

Scaled data based on original data using
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: 767437_350MP

Luminaire Tested: **OVX35PXX3EG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: 767437_350MP
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: OVX35PXX3EG
Description: 400 WATT MH TYPE III ROADWAY
Light Source: 350 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 33000 (1 lamp)
Luminaire Lumens: 25503.9 lumens
Efficiency: 77.3%
Efficacy: 64.2 lumens/watt
Luminous Opening: Point Source (0' x 0' x 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B3 - U3 - G4

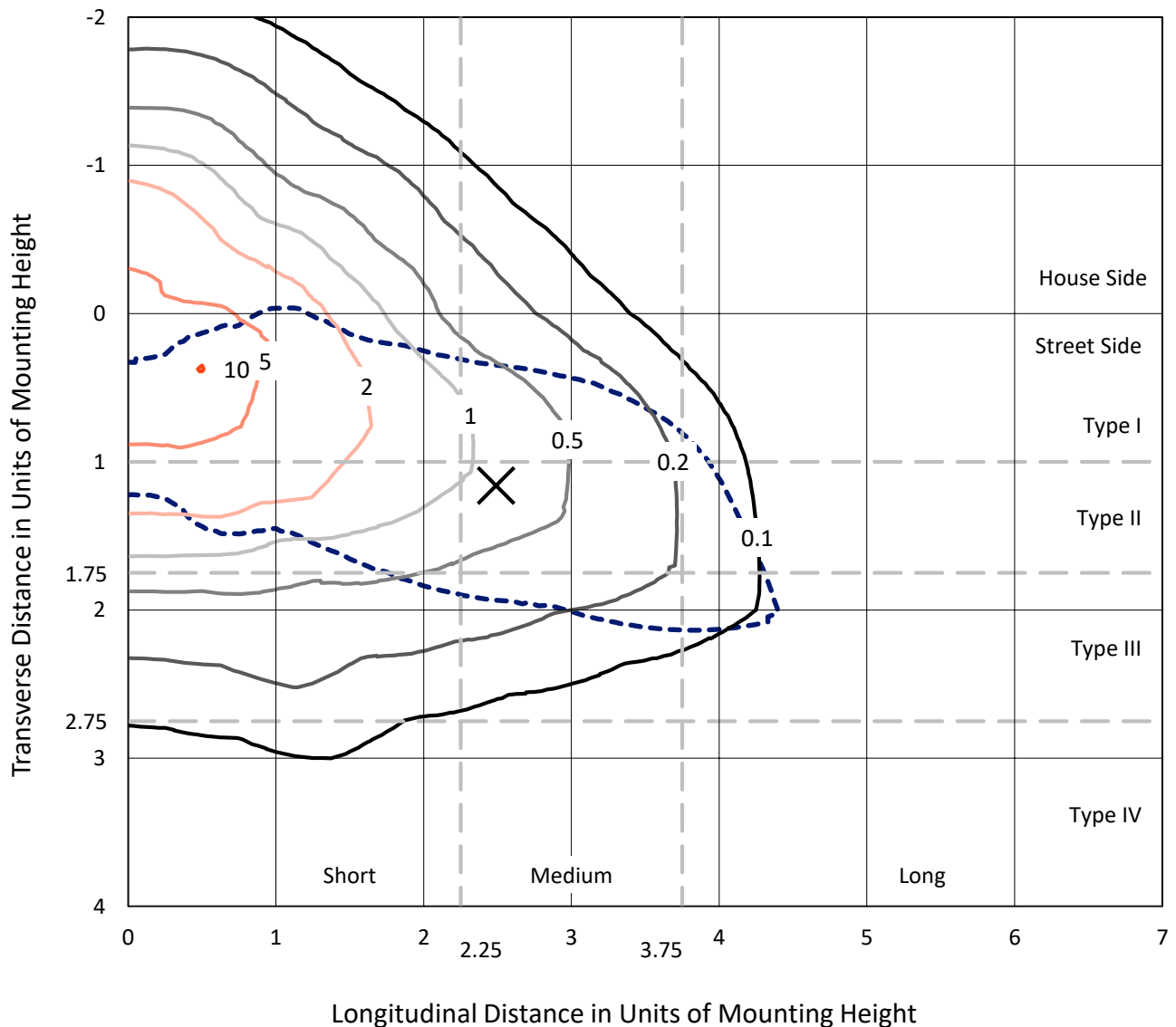
Input Watts (W): 397
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

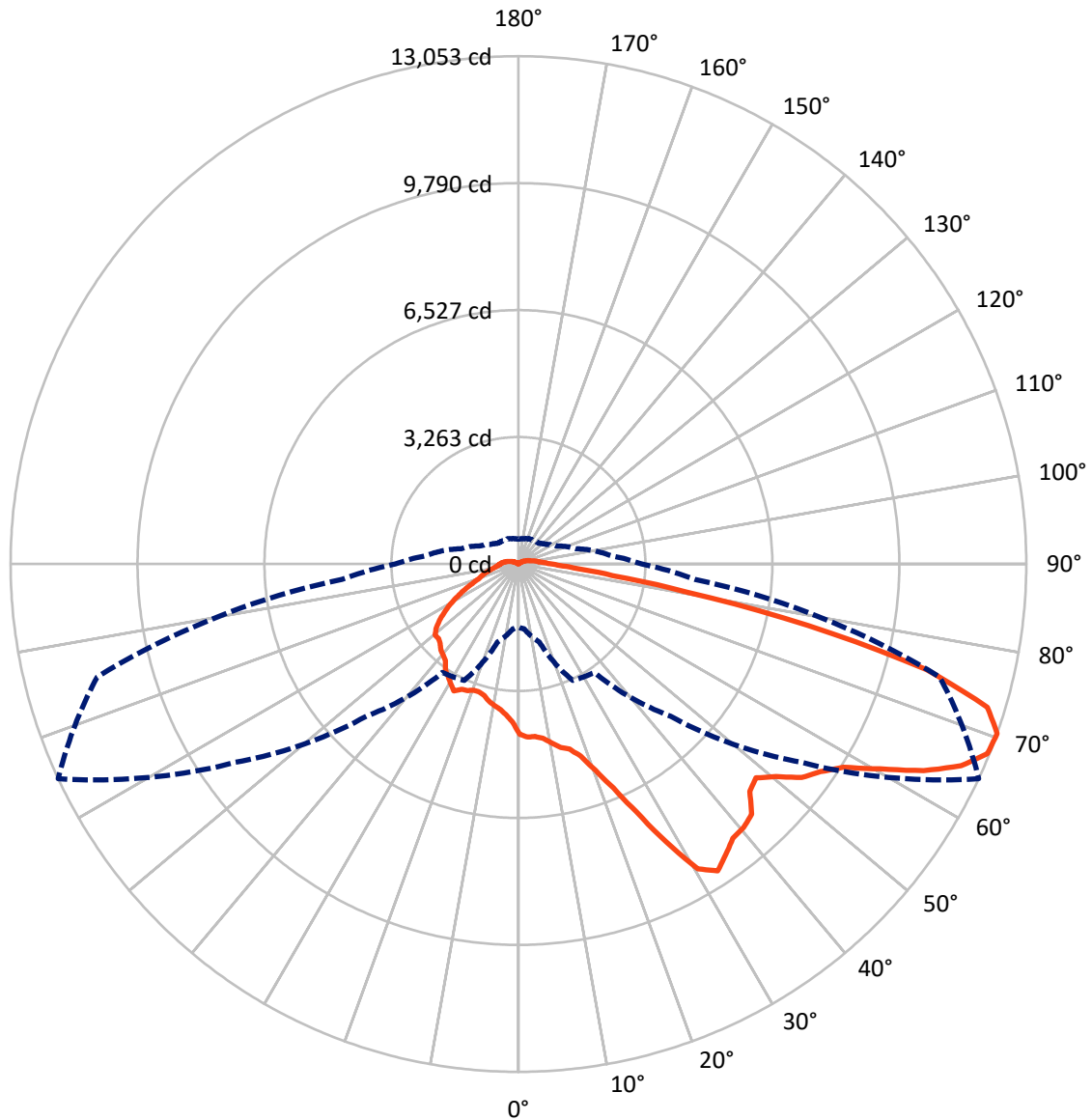
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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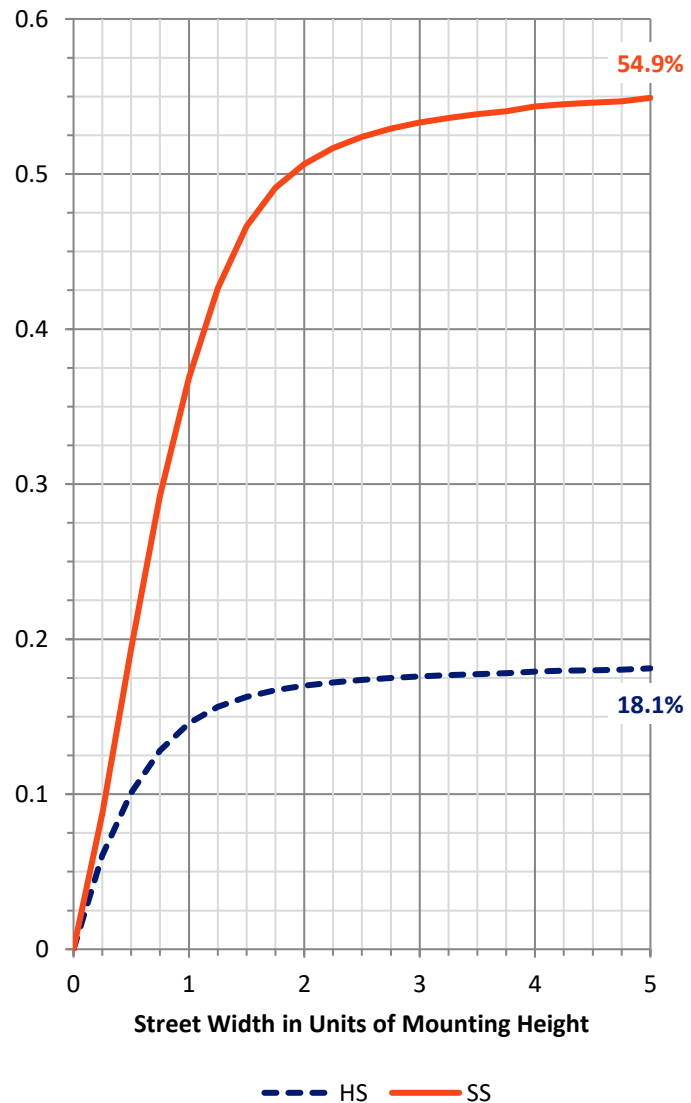
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|--------|----------|--------|---------|
| House Side | Lumens | 6137.6 | 322.6 | 6460.2 |
| | % Lamp | 18.6 | 1.0 | 19.6 |
| Street Side | Lumens | 18403.4 | 640.3 | 19043.7 |
| | % Lamp | 55.8 | 1.9 | 57.7 |
| Total | Lumens | 24541.0 | 962.8 | 25503.9 |
| | % Lamp | 74.4 | 2.9 | 77.3 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|---------|-----------|--------|
| 0°-10° | 412.9 | 1.6 | 1.3 |
| 10°-20° | 1286.0 | 5.0 | 3.9 |
| 20°-30° | 2498.8 | 9.8 | 7.6 |
| 30°-40° | 3828.5 | 15.0 | 11.6 |
| 40°-50° | 4451.7 | 17.5 | 13.5 |
| 50°-60° | 4524.5 | 17.7 | 13.7 |
| 60°-70° | 3986.4 | 15.6 | 12.1 |
| 70°-80° | 2622.6 | 10.3 | 7.9 |
| 80°-90° | 929.7 | 3.6 | 2.8 |
| 90°-100° | 478.0 | 1.9 | 1.4 |
| 100°-110° | 293.4 | 1.2 | 0.9 |
| 110°-120° | 149.7 | 0.6 | 0.5 |
| 120°-130° | 51.3 | 0.2 | 0.2 |
| 130°-140° | 8.1 | 0.0 | 0.0 |
| 140°-150° | 0.1 | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 | 0.0 |
| 0°-90° | 24541.0 | 96.2 | 74.4 |
| 0°-180° | 25503.9 | 100.0 | 77.3 |

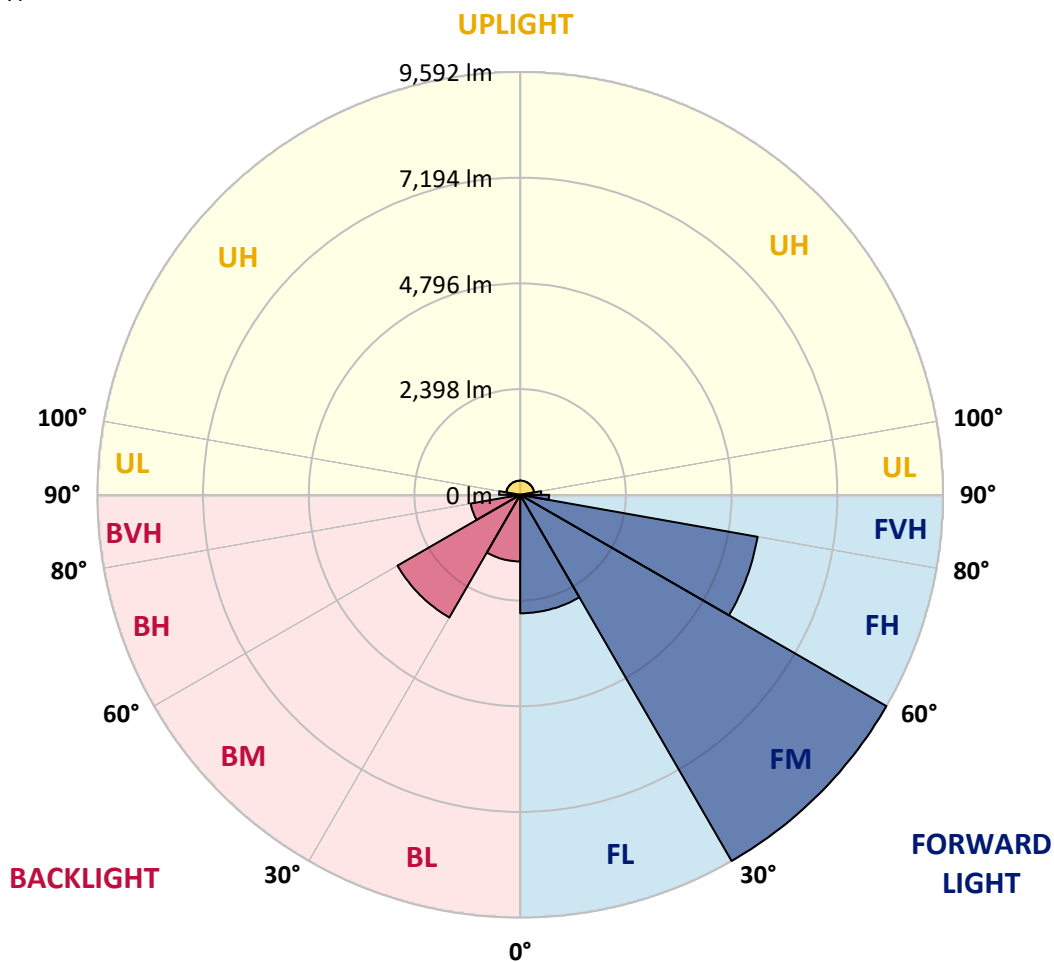


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Lamp | Zone Rating/Lumen Limit | | |
|---------------|-------------|--------|--------|-------------------------|--------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 2686.2 | 8.1 | | | |
| FM | (30°-60°) | 9591.8 | 29.1 | | | |
| FH | (60°-80°) | 5469.8 | 16.6 | | | G3/7500 |
| FVH | (80°-90°) | 655.7 | 2.0 | | | G4/750 |
| BL | (0°-30°) | 1511.5 | 4.6 | B3/2500 | | |
| BM | (30°-60°) | 3212.9 | 9.7 | B3/5000 | | |
| BH | (60°-80°) | 1139.2 | 3.5 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 274.0 | 0.8 | | | G3/500 |
| UL | (90°-100°) | 478.0 | 1.4 | | U3/500 | |
| UH | (100°-180°) | 322.6 | 1.0 | | U3/500 | |
| Trapped Light | | 7496.1 | 22.7 | | | |

BUG Rating: B3-U3-G4
 Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|--------|
| 0° | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 |
| 2.5° | 4661.2 | 4653.9 | 4646.6 | 4624.6 | 4587.0 | 4549.4 | 4489.8 | 4453.2 | 4408.2 | 4378.9 | 4348.7 |
| 5° | 4855.6 | 4847.3 | 4825.3 | 4780.4 | 4720.8 | 4646.6 | 4549.4 | 4453.2 | 4356.0 | 4289.1 | 4244.2 |
| 7.5° | 5063.7 | 5093.0 | 5049.0 | 4966.5 | 4870.2 | 4765.8 | 4646.6 | 4520.1 | 4363.3 | 4229.5 | 4177.2 |
| 10° | 5346.9 | 5368.9 | 5302.0 | 5182.8 | 5071.0 | 4944.5 | 4818.0 | 4676.8 | 4475.2 | 4252.4 | 4162.6 |
| 12.5° | 5674.2 | 5659.5 | 5585.2 | 5443.2 | 5287.3 | 5152.6 | 5018.8 | 4840.0 | 4579.7 | 4296.4 | 4177.2 |
| 15° | 6002.3 | 6002.3 | 5957.4 | 5771.3 | 5599.9 | 5443.2 | 5212.2 | 4937.2 | 4601.7 | 4311.1 | 4162.6 |
| 17.5° | 6314.9 | 6329.6 | 6403.8 | 6232.4 | 6031.7 | 5786.0 | 5480.8 | 5190.2 | 4810.7 | 4400.9 | 4222.2 |
| 20° | 6701.8 | 6776.0 | 6932.8 | 6798.9 | 6515.7 | 6307.6 | 6069.2 | 5659.5 | 5101.2 | 4557.7 | 4319.3 |
| 22.5° | 7163.8 | 7252.7 | 7543.2 | 7416.8 | 7118.8 | 6977.7 | 6820.9 | 6255.3 | 5466.1 | 4751.1 | 4467.8 |
| 25° | 7759.6 | 7871.4 | 8131.8 | 7893.4 | 7633.1 | 7766.9 | 7677.1 | 7066.6 | 5919.8 | 5026.1 | 4728.2 |
| 27.5° | 8503.9 | 8585.5 | 8570.8 | 8272.9 | 8124.4 | 8548.8 | 8742.2 | 8086.8 | 6530.3 | 5390.9 | 5041.7 |
| 30° | 9009.9 | 9099.8 | 8899.0 | 8675.3 | 8720.2 | 9233.6 | 9836.8 | 9092.4 | 7037.2 | 5771.3 | 5361.6 |
| 32.5° | 9054.8 | 9092.4 | 8913.7 | 9069.5 | 9248.2 | 9874.3 | 10708.5 | 9405.0 | 7260.0 | 6098.6 | 5659.5 |
| 35° | 8459.0 | 8466.3 | 8592.8 | 9412.3 | 9605.8 | 10306.1 | 10768.1 | 9174.0 | 7312.2 | 6136.2 | 5771.3 |
| 37.5° | 7788.9 | 7759.6 | 8086.8 | 9583.8 | 9926.6 | 10380.3 | 10380.3 | 8950.3 | 7386.5 | 6351.6 | 5897.8 |
| 40° | 7402.1 | 7357.2 | 7729.3 | 9442.6 | 9963.2 | 10127.3 | 9977.9 | 8906.3 | 7989.7 | 6895.2 | 6255.3 |
| 42.5° | 7431.4 | 7371.8 | 7766.9 | 9114.4 | 9724.9 | 10045.8 | 9658.0 | 8794.5 | 8429.7 | 7454.3 | 6642.2 |
| 45° | 7640.4 | 7513.9 | 7774.2 | 8511.2 | 9338.1 | 10053.1 | 9166.7 | 8332.5 | 8578.2 | 8027.2 | 6954.8 |
| 47.5° | 7402.1 | 7342.5 | 7535.9 | 7975.0 | 8839.4 | 9911.0 | 8668.0 | 8213.3 | 9188.7 | 8749.6 | 7230.7 |
| 50° | 6642.2 | 6634.8 | 6985.0 | 7640.4 | 8370.1 | 9598.4 | 8525.9 | 8585.5 | 9524.2 | 8094.2 | 6545.9 |
| 52.5° | 5957.4 | 6017.0 | 6486.3 | 7662.4 | 8131.8 | 9613.1 | 8370.1 | 9114.4 | 9255.6 | 7371.8 | 5964.8 |
| 55° | 5644.8 | 5696.2 | 6277.3 | 7826.5 | 8332.5 | 10053.1 | 8668.0 | 9419.7 | 9174.0 | 6701.8 | 5488.1 |
| 57.5° | 4929.8 | 4996.8 | 5555.0 | 7223.3 | 8005.2 | 10514.2 | 9434.3 | 9851.4 | 9114.4 | 6120.6 | 5123.2 |
| 60° | 3723.5 | 3738.2 | 4311.1 | 5726.4 | 6612.8 | 10551.8 | 10387.7 | 10685.6 | 9233.6 | 5867.6 | 5004.1 |
| 62.5° | 2770.2 | 2822.4 | 3291.8 | 4319.3 | 5220.4 | 9211.6 | 10976.2 | 11691.2 | 9777.2 | 5771.3 | 4653.9 |
| 65° | 2278.8 | 2308.2 | 2748.2 | 3633.7 | 4408.2 | 7692.7 | 11057.8 | 12502.4 | 10596.7 | 5004.1 | 3805.1 |
| 67.5° | 1891.1 | 1943.3 | 2375.1 | 3432.9 | 3872.0 | 6634.8 | 10320.8 | 13002.0 | 10909.2 | 4542.1 | 3299.1 |
| 70° | 1623.4 | 1675.7 | 2077.2 | 3299.1 | 3402.7 | 5533.0 | 8890.8 | 13053.3 | 11207.2 | 4549.4 | 3164.3 |
| 72.5° | 1444.7 | 1474.0 | 1780.2 | 2799.5 | 2799.5 | 4296.4 | 7223.3 | 12606.9 | 10439.9 | 4356.0 | 2956.2 |
| 75° | 1280.6 | 1295.2 | 1496.9 | 2025.8 | 2159.7 | 3172.6 | 5510.1 | 10835.0 | 8072.2 | 3700.6 | 2524.5 |
| 77.5° | 1117.4 | 1124.8 | 1287.9 | 1489.6 | 1697.7 | 2360.4 | 4014.1 | 7602.8 | 5071.0 | 2822.4 | 2025.8 |
| 80° | 998.2 | 1012.9 | 1184.3 | 1221.0 | 1399.8 | 1824.2 | 2725.2 | 4378.9 | 2956.2 | 2017.6 | 1578.5 |
| 82.5° | 879.1 | 908.4 | 1057.8 | 1049.6 | 1191.7 | 1437.3 | 1824.2 | 2442.9 | 1898.4 | 1392.4 | 1199.0 |
| 85° | 789.2 | 819.5 | 915.8 | 901.1 | 1012.9 | 1117.4 | 1265.9 | 1511.6 | 1370.4 | 960.7 | 908.4 |
| 87.5° | 729.7 | 737.0 | 796.6 | 789.2 | 848.8 | 893.8 | 960.7 | 1057.8 | 1027.6 | 707.7 | 692.1 |
| 90° | 640.8 | 655.4 | 684.8 | 692.1 | 722.3 | 737.0 | 774.6 | 796.6 | 789.2 | 573.8 | 558.2 |
| 95° | 536.2 | 536.2 | 543.6 | 565.6 | 565.6 | 565.6 | 558.2 | 543.6 | 514.2 | 439.1 | 424.4 |
| 105° | 386.8 | 395.1 | 402.4 | 409.8 | 395.1 | 379.5 | 357.5 | 312.6 | 290.6 | 290.6 | 283.2 |
| 115° | 267.7 | 267.7 | 253.0 | 253.0 | 238.3 | 208.1 | 178.8 | 178.8 | 178.8 | 178.8 | 178.8 |
| 125° | 88.9 | 88.9 | 74.2 | 59.6 | 37.6 | 44.9 | 59.6 | 74.2 | 74.2 | 74.2 | 74.2 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 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):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 | 4378.9 |
| 2.5° | 4334.0 | 4036.1 | 4073.7 | 4036.1 | 4207.5 | 4207.5 | 4169.9 | 4184.6 | 4169.9 | 4200.2 |
| 5° | 4207.5 | 3909.6 | 3902.2 | 3894.9 | 4058.1 | 4036.1 | 4036.1 | 4036.1 | 4028.8 | 4021.4 |
| 7.5° | 4110.3 | 3790.4 | 3767.5 | 3760.2 | 3924.2 | 3902.2 | 3931.6 | 3924.2 | 3938.9 | 3916.9 |
| 10° | 4103.0 | 3707.9 | 3693.2 | 3649.2 | 3827.1 | 3827.1 | 3827.1 | 3835.3 | 3850.0 | 3857.3 |
| 12.5° | 4081.0 | 3649.2 | 3611.7 | 3566.8 | 3730.8 | 3716.2 | 3707.9 | 3730.8 | 3730.8 | 3752.8 |
| 15° | 4005.8 | 3589.7 | 3492.5 | 3470.5 | 3626.3 | 3611.7 | 3611.7 | 3633.7 | 3633.7 | 3649.2 |
| 17.5° | 4043.4 | 3566.8 | 3440.2 | 3388.0 | 3544.8 | 3530.1 | 3530.1 | 3521.8 | 3574.1 | 3559.4 |
| 20° | 4140.6 | 3604.3 | 3440.2 | 3351.3 | 3462.2 | 3425.6 | 3395.3 | 3418.2 | 3470.5 | 3454.9 |
| 22.5° | 4259.8 | 3707.9 | 3507.2 | 3313.8 | 3373.3 | 3283.5 | 3261.5 | 3313.8 | 3343.1 | 3366.0 |
| 25° | 4445.8 | 3827.1 | 3537.4 | 3268.8 | 3261.5 | 3135.0 | 3142.3 | 3223.9 | 3261.5 | 3276.2 |
| 27.5° | 4706.2 | 3946.2 | 3656.6 | 3209.2 | 3149.7 | 3068.1 | 3113.0 | 3187.2 | 3254.2 | 3246.8 |
| 30° | 4966.5 | 4125.0 | 3530.1 | 3097.4 | 3068.1 | 3001.2 | 3090.1 | 3201.9 | 3283.5 | 3276.2 |
| 32.5° | 5182.8 | 4125.0 | 3410.9 | 2963.6 | 2978.2 | 2970.9 | 3060.8 | 3246.8 | 3373.3 | 3410.9 |
| 35° | 5220.4 | 4088.3 | 3306.4 | 2815.1 | 2882.0 | 2911.3 | 3030.5 | 3246.8 | 3440.2 | 3485.2 |
| 37.5° | 5413.8 | 4214.8 | 3113.0 | 2651.0 | 2748.2 | 2792.2 | 2956.2 | 3164.3 | 3388.0 | 3440.2 |
| 40° | 5562.3 | 4259.8 | 3037.8 | 2531.8 | 2598.8 | 2629.0 | 2799.5 | 2970.9 | 3179.9 | 3232.2 |
| 42.5° | 5629.2 | 3931.6 | 2978.2 | 2412.7 | 2398.0 | 2457.6 | 2620.8 | 2732.6 | 2874.7 | 2918.7 |
| 45° | 5621.9 | 3730.8 | 2867.3 | 2255.9 | 2189.0 | 2264.2 | 2427.3 | 2486.9 | 2561.2 | 2606.1 |
| 47.5° | 5585.2 | 3730.8 | 2807.8 | 2077.2 | 1980.9 | 2077.2 | 2248.6 | 2255.9 | 2271.5 | 2278.8 |
| 50° | 5190.2 | 3716.2 | 2815.1 | 1906.7 | 1780.2 | 1876.4 | 2069.8 | 2047.8 | 1988.2 | 1995.6 |
| 52.5° | 4803.3 | 3492.5 | 2680.3 | 1727.9 | 1608.8 | 1661.0 | 1869.1 | 1847.1 | 1735.2 | 1727.9 |
| 55° | 4489.8 | 3246.8 | 2486.9 | 1661.0 | 1422.7 | 1444.7 | 1623.4 | 1630.8 | 1504.2 | 1489.6 |
| 57.5° | 4334.0 | 2956.2 | 2264.2 | 1511.6 | 1265.9 | 1251.2 | 1370.4 | 1407.1 | 1303.5 | 1280.6 |
| 60° | 4311.1 | 2636.3 | 2025.8 | 1377.8 | 1132.1 | 1101.8 | 1161.4 | 1191.7 | 1132.1 | 1101.8 |
| 62.5° | 3998.5 | 2323.8 | 1764.6 | 1251.2 | 1012.9 | 982.7 | 998.2 | 1012.9 | 968.0 | 953.3 |
| 65° | 3194.6 | 1966.2 | 1526.2 | 1117.4 | 915.8 | 879.1 | 870.8 | 879.1 | 834.2 | 834.2 |
| 67.5° | 2651.0 | 1683.0 | 1287.9 | 998.2 | 834.2 | 789.2 | 781.9 | 767.2 | 729.7 | 729.7 |
| 70° | 2405.3 | 1526.2 | 1094.5 | 879.1 | 751.7 | 722.3 | 707.7 | 677.4 | 648.1 | 640.8 |
| 72.5° | 2159.7 | 1385.1 | 998.2 | 729.7 | 700.3 | 677.4 | 662.8 | 625.2 | 581.2 | 581.2 |
| 75° | 1764.6 | 1168.8 | 901.1 | 640.8 | 640.8 | 625.2 | 610.5 | 550.9 | 521.6 | 521.6 |
| 77.5° | 1414.4 | 930.4 | 781.9 | 581.2 | 573.8 | 565.6 | 536.2 | 491.3 | 454.7 | 446.4 |
| 80° | 1161.4 | 767.2 | 684.8 | 536.2 | 536.2 | 528.9 | 506.0 | 446.4 | 431.8 | 417.1 |
| 82.5° | 946.0 | 655.4 | 610.5 | 491.3 | 498.7 | 484.0 | 469.3 | 409.8 | 386.8 | 386.8 |
| 85° | 774.6 | 595.8 | 550.9 | 446.4 | 462.0 | 454.7 | 424.4 | 372.2 | 342.8 | 357.5 |
| 87.5° | 625.2 | 536.2 | 506.0 | 409.8 | 431.8 | 417.1 | 386.8 | 335.5 | 312.6 | 297.9 |
| 90° | 536.2 | 506.0 | 476.7 | 372.2 | 395.1 | 379.5 | 342.8 | 297.9 | 267.7 | 267.7 |
| 95° | 424.4 | 342.8 | 417.1 | 312.6 | 327.2 | 297.9 | 267.7 | 223.7 | 200.8 | 208.1 |
| 105° | 297.9 | 171.4 | 267.7 | 141.2 | 186.1 | 156.8 | 133.8 | 133.8 | 133.8 | 119.2 |
| 115° | 178.8 | 156.8 | 133.8 | 44.9 | 44.9 | 29.3 | 52.2 | 44.9 | 22.0 | 0.0 |
| 125° | 66.9 | 44.9 | 29.3 | 7.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|------|-----|------|------|------|------|------|------|------|------|------|
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)