

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: P170700

Luminaire Tested: **LDA4A13940D010TE LAR25NF 4LA1 30° Tilt**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P170700
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: LDA4A13940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1243.1 lumens
Efficiency: N/A
Efficacy: 55.8 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

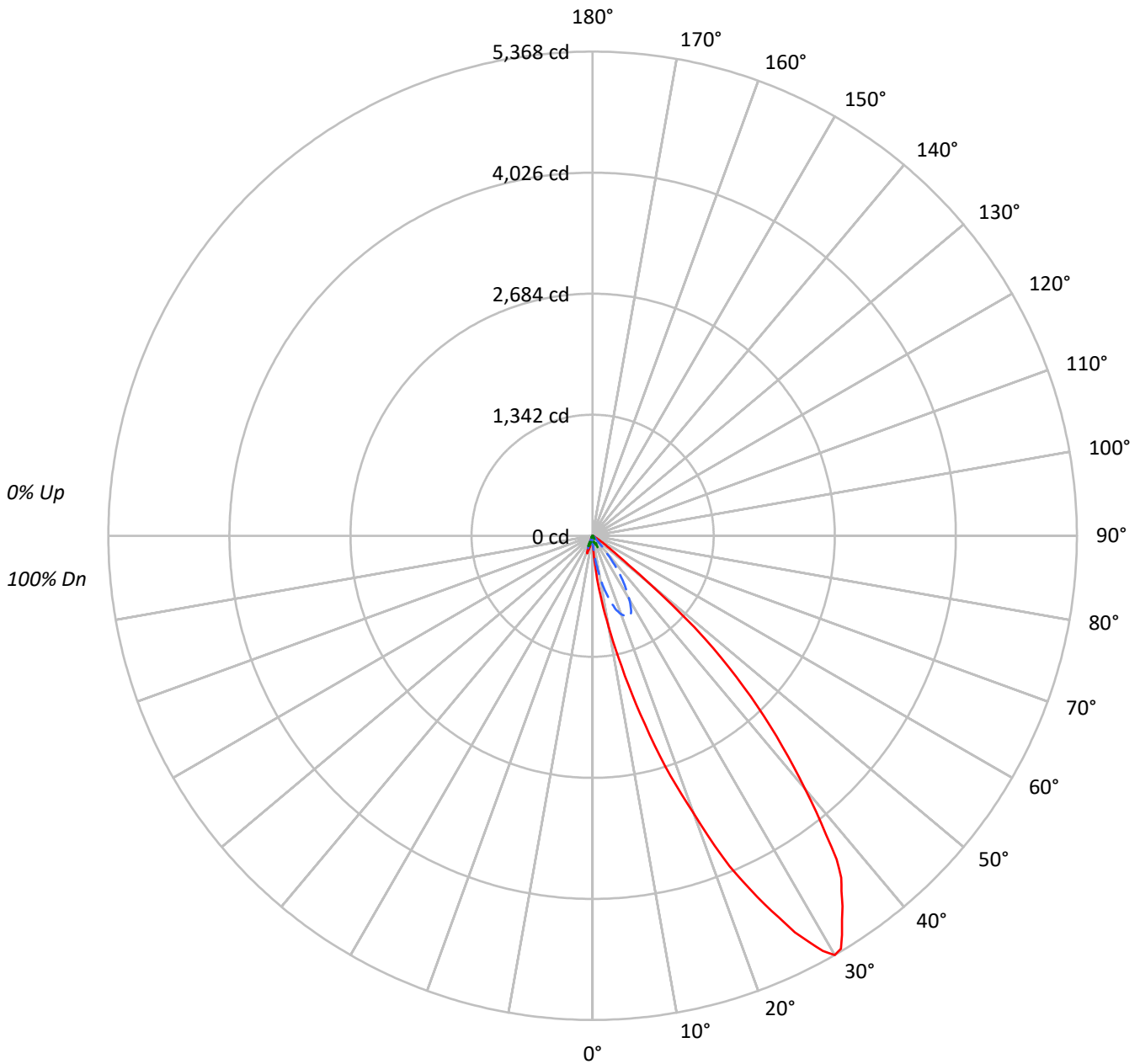
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P170700

CATALOG NUMBER: LDA4A13940D010TE LAR25NF 4LA1 30° Tilt

Luminous Intensity Polar Plot





TEST NUMBER: P170700

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|--|--|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | |
| RC | 80 | | | | | 70 | | | | | 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° | 10164 | 10164 | 10164 |
| 5° | 44153 | 9583 | 5807 |
| 10° | 127328 | 8630 | 6313 |
| 15° | 260897 | 9526 | 18235 |
| 20° | 430420 | 17720 | 18469 |
| 25° | 613143 | 11310 | 6192 |
| 30° | 764507 | 4956 | 2421 |
| 35° | 724382 | 2244 | 1069 |
| 40° | 589996 | 1143 | 338 |
| 45° | 413259 | 628 | 0 |
| 50° | 154857 | 403 | 0 |
| 55° | 32988 | 452 | 0 |
| 60° | 6315 | 345 | 0 |
| 65° | 1868 | 613 | 0 |
| 70° | 505 | 757 | 0 |
| 75° | 0 | 1001 | 0 |
| 80° | 0 | 1492 | 0 |
| 85° | 0 | 2972 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 17.3 | 1.4 |
| 10°-20° | 148.9 | 12.0 |
| 20°-30° | 380.3 | 30.6 |
| 30°-40° | 440.5 | 35.4 |
| 40°-50° | 227.2 | 18.3 |
| 50°-60° | 23.5 | 1.9 |
| 60°-70° | 2.5 | 0.2 |
| 70°-80° | 1.6 | 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° | 546.5 | 44.0 |
| 0°-40° | 986.9 | 79.4 |
| 0°-60° | 1237.6 | 99.6 |
| 0°-90° | 1243.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1243.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0° | 82 | 82 | 82 | 82 | 82 | |
| 5° | 357 | 185 | 77 | 51 | 47 | 56 |
| 15° | 2043 | 748 | 75 | 100 | 143 | 625 |
| 25° | 4505 | 977 | 83 | 52 | 46 | 2093 |
| 35° | 4811 | 534 | 15 | 8 | 7 | 2946 |
| 45° | 2369 | 62 | 4 | 2 | 0 | 1774 |
| 55° | 153 | 9 | 2 | 1 | 0 | 192 |
| 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: P170700

CATALOG NUMBER: LDA4A13940D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (FULL):

| | 0° | 2.5° | 5° | 7.5° | 10° | 12.5° | 15° | 17.5° | 20° | 22.5° | 25° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 |
| 2.5° | 142.1 | 137.1 | 133.6 | 135.0 | 142.8 | 134.3 | 135.0 | 132.1 | 130.7 | 129.3 | 125.7 |
| 5° | 356.6 | 342.4 | 333.2 | 333.9 | 313.3 | 328.9 | 327.5 | 315.4 | 307.6 | 292.7 | 284.2 |
| 7.5° | 669.2 | 638.6 | 628.0 | 624.4 | 626.6 | 611.6 | 605.2 | 589.6 | 569.0 | 542.0 | 526.4 |
| 10° | 1016.6 | 998.1 | 991.7 | 980.3 | 979.6 | 953.3 | 937.7 | 917.8 | 876.6 | 839.0 | 811.3 |
| 12.5° | 1481.1 | 1424.3 | 1414.4 | 1393.1 | 1387.4 | 1342.6 | 1309.9 | 1280.8 | 1211.9 | 1162.2 | 1118.1 |
| 15° | 2043.1 | 1996.9 | 2007.5 | 1942.2 | 1924.4 | 1851.3 | 1790.2 | 1727.7 | 1616.1 | 1540.1 | 1462.0 |
| 17.5° | 2681.0 | 2622.0 | 2629.1 | 2547.4 | 2400.4 | 2413.9 | 2325.1 | 2239.1 | 2082.1 | 1980.5 | 1859.8 |
| 20° | 3279.1 | 3237.2 | 3240.1 | 3131.4 | 3081.6 | 2946.7 | 2828.0 | 2725.7 | 2516.9 | 2387.6 | 2227.8 |
| 22.5° | 3967.5 | 3858.8 | 3838.2 | 3690.4 | 3603.1 | 3421.9 | 3256.4 | 3120.7 | 2867.8 | 2722.2 | 2526.1 |
| 25° | 4505.2 | 4430.7 | 4373.8 | 4199.1 | 4077.6 | 3841.8 | 3649.9 | 3448.9 | 3144.9 | 2983.6 | 2750.6 |
| 26° | 4707.0 | 4636.7 | 4563.5 | 4375.2 | 4238.9 | 3989.5 | 3780.7 | 3564.7 | 3239.3 | 3066.7 | 2813.1 |
| 27° | 4935.0 | 4819.9 | 4731.9 | 4520.9 | 4373.1 | 4111.0 | 3863.1 | 3659.2 | 3311.1 | 3120.0 | 2852.9 |
| 28° | 5096.3 | 4981.2 | 4864.7 | 4635.2 | 4475.4 | 4201.2 | 3943.3 | 3721.0 | 3353.0 | 3145.6 | 2869.2 |
| 29° | 5261.8 | 5139.6 | 4969.8 | 4719.8 | 4545.7 | 4257.3 | 3989.5 | 3751.5 | 3365.1 | 3144.2 | 2860.7 |
| 30° | 5367.7 | 5244.8 | 5025.2 | 4767.4 | 4583.4 | 4280.1 | 4002.3 | 3745.8 | 3345.9 | 3115.7 | 2829.5 |
| 31° | 5342.8 | 5229.8 | 5011.8 | 4772.4 | 4579.8 | 4266.6 | 3978.9 | 3705.4 | 3297.6 | 3065.3 | 2772.6 |
| 32° | 5218.5 | 5122.6 | 4957.1 | 4739.0 | 4540.8 | 4220.4 | 3924.2 | 3641.4 | 3228.0 | 3006.3 | 2703.7 |
| 33° | 5074.3 | 4994.7 | 4880.3 | 4671.5 | 4472.6 | 4150.8 | 3848.9 | 3562.6 | 3147.7 | 2926.1 | 2620.6 |
| 34° | 4953.5 | 4881.8 | 4775.9 | 4580.5 | 4379.5 | 4057.7 | 3753.7 | 3463.1 | 3056.1 | 2831.6 | 2522.6 |
| 35° | 4810.7 | 4745.4 | 4647.3 | 4457.7 | 4250.2 | 3932.7 | 3634.3 | 3348.0 | 2948.1 | 2719.3 | 2408.9 |
| 36° | 4686.4 | 4583.4 | 4483.9 | 4299.2 | 4092.5 | 3781.4 | 3493.7 | 3213.1 | 2825.9 | 2590.8 | 2281.0 |
| 37° | 4493.9 | 4390.9 | 4284.3 | 4109.6 | 3905.7 | 3608.0 | 3337.4 | 3068.9 | 2686.7 | 2494.2 | 2144.6 |
| 38° | 4206.2 | 4158.6 | 4052.0 | 3885.8 | 3696.1 | 3416.9 | 3166.2 | 2904.8 | 2529.7 | 2307.3 | 1999.7 |
| 39° | 3937.7 | 3898.6 | 3794.9 | 3642.8 | 3467.4 | 3211.6 | 2976.5 | 2720.1 | 2352.8 | 2142.5 | 1847.0 |
| 40° | 3664.2 | 3625.1 | 3527.8 | 3390.7 | 3233.0 | 2997.8 | 2774.8 | 2523.3 | 2167.4 | 1972.7 | 1693.6 |
| 42.5° | 3016.3 | 2975.8 | 2955.2 | 2815.2 | 2648.3 | 2446.6 | 2239.8 | 2012.5 | 1709.9 | 1550.1 | 1331.3 |
| 45° | 2369.1 | 2332.2 | 2254.8 | 2197.2 | 2048.0 | 1880.4 | 1712.0 | 1526.6 | 1303.6 | 1145.8 | 941.3 |
| 47.5° | 1693.6 | 1675.8 | 1678.6 | 1572.1 | 1430.0 | 1297.9 | 1158.6 | 991.0 | 793.5 | 595.3 | 436.9 |
| 50° | 807.0 | 812.0 | 831.9 | 757.3 | 650.7 | 573.3 | 490.9 | 385.0 | 281.3 | 220.9 | 171.2 |
| 51° | 522.8 | 528.5 | 545.6 | 492.3 | 414.9 | 362.3 | 309.7 | 250.1 | 199.6 | 169.8 | 135.7 |
| 52° | 353.8 | 353.8 | 357.3 | 326.1 | 287.7 | 257.9 | 227.3 | 192.5 | 155.6 | 133.6 | 107.3 |
| 53° | 265.7 | 265.0 | 266.4 | 245.8 | 219.5 | 197.5 | 176.2 | 150.6 | 122.9 | 104.4 | 83.1 |
| 54° | 203.2 | 202.5 | 203.9 | 188.3 | 169.8 | 153.4 | 137.1 | 117.9 | 95.2 | 78.1 | 62.5 |
| 55° | 153.4 | 153.4 | 155.6 | 143.5 | 129.3 | 116.5 | 104.4 | 88.1 | 70.3 | 56.8 | 45.5 |
| 57.5° | 61.8 | 61.8 | 63.9 | 59.7 | 53.3 | 48.3 | 44.0 | 37.7 | 31.3 | 26.3 | 21.3 |
| 60° | 25.6 | 26.3 | 27.0 | 24.9 | 23.4 | 22.0 | 20.6 | 18.5 | 16.3 | 13.5 | 11.4 |
| 61° | 19.2 | 19.2 | 19.9 | 18.5 | 17.8 | 16.3 | 15.6 | 14.2 | 12.8 | 10.7 | 9.2 |
| 62° | 14.2 | 14.2 | 14.9 | 14.2 | 13.5 | 12.8 | 12.1 | 11.4 | 9.9 | 8.5 | 7.1 |
| 63° | 10.7 | 10.7 | 11.4 | 10.7 | 10.7 | 9.9 | 9.2 | 8.5 | 7.8 | 6.4 | 5.7 |
| 64° | 8.5 | 8.5 | 8.5 | 7.8 | 7.8 | 7.8 | 7.1 | 7.1 | 5.7 | 5.0 | 4.3 |
| 65° | 6.4 | 6.4 | 6.4 | 6.4 | 5.7 | 5.7 | 5.7 | 5.0 | 5.0 | 3.6 | 3.6 |
| 66° | 5.0 | 5.0 | 5.0 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 3.6 | 2.8 | 2.1 |



TEST NUMBER: P170700

CATALOG NUMBER: LDA4A13940D010TE 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: P170700

CATALOG NUMBER: LDA4A13940D010TE 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° | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 | 82.4 |
| 2.5° | 127.2 | 126.4 | 119.3 | 119.3 | 122.2 | 117.9 | 115.8 | 110.8 | 95.2 | 81.0 | 68.2 |
| 5° | 281.3 | 273.5 | 249.3 | 242.2 | 241.5 | 221.6 | 210.3 | 185.4 | 108.7 | 77.4 | 59.0 |
| 7.5° | 519.3 | 495.8 | 454.6 | 432.6 | 405.6 | 390.0 | 362.3 | 319.7 | 123.6 | 72.5 | 53.3 |
| 10° | 767.9 | 741.6 | 680.5 | 641.5 | 620.9 | 570.4 | 524.3 | 466.0 | 138.5 | 68.9 | 52.6 |
| 12.5° | 1052.8 | 993.8 | 935.6 | 866.0 | 804.2 | 759.4 | 682.7 | 614.5 | 148.5 | 68.2 | 57.5 |
| 15° | 1361.1 | 1287.2 | 1187.8 | 1094.0 | 1006.6 | 942.7 | 839.7 | 748.0 | 152.0 | 74.6 | 75.3 |
| 17.5° | 1706.3 | 1567.8 | 1424.3 | 1296.4 | 1176.4 | 1090.4 | 962.6 | 854.6 | 149.9 | 91.6 | 120.1 |
| 20° | 2029.6 | 1845.6 | 1650.9 | 1473.3 | 1303.6 | 1192.0 | 1044.3 | 927.0 | 150.6 | 135.0 | 162.0 |
| 22.5° | 2286.0 | 2062.2 | 1825.0 | 1608.3 | 1393.1 | 1259.5 | 1098.3 | 965.4 | 169.1 | 144.2 | 110.1 |
| 25° | 2475.0 | 2211.4 | 1939.3 | 1690.0 | 1463.4 | 1313.5 | 1136.6 | 976.8 | 157.7 | 83.1 | 62.5 |
| 26° | 2525.4 | 2247.7 | 1960.7 | 1702.1 | 1471.9 | 1313.5 | 1130.9 | 964.7 | 136.4 | 66.1 | 51.9 |
| 27° | 2553.8 | 2264.0 | 1964.2 | 1696.4 | 1461.3 | 1298.6 | 1110.3 | 940.5 | 111.5 | 55.4 | 44.0 |
| 28° | 2557.4 | 2256.9 | 1946.4 | 1673.0 | 1431.4 | 1266.6 | 1073.4 | 903.6 | 92.3 | 46.9 | 36.2 |
| 29° | 2538.2 | 2230.6 | 1912.4 | 1633.9 | 1386.0 | 1219.7 | 1023.0 | 858.1 | 78.9 | 40.5 | 30.5 |
| 30° | 2497.7 | 2184.4 | 1860.5 | 1581.3 | 1327.0 | 1162.9 | 964.0 | 807.7 | 68.9 | 34.8 | 25.6 |
| 31° | 2439.5 | 2121.2 | 1804.4 | 1518.8 | 1265.2 | 1106.1 | 908.6 | 756.6 | 61.1 | 29.1 | 21.3 |
| 32° | 2364.2 | 2046.6 | 1731.9 | 1451.3 | 1209.8 | 1052.1 | 855.3 | 704.7 | 54.7 | 24.9 | 17.8 |
| 33° | 2280.3 | 1962.1 | 1653.1 | 1381.0 | 1156.5 | 996.7 | 799.2 | 650.0 | 49.0 | 20.6 | 14.9 |
| 34° | 2183.7 | 1869.0 | 1569.2 | 1310.7 | 1099.7 | 935.6 | 738.8 | 593.9 | 42.6 | 17.0 | 12.8 |
| 35° | 2073.6 | 1765.3 | 1479.0 | 1246.7 | 1036.4 | 869.5 | 675.6 | 534.2 | 37.7 | 14.9 | 10.7 |
| 36° | 1954.3 | 1657.3 | 1388.1 | 1173.6 | 968.3 | 800.6 | 608.8 | 473.8 | 32.7 | 12.8 | 9.2 |
| 37° | 1829.2 | 1545.1 | 1297.2 | 1090.4 | 893.0 | 727.4 | 539.9 | 408.5 | 28.4 | 10.7 | 7.8 |
| 38° | 1697.1 | 1432.1 | 1209.1 | 1011.6 | 813.4 | 648.6 | 469.6 | 336.7 | 24.9 | 9.2 | 7.1 |
| 39° | 1562.1 | 1320.6 | 1121.7 | 924.9 | 731.7 | 571.1 | 402.1 | 261.4 | 22.0 | 7.8 | 6.4 |
| 40° | 1430.0 | 1215.5 | 1029.3 | 830.4 | 650.0 | 495.1 | 336.7 | 192.5 | 19.2 | 7.1 | 5.0 |
| 42.5° | 1132.4 | 933.4 | 738.8 | 554.1 | 453.2 | 314.0 | 186.8 | 100.9 | 13.5 | 5.0 | 3.6 |
| 45° | 740.9 | 552.0 | 398.5 | 269.9 | 234.4 | 132.8 | 86.7 | 62.5 | 9.9 | 3.6 | 2.8 |
| 47.5° | 306.9 | 223.8 | 155.6 | 112.2 | 90.9 | 71.0 | 55.4 | 40.5 | 7.1 | 2.8 | 2.8 |
| 50° | 135.0 | 106.6 | 84.5 | 66.1 | 57.5 | 46.2 | 35.5 | 24.9 | 4.3 | 2.1 | 2.1 |
| 51° | 108.0 | 86.0 | 66.1 | 52.6 | 46.9 | 37.7 | 29.1 | 19.9 | 4.3 | 2.1 | 2.1 |
| 52° | 85.2 | 66.8 | 51.9 | 40.5 | 37.7 | 30.5 | 24.2 | 16.3 | 3.6 | 2.1 | 2.1 |
| 53° | 65.4 | 50.4 | 39.1 | 32.0 | 29.8 | 24.9 | 19.9 | 13.5 | 2.8 | 2.1 | 2.1 |
| 54° | 48.3 | 38.4 | 30.5 | 24.9 | 24.2 | 19.9 | 16.3 | 11.4 | 2.8 | 2.1 | 2.1 |
| 55° | 35.5 | 29.8 | 23.4 | 19.9 | 19.2 | 16.3 | 13.5 | 9.2 | 2.8 | 2.1 | 2.1 |
| 57.5° | 18.5 | 15.6 | 12.8 | 11.4 | 11.4 | 10.7 | 9.2 | 5.7 | 2.1 | 1.4 | 2.1 |
| 60° | 9.9 | 8.5 | 7.1 | 6.4 | 7.8 | 7.1 | 6.4 | 3.6 | 2.1 | 1.4 | 2.1 |
| 61° | 7.8 | 7.1 | 5.7 | 5.0 | 6.4 | 5.7 | 5.7 | 2.8 | 2.1 | 2.1 | 2.1 |
| 62° | 6.4 | 5.7 | 5.0 | 4.3 | 5.7 | 5.0 | 5.0 | 2.8 | 2.1 | 2.1 | 2.1 |
| 63° | 5.0 | 4.3 | 3.6 | 3.6 | 5.0 | 5.0 | 4.3 | 2.1 | 2.1 | 2.1 | 2.1 |
| 64° | 3.6 | 3.6 | 2.8 | 2.8 | 4.3 | 4.3 | 3.6 | 2.1 | 2.1 | 2.1 | 2.1 |
| 65° | 2.8 | 2.8 | 2.1 | 2.1 | 3.6 | 3.6 | 3.6 | 2.1 | 2.1 | 2.1 | 2.1 |
| 66° | 2.1 | 2.1 | 2.1 | 1.4 | 2.8 | 3.6 | 3.6 | 1.4 | 2.1 | 2.1 | 2.1 |



TEST NUMBER: P170700

CATALOG NUMBER: LDA4A13940D010TE 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 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.1 |
| 75° | 0.7 | 0.7 | 0.7 | 0.7 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.1 |
| 77.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.8 |
| 80° | 0.7 | 0.7 | 0.7 | 0.7 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.8 |
| 82.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.8 |
| 85° | 0.7 | 0.7 | 0.7 | 0.7 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.8 |
| 87.5° | 0.7 | 0.7 | 0.7 | 0.7 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.8 |
| 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: P170700

CATALOG NUMBER: LDA4A13940D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 135° | 157.5° | 180° |
|-------|-------|--------|-------|
| 0° | 82.4 | 82.4 | 82.4 |
| 2.5° | 61.8 | 58.3 | 57.5 |
| 5° | 51.1 | 47.6 | 46.9 |
| 7.5° | 46.9 | 44.0 | 43.3 |
| 10° | 48.3 | 49.0 | 50.4 |
| 12.5° | 61.8 | 68.2 | 73.9 |
| 15° | 99.5 | 125.0 | 142.8 |
| 17.5° | 173.3 | 191.8 | 203.9 |
| 20° | 152.0 | 139.9 | 140.7 |
| 22.5° | 85.2 | 76.7 | 76.0 |
| 25° | 51.9 | 46.9 | 45.5 |
| 26° | 43.3 | 39.1 | 37.7 |
| 27° | 35.5 | 32.0 | 30.5 |
| 28° | 29.1 | 26.3 | 25.6 |
| 29° | 24.9 | 21.3 | 20.6 |
| 30° | 20.6 | 17.8 | 17.0 |
| 31° | 17.0 | 14.9 | 14.2 |
| 32° | 14.9 | 12.8 | 11.4 |
| 33° | 12.1 | 10.7 | 9.9 |
| 34° | 10.7 | 8.5 | 7.8 |
| 35° | 8.5 | 7.1 | 7.1 |
| 36° | 7.8 | 6.4 | 5.7 |
| 37° | 6.4 | 5.0 | 5.0 |
| 38° | 5.7 | 4.3 | 3.6 |
| 39° | 5.0 | 3.6 | 2.8 |
| 40° | 4.3 | 2.8 | 2.1 |
| 42.5° | 2.8 | 1.4 | 0.7 |
| 45° | 2.1 | 0.7 | 0.0 |
| 47.5° | 1.4 | 0.7 | 0.0 |
| 50° | 1.4 | 0.0 | 0.0 |
| 51° | 1.4 | 0.0 | 0.0 |
| 52° | 1.4 | 0.0 | 0.0 |
| 53° | 1.4 | 0.0 | 0.0 |
| 54° | 1.4 | 0.0 | 0.0 |
| 55° | 1.4 | 0.0 | 0.0 |
| 57.5° | 1.4 | 0.0 | 0.0 |
| 60° | 1.4 | 0.0 | 0.0 |
| 61° | 1.4 | 0.0 | 0.0 |
| 62° | 1.4 | 0.0 | 0.0 |
| 63° | 1.4 | 0.7 | 0.0 |
| 64° | 1.4 | 0.7 | 0.0 |
| 65° | 1.4 | 0.7 | 0.0 |
| 66° | 1.4 | 0.7 | 0.0 |



TEST NUMBER: P170700

CATALOG NUMBER: LDA4A13940D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

| | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 72.5° | 2.1 | 0.7 | 0.0 |
| 75° | 2.1 | 0.7 | 0.0 |
| 77.5° | 2.1 | 0.7 | 0.0 |
| 80° | 2.1 | 0.7 | 0.0 |
| 82.5° | 2.1 | 0.7 | 0.0 |
| 85° | 2.1 | 0.7 | 0.0 |
| 87.5° | 1.4 | 0.7 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 |



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







| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67.5° | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.1 | 1.4 |
| 70° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.7 | 0.7 |





| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67.5° | 1.4 | 1.4 | 1.4 | 1.4 | 2.8 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.1 |
| 70° | 0.7 | 0.7 | 0.7 | 1.4 | 2.1 | 2.8 | 2.8 | 1.4 | 2.1 | 2.1 | 2.1 |





| | | | |
|-------|-----|-----|-----|
| 67.5° | 1.4 | 0.7 | 0.0 |
| 70° | 1.4 | 0.7 | 0.0 |



(END OF REPORT)