

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: SHAPER

Report Number: G3-2203-583-2

Luminaire Tested: 301-FR-120-DGYS-GDME

Test Date: 6/10/2022

**Test Information**

Test Method: LM-79-2019  
Report Number: G3-2203-583-2  
Test Lab: COOPER LIGHTING SOLUTIONS  
Test Date: 6/10/2022  
Issue Date: 6/10/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: SHAPER  
Catalog Number: 301-FR-120-DGYS-GDME  
Description: 3D PRINTED LED LAMP BASED DECORATIVE LUMIANIRE, DARK GRAY (OPAQUE) SHADE, FROSTED LAMP  
Light Source: 1 PHILIPS  
FROSTED BULB - 60W EQUIVALENT 929002036204 8.8A19/PER/930/P/E26/DIM  
6/1FB T20. PHILIPS  
Ballast/Driver: PHILIPS  
INTEGRAL TO LAMP

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 312.4 lumens  
Efficiency: N/A  
Efficacy: 39.5 lumens/watt  
Spacing Criteria (0/90/45): 1.42 / 1.41 / 1.27  
Luminous Opening: Rectangular w/ Sides (W: 1.17' x L: 1.17' x H: 1.26')  
CIE Type: Direct

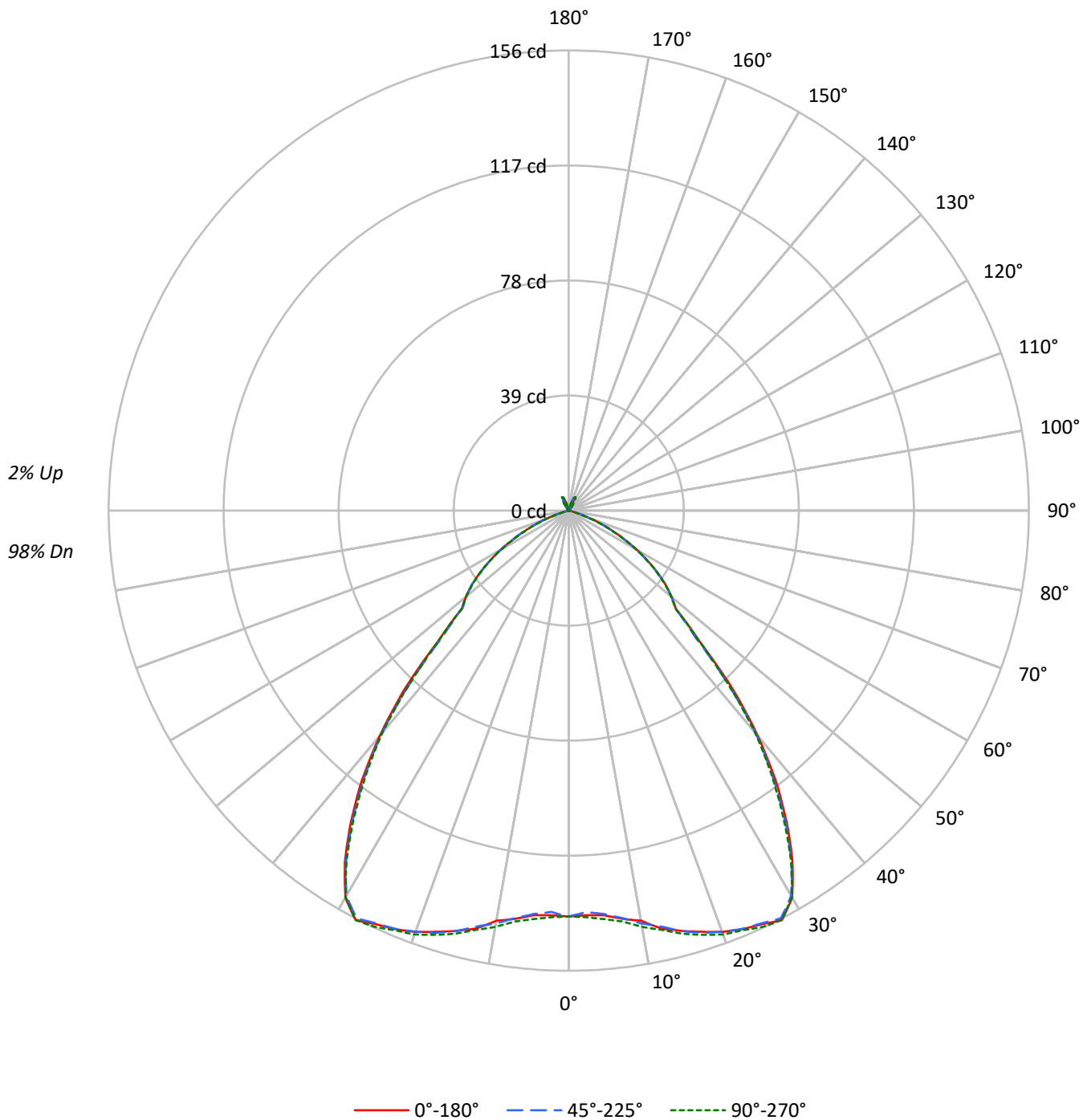
Input Watts (W): 7.9  
Input Voltage (V): 120.0  
Input Current (Ain): 0.0689  
Voltage Rise (V): NR  
Power Factor: 0.9787  
Total Harmonic Distortion (THDi): 23.0%  
Frequency (hertz): 60  
Stabilization Time: 0.5 HR  
Operation Time: 7.0 HR  
Ambient Temperature (°C): 24.0  
Test Distance: 24 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 |  | 105 | 105 | 105 |  | 101 |
| 1   | 111 | 108 | 104 | 102 | 109 | 105 | 102 | 100 | 101 | 99  | 96  |  | 97  | 95  | 93  |  | 93  |
| 2   | 103 | 97  | 92  | 87  | 101 | 95  | 90  | 86  | 91  | 87  | 84  |  | 88  | 85  | 82  |  | 85  |
| 3   | 96  | 87  | 81  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  |  | 80  | 76  | 72  |  | 77  |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 75  | 69  | 65  |  | 73  | 68  | 64  |  | 71  |
| 5   | 83  | 72  | 64  | 59  | 81  | 71  | 64  | 58  | 69  | 62  | 58  |  | 67  | 61  | 57  |  | 65  |
| 6   | 77  | 66  | 58  | 52  | 75  | 65  | 57  | 52  | 63  | 56  | 52  |  | 61  | 55  | 51  |  | 60  |
| 7   | 72  | 60  | 52  | 47  | 70  | 59  | 52  | 47  | 58  | 51  | 47  |  | 56  | 50  | 46  |  | 55  |
| 8   | 67  | 55  | 48  | 43  | 66  | 55  | 47  | 42  | 53  | 47  | 42  |  | 52  | 46  | 42  |  | 51  |
| 9   | 63  | 51  | 44  | 39  | 62  | 50  | 43  | 39  | 49  | 43  | 38  |  | 48  | 42  | 38  |  | 47  |
| 10  | 59  | 47  | 40  | 35  | 58  | 47  | 40  | 35  | 46  | 39  | 35  |  | 45  | 39  | 35  |  | 44  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1088 | 1088 | 1088 |
| 5°  | 999  | 961  | 1008 |
| 10° | 952  | 898  | 966  |
| 15° | 936  | 857  | 942  |
| 20° | 918  | 821  | 923  |
| 25° | 897  | 786  | 903  |
| 30° | 851  | 731  | 850  |
| 35° | 707  | 595  | 696  |
| 40° | 539  | 447  | 532  |
| 45° | 336  | 268  | 333  |
| 50° | 244  | 198  | 243  |
| 55° | 199  | 159  | 197  |
| 60° | 147  | 115  | 145  |
| 65° | 94   | 73   | 92   |
| 70° | 44   | 33   | 43   |
| 75° | 7    | 5    | 6    |
| 80° | 4    | 3    | 4    |
| 85° | 2    | 1    | 2    |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 336 cd/sqm



TEST NUMBER: G3-2203-583-2

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 13.3   | 4.3       |
| 10°-20°   | 42.0   | 13.4      |
| 20°-30°   | 71.3   | 22.8      |
| 30°-40°   | 78.9   | 25.3      |
| 40°-50°   | 50.4   | 16.1      |
| 50°-60°   | 32.5   | 10.4      |
| 60°-70°   | 16.4   | 5.3       |
| 70°-80°   | 2.5    | 0.8       |
| 80°-90°   | 0.3    | 0.1       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.3    | 0.1       |
| 130°-140° | 0.6    | 0.2       |
| 140°-150° | 1.3    | 0.4       |
| 150°-160° | 1.9    | 0.6       |
| 160°-170° | 0.5    | 0.2       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 126.6  | 40.5      |
| 0°-40°    | 205.5  | 65.8      |
| 0°-60°    | 288.5  | 92.3      |
| 0°-90°    | 307.7  | 98.5      |
| 90°-120°  | 0.1    | 0.0       |
| 90°-150°  | 2.3    | 0.7       |
| 90°-180°  | 5.0    | 1.6       |
| 0°-180°   | 312.4  | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 138 | 138   | 138 | 138   | 138 |      |
| 5°   | 138 | 138   | 137 | 138   | 139 | 13   |
| 15°  | 148 | 147   | 148 | 148   | 148 | 42   |
| 25°  | 155 | 155   | 154 | 155   | 156 | 71   |
| 35°  | 129 | 128   | 128 | 127   | 127 | 80   |
| 45°  | 63  | 62    | 61  | 62    | 62  | 51   |
| 55°  | 37  | 37    | 37  | 37    | 36  | 33   |
| 65°  | 17  | 17    | 17  | 16    | 16  | 17   |
| 75°  | 1   | 1     | 1   | 1     | 1   | 3    |
| 85°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 90°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 95°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 105° | 0   | 0     | 0   | 0     | 0   | 0    |
| 115° | 0   | 0     | 0   | 0     | 0   | 0    |
| 125° | 0   | 0     | 0   | 0     | 0   | 0    |
| 135° | 1   | 1     | 1   | 1     | 1   | 1    |
| 145° | 1   | 2     | 2   | 2     | 3   | 1    |
| 155° | 4   | 4     | 5   | 5     | 5   | 2    |
| 165° | 1   | 1     | 1   | 2     | 1   | 0    |
| 175° | 0   | 0     | 0   | 0     | 1   | 0    |
| 180° | 0   | 0     | 0   | 0     | 0   |      |

TEST NUMBER: G3-2203-583-2

CATALOG NUMBER: 301-FR-120-DGYS-GDME

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 137.6 | 137.6 | 137.6 | 137.6 | 137.6 |
| 2.5°   | 137.3 | 137.7 | 136.2 | 137.5 | 138.0 |
| 5°     | 137.7 | 137.9 | 137.3 | 138.0 | 139.0 |
| 7.5°   | 139.6 | 139.7 | 139.3 | 139.9 | 140.5 |
| 10°    | 141.2 | 142.7 | 142.1 | 142.5 | 143.3 |
| 12.5°  | 145.1 | 145.5 | 144.4 | 145.1 | 145.6 |
| 15°    | 147.5 | 147.1 | 147.6 | 147.6 | 148.5 |
| 17.5°  | 149.7 | 150.1 | 150.1 | 150.3 | 150.8 |
| 20°    | 152.0 | 152.3 | 151.9 | 151.9 | 152.9 |
| 22.5°  | 153.6 | 153.0 | 153.5 | 153.9 | 154.0 |
| 25°    | 154.7 | 154.8 | 154.4 | 154.9 | 155.7 |
| 27.5°  | 156.5 | 155.9 | 155.8 | 156.2 | 156.5 |
| 30°    | 151.5 | 151.3 | 150.8 | 151.4 | 151.3 |
| 32.5°  | 141.2 | 140.4 | 140.5 | 140.4 | 140.2 |
| 35°    | 128.7 | 127.8 | 127.7 | 127.0 | 126.8 |
| 37.5°  | 115.1 | 114.0 | 113.6 | 112.8 | 112.9 |
| 40°    | 99.7  | 99.0  | 98.9  | 98.9  | 98.3  |
| 42.5°  | 82.9  | 81.7  | 80.4  | 80.0  | 80.4  |
| 45°    | 62.6  | 61.8  | 60.7  | 61.6  | 62.1  |
| 47.5°  | 49.2  | 49.1  | 48.7  | 48.8  | 49.0  |
| 50°    | 45.5  | 45.4  | 45.4  | 45.2  | 45.3  |
| 52.5°  | 41.5  | 41.6  | 41.4  | 41.4  | 41.3  |
| 55°    | 36.8  | 36.9  | 36.7  | 36.7  | 36.4  |
| 57.5°  | 31.8  | 31.5  | 31.6  | 31.5  | 31.6  |
| 60°    | 26.8  | 26.5  | 26.6  | 26.5  | 26.4  |
| 62.5°  | 21.5  | 21.6  | 21.5  | 21.3  | 21.1  |
| 65°    | 16.7  | 16.6  | 16.6  | 16.5  | 16.4  |
| 67.5°  | 12.0  | 11.9  | 11.6  | 11.7  | 11.7  |
| 70°    | 7.6   | 7.5   | 7.4   | 7.5   | 7.4   |
| 72.5°  | 3.8   | 3.8   | 3.8   | 3.7   | 3.6   |
| 75°    | 1.1   | 1.2   | 1.2   | 1.1   | 1.0   |
| 77.5°  | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 80°    | 0.6   | 0.6   | 0.6   | 0.5   | 0.6   |
| 82.5°  | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   |
| 85°    | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   |
| 87.5°  | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   |
| 90°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 92.5°  | 0.1   | 0.1   | 0.0   | 0.0   | 0.1   |
| 95°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 97.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 100°   | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   |
| 102.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 105°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 107.5° | 0.1   | 0.1   | 0.1   | 0.0   | 0.0   |
| 110°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



TEST NUMBER: G3-2203-583-2

CATALOG NUMBER: 301-FR-120-DGYS-GDME

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 0.1   | 0.0 | 0.0   | 0.0 |
| 115°   | 0.1 | 0.1   | 0.1 | 0.1   | 0.0 |
| 117.5° | 0.0 | 0.1   | 0.0 | 0.0   | 0.0 |
| 120°   | 0.1 | 0.1   | 0.1 | 0.1   | 0.0 |
| 122.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 |
| 125°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 |
| 127.5° | 0.4 | 0.4   | 0.4 | 0.4   | 0.2 |
| 130°   | 0.5 | 0.5   | 0.6 | 0.5   | 0.4 |
| 132.5° | 0.7 | 0.7   | 0.8 | 0.7   | 0.6 |
| 135°   | 0.8 | 0.8   | 0.9 | 0.8   | 0.7 |
| 137.5° | 0.9 | 1.0   | 1.1 | 1.1   | 1.0 |
| 140°   | 0.9 | 1.0   | 1.2 | 1.3   | 1.2 |
| 142.5° | 1.1 | 1.3   | 1.5 | 1.8   | 1.8 |
| 145°   | 1.4 | 1.7   | 1.9 | 2.4   | 2.6 |
| 147.5° | 1.8 | 2.3   | 2.5 | 3.0   | 3.3 |
| 150°   | 2.4 | 3.1   | 3.3 | 3.7   | 4.2 |
| 152.5° | 3.0 | 3.7   | 4.2 | 4.5   | 5.0 |
| 155°   | 4.0 | 4.0   | 4.9 | 4.9   | 5.0 |
| 157.5° | 4.0 | 3.9   | 5.0 | 4.9   | 4.5 |
| 160°   | 3.5 | 3.2   | 3.9 | 4.3   | 3.6 |
| 162.5° | 2.5 | 2.1   | 2.5 | 3.2   | 2.2 |
| 165°   | 1.3 | 1.0   | 1.3 | 1.5   | 1.0 |
| 167.5° | 0.4 | 0.3   | 0.5 | 0.5   | 0.3 |
| 170°   | 0.3 | 0.3   | 0.2 | 0.1   | 0.2 |
| 172.5° | 0.3 | 0.2   | 0.3 | 0.4   | 0.2 |
| 175°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.7 |
| 177.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.1 |
| 180°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |

(END OF REPORT)