

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: P1212208

Luminaire Tested: **LDSQA4A20935D010TE LAR25NF 4LSQA1H 30°**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P1212208  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26800)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A20935D010TE LAR25NF 4LSQA1H 30°  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 25° NARROW FLOOD, 30° Tilt  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

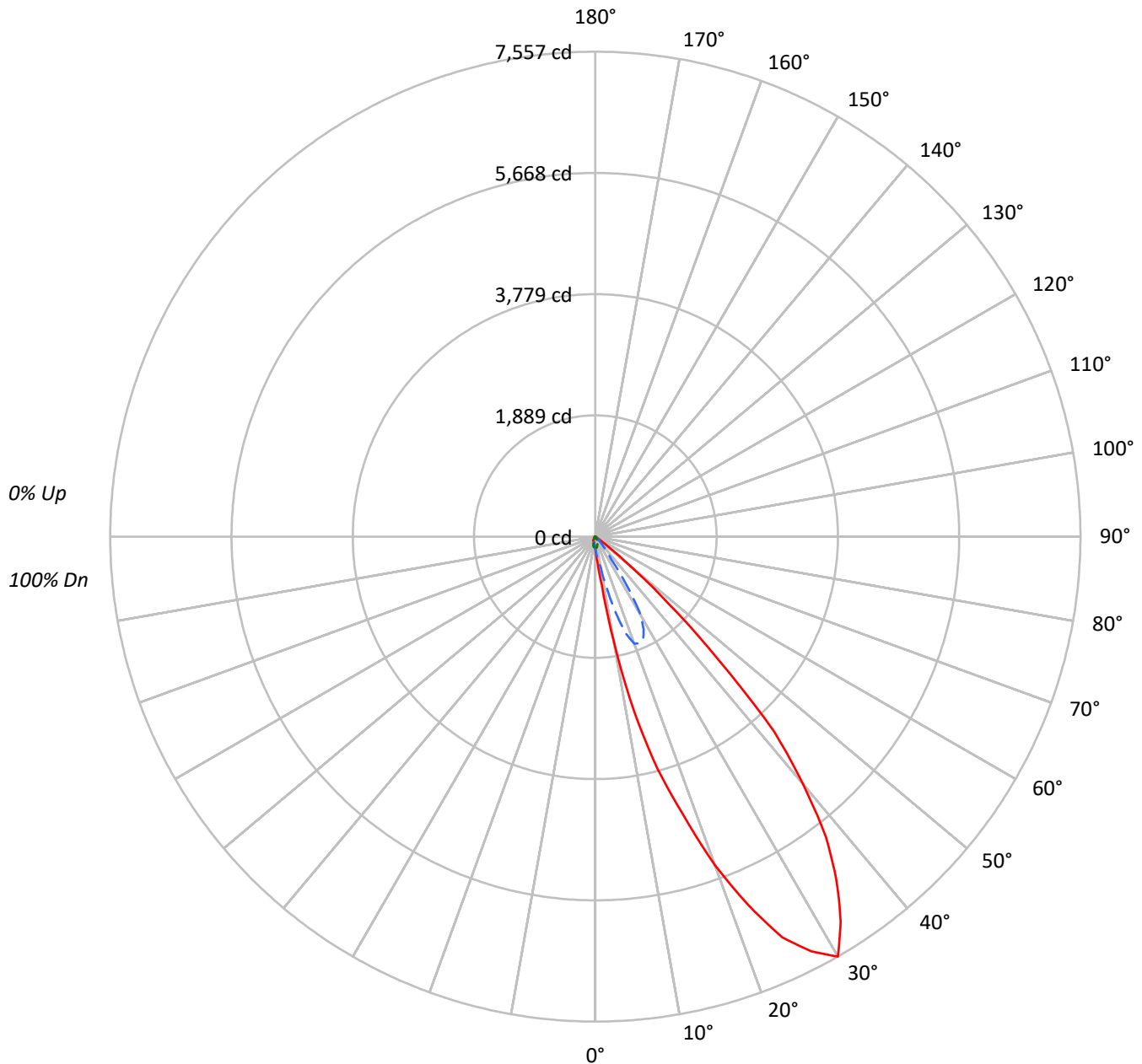
Lumens per Lamp: N/A  
Luminaire Lumens: 1820.4 lumens  
Efficiency: N/A  
Efficacy: 63.2 lumens/watt  
Spacing Criteria (0/90/45): 2.38 / 0.59 / 1.18  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 28.8  
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

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### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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 | 100 |    |    |
| 1   | 113 | 109 | 106 | 104 | 110 | 107 | 105 | 102 | 103 | 101 | 99  | 99  | 98  | 96  | 96  | 95  | 93  | 91  |    |    |
| 2   | 106 | 100 | 95  | 91  | 103 | 98  | 94  | 90  | 95  | 91  | 88  | 92  | 89  | 86  | 89  | 87  | 84  | 83  |    |    |
| 3   | 99  | 91  | 86  | 81  | 97  | 90  | 85  | 80  | 87  | 83  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 75  |    |    |
| 4   | 93  | 84  | 77  | 72  | 91  | 82  | 76  | 72  | 80  | 75  | 71  | 78  | 73  | 70  | 76  | 72  | 69  | 67  |    |    |
| 5   | 87  | 77  | 70  | 64  | 85  | 76  | 69  | 64  | 74  | 68  | 64  | 72  | 67  | 63  | 70  | 66  | 62  | 61  |    |    |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 65  | 60  | 56  | 55  |    |    |
| 7   | 76  | 64  | 57  | 52  | 74  | 64  | 57  | 52  | 62  | 56  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |
| 8   | 71  | 59  | 52  | 47  | 69  | 59  | 52  | 47  | 57  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 46  | 45  |    |    |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 42  | 51  | 46  | 42  | 41  |    |    |
| 10  | 62  | 50  | 44  | 39  | 61  | 50  | 43  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 47  | 42  | 38  | 37  |    |    |

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

|     | 0°     | 90°   | 180°  |
|-----|--------|-------|-------|
| 0°  | 18416  | 18416 | 18416 |
| 5°  | 40756  | 17417 | 12243 |
| 10° | 163166 | 15129 | 10221 |
| 15° | 376098 | 12035 | 8976  |
| 20° | 561422 | 8536  | 8010  |
| 25° | 736367 | 5697  | 7140  |
| 30° | 845297 | 3602  | 6242  |
| 35° | 775061 | 2294  | 5405  |
| 40° | 635585 | 1492  | 4591  |
| 45° | 368468 | 1041  | 3699  |
| 50° | 104428 | 769   | 3059  |
| 55° | 9560   | 709   | 2567  |
| 60° | 1473   | 814   | 2131  |
| 65° | 390    | 779   | 1559  |
| 70° | 482    | 963   | 1190  |
| 75° | 636    | 1273  | 1273  |
| 80° | 0      | 1897  | 948   |
| 85° | 0      | 3779  | 889   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 27.0   | 1.5       |
| 10°-20°   | 242.1  | 13.3      |
| 20°-30°   | 589.8  | 32.4      |
| 30°-40°   | 639.2  | 35.1      |
| 40°-50°   | 289.6  | 15.9      |
| 50°-60°   | 22.4   | 1.2       |
| 60°-70°   | 4.6    | 0.3       |
| 70°-80°   | 3.4    | 0.2       |
| 80°-90°   | 2.1    | 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°    | 858.9  | 47.2      |
| 0°-40°    | 1498.2 | 82.3      |
| 0°-60°    | 1810.2 | 99.4      |
| 0°-90°    | 1820.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1820.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90° | 135° | 180° | Flux |
|-----|------|------|-----|------|------|------|
| 0°  | 190  | 190  | 190 | 190  | 190  |      |
| 5°  | 419  | 309  | 179 | 135  | 126  | 75   |
| 15° | 3750 | 1227 | 120 | 87   | 90   | 1090 |
| 25° | 6889 | 1762 | 53  | 52   | 67   | 3140 |
| 35° | 6554 | 448  | 19  | 30   | 46   | 4031 |
| 45° | 2690 | 57   | 8   | 17   | 27   | 2123 |
| 55° | 57   | 8    | 4   | 10   | 15   | 129  |
| 65° | 2    | 2    | 3   | 7    | 7    | 3    |
| 75° | 2    | 2    | 3   | 5    | 3    | 1    |
| 85° | 0    | 2    | 3   | 2    | 1    | 0    |
| 90° | 0    | 0    | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 25°    | 30°    | 35°    | 40°    | 45°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  | 190.1  |
| 2.5°  | 284.7  | 279.7  | 282.2  | 275.5  | 271.2  | 267.9  | 269.6  | 267.9  | 256.9  | 254.4  | 245.8  |
| 5°    | 419.1  | 411.5  | 411.5  | 397.2  | 381.9  | 372.6  | 372.6  | 361.6  | 338.0  | 327.0  | 309.3  |
| 7.5°  | 751.2  | 736.0  | 723.4  | 678.5  | 620.2  | 587.3  | 578.7  | 532.4  | 472.4  | 434.3  | 389.6  |
| 10°   | 1658.7 | 1595.4 | 1550.6 | 1433.9 | 1277.6 | 1180.4 | 1139.0 | 978.6  | 787.5  | 643.8  | 513.8  |
| 12.5° | 2789.3 | 2703.0 | 2624.6 | 2433.5 | 2208.7 | 2055.8 | 1973.9 | 1737.3 | 1366.3 | 1101.0 | 823.9  |
| 15°   | 3750.0 | 3657.0 | 3564.1 | 3331.8 | 3094.3 | 2961.6 | 2811.2 | 2497.8 | 2007.7 | 1630.8 | 1226.9 |
| 17.5° | 4538.3 | 4486.1 | 4390.5 | 4050.0 | 3750.9 | 3543.8 | 3387.5 | 2977.8 | 2473.2 | 2043.2 | 1586.0 |
| 20°   | 5445.8 | 5316.6 | 5145.9 | 4732.7 | 4323.8 | 4064.3 | 3844.6 | 3345.3 | 2762.2 | 2267.9 | 1776.1 |
| 22.5° | 6209.8 | 6117.6 | 5872.6 | 5327.6 | 4726.0 | 4504.6 | 4235.9 | 3635.1 | 2948.1 | 2363.4 | 1798.2 |
| 25°   | 6889.0 | 6744.6 | 6437.1 | 5789.0 | 5173.0 | 4796.1 | 4466.6 | 3792.2 | 3016.6 | 2370.2 | 1761.8 |
| 27.5° | 7287.0 | 7098.6 | 6737.0 | 6030.6 | 5327.6 | 4911.0 | 4545.9 | 3819.3 | 2973.4 | 2280.6 | 1629.1 |
| 30°   | 7556.6 | 7181.5 | 6781.8 | 6033.1 | 5278.6 | 4852.7 | 4474.2 | 3683.3 | 2794.4 | 2076.2 | 1406.1 |
| 32.5° | 7112.2 | 6895.0 | 6513.1 | 5793.2 | 5011.5 | 4595.8 | 4219.8 | 3388.3 | 2514.6 | 1772.8 | 978.6  |
| 35°   | 6553.7 | 6377.9 | 6045.8 | 5331.0 | 4611.0 | 4219.0 | 3820.2 | 3009.8 | 2150.5 | 1218.5 | 447.8  |
| 37.5° | 5904.7 | 5767.0 | 5409.6 | 4756.3 | 4122.6 | 3739.0 | 3339.4 | 2565.4 | 1514.2 | 604.2  | 272.1  |
| 40°   | 5025.9 | 4909.4 | 4616.2 | 4091.4 | 3507.5 | 3142.5 | 2774.1 | 1918.9 | 822.1  | 337.2  | 177.4  |
| 42.5° | 4131.1 | 4033.1 | 3766.1 | 3312.3 | 2799.4 | 2498.6 | 2174.1 | 1169.5 | 409.0  | 212.1  | 98.9   |
| 45°   | 2689.5 | 2567.0 | 2423.4 | 2215.5 | 1962.1 | 1777.0 | 1394.2 | 564.4  | 242.6  | 118.2  | 56.6   |
| 47.5° | 1542.1 | 1461.0 | 1225.2 | 966.7  | 785.0  | 716.6  | 521.4  | 262.8  | 133.5  | 68.4   | 34.6   |
| 50°   | 692.9  | 640.6  | 537.4  | 437.8  | 316.9  | 247.6  | 210.4  | 131.8  | 65.9   | 37.1   | 23.6   |
| 52.5° | 170.6  | 174.1  | 164.7  | 144.5  | 128.5  | 109.0  | 94.6   | 61.7   | 34.6   | 22.8   | 15.2   |
| 55°   | 56.6   | 57.4   | 52.4   | 49.8   | 45.7   | 42.2   | 38.9   | 27.8   | 21.1   | 20.3   | 7.6    |
| 57.5° | 20.3   | 20.3   | 21.1   | 19.4   | 18.6   | 17.8   | 16.9   | 14.3   | 12.7   | 7.6    | 4.2    |
| 60°   | 7.6    | 7.6    | 7.6    | 8.4    | 8.4    | 8.4    | 9.3    | 8.4    | 5.9    | 4.2    | 3.4    |
| 62.5° | 3.4    | 3.4    | 3.4    | 3.4    | 4.2    | 4.2    | 5.1    | 4.2    | 3.4    | 3.4    | 2.5    |
| 65°   | 1.7    | 1.7    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    |
| 67.5° | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 2.5    | 2.5    |
| 70°   | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 2.5    | 2.5    |
| 72.5° | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 2.5    | 2.5    |
| 75°   | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 2.5    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 2.5    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 2.5    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    | 2.5    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 2.5    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 1.7    | 1.7    | 1.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



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**CANDELA DISTRIBUTION (continued):**

|       | 50°    | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 190.1  | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 |
| 2.5°  | 237.4  | 232.3 | 222.2 | 214.6 | 208.7 | 207.9 | 202.8 | 194.4 | 191.0 | 185.0 | 180.0 |
| 5°    | 292.3  | 279.7 | 263.7 | 248.5 | 237.4 | 231.5 | 213.8 | 197.7 | 188.5 | 179.1 | 170.6 |
| 7.5°  | 351.5  | 322.8 | 295.0 | 270.4 | 255.2 | 245.8 | 224.7 | 198.6 | 181.7 | 168.2 | 157.1 |
| 10°   | 425.9  | 366.7 | 318.6 | 280.5 | 260.2 | 247.6 | 222.2 | 191.0 | 169.8 | 153.8 | 142.8 |
| 12.5° | 595.7  | 434.3 | 340.5 | 285.6 | 260.2 | 242.6 | 212.1 | 180.9 | 157.1 | 137.7 | 125.9 |
| 15°   | 886.4  | 606.7 | 403.9 | 288.2 | 251.8 | 231.5 | 196.9 | 163.9 | 140.3 | 120.0 | 109.0 |
| 17.5° | 1160.2 | 798.5 | 504.5 | 305.8 | 246.7 | 215.5 | 176.6 | 144.5 | 120.0 | 100.6 | 91.2  |
| 20°   | 1302.1 | 894.0 | 560.2 | 319.4 | 238.2 | 195.2 | 153.0 | 123.4 | 99.8  | 82.8  | 75.2  |
| 22.5° | 1305.5 | 885.6 | 533.2 | 288.2 | 207.0 | 167.4 | 131.0 | 101.4 | 81.1  | 66.8  | 60.8  |
| 25°   | 1225.2 | 783.4 | 438.6 | 224.7 | 167.4 | 140.3 | 109.0 | 82.8  | 63.4  | 53.3  | 49.0  |
| 27.5° | 1074.0 | 633.8 | 323.7 | 162.2 | 131.0 | 111.5 | 85.4  | 63.4  | 48.2  | 41.4  | 38.9  |
| 30°   | 830.6  | 392.1 | 179.1 | 120.0 | 98.9  | 83.6  | 61.7  | 42.2  | 36.3  | 32.2  | 30.4  |
| 32.5° | 412.3  | 191.8 | 126.8 | 85.4  | 67.6  | 53.3  | 38.9  | 31.3  | 27.8  | 25.4  | 24.6  |
| 35°   | 223.9  | 137.7 | 79.4  | 51.6  | 40.6  | 33.8  | 26.2  | 21.9  | 20.3  | 19.4  | 19.4  |
| 37.5° | 156.3  | 81.9  | 48.2  | 31.3  | 25.4  | 22.8  | 18.6  | 16.0  | 15.2  | 15.2  | 15.2  |
| 40°   | 86.2   | 49.0  | 29.5  | 20.3  | 16.9  | 15.2  | 12.7  | 11.8  | 11.8  | 11.8  | 12.7  |
| 42.5° | 49.8   | 30.4  | 20.3  | 14.3  | 11.8  | 11.0  | 9.3   | 8.4   | 9.3   | 9.3   | 10.1  |
| 45°   | 32.2   | 22.8  | 13.5  | 10.1  | 8.4   | 7.6   | 6.8   | 6.8   | 7.6   | 7.6   | 8.4   |
| 47.5° | 22.8   | 16.0  | 9.3   | 6.8   | 5.1   | 5.1   | 5.1   | 5.1   | 5.9   | 6.8   | 7.6   |
| 50°   | 13.5   | 8.4   | 5.1   | 4.2   | 3.4   | 3.4   | 3.4   | 4.2   | 5.1   | 5.1   | 5.9   |
| 52.5° | 7.6    | 5.1   | 3.4   | 3.4   | 2.5   | 2.5   | 3.4   | 3.4   | 4.2   | 5.1   | 5.9   |
| 55°   | 4.2    | 3.4   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 3.4   | 3.4   | 4.2   | 5.1   |
| 57.5° | 3.4    | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 3.4   | 3.4   | 4.2   | 4.2   |
| 60°   | 2.5    | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 3.4   | 3.4   | 4.2   | 4.2   |
| 62.5° | 2.5    | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 4.2   |
| 65°   | 2.5    | 2.5   | 2.5   | 3.4   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 4.2   |
| 67.5° | 2.5    | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 4.2   |
| 70°   | 2.5    | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 4.2   |
| 72.5° | 2.5    | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 4.2   |
| 75°   | 2.5    | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 77.5° | 2.5    | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 80°   | 2.5    | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 82.5° | 2.5    | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 85°   | 2.5    | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 87.5° | 2.5    | 2.5   | 2.5   | 2.5   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 90°   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

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**CANDELA DISTRIBUTION (continued):**

|       | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 190.1 | 190.1 | 190.1 | 190.1  | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 |
| 2.5°  | 178.2 | 172.3 | 168.2 | 166.5  | 163.0 | 163.9 | 161.4 | 159.8 | 154.6 | 154.6 | 151.2 |
| 5°    | 164.7 | 157.1 | 152.1 | 149.5  | 146.2 | 145.3 | 142.8 | 140.3 | 135.2 | 134.4 | 131.8 |
| 7.5°  | 150.4 | 142.8 | 136.9 | 134.4  | 131.0 | 130.1 | 126.8 | 125.0 | 120.9 | 120.0 | 117.4 |
| 10°   | 135.2 | 126.8 | 121.7 | 119.2  | 115.8 | 115.8 | 113.3 | 111.5 | 108.2 | 108.2 | 106.5 |
| 12.5° | 119.2 | 111.5 | 108.2 | 104.7  | 103.0 | 103.0 | 101.4 | 99.8  | 97.1  | 98.0  | 97.1  |
| 15°   | 102.2 | 96.3  | 93.0  | 91.2   | 90.4  | 90.4  | 89.5  | 88.7  | 87.0  | 88.7  | 87.0  |
| 17.5° | 86.2  | 81.9  | 79.4  | 78.6   | 77.7  | 77.7  | 77.7  | 78.6  | 77.7  | 79.4  | 79.4  |
| 20°   | 71.0  | 67.6  | 65.9  | 65.9   | 65.1  | 66.8  | 66.8  | 68.4  | 68.4  | 71.0  | 71.8  |
| 22.5° | 58.3  | 55.8  | 54.9  | 54.9   | 54.9  | 56.6  | 57.4  | 59.2  | 60.0  | 62.5  | 64.2  |
| 25°   | 46.5  | 45.7  | 45.7  | 45.7   | 46.5  | 48.2  | 49.8  | 51.6  | 52.4  | 55.8  | 56.6  |
| 27.5° | 38.1  | 37.1  | 38.1  | 38.1   | 38.9  | 41.4  | 43.0  | 44.8  | 46.5  | 49.0  | 50.6  |
| 30°   | 30.4  | 30.4  | 31.3  | 32.2   | 33.0  | 34.6  | 37.1  | 38.9  | 40.6  | 43.0  | 44.8  |
| 32.5° | 24.6  | 25.4  | 26.2  | 27.0   | 27.0  | 29.5  | 31.3  | 33.8  | 34.6  | 37.1  | 38.9  |
| 35°   | 20.3  | 21.1  | 21.9  | 22.8   | 22.8  | 25.4  | 27.0  | 28.7  | 30.4  | 32.2  | 33.8  |
| 37.5° | 16.0  | 16.9  | 18.6  | 19.4   | 19.4  | 21.9  | 22.8  | 24.6  | 26.2  | 27.8  | 29.5  |
| 40°   | 13.5  | 14.3  | 16.0  | 16.0   | 16.9  | 18.6  | 19.4  | 21.1  | 22.8  | 24.6  | 26.2  |
| 42.5° | 11.0  | 11.8  | 13.5  | 14.3   | 14.3  | 16.0  | 16.9  | 18.6  | 19.4  | 21.1  | 21.9  |
| 45°   | 10.1  | 10.1  | 11.8  | 11.8   | 12.7  | 13.5  | 15.2  | 16.0  | 16.9  | 18.6  | 19.4  |
| 47.5° | 8.4   | 9.3   | 10.1  | 11.0   | 11.0  | 11.8  | 12.7  | 13.5  | 14.3  | 16.0  | 16.9  |
| 50°   | 6.8   | 7.6   | 9.3   | 9.3    | 9.3   | 11.0  | 11.8  | 12.7  | 12.7  | 13.5  | 14.3  |
| 52.5° | 6.8   | 6.8   | 7.6   | 8.4    | 8.4   | 9.3   | 10.1  | 11.0  | 11.0  | 11.8  | 12.7  |
| 55°   | 5.9   | 5.9   | 6.8   | 7.6    | 7.6   | 8.4   | 9.3   | 9.3   | 10.1  | 10.1  | 11.0  |
| 57.5° | 5.1   | 5.9   | 6.8   | 6.8    | 6.8   | 7.6   | 8.4   | 8.4   | 9.3   | 9.3   | 10.1  |
| 60°   | 5.1   | 5.9   | 5.9   | 6.8    | 6.8   | 7.6   | 7.6   | 7.6   | 8.4   | 8.4   | 8.4   |
| 62.5° | 5.1   | 5.1   | 5.9   | 5.9    | 5.9   | 6.8   | 6.8   | 7.6   | 7.6   | 7.6   | 7.6   |
| 65°   | 5.1   | 5.1   | 5.9   | 5.9    | 5.9   | 6.8   | 6.8   | 6.8   | 6.8   | 6.8   | 6.8   |
| 67.5° | 4.2   | 5.1   | 5.1   | 5.1    | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |
| 70°   | 4.2   | 4.2   | 5.1   | 5.1    | 5.1   | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   |
| 72.5° | 4.2   | 4.2   | 5.1   | 5.1    | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   |
| 75°   | 4.2   | 4.2   | 4.2   | 4.2    | 4.2   | 5.1   | 5.1   | 5.1   | 5.1   | 4.2   | 4.2   |
| 77.5° | 3.4   | 4.2   | 4.2   | 4.2    | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   | 3.4   |
| 80°   | 3.4   | 3.4   | 4.2   | 3.4    | 4.2   | 4.2   | 4.2   | 4.2   | 3.4   | 3.4   | 3.4   |
| 82.5° | 3.4   | 3.4   | 3.4   | 3.4    | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 2.5   | 2.5   |
| 85°   | 3.4   | 3.4   | 3.4   | 3.4    | 3.4   | 3.4   | 3.4   | 2.5   | 2.5   | 2.5   | 1.7   |
| 87.5° | 3.4   | 3.4   | 3.4   | 3.4    | 3.4   | 3.4   | 2.5   | 2.5   | 2.5   | 1.7   | 1.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1212208

CATALOG NUMBER: LDSQA4A20935D010TE LAR25NF 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 190.1 | 190.1 | 190.1  | 190.1 | 190.1 | 190.1 | 190.1 | 190.1 |
| 2.5°  | 149.5 | 151.2 | 149.5  | 151.2 | 147.0 | 148.7 | 150.4 | 146.2 |
| 5°    | 130.1 | 128.5 | 129.3  | 131.0 | 127.6 | 128.5 | 129.3 | 125.9 |
| 7.5°  | 116.6 | 117.4 | 115.8  | 117.4 | 114.9 | 115.8 | 116.6 | 114.1 |
| 10°   | 105.7 | 106.5 | 105.7  | 106.5 | 103.9 | 105.7 | 106.5 | 103.9 |
| 12.5° | 95.4  | 97.1  | 96.3   | 98.0  | 95.4  | 97.1  | 98.9  | 95.4  |
| 15°   | 87.8  | 89.5  | 88.7   | 90.4  | 88.7  | 90.4  | 92.2  | 89.5  |
| 17.5° | 80.3  | 81.9  | 81.9   | 83.6  | 82.8  | 84.5  | 86.2  | 83.6  |
| 20°   | 72.7  | 75.2  | 75.2   | 76.9  | 76.9  | 77.7  | 80.3  | 77.7  |
| 22.5° | 65.9  | 68.4  | 68.4   | 70.1  | 70.1  | 71.8  | 73.5  | 71.8  |
| 25°   | 58.3  | 61.7  | 62.5   | 64.2  | 64.2  | 65.9  | 68.4  | 66.8  |
| 27.5° | 53.3  | 55.8  | 56.6   | 58.3  | 59.2  | 60.8  | 62.5  | 60.8  |
| 30°   | 46.5  | 49.8  | 50.6   | 52.4  | 53.3  | 55.8  | 56.6  | 55.8  |
| 32.5° | 41.4  | 43.9  | 44.8   | 46.5  | 48.2  | 49.8  | 51.6  | 50.6  |
| 35°   | 36.3  | 38.9  | 39.8   | 41.4  | 42.2  | 44.8  | 46.5  | 45.7  |
| 37.5° | 32.2  | 34.6  | 35.4   | 36.3  | 37.1  | 39.8  | 41.4  | 40.6  |
| 40°   | 27.8  | 29.5  | 30.4   | 32.2  | 33.0  | 34.6  | 36.3  | 36.3  |
| 42.5° | 24.6  | 26.2  | 27.0   | 27.8  | 28.7  | 30.4  | 32.2  | 31.3  |
| 45°   | 21.1  | 22.8  | 23.6   | 24.6  | 25.4  | 26.2  | 27.8  | 27.0  |
| 47.5° | 17.8  | 19.4  | 20.3   | 21.1  | 21.9  | 22.8  | 24.6  | 23.6  |
| 50°   | 15.2  | 16.9  | 16.9   | 17.8  | 18.6  | 19.4  | 21.1  | 20.3  |
| 52.5° | 13.5  | 14.3  | 15.2   | 15.2  | 16.0  | 16.9  | 18.6  | 17.8  |
| 55°   | 11.8  | 12.7  | 12.7   | 13.5  | 13.5  | 14.3  | 15.2  | 15.2  |
| 57.5° | 10.1  | 11.0  | 11.0   | 11.8  | 11.8  | 12.7  | 13.5  | 13.5  |
| 60°   | 9.3   | 9.3   | 10.1   | 10.1  | 10.1  | 11.0  | 11.0  | 11.0  |
| 62.5° | 8.4   | 8.4   | 8.4    | 8.4   | 8.4   | 8.4   | 8.4   | 8.4   |
| 65°   | 6.8   | 6.8   | 6.8    | 6.8   | 6.8   | 6.8   | 6.8   | 6.8   |
| 67.5° | 5.9   | 5.9   | 5.9    | 5.9   | 5.9   | 5.1   | 5.1   | 5.1   |
| 70°   | 5.1   | 5.1   | 5.1    | 5.1   | 5.1   | 4.2   | 4.2   | 4.2   |
| 72.5° | 5.1   | 5.1   | 4.2    | 4.2   | 4.2   | 4.2   | 4.2   | 3.4   |
| 75°   | 4.2   | 4.2   | 4.2    | 4.2   | 3.4   | 3.4   | 3.4   | 3.4   |
| 77.5° | 3.4   | 3.4   | 3.4    | 3.4   | 2.5   | 2.5   | 2.5   | 2.5   |
| 80°   | 3.4   | 2.5   | 2.5    | 2.5   | 2.5   | 2.5   | 2.5   | 1.7   |
| 82.5° | 2.5   | 2.5   | 2.5    | 1.7   | 1.7   | 1.7   | 1.7   | 1.7   |
| 85°   | 1.7   | 1.7   | 1.7    | 1.7   | 0.8   | 0.8   | 0.8   | 0.8   |
| 87.5° | 1.7   | 0.8   | 0.8    | 0.8   | 0.8   | 0.8   | 0.8   | 0.8   |
| 90°   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

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Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



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Peachtree City, GA 30269

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1121 Highway 74 South

Peachtree City, GA 30269



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

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