

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: P163247

Luminaire Tested: **LDRL-SL2-E03-E-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163247
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33726)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL2-E03-E-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (63) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5335.7 lumens
Efficiency: N/A
Efficacy: 71.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 1' x H: 0.1')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

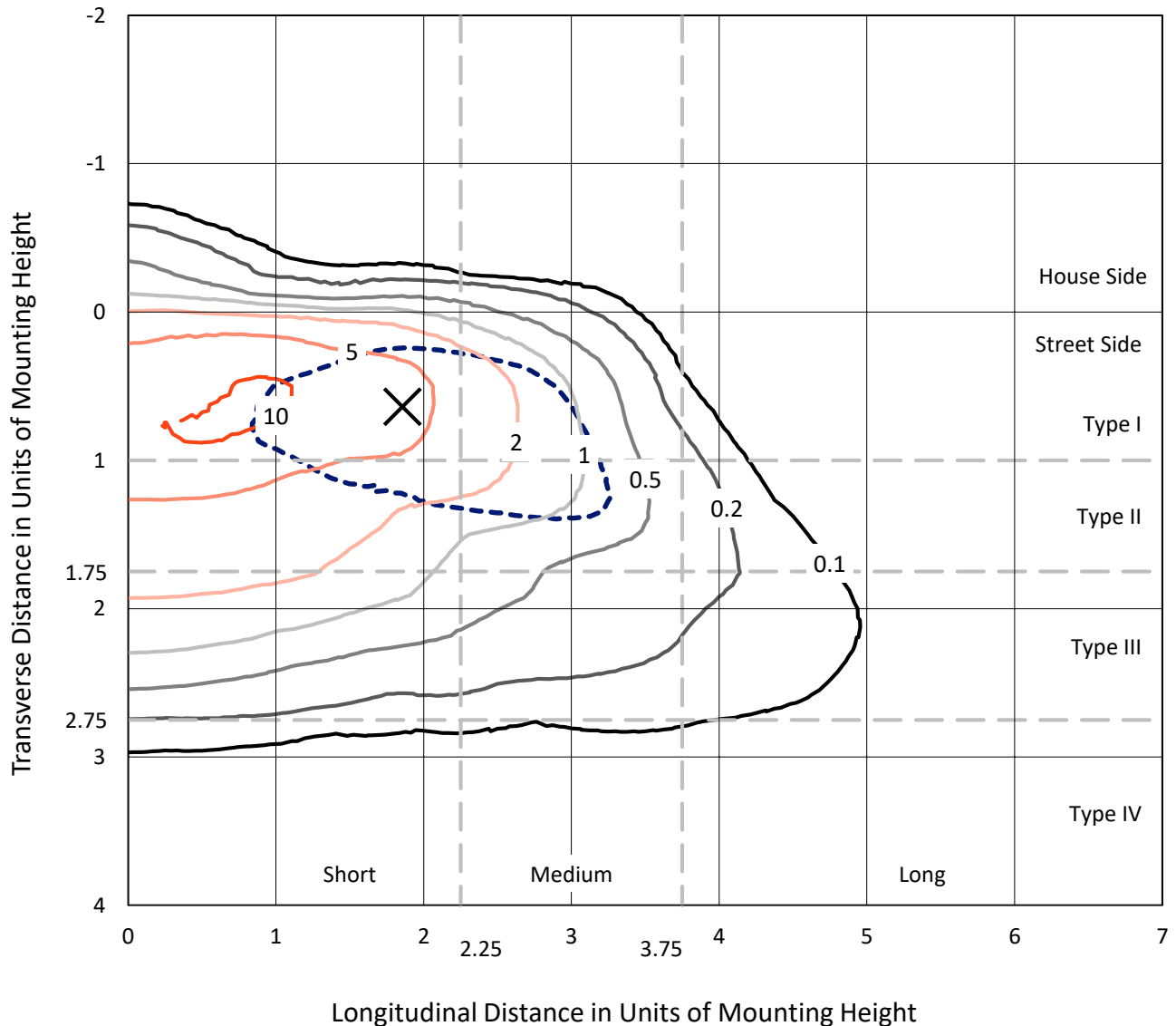
Input Watts (W): 75.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

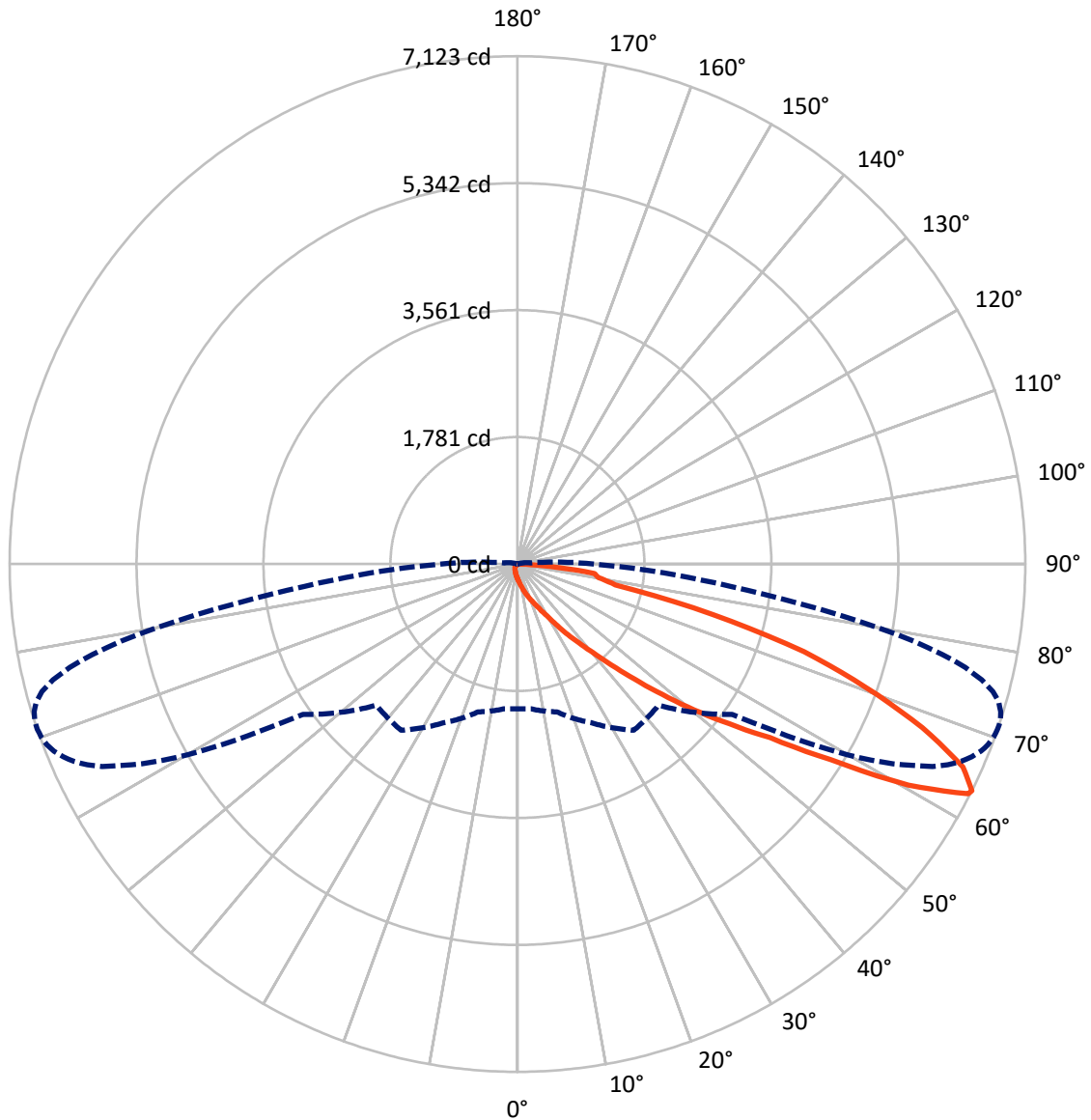
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

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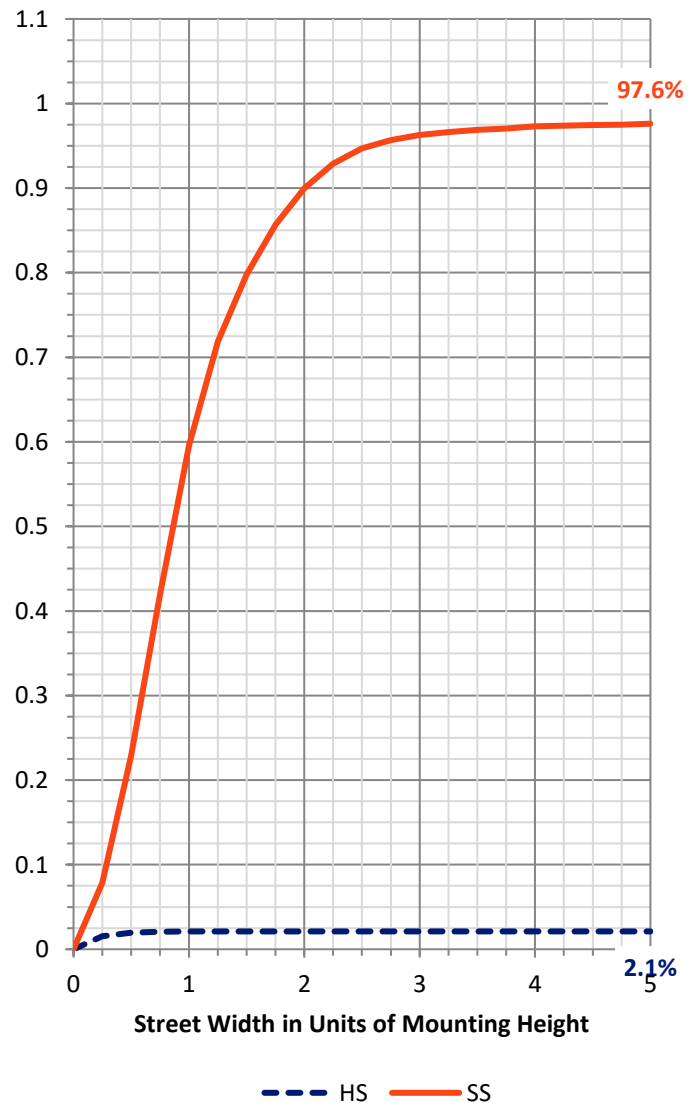
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 113.3 | 0.0 | 113.3 |
| | % Fixture | 2.1 | 0.0 | 2.1 |
| Street Side | Lumens | 5222.4 | 0.0 | 5222.4 |
| | % Fixture | 97.9 | 0.0 | 97.9 |
| Total | Lumens | 5335.7 | 0.0 | 5335.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 22.6 | 0.4 |
| 10°-20° | 87.7 | 1.6 |
| 20°-30° | 178.2 | 3.3 |
| 30°-40° | 435.4 | 8.2 |
| 40°-50° | 973.7 | 18.2 |
| 50°-60° | 1369.1 | 25.7 |
| 60°-70° | 1609.9 | 30.2 |
| 70°-80° | 581.3 | 10.9 |
| 80°-90° | 77.7 | 1.5 |
| 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° | 5335.7 | 100.0 |
| 0°-180° | 5335.7 | 100.0 |



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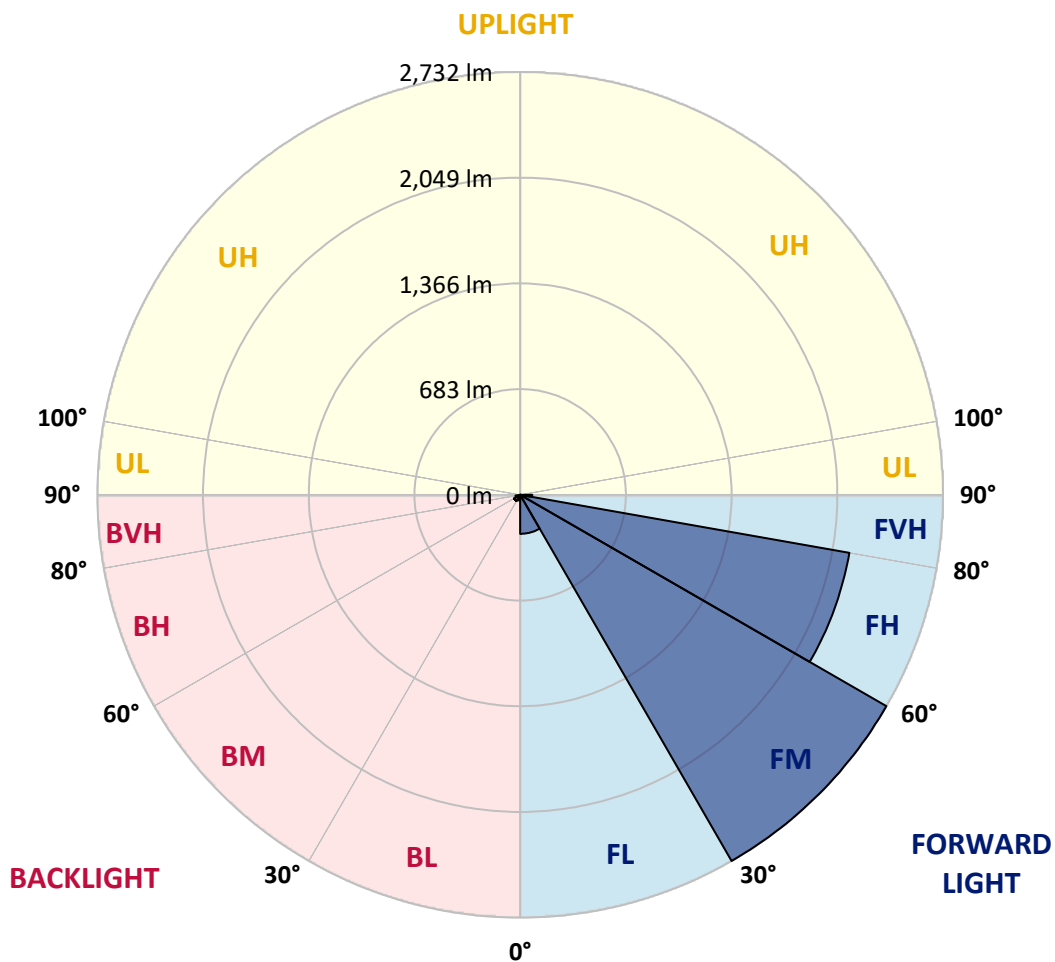
CATALOG NUMBER: LDRL-SL2-E03-E-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 252.1 | 4.7 | | | |
| FM (30°-60°) | 2732.5 | 51.2 | | | |
| FH (60°-80°) | 2160.2 | 40.5 | | | G2/5000 |
| FVH (80°-90°) | 77.6 | 1.5 | | | G1/100 |
| BL (0°-30°) | 36.4 | 0.7 | B0/110 | | |
| BM (30°-60°) | 45.6 | 0.9 | B0/220 | | |
| BH (60°-80°) | 31.1 | 0.6 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.2 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 56° | 57° | 58° | 59° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 |
| 2.5° | 267.7 | 270.6 | 268.7 | 263.8 | 258.0 | 250.3 | 243.5 | 243.5 | 242.5 | 239.6 | 240.5 |
| 5° | 351.1 | 352.1 | 348.2 | 336.6 | 325.9 | 309.4 | 291.0 | 289.1 | 287.1 | 284.2 | 283.3 |
| 7.5° | 432.6 | 436.5 | 432.6 | 420.0 | 398.6 | 373.4 | 344.3 | 341.5 | 335.6 | 335.6 | 331.7 |
| 10° | 516.1 | 516.1 | 512.2 | 497.6 | 478.2 | 442.3 | 405.5 | 400.6 | 393.8 | 391.9 | 386.0 |
| 12.5° | 575.2 | 575.2 | 573.2 | 565.5 | 550.0 | 518.0 | 473.3 | 468.5 | 459.8 | 456.8 | 450.1 |
| 15° | 598.5 | 598.5 | 599.5 | 606.2 | 607.2 | 592.7 | 546.1 | 542.2 | 533.5 | 525.7 | 522.8 |
| 17.5° | 613.0 | 612.1 | 612.1 | 621.8 | 639.2 | 648.9 | 618.8 | 615.0 | 605.3 | 601.4 | 591.7 |
| 20° | 645.1 | 643.1 | 637.3 | 637.3 | 653.8 | 687.7 | 687.7 | 686.8 | 676.1 | 673.2 | 668.3 |
| 22.5° | 692.6 | 690.7 | 673.2 | 658.6 | 666.4 | 709.1 | 748.9 | 746.9 | 743.0 | 739.1 | 736.2 |
| 25° | 770.2 | 763.4 | 733.3 | 690.7 | 683.8 | 729.4 | 795.4 | 800.2 | 803.2 | 803.2 | 805.1 |
| 27.5° | 887.5 | 878.8 | 825.5 | 745.9 | 715.9 | 762.4 | 846.8 | 856.5 | 865.3 | 867.2 | 875.9 |
| 30° | 1050.5 | 1035.0 | 958.4 | 842.0 | 773.1 | 810.9 | 922.4 | 933.1 | 945.7 | 949.6 | 963.2 |
| 32.5° | 1318.2 | 1309.5 | 1235.8 | 1061.2 | 913.7 | 906.0 | 1028.2 | 1041.8 | 1058.3 | 1065.1 | 1081.6 |
| 35° | 1725.6 | 1727.6 | 1667.4 | 1510.3 | 1306.6 | 1199.9 | 1217.3 | 1229.0 | 1234.8 | 1255.1 | 1263.9 |
| 37.5° | 2002.1 | 2006.9 | 2020.5 | 1958.4 | 1812.9 | 1704.3 | 1567.5 | 1580.1 | 1550.0 | 1553.0 | 1553.9 |
| 40° | 2153.4 | 2168.9 | 2248.4 | 2308.6 | 2296.9 | 2233.9 | 2124.3 | 2131.1 | 2074.8 | 2062.2 | 2001.1 |
| 42.5° | 2254.3 | 2274.6 | 2401.7 | 2587.9 | 2683.0 | 2740.2 | 2715.0 | 2712.1 | 2668.4 | 2651.9 | 2600.5 |
| 45° | 2317.3 | 2335.7 | 2495.8 | 2770.3 | 2989.5 | 3156.4 | 3225.2 | 3233.0 | 3196.1 | 3179.6 | 3136.9 |
| 47.5° | 2314.4 | 2335.7 | 2507.4 | 2838.2 | 3161.2 | 3427.9 | 3622.0 | 3631.6 | 3653.9 | 3639.4 | 3642.3 |
| 50° | 2186.3 | 2206.7 | 2379.4 | 2722.7 | 3110.8 | 3552.1 | 3907.1 | 3938.2 | 3974.0 | 3998.3 | 4009.9 |
| 52.5° | 2031.2 | 2045.7 | 2198.9 | 2524.9 | 2895.4 | 3500.7 | 4075.9 | 4129.3 | 4182.6 | 4228.2 | 4260.2 |
| 55° | 1973.9 | 1990.4 | 2110.7 | 2381.3 | 2722.7 | 3285.4 | 4154.5 | 4233.1 | 4308.7 | 4383.4 | 4444.5 |
| 57.5° | 2004.0 | 2019.5 | 2105.8 | 2313.4 | 2620.0 | 3058.4 | 4176.8 | 4299.0 | 4423.1 | 4544.4 | 4664.7 |
| 60° | 2114.6 | 2131.1 | 2204.8 | 2376.5 | 2592.8 | 2927.4 | 4089.5 | 4292.2 | 4498.8 | 4710.3 | 4909.1 |
| 62.5° | 2070.9 | 2077.7 | 2186.3 | 2487.1 | 2786.8 | 2815.9 | 3772.3 | 4055.5 | 4370.8 | 4696.7 | 5017.7 |
| 63° | 2029.2 | 2037.0 | 2147.6 | 2457.0 | 2846.0 | 2799.4 | 3674.3 | 3973.1 | 4305.8 | 4656.9 | 5006.1 |
| 65° | 1840.1 | 1841.0 | 1925.5 | 2169.8 | 2780.0 | 2828.5 | 3237.8 | 3523.0 | 3905.2 | 4326.2 | 4767.5 |
| 67.5° | 1373.5 | 1366.7 | 1448.2 | 1634.5 | 2182.5 | 2829.5 | 2779.0 | 2939.0 | 3204.8 | 3578.3 | 3974.0 |
| 70° | 487.0 | 476.3 | 608.2 | 866.2 | 1359.9 | 2314.4 | 2388.1 | 2398.8 | 2472.5 | 2674.3 | 2922.6 |
| 72.5° | 158.1 | 161.0 | 194.0 | 317.2 | 626.6 | 1557.8 | 2162.1 | 2129.1 | 2109.7 | 2108.8 | 2141.8 |
| 75° | 63.1 | 64.0 | 77.6 | 140.6 | 281.3 | 750.8 | 1893.4 | 1911.8 | 1918.6 | 1928.3 | 1939.0 |
| 77.5° | 30.1 | 33.0 | 43.6 | 78.5 | 139.7 | 371.5 | 1355.1 | 1511.2 | 1600.5 | 1669.4 | 1711.1 |
| 80° | 10.7 | 12.6 | 24.2 | 48.5 | 65.0 | 170.7 | 713.9 | 861.4 | 992.3 | 1161.1 | 1306.6 |
| 82.5° | 0.0 | 0.0 | 4.9 | 34.0 | 35.9 | 68.9 | 292.9 | 343.4 | 392.8 | 509.2 | 653.8 |
| 85° | 0.0 | 0.0 | 0.0 | 9.7 | 10.7 | 11.6 | 98.9 | 119.3 | 133.9 | 156.2 | 180.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 2.9 | 5.8 | 14.5 | 22.3 |
| 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-SL2-E03-E-HSS

CANDELA DISTRIBUTION (continued):

| | 60° | 61° | 62° | 64° | 65° | 66° | 67° | 68° | 69° | 70° | 71° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 |
| 2.5° | 238.6 | 237.7 | 237.7 | 235.7 | 234.7 | 232.8 | 231.8 | 228.9 | 227.9 | 227.9 | 227.9 |
| 5° | 282.2 | 278.4 | 276.4 | 271.6 | 268.7 | 267.7 | 262.9 | 260.9 | 258.0 | 259.0 | 254.2 |
| 7.5° | 330.8 | 324.0 | 321.1 | 314.3 | 312.4 | 305.5 | 303.6 | 298.7 | 295.9 | 290.0 | 288.1 |
| 10° | 384.1 | 375.4 | 370.6 | 359.9 | 356.9 | 352.1 | 346.3 | 340.4 | 335.6 | 329.8 | 326.9 |
| 12.5° | 445.2 | 437.5 | 433.6 | 419.0 | 412.3 | 405.5 | 397.7 | 389.9 | 382.2 | 377.3 | 370.6 |
| 15° | 517.0 | 504.4 | 500.5 | 487.0 | 475.3 | 466.6 | 455.9 | 446.2 | 440.4 | 430.7 | 423.9 |
| 17.5° | 587.8 | 575.2 | 572.3 | 551.9 | 539.3 | 533.5 | 521.9 | 509.2 | 498.6 | 488.9 | 478.2 |
| 20° | 658.6 | 649.9 | 642.1 | 622.7 | 609.2 | 599.5 | 583.9 | 571.3 | 562.6 | 549.0 | 535.4 |
| 22.5° | 729.4 | 720.7 | 714.9 | 694.5 | 681.9 | 668.3 | 654.7 | 641.2 | 628.6 | 612.1 | 596.5 |
| 25° | 802.2 | 796.4 | 793.4 | 775.0 | 763.4 | 750.8 | 737.2 | 721.7 | 706.1 | 687.7 | 671.2 |
| 27.5° | 877.9 | 879.8 | 874.0 | 870.1 | 857.5 | 848.8 | 827.4 | 816.7 | 805.1 | 782.8 | 762.4 |
| 30° | 973.9 | 979.7 | 977.8 | 980.6 | 972.9 | 967.1 | 950.6 | 937.0 | 923.5 | 902.1 | 878.8 |
| 32.5° | 1095.1 | 1102.9 | 1106.8 | 1117.4 | 1113.5 | 1111.6 | 1106.8 | 1087.4 | 1077.7 | 1040.8 | 1031.1 |
| 35° | 1282.3 | 1278.4 | 1294.9 | 1303.7 | 1299.8 | 1297.9 | 1292.0 | 1281.4 | 1269.7 | 1243.5 | 1219.3 |
| 37.5° | 1525.8 | 1529.7 | 1535.5 | 1518.1 | 1506.4 | 1505.4 | 1487.9 | 1477.3 | 1460.8 | 1431.7 | 1402.6 |
| 40° | 1972.0 | 1947.7 | 1920.6 | 1846.9 | 1814.9 | 1796.4 | 1745.0 | 1730.5 | 1702.3 | 1662.5 | 1632.5 |
| 42.5° | 2552.0 | 2527.8 | 2446.3 | 2323.1 | 2257.1 | 2166.0 | 2124.3 | 2072.9 | 2033.1 | 1968.1 | 1933.2 |
| 45° | 3128.2 | 3058.4 | 3048.7 | 2905.1 | 2823.7 | 2703.4 | 2628.7 | 2542.3 | 2452.1 | 2366.8 | 2304.7 |
| 47.5° | 3614.2 | 3598.7 | 3551.2 | 3463.9 | 3388.2 | 3287.3 | 3191.3 | 3058.4 | 2965.3 | 2844.0 | 2732.5 |
| 50° | 4003.1 | 4002.2 | 3984.7 | 3934.3 | 3871.3 | 3789.8 | 3705.4 | 3592.9 | 3487.1 | 3338.7 | 3219.4 |
| 52.5° | 4294.1 | 4309.7 | 4315.5 | 4300.0 | 4275.7 | 4204.0 | 4161.2 | 4067.2 | 3977.9 | 3851.8 | 3722.8 |
| 55° | 4507.6 | 4564.8 | 4593.9 | 4626.8 | 4620.1 | 4594.9 | 4592.9 | 4531.8 | 4491.1 | 4391.2 | 4300.0 |
| 57.5° | 4771.4 | 4865.5 | 4955.7 | 5115.7 | 5121.5 | 5177.8 | 5206.9 | 5236.0 | 5243.8 | 5204.0 | 5173.9 |
| 60° | 5107.0 | 5299.1 | 5469.8 | 5804.4 | 5891.7 | 6029.5 | 6118.7 | 6215.7 | 6298.1 | 6304.9 | 6303.0 |
| 62.5° | 5343.7 | 5639.5 | 5915.0 | 6411.7 | 6581.4 | 6740.5 | 6859.7 | 6953.9 | 7011.1 | 7069.3 | 7096.4 |
| 63° | 5350.4 | 5674.4 | 5967.4 | 6479.5 | 6658.0 | 6809.3 | 6922.8 | 7010.1 | 7070.3 | 7105.2 | 7122.7 |
| 65° | 5186.5 | 5579.4 | 5928.6 | 6438.8 | 6606.6 | 6758.9 | 6818.0 | 6875.3 | 6904.4 | 6917.9 | 6866.6 |
| 67.5° | 4396.0 | 4780.1 | 5187.5 | 5757.8 | 5901.4 | 6083.8 | 6132.3 | 6161.4 | 6175.0 | 6172.0 | 6128.4 |
| 70° | 3287.3 | 3609.4 | 4062.3 | 4714.1 | 4904.3 | 5082.7 | 5193.3 | 5240.9 | 5256.4 | 5251.5 | 5186.5 |
| 72.5° | 2295.0 | 2484.1 | 2857.6 | 3583.1 | 3842.2 | 4071.1 | 4207.8 | 4278.6 | 4293.2 | 4264.1 | 4204.0 |
| 75° | 1927.4 | 1937.1 | 2021.5 | 2418.2 | 2660.7 | 2905.1 | 3059.3 | 3104.0 | 3074.9 | 2986.6 | 2833.3 |
| 77.5° | 1720.7 | 1742.1 | 1742.1 | 1801.3 | 1848.8 | 1916.7 | 1931.3 | 1822.6 | 1696.5 | 1533.5 | 1401.7 |
| 80° | 1443.4 | 1518.1 | 1570.4 | 1614.1 | 1618.9 | 1605.4 | 1569.4 | 1508.3 | 1411.3 | 1287.2 | 1149.4 |
| 82.5° | 876.9 | 1024.3 | 1084.4 | 1309.5 | 1420.1 | 1494.8 | 1489.0 | 1407.5 | 1333.7 | 1204.7 | 1087.4 |
| 85° | 221.2 | 238.6 | 259.0 | 336.6 | 377.3 | 460.7 | 513.1 | 537.4 | 546.1 | 501.5 | 454.0 |
| 87.5° | 21.4 | 14.5 | 24.2 | 18.4 | 26.2 | 19.4 | 26.2 | 24.2 | 30.1 | 32.0 | 34.9 |
| 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):

| | 72° | 73° | 74° | 75° | 76° | 77° | 78° | 79° | 80° | 81° | 82° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 |
| 2.5° | 226.0 | 225.1 | 224.0 | 223.1 | 222.1 | 221.2 | 219.2 | 219.2 | 217.3 | 216.3 | 215.3 |
| 5° | 251.2 | 249.3 | 248.3 | 246.4 | 243.5 | 241.5 | 238.6 | 234.7 | 231.8 | 230.9 | 228.9 |
| 7.5° | 283.3 | 278.4 | 276.4 | 273.5 | 269.6 | 263.8 | 260.0 | 257.0 | 252.2 | 249.3 | 243.5 |
| 10° | 319.1 | 314.3 | 308.5 | 302.6 | 296.8 | 290.0 | 285.2 | 281.3 | 273.5 | 269.6 | 262.9 |
| 12.5° | 364.7 | 356.0 | 349.2 | 341.5 | 333.7 | 325.9 | 320.1 | 308.5 | 301.7 | 292.9 | 287.1 |
| 15° | 411.3 | 403.5 | 395.8 | 386.0 | 374.4 | 361.8 | 356.0 | 345.3 | 336.6 | 323.0 | 315.2 |
| 17.5° | 467.5 | 453.0 | 441.4 | 429.7 | 419.0 | 407.4 | 395.8 | 379.3 | 366.7 | 355.0 | 339.5 |
| 20° | 522.8 | 505.4 | 492.8 | 477.2 | 461.7 | 443.3 | 429.7 | 418.1 | 400.6 | 385.1 | 368.6 |
| 22.5° | 582.0 | 564.5 | 544.1 | 528.7 | 507.3 | 492.8 | 474.3 | 454.9 | 437.5 | 417.1 | 396.7 |
| 25° | 653.8 | 635.3 | 612.1 | 591.7 | 567.4 | 547.1 | 524.8 | 502.4 | 481.1 | 457.9 | 431.6 |
| 27.5° | 742.0 | 722.6 | 697.4 | 673.2 | 641.2 | 616.0 | 594.6 | 564.5 | 537.4 | 508.3 | 478.2 |
| 30° | 853.6 | 832.3 | 801.2 | 766.3 | 734.3 | 706.1 | 676.1 | 636.3 | 606.2 | 571.3 | 532.5 |
| 32.5° | 999.1 | 973.9 | 932.2 | 899.2 | 859.4 | 822.5 | 780.8 | 741.1 | 698.4 | 652.8 | 608.2 |
| 35° | 1182.4 | 1159.1 | 1110.7 | 1062.1 | 1018.5 | 974.8 | 922.4 | 876.9 | 816.7 | 761.5 | 704.2 |
| 37.5° | 1372.6 | 1330.8 | 1286.2 | 1233.8 | 1179.5 | 1127.1 | 1063.1 | 1000.1 | 931.2 | 871.1 | 799.3 |
| 40° | 1589.8 | 1539.4 | 1502.5 | 1446.2 | 1369.6 | 1294.9 | 1235.8 | 1157.2 | 1070.9 | 990.4 | 906.0 |
| 42.5° | 1887.6 | 1831.3 | 1765.4 | 1680.0 | 1624.7 | 1537.4 | 1460.8 | 1367.7 | 1254.2 | 1164.0 | 1062.1 |
| 45° | 2231.9 | 2155.3 | 2091.3 | 2008.9 | 1941.9 | 1833.3 | 1744.0 | 1619.9 | 1506.4 | 1388.0 | 1263.9 |
| 47.5° | 2624.8 | 2529.7 | 2436.6 | 2355.1 | 2248.4 | 2141.8 | 2028.2 | 1896.4 | 1750.9 | 1620.8 | 1473.4 |
| 50° | 3075.8 | 2941.0 | 2812.0 | 2707.3 | 2560.8 | 2437.6 | 2314.4 | 2166.0 | 2005.0 | 1855.6 | 1687.8 |
| 52.5° | 3577.3 | 3421.1 | 3250.4 | 3089.4 | 2919.7 | 2761.6 | 2613.2 | 2442.4 | 2263.0 | 2080.6 | 1893.4 |
| 55° | 4182.6 | 4065.2 | 3864.4 | 3659.8 | 3432.8 | 3221.3 | 3030.2 | 2818.8 | 2600.5 | 2360.9 | 2164.0 |
| 57.5° | 5130.3 | 5073.1 | 4905.2 | 4700.6 | 4404.7 | 4147.7 | 3823.7 | 3564.7 | 3248.5 | 2918.7 | 2664.5 |
| 60° | 6414.5 | 6343.7 | 6249.7 | 6083.8 | 5849.0 | 5499.8 | 5142.9 | 4740.4 | 4259.2 | 3802.4 | 3368.8 |
| 62.5° | 7099.4 | 7074.1 | 6997.5 | 6883.0 | 6663.8 | 6388.4 | 6028.5 | 5586.2 | 5043.0 | 4488.1 | 3935.2 |
| 63° | 7119.7 | 7087.7 | 7021.7 | 6905.3 | 6712.3 | 6445.6 | 6092.5 | 5662.8 | 5131.3 | 4565.8 | 4001.2 |
| 65° | 6844.3 | 6831.7 | 6764.7 | 6637.6 | 6505.7 | 6302.0 | 6028.5 | 5658.9 | 5212.7 | 4678.3 | 4116.7 |
| 67.5° | 6070.2 | 6032.3 | 5929.6 | 5890.7 | 5798.6 | 5657.0 | 5448.4 | 5194.3 | 4875.2 | 4455.2 | 3970.1 |
| 70° | 5134.1 | 5077.9 | 4948.9 | 4880.0 | 4767.5 | 4678.3 | 4551.2 | 4369.8 | 4172.9 | 3880.0 | 3518.2 |
| 72.5° | 4141.9 | 4025.5 | 3907.1 | 3727.7 | 3570.5 | 3411.5 | 3270.8 | 3142.7 | 2926.4 | 2808.1 | 2533.6 |
| 75° | 2689.8 | 2478.3 | 2275.6 | 2004.0 | 1759.6 | 1543.3 | 1332.8 | 1226.0 | 1003.9 | 913.7 | 784.7 |
| 77.5° | 1276.5 | 1158.2 | 999.1 | 875.9 | 718.7 | 586.9 | 479.2 | 359.9 | 282.2 | 221.2 | 168.8 |
| 80° | 1030.1 | 930.2 | 834.2 | 722.6 | 604.3 | 482.1 | 369.5 | 276.4 | 196.0 | 135.8 | 96.0 |
| 82.5° | 918.6 | 809.9 | 691.6 | 615.0 | 534.5 | 437.5 | 358.9 | 292.9 | 216.3 | 158.1 | 107.6 |
| 85° | 356.9 | 300.7 | 231.8 | 189.1 | 147.4 | 121.3 | 109.6 | 75.7 | 59.2 | 46.6 | 35.9 |
| 87.5° | 31.0 | 25.2 | 20.3 | 13.6 | 14.5 | 7.7 | 8.7 | 5.8 | 4.9 | 4.9 | 3.9 |
| 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):

| | 83° | 84° | 85° | 86° | 87° | 88° | 89° | 90° | 95° | 105° | 115° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 0° | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 |
| 2.5° | 214.4 | 213.4 | 212.4 | 210.5 | 210.5 | 208.6 | 207.6 | 206.6 | 201.8 | 191.1 | 182.3 |
| 5° | 225.1 | 223.1 | 221.2 | 218.2 | 216.3 | 213.4 | 211.4 | 208.6 | 197.9 | 177.5 | 160.0 |
| 7.5° | 240.5 | 236.7 | 233.8 | 227.9 | 225.1 | 221.2 | 218.2 | 213.4 | 196.0 | 164.9 | 140.6 |
| 10° | 259.0 | 252.2 | 247.3 | 240.5 | 234.7 | 229.9 | 225.1 | 218.2 | 194.0 | 151.3 | 123.2 |
| 12.5° | 281.3 | 273.5 | 263.8 | 256.1 | 248.3 | 241.5 | 234.7 | 226.0 | 191.1 | 139.7 | 109.6 |
| 15° | 303.6 | 292.0 | 285.2 | 274.5 | 263.8 | 254.2 | 244.4 | 236.7 | 192.1 | 127.1 | 98.0 |
| 17.5° | 328.8 | 317.2 | 302.6 | 291.0 | 279.4 | 266.8 | 255.1 | 239.6 | 187.2 | 117.4 | 89.2 |
| 20° | 353.1 | 336.6 | 323.0 | 308.5 | 292.0 | 276.4 | 261.9 | 248.3 | 183.3 | 107.6 | 81.5 |
| 22.5° | 379.3 | 359.9 | 342.4 | 324.0 | 303.6 | 286.1 | 268.7 | 251.2 | 176.5 | 98.9 | 74.7 |
| 25° | 411.3 | 389.0 | 363.7 | 341.5 | 320.1 | 298.7 | 276.4 | 255.1 | 169.7 | 91.2 | 69.8 |
| 27.5° | 450.1 | 421.0 | 395.8 | 367.6 | 337.6 | 310.4 | 286.1 | 262.9 | 163.0 | 85.4 | 65.0 |
| 30° | 499.6 | 465.6 | 429.7 | 393.8 | 361.8 | 330.8 | 296.8 | 267.7 | 156.2 | 79.6 | 60.1 |
| 32.5° | 565.5 | 522.8 | 479.2 | 437.5 | 394.8 | 355.0 | 319.1 | 281.3 | 152.3 | 74.7 | 55.3 |
| 35° | 652.8 | 597.5 | 544.1 | 491.8 | 440.4 | 391.9 | 345.3 | 302.6 | 152.3 | 68.9 | 49.4 |
| 37.5° | 735.2 | 671.2 | 603.4 | 538.3 | 477.2 | 421.0 | 365.7 | 314.3 | 144.5 | 64.0 | 44.6 |
| 40° | 824.5 | 747.8 | 668.3 | 591.7 | 518.0 | 448.1 | 385.1 | 325.9 | 137.8 | 58.2 | 39.8 |
| 42.5° | 961.3 | 864.2 | 760.5 | 671.2 | 583.0 | 496.6 | 418.1 | 348.2 | 129.0 | 52.4 | 34.9 |
| 45° | 1140.7 | 1017.5 | 895.3 | 786.7 | 674.2 | 568.4 | 475.3 | 389.0 | 127.1 | 47.5 | 30.1 |
| 47.5° | 1332.8 | 1187.3 | 1043.7 | 905.0 | 773.1 | 649.9 | 538.3 | 434.6 | 127.1 | 42.7 | 26.2 |
| 50° | 1523.9 | 1341.5 | 1188.2 | 1027.2 | 878.8 | 733.3 | 600.4 | 482.1 | 128.0 | 38.8 | 21.4 |
| 52.5° | 1696.5 | 1501.6 | 1329.8 | 1143.6 | 979.7 | 810.9 | 666.4 | 528.7 | 126.1 | 34.0 | 17.5 |
| 55° | 1936.1 | 1707.2 | 1508.3 | 1302.7 | 1110.7 | 920.5 | 756.6 | 598.5 | 127.1 | 30.1 | 14.5 |
| 57.5° | 2377.4 | 2108.8 | 1869.2 | 1599.5 | 1378.4 | 1132.9 | 934.1 | 742.0 | 138.7 | 25.2 | 10.7 |
| 60° | 3010.9 | 2661.7 | 2325.1 | 1996.3 | 1714.9 | 1423.0 | 1165.0 | 938.9 | 163.0 | 20.3 | 7.7 |
| 62.5° | 3436.7 | 2979.8 | 2578.3 | 2215.4 | 1888.6 | 1583.0 | 1301.7 | 1044.7 | 179.5 | 16.5 | 4.9 |
| 63° | 3480.3 | 3007.9 | 2604.4 | 2230.0 | 1896.4 | 1590.8 | 1307.5 | 1052.5 | 180.4 | 15.5 | 4.9 |
| 65° | 3562.8 | 3056.5 | 2619.0 | 2232.9 | 1888.6 | 1580.1 | 1303.7 | 1051.4 | 182.3 | 12.6 | 3.9 |
| 67.5° | 3468.7 | 2981.8 | 2534.6 | 2149.5 | 1820.7 | 1517.0 | 1255.1 | 1012.7 | 181.4 | 8.7 | 2.9 |
| 70° | 3102.0 | 2698.5 | 2305.7 | 1946.8 | 1648.0 | 1373.5 | 1142.6 | 923.5 | 166.9 | 5.8 | 1.9 |
| 72.5° | 2277.5 | 2003.0 | 1698.5 | 1439.5 | 1241.6 | 1031.1 | 879.8 | 693.5 | 129.0 | 3.9 | 1.0 |
| 75° | 675.1 | 615.0 | 517.0 | 455.9 | 402.5 | 332.7 | 295.9 | 230.9 | 65.9 | 1.9 | 0.0 |
| 77.5° | 134.8 | 122.2 | 109.6 | 99.9 | 94.1 | 80.5 | 76.6 | 63.1 | 27.2 | 1.0 | 0.0 |
| 80° | 70.8 | 58.2 | 49.4 | 43.6 | 37.8 | 31.0 | 26.2 | 21.4 | 4.9 | 0.0 | 0.0 |
| 82.5° | 67.9 | 45.6 | 33.0 | 27.2 | 23.3 | 18.4 | 14.5 | 10.7 | 2.9 | 0.0 | 0.0 |
| 85° | 25.2 | 19.4 | 14.5 | 11.6 | 9.7 | 8.7 | 6.8 | 5.8 | 0.0 | 0.0 | 0.0 |
| 87.5° | 3.9 | 2.9 | 2.9 | 1.9 | 1.9 | 1.0 | 1.0 | 1.0 | 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 |



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CANDELA DISTRIBUTION (continued):

| | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 | 204.7 |
| 2.5° | 173.6 | 165.8 | 162.0 | 157.1 | 157.1 | 156.2 | 158.1 |
| 5° | 144.5 | 133.9 | 126.1 | 120.3 | 121.3 | 118.3 | 119.3 |
| 7.5° | 122.2 | 111.5 | 104.8 | 100.9 | 99.9 | 98.9 | 98.9 |
| 10° | 105.7 | 96.0 | 90.2 | 87.3 | 86.3 | 86.3 | 86.3 |
| 12.5° | 94.1 | 84.4 | 79.6 | 77.6 | 77.6 | 76.6 | 76.6 |
| 15° | 84.4 | 76.6 | 71.8 | 69.8 | 69.8 | 68.9 | 69.8 |
| 17.5° | 76.6 | 68.9 | 65.0 | 63.1 | 63.1 | 62.1 | 62.1 |
| 20° | 69.8 | 63.1 | 59.2 | 56.3 | 56.3 | 55.3 | 56.3 |
| 22.5° | 64.0 | 57.2 | 52.4 | 50.5 | 49.4 | 48.5 | 49.4 |
| 25° | 58.2 | 51.4 | 46.6 | 43.6 | 42.7 | 42.7 | 41.7 |
| 27.5° | 53.3 | 46.6 | 40.7 | 37.8 | 36.8 | 36.8 | 35.9 |
| 30° | 48.5 | 40.7 | 34.9 | 32.0 | 31.0 | 31.0 | 31.0 |
| 32.5° | 43.6 | 34.9 | 30.1 | 27.2 | 26.2 | 26.2 | 26.2 |
| 35° | 38.8 | 30.1 | 25.2 | 22.3 | 21.4 | 21.4 | 21.4 |
| 37.5° | 33.0 | 25.2 | 19.4 | 17.5 | 16.5 | 15.5 | 15.5 |
| 40° | 28.1 | 19.4 | 14.5 | 12.6 | 10.7 | 10.7 | 10.7 |
| 42.5° | 23.3 | 15.5 | 10.7 | 7.7 | 6.8 | 5.8 | 6.8 |
| 45° | 19.4 | 11.6 | 6.8 | 3.9 | 2.9 | 2.9 | 2.9 |
| 47.5° | 15.5 | 7.7 | 2.9 | 1.0 | 1.0 | 1.0 | 1.0 |
| 50° | 11.6 | 4.9 | 1.0 | 0.0 | 0.0 | 1.0 | 1.0 |
| 52.5° | 8.7 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55° | 4.9 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57.5° | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60° | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 63° | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 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 |

(END OF REPORT)