

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: LUMARK

Report Number: P144525

Luminaire Tested: **LDRL-RW-F01-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144525
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33700)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-RW-F01-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (7) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2479.6 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

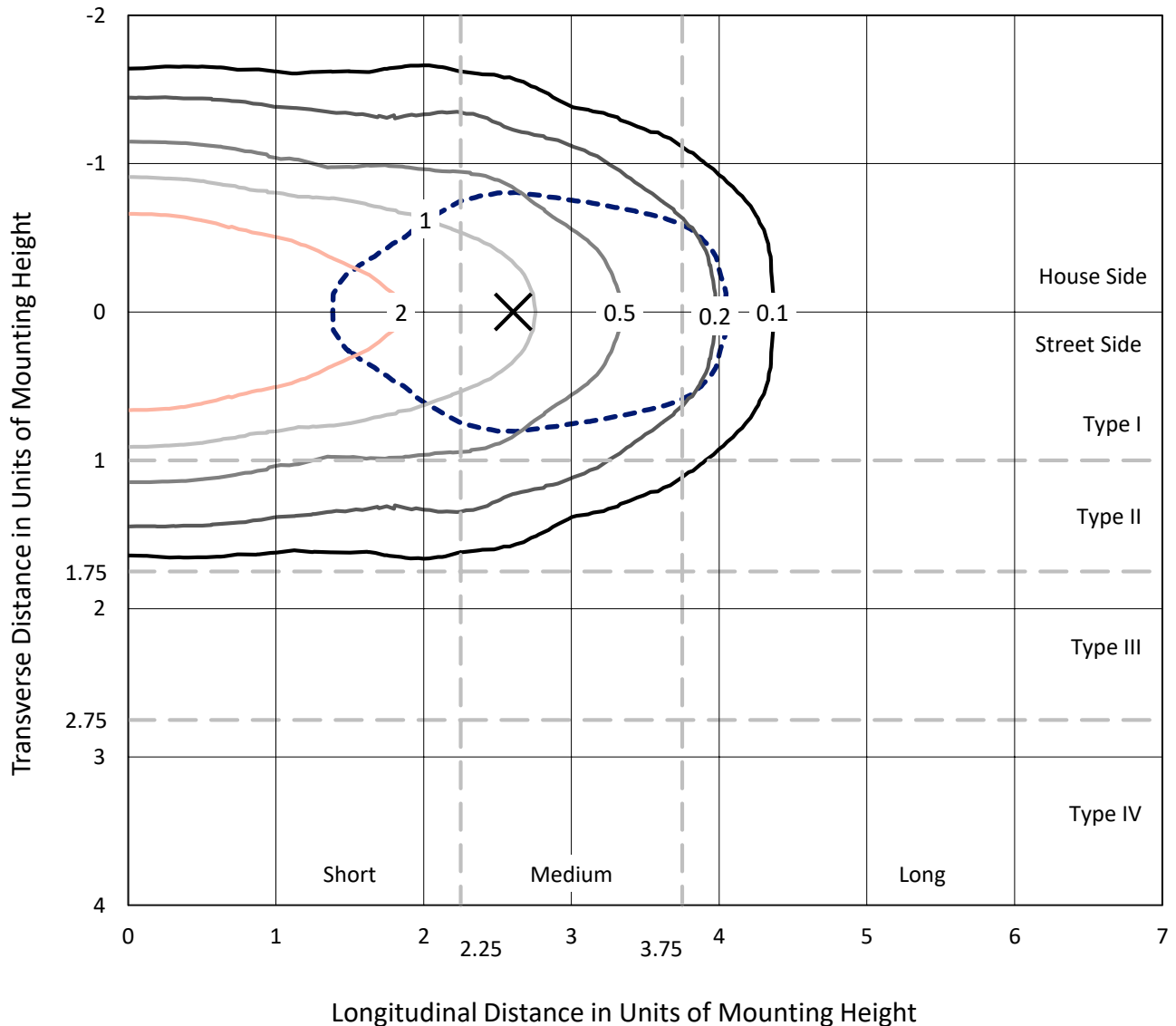
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P144525
 CATALOG NUMBER: LDRL-RW-F01-E

Iso-Footcandle Lines of Horizontal Illumination

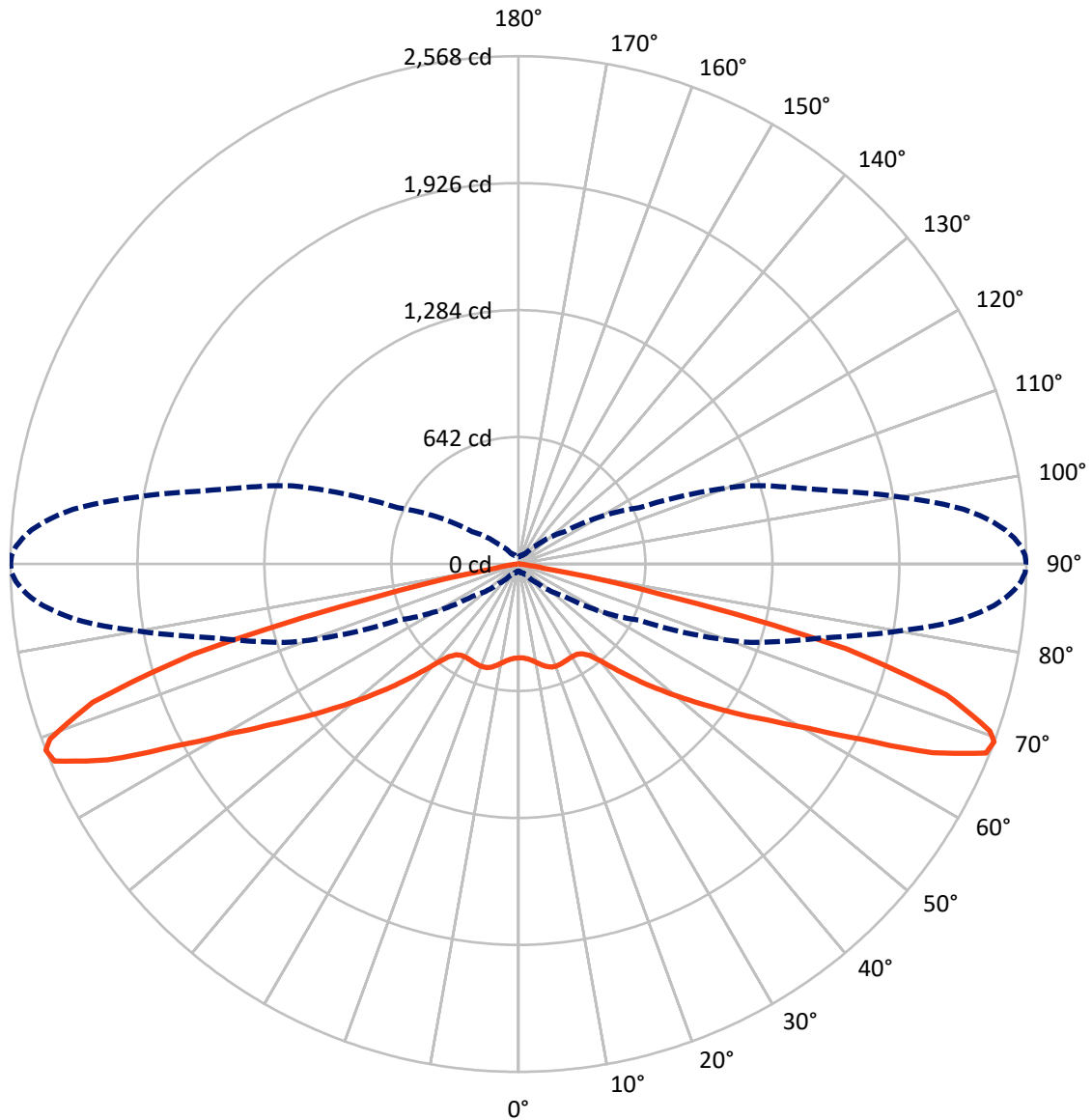
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.9 fc
 Type I - Short - Full Cutoff

REPORT NUMBER: P144525
CATALOG NUMBER: LDRL-RW-F01-E

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P144525

CATALOG NUMBER: LDRL-RW-F01-E

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1239.8 | 0.0 | 1239.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 1239.8 | 0.0 | 1239.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 2479.6 | 0.0 | 2479.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 46.5 | 1.9 |
| 10°-20° | 146.3 | 5.9 |
| 20°-30° | 237.0 | 9.6 |
| 30°-40° | 295.2 | 11.9 |
| 40°-50° | 367.5 | 14.8 |
| 50°-60° | 450.9 | 18.2 |
| 60°-70° | 556.1 | 22.4 |
| 70°-80° | 345.7 | 13.9 |
| 80°-90° | 34.3 | 1.4 |
| 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° | 2479.6 | 100.0 |
| 0°-180° | 2479.6 | 100.0 |



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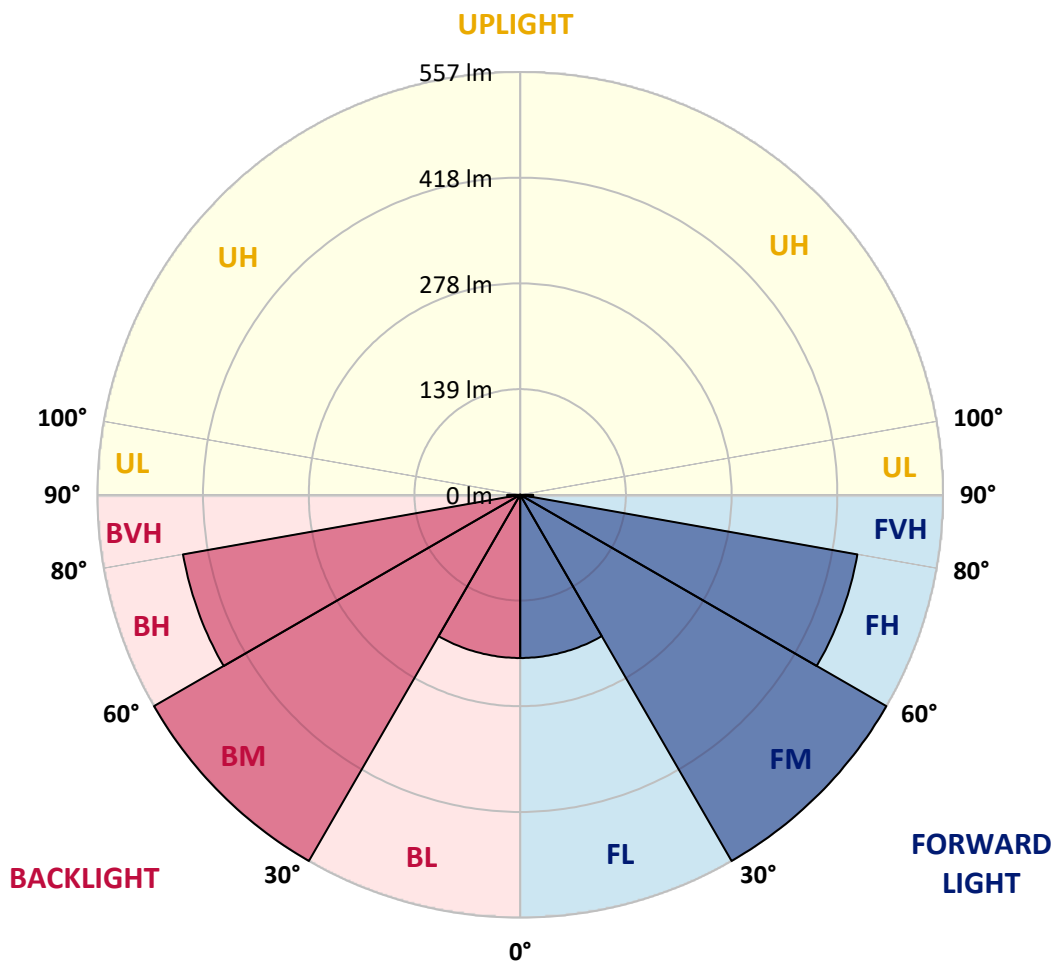
CATALOG NUMBER: LDRL-RW-F01-E

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 214.9 | 8.7 | | | |
| FM | (30°-60°) | 556.8 | 22.5 | | | |
| FH | (60°-80°) | 450.9 | 18.2 | | | G0/660 |
| FVH | (80°-90°) | 17.2 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 214.9 | 8.7 | B1/500 | | |
| BM | (30°-60°) | 556.8 | 22.5 | B1/1000 | | |
| BH | (60°-80°) | 450.9 | 18.2 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 17.2 | 0.7 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type I Short





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 CATALOG NUMBER: LDRL-RW-F01-E

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 67° | 68° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 |
| 2.5° | 476.1 | 475.6 | 476.5 | 477.4 | 477.1 | 477.2 | 476.9 | 476.5 | 476.5 | 476.6 | 476.6 |
| 5° | 479.8 | 479.3 | 480.2 | 480.8 | 481.1 | 481.7 | 481.8 | 481.6 | 481.8 | 481.9 | 482.0 |
| 7.5° | 484.2 | 483.8 | 484.9 | 485.9 | 487.8 | 488.8 | 489.8 | 490.8 | 490.8 | 490.9 | 491.0 |
| 10° | 488.4 | 488.2 | 490.0 | 492.1 | 495.2 | 497.4 | 500.2 | 503.0 | 503.2 | 503.4 | 503.6 |
| 12.5° | 491.2 | 491.2 | 493.8 | 497.7 | 503.0 | 507.7 | 512.5 | 517.1 | 517.5 | 518.0 | 518.4 |
| 15° | 491.0 | 491.4 | 495.4 | 502.5 | 511.6 | 519.9 | 525.8 | 530.8 | 531.3 | 531.7 | 532.1 |
| 17.5° | 487.6 | 487.7 | 493.5 | 504.8 | 519.0 | 531.4 | 539.0 | 541.8 | 541.9 | 542.0 | 542.2 |
| 20° | 478.2 | 478.8 | 487.0 | 503.4 | 524.8 | 541.8 | 549.1 | 547.9 | 547.7 | 547.4 | 547.2 |
| 22.5° | 461.8 | 462.7 | 473.6 | 495.6 | 525.8 | 548.7 | 556.0 | 550.8 | 550.1 | 549.3 | 548.5 |
| 25° | 439.3 | 440.7 | 452.5 | 480.7 | 518.6 | 550.6 | 560.6 | 552.2 | 551.0 | 549.8 | 548.6 |
| 27.5° | 413.0 | 413.8 | 427.7 | 457.4 | 501.6 | 544.0 | 562.7 | 555.2 | 553.6 | 552.0 | 550.5 |
| 30° | 382.8 | 384.5 | 399.0 | 430.0 | 477.8 | 528.6 | 561.8 | 560.8 | 559.1 | 557.3 | 555.6 |
| 32.5° | 352.6 | 354.2 | 368.4 | 401.8 | 450.4 | 507.3 | 557.7 | 569.3 | 567.8 | 566.4 | 565.0 |
| 35° | 322.3 | 324.1 | 338.8 | 374.6 | 423.0 | 483.0 | 551.2 | 581.4 | 580.8 | 580.1 | 579.5 |
| 37.5° | 295.6 | 296.8 | 311.2 | 348.4 | 399.1 | 460.8 | 542.7 | 597.7 | 599.1 | 600.5 | 601.9 |
| 40° | 268.4 | 269.6 | 284.7 | 322.9 | 377.0 | 441.8 | 534.8 | 618.2 | 622.0 | 625.9 | 629.8 |
| 42.5° | 242.4 | 243.4 | 258.0 | 296.0 | 352.5 | 425.4 | 530.2 | 642.9 | 650.4 | 657.8 | 665.2 |
| 45° | 215.6 | 216.3 | 230.0 | 267.0 | 324.5 | 406.2 | 528.9 | 670.8 | 681.5 | 692.2 | 703.0 |
| 47.5° | 189.3 | 190.9 | 205.0 | 240.2 | 292.6 | 378.8 | 527.1 | 701.5 | 715.8 | 730.0 | 744.2 |
| 50° | 164.1 | 165.9 | 180.4 | 213.8 | 261.6 | 346.3 | 517.8 | 736.4 | 753.8 | 771.2 | 788.6 |
| 52.5° | 138.4 | 140.2 | 154.7 | 186.6 | 233.0 | 309.6 | 492.1 | 773.1 | 793.8 | 814.4 | 835.0 |
| 55° | 111.0 | 111.7 | 126.6 | 158.6 | 204.4 | 279.0 | 451.0 | 806.7 | 831.7 | 856.7 | 881.7 |
| 57.5° | 80.8 | 83.0 | 97.7 | 127.4 | 175.2 | 251.8 | 398.9 | 823.8 | 855.1 | 886.3 | 917.5 |
| 60° | 58.3 | 59.8 | 72.8 | 96.0 | 142.0 | 225.2 | 352.6 | 811.4 | 853.0 | 894.7 | 936.4 |
| 62.5° | 46.1 | 47.8 | 57.7 | 72.4 | 109.8 | 195.8 | 322.4 | 776.9 | 835.4 | 893.8 | 952.3 |
| 65° | 40.8 | 42.2 | 51.5 | 58.8 | 84.1 | 165.6 | 303.4 | 742.8 | 821.7 | 900.6 | 979.5 |
| 67.5° | 37.2 | 38.8 | 46.9 | 51.8 | 69.4 | 146.3 | 294.4 | 717.0 | 808.2 | 899.3 | 990.4 |
| 69° | 35.6 | 37.0 | 44.4 | 49.0 | 65.4 | 139.7 | 284.7 | 673.4 | 763.8 | 854.2 | 944.5 |
| 70° | 34.6 | 36.0 | 42.6 | 47.3 | 63.9 | 134.2 | 270.4 | 621.6 | 708.8 | 796.0 | 883.1 |
| 72.5° | 32.1 | 33.0 | 38.6 | 42.9 | 58.4 | 107.2 | 204.0 | 438.6 | 512.5 | 586.4 | 660.3 |
| 75° | 28.5 | 29.5 | 34.5 | 38.5 | 44.6 | 64.4 | 127.7 | 254.6 | 305.2 | 355.9 | 406.5 |
| 77.5° | 24.4 | 25.6 | 29.7 | 36.0 | 35.9 | 42.0 | 77.5 | 146.2 | 170.8 | 195.4 | 220.0 |
| 80° | 21.0 | 22.0 | 25.6 | 35.6 | 30.0 | 33.2 | 57.8 | 109.0 | 119.0 | 128.9 | 138.8 |
| 82.5° | 16.4 | 17.2 | 21.5 | 29.4 | 24.0 | 25.2 | 44.0 | 99.3 | 106.0 | 112.7 | 119.5 |
| 85° | 10.3 | 10.6 | 15.7 | 20.3 | 17.0 | 15.3 | 28.3 | 76.4 | 81.3 | 86.2 | 91.1 |
| 87.5° | 4.2 | 5.0 | 7.6 | 7.2 | 7.4 | 6.1 | 9.2 | 27.6 | 30.1 | 32.6 | 35.1 |
| 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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 CATALOG NUMBER: LDRL-RW-F01-E

CANDELA DISTRIBUTION (continued):

| | 69° | 70° | 71° | 72° | 73° | 74° | 75° | 76° | 77° | 78° | 79° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 |
| 2.5° | 476.6 | 476.6 | 476.5 | 476.2 | 476.5 | 476.2 | 476.3 | 476.6 | 476.4 | 476.5 | 476.3 |
| 5° | 482.1 | 482.2 | 482.2 | 481.7 | 482.0 | 482.0 | 482.1 | 482.0 | 482.0 | 482.2 | 481.8 |
| 7.5° | 491.1 | 491.2 | 491.4 | 491.7 | 491.5 | 491.6 | 491.8 | 491.6 | 491.4 | 491.9 | 491.5 |
| 10° | 503.8 | 504.0 | 504.0 | 504.8 | 504.4 | 504.7 | 505.4 | 505.5 | 505.1 | 505.6 | 505.5 |
| 12.5° | 518.8 | 519.2 | 519.2 | 519.1 | 519.4 | 519.6 | 520.4 | 520.6 | 520.8 | 521.7 | 521.4 |
| 15° | 532.5 | 532.9 | 533.2 | 533.4 | 534.0 | 534.1 | 534.6 | 535.0 | 535.2 | 535.5 | 535.7 |
| 17.5° | 542.3 | 542.4 | 543.0 | 542.7 | 543.6 | 543.4 | 544.0 | 544.2 | 544.4 | 544.8 | 545.1 |
| 20° | 546.9 | 546.6 | 546.8 | 546.5 | 546.5 | 546.7 | 546.8 | 547.0 | 546.9 | 547.3 | 547.6 |
| 22.5° | 547.7 | 547.0 | 546.4 | 545.8 | 545.6 | 545.0 | 545.1 | 545.3 | 544.6 | 545.1 | 545.6 |
| 25° | 547.3 | 546.1 | 545.2 | 544.2 | 543.3 | 542.4 | 542.0 | 541.8 | 541.4 | 541.4 | 541.8 |
| 27.5° | 549.0 | 547.4 | 546.0 | 544.4 | 543.2 | 542.1 | 541.0 | 540.2 | 539.3 | 539.2 | 539.2 |
| 30° | 553.8 | 552.1 | 550.6 | 548.6 | 546.8 | 545.2 | 543.8 | 542.7 | 541.0 | 540.4 | 539.6 |
| 32.5° | 563.5 | 562.0 | 560.0 | 558.2 | 556.0 | 554.2 | 552.2 | 550.3 | 548.6 | 546.9 | 546.2 |
| 35° | 578.9 | 578.2 | 577.2 | 575.9 | 573.8 | 571.6 | 569.8 | 567.8 | 565.7 | 563.2 | 562.6 |
| 37.5° | 603.3 | 604.8 | 604.1 | 603.2 | 602.6 | 601.8 | 599.6 | 598.3 | 596.8 | 594.9 | 594.4 |
| 40° | 633.7 | 637.6 | 641.4 | 644.0 | 643.1 | 646.2 | 646.6 | 646.9 | 645.6 | 647.3 | 647.6 |
| 42.5° | 672.7 | 680.2 | 687.2 | 692.3 | 698.2 | 702.7 | 708.4 | 711.0 | 715.6 | 720.5 | 723.4 |
| 45° | 713.7 | 724.4 | 734.6 | 745.0 | 755.4 | 766.6 | 777.6 | 785.4 | 796.7 | 805.1 | 810.4 |
| 47.5° | 758.5 | 772.8 | 784.8 | 800.5 | 815.4 | 828.8 | 848.0 | 863.5 | 877.2 | 890.4 | 904.2 |
| 50° | 805.9 | 823.3 | 838.2 | 857.4 | 875.4 | 896.4 | 919.0 | 938.6 | 960.2 | 981.2 | 999.7 |
| 52.5° | 855.7 | 876.4 | 896.4 | 916.1 | 938.2 | 961.0 | 985.4 | 1013.8 | 1039.6 | 1071.1 | 1093.6 |
| 55° | 906.7 | 931.8 | 953.2 | 973.7 | 997.0 | 1022.4 | 1051.4 | 1085.0 | 1117.9 | 1152.4 | 1186.5 |
| 57.5° | 948.8 | 980.0 | 1003.4 | 1027.4 | 1052.6 | 1077.6 | 1113.6 | 1148.0 | 1189.8 | 1232.1 | 1274.8 |
| 60° | 978.0 | 1019.7 | 1048.0 | 1078.4 | 1107.5 | 1137.9 | 1176.8 | 1220.3 | 1272.6 | 1323.8 | 1381.8 |
| 62.5° | 1010.7 | 1069.2 | 1108.9 | 1149.4 | 1184.9 | 1221.4 | 1273.4 | 1323.5 | 1390.6 | 1449.5 | 1522.7 |
| 65° | 1058.4 | 1137.3 | 1195.8 | 1250.4 | 1298.0 | 1347.6 | 1409.4 | 1472.0 | 1548.8 | 1630.2 | 1722.0 |
| 67.5° | 1081.5 | 1172.6 | 1249.2 | 1316.6 | 1377.4 | 1440.7 | 1504.4 | 1578.5 | 1665.0 | 1763.1 | 1863.8 |
| 69° | 1034.8 | 1125.2 | 1213.2 | 1281.4 | 1345.4 | 1413.0 | 1481.0 | 1555.9 | 1641.1 | 1742.8 | 1849.6 |
| 70° | 970.3 | 1057.5 | 1151.0 | 1219.4 | 1284.0 | 1354.1 | 1423.4 | 1498.9 | 1580.4 | 1685.3 | 1793.3 |
| 72.5° | 734.2 | 808.1 | 898.9 | 971.1 | 1039.0 | 1109.9 | 1181.4 | 1246.8 | 1329.5 | 1430.4 | 1529.8 |
| 75° | 457.1 | 507.8 | 589.4 | 662.0 | 716.6 | 777.3 | 844.4 | 906.4 | 989.4 | 1060.9 | 1156.6 |
| 77.5° | 244.6 | 269.2 | 316.8 | 368.8 | 399.2 | 428.8 | 472.5 | 506.2 | 541.1 | 582.5 | 622.0 |
| 80° | 148.6 | 158.6 | 174.8 | 186.0 | 181.9 | 169.8 | 165.8 | 153.7 | 158.1 | 150.6 | 145.3 |
| 82.5° | 126.2 | 132.9 | 142.8 | 149.6 | 144.6 | 125.2 | 103.2 | 86.9 | 75.4 | 64.3 | 54.6 |
| 85° | 96.0 | 100.9 | 106.0 | 109.0 | 108.8 | 99.1 | 78.8 | 61.0 | 47.6 | 36.8 | 30.6 |
| 87.5° | 37.6 | 40.1 | 43.8 | 43.2 | 45.2 | 45.4 | 35.6 | 27.5 | 19.6 | 13.2 | 11.5 |
| 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):

| | 80° | 81° | 82° | 83° | 84° | 85° | 86° | 87° | 88° | 89° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 | 474.8 |
| 2.5° | 476.0 | 475.9 | 476.0 | 476.2 | 476.2 | 476.4 | 476.2 | 476.4 | 476.1 | 475.8 | 476.0 |
| 5° | 481.9 | 481.7 | 481.8 | 482.0 | 482.0 | 481.8 | 482.2 | 482.3 | 482.1 | 481.8 | 481.9 |
| 7.5° | 491.9 | 492.0 | 491.8 | 492.6 | 491.8 | 492.0 | 492.4 | 492.4 | 492.2 | 492.2 | 492.3 |
| 10° | 506.0 | 505.8 | 506.0 | 506.6 | 505.8 | 506.3 | 506.9 | 507.0 | 506.6 | 506.6 | 506.7 |
| 12.5° | 521.5 | 522.2 | 522.2 | 522.6 | 522.6 | 523.0 | 523.0 | 523.2 | 523.4 | 523.6 | 523.1 |
| 15° | 536.3 | 536.8 | 537.2 | 537.5 | 537.1 | 537.6 | 538.3 | 538.4 | 538.2 | 538.6 | 538.1 |
| 17.5° | 545.5 | 545.9 | 546.5 | 546.4 | 546.5 | 547.0 | 547.4 | 547.6 | 547.8 | 547.8 | 547.8 |
| 20° | 548.4 | 548.7 | 549.0 | 549.3 | 549.4 | 550.0 | 550.3 | 550.6 | 550.8 | 550.6 | 550.6 |
| 22.5° | 546.1 | 546.4 | 547.1 | 547.3 | 547.4 | 548.2 | 548.5 | 548.8 | 548.9 | 549.0 | 548.8 |
| 25° | 542.1 | 542.4 | 543.1 | 543.3 | 543.5 | 544.2 | 544.6 | 545.2 | 545.4 | 545.4 | 545.5 |
| 27.5° | 539.4 | 539.6 | 540.0 | 540.4 | 540.4 | 541.2 | 541.8 | 542.2 | 542.3 | 542.4 | 542.4 |
| 30° | 539.4 | 539.4 | 540.1 | 540.2 | 540.1 | 540.7 | 541.0 | 541.3 | 541.4 | 541.4 | 541.5 |
| 32.5° | 545.2 | 544.8 | 545.4 | 544.6 | 544.7 | 544.6 | 544.5 | 544.8 | 544.6 | 544.7 | 544.4 |
| 35° | 561.3 | 560.3 | 559.6 | 560.0 | 558.8 | 557.2 | 558.0 | 557.7 | 556.7 | 556.8 | 557.1 |
| 37.5° | 592.2 | 591.2 | 592.0 | 591.3 | 591.6 | 589.2 | 589.8 | 587.8 | 587.2 | 588.0 | 585.8 |
| 40° | 647.0 | 646.6 | 648.1 | 647.4 | 647.8 | 648.6 | 649.1 | 647.1 | 643.8 | 646.8 | 646.9 |
| 42.5° | 723.0 | 726.6 | 728.1 | 730.2 | 732.4 | 731.4 | 733.4 | 733.9 | 730.3 | 733.0 | 733.7 |
| 45° | 818.2 | 822.1 | 826.8 | 828.2 | 831.8 | 832.3 | 833.8 | 834.2 | 830.9 | 831.2 | 832.0 |
| 47.5° | 918.0 | 925.2 | 930.7 | 934.5 | 938.3 | 939.0 | 939.8 | 938.3 | 938.6 | 939.3 | 939.3 |
| 50° | 1016.0 | 1031.6 | 1041.2 | 1048.8 | 1055.2 | 1051.9 | 1054.8 | 1055.0 | 1056.0 | 1054.0 | 1055.2 |
| 52.5° | 1119.2 | 1139.7 | 1155.9 | 1168.5 | 1172.5 | 1184.6 | 1179.6 | 1183.4 | 1186.0 | 1182.2 | 1184.6 |
| 55° | 1219.9 | 1249.2 | 1275.2 | 1293.5 | 1306.4 | 1318.6 | 1320.5 | 1330.3 | 1329.2 | 1332.9 | 1331.2 |
| 57.5° | 1315.6 | 1356.6 | 1393.7 | 1420.9 | 1439.4 | 1458.0 | 1470.6 | 1481.4 | 1482.5 | 1493.1 | 1487.1 |
| 60° | 1431.4 | 1488.6 | 1536.3 | 1576.8 | 1604.1 | 1631.8 | 1653.6 | 1671.2 | 1675.3 | 1693.6 | 1687.5 |
| 62.5° | 1587.7 | 1657.3 | 1718.4 | 1765.9 | 1826.8 | 1856.0 | 1898.6 | 1925.2 | 1941.8 | 1946.4 | 1954.8 |
| 65° | 1807.4 | 1898.0 | 1978.6 | 2054.6 | 2123.0 | 2170.4 | 2219.8 | 2259.4 | 2291.2 | 2288.5 | 2301.6 |
| 67.5° | 1970.6 | 2074.0 | 2171.0 | 2262.0 | 2335.6 | 2396.8 | 2453.4 | 2496.2 | 2524.6 | 2542.7 | 2550.4 |
| 69° | 1953.6 | 2064.6 | 2171.6 | 2268.8 | 2344.7 | 2413.0 | 2468.2 | 2510.4 | 2542.9 | 2562.5 | 2568.2 |
| 70° | 1897.0 | 2011.0 | 2122.6 | 2218.0 | 2295.4 | 2370.4 | 2426.6 | 2473.5 | 2504.4 | 2526.0 | 2529.2 |
| 72.5° | 1640.9 | 1764.4 | 1863.0 | 1967.2 | 2041.6 | 2117.6 | 2152.9 | 2211.1 | 2251.4 | 2264.5 | 2264.2 |
| 75° | 1237.6 | 1340.6 | 1427.4 | 1504.3 | 1570.9 | 1622.4 | 1639.1 | 1680.6 | 1714.0 | 1713.6 | 1710.5 |
| 77.5° | 666.4 | 690.8 | 723.2 | 734.0 | 754.6 | 754.3 | 733.6 | 740.2 | 759.2 | 722.3 | 734.2 |
| 80° | 143.0 | 140.9 | 139.0 | 138.0 | 137.4 | 137.6 | 138.4 | 133.6 | 138.3 | 136.2 | 127.5 |
| 82.5° | 49.8 | 48.6 | 47.4 | 48.3 | 47.7 | 48.2 | 48.0 | 48.6 | 48.6 | 48.4 | 47.2 |
| 85° | 28.0 | 27.0 | 26.4 | 26.8 | 26.0 | 25.1 | 24.6 | 24.3 | 24.2 | 23.6 | 23.3 |
| 87.5° | 10.6 | 10.6 | 10.4 | 10.0 | 9.0 | 8.4 | 7.8 | 6.8 | 6.4 | 5.8 | 5.4 |
| 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)