

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: P144522

Luminaire Tested: **LDRL-RW-E01-E-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144522
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-E01-E-7060
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (21) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3082.1 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

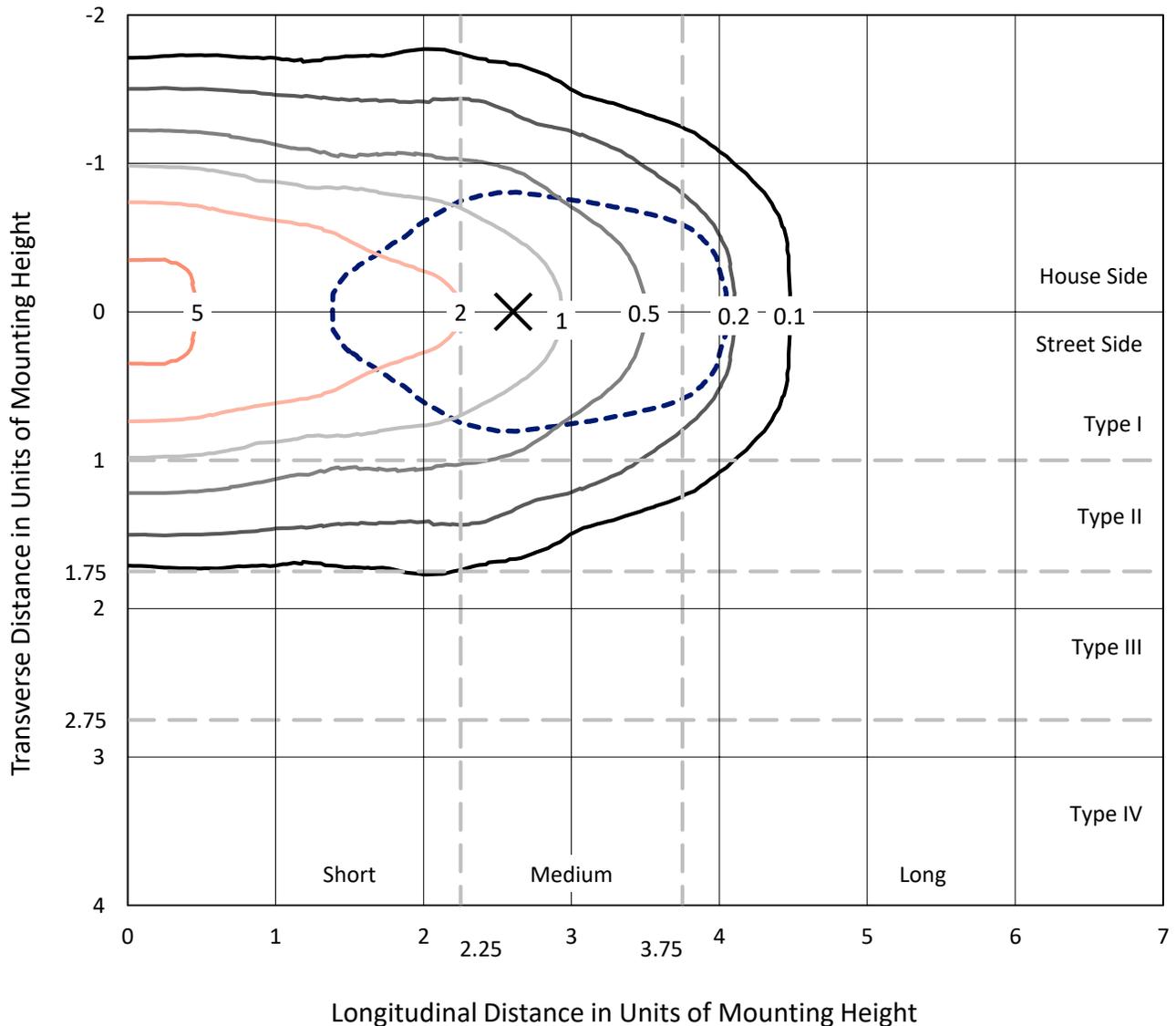
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P144522
 CATALOG NUMBER: LDRL-RW-E01-E-7060

Iso-Footcandle Lines of Horizontal Illumination

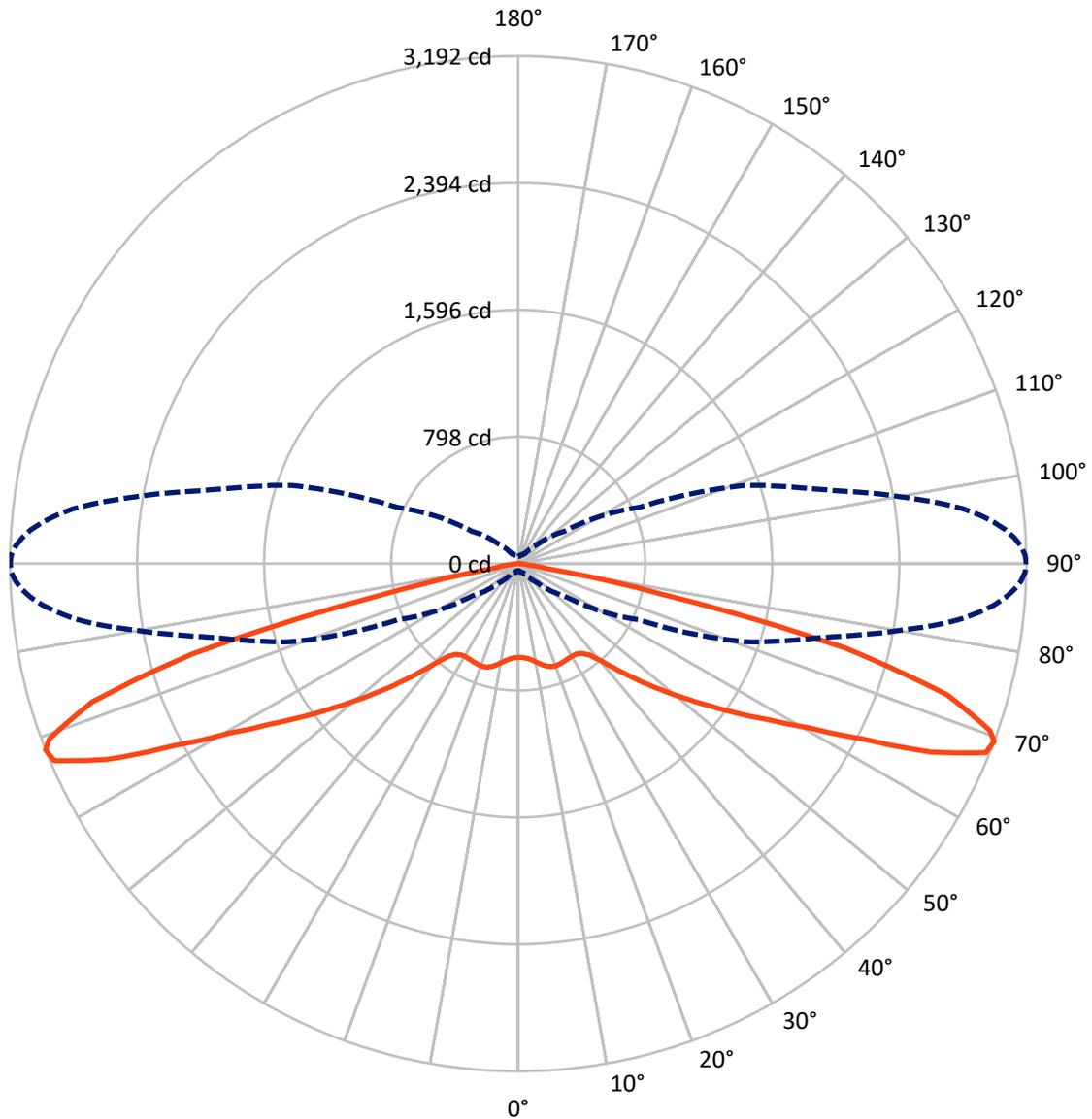
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc
 Type I - Short - Full Cutoff

REPORT NUMBER: P144522
CATALOG NUMBER: LDRL-RW-E01-E-7060

Luminous Intensity Polar Plot



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

REPORT NUMBER: P144522

CATALOG NUMBER: LDRL-RW-E01-E-7060

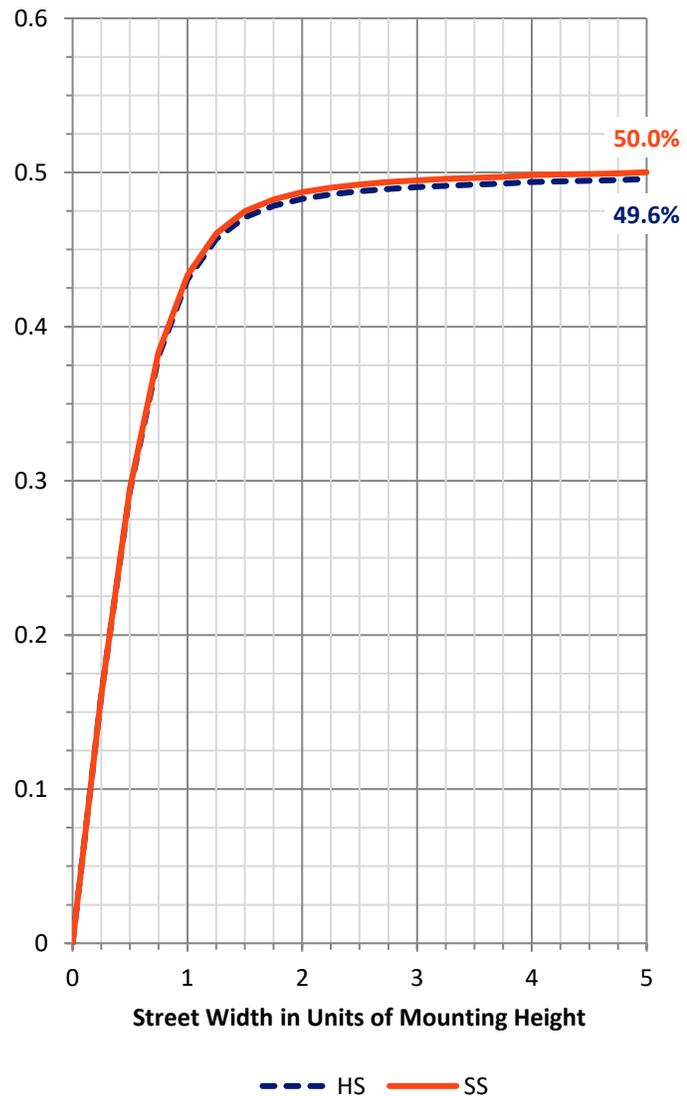
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1541.0 | 0.0 | 1541.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 1541.0 | 0.0 | 1541.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 3082.1 | 0.0 | 3082.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 57.7 | 1.9 |
| 10°-20° | 181.9 | 5.9 |
| 20°-30° | 294.5 | 9.6 |
| 30°-40° | 366.9 | 11.9 |
| 40°-50° | 456.8 | 14.8 |
| 50°-60° | 560.5 | 18.2 |
| 60°-70° | 691.3 | 22.4 |
| 70°-80° | 429.7 | 13.9 |
| 80°-90° | 42.7 | 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° | 3082.1 | 100.0 |
| 0°-180° | 3082.1 | 100.0 |



REPORT NUMBER: P144522

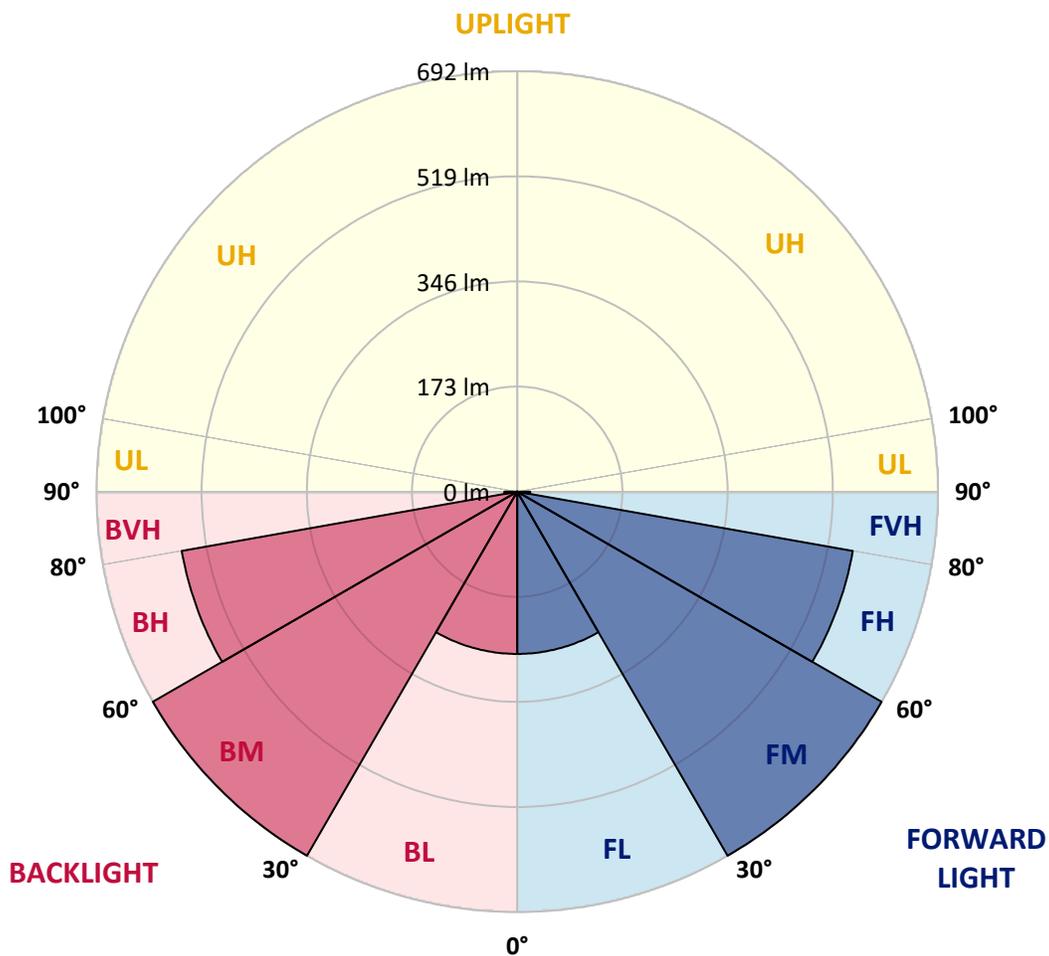
CATALOG NUMBER: LDRL-RW-E01-E-7060

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 267.1 | 8.7 | | | |
| FM (30°-60°) | 692.1 | 22.5 | | | |
| FH (60°-80°) | 560.5 | 18.2 | | | G0/660 |
| FVH (80°-90°) | 21.3 | 0.7 | | | G1/100 |
| BL (0°-30°) | 267.1 | 8.7 | B1/500 | | |
| BM (30°-60°) | 692.1 | 22.5 | B1/1000 | | |
| BH (60°-80°) | 560.5 | 18.2 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 21.3 | 0.7 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type I Short





REPORT NUMBER: P144522

CATALOG NUMBER: LDRL-RW-E01-E-7060

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 67° | 68° |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0° | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 |
| 2.5° | 591.8 | 591.2 | 592.2 | 593.3 | 593.0 | 593.2 | 592.8 | 592.3 | 592.3 | 592.4 | 592.4 |
| 5° | 596.4 | 595.8 | 596.8 | 597.7 | 598.0 | 598.8 | 599.0 | 598.6 | 598.8 | 598.9 | 599.1 |
| 7.5° | 602.0 | 601.4 | 602.8 | 604.0 | 606.3 | 607.6 | 608.8 | 610.0 | 610.1 | 610.2 | 610.3 |
| 10° | 607.2 | 606.8 | 609.0 | 611.6 | 615.4 | 618.3 | 621.8 | 625.2 | 625.5 | 625.7 | 626.0 |
| 12.5° | 610.6 | 610.6 | 613.8 | 618.7 | 625.2 | 631.1 | 637.0 | 642.8 | 643.3 | 643.8 | 644.4 |
| 15° | 610.3 | 610.8 | 615.8 | 624.6 | 635.9 | 646.2 | 653.6 | 659.8 | 660.3 | 660.8 | 661.3 |
| 17.5° | 606.2 | 606.2 | 613.4 | 627.5 | 645.2 | 660.5 | 670.0 | 673.3 | 673.5 | 673.7 | 673.9 |
| 20° | 594.3 | 595.2 | 605.3 | 625.7 | 652.3 | 673.6 | 682.5 | 681.0 | 680.7 | 680.4 | 680.1 |
| 22.5° | 574.1 | 575.1 | 588.7 | 616.1 | 653.7 | 682.0 | 691.2 | 684.7 | 683.7 | 682.7 | 681.8 |
| 25° | 546.0 | 547.8 | 562.4 | 597.5 | 644.6 | 684.4 | 696.8 | 686.4 | 684.9 | 683.4 | 681.9 |
| 27.5° | 513.4 | 514.3 | 531.6 | 568.4 | 623.6 | 676.2 | 699.4 | 690.0 | 688.1 | 686.2 | 684.3 |
| 30° | 475.8 | 478.0 | 496.0 | 534.5 | 593.9 | 657.1 | 698.4 | 697.0 | 694.9 | 692.7 | 690.6 |
| 32.5° | 438.4 | 440.2 | 458.0 | 499.4 | 559.8 | 630.6 | 693.2 | 707.6 | 705.8 | 704.0 | 702.2 |
| 35° | 400.6 | 402.8 | 421.1 | 465.6 | 525.8 | 600.4 | 685.2 | 722.7 | 721.9 | 721.1 | 720.4 |
| 37.5° | 367.5 | 368.9 | 386.8 | 433.2 | 496.0 | 572.8 | 674.6 | 742.9 | 744.7 | 746.4 | 748.2 |
| 40° | 333.7 | 335.2 | 354.0 | 401.3 | 468.6 | 549.2 | 664.8 | 768.4 | 773.2 | 778.0 | 782.8 |
| 42.5° | 301.3 | 302.5 | 320.6 | 368.0 | 438.2 | 528.8 | 659.0 | 799.2 | 808.4 | 817.6 | 826.9 |
| 45° | 268.0 | 268.8 | 285.9 | 332.0 | 403.4 | 505.0 | 657.4 | 833.7 | 847.1 | 860.4 | 873.8 |
| 47.5° | 235.3 | 237.2 | 254.8 | 298.5 | 363.7 | 470.8 | 655.2 | 872.0 | 889.7 | 907.4 | 925.1 |
| 50° | 204.0 | 206.2 | 224.2 | 265.7 | 325.3 | 430.4 | 643.6 | 915.4 | 936.9 | 958.5 | 980.1 |
| 52.5° | 172.0 | 174.2 | 192.3 | 231.9 | 289.6 | 384.9 | 611.6 | 961.0 | 986.6 | 1012.3 | 1038.0 |
| 55° | 138.0 | 138.8 | 157.4 | 197.1 | 254.0 | 346.8 | 560.7 | 1002.7 | 1033.8 | 1064.9 | 1096.0 |
| 57.5° | 100.4 | 103.2 | 121.5 | 158.4 | 217.8 | 313.0 | 495.8 | 1024.1 | 1062.9 | 1101.7 | 1140.5 |
| 60° | 72.4 | 74.2 | 90.4 | 119.4 | 176.6 | 279.8 | 438.2 | 1008.4 | 1060.2 | 1112.1 | 1163.8 |
| 62.5° | 57.2 | 59.3 | 71.8 | 90.0 | 136.6 | 243.4 | 400.7 | 965.7 | 1038.4 | 1111.0 | 1183.7 |
| 65° | 50.7 | 52.5 | 64.0 | 73.0 | 104.4 | 206.0 | 377.1 | 923.3 | 1021.4 | 1119.4 | 1217.5 |
| 67.5° | 46.3 | 48.2 | 58.3 | 64.4 | 86.3 | 181.8 | 365.9 | 891.2 | 1004.5 | 1117.8 | 1231.1 |
| 69° | 44.2 | 46.0 | 55.2 | 61.0 | 81.4 | 173.6 | 353.9 | 837.1 | 949.4 | 1061.7 | 1174.0 |
| 70° | 43.1 | 44.6 | 53.0 | 58.8 | 79.4 | 166.8 | 336.2 | 772.7 | 881.0 | 989.4 | 1097.7 |
| 72.5° | 39.9 | 41.0 | 48.0 | 53.4 | 72.6 | 133.2 | 253.6 | 545.2 | 637.0 | 728.9 | 820.8 |
| 75° | 35.4 | 36.6 | 42.9 | 47.8 | 55.4 | 80.0 | 158.8 | 316.4 | 379.4 | 442.3 | 505.3 |
| 77.5° | 30.4 | 31.8 | 37.0 | 44.7 | 44.6 | 52.2 | 96.4 | 181.8 | 212.3 | 242.9 | 273.5 |
| 80° | 26.1 | 27.3 | 31.9 | 44.2 | 37.4 | 41.2 | 71.8 | 135.6 | 147.9 | 160.2 | 172.5 |
| 82.5° | 20.4 | 21.4 | 26.8 | 36.6 | 29.8 | 31.4 | 54.7 | 123.4 | 131.8 | 140.2 | 148.5 |
| 85° | 12.8 | 13.2 | 19.5 | 25.2 | 21.2 | 19.0 | 35.2 | 95.0 | 101.1 | 107.2 | 113.2 |
| 87.5° | 5.2 | 6.2 | 9.4 | 9.0 | 9.2 | 7.6 | 11.4 | 34.2 | 37.4 | 40.5 | 43.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P144522

CATALOG NUMBER: LDRL-RW-E01-E-7060

CANDELA DISTRIBUTION (continued):

| | 69° | 70° | 71° | 72° | 73° | 74° | 75° | 76° | 77° | 78° | 79° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 |
| 2.5° | 592.5 | 592.5 | 592.3 | 592.0 | 592.2 | 592.0 | 592.0 | 592.4 | 592.2 | 592.2 | 592.0 |
| 5° | 599.2 | 599.4 | 599.4 | 598.8 | 599.0 | 599.2 | 599.2 | 599.0 | 599.1 | 599.4 | 599.0 |
| 7.5° | 610.4 | 610.6 | 610.8 | 611.2 | 611.0 | 611.0 | 611.2 | 611.0 | 610.8 | 611.5 | 610.9 |
| 10° | 626.3 | 626.6 | 626.6 | 627.4 | 627.0 | 627.3 | 628.2 | 628.3 | 627.8 | 628.5 | 628.3 |
| 12.5° | 644.9 | 645.4 | 645.4 | 645.2 | 645.7 | 646.0 | 647.0 | 647.2 | 647.4 | 648.5 | 648.1 |
| 15° | 661.8 | 662.3 | 662.8 | 663.0 | 663.7 | 663.9 | 664.5 | 664.9 | 665.2 | 665.6 | 665.8 |
| 17.5° | 674.1 | 674.2 | 674.8 | 674.6 | 675.6 | 675.4 | 676.1 | 676.4 | 676.8 | 677.2 | 677.6 |
| 20° | 679.8 | 679.4 | 679.6 | 679.3 | 679.3 | 679.5 | 679.6 | 680.0 | 679.8 | 680.3 | 680.7 |
| 22.5° | 680.8 | 679.8 | 679.2 | 678.4 | 678.2 | 677.5 | 677.6 | 677.8 | 677.0 | 677.6 | 678.2 |
| 25° | 680.3 | 678.8 | 677.6 | 676.4 | 675.2 | 674.2 | 673.6 | 673.4 | 673.0 | 672.9 | 673.4 |
| 27.5° | 682.4 | 680.4 | 678.8 | 676.7 | 675.3 | 673.8 | 672.5 | 671.4 | 670.4 | 670.2 | 670.2 |
| 30° | 688.4 | 686.2 | 684.4 | 681.8 | 679.6 | 677.8 | 675.9 | 674.4 | 672.6 | 671.7 | 670.8 |
| 32.5° | 700.4 | 698.6 | 696.0 | 693.8 | 691.1 | 688.8 | 686.3 | 684.1 | 681.8 | 679.8 | 679.0 |
| 35° | 719.6 | 718.8 | 717.4 | 715.8 | 713.2 | 710.4 | 708.3 | 705.7 | 703.0 | 700.1 | 699.2 |
| 37.5° | 749.9 | 751.7 | 750.9 | 749.8 | 749.0 | 748.1 | 745.4 | 743.7 | 741.9 | 739.4 | 738.9 |
| 40° | 787.6 | 792.4 | 797.3 | 800.4 | 799.3 | 803.1 | 803.8 | 804.0 | 802.6 | 804.6 | 805.0 |
| 42.5° | 836.2 | 845.4 | 854.2 | 860.5 | 867.9 | 873.4 | 880.6 | 883.7 | 889.5 | 895.6 | 899.0 |
| 45° | 887.1 | 900.5 | 913.0 | 926.1 | 938.9 | 952.9 | 966.6 | 976.2 | 990.3 | 1000.8 | 1007.4 |
| 47.5° | 942.8 | 960.5 | 975.5 | 995.0 | 1013.6 | 1030.2 | 1054.1 | 1073.3 | 1090.4 | 1106.8 | 1123.9 |
| 50° | 1001.7 | 1023.3 | 1041.8 | 1065.6 | 1088.2 | 1114.2 | 1142.2 | 1166.7 | 1193.6 | 1219.6 | 1242.6 |
| 52.5° | 1063.6 | 1089.3 | 1114.2 | 1138.6 | 1166.1 | 1194.4 | 1224.8 | 1260.1 | 1292.2 | 1331.4 | 1359.4 |
| 55° | 1127.1 | 1158.2 | 1184.8 | 1210.3 | 1239.3 | 1270.8 | 1306.8 | 1348.6 | 1389.6 | 1432.4 | 1474.8 |
| 57.5° | 1179.3 | 1218.1 | 1247.2 | 1277.0 | 1308.3 | 1339.4 | 1384.2 | 1427.0 | 1478.9 | 1531.4 | 1584.6 |
| 60° | 1215.6 | 1267.4 | 1302.6 | 1340.4 | 1376.6 | 1414.4 | 1462.8 | 1516.8 | 1581.8 | 1645.4 | 1717.6 |
| 62.5° | 1256.3 | 1329.0 | 1378.4 | 1428.8 | 1472.8 | 1518.1 | 1582.8 | 1645.0 | 1728.4 | 1801.8 | 1892.6 |
| 65° | 1315.6 | 1413.6 | 1486.3 | 1554.2 | 1613.4 | 1675.1 | 1751.8 | 1829.6 | 1925.1 | 2026.4 | 2140.4 |
| 67.5° | 1344.3 | 1457.6 | 1552.7 | 1636.6 | 1712.0 | 1790.8 | 1869.8 | 1962.0 | 2069.6 | 2191.4 | 2316.6 |
| 69° | 1286.3 | 1398.6 | 1507.9 | 1592.8 | 1672.2 | 1756.3 | 1841.0 | 1933.9 | 2039.8 | 2166.4 | 2299.0 |
| 70° | 1206.1 | 1314.4 | 1430.7 | 1515.6 | 1595.9 | 1683.2 | 1769.4 | 1863.2 | 1964.4 | 2094.8 | 2229.0 |
| 72.5° | 912.6 | 1004.4 | 1117.3 | 1207.1 | 1291.4 | 1379.6 | 1468.4 | 1549.8 | 1652.6 | 1778.0 | 1901.6 |
| 75° | 568.2 | 631.2 | 732.6 | 822.8 | 890.6 | 966.2 | 1049.5 | 1126.6 | 1229.8 | 1318.6 | 1437.6 |
| 77.5° | 304.1 | 334.6 | 393.8 | 458.4 | 496.2 | 533.0 | 587.4 | 629.2 | 672.6 | 724.0 | 773.2 |
| 80° | 184.8 | 197.2 | 217.3 | 231.2 | 226.0 | 211.0 | 206.2 | 191.0 | 196.5 | 187.2 | 180.6 |
| 82.5° | 156.9 | 165.2 | 177.5 | 186.0 | 179.8 | 155.6 | 128.4 | 108.0 | 93.7 | 80.0 | 68.0 |
| 85° | 119.3 | 125.4 | 131.8 | 135.6 | 135.2 | 123.2 | 97.9 | 75.8 | 59.1 | 45.8 | 38.0 |
| 87.5° | 46.7 | 49.8 | 54.5 | 53.8 | 56.1 | 56.5 | 44.2 | 34.2 | 24.3 | 16.4 | 14.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P144522

CATALOG NUMBER: LDRL-RW-E01-E-7060

CANDELA DISTRIBUTION (continued):

| | 80° | 81° | 82° | 83° | 84° | 85° | 86° | 87° | 88° | 89° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 | 590.2 |
| 2.5° | 591.7 | 591.6 | 591.6 | 592.0 | 592.0 | 592.2 | 592.0 | 592.1 | 591.8 | 591.4 | 591.7 |
| 5° | 599.0 | 598.8 | 599.0 | 599.2 | 599.2 | 599.0 | 599.4 | 599.4 | 599.2 | 599.0 | 599.0 |
| 7.5° | 611.4 | 611.6 | 611.2 | 612.2 | 611.4 | 611.4 | 612.0 | 612.0 | 611.8 | 611.9 | 612.0 |
| 10° | 628.9 | 628.8 | 629.0 | 629.6 | 628.7 | 629.4 | 630.0 | 630.2 | 629.7 | 629.7 | 629.8 |
| 12.5° | 648.2 | 649.0 | 649.2 | 649.6 | 649.6 | 650.0 | 650.2 | 650.2 | 650.7 | 650.8 | 650.1 |
| 15° | 666.7 | 667.2 | 667.7 | 668.1 | 667.6 | 668.3 | 669.1 | 669.1 | 669.0 | 669.4 | 668.8 |
| 17.5° | 678.0 | 678.6 | 679.3 | 679.2 | 679.3 | 679.9 | 680.4 | 680.6 | 680.8 | 680.8 | 680.9 |
| 20° | 681.7 | 682.0 | 682.3 | 682.8 | 683.0 | 683.6 | 684.0 | 684.3 | 684.5 | 684.3 | 684.4 |
| 22.5° | 678.8 | 679.2 | 680.0 | 680.3 | 680.4 | 681.3 | 681.8 | 682.0 | 682.2 | 682.4 | 682.2 |
| 25° | 673.8 | 674.2 | 675.1 | 675.4 | 675.6 | 676.4 | 676.9 | 677.7 | 677.8 | 678.0 | 678.1 |
| 27.5° | 670.5 | 670.6 | 671.3 | 671.7 | 671.8 | 672.7 | 673.4 | 674.0 | 674.0 | 674.2 | 674.2 |
| 30° | 670.6 | 670.6 | 671.3 | 671.4 | 671.3 | 672.1 | 672.5 | 672.8 | 673.0 | 673.0 | 673.1 |
| 32.5° | 677.6 | 677.2 | 677.8 | 676.9 | 677.0 | 676.9 | 676.8 | 677.2 | 677.0 | 677.0 | 676.6 |
| 35° | 697.6 | 696.5 | 695.6 | 696.0 | 694.6 | 692.5 | 693.7 | 693.2 | 692.0 | 692.1 | 692.4 |
| 37.5° | 736.0 | 734.9 | 735.9 | 735.0 | 735.3 | 732.4 | 733.2 | 730.6 | 729.9 | 730.8 | 728.1 |
| 40° | 804.2 | 803.6 | 805.6 | 804.8 | 805.3 | 806.1 | 806.8 | 804.3 | 800.2 | 804.0 | 804.1 |
| 42.5° | 898.6 | 903.2 | 905.0 | 907.6 | 910.4 | 909.2 | 911.6 | 912.3 | 907.8 | 911.2 | 912.0 |
| 45° | 1017.0 | 1021.9 | 1027.6 | 1029.4 | 1033.9 | 1034.5 | 1036.4 | 1036.9 | 1032.8 | 1033.2 | 1034.1 |
| 47.5° | 1141.0 | 1150.1 | 1156.8 | 1161.6 | 1166.2 | 1167.2 | 1168.2 | 1166.2 | 1166.6 | 1167.5 | 1167.5 |
| 50° | 1262.9 | 1282.2 | 1294.2 | 1303.6 | 1311.6 | 1307.4 | 1311.1 | 1311.4 | 1312.6 | 1310.0 | 1311.6 |
| 52.5° | 1391.1 | 1416.6 | 1436.8 | 1452.4 | 1457.4 | 1472.4 | 1466.2 | 1470.9 | 1474.1 | 1469.4 | 1472.5 |
| 55° | 1516.3 | 1552.7 | 1585.1 | 1607.8 | 1623.8 | 1639.0 | 1641.4 | 1653.6 | 1652.2 | 1656.8 | 1654.7 |
| 57.5° | 1635.3 | 1686.2 | 1732.4 | 1766.2 | 1789.2 | 1812.3 | 1828.0 | 1841.4 | 1842.7 | 1855.9 | 1848.4 |
| 60° | 1779.3 | 1850.2 | 1909.6 | 1959.8 | 1993.8 | 2028.3 | 2055.5 | 2077.4 | 2082.4 | 2105.0 | 2097.6 |
| 62.5° | 1973.5 | 2060.0 | 2136.0 | 2195.0 | 2270.6 | 2307.0 | 2360.0 | 2393.0 | 2413.6 | 2419.2 | 2429.8 |
| 65° | 2246.6 | 2359.2 | 2459.4 | 2553.8 | 2638.8 | 2697.9 | 2759.0 | 2808.4 | 2847.8 | 2844.6 | 2860.8 |
| 67.5° | 2449.4 | 2577.9 | 2698.4 | 2811.6 | 2903.2 | 2979.1 | 3049.4 | 3102.8 | 3138.0 | 3160.5 | 3170.1 |
| 69° | 2428.2 | 2566.2 | 2699.1 | 2820.0 | 2914.5 | 2999.4 | 3067.9 | 3120.3 | 3160.7 | 3185.1 | 3192.2 |
| 70° | 2358.0 | 2499.7 | 2638.3 | 2757.0 | 2853.1 | 2946.4 | 3016.1 | 3074.6 | 3113.0 | 3139.6 | 3143.8 |
| 72.5° | 2039.6 | 2193.1 | 2315.7 | 2445.1 | 2537.8 | 2632.0 | 2676.0 | 2748.3 | 2798.5 | 2814.7 | 2814.4 |
| 75° | 1538.4 | 1666.4 | 1774.2 | 1869.8 | 1952.7 | 2016.6 | 2037.4 | 2088.9 | 2130.5 | 2130.0 | 2126.1 |
| 77.5° | 828.4 | 858.5 | 898.8 | 912.4 | 938.0 | 937.6 | 911.9 | 920.0 | 943.6 | 897.8 | 912.6 |
| 80° | 177.7 | 175.0 | 172.8 | 171.5 | 170.8 | 171.0 | 172.0 | 166.1 | 171.8 | 169.3 | 158.4 |
| 82.5° | 61.9 | 60.4 | 59.0 | 60.0 | 59.4 | 60.0 | 59.8 | 60.4 | 60.3 | 60.1 | 58.7 |
| 85° | 34.8 | 33.6 | 32.8 | 33.4 | 32.2 | 31.2 | 30.5 | 30.2 | 30.0 | 29.4 | 28.9 |
| 87.5° | 13.2 | 13.2 | 13.0 | 12.5 | 11.3 | 10.4 | 9.8 | 8.5 | 8.0 | 7.3 | 6.8 |
| 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)