

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: P314813

Luminaire Tested: **LDA2B15SP9035D010 PIN1MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P314813  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-8)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B15SP9035D010 PIN1MB  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in  
Adj PinHole, Black oculus black finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1205.5 lumens  
Efficiency: N/A  
Efficacy: 85.5 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

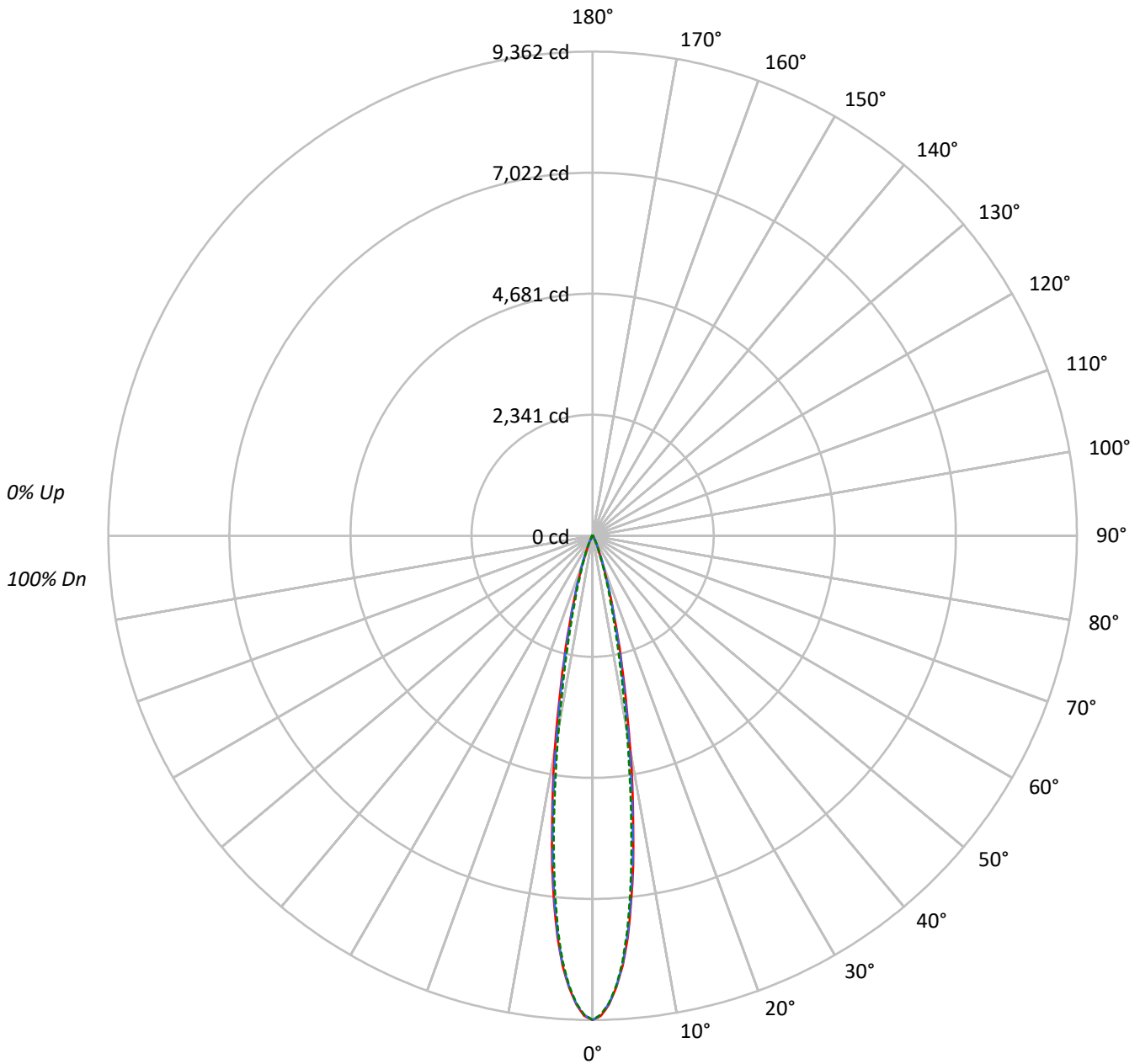
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|-----|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |     |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| 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 |    |    |   | 100 |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 115 | 113 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99  | 97  |    |    |   | 97  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 112 | 109 | 106 | 104 | 110 | 107 | 105 | 103 | 104 | 102 | 101 | 101 | 100 | 98  | 99  | 98  | 96  | 95  |    |    |   | 95  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 109 | 105 | 102 | 99  | 107 | 104 | 101 | 98  | 101 | 99  | 97  | 99  | 97  | 95  | 97  | 95  | 94  | 93  |    |    |   | 93  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 106 | 102 | 98  | 96  | 105 | 101 | 97  | 95  | 99  | 96  | 94  | 97  | 95  | 93  | 95  | 93  | 92  | 91  |    |    |   | 91  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 104 | 99  | 95  | 92  | 103 | 98  | 95  | 92  | 96  | 93  | 91  | 95  | 92  | 91  | 94  | 92  | 90  | 89  |    |    |   | 89  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 101 | 96  | 92  | 90  | 100 | 95  | 92  | 90  | 94  | 91  | 89  | 93  | 90  | 88  | 92  | 90  | 88  | 87  |    |    |   | 87  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 99  | 94  | 90  | 88  | 98  | 93  | 90  | 87  | 92  | 89  | 87  | 91  | 89  | 87  | 90  | 88  | 86  | 85  |    |    |   | 85  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 97  | 92  | 88  | 86  | 96  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 87  | 85  | 89  | 86  | 85  | 84  |    |    |   | 84  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 95  | 90  | 86  | 84  | 95  | 89  | 86  | 84  | 88  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 83  | 82  |    |    |   | 82  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 93  | 88  | 84  | 82  | 93  | 87  | 84  | 82  | 87  | 84  | 82  | 86  | 84  | 82  | 86  | 83  | 82  | 81  |    |    |   | 81  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 4618656 | 4618656 | 4618656 |
| 5°  | 3858662 | 3840190 | 3794726 |
| 10° | 2102332 | 2020423 | 1891122 |
| 15° | 833467  | 812271  | 697246  |
| 20° | 280048  | 299264  | 247339  |
| 25° | 97169   | 105008  | 93304   |
| 30° | 35548   | 38796   | 37998   |
| 35° | 22887   | 26802   | 20297   |
| 40° | 11979   | 14298   | 14748   |
| 45° | 11024   | 8512    | 8024    |
| 50° | 6601    | 4375    | 3300    |
| 55° | 0       | 0       | 0       |
| 60° | 4243    | 4243    | 1381    |
| 65° | 3385    | 817     | 0       |
| 70° | 0       | 3173    | 4183    |
| 75° | 0       | 6862    | 0       |
| 80° | 0       | 0       | 0       |
| 85° | 0       | 3962    | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 612.1  | 50.8      |
| 10°-20°   | 455.6  | 37.8      |
| 20°-30°   | 100.8  | 8.4       |
| 30°-40°   | 22.4   | 1.9       |
| 40°-50°   | 9.1    | 0.8       |
| 50°-60°   | 1.5    | 0.1       |
| 60°-70°   | 1.6    | 0.1       |
| 70°-80°   | 1.3    | 0.1       |
| 80°-90°   | 1.2    | 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°    | 1168.4 | 96.9      |
| 0°-40°    | 1190.8 | 98.8      |
| 0°-60°    | 1201.5 | 99.7      |
| 0°-90°    | 1205.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1205.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 9362 | 9362  | 9362 | 9362  | 9362 |      |
| 5°  | 7791 | 7759  | 7754 | 7725  | 7662 | 621  |
| 15° | 1632 | 1627  | 1590 | 1442  | 1365 | 480  |
| 25° | 178  | 199   | 193  | 178   | 171  | 97   |
| 35° | 38   | 38    | 44   | 36    | 34   | 22   |
| 45° | 16   | 13    | 12   | 12    | 12   | 9    |
| 55° | 0    | 0     | 0    | 0     | 0    | 2    |
| 65° | 3    | 1     | 1    | 0     | 0    | 3    |
| 75° | 0    | 0     | 4    | 0     | 0    | 1    |
| 85° | 0    | 1     | 1    | 2     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 9361.6 | 9361.6 | 9361.6 | 9361.6 | 9361.6 |
| 1°    | 9284.8 | 9246.8 | 9265.5 | 9276.2 | 9260.5 |
| 2°    | 9068.3 | 9022.4 | 9051.8 | 9054.7 | 9038.9 |
| 3°    | 8745.7 | 8724.9 | 8734.2 | 8737.8 | 8706.2 |
| 4°    | 8332.7 | 8302.6 | 8309.0 | 8301.1 | 8262.4 |
| 5°    | 7791.4 | 7759.1 | 7754.1 | 7724.7 | 7662.3 |
| 6°    | 7129.6 | 7111.0 | 7077.3 | 7027.1 | 6943.9 |
| 7°    | 6420.5 | 6405.5 | 6347.4 | 6257.0 | 6161.0 |
| 8°    | 5643.3 | 5643.3 | 5559.4 | 5434.7 | 5325.0 |
| 9°    | 4907.7 | 4880.5 | 4773.6 | 4623.1 | 4516.9 |
| 10°   | 4196.5 | 4159.9 | 4033.0 | 3880.3 | 3774.9 |
| 11°   | 3523.2 | 3484.5 | 3362.6 | 3206.3 | 3108.8 |
| 12°   | 2941.8 | 2921.0 | 2826.3 | 2654.2 | 2556.7 |
| 13°   | 2450.6 | 2423.4 | 2340.2 | 2177.5 | 2094.3 |
| 14°   | 2022.6 | 1988.2 | 1921.5 | 1772.4 | 1691.3 |
| 15°   | 1631.8 | 1626.8 | 1590.3 | 1441.8 | 1365.1 |
| 16°   | 1333.6 | 1330.7 | 1296.3 | 1151.5 | 1119.9 |
| 17°   | 1070.4 | 1085.5 | 1075.5 | 942.1  | 906.3  |
| 18°   | 833.1  | 863.2  | 870.4  | 750.0  | 714.1  |
| 19°   | 670.4  | 699.1  | 711.2  | 605.8  | 575.7  |
| 20°   | 533.4  | 560.7  | 570.0  | 491.1  | 471.1  |
| 22.5° | 302.6  | 339.1  | 340.6  | 299.7  | 278.9  |
| 25°   | 178.5  | 199.3  | 192.9  | 178.5  | 171.4  |
| 26°   | 149.8  | 169.9  | 159.9  | 155.6  | 149.8  |
| 27°   | 126.2  | 139.8  | 131.9  | 124.8  | 129.8  |
| 28°   | 104.7  | 114.0  | 106.1  | 108.3  | 100.4  |
| 29°   | 83.2   | 98.9   | 87.5   | 89.6   | 83.2   |
| 30°   | 62.4   | 76.7   | 68.1   | 71.7   | 66.7   |
| 32.5° | 46.6   | 50.9   | 45.2   | 50.9   | 50.9   |
| 35°   | 38.0   | 38.0   | 44.5   | 35.8   | 33.7   |
| 37.5° | 17.2   | 13.6   | 15.1   | 12.2   | 14.3   |
| 40°   | 18.6   | 20.8   | 22.2   | 18.6   | 22.9   |
| 42.5° | 12.9   | 17.2   | 17.2   | 11.5   | 20.1   |
| 45°   | 15.8   | 12.9   | 12.2   | 12.2   | 11.5   |
| 47.5° | 7.2    | 5.0    | 5.7    | 6.5    | 10.0   |
| 50°   | 8.6    | 3.6    | 5.7    | 8.6    | 4.3    |
| 52.5° | 2.9    | 0.0    | 3.6    | 0.0    | 1.4    |
| 55°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 57.5° | 0.0    | 0.0    | 0.7    | 1.4    | 0.0    |
| 60°   | 4.3    | 5.0    | 4.3    | 2.9    | 1.4    |
| 62.5° | 7.2    | 1.4    | 2.2    | 2.9    | 0.0    |
| 65°   | 2.9    | 1.4    | 0.7    | 0.0    | 0.0    |
| 67.5° | 0.0    | 0.0    | 2.2    | 0.0    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75°   | 0.0 | 0.0   | 3.6 | 0.0   | 0.0 |
| 77.5° | 1.4 | 0.0   | 2.9 | 0.0   | 0.0 |
| 80°   | 0.0 | 1.4   | 0.0 | 0.0   | 0.0 |
| 82.5° | 0.0 | 0.0   | 3.6 | 2.9   | 0.0 |
| 85°   | 0.0 | 0.7   | 0.7 | 2.2   | 0.0 |
| 87.5° | 0.0 | 2.2   | 2.9 | 0.7   | 1.4 |
| 90°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |



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







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 70°   | 0.0 | 0.0 | 2.2 | 1.4 | 2.9 |
| 72.5° | 0.0 | 0.7 | 2.9 | 4.3 | 1.4 |



(END OF REPORT)