

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: P315486

Luminaire Tested: **LDA2B20FL8050D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315486
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-15)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B20FL8050D010 PINW1MMS
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, White oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1739.4 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

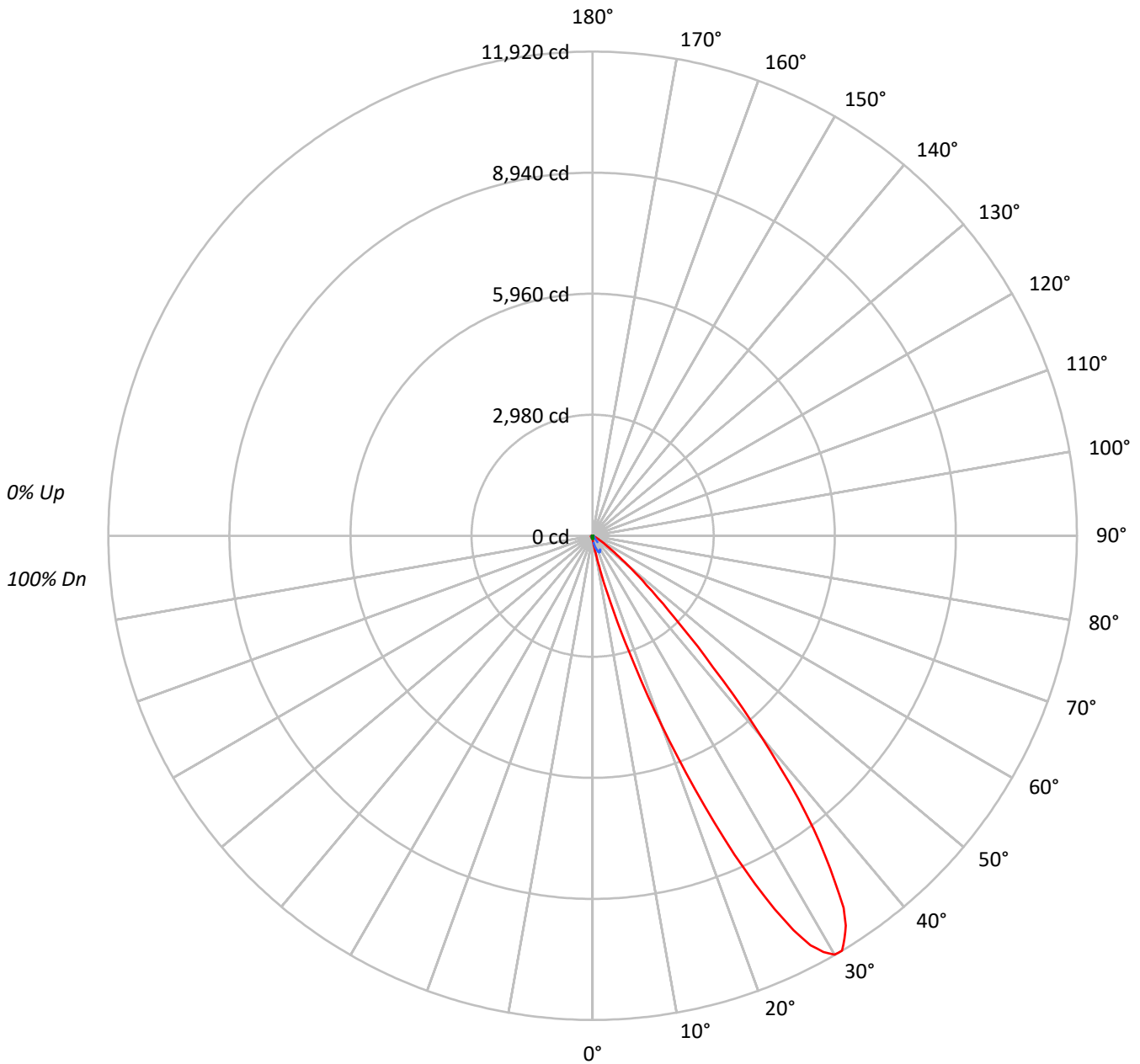
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

Luminous Intensity Polar Plot





TEST NUMBER: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

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 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 97 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | |
| 2 | 104 | 98 | 93 | 89 | 102 | 96 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 84 | 82 | 80 | | | | | | | | | | | | | | | | | | | |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 82 | 77 | 85 | 80 | 75 | 82 | 78 | 74 | 80 | 76 | 73 | 71 | | | | | | | | | | | | | | | | | | | |
| 4 | 90 | 81 | 74 | 68 | 88 | 79 | 73 | 68 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | | | | | | | | | | | | | | | | | | |
| 5 | 84 | 73 | 66 | 60 | 82 | 72 | 65 | 60 | 70 | 64 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 6 | 78 | 67 | 59 | 53 | 76 | 66 | 58 | 53 | 64 | 58 | 53 | 62 | 57 | 52 | 61 | 56 | 52 | 50 | | | | | | | | | | | | | | | | | | | |
| 7 | 72 | 61 | 53 | 48 | 71 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 45 | | | | | | | | | | | | | | | | | | | |
| 8 | 67 | 55 | 48 | 43 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | | | | | | | | | | | | | | | | | | |
| 9 | 63 | 51 | 43 | 38 | 61 | 50 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 38 | 47 | 41 | 37 | 36 | | | | | | | | | | | | | | | | | | | |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|---------|-------|--------|
| 0° | 36558 | 36558 | 36558 |
| 5° | 81617 | 37688 | 29467 |
| 10° | 218424 | 23496 | 8366 |
| 15° | 859925 | 30391 | 19716 |
| 20° | 2601392 | 18638 | 15331 |
| 25° | 5147946 | 15895 | 13609 |
| 30° | 6783298 | 9514 | 16635 |
| 35° | 6259232 | 13792 | 20116 |
| 40° | 4169180 | 12108 | 27565 |
| 45° | 1966521 | 4396 | 11652 |
| 50° | 867084 | 16041 | 35997 |
| 55° | 352575 | 0 | 36814 |
| 60° | 146134 | 10262 | 32957 |
| 65° | 49964 | 12141 | 24399 |
| 70° | 42121 | 24090 | 61739 |
| 75° | 23828 | 35837 | 81586 |
| 80° | 0 | 17899 | 35514 |
| 85° | 23775 | 23775 | 118308 |



TEST NUMBER: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 10.1 | 0.6 |
| 10°-20° | 106.4 | 6.1 |
| 20°-30° | 547.1 | 31.5 |
| 30°-40° | 700.5 | 40.3 |
| 40°-50° | 269.4 | 15.5 |
| 50°-60° | 54.8 | 3.1 |
| 60°-70° | 18.6 | 1.1 |
| 70°-80° | 21.6 | 1.2 |
| 80°-90° | 11.0 | 0.6 |
| 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° | 663.6 | 38.1 |
| 0°-40° | 1364.1 | 78.4 |
| 0°-60° | 1688.2 | 97.1 |
| 0°-90° | 1739.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1739.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-------|-----|-----|------|------|------|
| 0° | 74 | 74 | 74 | 74 | 74 | |
| 5° | 165 | 136 | 76 | 55 | 60 | 24 |
| 15° | 1684 | 328 | 60 | 36 | 39 | 646 |
| 25° | 9457 | 428 | 29 | 23 | 25 | 4317 |
| 35° | 10392 | 222 | 23 | 19 | 33 | 6211 |
| 45° | 2818 | 55 | 6 | 4 | 17 | 2423 |
| 55° | 410 | 10 | 0 | 8 | 43 | 425 |
| 65° | 43 | 15 | 10 | 15 | 21 | 60 |
| 75° | 12 | 23 | 19 | 31 | 43 | 17 |
| 85° | 4 | 15 | 4 | 17 | 21 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

CANDELA DISTRIBUTION (FULL):

| | 0° | 2.5° | 5° | 7.5° | 10° | 12.5° | 15° | 17.5° | 22.5° | 45° | 67.5° |
|-------|---------|---------|---------|---------|--------|--------|--------|--------|--------|-------|-------|
| 0° | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 |
| 2.5° | 109.5 | 94.9 | 99.1 | 84.5 | 92.8 | 94.9 | 78.2 | 103.3 | 92.8 | 97.0 | 84.5 |
| 5° | 164.8 | 177.3 | 162.7 | 156.5 | 152.3 | 156.5 | 152.3 | 158.6 | 154.4 | 135.6 | 97.0 |
| 7.5° | 275.4 | 251.4 | 251.4 | 243.0 | 249.3 | 247.2 | 236.8 | 243.0 | 228.4 | 164.8 | 111.6 |
| 10° | 436.0 | 412.0 | 409.9 | 403.7 | 401.6 | 382.8 | 372.4 | 364.0 | 333.8 | 195.1 | 101.2 |
| 12.5° | 854.3 | 833.4 | 818.8 | 782.3 | 757.3 | 742.7 | 687.4 | 658.2 | 571.6 | 290.0 | 129.3 |
| 15° | 1683.6 | 1576.1 | 1603.3 | 1485.4 | 1398.8 | 1341.4 | 1226.7 | 1125.5 | 917.9 | 327.5 | 125.2 |
| 17.5° | 2979.1 | 2874.8 | 2804.9 | 2676.6 | 2500.3 | 2348.0 | 2121.7 | 1897.4 | 1475.0 | 372.4 | 116.8 |
| 20° | 4954.8 | 4789.9 | 4643.9 | 4423.8 | 4084.8 | 3791.7 | 3393.2 | 2964.5 | 2195.7 | 425.6 | 105.4 |
| 21° | 5822.6 | 5695.4 | 5526.4 | 5236.4 | 4841.1 | 4448.9 | 3971.1 | 3454.8 | 2502.4 | 429.8 | 94.9 |
| 22° | 6728.0 | 6645.6 | 6423.5 | 6090.7 | 5629.6 | 5162.3 | 4576.1 | 4008.7 | 2828.9 | 436.0 | 90.8 |
| 23° | 7671.0 | 7584.4 | 7333.0 | 6952.3 | 6433.9 | 5868.5 | 5185.3 | 4512.5 | 3135.6 | 444.4 | 88.7 |
| 24° | 8594.2 | 8498.2 | 8217.6 | 7792.0 | 7203.7 | 6553.8 | 5781.9 | 5001.7 | 3421.4 | 440.2 | 92.8 |
| 25° | 9456.8 | 9323.3 | 9027.0 | 8555.6 | 7909.9 | 7180.7 | 6329.6 | 5424.2 | 3672.8 | 427.7 | 78.2 |
| 26° | 10226.6 | 10074.3 | 9755.1 | 9240.9 | 8534.7 | 7745.1 | 6786.5 | 5816.4 | 3858.5 | 417.2 | 74.1 |
| 27° | 10895.3 | 10703.3 | 10362.2 | 9822.9 | 9065.6 | 8193.6 | 7176.6 | 6123.0 | 4022.2 | 401.6 | 59.5 |
| 28° | 11415.8 | 11195.7 | 10849.4 | 10279.8 | 9479.8 | 8543.0 | 7463.4 | 6315.0 | 4119.2 | 403.7 | 67.8 |
| 29° | 11716.2 | 11547.2 | 11170.6 | 10574.0 | 9732.2 | 8744.4 | 7614.7 | 6421.4 | 4138.0 | 372.4 | 63.6 |
| 30° | 11907.1 | 11718.3 | 11331.3 | 10707.5 | 9829.2 | 8790.3 | 7633.5 | 6401.5 | 4082.7 | 349.4 | 59.5 |
| 31° | 11919.6 | 11722.4 | 11329.2 | 10683.5 | 9791.6 | 8714.1 | 7529.1 | 6283.7 | 3962.8 | 325.4 | 49.0 |
| 32° | 11695.3 | 11543.0 | 11156.0 | 10489.5 | 9588.2 | 8504.5 | 7304.9 | 6084.4 | 3774.0 | 277.5 | 33.4 |
| 33° | 11441.8 | 11257.2 | 10872.3 | 10199.5 | 9306.6 | 8217.6 | 6981.5 | 5816.4 | 3577.9 | 273.3 | 42.8 |
| 34° | 11047.5 | 10825.4 | 10446.7 | 9784.3 | 8915.4 | 7808.7 | 6596.6 | 5458.6 | 3327.5 | 249.3 | 40.7 |
| 35° | 10392.5 | 10273.6 | 9890.7 | 9236.7 | 8392.8 | 7318.4 | 6133.5 | 5065.3 | 3061.5 | 222.2 | 29.2 |
| 36° | 9736.4 | 9590.3 | 9228.4 | 8596.2 | 7796.2 | 6734.3 | 5610.9 | 4616.8 | 2761.1 | 188.8 | 22.9 |
| 37° | 9042.7 | 8851.8 | 8522.2 | 7903.6 | 7068.1 | 6152.2 | 5109.1 | 4189.1 | 2516.0 | 199.2 | 31.3 |
| 38° | 8234.3 | 8170.7 | 7736.7 | 7160.9 | 6389.0 | 5524.3 | 4569.9 | 3738.5 | 2244.8 | 185.7 | 51.1 |
| 39° | 7345.6 | 7302.8 | 6869.9 | 6345.2 | 5652.6 | 4857.7 | 4018.0 | 3271.2 | 1973.6 | 135.6 | 16.7 |
| 40° | 6473.5 | 6351.5 | 6044.8 | 5568.1 | 4965.2 | 4250.7 | 3524.7 | 2872.7 | 1738.9 | 133.5 | 33.4 |
| 42.5° | 4387.3 | 4425.9 | 4094.2 | 3753.1 | 3366.1 | 2881.1 | 2397.1 | 1969.4 | 1216.3 | 99.1 | 20.9 |
| 45° | 2818.5 | 2826.8 | 2678.7 | 2413.7 | 2160.3 | 1857.8 | 1538.6 | 1282.0 | 784.4 | 55.3 | 6.3 |
| 47.5° | 1794.1 | 1790.0 | 1695.0 | 1542.8 | 1376.9 | 1199.6 | 1000.3 | 837.6 | 508.0 | 42.8 | 18.8 |
| 50° | 1129.7 | 1125.5 | 1066.1 | 969.0 | 876.2 | 759.4 | 634.2 | 539.3 | 321.3 | 51.1 | 20.9 |
| 51° | 917.9 | 924.2 | 874.1 | 776.1 | 704.1 | 592.5 | 505.9 | 429.8 | 251.4 | 35.5 | 18.8 |
| 52° | 757.3 | 753.1 | 721.8 | 639.4 | 580.0 | 484.0 | 412.0 | 351.5 | 209.7 | 31.3 | 8.3 |
| 53° | 609.2 | 611.3 | 580.0 | 516.3 | 459.0 | 387.0 | 329.6 | 273.3 | 150.2 | 22.9 | 6.3 |
| 54° | 481.9 | 477.7 | 467.3 | 405.8 | 370.3 | 306.7 | 257.6 | 209.7 | 129.3 | 4.2 | 0.0 |
| 55° | 409.9 | 403.7 | 389.1 | 335.9 | 300.4 | 253.5 | 205.5 | 179.4 | 111.6 | 10.4 | 0.0 |
| 57.5° | 236.8 | 236.8 | 228.4 | 199.2 | 175.2 | 156.5 | 125.2 | 116.8 | 57.4 | 10.4 | 0.0 |
| 60° | 148.1 | 129.3 | 143.9 | 123.1 | 97.0 | 86.6 | 72.0 | 65.7 | 49.0 | 18.8 | 4.2 |
| 61° | 123.1 | 99.1 | 97.0 | 90.8 | 84.5 | 57.4 | 49.0 | 53.2 | 31.3 | 6.3 | 4.2 |
| 62° | 88.7 | 78.2 | 84.5 | 72.0 | 63.6 | 44.9 | 40.7 | 38.6 | 18.8 | 8.3 | 10.4 |
| 63° | 80.3 | 72.0 | 69.9 | 53.2 | 46.9 | 46.9 | 35.5 | 33.4 | 22.9 | 16.7 | 8.3 |



TEST NUMBER: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

CANDELA DISTRIBUTION (continued):

| | 0° | 2.5° | 5° | 7.5° | 10° | 12.5° | 15° | 17.5° | 22.5° | 45° | 67.5° |
|-------|------|------|------|------|------|-------|------|-------|-------|------|-------|
| 66° | 42.8 | 35.5 | 31.3 | 35.5 | 20.9 | 27.1 | 10.4 | 29.2 | 6.3 | 10.4 | 6.3 |
| 67.5° | 33.4 | 20.9 | 18.8 | 22.9 | 14.6 | 10.4 | 14.6 | 18.8 | 6.3 | 10.4 | 14.6 |
| 70° | 29.2 | 14.6 | 20.9 | 18.8 | 14.6 | 18.8 | 20.9 | 20.9 | 6.3 | 20.9 | 18.8 |
| 72.5° | 29.2 | 18.8 | 10.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 12.5 | 29.2 | 22.9 |
| 75° | 12.5 | 12.5 | 6.3 | 14.6 | 8.3 | 12.5 | 8.3 | 20.9 | 8.3 | 22.9 | 18.8 |
| 77.5° | 8.3 | 10.4 | 0.0 | 10.4 | 0.0 | 0.0 | 6.3 | 14.6 | 6.3 | 16.7 | 20.9 |
| 80° | 0.0 | 10.4 | 6.3 | 0.0 | 4.2 | 6.3 | 0.0 | 2.1 | 4.2 | 18.8 | 8.3 |
| 82.5° | 4.2 | 6.3 | 8.3 | 4.2 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 12.5 | 10.4 |
| 85° | 4.2 | 8.3 | 0.0 | 2.1 | 8.3 | 4.2 | 2.1 | 10.4 | 4.2 | 14.6 | 16.7 |
| 87.5° | 0.0 | 4.2 | 4.2 | 0.0 | 6.3 | 0.0 | 6.3 | 4.2 | 0.0 | 12.5 | 6.3 |
| 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: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

CANDELA DISTRIBUTION (continued):

| | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|------|--------|------|--------|------|
| 0° | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 |
| 2.5° | 63.6 | 57.4 | 49.0 | 61.5 | 51.1 |
| 5° | 76.1 | 69.9 | 55.3 | 65.7 | 59.5 |
| 7.5° | 78.2 | 65.7 | 57.4 | 53.2 | 59.5 |
| 10° | 46.9 | 31.3 | 22.9 | 31.3 | 16.7 |
| 12.5° | 78.2 | 55.3 | 51.1 | 57.4 | 63.6 |
| 15° | 59.5 | 35.5 | 35.5 | 27.1 | 38.6 |
| 17.5° | 33.4 | 27.1 | 25.0 | 33.4 | 38.6 |
| 20° | 35.5 | 22.9 | 18.8 | 31.3 | 29.2 |
| 21° | 31.3 | 8.3 | 25.0 | 25.0 | 29.2 |
| 22° | 44.9 | 20.9 | 25.0 | 40.7 | 42.8 |
| 23° | 29.2 | 22.9 | 18.8 | 25.0 | 33.4 |
| 24° | 42.8 | 25.0 | 22.9 | 31.3 | 46.9 |
| 25° | 29.2 | 22.9 | 22.9 | 29.2 | 25.0 |
| 26° | 16.7 | 22.9 | 16.7 | 25.0 | 20.9 |
| 27° | 12.5 | 20.9 | 12.5 | 18.8 | 25.0 |
| 28° | 27.1 | 33.4 | 31.3 | 33.4 | 29.2 |
| 29° | 29.2 | 35.5 | 29.2 | 44.9 | 33.4 |
| 30° | 16.7 | 31.3 | 14.6 | 33.4 | 29.2 |
| 31° | 16.7 | 22.9 | 10.4 | 33.4 | 29.2 |
| 32° | 2.1 | 12.5 | 6.3 | 12.5 | 12.5 |
| 33° | 12.5 | 14.6 | 16.7 | 27.1 | 20.9 |
| 34° | 20.9 | 25.0 | 16.7 | 29.2 | 25.0 |
| 35° | 22.9 | 12.5 | 18.8 | 31.3 | 33.4 |
| 36° | 6.3 | 6.3 | 10.4 | 25.0 | 8.3 |
| 37° | 12.5 | 35.5 | 25.0 | 42.8 | 25.0 |
| 38° | 20.9 | 42.8 | 40.7 | 53.2 | 42.8 |
| 39° | 4.2 | 12.5 | 14.6 | 29.2 | 29.2 |
| 40° | 18.8 | 31.3 | 22.9 | 42.8 | 42.8 |
| 42.5° | 14.6 | 22.9 | 16.7 | 35.5 | 29.2 |
| 45° | 6.3 | 6.3 | 4.2 | 22.9 | 16.7 |
| 47.5° | 10.4 | 10.4 | 18.8 | 29.2 | 51.1 |
| 50° | 20.9 | 20.9 | 27.1 | 49.0 | 46.9 |
| 51° | 12.5 | 10.4 | 14.6 | 33.4 | 42.8 |
| 52° | 10.4 | 14.6 | 14.6 | 33.4 | 33.4 |
| 53° | 4.2 | 0.0 | 0.0 | 25.0 | 20.9 |
| 54° | 4.2 | 2.1 | 6.3 | 18.8 | 29.2 |
| 55° | 0.0 | 10.4 | 8.3 | 38.6 | 42.8 |
| 57.5° | 2.1 | 16.7 | 8.3 | 27.1 | 33.4 |
| 60° | 10.4 | 12.5 | 22.9 | 27.1 | 33.4 |
| 61° | 0.0 | 10.4 | 10.4 | 25.0 | 29.2 |
| 62° | 0.0 | 8.3 | 18.8 | 22.9 | 29.2 |
| 63° | 10.4 | 12.5 | 16.7 | 27.1 | 33.4 |



TEST NUMBER: P315486

CATALOG NUMBER: LDA2B20FL8050D010 PINW1MMS

CANDELA DISTRIBUTION (continued):

| | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|------|--------|------|--------|------|
| 66° | 6.3 | 16.7 | 20.9 | 27.1 | 25.0 |
| 67.5° | 12.5 | 14.6 | 12.5 | 35.5 | 42.8 |
| 70° | 16.7 | 27.1 | 29.2 | 25.0 | 42.8 |
| 72.5° | 10.4 | 14.6 | 20.9 | 38.6 | 42.8 |
| 75° | 18.8 | 20.9 | 31.3 | 35.5 | 42.8 |
| 77.5° | 14.6 | 20.9 | 20.9 | 22.9 | 42.8 |
| 80° | 6.3 | 18.8 | 20.9 | 22.9 | 12.5 |
| 82.5° | 8.3 | 12.5 | 8.3 | 22.9 | 16.7 |
| 85° | 4.2 | 18.8 | 16.7 | 20.9 | 20.9 |
| 87.5° | 6.3 | 10.4 | 10.4 | 18.8 | 12.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By E9808895 / USPTCWHP6082093





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







| | | | | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|-----|------|------|
| 64° | 46.9 | 49.0 | 46.9 | 33.4 | 25.0 | 22.9 | 16.7 | 29.2 | 8.3 | 8.3 | 0.0 |
| 65° | 42.8 | 46.9 | 35.5 | 40.7 | 27.1 | 25.0 | 14.6 | 29.2 | 4.2 | 14.6 | 10.4 |





| | | | | | |
|-----|------|------|------|------|------|
| 64° | 6.3 | 10.4 | 10.4 | 18.8 | 29.2 |
| 65° | 10.4 | 14.6 | 14.6 | 27.1 | 20.9 |



(END OF REPORT)