

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: P189735

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10930D2W 6LSQ0LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P189735  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27680)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ6A10D010TE ESQ6A10930D2W 6LSQ0LI  
Description: 6" SQUARE D2W Dimmed to 3000K, with specular clear trim  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 891.6 lumens  
Efficiency: N/A  
Efficacy: 65.1 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.93 / 0.96  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

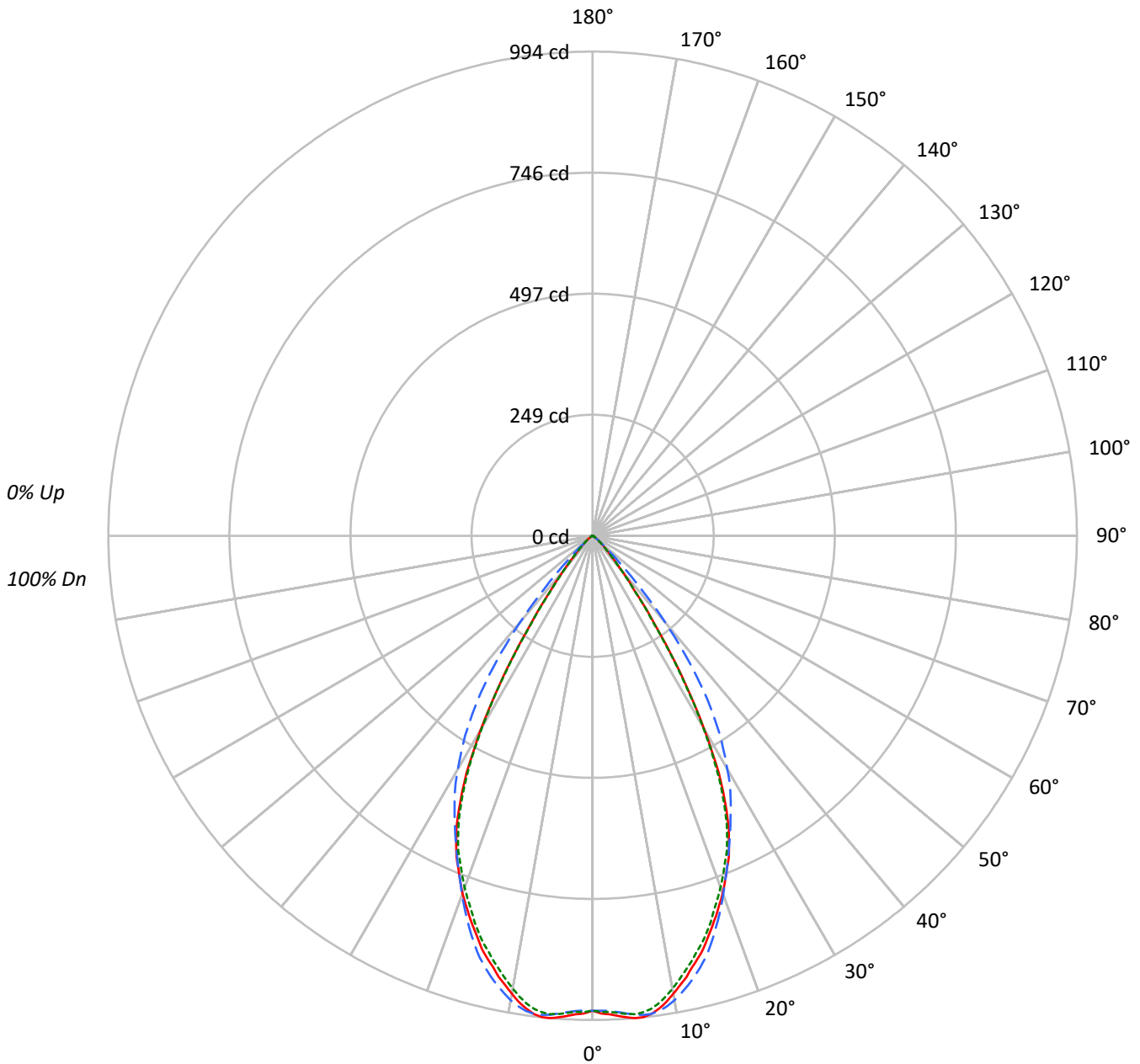
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 20  |     |     |     | 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 |    |    |    | 100 |
| 1   | 114 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 100 | 98  | 97  | 96  | 95  | 94  |    |    |    | 94  |
| 2   | 108 | 103 | 99  | 96  | 106 | 101 | 98  | 95  | 98  | 95  | 93  | 95  | 93  | 91  | 93  | 91  | 89  | 87  |    |    |    | 87  |
| 3   | 103 | 96  | 91  | 87  | 101 | 95  | 90  | 87  | 92  | 88  | 85  | 90  | 87  | 84  | 88  | 85  | 83  | 81  |    |    |    | 81  |
| 4   | 97  | 90  | 84  | 80  | 96  | 89  | 84  | 80  | 87  | 82  | 79  | 85  | 81  | 78  | 83  | 80  | 77  | 76  |    |    |    | 76  |
| 5   | 93  | 84  | 78  | 74  | 91  | 83  | 78  | 74  | 82  | 77  | 73  | 80  | 76  | 73  | 78  | 75  | 72  | 70  |    |    |    | 70  |
| 6   | 88  | 79  | 73  | 69  | 86  | 78  | 73  | 69  | 77  | 72  | 68  | 75  | 71  | 68  | 74  | 70  | 67  | 66  |    |    |    | 66  |
| 7   | 84  | 74  | 68  | 64  | 82  | 74  | 68  | 64  | 72  | 67  | 64  | 71  | 67  | 63  | 70  | 66  | 63  | 62  |    |    |    | 62  |
| 8   | 80  | 70  | 64  | 60  | 78  | 69  | 64  | 60  | 68  | 63  | 60  | 67  | 63  | 59  | 66  | 62  | 59  | 58  |    |    |    | 58  |
| 9   | 76  | 66  | 60  | 56  | 75  | 66  | 60  | 56  | 65  | 60  | 56  | 64  | 59  | 56  | 63  | 59  | 56  | 54  |    |    |    | 54  |
| 10  | 72  | 63  | 57  | 53  | 71  | 62  | 57  | 53  | 61  | 56  | 53  | 61  | 56  | 53  | 60  | 55  | 52  | 51  |    |    |    | 51  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 41979 | 41979 | 41979 |
| 5°  | 42961 | 42658 | 42615 |
| 10° | 41752 | 42321 | 41272 |
| 15° | 39136 | 39939 | 38602 |
| 20° | 35785 | 35922 | 35189 |
| 25° | 31402 | 31734 | 30927 |
| 30° | 22770 | 27493 | 22522 |
| 35° | 11774 | 21603 | 11458 |
| 40° | 4946  | 12983 | 4890  |
| 45° | 2314  | 4689  | 2253  |
| 50° | 1206  | 1340  | 1206  |
| 55° | 601   | 525   | 601   |
| 60° | 344   | 344   | 344   |
| 65° | 204   | 204   | 204   |
| 70° | 126   | 126   | 126   |
| 75° | 166   | 166   | 166   |
| 80° | 0     | 0     | 0     |
| 85° | 0     | 0     | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 93.2   | 10.4      |
| 10°-20°   | 246.4  | 27.6      |
| 20°-30°   | 302.7  | 33.9      |
| 30°-40°   | 190.8  | 21.4      |
| 40°-50°   | 46.6   | 5.2       |
| 50°-60°   | 8.5    | 0.9       |
| 60°-70°   | 2.6    | 0.3       |
| 70°-80°   | 0.8    | 0.1       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 642.2  | 72.0      |
| 0°-40°    | 833.0  | 93.4      |
| 0°-60°    | 888.1  | 99.6      |
| 0°-90°    | 891.6  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 891.6  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 975 | 975   | 975 | 975   | 975 |      |
| 5°  | 994 | 981   | 987 | 980   | 986 | 94   |
| 15° | 878 | 884   | 896 | 883   | 866 | 245  |
| 25° | 661 | 679   | 668 | 682   | 651 | 294  |
| 35° | 224 | 290   | 411 | 291   | 218 | 148  |
| 45° | 38  | 45    | 77  | 45    | 37  | 33   |
| 55° | 8   | 9     | 7   | 9     | 8   | 8    |
| 65° | 2   | 3     | 2   | 3     | 2   | 2    |
| 75° | 1   | 1     | 1   | 1     | 1   | 1    |
| 85° | 0   | 0     | 0   | 0     | 0   | 0    |
| 90° | 0   | 0     | 0   | 0     | 0   | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 0°    | 975 | 975   | 975 | 975   | 975 |
| 1°    | 981 | 969   | 975 | 971   | 978 |
| 2°    | 983 | 970   | 976 | 972   | 978 |
| 3°    | 987 | 974   | 979 | 974   | 981 |
| 4°    | 991 | 977   | 983 | 978   | 984 |
| 5°    | 994 | 981   | 987 | 980   | 986 |
| 6°    | 994 | 982   | 989 | 981   | 984 |
| 7°    | 989 | 980   | 989 | 978   | 979 |
| 8°    | 980 | 974   | 985 | 972   | 970 |
| 9°    | 969 | 965   | 978 | 963   | 958 |
| 10°   | 955 | 954   | 968 | 952   | 944 |
| 11°   | 940 | 942   | 956 | 939   | 929 |
| 12°   | 926 | 928   | 943 | 927   | 913 |
| 13°   | 909 | 914   | 929 | 913   | 898 |
| 14°   | 894 | 900   | 913 | 899   | 881 |
| 15°   | 878 | 884   | 896 | 883   | 866 |
| 16°   | 858 | 867   | 876 | 867   | 848 |
| 17°   | 839 | 849   | 854 | 850   | 829 |
| 18°   | 820 | 830   | 831 | 830   | 807 |
| 19°   | 800 | 810   | 808 | 809   | 788 |
| 20°   | 781 | 790   | 784 | 789   | 768 |
| 21°   | 759 | 770   | 759 | 770   | 747 |
| 22°   | 736 | 749   | 736 | 749   | 725 |
| 23°   | 716 | 727   | 713 | 728   | 705 |
| 24°   | 688 | 704   | 690 | 707   | 679 |
| 25°   | 661 | 679   | 668 | 682   | 651 |
| 26°   | 626 | 651   | 646 | 654   | 618 |
| 27°   | 590 | 620   | 624 | 624   | 582 |
| 28°   | 552 | 587   | 603 | 590   | 542 |
| 29°   | 504 | 551   | 580 | 554   | 499 |
| 30°   | 458 | 511   | 553 | 511   | 453 |
| 32.5° | 338 | 404   | 487 | 406   | 333 |
| 35°   | 224 | 290   | 411 | 291   | 218 |
| 37.5° | 140 | 189   | 324 | 189   | 137 |
| 40°   | 88  | 119   | 231 | 117   | 87  |
| 42.5° | 57  | 73    | 142 | 72    | 56  |
| 45°   | 38  | 45    | 77  | 45    | 37  |
| 47.5° | 26  | 30    | 39  | 30    | 25  |
| 50°   | 18  | 20    | 20  | 20    | 18  |
| 52.5° | 12  | 13    | 11  | 13    | 12  |
| 55°   | 8   | 9     | 7   | 9     | 8   |
| 57.5° | 6   | 6     | 5   | 6     | 6   |
| 60°   | 4   | 5     | 4   | 5     | 4   |



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**CANDELA DISTRIBUTION (continued):**

|       | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|----|-------|-----|-------|-----|
| 67.5° | 2  | 2     | 2   | 2     | 2   |
| 70°   | 1  | 1     | 1   | 1     | 1   |
| 72.5° | 1  | 1     | 1   | 1     | 1   |
| 75°   | 1  | 1     | 1   | 1     | 1   |
| 77.5° | 0  | 1     | 0   | 1     | 0   |
| 80°   | 0  | 0     | 0   | 0     | 0   |
| 82.5° | 0  | 0     | 0   | 0     | 0   |
| 85°   | 0  | 0     | 0   | 0     | 0   |
| 87.5° | 0  | 0     | 0   | 0     | 0   |
| 90°   | 0  | 0     | 0   | 0     | 0   |



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







|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| 62.5° | 3 | 4 | 3 | 4 | 3 |
| 65°   | 2 | 3 | 2 | 3 | 2 |



(END OF REPORT)