

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: SHAPER

Report Number: P241198

Luminaire Tested: **1800-X-90-L40-2-W-UNV-STD-X-X**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P241198  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL90337-GONIOPHOTOMETRY)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 1800-X-90-L40-2-W-UNV-STD-X-X  
Description: SHAPER 1800 SERIES LED PENDANT DIRECT DOWNLIGHT  
WIDE DISTRIBUTION  
Light Source: (168) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4252.3 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.48 / 1.48 / 1.61  
Luminous Opening: Circular (Dia: 1.17' x H: 0')  
CIE Type: Direct

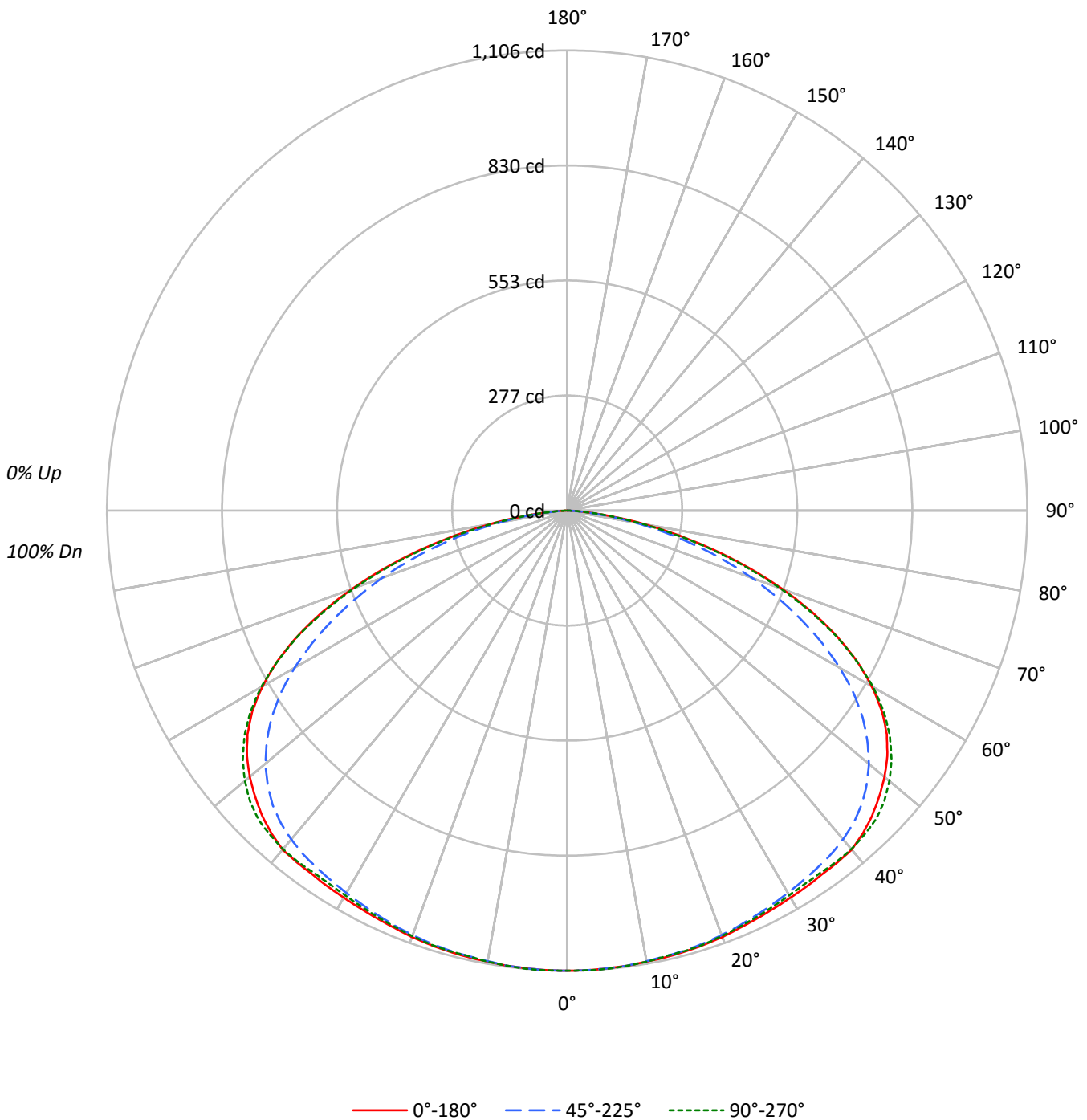
Input Watts (W): 53.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |
| 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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 108 | 103 | 98  | 94  | 105 | 101 | 96  | 93  | 96  | 93  | 90  | 92  | 90  | 87  | 89  | 87  | 84  | 82  |
| 2   | 97  | 89  | 81  | 75  | 95  | 87  | 80  | 74  | 83  | 77  | 72  | 80  | 75  | 71  | 77  | 73  | 69  | 67  |
| 3   | 88  | 77  | 68  | 61  | 85  | 75  | 67  | 60  | 72  | 65  | 59  | 69  | 63  | 58  | 67  | 62  | 57  | 55  |
| 4   | 80  | 67  | 58  | 51  | 78  | 66  | 57  | 50  | 63  | 56  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 46  |
| 5   | 73  | 59  | 50  | 43  | 71  | 58  | 49  | 43  | 56  | 48  | 42  | 54  | 47  | 42  | 52  | 46  | 41  | 39  |
| 6   | 67  | 53  | 44  | 37  | 65  | 52  | 43  | 37  | 50  | 42  | 36  | 48  | 41  | 36  | 47  | 40  | 35  | 33  |
| 7   | 62  | 48  | 38  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 44  | 37  | 31  | 42  | 36  | 31  | 29  |
| 8   | 57  | 43  | 34  | 28  | 56  | 43  | 34  | 28  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 27  | 25  |
| 9   | 53  | 39  | 31  | 25  | 52  | 39  | 31  | 25  | 38  | 30  | 25  | 37  | 30  | 25  | 35  | 29  | 24  | 23  |
| 10  | 50  | 36  | 28  | 22  | 49  | 36  | 28  | 22  | 35  | 27  | 22  | 34  | 27  | 22  | 33  | 27  | 22  | 20  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11136 | 11136 | 11136 |
| 5°  | 11166 | 11166 | 11179 |
| 10° | 11256 | 11243 | 11256 |
| 15° | 11435 | 11408 | 11422 |
| 20° | 11686 | 11631 | 11658 |
| 25° | 12016 | 11931 | 11974 |
| 30° | 12486 | 12337 | 12411 |
| 35° | 13122 | 12886 | 13059 |
| 40° | 13981 | 13560 | 13964 |
| 45° | 14762 | 14251 | 14945 |
| 50° | 15596 | 14833 | 15837 |
| 55° | 16465 | 15225 | 16623 |
| 60° | 17027 | 15244 | 17105 |
| 65° | 17057 | 14796 | 16997 |
| 70° | 16204 | 13901 | 16015 |
| 75° | 14227 | 12227 | 13877 |
| 80° | 10936 | 9446  | 10565 |
| 85° | 5776  | 4748  | 5488  |



TEST NUMBER: P241198

CATALOG NUMBER: 1800-X-90-L40-2-W-UNV-STD-X-X

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 105.3  | 2.5       |
| 10°-20°   | 310.1  | 7.3       |
| 20°-30°   | 498.1  | 11.7      |
| 30°-40°   | 663.9  | 15.6      |
| 40°-50°   | 787.9  | 18.5      |
| 50°-60°   | 805.4  | 18.9      |
| 60°-70°   | 656.6  | 15.4      |
| 70°-80°   | 358.2  | 8.4       |
| 80°-90°   | 66.8   | 1.6       |
| 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°    | 913.5  | 21.5      |
| 0°-40°    | 1577.4 | 37.1      |
| 0°-60°    | 3170.7 | 74.6      |
| 0°-90°    | 4252.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4252.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1106 | 1106  | 1106 | 1106  | 1106 |      |
| 5°  | 1105 | 1105  | 1105 | 1105  | 1106 | 105  |
| 15° | 1097 | 1096  | 1094 | 1094  | 1096 | 311  |
| 25° | 1082 | 1078  | 1074 | 1076  | 1078 | 501  |
| 35° | 1068 | 1060  | 1048 | 1056  | 1062 | 671  |
| 45° | 1037 | 1019  | 1001 | 1028  | 1050 | 800  |
| 55° | 938  | 902   | 867  | 910   | 947  | 834  |
| 65° | 716  | 668   | 621  | 667   | 713  | 702  |
| 75° | 366  | 339   | 314  | 339   | 357  | 387  |
| 85° | 50   | 48    | 41   | 46    | 48   | 72   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P241198

CATALOG NUMBER: 1800-X-90-L40-2-W-UNV-STD-X-X

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1106.0 | 1106.0 | 1106.0 | 1106.0 | 1106.0 |
| 2.5°  | 1106.0 | 1106.0 | 1106.0 | 1106.0 | 1106.0 |
| 5°    | 1104.7 | 1104.7 | 1104.7 | 1104.7 | 1106.0 |
| 7.5°  | 1103.4 | 1103.4 | 1103.4 | 1103.4 | 1103.4 |
| 10°   | 1100.9 | 1100.9 | 1099.6 | 1099.6 | 1100.9 |
| 12.5° | 1099.6 | 1098.3 | 1097.0 | 1097.0 | 1097.0 |
| 15°   | 1097.0 | 1095.7 | 1094.4 | 1094.4 | 1095.7 |
| 17.5° | 1094.4 | 1091.9 | 1090.6 | 1090.6 | 1093.2 |
| 20°   | 1090.6 | 1086.7 | 1085.5 | 1086.7 | 1088.0 |
| 22.5° | 1085.5 | 1082.9 | 1080.3 | 1081.6 | 1082.9 |
| 25°   | 1081.6 | 1077.8 | 1073.9 | 1076.5 | 1077.8 |
| 27.5° | 1077.8 | 1072.6 | 1067.5 | 1070.1 | 1072.6 |
| 30°   | 1073.9 | 1067.5 | 1061.1 | 1063.7 | 1067.5 |
| 32.5° | 1071.4 | 1063.7 | 1054.7 | 1059.8 | 1063.7 |
| 35°   | 1067.5 | 1059.8 | 1048.3 | 1056.0 | 1062.4 |
| 37.5° | 1066.2 | 1054.7 | 1041.8 | 1052.1 | 1063.7 |
| 40°   | 1063.7 | 1047.0 | 1031.6 | 1048.3 | 1062.4 |
| 42.5° | 1052.1 | 1035.4 | 1018.7 | 1039.3 | 1057.2 |
| 45°   | 1036.7 | 1018.7 | 1000.8 | 1027.7 | 1049.5 |
| 47.5° | 1017.5 | 998.2  | 976.4  | 1008.5 | 1034.1 |
| 50°   | 995.6  | 971.3  | 946.9  | 981.5  | 1011.0 |
| 52.5° | 970.0  | 939.2  | 909.7  | 949.5  | 982.8  |
| 55°   | 937.9  | 902.0  | 867.3  | 909.7  | 946.9  |
| 57.5° | 896.9  | 857.1  | 816.0  | 862.2  | 903.3  |
| 60°   | 845.5  | 803.2  | 757.0  | 804.5  | 849.4  |
| 62.5° | 786.5  | 739.0  | 691.6  | 741.6  | 785.2  |
| 65°   | 715.9  | 668.5  | 621.0  | 667.2  | 713.4  |
| 67.5° | 636.4  | 590.2  | 547.9  | 588.9  | 631.3  |
| 70°   | 550.4  | 509.4  | 472.2  | 506.8  | 544.0  |
| 72.5° | 459.3  | 424.7  | 393.9  | 423.4  | 450.4  |
| 75°   | 365.7  | 338.7  | 314.3  | 338.7  | 356.7  |
| 77.5° | 274.6  | 254.0  | 237.4  | 256.6  | 266.9  |
| 80°   | 188.6  | 175.8  | 162.9  | 177.1  | 182.2  |
| 82.5° | 111.6  | 106.5  | 96.2   | 105.2  | 107.8  |
| 85°   | 50.0   | 47.5   | 41.1   | 46.2   | 47.5   |
| 87.5° | 9.0    | 7.7    | 6.4    | 7.7    | 9.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)