

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: P701989

Luminaire Tested: 340-4C-20-D010 / 340-EU4C-1020-9030-4LBW1LI-GCC

Issue Date: 8/30/2023

Test Information

Test Method: LM-79-2019
Report Number: P701989
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-068-8)
Test Lab: INNOVATION CENTER
Issue Date: 8/30/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: SHAPER
Catalog Number: 340-4C-20-D010 / 340-EU4C-1020-9030-4LBW1LI-GCC
Description: FARALLON 4" LED GLASS DOWNLIGHT. GLASS-IN-A-GLASS, CLEAR INSIDE, CLEAR OUTSIDE GLA
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

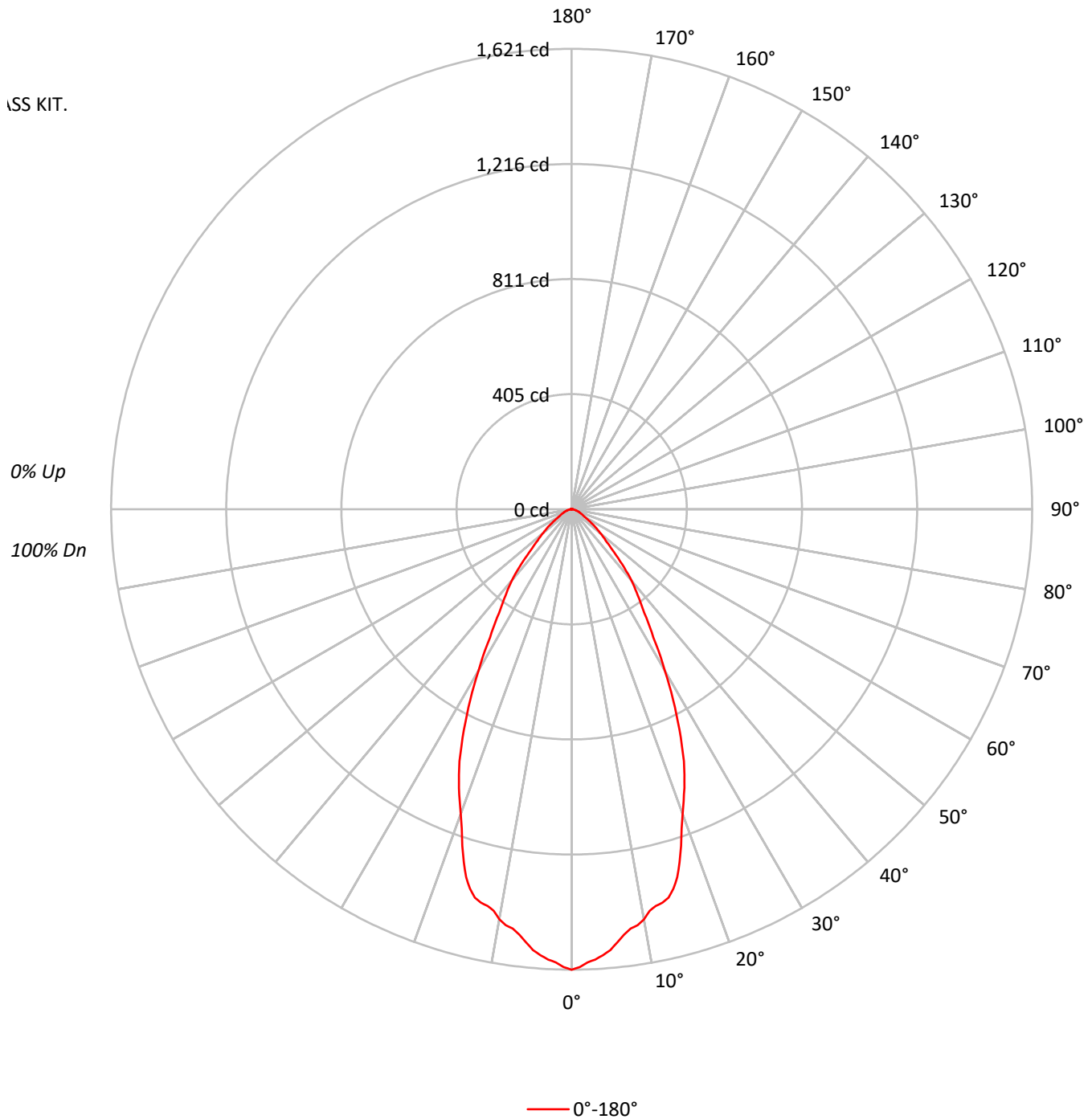
Lumens per Lamp: N/A
Luminaire Lumens: 1529.6 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 0.83 / 0.83
Luminous Opening: Circular (Dia: 0.34' x H: 0')
CIE Type: Direct

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

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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 | 113 | 109 | 107 | 104 | 110 | 107 | 105 | 102 | 103 | 101 | 99 | | 99 | 98 | 96 | | 96 | 94 | 93 | 91 |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 95 | 92 | 89 | | 92 | 89 | 87 | | 89 | 87 | 85 | 83 |
| 3 | 100 | 93 | 87 | 83 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | | 86 | 82 | 79 | | 84 | 81 | 78 | 76 |
| 4 | 94 | 86 | 79 | 75 | 92 | 85 | 79 | 74 | 82 | 77 | 73 | | 80 | 76 | 72 | | 78 | 75 | 72 | 70 |
| 5 | 89 | 80 | 73 | 68 | 87 | 79 | 72 | 68 | 77 | 71 | 67 | | 75 | 70 | 67 | | 73 | 69 | 66 | 64 |
| 6 | 84 | 74 | 68 | 63 | 82 | 73 | 67 | 63 | 72 | 66 | 62 | | 70 | 65 | 62 | | 69 | 65 | 61 | 60 |
| 7 | 79 | 69 | 63 | 58 | 78 | 69 | 62 | 58 | 67 | 62 | 58 | | 66 | 61 | 57 | | 65 | 60 | 57 | 55 |
| 8 | 75 | 65 | 58 | 54 | 74 | 64 | 58 | 54 | 63 | 58 | 54 | | 62 | 57 | 53 | | 61 | 56 | 53 | 52 |
| 9 | 71 | 61 | 55 | 50 | 70 | 61 | 54 | 50 | 60 | 54 | 50 | | 59 | 53 | 50 | | 58 | 53 | 50 | 48 |
| 10 | 68 | 58 | 51 | 47 | 67 | 57 | 51 | 47 | 56 | 51 | 47 | | 55 | 50 | 47 | | 55 | 50 | 47 | 45 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 188055 |
| 5° | 181427 |
| 10° | 172654 |
| 15° | 166051 |
| 20° | 140879 |
| 25° | 117531 |
| 30° | 87976 |
| 35° | 63163 |
| 40° | 49843 |
| 45° | 33051 |
| 50° | 24143 |
| 55° | 17107 |
| 60° | 11784 |
| 65° | 10127 |
| 70° | 8885 |
| 75° | 7573 |
| 80° | 6145 |
| 85° | 6121 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33051 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 145.2 | 9.5 |
| 10°-20° | 377.0 | 24.6 |
| 20°-30° | 414.8 | 27.1 |
| 30°-40° | 287.6 | 18.8 |
| 40°-50° | 163.9 | 10.7 |
| 50°-60° | 77.9 | 5.1 |
| 60°-70° | 36.9 | 2.4 |
| 70°-80° | 18.0 | 1.2 |
| 80°-90° | 5.2 | 0.3 |
| 90°-100° | 1.9 | 0.1 |
| 100°-110° | 1.2 | 0.1 |
| 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° | 937.0 | 61.3 |
| 0°-40° | 1224.5 | 80.1 |
| 0°-60° | 1466.4 | 95.9 |
| 0°-90° | 1526.5 | 99.8 |
| 90°-120° | 3.1 | 0.2 |
| 90°-150° | 3.1 | 0.2 |
| 90°-180° | 3.0 | 0.2 |
| 0°-180° | 1529.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|------|------|------|
| 0° | 1621 | |
| 5° | 1558 | 145 |
| 15° | 1383 | 377 |
| 25° | 918 | 415 |
| 35° | 446 | 288 |
| 45° | 202 | 164 |
| 55° | 85 | 78 |
| 65° | 37 | 37 |
| 75° | 17 | 18 |
| 85° | 5 | 5 |
| 90° | 2 | 1 |
| 95° | 2 | 1 |
| 105° | 2 | 1 |
| 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° | 1621.4 |
| 1° | 1612.1 |
| 2° | 1596.8 |
| 3° | 1587.5 |
| 4° | 1573.7 |
| 5° | 1558.3 |
| 6° | 1533.7 |
| 7° | 1509.1 |
| 8° | 1490.6 |
| 9° | 1482.9 |
| 10° | 1466.0 |
| 11° | 1439.9 |
| 12° | 1427.5 |
| 13° | 1421.4 |
| 14° | 1409.1 |
| 15° | 1382.9 |
| 16° | 1347.6 |
| 17° | 1299.9 |
| 18° | 1246.0 |
| 19° | 1189.1 |
| 20° | 1141.4 |
| 21° | 1099.9 |
| 22° | 1058.4 |
| 23° | 1015.3 |
| 24° | 970.7 |
| 25° | 918.4 |
| 27.5° | 786.1 |
| 30° | 656.9 |
| 32.5° | 535.3 |
| 35° | 446.1 |
| 37.5° | 381.5 |
| 40° | 329.2 |
| 42.5° | 263.1 |
| 45° | 201.5 |
| 47.5° | 161.5 |
| 50° | 133.8 |
| 52.5° | 109.2 |
| 55° | 84.6 |
| 57.5° | 64.6 |
| 60° | 50.8 |
| 62.5° | 43.1 |
| 65° | 36.9 |
| 67.5° | 30.8 |
| 70° | 26.2 |
| 72.5° | 21.5 |

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CANDELA DISTRIBUTION (continued):

| | 0° |
|--------|------|
| 75° | 16.9 |
| 77.5° | 12.3 |
| 80° | 9.2 |
| 82.5° | 6.2 |
| 85° | 4.6 |
| 87.5° | 3.1 |
| 90° | 1.5 |
| 92.5° | 1.5 |
| 95° | 1.5 |
| 97.5° | 1.5 |
| 100° | 3.1 |
| 102.5° | 1.5 |
| 105° | 1.5 |
| 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)