

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: P143925

Luminaire Tested: **LDRL-5WQ-F01-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143925
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33698)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-5WQ-F01-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE
Light Source: (7) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2530.7 lumens
Efficiency: N/A
Efficacy: 97.7 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G1

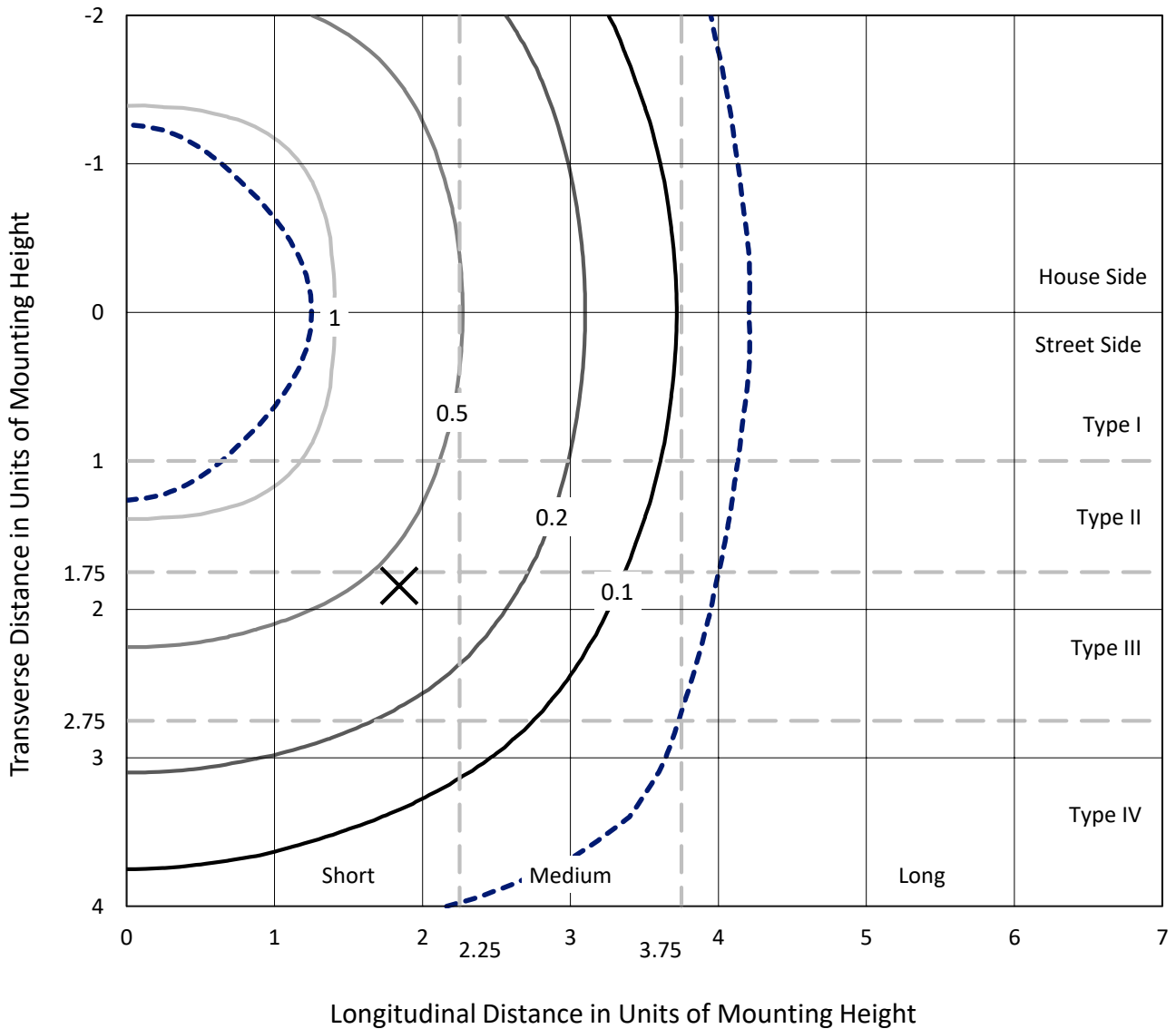
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

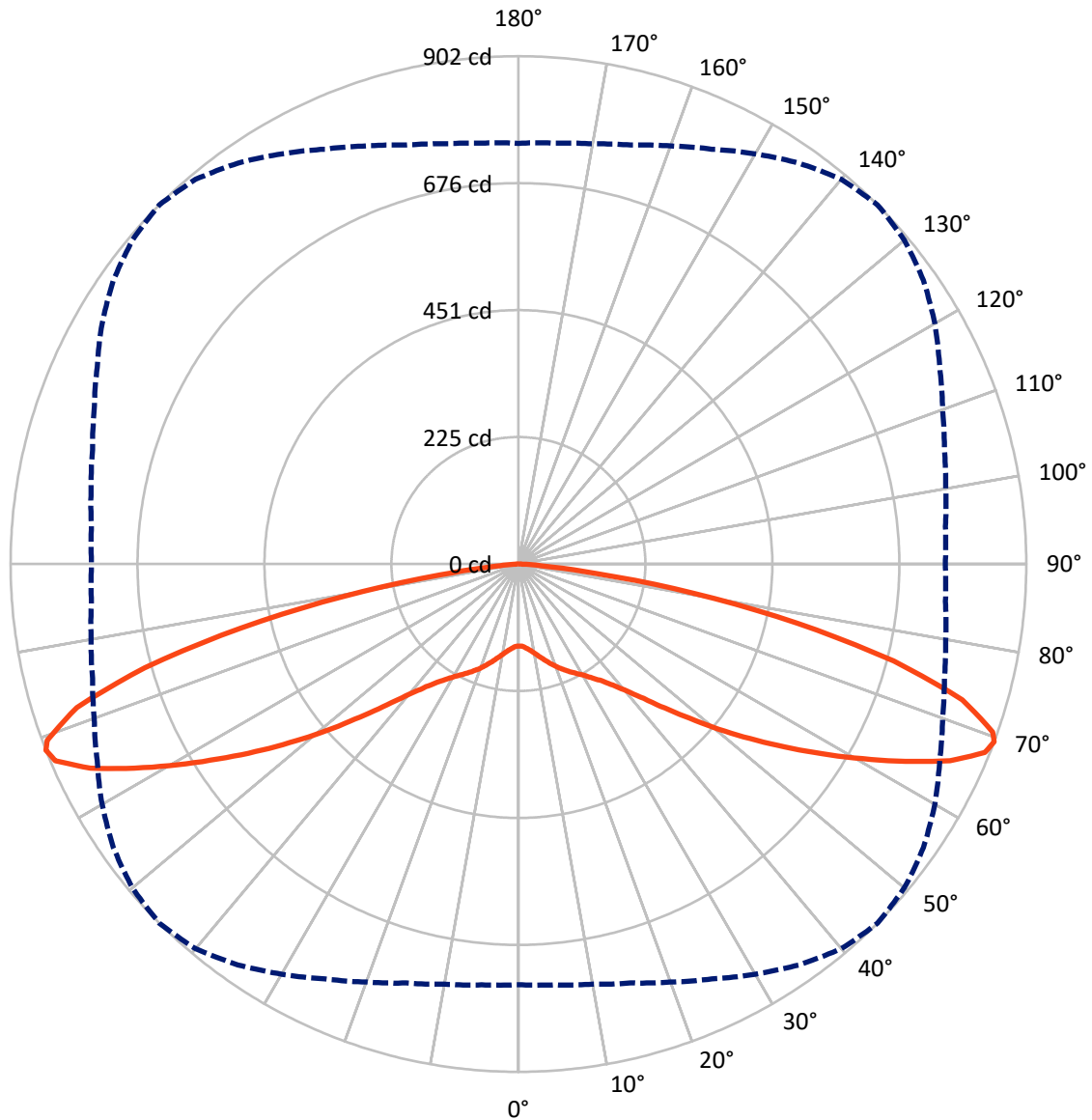
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.6 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: LDRL-5WQ-F01-E

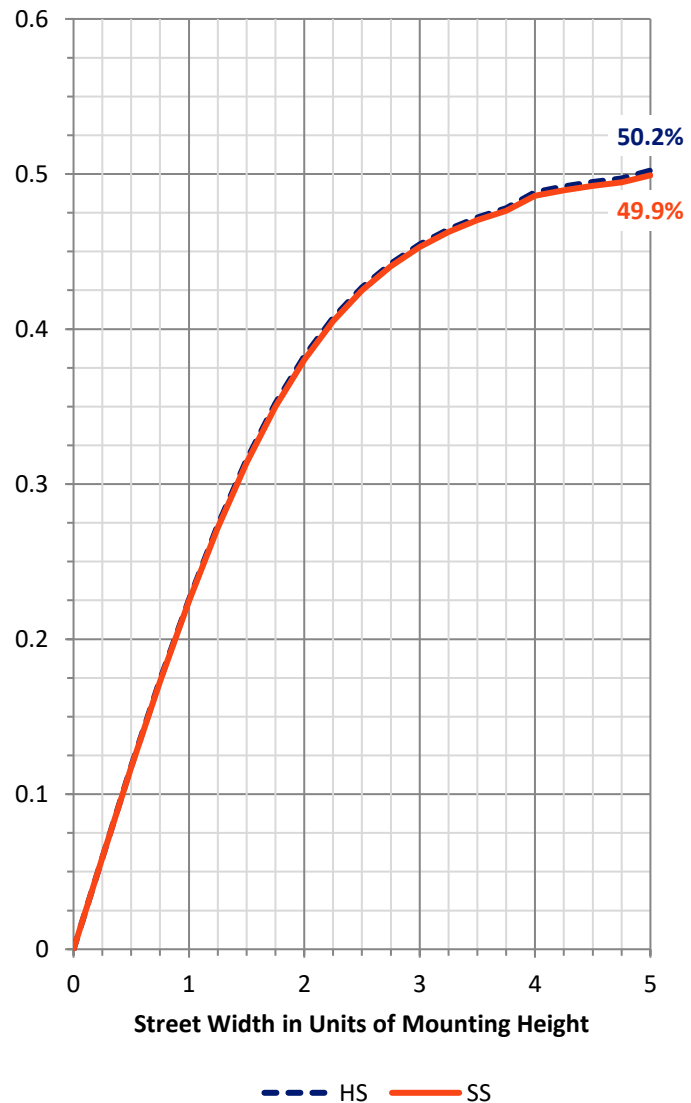
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1265.4 | 0.0 | 1265.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 1265.4 | 0.0 | 1265.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 2530.7 | 0.0 | 2530.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 14.7 | 0.6 |
| 10°-20° | 50.6 | 2.0 |
| 20°-30° | 97.5 | 3.9 |
| 30°-40° | 159.7 | 6.3 |
| 40°-50° | 277.8 | 11.0 |
| 50°-60° | 493.4 | 19.5 |
| 60°-70° | 766.0 | 30.3 |
| 70°-80° | 610.3 | 24.1 |
| 80°-90° | 60.7 | 2.4 |
| 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° | 2530.7 | 100.0 |
| 0°-180° | 2530.7 | 100.0 |



REPORT NUMBER: P143925

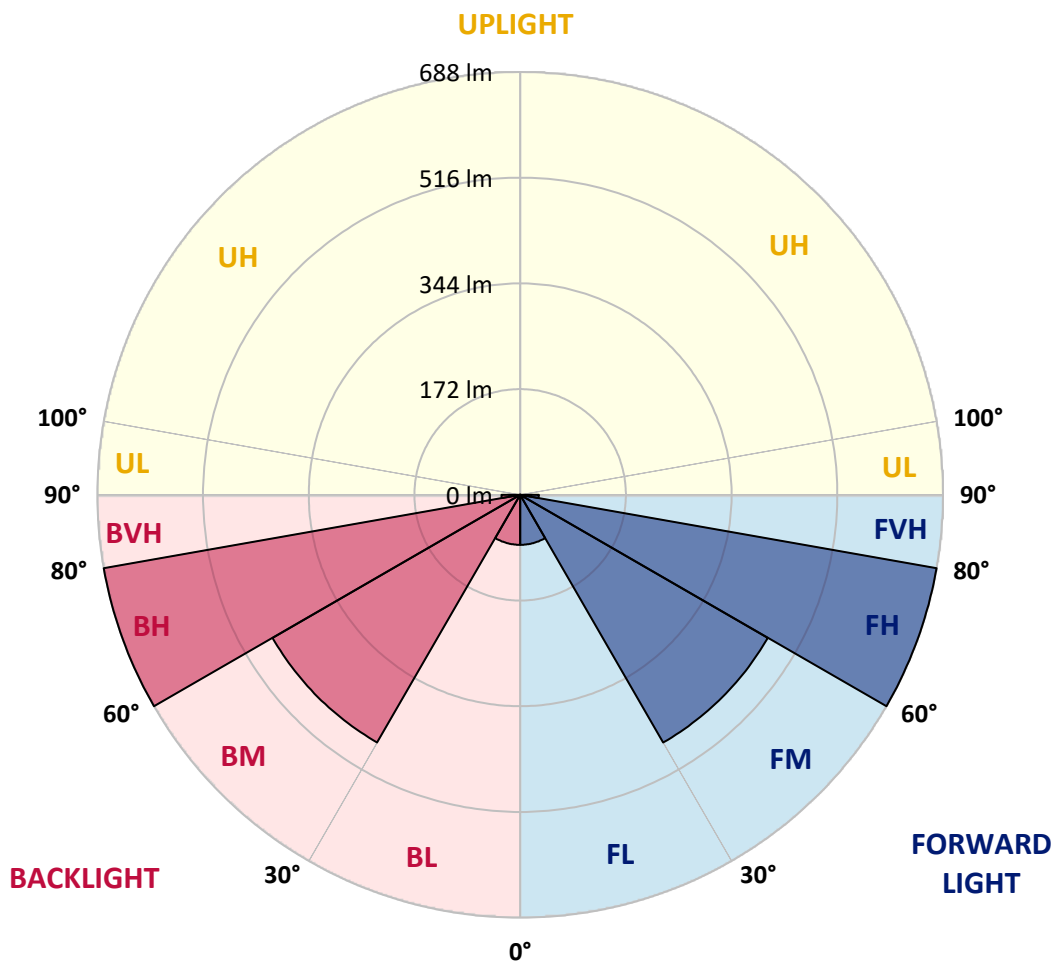
CATALOG NUMBER: LDRL-5WQ-F01-E

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 81.4 | 3.2 | | | |
| FM | (30°-60°) | 465.5 | 18.4 | | | |
| FH | (60°-80°) | 688.2 | 27.2 | | | G1/1800 |
| FVH | (80°-90°) | 30.3 | 1.2 | | | G1/100 |
| BL | (0°-30°) | 81.4 | 3.2 | B0/110 | | |
| BM | (30°-60°) | 465.5 | 18.4 | B1/1000 | | |
| BH | (60°-80°) | 688.2 | 27.2 | B2/1000 | | G1/1800 |
| BVH | (80°-90°) | 30.3 | 1.2 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G1

Type V Short





REPORT NUMBER: P143925
 CATALOG NUMBER: LDRL-5WQ-F01-E

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 |
| 2.5° | 146.6 | 146.6 | 146.6 | 146.4 | 146.4 | 146.3 | 146.4 | 146.3 | 146.3 | 146.3 | 146.3 |
| 5° | 150.4 | 150.1 | 150.1 | 149.9 | 150.2 | 150.2 | 149.9 | 150.1 | 149.9 | 150.1 | 150.1 |
| 7.5° | 155.2 | 155.2 | 155.2 | 155.0 | 155.4 | 155.2 | 155.0 | 155.2 | 155.2 | 155.0 | 155.0 |
| 10° | 161.1 | 161.3 | 161.1 | 161.1 | 161.6 | 161.5 | 161.6 | 161.6 | 161.8 | 161.6 | 161.6 |
| 12.5° | 168.1 | 168.1 | 168.2 | 168.4 | 168.6 | 168.7 | 169.2 | 169.1 | 169.4 | 169.1 | 169.1 |
| 15° | 176.2 | 176.5 | 176.2 | 176.2 | 176.7 | 177.0 | 177.2 | 177.2 | 177.5 | 177.3 | 177.0 |
| 17.5° | 184.8 | 184.9 | 184.8 | 184.6 | 185.1 | 185.6 | 185.7 | 185.7 | 186.2 | 185.9 | 185.9 |
| 20° | 193.5 | 193.7 | 193.3 | 193.2 | 193.8 | 193.8 | 194.2 | 194.3 | 194.8 | 195.0 | 194.5 |
| 22.5° | 201.6 | 201.8 | 201.6 | 201.4 | 202.1 | 202.1 | 202.6 | 202.7 | 203.4 | 203.2 | 203.2 |
| 25° | 209.5 | 209.5 | 209.4 | 209.4 | 210.0 | 210.2 | 210.7 | 211.0 | 211.7 | 211.7 | 211.7 |
| 27.5° | 216.8 | 216.9 | 216.6 | 216.5 | 217.8 | 218.3 | 218.6 | 219.3 | 219.8 | 220.1 | 219.9 |
| 30° | 225.0 | 225.0 | 224.9 | 225.4 | 226.2 | 226.9 | 227.5 | 228.5 | 229.5 | 229.2 | 229.2 |
| 32.5° | 234.8 | 235.1 | 234.9 | 235.6 | 236.6 | 237.6 | 238.4 | 239.6 | 240.1 | 240.9 | 240.2 |
| 35° | 247.8 | 248.5 | 248.2 | 248.8 | 249.6 | 250.3 | 252.1 | 253.3 | 254.1 | 254.6 | 254.3 |
| 37.5° | 264.2 | 263.8 | 264.5 | 264.7 | 266.3 | 267.1 | 269.3 | 270.9 | 272.3 | 272.8 | 272.4 |
| 40° | 284.5 | 284.0 | 284.8 | 285.6 | 287.8 | 288.6 | 291.1 | 293.6 | 295.4 | 296.0 | 295.7 |
| 42.5° | 308.7 | 309.4 | 310.7 | 311.9 | 314.9 | 317.2 | 320.0 | 323.6 | 325.6 | 326.4 | 325.3 |
| 45° | 340.6 | 339.5 | 341.9 | 344.9 | 346.6 | 351.7 | 356.3 | 360.1 | 363.4 | 364.7 | 363.4 |
| 47.5° | 376.9 | 376.8 | 379.7 | 383.4 | 387.7 | 392.5 | 397.9 | 402.9 | 408.6 | 409.0 | 407.3 |
| 50° | 417.1 | 420.4 | 422.0 | 425.6 | 433.6 | 439.5 | 446.4 | 453.9 | 459.2 | 460.8 | 457.8 |
| 52.5° | 465.4 | 467.9 | 468.9 | 475.0 | 482.3 | 489.5 | 499.3 | 508.2 | 514.3 | 515.0 | 513.5 |
| 55° | 517.9 | 519.9 | 521.7 | 529.2 | 537.1 | 543.5 | 555.9 | 564.7 | 570.8 | 573.1 | 572.1 |
| 57.5° | 572.3 | 574.1 | 576.4 | 584.5 | 592.6 | 601.6 | 613.4 | 623.6 | 630.7 | 635.0 | 633.8 |
| 60° | 632.5 | 632.5 | 637.8 | 645.9 | 652.5 | 663.2 | 675.4 | 687.3 | 695.1 | 701.9 | 700.0 |
| 62.5° | 695.9 | 697.7 | 702.9 | 709.5 | 716.4 | 726.3 | 740.2 | 754.4 | 766.3 | 771.4 | 771.2 |
| 65° | 744.0 | 747.3 | 754.0 | 761.6 | 773.2 | 784.9 | 802.4 | 820.1 | 834.4 | 841.9 | 841.9 |
| 67.5° | 758.0 | 760.1 | 768.6 | 780.1 | 796.8 | 815.5 | 839.2 | 863.8 | 883.5 | 893.2 | 887.1 |
| 69° | 746.8 | 749.9 | 757.3 | 769.9 | 789.7 | 812.5 | 840.7 | 868.6 | 891.4 | 901.5 | 894.4 |
| 70° | 733.7 | 737.2 | 744.6 | 757.0 | 777.5 | 801.7 | 830.0 | 860.0 | 884.5 | 893.1 | 885.0 |
| 72.5° | 680.6 | 684.9 | 690.1 | 700.9 | 719.4 | 742.1 | 767.6 | 794.0 | 817.4 | 824.2 | 814.1 |
| 75° | 589.9 | 590.7 | 593.4 | 601.3 | 607.9 | 624.1 | 645.7 | 666.7 | 684.4 | 688.3 | 677.6 |
| 77.5° | 417.6 | 413.1 | 408.6 | 415.4 | 420.7 | 441.5 | 464.9 | 482.1 | 500.6 | 506.2 | 495.3 |
| 80° | 183.1 | 181.5 | 187.7 | 196.6 | 219.9 | 233.8 | 256.7 | 281.3 | 297.0 | 315.4 | 295.7 |
| 82.5° | 36.2 | 38.1 | 44.1 | 54.5 | 67.2 | 84.5 | 99.6 | 116.6 | 131.9 | 138.9 | 131.8 |
| 85° | 14.7 | 16.0 | 18.2 | 20.3 | 21.8 | 24.4 | 28.7 | 35.7 | 39.3 | 39.8 | 37.8 |
| 87.5° | 6.1 | 7.1 | 9.6 | 11.4 | 11.6 | 11.1 | 11.4 | 11.7 | 9.6 | 7.8 | 9.7 |
| 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: P143925
 CATALOG NUMBER: LDRL-5WQ-F01-E

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 |
| 2.5° | 146.3 | 146.4 | 146.3 | 146.4 | 146.3 | 146.3 | 146.4 | 146.3 |
| 5° | 149.9 | 150.1 | 149.9 | 149.8 | 149.6 | 149.8 | 149.8 | 149.8 |
| 7.5° | 155.0 | 154.9 | 154.7 | 154.7 | 154.5 | 154.4 | 154.7 | 154.7 |
| 10° | 161.3 | 161.1 | 160.8 | 160.8 | 160.6 | 160.6 | 160.6 | 160.6 |
| 12.5° | 168.9 | 168.4 | 168.2 | 167.7 | 167.6 | 167.4 | 167.4 | 167.6 |
| 15° | 176.8 | 176.3 | 176.2 | 175.3 | 175.3 | 175.2 | 175.2 | 175.2 |
| 17.5° | 185.2 | 184.8 | 184.1 | 184.1 | 183.6 | 183.3 | 183.4 | 183.1 |
| 20° | 193.8 | 193.2 | 192.8 | 192.7 | 192.0 | 192.0 | 192.0 | 191.9 |
| 22.5° | 202.3 | 201.8 | 201.3 | 200.6 | 199.9 | 199.8 | 199.8 | 199.6 |
| 25° | 210.8 | 210.0 | 209.0 | 208.4 | 207.7 | 207.2 | 207.2 | 207.2 |
| 27.5° | 219.4 | 218.4 | 216.9 | 216.1 | 215.1 | 214.6 | 214.6 | 214.5 |
| 30° | 228.5 | 227.3 | 226.0 | 224.9 | 223.6 | 223.1 | 222.9 | 222.6 |
| 32.5° | 239.4 | 238.2 | 236.9 | 235.3 | 234.0 | 233.1 | 233.1 | 232.6 |
| 35° | 253.3 | 252.0 | 251.0 | 248.8 | 247.2 | 245.8 | 246.0 | 246.3 |
| 37.5° | 271.4 | 269.8 | 269.0 | 266.3 | 264.2 | 262.8 | 262.8 | 262.7 |
| 40° | 294.5 | 292.9 | 291.1 | 288.6 | 286.0 | 284.1 | 283.7 | 283.7 |
| 42.5° | 323.9 | 322.5 | 320.0 | 316.5 | 313.4 | 311.4 | 309.7 | 309.9 |
| 45° | 360.8 | 358.9 | 355.5 | 351.2 | 347.4 | 344.6 | 342.3 | 342.3 |
| 47.5° | 405.5 | 401.7 | 396.9 | 393.1 | 386.7 | 382.4 | 380.7 | 380.4 |
| 50° | 456.5 | 449.4 | 443.5 | 438.0 | 431.3 | 426.8 | 424.3 | 423.7 |
| 52.5° | 510.0 | 502.6 | 495.1 | 488.1 | 479.8 | 475.2 | 471.2 | 470.9 |
| 55° | 568.1 | 558.7 | 549.3 | 542.4 | 532.6 | 527.8 | 523.9 | 521.6 |
| 57.5° | 627.4 | 616.8 | 610.1 | 600.2 | 589.9 | 586.5 | 582.7 | 579.8 |
| 60° | 694.1 | 682.5 | 673.6 | 663.2 | 656.6 | 649.2 | 645.6 | 643.4 |
| 62.5° | 762.3 | 751.6 | 740.2 | 730.3 | 721.0 | 715.9 | 710.9 | 708.5 |
| 65° | 831.6 | 814.0 | 800.4 | 786.7 | 775.8 | 766.6 | 758.8 | 757.8 |
| 67.5° | 874.2 | 851.9 | 829.3 | 809.3 | 793.3 | 780.3 | 772.4 | 769.6 |
| 69° | 877.7 | 853.4 | 825.2 | 801.3 | 782.8 | 770.2 | 760.8 | 757.8 |
| 70° | 868.1 | 843.7 | 814.0 | 788.2 | 769.1 | 755.4 | 747.6 | 742.6 |
| 72.5° | 798.1 | 776.7 | 748.1 | 722.7 | 705.3 | 689.3 | 681.6 | 679.6 |
| 75° | 658.4 | 635.7 | 609.4 | 597.2 | 585.1 | 575.1 | 569.8 | 569.3 |
| 77.5° | 467.6 | 444.3 | 424.3 | 408.3 | 395.3 | 388.8 | 390.3 | 384.9 |
| 80° | 267.6 | 237.3 | 213.2 | 199.0 | 179.6 | 168.1 | 155.0 | 164.4 |
| 82.5° | 115.1 | 93.0 | 70.8 | 57.6 | 43.9 | 34.8 | 28.7 | 26.7 |
| 85° | 32.2 | 26.3 | 22.0 | 20.1 | 18.2 | 16.2 | 13.7 | 12.7 |
| 87.5° | 10.9 | 10.4 | 9.2 | 9.2 | 8.4 | 7.1 | 5.0 | 4.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)