

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: P144236

Luminaire Tested: **LDRL-5XQ-F02-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P144236
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33699)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-5XQ-F02-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5238.5 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B3 - U0 - G2

Input Watts (W): 55
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

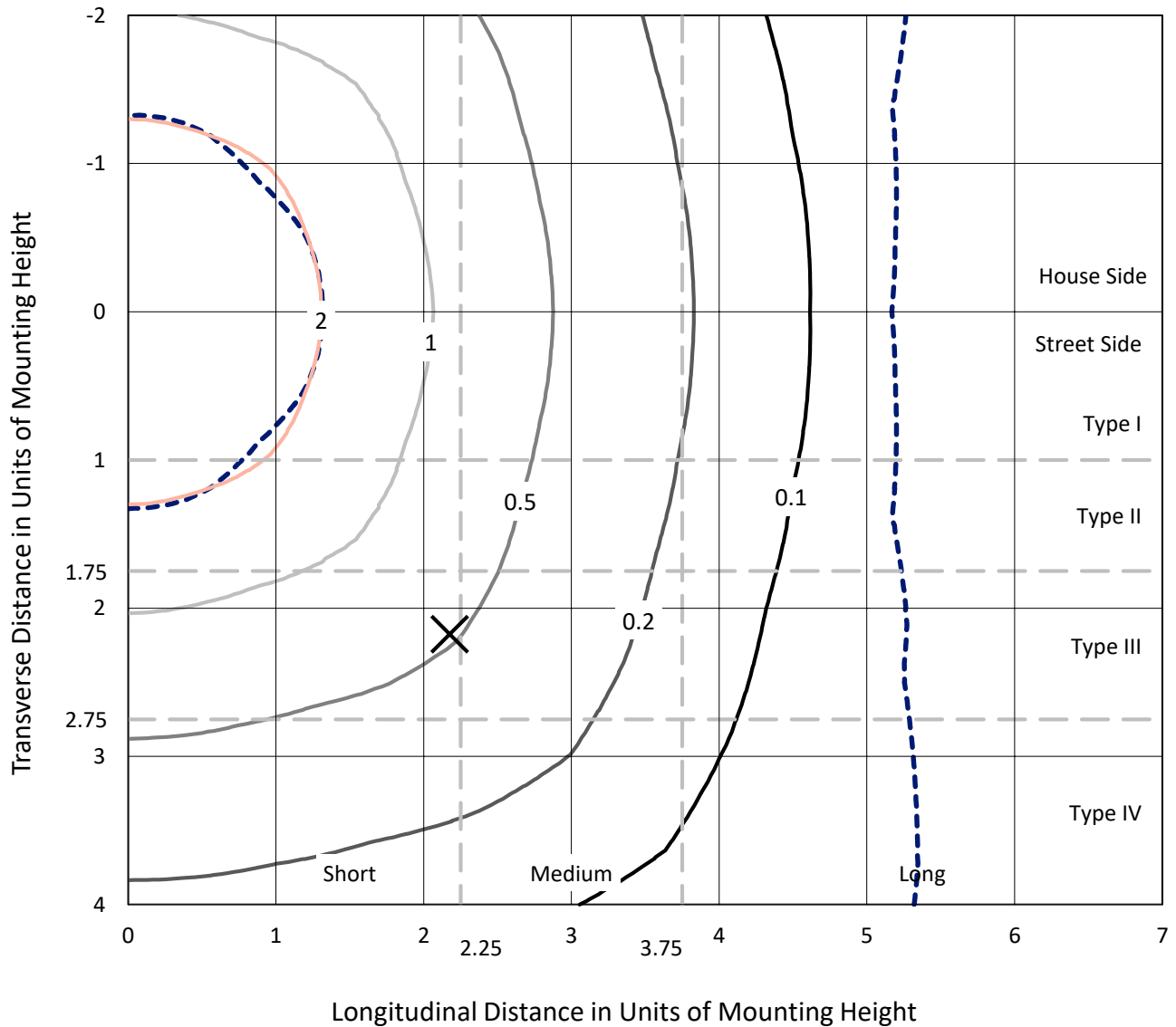


REPORT NUMBER: P144236

CATALOG NUMBER: LDRL-5XQ-F02-E-7050

Iso-Footcandle Lines of Horizontal Illumination

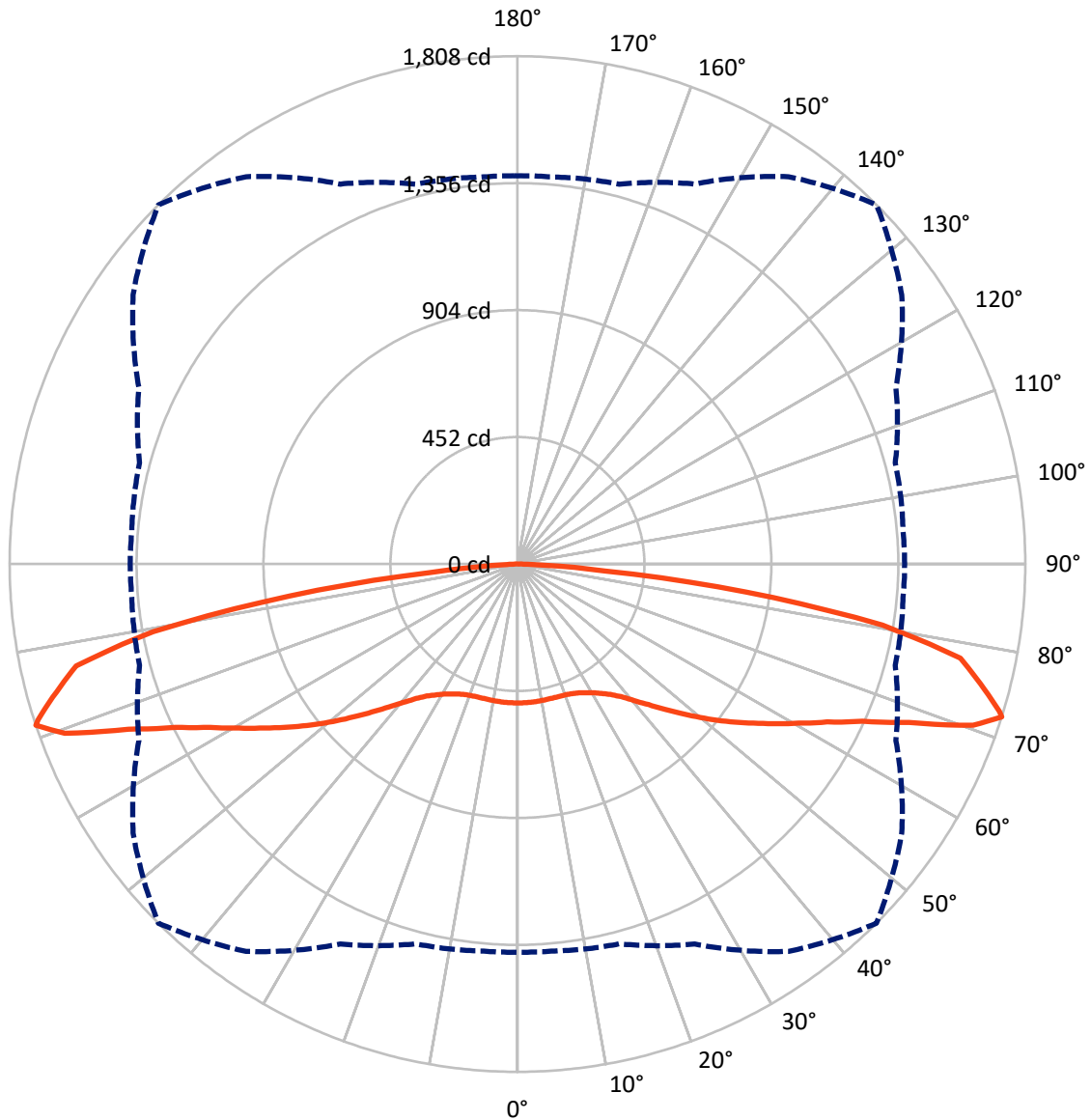
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2619.2 | 0.0 | 2619.2 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 2619.2 | 0.0 | 2619.2 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 5238.5 | 0.0 | 5238.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 47.2 | 0.9 |
| 10°-20° | 140.3 | 2.7 |
| 20°-30° | 235.6 | 4.5 |
| 30°-40° | 358.6 | 6.8 |
| 40°-50° | 566.9 | 10.8 |
| 50°-60° | 865.8 | 16.5 |
| 60°-70° | 1268.4 | 24.2 |
| 70°-80° | 1441.0 | 27.5 |
| 80°-90° | 314.8 | 6.0 |
| 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° | 5238.5 | 100.0 |
| 0°-180° | 5238.5 | 100.0 |



REPORT NUMBER: P144236

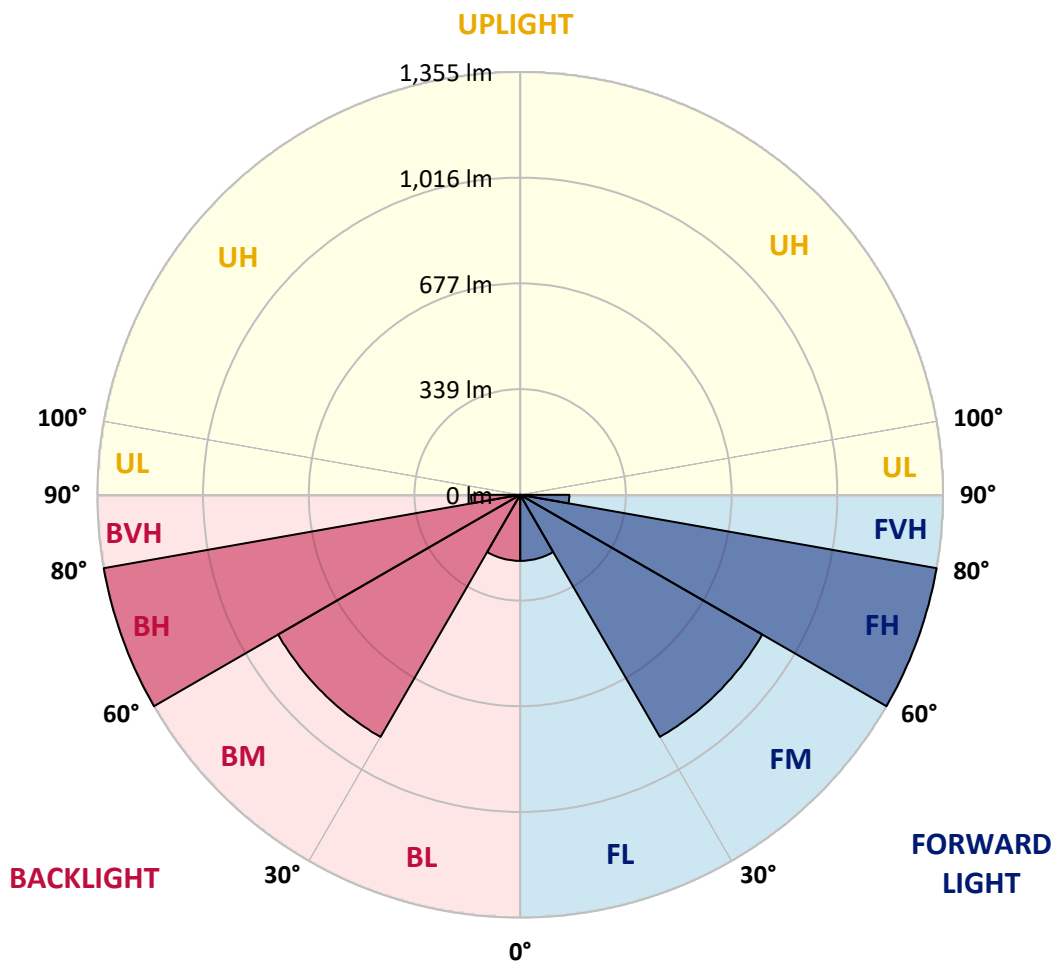
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 211.5 | 4.0 | | | |
| FM (30°-60°) | 895.6 | 17.1 | | | |
| FH (60°-80°) | 1354.7 | 25.9 | | | G1/1800 |
| FVH (80°-90°) | 157.4 | 3.0 | | | G2/225 |
| BL (0°-30°) | 211.5 | 4.0 | B1/500 | | |
| BM (30°-60°) | 895.6 | 17.1 | B1/1000 | | |
| BH (60°-80°) | 1354.7 | 25.9 | B3/2500 | | G1/1800 |
| BVH (80°-90°) | 157.4 | 3.0 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type V Short





REPORT NUMBER: P144236

CATALOG NUMBER: LDRL-5XQ-F02-E-7050

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 |
| 2.5° | 495.8 | 495.6 | 495.2 | 494.8 | 494.7 | 494.5 | 494.5 | 494.5 | 494.4 | 494.4 | 494.4 |
| 5° | 495.7 | 495.5 | 495.3 | 495.0 | 494.8 | 494.5 | 494.5 | 494.6 | 494.4 | 494.4 | 494.5 |
| 7.5° | 495.0 | 495.2 | 495.0 | 494.7 | 494.6 | 494.5 | 494.4 | 494.4 | 494.2 | 494.0 | 494.1 |
| 10° | 495.2 | 495.8 | 495.4 | 494.9 | 494.7 | 494.5 | 494.2 | 493.8 | 493.8 | 493.6 | 493.5 |
| 12.5° | 495.6 | 496.2 | 495.6 | 495.0 | 494.8 | 494.6 | 494.2 | 493.8 | 493.6 | 493.4 | 493.1 |
| 15° | 496.6 | 497.0 | 496.6 | 496.0 | 495.6 | 495.0 | 494.7 | 494.4 | 493.8 | 493.4 | 493.1 |
| 17.5° | 497.2 | 498.1 | 497.5 | 496.9 | 496.3 | 495.7 | 495.4 | 495.0 | 494.7 | 494.4 | 494.0 |
| 20° | 498.4 | 499.3 | 498.8 | 498.2 | 497.9 | 497.6 | 497.4 | 497.1 | 496.8 | 496.6 | 496.0 |
| 22.5° | 500.6 | 501.3 | 501.2 | 501.0 | 501.1 | 501.2 | 501.2 | 501.3 | 501.1 | 501.0 | 500.4 |
| 25° | 505.2 | 505.2 | 505.5 | 505.8 | 506.4 | 506.9 | 507.3 | 507.7 | 508.0 | 508.2 | 507.5 |
| 27.5° | 513.2 | 513.8 | 514.1 | 514.4 | 515.2 | 516.0 | 517.0 | 517.9 | 518.4 | 518.9 | 518.2 |
| 30° | 523.5 | 523.5 | 524.1 | 524.7 | 526.1 | 527.6 | 528.7 | 529.9 | 530.8 | 531.8 | 531.2 |
| 32.5° | 536.7 | 537.6 | 538.4 | 539.2 | 541.0 | 542.8 | 544.8 | 546.8 | 548.0 | 549.2 | 548.3 |
| 35° | 556.9 | 557.9 | 558.8 | 559.6 | 561.4 | 563.3 | 565.6 | 567.8 | 568.9 | 569.9 | 569.3 |
| 37.5° | 585.3 | 585.3 | 586.5 | 587.7 | 588.9 | 590.1 | 593.1 | 596.2 | 597.4 | 598.7 | 597.7 |
| 40° | 623.8 | 624.0 | 624.2 | 624.4 | 625.6 | 626.6 | 630.4 | 634.2 | 636.3 | 638.5 | 636.4 |
| 42.5° | 668.0 | 669.8 | 669.8 | 669.7 | 670.5 | 671.2 | 674.8 | 678.4 | 681.5 | 684.6 | 683.4 |
| 45° | 720.2 | 719.8 | 719.2 | 718.5 | 720.8 | 723.0 | 728.1 | 733.2 | 736.0 | 738.8 | 736.2 |
| 47.5° | 772.8 | 772.3 | 771.4 | 770.5 | 772.8 | 775.0 | 782.7 | 790.4 | 794.3 | 798.3 | 794.0 |
| 50° | 825.4 | 827.4 | 826.2 | 825.0 | 828.4 | 831.8 | 841.5 | 851.2 | 857.0 | 862.8 | 857.9 |
| 52.5° | 883.5 | 885.0 | 883.6 | 882.3 | 887.0 | 891.6 | 903.1 | 914.5 | 922.3 | 930.1 | 923.5 |
| 55° | 943.6 | 941.8 | 942.5 | 943.3 | 947.7 | 952.1 | 966.2 | 980.2 | 989.6 | 998.8 | 991.4 |
| 57.5° | 999.9 | 1000.6 | 999.8 | 999.0 | 1006.0 | 1013.0 | 1030.6 | 1048.3 | 1060.0 | 1071.8 | 1062.4 |
| 60° | 1057.4 | 1057.6 | 1056.0 | 1054.2 | 1061.8 | 1069.4 | 1094.8 | 1120.2 | 1135.3 | 1150.5 | 1137.7 |
| 62.5° | 1121.8 | 1121.7 | 1118.7 | 1115.8 | 1124.6 | 1133.6 | 1165.0 | 1196.6 | 1217.4 | 1238.2 | 1222.6 |
| 65° | 1200.8 | 1198.8 | 1197.1 | 1195.4 | 1205.6 | 1215.9 | 1255.1 | 1294.2 | 1322.3 | 1350.4 | 1330.4 |
| 67.5° | 1317.2 | 1315.6 | 1312.1 | 1308.6 | 1320.0 | 1331.4 | 1381.6 | 1431.8 | 1468.1 | 1504.4 | 1477.9 |
| 70° | 1445.2 | 1442.4 | 1444.8 | 1447.3 | 1473.8 | 1500.2 | 1567.4 | 1634.7 | 1677.7 | 1720.8 | 1676.2 |
| 72° | 1382.1 | 1383.3 | 1391.5 | 1399.7 | 1446.0 | 1492.4 | 1587.9 | 1683.5 | 1745.8 | 1808.0 | 1739.1 |
| 72.5° | 1360.0 | 1361.0 | 1370.4 | 1379.8 | 1424.0 | 1468.2 | 1566.6 | 1665.2 | 1729.6 | 1794.1 | 1723.3 |
| 75° | 1266.6 | 1269.2 | 1280.0 | 1290.8 | 1335.6 | 1380.4 | 1479.8 | 1579.1 | 1640.8 | 1702.6 | 1631.7 |
| 77.5° | 1113.9 | 1122.4 | 1133.3 | 1144.2 | 1197.6 | 1251.0 | 1363.3 | 1475.6 | 1543.8 | 1612.0 | 1531.5 |
| 80° | 850.2 | 847.0 | 865.9 | 884.7 | 935.7 | 986.6 | 1073.6 | 1160.5 | 1239.0 | 1317.5 | 1227.1 |
| 82.5° | 330.4 | 337.6 | 376.6 | 415.6 | 469.0 | 522.4 | 600.3 | 678.2 | 748.9 | 819.6 | 744.3 |
| 85° | 34.0 | 38.8 | 52.8 | 66.8 | 95.9 | 125.0 | 172.5 | 219.9 | 266.4 | 312.9 | 262.4 |
| 87.5° | 13.7 | 15.0 | 19.4 | 23.7 | 24.8 | 25.9 | 31.3 | 36.8 | 36.5 | 36.2 | 35.8 |
| 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: P144236

CATALOG NUMBER: LDRL-5XQ-F02-E-7050

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 | 494.7 |
| 2.5° | 494.5 | 494.7 | 494.8 | 494.8 | 494.8 | 495.1 | 495.4 | 495.0 |
| 5° | 494.7 | 494.8 | 494.8 | 494.8 | 494.8 | 495.1 | 495.4 | 495.0 |
| 7.5° | 494.2 | 494.2 | 494.2 | 494.4 | 494.7 | 494.8 | 494.8 | 494.7 |
| 10° | 493.4 | 493.4 | 493.5 | 493.8 | 494.0 | 494.3 | 494.6 | 494.7 |
| 12.5° | 492.8 | 492.9 | 493.0 | 493.2 | 493.5 | 493.8 | 494.0 | 494.4 |
| 15° | 492.8 | 492.9 | 493.0 | 493.1 | 493.3 | 493.7 | 494.0 | 494.4 |
| 17.5° | 493.6 | 493.4 | 493.2 | 493.3 | 493.5 | 493.9 | 494.4 | 494.7 |
| 20° | 495.4 | 495.1 | 494.9 | 494.9 | 494.9 | 495.3 | 495.7 | 495.7 |
| 22.5° | 499.8 | 498.9 | 498.0 | 497.9 | 497.8 | 497.8 | 497.9 | 498.1 |
| 25° | 506.8 | 505.4 | 504.0 | 503.6 | 503.2 | 503.0 | 502.8 | 503.2 |
| 27.5° | 517.4 | 515.9 | 514.3 | 513.4 | 512.5 | 512.0 | 511.5 | 511.6 |
| 30° | 530.6 | 528.8 | 527.0 | 525.5 | 524.0 | 523.3 | 522.6 | 522.8 |
| 32.5° | 547.4 | 545.3 | 543.2 | 541.1 | 539.0 | 538.1 | 537.2 | 537.4 |
| 35° | 568.8 | 566.3 | 563.8 | 562.1 | 560.4 | 559.0 | 557.6 | 558.7 |
| 37.5° | 596.6 | 594.4 | 592.1 | 591.0 | 589.9 | 588.6 | 587.4 | 587.5 |
| 40° | 634.2 | 631.9 | 629.6 | 628.6 | 627.7 | 626.1 | 624.4 | 624.8 |
| 42.5° | 682.1 | 678.5 | 675.0 | 673.2 | 671.6 | 670.8 | 670.0 | 670.5 |
| 45° | 733.6 | 730.0 | 726.4 | 725.0 | 723.6 | 721.5 | 719.5 | 721.4 |
| 47.5° | 789.8 | 785.3 | 780.8 | 778.3 | 775.8 | 776.4 | 777.1 | 775.6 |
| 50° | 853.0 | 845.5 | 838.0 | 835.0 | 832.0 | 832.0 | 832.0 | 831.8 |
| 52.5° | 916.8 | 906.4 | 896.0 | 893.5 | 891.0 | 890.4 | 889.8 | 889.1 |
| 55° | 984.0 | 971.2 | 958.4 | 953.6 | 948.9 | 949.6 | 950.2 | 952.1 |
| 57.5° | 1053.0 | 1036.2 | 1019.4 | 1014.0 | 1008.6 | 1009.0 | 1009.4 | 1012.4 |
| 60° | 1125.0 | 1103.2 | 1081.4 | 1075.4 | 1069.4 | 1071.0 | 1072.6 | 1074.4 |
| 62.5° | 1207.0 | 1180.7 | 1154.4 | 1146.4 | 1138.3 | 1140.3 | 1142.4 | 1147.3 |
| 65° | 1310.3 | 1277.4 | 1244.5 | 1236.1 | 1227.8 | 1228.7 | 1229.6 | 1238.1 |
| 67.5° | 1451.4 | 1407.6 | 1363.8 | 1356.1 | 1348.4 | 1349.7 | 1351.1 | 1364.8 |
| 70° | 1631.6 | 1566.8 | 1501.8 | 1469.9 | 1438.0 | 1433.0 | 1428.0 | 1435.3 |
| 72° | 1670.2 | 1578.6 | 1487.0 | 1439.8 | 1392.8 | 1385.4 | 1378.0 | 1378.7 |
| 72.5° | 1652.5 | 1559.8 | 1467.2 | 1421.4 | 1375.6 | 1369.6 | 1363.6 | 1362.4 |
| 75° | 1560.8 | 1470.2 | 1379.6 | 1332.3 | 1285.0 | 1273.6 | 1262.2 | 1262.1 |
| 77.5° | 1451.0 | 1336.8 | 1222.5 | 1171.5 | 1120.5 | 1108.6 | 1096.6 | 1087.3 |
| 80° | 1136.6 | 1034.2 | 931.8 | 880.0 | 828.3 | 809.2 | 790.0 | 778.6 |
| 82.5° | 669.0 | 574.8 | 480.6 | 414.9 | 349.2 | 329.4 | 309.6 | 282.2 |
| 85° | 212.0 | 163.1 | 114.2 | 89.1 | 64.0 | 51.7 | 39.4 | 34.6 |
| 87.5° | 35.2 | 28.6 | 22.0 | 21.2 | 20.5 | 16.1 | 11.7 | 9.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)