

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: P223686

Luminaire Tested: **LSSQ2B10SP159050D010 2LBD*GPH**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P223686
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (150)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LSSQ2B10SP159050D010 2LBD*GPH
Description: 1000 Lumen, 2inch Portfolio LED Cylinder
SPOT OPTIC
SPUN ROUND TRIM WITH GRAPHITE FINISH
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 500.3 lumens
Efficiency: N/A
Efficacy: 48.6 lumens/watt
Spacing Criteria (0/90/45): 0.24 / 0.24 / 0.23
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 10.3
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



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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 | | | | | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 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 | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 103 | 101 | 100 | 100 | 98 | | | | | | | | | 98 | | | | | | | | | | | | | | | | | | | |
| 2 | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 104 | 105 | 103 | 102 | 102 | 101 | 100 | 100 | 99 | 98 | 96 | | | | | | | | | 96 | | | | | | | | | | | | | | | | | | | |
| 3 | 110 | 106 | 103 | 101 | 108 | 105 | 102 | 100 | 102 | 100 | 98 | 100 | 98 | 97 | 98 | 97 | 96 | 94 | | | | | | | | | 94 | | | | | | | | | | | | | | | | | | | |
| 4 | 108 | 103 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 98 | 96 | 98 | 96 | 95 | 97 | 95 | 94 | 93 | | | | | | | | | 93 | | | | | | | | | | | | | | | | | | | |
| 5 | 105 | 101 | 97 | 95 | 104 | 100 | 97 | 94 | 98 | 96 | 94 | 97 | 95 | 93 | 95 | 94 | 92 | 91 | | | | | | | | | 91 | | | | | | | | | | | | | | | | | | | |
| 6 | 103 | 98 | 95 | 93 | 102 | 98 | 95 | 92 | 96 | 94 | 92 | 95 | 93 | 91 | 94 | 92 | 91 | 90 | | | | | | | | | 90 | | | | | | | | | | | | | | | | | | | |
| 7 | 101 | 96 | 93 | 91 | 100 | 96 | 93 | 90 | 95 | 92 | 90 | 94 | 91 | 90 | 93 | 91 | 89 | 88 | | | | | | | | | 88 | | | | | | | | | | | | | | | | | | | |
| 8 | 100 | 94 | 91 | 89 | 99 | 94 | 91 | 89 | 93 | 90 | 89 | 92 | 90 | 88 | 92 | 90 | 88 | 87 | | | | | | | | | 87 | | | | | | | | | | | | | | | | | | | |
| 9 | 98 | 93 | 90 | 88 | 97 | 92 | 89 | 87 | 92 | 89 | 87 | 91 | 89 | 87 | 90 | 88 | 87 | 86 | | | | | | | | | 86 | | | | | | | | | | | | | | | | | | | |
| 10 | 96 | 91 | 88 | 86 | 96 | 91 | 88 | 86 | 90 | 88 | 86 | 90 | 87 | 86 | 89 | 87 | 86 | 85 | | | | | | | | | 85 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 2404063 |
| 5° | 1737895 |
| 10° | 505929 |
| 15° | 177527 |
| 20° | 76011 |
| 25° | 34191 |
| 30° | 13239 |
| 35° | 6573 |
| 40° | 4399 |
| 45° | 2849 |
| 50° | 1567 |
| 55° | 1148 |
| 60° | 697 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 316.3 | 63.2 |
| 10°-20° | 128.7 | 25.7 |
| 20°-30° | 39.5 | 7.9 |
| 30°-40° | 9.7 | 1.9 |
| 40°-50° | 4.1 | 0.8 |
| 50°-60° | 1.7 | 0.3 |
| 60°-70° | 0.3 | 0.1 |
| 70°-80° | 0.0 | 0.0 |
| 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° | 484.4 | 96.8 |
| 0°-40° | 494.2 | 98.8 |
| 0°-60° | 500.0 | 99.9 |
| 0°-90° | 500.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 500.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 6206 | |
| 5° | 4470 | 316 |
| 15° | 443 | 129 |
| 25° | 80 | 39 |
| 35° | 14 | 10 |
| 45° | 5 | 4 |
| 55° | 2 | 2 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 6206.5 |
| 1° | 6111.7 |
| 2° | 5880.3 |
| 3° | 5511.5 |
| 4° | 5029.7 |
| 5° | 4469.6 |
| 6° | 3838.2 |
| 7° | 3152.8 |
| 8° | 2457.9 |
| 9° | 1808.2 |
| 10° | 1286.3 |
| 11° | 921.9 |
| 12° | 693.2 |
| 13° | 564.5 |
| 14° | 494.0 |
| 15° | 442.7 |
| 17.5° | 273.1 |
| 20° | 184.4 |
| 22.5° | 123.5 |
| 25° | 80.0 |
| 27.5° | 48.7 |
| 30° | 29.6 |
| 32.5° | 19.1 |
| 35° | 13.9 |
| 37.5° | 11.3 |
| 40° | 8.7 |
| 42.5° | 7.0 |
| 45° | 5.2 |
| 47.5° | 3.5 |
| 50° | 2.6 |
| 52.5° | 2.6 |
| 55° | 1.7 |
| 57.5° | 1.7 |
| 60° | 0.9 |
| 62.5° | 0.9 |
| 65° | 0.0 |
| 67.5° | 0.0 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |



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CANDELA DISTRIBUTION (continued):

0°
90° | 0.0



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— 0°-180°







| | | |
|-------|--|-----|
| 85° | | 0.0 |
| 87.5° | | 0.0 |



(END OF REPORT)