

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P840385

Luminaire Tested: **LDS4C45D010 EU4459040 4LPSSQMMS**

Issue Date: 8/24/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P840385  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2105-247-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/24/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LDS4C45D010 EU4459040 4LBPSSQMMS  
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBPSSQ TRIM WITH MMS FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

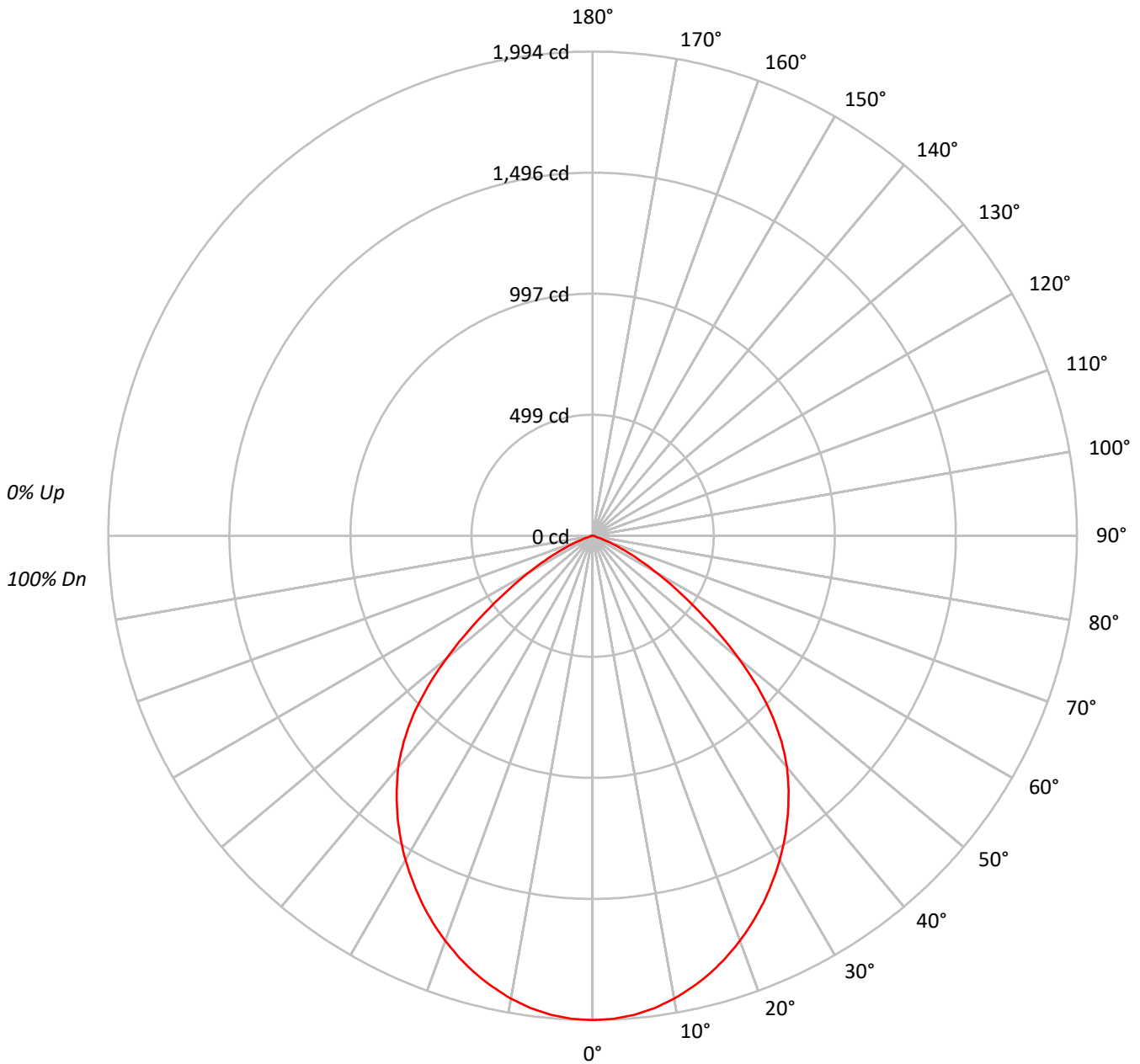
Lumens per Lamp: N/A  
Luminaire Lumens: 3798.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.25  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 49.6  
Input Voltage (V):  
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 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 92  | 90  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 104 | 97  | 92  | 88  | 101 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 83  | 81  | 79  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 96  | 88  | 81  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 81  | 76  | 73  | 78  | 75  | 72  | 70  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 76  | 70  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 62  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 83  | 72  | 64  | 59  | 81  | 71  | 64  | 58  | 69  | 63  | 58  | 67  | 61  | 57  | 65  | 60  | 57  | 55  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 77  | 65  | 58  | 52  | 75  | 65  | 57  | 52  | 63  | 56  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 72  | 60  | 52  | 47  | 70  | 59  | 52  | 47  | 58  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 67  | 55  | 47  | 42  | 66  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 41  | 40  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 63  | 51  | 43  | 38  | 62  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 59  | 47  | 40  | 35  | 58  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 44  | 39  | 35  | 33  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 192428 |
| 5°  | 191768 |
| 10° | 189665 |
| 15° | 186400 |
| 20° | 182218 |
| 25° | 177347 |
| 30° | 171759 |
| 35° | 165143 |
| 40° | 156817 |
| 45° | 142583 |
| 50° | 117716 |
| 55° | 86669  |
| 60° | 58820  |
| 65° | 34452  |
| 70° | 13598  |
| 75° | 3057   |
| 80° | 4001   |
| 85° | 6864   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 187.6  | 4.9       |
| 10°-20°   | 525.4  | 13.8      |
| 20°-30°   | 766.4  | 20.2      |
| 30°-40°   | 874.8  | 23.0      |
| 40°-50°   | 795.3  | 20.9      |
| 50°-60°   | 469.0  | 12.3      |
| 60°-70°   | 157.3  | 4.1       |
| 70°-80°   | 16.4   | 0.4       |
| 80°-90°   | 5.7    | 0.2       |
| 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°    | 1479.4 | 39.0      |
| 0°-40°    | 2354.2 | 62.0      |
| 0°-60°    | 3618.5 | 95.3      |
| 0°-90°    | 3798.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3798.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1994 |      |
| 5°  | 1980 | 188  |
| 15° | 1866 | 525  |
| 25° | 1666 | 766  |
| 35° | 1402 | 875  |
| 45° | 1045 | 795  |
| 55° | 515  | 469  |
| 65° | 151  | 157  |
| 75° | 8    | 16   |
| 85° | 6    | 6    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1994.3 |
| 2.5°  | 1991.2 |
| 5°    | 1979.9 |
| 7.5°  | 1961.4 |
| 10°   | 1935.8 |
| 12.5° | 1902.9 |
| 15°   | 1866.0 |
| 17.5° | 1822.9 |
| 20°   | 1774.6 |
| 22.5° | 1722.3 |
| 25°   | 1665.8 |
| 27.5° | 1604.2 |
| 30°   | 1541.6 |
| 32.5° | 1472.9 |
| 35°   | 1402.0 |
| 37.5° | 1325.1 |
| 40°   | 1245.0 |
| 42.5° | 1151.6 |
| 45°   | 1044.9 |
| 47.5° | 921.7  |
| 50°   | 784.2  |
| 52.5° | 646.6  |
| 55°   | 515.2  |
| 57.5° | 403.4  |
| 60°   | 304.8  |
| 62.5° | 220.7  |
| 65°   | 150.9  |
| 67.5° | 92.4   |
| 70°   | 48.2   |
| 72.5° | 18.5   |
| 75°   | 8.2    |
| 77.5° | 8.2    |
| 80°   | 7.2    |
| 82.5° | 6.2    |
| 85°   | 6.2    |
| 87.5° | 5.1    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)