
| 82.5° | 443.6 | 431.3 | 431.3 | 411.6 | 384.5 | 350.0 | 285.9 | 271.1 |
| 85° | 285.9 | 283.4 | 288.3 | 280.9 | 261.2 | 224.3 | 184.8 | 175.0 |
| 87.5° | 133.1 | 135.5 | 150.3 | 147.9 | 142.9 | 118.3 | 93.6 | 88.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)