

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: P234820

Luminaire Tested: **ARCH-M-AF48-60-D-U-T3-8027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234820
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29624)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-60-D-U-T3-8027-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 2700K, 405mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS
WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5096 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 63
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

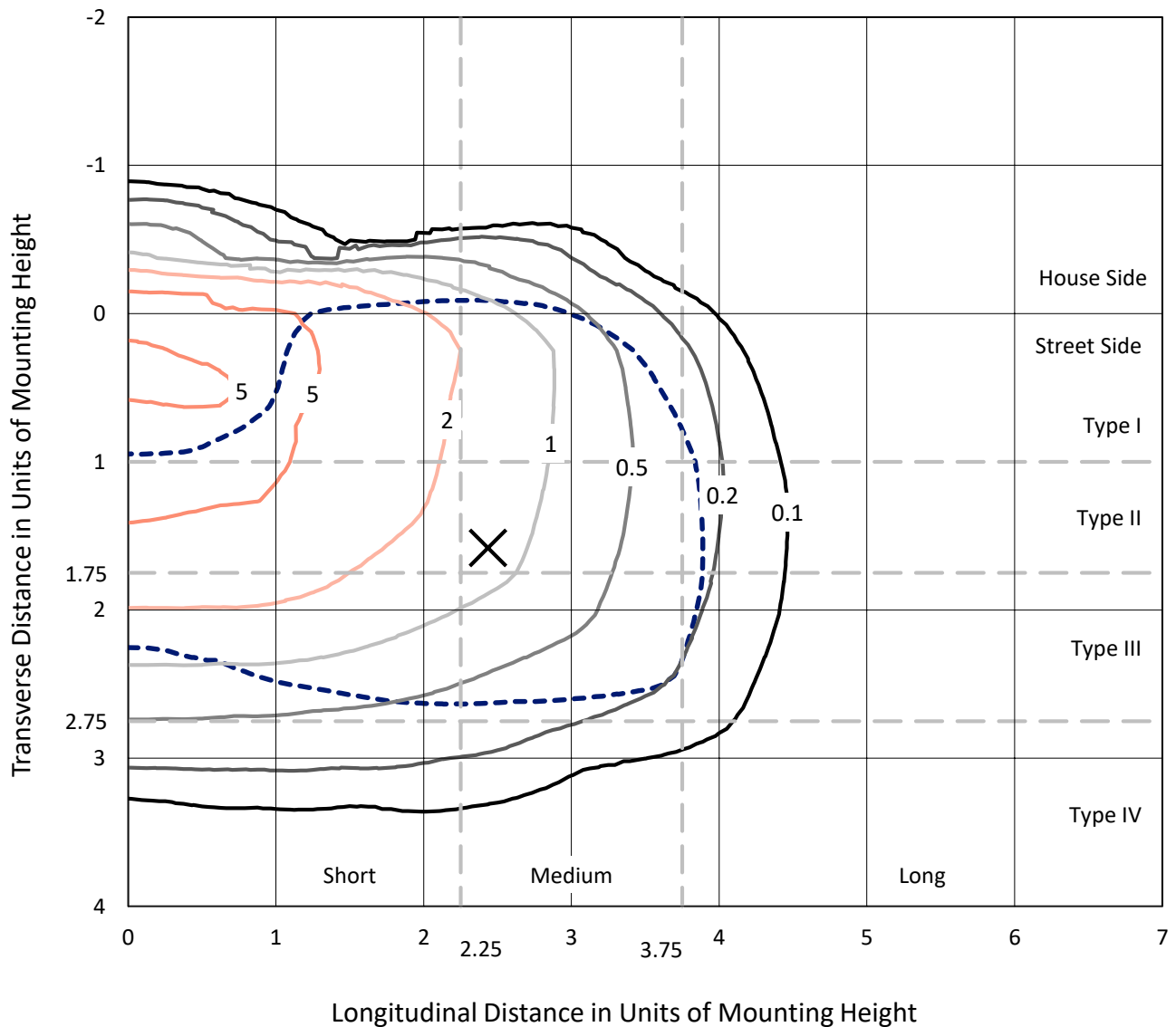


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

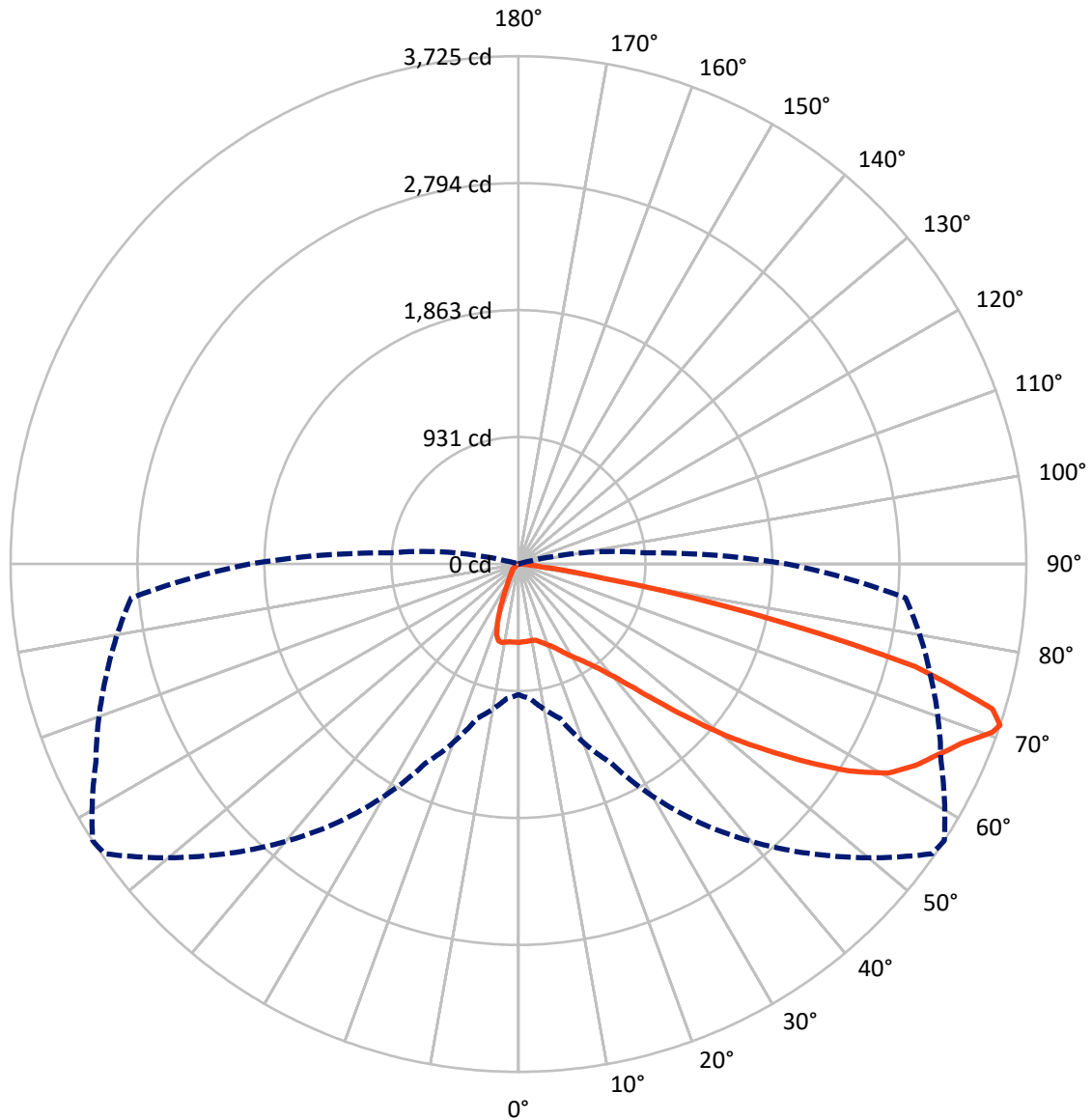


Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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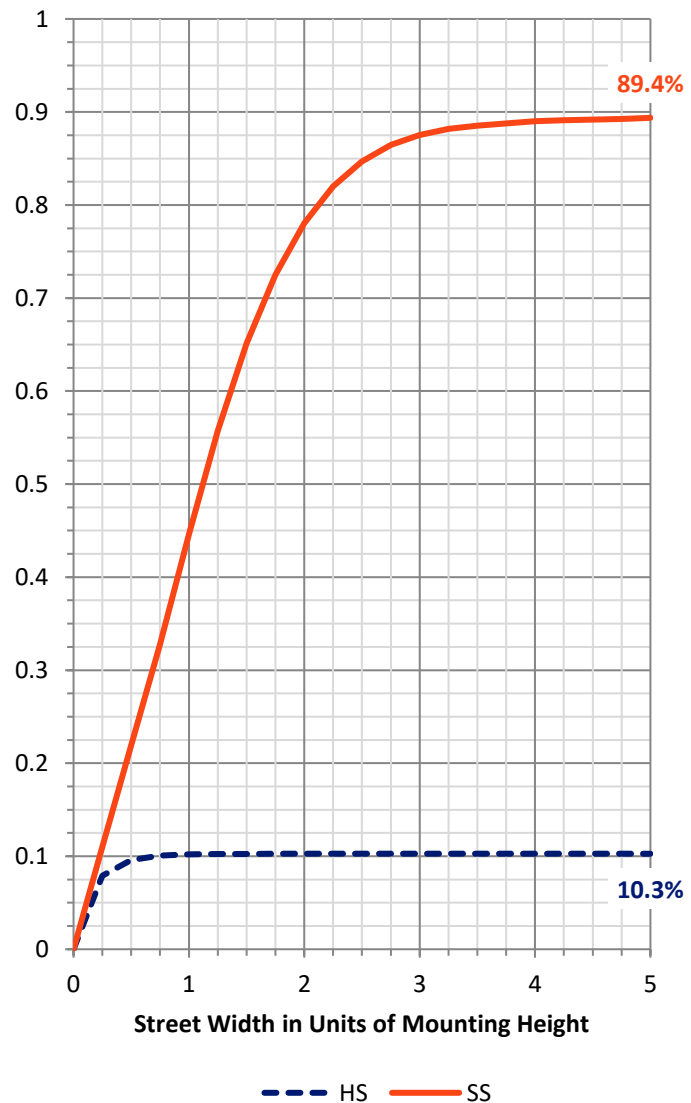
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 528.1 | 0.0 | 528.1 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 4567.9 | 0.0 | 4567.9 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 5096.0 | 0.0 | 5096.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 54.1 | 1.1 |
| 10°-20° | 144.6 | 2.8 |
| 20°-30° | 225.6 | 4.4 |
| 30°-40° | 381.3 | 7.5 |
| 40°-50° | 740.6 | 14.5 |
| 50°-60° | 1243.7 | 24.4 |
| 60°-70° | 1484.2 | 29.1 |
| 70°-80° | 782.2 | 15.3 |
| 80°-90° | 39.7 | 0.8 |
| 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° | 5096.0 | 100.0 |
| 0°-180° | 5096.0 | 100.0 |



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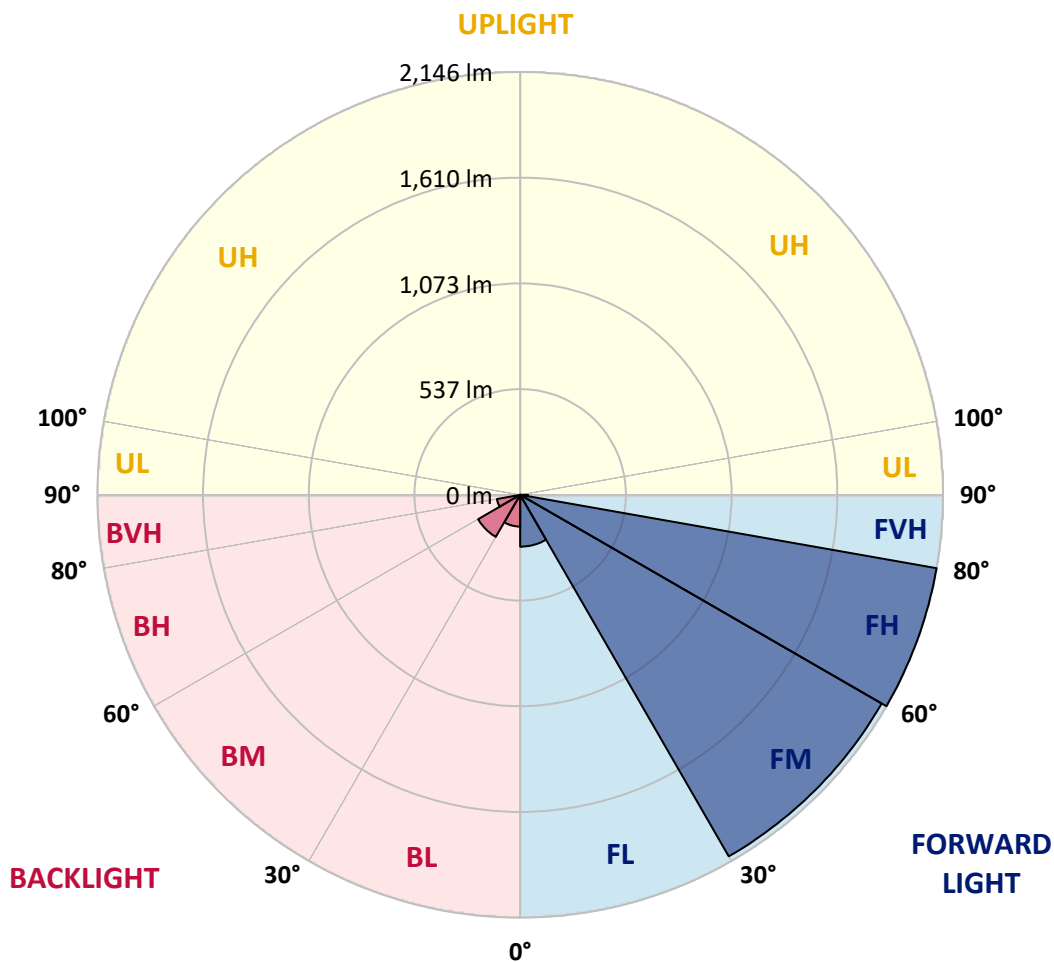
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 263.1 | 5.2 | | | |
| FM | (30°-60°) | 2119.0 | 41.6 | | | |
| FH | (60°-80°) | 2146.5 | 42.1 | | | G2/5000 |
| FVH | (80°-90°) | 39.4 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 161.2 | 3.2 | B1/500 | | |
| BM | (30°-60°) | 246.6 | 4.8 | B1/1000 | | |
| BH | (60°-80°) | 119.9 | 2.4 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 0.4 | 0.0 | | | 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 III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 |
| 2.5° | 567.6 | 567.6 | 567.6 | 568.8 | 570.0 | 570.0 | 572.4 | 571.2 | 571.2 | 571.2 | 573.6 |
| 5° | 552.2 | 553.4 | 554.6 | 556.9 | 561.7 | 565.2 | 571.2 | 571.2 | 572.4 | 574.7 | 575.9 |
| 7.5° | 530.8 | 532.0 | 535.6 | 540.3 | 549.8 | 558.1 | 567.6 | 570.0 | 573.6 | 579.5 | 581.9 |
| 10° | 517.7 | 520.1 | 524.9 | 530.8 | 541.5 | 552.2 | 564.1 | 567.6 | 578.3 | 589.0 | 594.9 |
| 12.5° | 514.2 | 515.4 | 520.1 | 529.6 | 542.7 | 555.7 | 571.2 | 574.7 | 590.2 | 606.8 | 616.3 |
| 15° | 520.1 | 521.3 | 523.7 | 534.4 | 549.8 | 566.4 | 586.6 | 591.4 | 610.4 | 629.4 | 641.2 |
| 17.5° | 530.8 | 530.8 | 533.2 | 542.7 | 559.3 | 578.3 | 604.4 | 611.5 | 632.9 | 654.3 | 667.4 |
| 20° | 537.9 | 537.9 | 541.5 | 551.0 | 570.0 | 594.9 | 625.8 | 635.3 | 659.0 | 682.8 | 694.7 |
| 22.5° | 545.1 | 546.2 | 549.8 | 560.5 | 581.9 | 616.3 | 651.9 | 661.4 | 688.7 | 713.7 | 725.5 |
| 25° | 565.2 | 564.1 | 565.2 | 574.7 | 599.7 | 642.4 | 687.5 | 699.4 | 727.9 | 755.2 | 761.2 |
| 27.5° | 621.0 | 618.7 | 603.2 | 597.3 | 616.3 | 669.7 | 732.7 | 744.5 | 777.8 | 805.1 | 805.1 |
| 30° | 749.3 | 744.5 | 706.5 | 657.9 | 642.4 | 694.7 | 775.4 | 792.0 | 834.8 | 858.5 | 851.4 |
| 32.5° | 912.0 | 901.3 | 852.6 | 769.5 | 707.7 | 727.9 | 820.5 | 839.5 | 894.2 | 914.4 | 898.9 |
| 35° | 1090.1 | 1088.9 | 1028.4 | 921.5 | 833.6 | 796.8 | 878.7 | 901.3 | 970.2 | 988.0 | 963.0 |
| 37.5° | 1278.9 | 1283.7 | 1243.3 | 1096.0 | 992.7 | 909.6 | 955.9 | 982.0 | 1066.4 | 1087.7 | 1064.0 |
| 40° | 1489.1 | 1487.9 | 1472.5 | 1297.9 | 1183.9 | 1069.9 | 1067.5 | 1091.3 | 1193.4 | 1226.7 | 1193.4 |
| 42.5° | 1755.1 | 1752.7 | 1696.9 | 1540.2 | 1415.5 | 1278.9 | 1230.2 | 1238.5 | 1352.5 | 1407.2 | 1358.5 |
| 45° | 2025.8 | 2009.2 | 1945.1 | 1809.7 | 1699.3 | 1537.8 | 1445.2 | 1445.2 | 1542.5 | 1617.3 | 1541.3 |
| 47.5° | 2176.6 | 2160.0 | 2133.9 | 2059.1 | 2025.8 | 1845.3 | 1708.8 | 1692.2 | 1768.1 | 1844.1 | 1737.3 |
| 50° | 2374.9 | 2374.9 | 2309.6 | 2281.1 | 2338.1 | 2211.1 | 1999.7 | 1983.1 | 2019.9 | 2080.5 | 1940.3 |
| 52.5° | 2531.7 | 2503.2 | 2456.9 | 2481.8 | 2644.5 | 2586.3 | 2290.6 | 2258.6 | 2287.1 | 2302.5 | 2117.3 |
| 55° | 2597.0 | 2569.7 | 2566.1 | 2657.6 | 2909.3 | 2828.6 | 2588.7 | 2560.2 | 2557.8 | 2481.8 | 2271.6 |
| 57.5° | 2610.1 | 2586.3 | 2631.4 | 2791.8 | 3167.0 | 3026.9 | 2885.6 | 2864.2 | 2797.7 | 2607.7 | 2429.6 |
| 60° | 2499.6 | 2511.5 | 2620.8 | 2865.4 | 3319.0 | 3199.1 | 3136.1 | 3113.6 | 2960.4 | 2714.6 | 2605.3 |
| 62.5° | 2272.8 | 2301.3 | 2505.6 | 2872.5 | 3263.2 | 3269.1 | 3275.1 | 3259.6 | 3086.2 | 2811.9 | 2782.3 |
| 65° | 2004.5 | 2012.8 | 2258.6 | 2773.9 | 3165.8 | 3247.7 | 3377.2 | 3376.0 | 3182.4 | 2921.2 | 2981.7 |
| 67.5° | 1651.8 | 1666.0 | 1878.6 | 2441.4 | 2971.1 | 3238.2 | 3511.4 | 3507.8 | 3291.7 | 3045.9 | 3100.5 |
| 70° | 1229.0 | 1246.8 | 1419.0 | 1898.8 | 2536.4 | 3119.5 | 3687.1 | 3689.5 | 3406.9 | 3140.9 | 3018.6 |
| 71° | 958.3 | 990.4 | 1170.9 | 1612.6 | 2314.4 | 2999.6 | 3703.7 | 3725.1 | 3419.9 | 3127.8 | 2849.9 |
| 72.5° | 470.2 | 508.2 | 735.0 | 1135.2 | 1904.7 | 2731.2 | 3594.5 | 3636.0 | 3338.0 | 2965.1 | 2436.7 |
| 75° | 122.3 | 129.4 | 219.7 | 464.3 | 1021.2 | 1809.7 | 2898.6 | 3004.3 | 2728.8 | 2257.4 | 1489.1 |
| 77.5° | 77.2 | 79.6 | 103.3 | 180.5 | 382.4 | 687.5 | 1702.8 | 1755.1 | 1559.2 | 1143.5 | 524.9 |
| 80° | 54.6 | 55.8 | 65.3 | 116.4 | 223.2 | 200.7 | 612.7 | 635.3 | 564.1 | 302.8 | 93.8 |
| 82.5° | 33.2 | 33.2 | 47.5 | 74.8 | 137.7 | 109.2 | 161.5 | 172.2 | 152.0 | 84.3 | 30.9 |
| 85° | 19.0 | 20.2 | 29.7 | 51.1 | 65.3 | 53.4 | 60.6 | 64.1 | 65.3 | 55.8 | 13.1 |
| 87.5° | 15.4 | 16.6 | 26.1 | 42.7 | 35.6 | 26.1 | 26.1 | 27.3 | 28.5 | 33.2 | 5.9 |
| 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° | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 |
| 2.5° | 573.6 | 573.6 | 574.7 | 573.6 | 573.6 | 573.6 | 574.7 | 574.7 | 574.7 | 577.1 | 578.3 |
| 5° | 575.9 | 575.9 | 575.9 | 574.7 | 573.6 | 573.6 | 575.9 | 577.1 | 577.1 | 580.7 | 580.7 |
| 7.5° | 581.9 | 581.9 | 579.5 | 577.1 | 574.7 | 571.2 | 572.4 | 573.6 | 572.4 | 573.6 | 573.6 |
| 10° | 594.9 | 594.9 | 591.4 | 586.6 | 579.5 | 568.8 | 554.6 | 536.7 | 520.1 | 514.2 | 511.8 |
| 12.5° | 616.3 | 615.1 | 608.0 | 599.7 | 584.2 | 547.4 | 494.0 | 431.1 | 378.8 | 364.6 | 359.8 |
| 15° | 640.0 | 637.7 | 629.4 | 615.1 | 573.6 | 476.2 | 364.6 | 283.8 | 233.9 | 222.1 | 219.7 |
| 17.5° | 665.0 | 661.4 | 649.5 | 621.0 | 524.9 | 353.9 | 235.1 | 178.1 | 150.8 | 148.4 | 149.6 |
| 20° | 691.1 | 686.4 | 669.7 | 609.2 | 423.9 | 236.3 | 152.0 | 137.7 | 135.4 | 135.4 | 136.6 |
| 22.5° | 720.8 | 714.9 | 692.3 | 566.4 | 308.7 | 156.7 | 130.6 | 129.4 | 128.2 | 127.1 | 127.1 |
| 25° | 755.2 | 748.1 | 713.7 | 489.2 | 212.6 | 128.2 | 124.7 | 121.1 | 118.7 | 116.4 | 115.2 |
| 27.5° | 796.8 | 787.3 | 730.3 | 394.2 | 146.1 | 119.9 | 117.6 | 111.6 | 106.9 | 102.1 | 102.1 |
| 30° | 838.4 | 826.5 | 725.5 | 296.9 | 118.7 | 111.6 | 106.9 | 99.7 | 92.6 | 87.9 | 86.7 |
| 32.5° | 882.3 | 870.4 | 694.7 | 199.5 | 108.1 | 102.1 | 96.2 | 85.5 | 77.2 | 71.2 | 70.1 |
| 35° | 947.6 | 938.1 | 634.1 | 131.8 | 97.4 | 90.2 | 81.9 | 71.2 | 60.6 | 54.6 | 53.4 |
| 37.5° | 1045.0 | 1033.1 | 559.3 | 100.9 | 85.5 | 74.8 | 67.7 | 55.8 | 45.1 | 39.2 | 38.0 |
| 40° | 1175.6 | 1140.0 | 470.2 | 89.1 | 74.8 | 61.7 | 52.2 | 40.4 | 32.1 | 28.5 | 28.5 |
| 42.5° | 1327.6 | 1243.3 | 374.1 | 80.7 | 66.5 | 51.1 | 38.0 | 27.3 | 22.6 | 21.4 | 21.4 |
| 45° | 1489.1 | 1339.5 | 277.9 | 74.8 | 58.2 | 40.4 | 27.3 | 19.0 | 16.6 | 15.4 | 15.4 |
| 47.5° | 1655.3 | 1417.8 | 193.6 | 67.7 | 48.7 | 30.9 | 19.0 | 14.2 | 11.9 | 10.7 | 10.7 |
| 50° | 1810.9 | 1468.9 | 136.6 | 60.6 | 41.6 | 22.6 | 14.2 | 10.7 | 8.3 | 8.3 | 8.3 |
| 52.5° | 1919.0 | 1464.2 | 98.6 | 52.2 | 32.1 | 15.4 | 9.5 | 7.1 | 7.1 | 7.1 | 7.1 |
| 55° | 2014.0 | 1446.3 | 77.2 | 45.1 | 24.9 | 10.7 | 7.1 | 5.9 | 5.9 | 4.7 | 4.7 |
| 57.5° | 2094.7 | 1417.8 | 65.3 | 36.8 | 17.8 | 8.3 | 4.7 | 4.7 | 3.6 | 3.6 | 3.6 |
| 60° | 2163.6 | 1382.2 | 54.6 | 30.9 | 11.9 | 5.9 | 3.6 | 2.4 | 2.4 | 1.2 | 2.4 |
| 62.5° | 2257.4 | 1359.7 | 47.5 | 23.7 | 8.3 | 3.6 | 2.4 | 1.2 | 1.2 | 0.0 | 0.0 |
| 65° | 2326.3 | 1316.9 | 40.4 | 16.6 | 4.7 | 2.4 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 |
| 67.5° | 2328.6 | 1239.7 | 29.7 | 9.5 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 2141.0 | 1056.9 | 19.0 | 4.7 | 2.4 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 71° | 1968.8 | 935.7 | 15.4 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1622.1 | 687.5 | 11.9 | 3.6 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 894.2 | 249.4 | 5.9 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 286.2 | 76.0 | 3.6 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 48.7 | 11.9 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 16.6 | 4.7 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 4.7 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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)