

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P170803

Luminaire Tested: **LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P170803
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 25° Narrow Flood
Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2551.6 lumens
Efficiency: N/A
Efficacy: 57.4 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

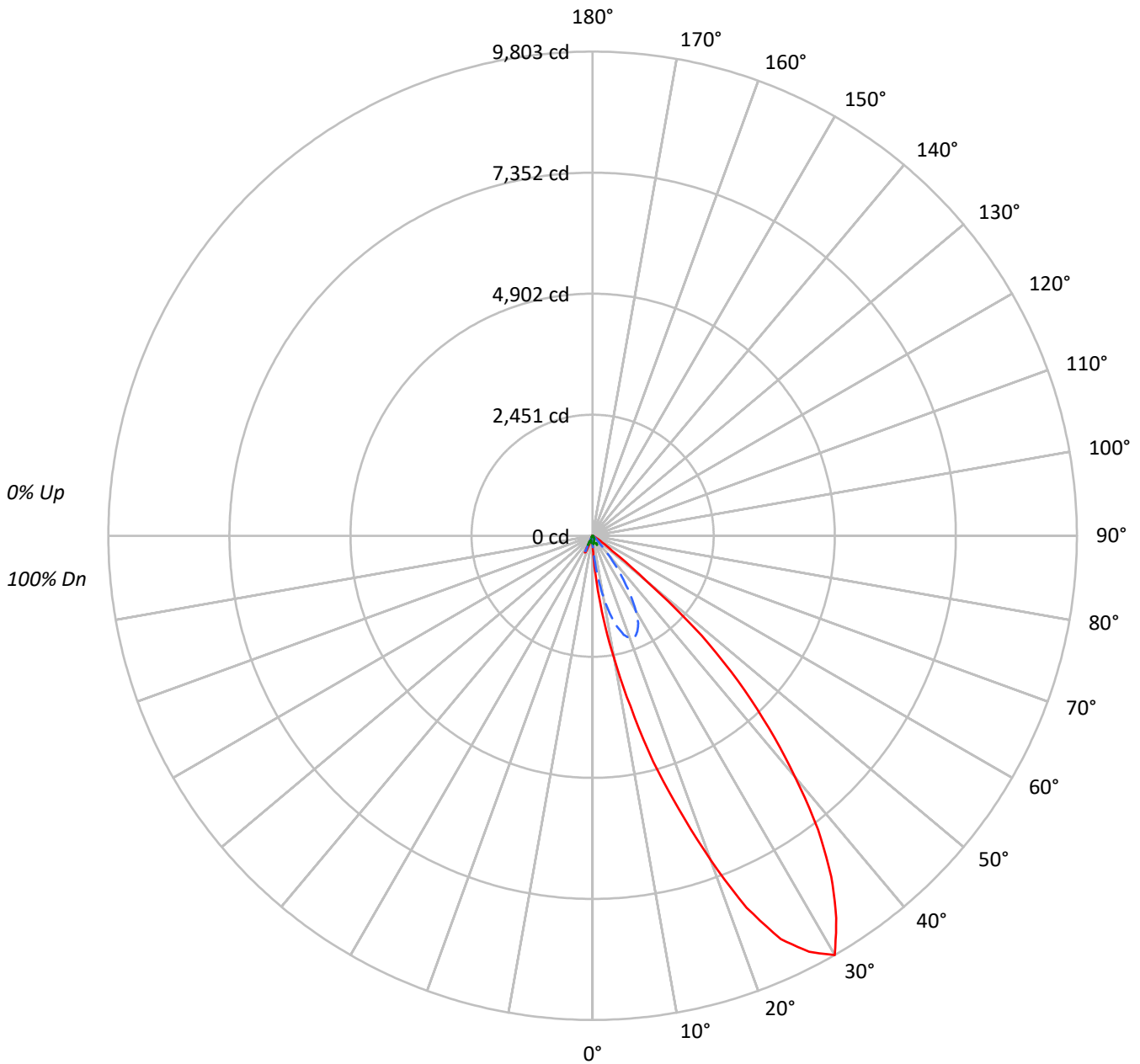
Input Watts (W): 44.49
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P170803

CATALOG NUMBER: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt

Luminous Intensity Polar Plot





TEST NUMBER: P170803

CATALOG NUMBER: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 50 | | | | | | | | | 30 | | | | | | | | | 10 | | | | | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 103 | 101 | 99 | 99 | 98 | 96 | 96 | 94 | 93 | 91 | | | | | | | | | | | | | | | | | | | |
| 2 | 106 | 100 | 95 | 91 | 103 | 98 | 94 | 90 | 95 | 91 | 88 | 92 | 89 | 86 | 89 | 86 | 84 | 83 | | | | | | | | | | | | | | | | | | | |
| 3 | 99 | 91 | 85 | 81 | 97 | 90 | 84 | 80 | 87 | 82 | 79 | 84 | 81 | 77 | 82 | 79 | 76 | 74 | | | | | | | | | | | | | | | | | | | |
| 4 | 92 | 83 | 77 | 72 | 90 | 82 | 76 | 71 | 80 | 74 | 70 | 78 | 73 | 69 | 76 | 72 | 69 | 67 | | | | | | | | | | | | | | | | | | | |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 69 | 64 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 | | | | | | | | | | | | | | | | | | | |
| 6 | 80 | 70 | 63 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 60 | 56 | 64 | 60 | 56 | 54 | | | | | | | | | | | | | | | | | | | |
| 7 | 75 | 64 | 57 | 52 | 74 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 55 | 51 | 59 | 54 | 51 | 49 | | | | | | | | | | | | | | | | | | | |
| 8 | 70 | 59 | 52 | 47 | 69 | 58 | 51 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | | | | | | | | | | | | | | | | | |
| 9 | 66 | 54 | 47 | 42 | 64 | 54 | 47 | 42 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 45 | 42 | 40 | | | | | | | | | | | | | | | | | | | |
| 10 | 62 | 50 | 43 | 38 | 60 | 50 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|---------|-------|-------|
| 0° | 23423 | 23423 | 23423 |
| 5° | 120437 | 21767 | 10165 |
| 10° | 317430 | 18161 | 5298 |
| 15° | 604185 | 14251 | 4099 |
| 20° | 917677 | 11787 | 10947 |
| 25° | 1226192 | 28118 | 50642 |
| 30° | 1396186 | 10597 | 10241 |
| 35° | 1268161 | 5993 | 4638 |
| 40° | 1027123 | 2689 | 1852 |
| 45° | 726827 | 1570 | 454 |
| 50° | 265214 | 979 | 0 |
| 55° | 55202 | 817 | 0 |
| 60° | 13297 | 937 | 0 |
| 65° | 4115 | 1109 | 0 |
| 70° | 1370 | 1370 | 0 |
| 75° | 620 | 1811 | 0 |
| 80° | 0 | 2699 | 0 |
| 85° | 0 | 5378 | 0 |



TEST NUMBER: P170803

CATALOG NUMBER: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.0 | 1.7 |
| 10°-20° | 320.9 | 12.6 |
| 20°-30° | 813.9 | 31.9 |
| 30°-40° | 871.1 | 34.1 |
| 40°-50° | 445.3 | 17.5 |
| 50°-60° | 46.5 | 1.8 |
| 60°-70° | 5.3 | 0.2 |
| 70°-80° | 2.9 | 0.1 |
| 80°-90° | 2.6 | 0.1 |
| 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°-30° | 1177.9 | 46.2 |
| 0°-40° | 2049.0 | 80.3 |
| 0°-60° | 2540.8 | 99.6 |
| 0°-90° | 2551.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2551.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|-----|------|------|------|
| 0° | 190 | 190 | 190 | 190 | 190 | |
| 5° | 973 | 529 | 176 | 101 | 82 | 142 |
| 15° | 4731 | 1902 | 112 | 40 | 32 | 1398 |
| 25° | 9010 | 2142 | 207 | 346 | 372 | 4094 |
| 35° | 8422 | 1086 | 40 | 31 | 31 | 5171 |
| 45° | 4167 | 145 | 9 | 5 | 3 | 3110 |
| 55° | 257 | 23 | 4 | 3 | 0 | 348 |
| 65° | 14 | 5 | 4 | 3 | 0 | 19 |
| 75° | 1 | 3 | 4 | 4 | 0 | 1 |
| 85° | 0 | 3 | 4 | 4 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P170803

CATALOG NUMBER: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 |
| 2.5° | 383.7 | 387.5 | 359.3 | 368.3 | 374.7 | 361.9 | 359.3 | 359.3 | 373.4 | 365.7 | 378.6 |
| 5° | 972.7 | 968.9 | 920.1 | 934.2 | 944.5 | 920.1 | 931.6 | 913.7 | 935.5 | 921.4 | 935.5 |
| 7.5° | 1699.0 | 1743.9 | 1682.3 | 1696.5 | 1705.4 | 1679.8 | 1686.2 | 1660.5 | 1684.9 | 1668.2 | 1679.8 |
| 10° | 2534.4 | 2580.6 | 2508.8 | 2520.3 | 2526.7 | 2502.3 | 2503.6 | 2470.3 | 2492.1 | 2474.1 | 2481.8 |
| 12.5° | 3532.8 | 3550.8 | 3516.1 | 3525.1 | 3528.9 | 3496.9 | 3436.6 | 3443.0 | 3464.8 | 3434.0 | 3441.7 |
| 15° | 4731.4 | 4718.5 | 4677.5 | 4707.0 | 4677.5 | 4662.1 | 4570.9 | 4565.8 | 4578.6 | 4544.0 | 4488.8 |
| 17.5° | 5787.5 | 5885.0 | 5838.8 | 5855.5 | 5819.6 | 5819.6 | 5702.8 | 5683.5 | 5684.8 | 5592.4 | 5582.1 |
| 20° | 6991.2 | 7115.6 | 7002.7 | 7007.8 | 6960.4 | 6959.1 | 6816.6 | 6776.9 | 6760.2 | 6654.9 | 6625.4 |
| 22.5° | 8151.2 | 8187.2 | 8185.9 | 8164.1 | 8052.4 | 8116.6 | 7938.2 | 7875.3 | 7824.0 | 7704.6 | 7645.6 |
| 25° | 9009.7 | 9122.6 | 9045.6 | 8990.5 | 8892.9 | 8973.8 | 8773.6 | 8691.5 | 8614.5 | 8514.4 | 8437.4 |
| 27.5° | 9494.8 | 9600.0 | 9582.0 | 9499.9 | 9399.8 | 9478.1 | 9258.7 | 9152.2 | 9043.1 | 8969.9 | 8873.7 |
| 30° | 9802.8 | 9963.2 | 9910.6 | 9732.2 | 9585.9 | 9611.6 | 9365.2 | 9222.7 | 9102.1 | 9026.4 | 8904.5 |
| 32.5° | 9177.8 | 9343.4 | 9328.0 | 9198.4 | 9122.6 | 9185.5 | 8971.2 | 8830.1 | 8714.6 | 8654.3 | 8518.2 |
| 35° | 8422.0 | 8615.8 | 8573.4 | 8465.6 | 8410.4 | 8483.6 | 8274.4 | 8156.4 | 8039.6 | 7987.0 | 7838.1 |
| 37.5° | 7496.8 | 7679.0 | 7636.6 | 7534.0 | 7480.1 | 7534.0 | 7333.8 | 7224.7 | 7114.4 | 7059.2 | 6957.8 |
| 40° | 6379.0 | 6539.5 | 6494.5 | 6399.6 | 6354.7 | 6393.2 | 6219.9 | 6125.0 | 6031.3 | 5990.2 | 5855.5 |
| 42.5° | 5287.0 | 5415.3 | 5374.3 | 5292.1 | 5257.5 | 5283.2 | 5140.7 | 5056.0 | 4973.9 | 4939.2 | 4859.7 |
| 45° | 4166.7 | 4293.8 | 4254.0 | 4183.4 | 4151.3 | 4165.4 | 4046.1 | 3970.4 | 3899.8 | 3867.7 | 3795.9 |
| 47.5° | 2990.0 | 3132.4 | 3083.7 | 3023.3 | 2990.0 | 2983.6 | 2878.3 | 2810.3 | 2816.7 | 2707.7 | 2640.9 |
| 50° | 1382.1 | 1502.7 | 1453.9 | 1421.8 | 1389.8 | 1371.8 | 1334.6 | 1257.6 | 1279.4 | 1180.6 | 1142.1 |
| 52.5° | 501.8 | 531.3 | 519.7 | 509.5 | 499.2 | 495.3 | 482.5 | 463.3 | 465.8 | 441.4 | 429.9 |
| 55° | 256.7 | 270.8 | 266.9 | 260.5 | 260.5 | 256.7 | 250.2 | 242.5 | 237.4 | 233.6 | 229.7 |
| 57.5° | 118.1 | 125.8 | 123.2 | 120.6 | 120.6 | 118.1 | 115.5 | 111.6 | 114.2 | 107.8 | 106.5 |
| 60° | 53.9 | 57.7 | 56.5 | 55.2 | 55.2 | 55.2 | 53.9 | 52.6 | 52.6 | 51.3 | 50.0 |
| 62.5° | 25.7 | 28.2 | 26.9 | 26.9 | 26.9 | 26.9 | 25.7 | 25.7 | 25.7 | 25.7 | 24.4 |
| 65° | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 | 14.1 | 12.8 | 14.1 | 12.8 | 12.8 |
| 67.5° | 7.7 | 7.7 | 7.7 | 7.7 | 6.4 | 7.7 | 7.7 | 6.4 | 6.4 | 6.4 | 6.4 |
| 70° | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 72.5° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 75° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 77.5° | 0.0 | 1.3 | 1.3 | 1.3 | 0.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 1.3 | 0.0 | 1.3 | 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 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 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 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P170803

CATALOG NUMBER: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 11° | 12° | 13° | 14° | 15° | 17.5° | 20° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 0° | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 | 189.9 |
| 2.5° | 349.0 | 358.0 | 367.0 | 364.4 | 351.6 | 350.3 | 345.2 | 347.8 | 270.8 | 219.4 | 183.5 |
| 5° | 885.4 | 897.0 | 908.5 | 902.1 | 870.0 | 862.3 | 836.7 | 831.5 | 528.7 | 259.2 | 175.8 |
| 7.5° | 1618.2 | 1624.6 | 1633.6 | 1625.9 | 1578.4 | 1556.6 | 1502.7 | 1450.1 | 889.3 | 313.1 | 163.0 |
| 10° | 2412.5 | 2409.9 | 2413.8 | 2403.5 | 2344.5 | 2302.2 | 2218.7 | 2181.5 | 1260.2 | 359.3 | 145.0 |
| 12.5° | 3339.0 | 3328.8 | 3272.3 | 3299.2 | 3215.8 | 3129.9 | 2992.5 | 2877.1 | 1610.5 | 385.0 | 128.3 |
| 15° | 4420.8 | 4390.0 | 4369.5 | 4338.7 | 4236.0 | 4097.4 | 3888.3 | 3759.9 | 1901.8 | 382.4 | 111.6 |
| 17.5° | 5496.2 | 5446.1 | 5356.3 | 5367.8 | 5248.5 | 5054.7 | 4778.8 | 4559.4 | 2103.3 | 350.3 | 98.8 |
| 20° | 6513.8 | 6439.4 | 6326.4 | 6317.5 | 6173.7 | 5918.4 | 5570.6 | 5298.5 | 2213.6 | 297.7 | 89.8 |
| 22.5° | 7494.2 | 7378.7 | 7227.3 | 7179.8 | 6995.0 | 6633.1 | 6178.9 | 5847.8 | 2223.9 | 249.0 | 107.8 |
| 25° | 8266.7 | 8121.7 | 7953.6 | 7871.5 | 7667.4 | 7205.5 | 6639.5 | 6232.8 | 2141.7 | 246.4 | 206.6 |
| 27.5° | 8697.9 | 8533.6 | 8365.5 | 8253.9 | 8047.3 | 7523.7 | 6883.4 | 6413.7 | 2000.6 | 264.4 | 196.3 |
| 30° | 8721.0 | 8536.2 | 8361.7 | 8220.5 | 8015.2 | 7455.7 | 6775.6 | 6286.7 | 1746.5 | 166.8 | 74.4 |
| 32.5° | 8337.3 | 8139.7 | 7965.1 | 7806.0 | 7603.3 | 7039.9 | 6372.6 | 5905.5 | 1420.6 | 116.8 | 52.6 |
| 35° | 7666.2 | 7462.1 | 7295.3 | 7127.2 | 6937.3 | 6407.3 | 5795.2 | 5360.1 | 1085.6 | 92.4 | 39.8 |
| 37.5° | 6752.5 | 6563.8 | 6416.3 | 6302.1 | 6096.7 | 5674.5 | 5115.0 | 4654.4 | 767.4 | 65.4 | 24.4 |
| 40° | 5729.7 | 5570.6 | 5450.0 | 5351.2 | 5161.2 | 4786.5 | 4221.9 | 3833.1 | 465.8 | 46.2 | 16.7 |
| 42.5° | 4700.6 | 4551.7 | 4445.2 | 4351.5 | 4175.7 | 3844.6 | 3380.1 | 2990.0 | 223.3 | 32.1 | 11.5 |
| 45° | 3656.0 | 3522.5 | 3432.7 | 3348.0 | 3190.2 | 2864.2 | 2495.9 | 2213.6 | 145.0 | 23.1 | 9.0 |
| 47.5° | 2497.2 | 2427.9 | 2280.3 | 2187.9 | 2026.3 | 1777.3 | 1432.1 | 1121.6 | 96.2 | 16.7 | 6.4 |
| 50° | 1038.2 | 1002.2 | 904.7 | 841.8 | 749.4 | 622.4 | 451.7 | 378.6 | 59.0 | 11.5 | 5.1 |
| 52.5° | 402.9 | 394.0 | 369.6 | 355.5 | 332.4 | 299.0 | 249.0 | 222.0 | 35.9 | 9.0 | 5.1 |
| 55° | 216.9 | 214.3 | 201.5 | 193.8 | 180.9 | 164.3 | 134.7 | 118.1 | 23.1 | 6.4 | 3.8 |
| 57.5° | 100.1 | 98.8 | 92.4 | 92.4 | 83.4 | 77.0 | 64.2 | 57.7 | 14.1 | 5.1 | 3.8 |
| 60° | 47.5 | 47.5 | 44.9 | 44.9 | 41.1 | 38.5 | 32.1 | 29.5 | 9.0 | 3.8 | 3.8 |
| 62.5° | 23.1 | 23.1 | 23.1 | 23.1 | 21.8 | 20.5 | 18.0 | 16.7 | 6.4 | 3.8 | 3.8 |
| 65° | 12.8 | 12.8 | 12.8 | 12.8 | 11.5 | 11.5 | 10.3 | 9.0 | 5.1 | 3.8 | 3.8 |
| 67.5° | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 5.1 | 5.1 | 3.8 | 3.8 | 3.8 |
| 70° | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 2.6 | 2.6 | 2.6 | 2.6 | 3.8 | 3.8 |
| 72.5° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 75° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 77.5° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 80° | 0.0 | 0.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 82.5° | 0.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 3.8 | 3.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P170803

CATALOG NUMBER: LDA4A28935D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 112.5° | 135° | 157.5° | 180° |
|-------|--------|-------|--------|-------|
| 0° | 189.9 | 189.9 | 189.9 | 189.9 |
| 2.5° | 157.8 | 137.3 | 127.0 | 124.5 |
| 5° | 129.6 | 101.4 | 87.3 | 82.1 |
| 7.5° | 105.2 | 73.1 | 61.6 | 56.5 |
| 10° | 83.4 | 57.7 | 46.2 | 42.3 |
| 12.5° | 69.3 | 46.2 | 37.2 | 34.6 |
| 15° | 59.0 | 39.8 | 33.4 | 32.1 |
| 17.5° | 53.9 | 42.3 | 39.8 | 41.1 |
| 20° | 65.4 | 69.3 | 80.8 | 83.4 |
| 22.5° | 138.6 | 240.0 | 325.9 | 345.2 |
| 25° | 288.7 | 346.5 | 359.3 | 372.1 |
| 27.5° | 160.4 | 124.5 | 121.9 | 127.0 |
| 30° | 65.4 | 66.7 | 69.3 | 71.9 |
| 32.5° | 48.8 | 48.8 | 47.5 | 48.8 |
| 35° | 33.4 | 30.8 | 29.5 | 30.8 |
| 37.5° | 20.5 | 19.2 | 18.0 | 18.0 |
| 40° | 14.1 | 12.8 | 11.5 | 11.5 |
| 42.5° | 10.3 | 7.7 | 6.4 | 6.4 |
| 45° | 7.7 | 5.1 | 3.8 | 2.6 |
| 47.5° | 6.4 | 3.8 | 1.3 | 1.3 |
| 50° | 5.1 | 2.6 | 1.3 | 0.0 |
| 52.5° | 3.8 | 2.6 | 1.3 | 0.0 |
| 55° | 3.8 | 2.6 | 0.0 | 0.0 |
| 57.5° | 3.8 | 2.6 | 0.0 | 0.0 |
| 60° | 3.8 | 2.6 | 1.3 | 0.0 |
| 62.5° | 3.8 | 2.6 | 1.3 | 1.3 |
| 65° | 3.8 | 2.6 | 1.3 | 0.0 |
| 67.5° | 3.8 | 2.6 | 1.3 | 0.0 |
| 70° | 3.8 | 2.6 | 1.3 | 0.0 |
| 72.5° | 5.1 | 2.6 | 1.3 | 0.0 |
| 75° | 5.1 | 3.8 | 1.3 | 0.0 |
| 77.5° | 5.1 | 3.8 | 1.3 | 0.0 |
| 80° | 5.1 | 3.8 | 1.3 | 0.0 |
| 82.5° | 5.1 | 3.8 | 1.3 | 0.0 |
| 85° | 5.1 | 3.8 | 1.3 | 0.0 |
| 87.5° | 5.1 | 3.8 | 1.3 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°











(END OF REPORT)