

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: P170699

Luminaire Tested: **LDA4A13935D010TE LAR25NF 4LA1 30° Tilt**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P170699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25649)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt
Description: PORTFOLIO 4" Adjustable Reflector, Self-flanged Trim Ring, 25°
Narrow Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1157.9 lumens
Efficiency: N/A
Efficacy: 52.0 lumens/watt
Spacing Criteria (0/90/45): 2.56 / 1.01 / 1.3
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

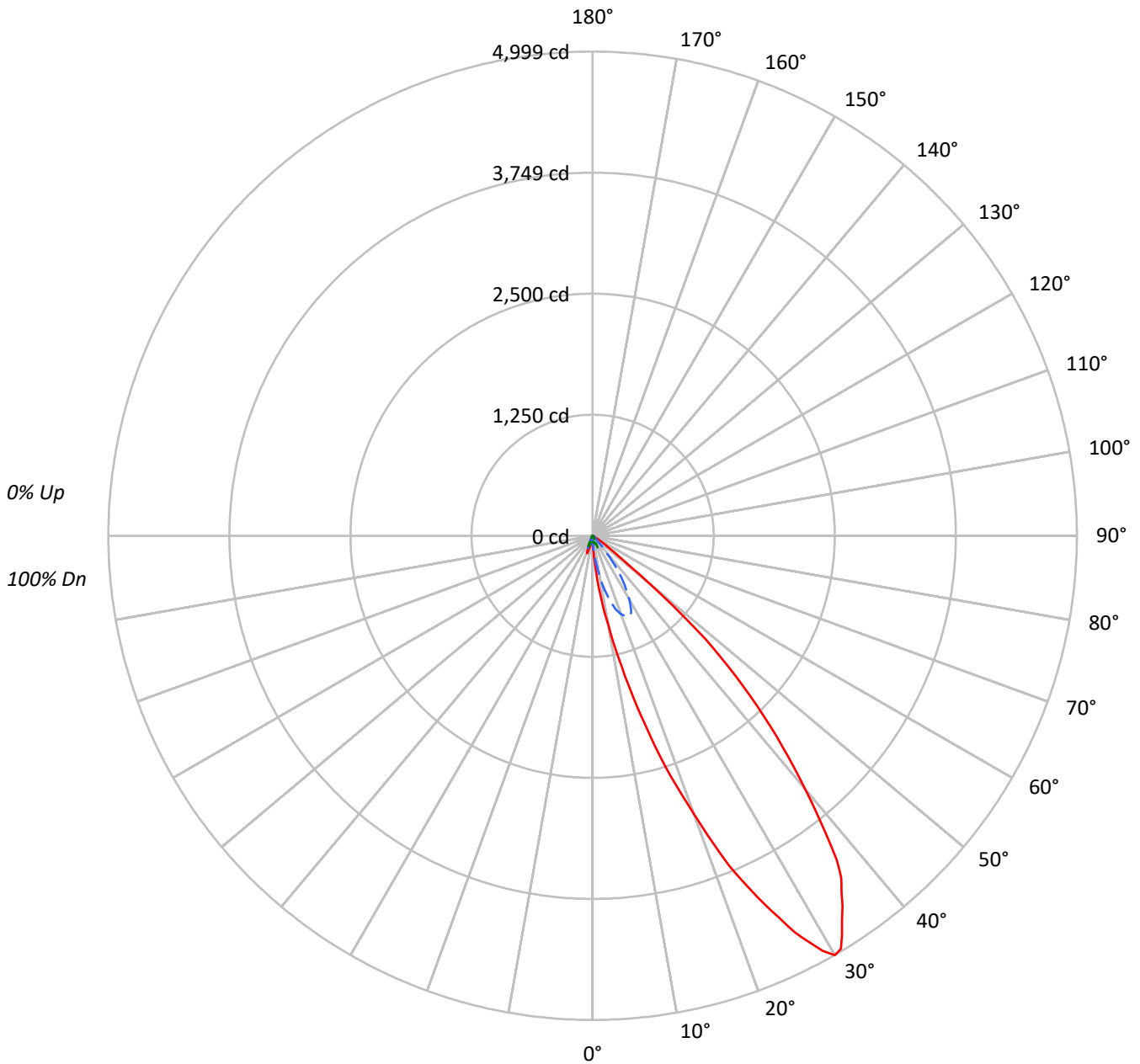
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

Luminous Intensity Polar Plot





TEST NUMBER: P170699

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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 | 97 | 96 | 96 | 94 | 93 | 91 | | | | | | | | | | | | | | | | | | | |
| 2 | 105 | 100 | 95 | 91 | 103 | 98 | 93 | 90 | 95 | 91 | 88 | 91 | 88 | 86 | 89 | 86 | 84 | 82 | | | | | | | | | | | | | | | | | | | |
| 3 | 99 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 87 | 82 | 78 | 84 | 80 | 77 | 82 | 78 | 76 | 74 | | | | | | | | | | | | | | | | | | | |
| 4 | 92 | 83 | 76 | 71 | 90 | 82 | 75 | 71 | 79 | 74 | 70 | 77 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | |
| 5 | 86 | 76 | 69 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 60 | | | | | | | | | | | | | | | | | | | |
| 6 | 80 | 69 | 62 | 57 | 78 | 68 | 61 | 56 | 67 | 61 | 56 | 65 | 60 | 56 | 64 | 59 | 55 | 53 | | | | | | | | | | | | | | | | | | | |
| 7 | 75 | 63 | 56 | 51 | 73 | 63 | 56 | 51 | 61 | 55 | 50 | 60 | 54 | 50 | 59 | 54 | 50 | 48 | | | | | | | | | | | | | | | | | | | |
| 8 | 70 | 58 | 51 | 46 | 68 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 49 | 45 | 54 | 49 | 45 | 43 | | | | | | | | | | | | | | | | | | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | | | | | | | | | | | | | | | | |
| 10 | 61 | 49 | 42 | 38 | 60 | 49 | 42 | 38 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 36 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|-------|-------|
| 0° | 9461 | 9461 | 9461 |
| 5° | 41120 | 8927 | 5411 |
| 10° | 118585 | 8041 | 5887 |
| 15° | 242981 | 8875 | 16984 |
| 20° | 400873 | 16500 | 17195 |
| 25° | 571062 | 10534 | 5757 |
| 30° | 712022 | 4615 | 2265 |
| 35° | 674661 | 2093 | 994 |
| 40° | 549484 | 1063 | 322 |
| 45° | 384895 | 576 | 0 |
| 50° | 144226 | 384 | 0 |
| 55° | 30730 | 430 | 0 |
| 60° | 5871 | 321 | 0 |
| 65° | 1751 | 584 | 0 |
| 70° | 469 | 721 | 0 |
| 75° | 0 | 953 | 0 |
| 80° | 0 | 1421 | 0 |
| 85° | 0 | 2830 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 16.1 | 1.4 |
| 10°-20° | 138.7 | 12.0 |
| 20°-30° | 354.2 | 30.6 |
| 30°-40° | 410.2 | 35.4 |
| 40°-50° | 211.6 | 18.3 |
| 50°-60° | 21.8 | 1.9 |
| 60°-70° | 2.4 | 0.2 |
| 70°-80° | 1.5 | 0.1 |
| 80°-90° | 1.4 | 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° | 509.0 | 44.0 |
| 0°-40° | 919.2 | 79.4 |
| 0°-60° | 1152.7 | 99.5 |
| 0°-90° | 1157.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1157.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0° | 77 | 77 | 77 | 77 | 77 | |
| 5° | 332 | 173 | 72 | 48 | 44 | 52 |
| 15° | 1903 | 697 | 70 | 93 | 133 | 582 |
| 25° | 4196 | 910 | 77 | 48 | 42 | 1949 |
| 35° | 4480 | 498 | 14 | 8 | 7 | 2744 |
| 45° | 2206 | 58 | 3 | 2 | 0 | 1652 |
| 55° | 143 | 9 | 2 | 1 | 0 | 179 |
| 65° | 6 | 2 | 2 | 1 | 0 | 8 |
| 75° | 0 | 1 | 2 | 2 | 0 | 0 |
| 85° | 0 | 1 | 2 | 2 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (FULL):

| | 0° | 2.5° | 5° | 7.5° | 10° | 12.5° | 15° | 17.5° | 20° | 22.5° | 25° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 |
| 2.5° | 132.3 | 127.7 | 124.4 | 125.7 | 133.0 | 125.0 | 125.7 | 123.1 | 121.7 | 120.4 | 117.1 |
| 5° | 332.1 | 318.9 | 310.3 | 311.0 | 291.8 | 306.3 | 305.0 | 293.8 | 286.5 | 272.6 | 264.6 |
| 7.5° | 623.2 | 594.8 | 584.9 | 581.6 | 583.5 | 569.7 | 563.7 | 549.1 | 530.0 | 504.8 | 490.3 |
| 10° | 946.8 | 929.6 | 923.6 | 913.0 | 912.4 | 887.9 | 873.3 | 854.8 | 816.4 | 781.4 | 755.6 |
| 12.5° | 1379.5 | 1326.5 | 1317.3 | 1297.4 | 1292.1 | 1250.5 | 1220.0 | 1192.9 | 1128.7 | 1082.4 | 1041.4 |
| 15° | 1902.8 | 1859.8 | 1869.7 | 1808.9 | 1792.3 | 1724.2 | 1667.3 | 1609.1 | 1505.2 | 1434.4 | 1361.6 |
| 17.5° | 2497.0 | 2442.0 | 2448.7 | 2372.6 | 2235.6 | 2248.2 | 2165.5 | 2085.4 | 1939.2 | 1844.6 | 1732.1 |
| 20° | 3054.0 | 3015.0 | 3017.6 | 2916.4 | 2870.1 | 2744.4 | 2633.9 | 2538.6 | 2344.1 | 2223.7 | 2074.8 |
| 22.5° | 3695.1 | 3593.9 | 3574.7 | 3437.1 | 3355.7 | 3187.0 | 3032.9 | 2906.5 | 2671.0 | 2535.3 | 2352.7 |
| 25° | 4196.0 | 4126.5 | 4073.6 | 3910.8 | 3797.7 | 3578.0 | 3399.4 | 3212.2 | 2929.0 | 2778.8 | 2561.8 |
| 26° | 4383.9 | 4318.4 | 4250.2 | 4074.9 | 3947.9 | 3715.7 | 3521.1 | 3320.0 | 3017.0 | 2856.2 | 2620.0 |
| 27° | 4596.3 | 4489.1 | 4407.0 | 4210.5 | 4072.9 | 3828.8 | 3597.9 | 3408.0 | 3083.8 | 2905.8 | 2657.1 |
| 28° | 4746.5 | 4639.3 | 4530.8 | 4317.1 | 4168.2 | 3912.8 | 3672.7 | 3465.6 | 3122.8 | 2929.7 | 2672.3 |
| 29° | 4900.6 | 4786.8 | 4628.7 | 4395.8 | 4233.7 | 3965.1 | 3715.7 | 3494.0 | 3134.1 | 2928.3 | 2664.3 |
| 30° | 4999.2 | 4884.7 | 4680.3 | 4440.1 | 4268.8 | 3986.3 | 3727.6 | 3488.7 | 3116.2 | 2901.9 | 2635.2 |
| 31° | 4976.0 | 4870.8 | 4667.7 | 4444.8 | 4265.5 | 3973.7 | 3705.7 | 3451.0 | 3071.2 | 2854.9 | 2582.3 |
| 32° | 4860.3 | 4770.9 | 4616.8 | 4413.7 | 4229.1 | 3930.7 | 3654.8 | 3391.5 | 3006.4 | 2800.0 | 2518.1 |
| 33° | 4725.9 | 4651.8 | 4545.3 | 4350.8 | 4165.6 | 3865.8 | 3584.7 | 3318.0 | 2931.6 | 2725.2 | 2440.7 |
| 34° | 4613.5 | 4546.6 | 4448.1 | 4266.1 | 4078.9 | 3779.2 | 3496.0 | 3225.4 | 2846.3 | 2637.2 | 2349.4 |
| 35° | 4480.5 | 4419.6 | 4328.3 | 4151.7 | 3958.5 | 3662.7 | 3384.8 | 3118.2 | 2745.7 | 2532.7 | 2243.6 |
| 36° | 4364.7 | 4268.8 | 4176.1 | 4004.1 | 3811.6 | 3521.8 | 3253.8 | 2992.5 | 2631.9 | 2412.9 | 2124.5 |
| 37° | 4185.4 | 4089.5 | 3990.2 | 3827.5 | 3637.6 | 3360.4 | 3108.3 | 2858.2 | 2502.2 | 2322.9 | 1997.4 |
| 38° | 3917.4 | 3873.1 | 3773.9 | 3619.1 | 3442.4 | 3182.4 | 2948.8 | 2705.4 | 2356.0 | 2148.9 | 1862.5 |
| 39° | 3667.4 | 3631.0 | 3534.4 | 3392.8 | 3229.4 | 2991.2 | 2772.2 | 2533.3 | 2191.3 | 1995.4 | 1720.2 |
| 40° | 3412.6 | 3376.2 | 3285.6 | 3157.9 | 3011.0 | 2792.0 | 2584.3 | 2350.1 | 2018.6 | 1837.3 | 1577.3 |
| 42.5° | 2809.2 | 2771.5 | 2752.3 | 2622.0 | 2466.5 | 2278.6 | 2086.1 | 1874.4 | 1592.5 | 1443.7 | 1239.9 |
| 45° | 2206.5 | 2172.1 | 2100.0 | 2046.4 | 1907.4 | 1751.3 | 1594.5 | 1421.8 | 1214.1 | 1067.2 | 876.6 |
| 47.5° | 1577.3 | 1560.8 | 1563.4 | 1464.2 | 1331.8 | 1208.8 | 1079.1 | 923.0 | 739.0 | 554.4 | 406.9 |
| 50° | 751.6 | 756.2 | 774.8 | 705.3 | 606.0 | 533.9 | 457.2 | 358.6 | 262.0 | 205.8 | 159.5 |
| 51° | 487.0 | 492.2 | 508.1 | 458.5 | 386.4 | 337.4 | 288.5 | 232.9 | 185.9 | 158.1 | 126.4 |
| 52° | 329.5 | 329.5 | 332.8 | 303.7 | 268.0 | 240.2 | 211.7 | 179.3 | 144.9 | 124.4 | 99.9 |
| 53° | 247.4 | 246.8 | 248.1 | 228.9 | 204.4 | 183.9 | 164.1 | 140.3 | 114.5 | 97.3 | 77.4 |
| 54° | 189.2 | 188.6 | 189.9 | 175.3 | 158.1 | 142.9 | 127.7 | 109.8 | 88.7 | 72.8 | 58.2 |
| 55° | 142.9 | 142.9 | 144.9 | 133.6 | 120.4 | 108.5 | 97.3 | 82.0 | 65.5 | 52.9 | 42.3 |
| 57.5° | 57.6 | 57.6 | 59.5 | 55.6 | 49.6 | 45.0 | 41.0 | 35.1 | 29.1 | 24.5 | 19.8 |
| 60° | 23.8 | 24.5 | 25.1 | 23.2 | 21.8 | 20.5 | 19.2 | 17.2 | 15.2 | 12.6 | 10.6 |
| 61° | 17.9 | 17.9 | 18.5 | 17.2 | 16.5 | 15.2 | 14.6 | 13.2 | 11.9 | 9.9 | 8.6 |
| 62° | 13.2 | 13.2 | 13.9 | 13.2 | 12.6 | 11.9 | 11.2 | 10.6 | 9.3 | 7.9 | 6.6 |
| 63° | 9.9 | 9.9 | 10.6 | 9.9 | 9.9 | 9.3 | 8.6 | 7.9 | 7.3 | 6.0 | 5.3 |
| 64° | 7.9 | 7.9 | 7.9 | 7.3 | 7.3 | 7.3 | 6.6 | 6.6 | 5.3 | 4.6 | 4.0 |
| 65° | 6.0 | 6.0 | 6.0 | 6.0 | 5.3 | 5.3 | 5.3 | 4.6 | 4.6 | 3.3 | 3.3 |
| 66° | 4.6 | 4.6 | 4.6 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.3 | 2.6 | 2.0 |



TEST NUMBER: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 0° | 2.5° | 5° | 7.5° | 10° | 12.5° | 15° | 17.5° | 20° | 22.5° | 25° |
|-------|-----|------|-----|------|-----|-------|-----|-------|-----|-------|-----|
| 72.5° | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 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: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 27.5° | 30° | 32.5° | 35° | 37.5° | 40° | 42.5° | 45° | 67.5° | 90° | 112.5° |
|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|--------|
| 0° | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 |
| 2.5° | 118.4 | 117.8 | 111.2 | 111.2 | 113.8 | 109.8 | 107.8 | 103.2 | 88.7 | 75.4 | 63.5 |
| 5° | 262.0 | 254.7 | 232.2 | 225.6 | 225.0 | 206.4 | 195.8 | 172.7 | 101.2 | 72.1 | 54.9 |
| 7.5° | 483.6 | 461.8 | 423.4 | 402.9 | 377.8 | 363.2 | 337.4 | 297.7 | 115.1 | 67.5 | 49.6 |
| 10° | 715.2 | 690.7 | 633.8 | 597.4 | 578.3 | 531.3 | 488.3 | 434.0 | 129.0 | 64.2 | 49.0 |
| 12.5° | 980.5 | 925.6 | 871.4 | 806.5 | 749.0 | 707.3 | 635.8 | 572.3 | 138.3 | 63.5 | 53.6 |
| 15° | 1267.7 | 1198.9 | 1106.2 | 1018.9 | 937.5 | 878.0 | 782.0 | 696.7 | 141.6 | 69.5 | 70.1 |
| 17.5° | 1589.2 | 1460.2 | 1326.5 | 1207.5 | 1095.6 | 1015.6 | 896.5 | 795.9 | 139.6 | 85.3 | 111.8 |
| 20° | 1890.2 | 1718.9 | 1537.6 | 1372.2 | 1214.1 | 1110.2 | 972.6 | 863.4 | 140.3 | 125.7 | 150.8 |
| 22.5° | 2129.1 | 1920.7 | 1699.7 | 1497.9 | 1297.4 | 1173.1 | 1022.9 | 899.1 | 157.5 | 134.3 | 102.6 |
| 25° | 2305.1 | 2059.6 | 1806.2 | 1574.0 | 1362.9 | 1223.3 | 1058.6 | 909.7 | 146.9 | 77.4 | 58.2 |
| 26° | 2352.1 | 2093.4 | 1826.1 | 1585.2 | 1370.9 | 1223.3 | 1053.3 | 898.5 | 127.0 | 61.5 | 48.3 |
| 27° | 2378.5 | 2108.6 | 1829.4 | 1579.9 | 1361.0 | 1209.4 | 1034.1 | 876.0 | 103.9 | 51.6 | 41.0 |
| 28° | 2381.8 | 2102.0 | 1812.8 | 1558.1 | 1333.2 | 1179.7 | 999.7 | 841.6 | 86.0 | 43.7 | 33.7 |
| 29° | 2364.0 | 2077.5 | 1781.1 | 1521.7 | 1290.8 | 1136.0 | 952.7 | 799.2 | 73.4 | 37.7 | 28.4 |
| 30° | 2326.3 | 2034.5 | 1732.8 | 1472.8 | 1235.9 | 1083.1 | 897.8 | 752.3 | 64.2 | 32.4 | 23.8 |
| 31° | 2272.0 | 1975.6 | 1680.5 | 1414.5 | 1178.3 | 1030.1 | 846.2 | 704.6 | 56.9 | 27.1 | 19.8 |
| 32° | 2201.9 | 1906.1 | 1613.0 | 1351.7 | 1126.7 | 979.9 | 796.6 | 656.3 | 50.9 | 23.2 | 16.5 |
| 33° | 2123.8 | 1827.4 | 1539.6 | 1286.2 | 1077.1 | 928.3 | 744.3 | 605.4 | 45.7 | 19.2 | 13.9 |
| 34° | 2033.8 | 1740.7 | 1461.5 | 1220.7 | 1024.2 | 871.4 | 688.1 | 553.1 | 39.7 | 15.9 | 11.9 |
| 35° | 1931.3 | 1644.1 | 1377.5 | 1161.1 | 965.3 | 809.8 | 629.2 | 497.5 | 35.1 | 13.9 | 9.9 |
| 36° | 1820.1 | 1543.6 | 1292.8 | 1093.0 | 901.8 | 745.6 | 567.0 | 441.3 | 30.4 | 11.9 | 8.6 |
| 37° | 1703.7 | 1439.0 | 1208.1 | 1015.6 | 831.7 | 677.5 | 502.8 | 380.4 | 26.5 | 9.9 | 7.3 |
| 38° | 1580.6 | 1333.8 | 1126.1 | 942.1 | 757.6 | 604.1 | 437.3 | 313.6 | 23.2 | 8.6 | 6.6 |
| 39° | 1454.9 | 1230.0 | 1044.7 | 861.4 | 681.5 | 531.9 | 374.5 | 243.5 | 20.5 | 7.3 | 6.0 |
| 40° | 1331.8 | 1132.0 | 958.7 | 773.4 | 605.4 | 461.1 | 313.6 | 179.3 | 17.9 | 6.6 | 4.6 |
| 42.5° | 1054.6 | 869.4 | 688.1 | 516.1 | 422.1 | 292.4 | 174.0 | 93.9 | 12.6 | 4.6 | 3.3 |
| 45° | 690.1 | 514.1 | 371.2 | 251.4 | 218.3 | 123.7 | 80.7 | 58.2 | 9.3 | 3.3 | 2.6 |
| 47.5° | 285.8 | 208.4 | 144.9 | 104.5 | 84.7 | 66.2 | 51.6 | 37.7 | 6.6 | 2.6 | 2.6 |
| 50° | 125.7 | 99.2 | 78.7 | 61.5 | 53.6 | 43.0 | 33.1 | 23.2 | 4.0 | 2.0 | 2.0 |
| 51° | 100.6 | 80.1 | 61.5 | 49.0 | 43.7 | 35.1 | 27.1 | 18.5 | 4.0 | 2.0 | 2.0 |
| 52° | 79.4 | 62.2 | 48.3 | 37.7 | 35.1 | 28.4 | 22.5 | 15.2 | 3.3 | 2.0 | 2.0 |
| 53° | 60.9 | 47.0 | 36.4 | 29.8 | 27.8 | 23.2 | 18.5 | 12.6 | 2.6 | 2.0 | 2.0 |
| 54° | 45.0 | 35.7 | 28.4 | 23.2 | 22.5 | 18.5 | 15.2 | 10.6 | 2.6 | 2.0 | 2.0 |
| 55° | 33.1 | 27.8 | 21.8 | 18.5 | 17.9 | 15.2 | 12.6 | 8.6 | 2.6 | 2.0 | 2.0 |
| 57.5° | 17.2 | 14.6 | 11.9 | 10.6 | 10.6 | 9.9 | 8.6 | 5.3 | 2.0 | 1.3 | 2.0 |
| 60° | 9.3 | 7.9 | 6.6 | 6.0 | 7.3 | 6.6 | 6.0 | 3.3 | 2.0 | 1.3 | 2.0 |
| 61° | 7.3 | 6.6 | 5.3 | 4.6 | 6.0 | 5.3 | 5.3 | 2.6 | 2.0 | 2.0 | 2.0 |
| 62° | 6.0 | 5.3 | 4.6 | 4.0 | 5.3 | 4.6 | 4.6 | 2.6 | 2.0 | 2.0 | 2.0 |
| 63° | 4.6 | 4.0 | 3.3 | 3.3 | 4.6 | 4.6 | 4.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 64° | 3.3 | 3.3 | 2.6 | 2.6 | 4.0 | 4.0 | 3.3 | 2.0 | 2.0 | 2.0 | 2.0 |
| 65° | 2.6 | 2.6 | 2.0 | 2.0 | 3.3 | 3.3 | 3.3 | 2.0 | 2.0 | 2.0 | 2.0 |
| 66° | 2.0 | 2.0 | 2.0 | 1.3 | 2.6 | 3.3 | 3.3 | 1.3 | 2.0 | 2.0 | 2.0 |



TEST NUMBER: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 27.5° | 30° | 32.5° | 35° | 37.5° | 40° | 42.5° | 45° | 67.5° | 90° | 112.5° |
|-------|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|--------|
| 72.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.0 |
| 75° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.0 |
| 77.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.6 |
| 80° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.6 |
| 82.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.6 |
| 85° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.6 |
| 87.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.6 |
| 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: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 135° | 157.5° | 180° |
|-------|-------|--------|-------|
| 0° | 76.7 | 76.7 | 76.7 |
| 2.5° | 57.6 | 54.3 | 53.6 |
| 5° | 47.6 | 44.3 | 43.7 |
| 7.5° | 43.7 | 41.0 | 40.4 |
| 10° | 45.0 | 45.7 | 47.0 |
| 12.5° | 57.6 | 63.5 | 68.8 |
| 15° | 92.6 | 116.4 | 133.0 |
| 17.5° | 161.4 | 178.6 | 189.9 |
| 20° | 141.6 | 130.3 | 131.0 |
| 22.5° | 79.4 | 71.5 | 70.8 |
| 25° | 48.3 | 43.7 | 42.3 |
| 26° | 40.4 | 36.4 | 35.1 |
| 27° | 33.1 | 29.8 | 28.4 |
| 28° | 27.1 | 24.5 | 23.8 |
| 29° | 23.2 | 19.8 | 19.2 |
| 30° | 19.2 | 16.5 | 15.9 |
| 31° | 15.9 | 13.9 | 13.2 |
| 32° | 13.9 | 11.9 | 10.6 |
| 33° | 11.2 | 9.9 | 9.3 |
| 34° | 9.9 | 7.9 | 7.3 |
| 35° | 7.9 | 6.6 | 6.6 |
| 36° | 7.3 | 6.0 | 5.3 |
| 37° | 6.0 | 4.6 | 4.6 |
| 38° | 5.3 | 4.0 | 3.3 |
| 39° | 4.6 | 3.3 | 2.6 |
| 40° | 4.0 | 2.6 | 2.0 |
| 42.5° | 2.6 | 1.3 | 0.7 |
| 45° | 2.0 | 0.7 | 0.0 |
| 47.5° | 1.3 | 0.7 | 0.0 |
| 50° | 1.3 | 0.0 | 0.0 |
| 51° | 1.3 | 0.0 | 0.0 |
| 52° | 1.3 | 0.0 | 0.0 |
| 53° | 1.3 | 0.0 | 0.0 |
| 54° | 1.3 | 0.0 | 0.0 |
| 55° | 1.3 | 0.0 | 0.0 |
| 57.5° | 1.3 | 0.0 | 0.0 |
| 60° | 1.3 | 0.0 | 0.0 |
| 61° | 1.3 | 0.0 | 0.0 |
| 62° | 1.3 | 0.0 | 0.0 |
| 63° | 1.3 | 0.7 | 0.0 |
| 64° | 1.3 | 0.7 | 0.0 |
| 65° | 1.3 | 0.7 | 0.0 |
| 66° | 1.3 | 0.7 | 0.0 |



TEST NUMBER: P170699

CATALOG NUMBER: LDA4A13935D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 72.5° | 2.0 | 0.7 | 0.0 |
| 75° | 2.0 | 0.7 | 0.0 |
| 77.5° | 2.0 | 0.7 | 0.0 |
| 80° | 2.0 | 0.7 | 0.0 |
| 82.5° | 2.0 | 0.7 | 0.0 |
| 85° | 2.0 | 0.7 | 0.0 |
| 87.5° | 1.3 | 0.7 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 |



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







| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67.5° | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.0 | 1.3 |
| 70° | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 0.7 | 0.7 |





| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67.5° | 1.3 | 1.3 | 1.3 | 1.3 | 2.6 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.0 |
| 70° | 0.7 | 0.7 | 0.7 | 1.3 | 2.0 | 2.6 | 2.6 | 1.3 | 2.0 | 2.0 | 2.0 |





| | | | |
|-------|-----|-----|-----|
| 67.5° | 1.3 | 0.7 | 0.0 |
| 70° | 1.3 | 0.7 | 0.0 |



(END OF REPORT)