

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: IRiS

Report Number: P1345429

Luminaire Tested: P3A13R359030D2WDE010 E3CA451MMS

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1345429  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-77)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A13R359030D2WDE010 E3CA451MMS  
Description: 3in Adjustable Dim to Warm LED luminaire with, R35 optic, 3000K CCT AND, 90CRI ,  
E3CA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

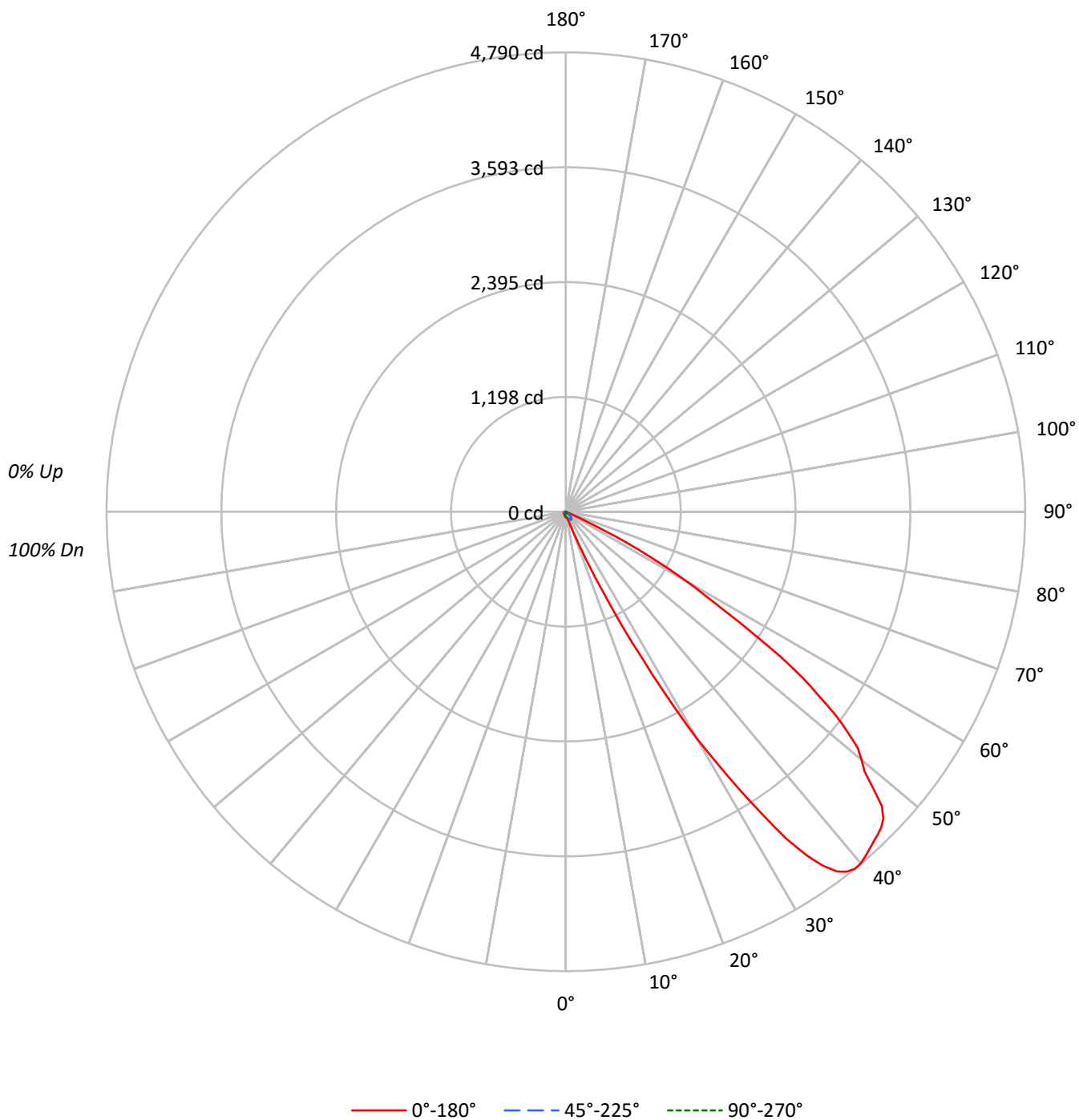
Lumens per Lamp: N/A  
Luminaire Lumens: 1193.0 lumens  
Efficiency: N/A  
Efficacy: 59.4 lumens/watt  
Spacing Criteria (0/90/45): 4.01 / 0.66 / 1.41  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 20.1  
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: 24 FT

TEST NUMBER: P1345429

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |     | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  | 89  | 89  | 87  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  | 75  | 75  | 73  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  | 63  | 63  | 61  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 52  | 52  | 50  |
| 5   | 75  | 62  | 52  | 46  | 73  | 61  | 52  | 45  | 58  | 51  | 45  | 56  | 50  | 44  | 55  | 49  | 44  | 44  | 44  | 42  |
| 6   | 68  | 54  | 45  | 38  | 66  | 53  | 44  | 38  | 51  | 43  | 38  | 50  | 43  | 37  | 48  | 42  | 37  | 37  | 37  | 35  |
| 7   | 62  | 48  | 38  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 44  | 37  | 31  | 42  | 36  | 31  | 31  | 31  | 29  |
| 8   | 57  | 42  | 33  | 27  | 55  | 41  | 33  | 27  | 40  | 32  | 27  | 39  | 32  | 26  | 38  | 31  | 26  | 26  | 26  | 24  |
| 9   | 52  | 38  | 29  | 23  | 50  | 37  | 29  | 23  | 36  | 28  | 23  | 35  | 28  | 22  | 34  | 27  | 22  | 22  | 22  | 20  |
| 10  | 48  | 34  | 25  | 19  | 46  | 33  | 25  | 19  | 32  | 25  | 19  | 31  | 24  | 19  | 30  | 24  | 19  | 19  | 19  | 17  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°      | 45°   | 90°   | 135°  | 180°  |
|-----|---------|-------|-------|-------|-------|
| 0°  | 12039   | 12039 | 12039 | 12039 | 12039 |
| 5°  | 13031   | 12811 | 11842 | 10676 | 10434 |
| 10° | 13672   | 12469 | 10554 | 9107  | 9107  |
| 15° | 19569   | 12213 | 8559  | 7832  | 8059  |
| 20° | 49004   | 13068 | 6791  | 6791  | 7537  |
| 25° | 227481  | 16670 | 5202  | 6242  | 7041  |
| 30° | 691524  | 22636 | 4102  | 5722  | 7090  |
| 35° | 1168718 | 26234 | 3453  | 5488  | 6906  |
| 40° | 1369967 | 25906 | 2777  | 5553  | 7385  |
| 45° | 1442754 | 18358 | 2326  | 6016  | 8001  |
| 50° | 1373294 | 11019 | 2217  | 6243  | 8801  |
| 55° | 1150736 | 4511  | 2485  | 6996  | 10284 |
| 60° | 644203  | 965   | 2851  | 8026  | 11315 |
| 65° | 111192  | 571   | 2802  | 8924  | 12868 |
| 70° | 2052    | 705   | 3462  | 9681  | 14490 |
| 75° | 1864    | 932   | 4575  | 10929 | 16436 |
| 80° | 1389    | 1389  | 5430  | 12249 | 19068 |
| 85° | 0       | 2768  | 10819 | 13586 | 21637 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 46°

Luminance: 1452952 cd/sqm

TEST NUMBER: P1345429

CATALOG NUMBER: P3A13R359030D2WDE010 E3CA451MMS

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 5.0    | 0.4       |
| 10°-20°   | 14.1   | 1.2       |
| 20°-30°   | 73.2   | 6.1       |
| 30°-40°   | 316.1  | 26.5      |
| 40°-50°   | 450.9  | 37.8      |
| 50°-60°   | 279.3  | 23.4      |
| 60°-70°   | 42.5   | 3.6       |
| 70°-80°   | 8.0    | 0.7       |
| 80°-90°   | 4.0    | 0.3       |
| 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°    | 92.2   | 7.7       |
| 0°-40°    | 408.3  | 34.2      |
| 0°-60°    | 1138.6 | 95.4      |
| 0°-90°    | 1193.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1193.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 55   | 55  | 55  | 55   | 55   |      |
| 5°  | 59   | 58  | 54  | 48   | 47   | 6    |
| 15° | 86   | 54  | 38  | 34   | 36   | 31   |
| 25° | 940  | 69  | 22  | 26   | 29   | 563  |
| 35° | 4366 | 98  | 13  | 20   | 26   | 2621 |
| 45° | 4652 | 59  | 8   | 19   | 26   | 3515 |
| 55° | 3010 | 12  | 6   | 18   | 27   | 2564 |
| 65° | 214  | 1   | 5   | 17   | 25   | 438  |
| 75° | 2    | 1   | 5   | 13   | 19   | 2    |
| 85° | 0    | 1   | 4   | 5    | 9    | 0    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1345429

CATALOG NUMBER: P3A13R359030D2WDE010 E3CA451MMS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°   | 45°  | 67.5° | 90°  | 112.5° |
|-------|--------|--------|--------|--------|--------|--------|-------|------|-------|------|--------|
| 0°    | 54.9   | 54.9   | 54.9   | 54.9   | 54.9   | 54.9   | 54.9  | 54.9 | 54.9  | 54.9 | 54.9   |
| 2.5°  | 57.1   | 57.1   | 57.1   | 57.1   | 57.1   | 57.1   | 57.1  | 57.1 | 57.1  | 54.9 | 53.8   |
| 5°    | 59.2   | 59.2   | 58.2   | 58.2   | 58.2   | 58.2   | 58.2  | 58.2 | 56.0  | 53.8 | 50.6   |
| 7.5°  | 60.3   | 60.3   | 59.2   | 59.2   | 59.2   | 59.2   | 58.2  | 57.1 | 54.9  | 50.6 | 47.4   |
| 10°   | 61.4   | 61.4   | 61.4   | 61.4   | 60.3   | 59.2   | 58.2  | 56.0 | 52.8  | 47.4 | 44.2   |
| 12.5° | 68.9   | 68.9   | 67.8   | 65.7   | 63.5   | 61.4   | 59.2  | 54.9 | 48.5  | 43.1 | 39.8   |
| 15°   | 86.2   | 85.1   | 82.9   | 79.7   | 75.4   | 70.0   | 65.7  | 53.8 | 44.2  | 37.7 | 35.5   |
| 17.5° | 120.6  | 118.5  | 115.2  | 104.5  | 94.8   | 85.1   | 76.5  | 53.8 | 39.8  | 33.4 | 31.2   |
| 20°   | 210.0  | 211.1  | 188.5  | 162.6  | 141.1  | 117.4  | 95.8  | 56.0 | 35.5  | 29.1 | 28.0   |
| 22.5° | 438.3  | 421.1  | 367.2  | 304.8  | 232.6  | 179.8  | 135.7 | 61.4 | 31.2  | 24.8 | 24.8   |
| 25°   | 940.2  | 874.5  | 744.2  | 562.2  | 396.3  | 281.1  | 197.1 | 68.9 | 28.0  | 21.5 | 22.6   |
| 27.5° | 1716.6 | 1657.4 | 1395.7 | 1051.1 | 697.9  | 424.3  | 267.1 | 78.6 | 24.8  | 18.3 | 20.5   |
| 30°   | 2731.1 | 2567.4 | 2226.0 | 1723.1 | 1166.3 | 649.4  | 358.6 | 89.4 | 20.5  | 16.2 | 19.4   |
| 31°   | 3047.7 | 2972.3 | 2556.7 | 1993.4 | 1366.6 | 771.1  | 397.4 | 92.6 | 19.4  | 16.2 | 18.3   |
| 32°   | 3423.6 | 3290.0 | 2917.4 | 2289.6 | 1570.2 | 879.9  | 443.7 | 95.8 | 18.3  | 14.0 | 18.3   |
| 33°   | 3759.6 | 3630.4 | 3177.0 | 2550.2 | 1775.9 | 1003.7 | 493.2 | 96.9 | 16.2  | 14.0 | 17.2   |
| 34°   | 4112.8 | 3936.2 | 3487.1 | 2822.7 | 1987.0 | 1137.2 | 538.5 | 98.0 | 15.1  | 12.9 | 17.2   |
| 35°   | 4365.9 | 4189.3 | 3754.2 | 3038.0 | 2169.0 | 1255.7 | 590.2 | 98.0 | 14.0  | 12.9 | 16.2   |
| 36°   | 4561.9 | 4406.8 | 3984.7 | 3259.9 | 2349.9 | 1362.3 | 631.1 | 98.0 | 11.8  | 11.8 | 16.2   |
| 37°   | 4696.5 | 4549.0 | 4139.7 | 3450.5 | 2487.7 | 1457.1 | 667.7 | 98.0 | 10.8  | 11.8 | 16.2   |
| 38°   | 4762.2 | 4639.4 | 4289.4 | 3589.4 | 2621.3 | 1531.4 | 696.8 | 95.8 | 9.7   | 10.8 | 15.1   |
| 39°   | 4790.2 | 4690.1 | 4381.0 | 3706.8 | 2721.4 | 1596.0 | 718.3 | 93.7 | 8.6   | 10.8 | 15.1   |
| 40°   | 4785.9 | 4698.7 | 4432.7 | 3787.6 | 2802.2 | 1640.2 | 730.2 | 90.5 | 7.5   | 9.7  | 15.1   |
| 41°   | 4761.1 | 4685.8 | 4459.6 | 3856.5 | 2850.7 | 1670.3 | 733.4 | 87.2 | 6.5   | 9.7  | 14.0   |
| 42°   | 4733.1 | 4664.2 | 4468.2 | 3893.1 | 2881.9 | 1680.0 | 724.8 | 82.9 | 6.5   | 8.6  | 14.0   |
| 43°   | 4704.1 | 4640.5 | 4468.2 | 3905.0 | 2889.4 | 1673.6 | 710.8 | 75.4 | 5.4   | 8.6  | 14.0   |
| 44°   | 4680.4 | 4620.1 | 4454.2 | 3901.7 | 2873.3 | 1648.8 | 684.9 | 66.8 | 4.3   | 8.6  | 14.0   |
| 45°   | 4652.4 | 4593.1 | 4435.9 | 3881.3 | 2842.0 | 1606.8 | 652.6 | 59.2 | 3.2   | 7.5  | 14.0   |
| 46°   | 4602.8 | 4556.5 | 4403.6 | 3839.3 | 2792.5 | 1548.6 | 611.7 | 53.8 | 2.2   | 7.5  | 12.9   |
| 47°   | 4507.0 | 4467.1 | 4341.1 | 3776.8 | 2726.8 | 1479.7 | 569.7 | 48.5 | 2.2   | 7.5  | 12.9   |
| 48°   | 4314.2 | 4313.1 | 4216.2 | 3660.5 | 2622.3 | 1393.6 | 525.5 | 43.1 | 2.2   | 7.5  | 12.9   |
| 49°   | 4127.9 | 4108.5 | 3987.9 | 3455.9 | 2472.6 | 1290.2 | 479.2 | 38.8 | 1.1   | 7.5  | 12.9   |
| 50°   | 4025.6 | 3983.6 | 3785.4 | 3214.7 | 2281.0 | 1146.9 | 429.7 | 32.3 | 1.1   | 6.5  | 12.9   |
| 51°   | 3919.0 | 3858.7 | 3625.0 | 2997.1 | 2052.6 | 1009.1 | 375.9 | 25.8 | 1.1   | 6.5  | 11.8   |
| 52°   | 3726.2 | 3669.1 | 3407.4 | 2789.3 | 1830.8 | 868.0  | 324.2 | 21.5 | 1.1   | 6.5  | 12.9   |
| 53°   | 3518.4 | 3436.5 | 3152.2 | 2561.0 | 1635.9 | 743.1  | 271.4 | 18.3 | 1.1   | 6.5  | 11.8   |
| 54°   | 3256.7 | 3220.0 | 2893.7 | 2281.0 | 1407.6 | 622.5  | 222.9 | 15.1 | 1.1   | 6.5  | 11.8   |
| 55°   | 3010.0 | 2956.2 | 2617.0 | 1994.5 | 1200.8 | 510.5  | 186.3 | 11.8 | 1.1   | 6.5  | 11.8   |
| 56°   | 2695.6 | 2614.8 | 2297.1 | 1731.7 | 990.8  | 411.4  | 157.2 | 9.7  | 1.1   | 6.5  | 11.8   |
| 57°   | 2320.8 | 2234.6 | 1983.7 | 1439.9 | 777.5  | 313.4  | 131.4 | 7.5  | 1.1   | 6.5  | 11.8   |
| 58°   | 1963.3 | 1888.9 | 1619.7 | 1111.4 | 585.9  | 217.5  | 108.8 | 5.4  | 1.1   | 5.4  | 11.8   |
| 59°   | 1696.2 | 1614.3 | 1347.2 | 855.1  | 407.1  | 160.5  | 81.8  | 4.3  | 1.1   | 6.5  | 11.8   |
| 60°   | 1468.9 | 1363.4 | 1084.5 | 662.3  | 290.8  | 115.2  | 60.3  | 2.2  | 2.2   | 6.5  | 11.8   |
| 62.5° | 846.5  | 747.4  | 518.0  | 269.2  | 119.5  | 59.2   | 29.1  | 1.1  | 2.2   | 6.5  | 11.8   |
| 65°   | 214.3  | 190.6  | 123.8  | 58.2   | 33.4   | 20.5   | 10.8  | 1.1  | 2.2   | 5.4  | 10.8   |



TEST NUMBER: P1345429

CATALOG NUMBER: P3A13R359030D2WDE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 45° | 67.5° | 90° | 112.5° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|--------|
| 67.5° | 7.5 | 7.5 | 7.5 | 6.5 | 5.4 | 4.3 | 2.2 | 1.1 | 2.2   | 5.4 | 10.8   |
| 70°   | 3.2 | 3.2 | 3.2 | 2.2 | 2.2 | 1.1 | 1.1 | 1.1 | 2.2   | 5.4 | 9.7    |
| 72.5° | 2.2 | 2.2 | 2.2 | 2.2 | 1.1 | 1.1 | 1.1 | 1.1 | 3.2   | 5.4 | 8.6    |
| 75°   | 2.2 | 2.2 | 2.2 | 2.2 | 1.1 | 1.1 | 1.1 | 1.1 | 3.2   | 5.4 | 8.6    |
| 77.5° | 2.2 | 2.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 3.2   | 4.3 | 7.5    |
| 80°   | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 3.2   | 4.3 | 6.5    |
| 82.5° | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 3.2   | 4.3 | 5.4    |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 1.1 | 3.2   | 4.3 | 4.3    |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 3.2   | 4.3 | 3.2    |
| 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: P1345429

CATALOG NUMBER: P3A13R359030D2WDE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 0°    | 54.9 | 54.9   | 54.9 |
| 2.5°  | 51.7 | 51.7   | 51.7 |
| 5°    | 48.5 | 48.5   | 47.4 |
| 7.5°  | 45.2 | 44.2   | 44.2 |
| 10°   | 40.9 | 40.9   | 40.9 |
| 12.5° | 37.7 | 37.7   | 37.7 |
| 15°   | 34.5 | 35.5   | 35.5 |
| 17.5° | 31.2 | 33.4   | 33.4 |
| 20°   | 29.1 | 31.2   | 32.3 |
| 22.5° | 26.9 | 29.1   | 30.2 |
| 25°   | 25.8 | 28.0   | 29.1 |
| 27.5° | 23.7 | 26.9   | 29.1 |
| 30°   | 22.6 | 25.8   | 28.0 |
| 31°   | 22.6 | 25.8   | 26.9 |
| 32°   | 21.5 | 25.8   | 26.9 |
| 33°   | 21.5 | 25.8   | 26.9 |
| 34°   | 21.5 | 24.8   | 26.9 |
| 35°   | 20.5 | 24.8   | 25.8 |
| 36°   | 20.5 | 24.8   | 25.8 |
| 37°   | 20.5 | 24.8   | 26.9 |
| 38°   | 20.5 | 24.8   | 25.8 |
| 39°   | 19.4 | 24.8   | 25.8 |
| 40°   | 19.4 | 24.8   | 25.8 |
| 41°   | 19.4 | 24.8   | 25.8 |
| 42°   | 19.4 | 24.8   | 25.8 |
| 43°   | 19.4 | 24.8   | 25.8 |
| 44°   | 19.4 | 23.7   | 25.8 |
| 45°   | 19.4 | 23.7   | 25.8 |
| 46°   | 19.4 | 24.8   | 25.8 |
| 47°   | 19.4 | 24.8   | 26.9 |
| 48°   | 19.4 | 23.7   | 25.8 |
| 49°   | 18.3 | 23.7   | 25.8 |
| 50°   | 18.3 | 23.7   | 25.8 |
| 51°   | 18.3 | 24.8   | 26.9 |
| 52°   | 18.3 | 24.8   | 26.9 |
| 53°   | 18.3 | 24.8   | 26.9 |
| 54°   | 18.3 | 24.8   | 25.8 |
| 55°   | 18.3 | 24.8   | 26.9 |
| 56°   | 18.3 | 24.8   | 25.8 |
| 57°   | 18.3 | 24.8   | 25.8 |
| 58°   | 18.3 | 23.7   | 25.8 |
| 59°   | 18.3 | 23.7   | 25.8 |
| 60°   | 18.3 | 23.7   | 25.8 |
| 62.5° | 17.2 | 23.7   | 25.8 |
| 65°   | 17.2 | 22.6   | 24.8 |





TEST NUMBER: P1345429

CATALOG NUMBER: P3A13R359030D2WDE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 67.5° | 16.2 | 22.6   | 23.7 |
| 70°   | 15.1 | 21.5   | 22.6 |
| 72.5° | 14.0 | 20.5   | 21.5 |
| 75°   | 12.9 | 18.3   | 19.4 |
| 77.5° | 10.8 | 16.2   | 18.3 |
| 80°   | 9.7  | 14.0   | 15.1 |
| 82.5° | 7.5  | 11.8   | 12.9 |
| 85°   | 5.4  | 8.6    | 8.6  |
| 87.5° | 2.2  | 4.3    | 4.3  |
| 90°   | 0.0  | 0.0    | 0.0  |

(END OF REPORT)