

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: P701980

Luminaire Tested: 340-4C-20-D010 / 340-EU4C-1020-9027-4LBW1LI-CQ

Issue Date: 8/30/2023

Test Information

Test Method: LM-79-2019
Report Number: P701980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-068-5)
Test Lab: INNOVATION CENTER
Issue Date: 8/30/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: SHAPER
Catalog Number: 340-4C-20-D010 / 340-EU4C-1020-9027-4LBW1LI-CQ
Description: FARALLON 4" LED GLASS DOWNLIGHT CYLINDRICAL FROSTED, QUADRATE ETCHED GLASS KIT.
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

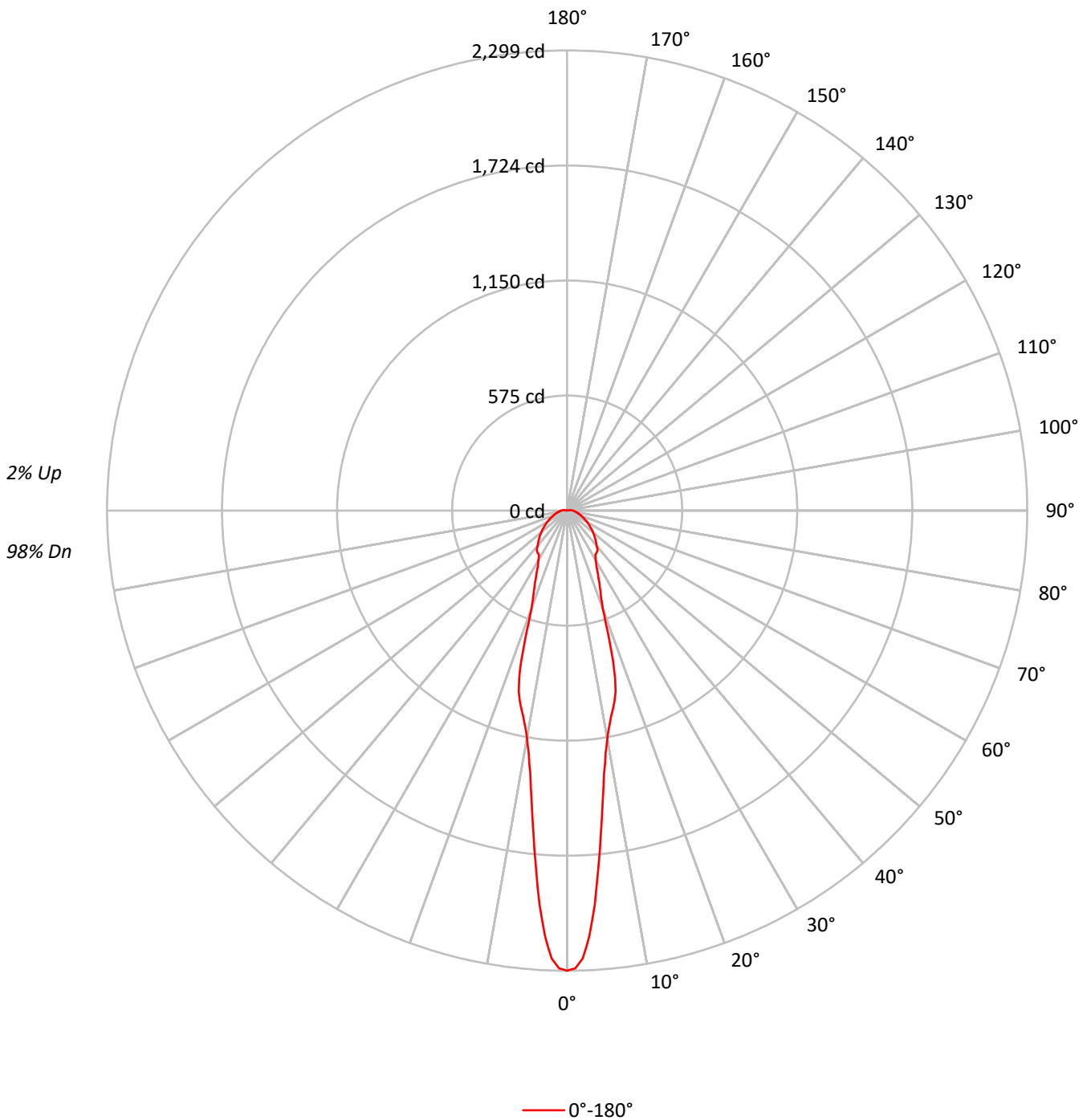
Lumens per Lamp: N/A
Luminaire Lumens: 1225.2 lumens
Efficiency: N/A
Efficacy: 56.2 lumens/watt
Spacing Criteria (0/90/45): 0.33 / 0.33 / 0.46
Luminous Opening: Vertical Cylinder (Dia: 0.34' x H: 0.46')
CIE Type: Direct

Input Watts (W): 21.8
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: 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 | 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 | 110 | 110 | 110 | | 105 | 105 | 105 | | 100 | 100 | 100 | 98 |
| 1 | 109 | 105 | 101 | 98 | 106 | 103 | 99 | 96 | 98 | 95 | 92 | | 94 | 91 | 89 | | 90 | 88 | 86 | 84 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 88 | 84 | 80 | | 85 | 81 | 78 | | 81 | 78 | 76 | 74 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 72 | 80 | 75 | 70 | | 77 | 73 | 69 | | 75 | 71 | 67 | 65 |
| 4 | 88 | 78 | 70 | 64 | 86 | 76 | 69 | 64 | 74 | 68 | 63 | | 71 | 66 | 62 | | 69 | 64 | 61 | 59 |
| 5 | 82 | 71 | 64 | 58 | 80 | 70 | 63 | 58 | 68 | 62 | 57 | | 66 | 60 | 56 | | 64 | 59 | 55 | 53 |
| 6 | 77 | 66 | 58 | 53 | 76 | 65 | 58 | 53 | 63 | 57 | 52 | | 61 | 56 | 52 | | 60 | 55 | 51 | 49 |
| 7 | 73 | 62 | 54 | 49 | 71 | 61 | 54 | 49 | 59 | 53 | 48 | | 58 | 52 | 48 | | 56 | 51 | 47 | 45 |
| 8 | 69 | 58 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | | 54 | 49 | 44 | | 53 | 48 | 44 | 42 |
| 9 | 66 | 54 | 47 | 42 | 64 | 54 | 47 | 42 | 52 | 46 | 42 | | 51 | 46 | 42 | | 50 | 45 | 41 | 40 |
| 10 | 63 | 51 | 44 | 40 | 61 | 51 | 44 | 40 | 50 | 44 | 39 | | 49 | 43 | 39 | | 48 | 43 | 39 | 37 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 266645 |
| 5° | 181463 |
| 10° | 104599 |
| 15° | 77167 |
| 20° | 39731 |
| 25° | 26421 |
| 30° | 19310 |
| 35° | 16651 |
| 40° | 14319 |
| 45° | 12051 |
| 50° | 10069 |
| 55° | 8296 |
| 60° | 6793 |
| 65° | 5512 |
| 70° | 4430 |
| 75° | 3616 |
| 80° | 2973 |
| 85° | 2413 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12051 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 148.2 | 12.1 |
| 10°-20° | 241.3 | 19.7 |
| 20°-30° | 172.7 | 14.1 |
| 30°-40° | 160.7 | 13.1 |
| 40°-50° | 153.0 | 12.5 |
| 50°-60° | 126.0 | 10.3 |
| 60°-70° | 92.6 | 7.6 |
| 70°-80° | 63.3 | 5.2 |
| 80°-90° | 40.7 | 3.3 |
| 90°-100° | 22.4 | 1.8 |
| 100°-110° | 4.2 | 0.3 |
| 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° | 562.2 | 45.9 |
| 0°-40° | 722.9 | 59.0 |
| 0°-60° | 1001.9 | 81.8 |
| 0°-90° | 1198.6 | 97.8 |
| 90°-120° | 26.6 | 2.2 |
| 90°-150° | 26.6 | 2.2 |
| 90°-180° | 27.0 | 2.2 |
| 0°-180° | 1225.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|------|------|------|
| 0° | 2299 | |
| 5° | 1790 | 148 |
| 15° | 935 | 241 |
| 25° | 370 | 173 |
| 35° | 257 | 161 |
| 45° | 198 | 153 |
| 55° | 140 | 126 |
| 65° | 93 | 93 |
| 75° | 59 | 63 |
| 85° | 37 | 32 |
| 90° | 30 | 16 |
| 95° | 21 | 15 |
| 105° | 3 | 4 |
| 115° | 0 | 0 |
| 125° | 0 | 0 |
| 135° | 0 | 0 |
| 145° | 0 | 0 |
| 155° | 0 | 0 |
| 165° | 0 | 0 |
| 175° | 0 | 0 |
| 180° | 0 | 0 |

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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 2299.0 |
| 1° | 2287.2 |
| 2° | 2238.4 |
| 3° | 2127.4 |
| 4° | 1973.6 |
| 5° | 1790.1 |
| 6° | 1615.5 |
| 7° | 1458.7 |
| 8° | 1327.1 |
| 9° | 1227.9 |
| 10° | 1154.0 |
| 11° | 1099.2 |
| 12° | 1053.4 |
| 13° | 1016.4 |
| 14° | 979.4 |
| 15° | 935.0 |
| 16° | 869.9 |
| 17° | 784.1 |
| 18° | 683.5 |
| 19° | 590.3 |
| 20° | 520.8 |
| 21° | 477.9 |
| 22° | 446.8 |
| 23° | 420.2 |
| 24° | 395.0 |
| 25° | 369.9 |
| 27.5° | 318.1 |
| 30° | 285.5 |
| 32.5° | 261.9 |
| 35° | 257.4 |
| 37.5° | 250.0 |
| 40° | 229.3 |
| 42.5° | 213.0 |
| 45° | 198.2 |
| 47.5° | 183.4 |
| 50° | 168.7 |
| 52.5° | 153.9 |
| 55° | 140.5 |
| 57.5° | 127.2 |
| 60° | 115.4 |
| 62.5° | 103.6 |
| 65° | 93.2 |
| 67.5° | 82.8 |
| 70° | 74.0 |
| 72.5° | 66.6 |

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CANDELA DISTRIBUTION (continued):

| | 0° |
|--------|------|
| 75° | 59.2 |
| 77.5° | 53.3 |
| 80° | 47.3 |
| 82.5° | 41.4 |
| 85° | 37.0 |
| 87.5° | 32.5 |
| 90° | 29.6 |
| 92.5° | 26.6 |
| 95° | 20.7 |
| 97.5° | 14.8 |
| 100° | 10.4 |
| 102.5° | 5.9 |
| 105° | 3.0 |
| 107.5° | 1.5 |
| 110° | 0.0 |
| 112.5° | 0.0 |
| 115° | 0.0 |
| 117.5° | 0.0 |
| 120° | 0.0 |
| 122.5° | 0.0 |
| 125° | 0.0 |
| 127.5° | 0.0 |
| 130° | 0.0 |
| 132.5° | 0.0 |
| 135° | 0.0 |
| 137.5° | 0.0 |
| 140° | 0.0 |
| 142.5° | 0.0 |
| 145° | 0.0 |
| 147.5° | 0.0 |
| 150° | 0.0 |
| 152.5° | 0.0 |
| 155° | 0.0 |
| 157.5° | 0.0 |
| 160° | 0.0 |
| 162.5° | 0.0 |
| 165° | 0.0 |
| 167.5° | 0.0 |
| 170° | 0.0 |
| 172.5° | 0.0 |
| 175° | 0.0 |
| 177.5° | 0.0 |
| 180° | 0.0 |

(END OF REPORT)