

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: P702020

Luminaire Tested: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC

Issue Date: 8/30/2023

Test Information

Test Method: LM-79-2019
Report Number: P702020
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-068-3)
Test Lab: INNOVATION CENTER
Issue Date: 8/30/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: SHAPER
Catalog Number: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC
Description: FARALLON 4" LED GLASS DOWNLIGHT. CYLINDRICAL CLEAR GLASS KIT.
Light Source: 3000K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

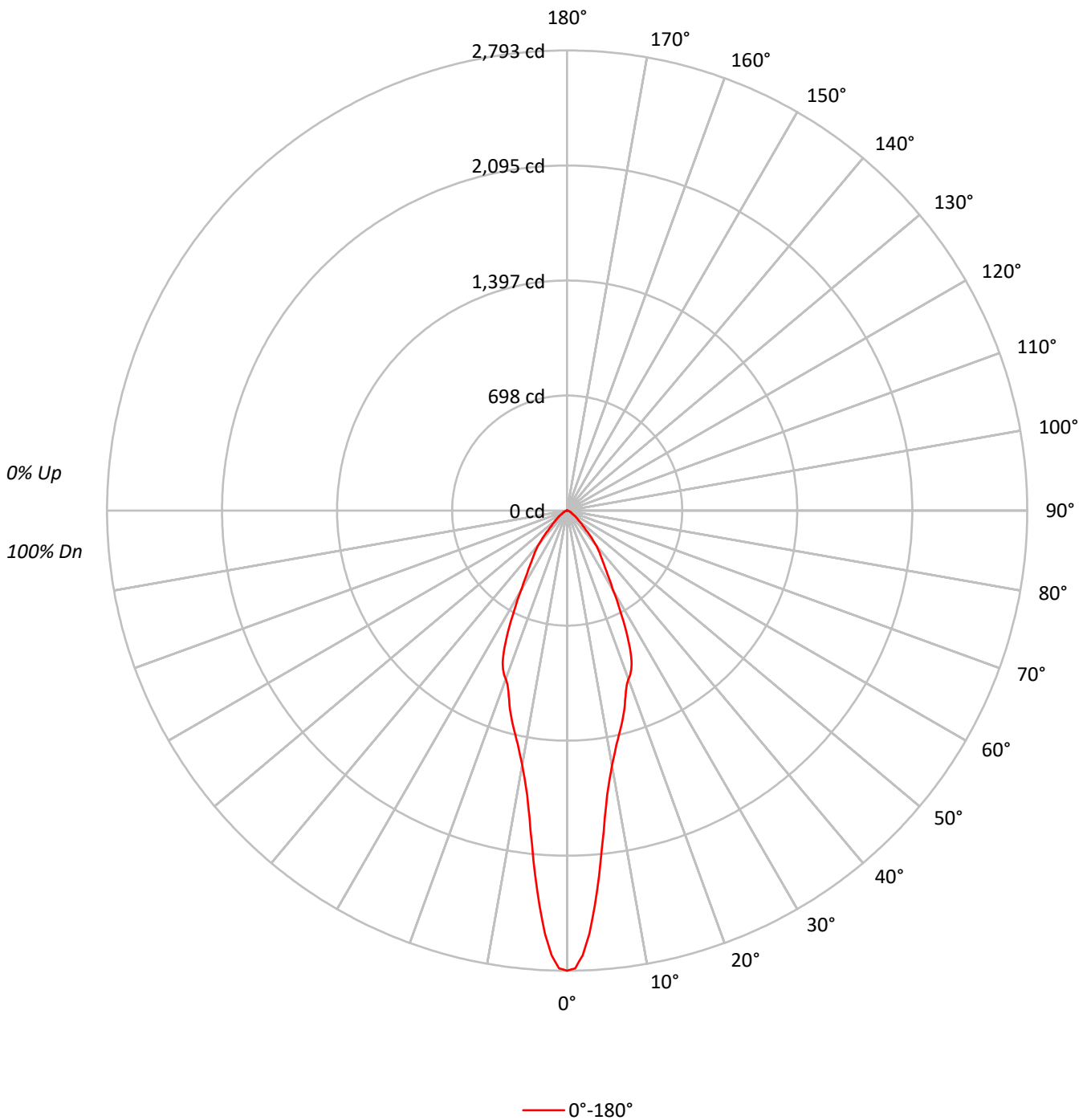
Lumens per Lamp: N/A
Luminaire Lumens: 1396.3 lumens
Efficiency: N/A
Efficacy: 64.1 lumens/watt
Spacing Criteria (0/90/45): 0.4 / 0.4 / 0.64
Luminous Opening: Circular (Dia: 0.34' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P702020

CATALOG NUMBER: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC

Luminous Intensity Polar Plot



TEST NUMBER: P702020

CATALOG NUMBER: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC

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 | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | | 100 | 99 | 97 | | 97 | 96 | 94 | 93 |
| 2 | 107 | 102 | 98 | 94 | 105 | 100 | 96 | 93 | 97 | 94 | 91 | | 94 | 91 | 89 | | 91 | 89 | 87 | 85 |
| 3 | 101 | 95 | 89 | 85 | 99 | 93 | 88 | 85 | 91 | 87 | 83 | | 88 | 85 | 82 | | 86 | 83 | 81 | 79 |
| 4 | 96 | 88 | 82 | 78 | 94 | 87 | 82 | 78 | 85 | 80 | 77 | | 83 | 79 | 76 | | 81 | 78 | 75 | 73 |
| 5 | 91 | 82 | 76 | 72 | 89 | 82 | 76 | 72 | 80 | 75 | 71 | | 78 | 74 | 70 | | 76 | 73 | 70 | 68 |
| 6 | 87 | 77 | 71 | 67 | 85 | 77 | 71 | 67 | 75 | 70 | 66 | | 74 | 69 | 66 | | 72 | 68 | 65 | 64 |
| 7 | 82 | 73 | 67 | 62 | 81 | 72 | 66 | 62 | 71 | 66 | 62 | | 70 | 65 | 61 | | 68 | 64 | 61 | 60 |
| 8 | 78 | 69 | 63 | 58 | 77 | 68 | 62 | 58 | 67 | 62 | 58 | | 66 | 61 | 58 | | 65 | 61 | 57 | 56 |
| 9 | 75 | 65 | 59 | 55 | 74 | 64 | 59 | 55 | 63 | 58 | 55 | | 63 | 58 | 54 | | 62 | 57 | 54 | 53 |
| 10 | 71 | 62 | 56 | 52 | 70 | 61 | 55 | 52 | 60 | 55 | 52 | | 59 | 55 | 51 | | 59 | 54 | 51 | 50 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 323929 |
| 5° | 258734 |
| 10° | 184926 |
| 15° | 156781 |
| 20° | 134387 |
| 25° | 113755 |
| 30° | 74771 |
| 35° | 53351 |
| 40° | 40743 |
| 45° | 23964 |
| 50° | 15824 |
| 55° | 11506 |
| 60° | 7493 |
| 65° | 6751 |
| 70° | 5731 |
| 75° | 4123 |
| 80° | 3072 |
| 85° | 1996 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23964 cd/sqm

TEST NUMBER: P702020

CATALOG NUMBER: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 188.9 | 13.5 |
| 10°-20° | 363.1 | 26.0 |
| 20°-30° | 392.2 | 28.1 |
| 30°-40° | 242.3 | 17.4 |
| 40°-50° | 121.3 | 8.7 |
| 50°-60° | 50.9 | 3.6 |
| 60°-70° | 23.9 | 1.7 |
| 70°-80° | 10.5 | 0.8 |
| 80°-90° | 2.3 | 0.2 |
| 90°-100° | 0.2 | 0.0 |
| 100°-110° | 0.6 | 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° | 944.2 | 67.6 |
| 0°-40° | 1186.5 | 85.0 |
| 0°-60° | 1358.7 | 97.3 |
| 0°-90° | 1395.5 | 99.9 |
| 90°-120° | 0.8 | 0.1 |
| 90°-150° | 0.8 | 0.1 |
| 90°-180° | 1.0 | 0.1 |
| 0°-180° | 1396.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|------|------|------|
| 0° | 2793 | |
| 5° | 2222 | 189 |
| 15° | 1306 | 363 |
| 25° | 889 | 392 |
| 35° | 377 | 242 |
| 45° | 146 | 121 |
| 55° | 57 | 51 |
| 65° | 25 | 24 |
| 75° | 9 | 11 |
| 85° | 2 | 2 |
| 90° | 0 | 0 |
| 95° | 0 | 1 |
| 105° | 0 | 1 |
| 115° | 0 | 0 |
| 125° | 0 | 0 |
| 135° | 0 | 0 |
| 145° | 0 | 0 |
| 155° | 0 | 0 |
| 165° | 0 | 0 |
| 175° | 0 | 0 |
| 180° | 0 | |

TEST NUMBER: P702020

CATALOG NUMBER: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC

CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 2792.9 |
| 1° | 2779.0 |
| 2° | 2700.6 |
| 3° | 2571.4 |
| 4° | 2403.8 |
| 5° | 2222.3 |
| 6° | 2040.8 |
| 7° | 1876.3 |
| 8° | 1745.5 |
| 9° | 1647.1 |
| 10° | 1570.2 |
| 11° | 1504.1 |
| 12° | 1447.2 |
| 13° | 1398.0 |
| 14° | 1353.4 |
| 15° | 1305.7 |
| 16° | 1258.0 |
| 17° | 1204.2 |
| 18° | 1155.0 |
| 19° | 1115.0 |
| 20° | 1088.8 |
| 21° | 1067.3 |
| 22° | 1039.6 |
| 23° | 1001.2 |
| 24° | 948.9 |
| 25° | 888.9 |
| 27.5° | 715.1 |
| 30° | 558.3 |
| 32.5° | 450.6 |
| 35° | 376.8 |
| 37.5° | 323.0 |
| 40° | 269.1 |
| 42.5° | 201.5 |
| 45° | 146.1 |
| 47.5° | 110.7 |
| 50° | 87.7 |
| 52.5° | 72.3 |
| 55° | 56.9 |
| 57.5° | 40.0 |
| 60° | 32.3 |
| 62.5° | 27.7 |
| 65° | 24.6 |
| 67.5° | 20.0 |
| 70° | 16.9 |
| 72.5° | 12.3 |

TEST NUMBER: P702020

CATALOG NUMBER: 340-4C-20-D010 / 340-EU4C-1020-9730-4LBW1LI-CC

CANDELA DISTRIBUTION (continued):

| | 0° |
|--------|-----|
| 75° | 9.2 |
| 77.5° | 7.7 |
| 80° | 4.6 |
| 82.5° | 3.1 |
| 85° | 1.5 |
| 87.5° | 1.5 |
| 90° | 0.0 |
| 92.5° | 0.0 |
| 95° | 0.0 |
| 97.5° | 0.0 |
| 100° | 1.5 |
| 102.5° | 1.5 |
| 105° | 0.0 |
| 107.5° | 0.0 |
| 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)