Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: STREETWORKS

Report Number: P981486

Luminaire Tested: **FFX-CLB-20-740-U-FR-T3-UPLR**

Issue Date: 04/15/2025

Report Generated By 670245763

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P981486 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 04/15/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | STREETWORKS |
| Catalog Number: | FFX-CLB-20-740-U-FR-T3-UPLR |
| Description: | FAIRFAX POST TOP FIXTURE w/ FAIRFAX REFRACTOR T3 DISTRIBUTION LENS AND UPLIGHT REFLECTOR |
| Light Source: | (4) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3259.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 164.6 lumens/watt |
| Luminous Opening: | Vertical Cylinder (Dia: 1.17' x H: 1.67') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U3 - G2 |

| | |
|---|---|
| Input Watts (W): | 19.8 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.99 |
| Total Harmonic Distortion (THDi): | 9.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

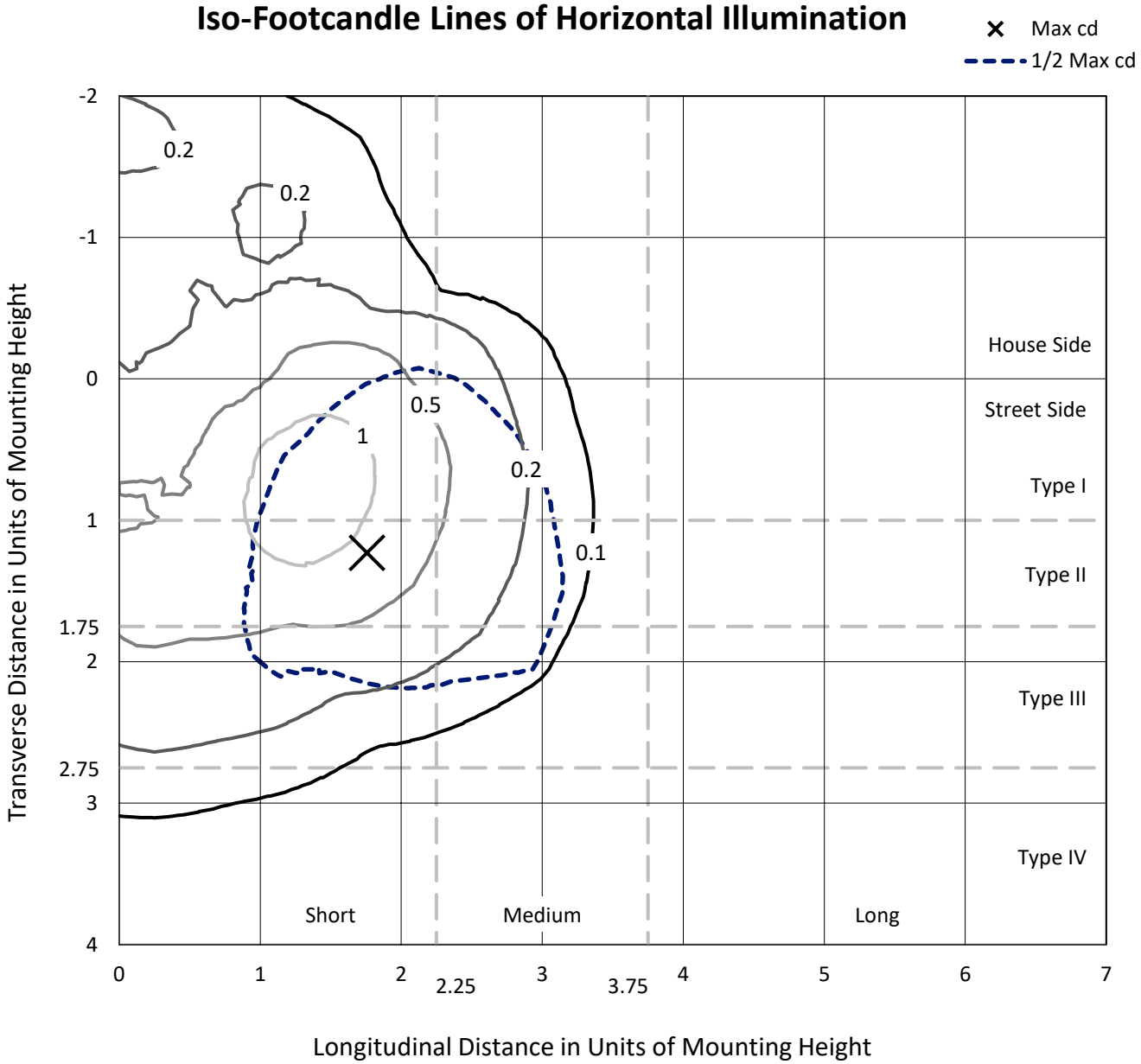


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## Iso-Footcandle Lines of Horizontal Illumination



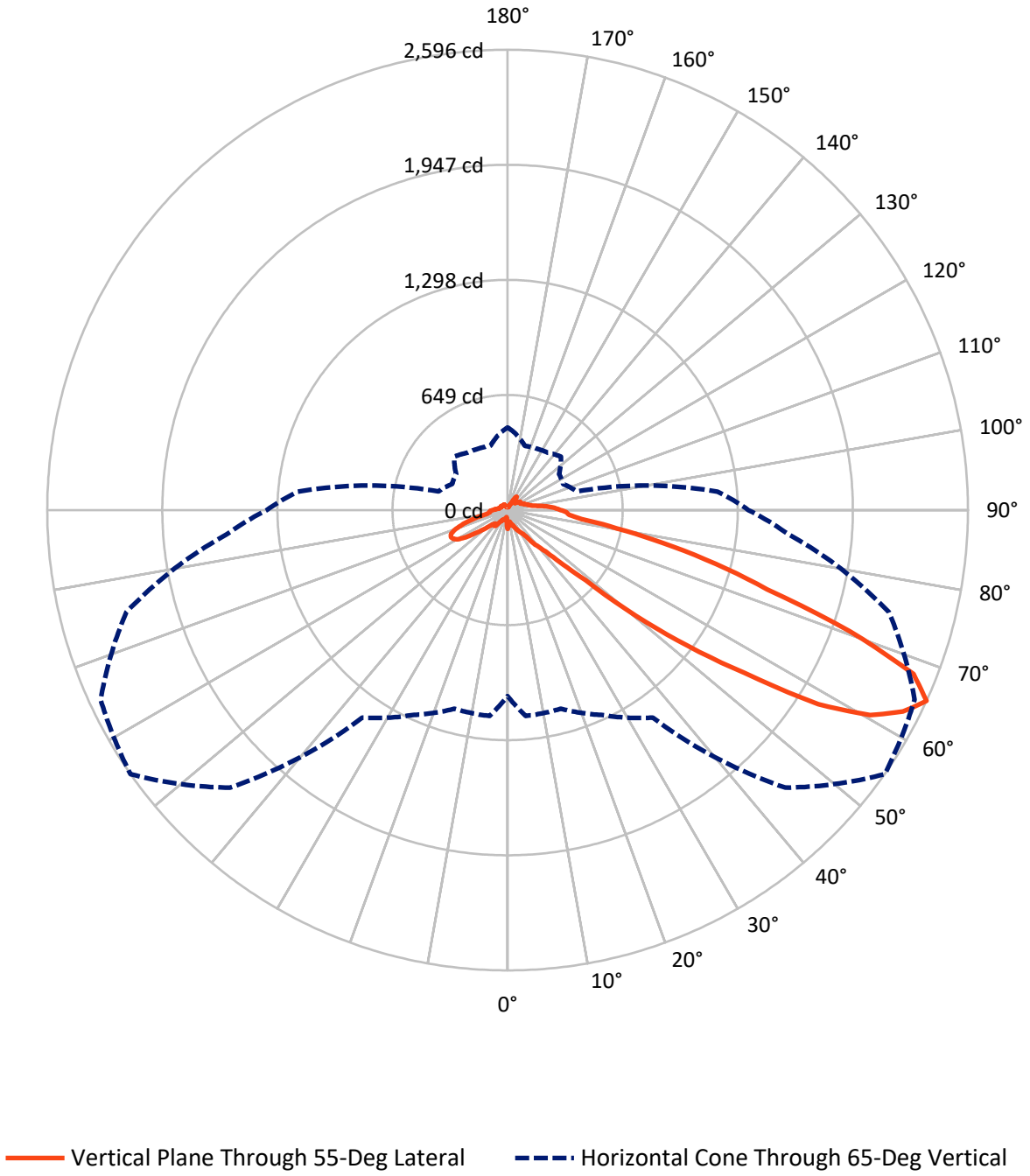

Based on 15 foot mounting height. Maximum calculated value = 1.4 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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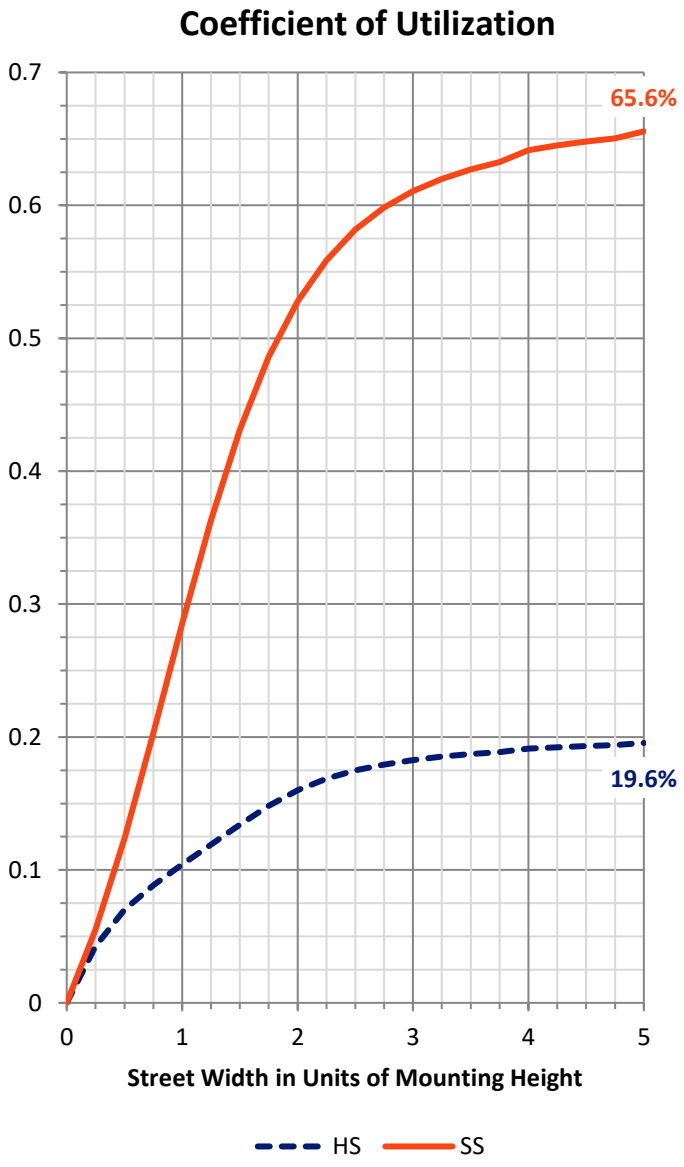
REPORT NUMBER: P981486
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**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 662.1 | 129.2 | 791.3 |
| | % Fixture | 20.3 | 4.0 | 24.3 |
| **Street Side** | Lumens | 2209.3 | 258.5 | 2467.9 |
| | % Fixture | 67.8 | 7.9 | 75.7 |
| **Total** | Lumens | 2871.5 | 387.7 | 3259.2 |
| | % Fixture | 88.1 | 11.9 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 6.1 | 0.2 |
| 10°-20° | 19.9 | 0.6 |
| 20°-30° | 40.7 | 1.3 |
| 30°-40° | 88.3 | 2.7 |
| 40°-50° | 214.4 | 6.6 |
| 50°-60° | 669.4 | 20.5 |
| 60°-70° | 1063.7 | 32.6 |
| 70°-80° | 566.8 | 17.4 |
| 80°-90° | 202.0 | 6.2 |
| 90°-100° | 122.9 | 3.8 |
| 100°-110° | 72.8 | 2.2 |
| 110°-120° | 56.8 | 1.7 |
| 120°-130° | 47.4 | 1.5 |
| 130°-140° | 34.6 | 1.1 |
| 140°-150° | 31.8 | 1.0 |
| 150°-160° | 14.4 | 0.4 |
| 160°-170° | 5.5 | 0.2 |
| 170°-180° | 1.6 | 0.0 |
| 0°-90° | 2871.5 | 88.1 |
| 0°-180° | 3259.2 | 100.0 |



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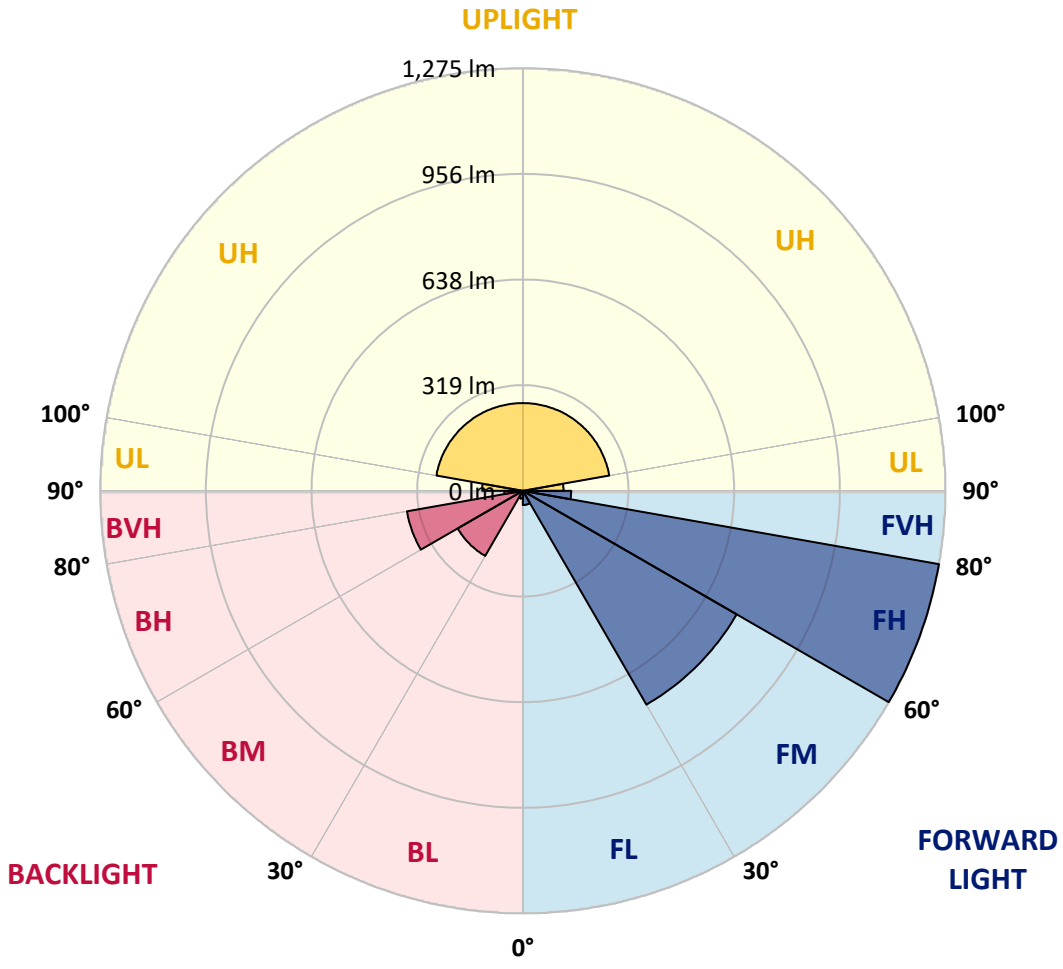
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REPORT NUMBER: P981486
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## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 43.1 | 1.3 | | | |
| FM | (30°-60°) | 745.2 | 22.9 | | | |
| FH | (60°-80°) | 1275.3 | 39.1 | | | G1/1800 |
| FVH | (80°-90°) | 145.7 | 4.5 | | | G2/225 |
| BL | (0°-30°) | 23.7 | 0.7 | B0/110 | | |
| BM | (30°-60°) | 226.9 | 7.0 | B1/1000 | | |
| BH | (60°-80°) | 355.2 | 10.9 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 56.2 | 1.7 | | | G1/100 |
| UL | (90°-100°) | 122.9 | 3.8 | | U3/500 | |
| UH | (100°-180°) | 264.9 | 8.1 | | U3/500 | |

**BUG Rating: B1-U3-G2**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 |
| 2.5° | 63.1 | 63.6 | 70.6 | 76.2 | 83.0 | 81.0 | 81.0 | 96.0 | 106.0 | 120.5 | 119.2 |
| 5° | 67.6 | 64.7 | 66.0 | 70.9 | 80.1 | 84.6 | 79.7 | 63.1 | 52.3 | 56.7 | 62.0 |
| 7.5° | 74.0 | 73.3 | 71.7 | 67.1 | 63.6 | 73.1 | 86.3 | 76.8 | 58.1 | 48.8 | 46.8 |
| 10° | 75.7 | 75.9 | 75.5 | 75.9 | 77.7 | 73.5 | 66.0 | 60.0 | 58.3 | 57.4 | 56.7 |
| 12.5° | 91.6 | 91.4 | 92.3 | 91.2 | 87.0 | 81.9 | 83.4 | 79.0 | 70.4 | 64.5 | 62.9 |
| 15° | 106.8 | 106.4 | 106.2 | 102.0 | 95.1 | 87.0 | 83.0 | 85.0 | 79.5 | 72.6 | 69.5 |
| 17.5° | 113.0 | 113.0 | 108.6 | 102.7 | 98.5 | 92.7 | 89.6 | 87.4 | 83.2 | 78.8 | 75.1 |
| 20° | 110.6 | 110.4 | 106.0 | 103.5 | 104.0 | 101.3 | 98.7 | 95.4 | 91.2 | 84.1 | 79.5 |
| 22.5° | 109.3 | 109.3 | 107.7 | 107.1 | 110.8 | 109.9 | 109.3 | 105.1 | 99.6 | 89.2 | 83.2 |
| 25° | 117.9 | 117.2 | 115.2 | 115.2 | 118.8 | 121.6 | 122.7 | 119.4 | 110.4 | 94.7 | 89.2 |
| 27.5° | 126.3 | 126.1 | 123.4 | 124.1 | 126.3 | 132.0 | 133.8 | 132.2 | 119.9 | 99.3 | 94.5 |
| 30° | 136.4 | 134.9 | 132.7 | 136.7 | 136.2 | 144.2 | 146.6 | 148.4 | 132.7 | 108.8 | 103.1 |
| 32.5° | 147.2 | 146.4 | 144.6 | 149.7 | 151.4 | 158.7 | 160.7 | 169.5 | 150.1 | 125.8 | 119.9 |
| 35° | 165.6 | 164.9 | 169.5 | 179.5 | 179.3 | 192.9 | 187.6 | 200.9 | 182.6 | 156.5 | 150.6 |
| 37.5° | 248.1 | 244.4 | 239.1 | 229.6 | 228.9 | 247.9 | 242.0 | 252.3 | 226.5 | 189.9 | 183.2 |
| 40° | 258.3 | 257.6 | 255.2 | 244.4 | 238.2 | 270.7 | 274.6 | 305.3 | 262.7 | 220.8 | 208.0 |
| 42.5° | 252.3 | 253.2 | 285.7 | 292.5 | 279.9 | 319.9 | 326.5 | 380.4 | 303.5 | 267.8 | 244.4 |
| 45° | 304.2 | 305.5 | 316.1 | 321.0 | 320.1 | 420.6 | 436.9 | 502.9 | 375.1 | 333.8 | 290.5 |
| 47.5° | 348.4 | 343.7 | 362.9 | 400.0 | 425.4 | 538.9 | 591.4 | 692.8 | 504.0 | 443.1 | 362.9 |
| 50° | 478.6 | 477.5 | 523.9 | 564.5 | 589.7 | 775.3 | 937.1 | 1048.4 | 738.7 | 642.4 | 506.4 |
| 52.5° | 566.9 | 604.4 | 648.8 | 742.9 | 765.6 | 1055.0 | 1274.0 | 1363.2 | 1020.8 | 843.8 | 691.4 |
| 55° | 656.5 | 710.6 | 760.3 | 906.7 | 982.2 | 1370.7 | 1620.0 | 1644.5 | 1340.7 | 1025.9 | 872.5 |
| 57.5° | 823.2 | 914.4 | 946.4 | 1063.2 | 1173.6 | 1734.5 | 2065.0 | 2039.0 | 1670.5 | 1237.2 | 1074.7 |
| 60° | 974.0 | 1083.7 | 1074.5 | 1188.8 | 1330.8 | 2031.0 | 2347.6 | 2320.2 | 1972.3 | 1424.8 | 1230.1 |
| 62.5° | 1024.6 | 1135.2 | 1122.6 | 1247.1 | 1428.6 | 2190.0 | 2501.7 | 2454.9 | 2169.9 | 1545.1 | 1316.2 |
| 65° | 1048.2 | 1165.6 | 1159.4 | 1275.6 | 1428.6 | 2212.9 | 2595.5 | 2531.5 | 2225.1 | 1591.5 | 1357.7 |
| 67.5° | 1027.4 | 1140.7 | 1144.7 | 1247.7 | 1344.4 | 2047.1 | 2467.5 | 2380.5 | 2086.9 | 1480.2 | 1283.5 |
| 70° | 898.1 | 977.3 | 967.4 | 1060.8 | 1070.3 | 1638.7 | 2047.8 | 1953.1 | 1695.5 | 1234.3 | 1062.1 |
| 72.5° | 742.0 | 761.2 | 753.0 | 812.0 | 823.0 | 1200.3 | 1530.5 | 1476.9 | 1266.1 | 918.4 | 811.5 |
| 75° | 591.6 | 588.6 | 605.3 | 619.0 | 607.5 | 881.1 | 1212.0 | 1151.1 | 936.7 | 691.6 | 624.5 |
| 77.5° | 409.3 | 385.7 | 429.8 | 434.0 | 415.9 | 585.9 | 894.1 | 870.9 | 671.3 | 509.7 | 460.3 |
| 80° | 230.0 | 232.7 | 264.3 | 283.0 | 276.4 | 372.9 | 622.1 | 606.9 | 458.5 | 356.3 | 316.6 |
| 82.5° | 177.5 | 185.4 | 200.2 | 214.4 | 205.1 | 285.2 | 420.8 | 421.9 | 335.3 | 260.3 | 237.8 |
| 85° | 195.2 | 199.3 | 201.3 | 201.8 | 194.5 | 265.1 | 348.8 | 344.2 | 284.8 | 217.9 | 210.8 |
| 87.5° | 190.3 | 194.7 | 195.4 | 195.6 | 189.2 | 252.6 | 330.3 | 323.0 | 271.5 | 209.3 | 198.5 |
| 90° | 163.1 | 170.6 | 171.5 | 177.3 | 169.8 | 225.6 | 290.7 | 283.5 | 244.8 | 188.8 | 178.6 |
| 92.5° | 140.2 | 144.2 | 148.4 | 155.2 | 147.2 | 196.5 | 260.3 | 251.2 | 219.2 | 170.6 | 156.7 |
| 95° | 128.3 | 130.5 | 134.0 | 136.7 | 127.4 | 166.9 | 217.7 | 208.2 | 177.9 | 137.3 | 125.0 |
| 97.5° | 103.1 | 105.1 | 106.6 | 109.9 | 103.5 | 132.2 | 168.9 | 160.1 | 139.5 | 109.3 | 100.0 |
| 100° | 88.1 | 89.4 | 91.2 | 93.4 | 88.1 | 110.8 | 138.6 | 134.7 | 116.1 | 92.3 | 86.3 |
| 102.5° | 80.6 | 81.7 | 84.8 | 84.8 | 81.5 | 101.3 | 123.8 | 120.8 | 104.4 | 83.7 | 79.7 |
| 105° | 77.7 | 77.9 | 80.6 | 79.5 | 77.3 | 94.5 | 115.5 | 111.5 | 97.8 | 79.5 | 74.8 |
| 107.5° | 74.0 | 74.2 | 77.5 | 75.7 | 74.0 | 87.6 | 104.6 | 102.9 | 90.5 | 74.2 | 70.2 |
| 110° | 70.2 | 70.9 | 75.1 | 73.5 | 72.4 | 82.3 | 98.0 | 94.7 | 86.5 | 71.7 | 68.4 |

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REPORT NUMBER: P981486
CATALOG NUMBER: FFX-CLB-20-740-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112.5° | 67.3 | 67.8 | 71.7 | 70.6 | 69.8 | 78.8 | *91.0* | 91.0 | 84.6 | 71.7 | 67.3 |
| 115° | 64.9 | 65.8 | 69.1 | 66.9 | 65.3 | 74.2 | *83.9* | 84.3 | 79.0 | 68.4 | 64.0 |
| 117.5° | 60.7 | 62.7 | 64.5 | 65.3 | 63.6 | 71.1 | *79.7* | 79.3 | 76.4 | 66.0 | 62.9 |
| 120° | 69.1 | 67.6 | 68.9 | 70.4 | 67.6 | 73.5 | *80.8* | 80.8 | 77.9 | 64.9 | 62.3 |
| 122.5° | 72.2 | 70.0 | 71.3 | 69.8 | 69.5 | 77.3 | *86.3* | 87.0 | 81.0 | 66.9 | 60.3 |
| 125° | 64.0 | 63.1 | 61.6 | 61.2 | 62.9 | 70.2 | *78.4* | 81.2 | 74.8 | 64.0 | 56.3 |
| 127.5° | 54.7 | 53.6 | 51.7 | 52.8 | 56.1 | 63.4 | *67.6* | 69.1 | 66.4 | 59.4 | 53.6 |
| 130° | 50.6 | 50.3 | 51.9 | 53.9 | 56.5 | 62.7 | *64.0* | 66.2 | 66.2 | 57.8 | 54.5 |
| 132.5° | 46.1 | 46.4 | 51.2 | 58.1 | 60.0 | 61.4 | *58.5* | 62.7 | 64.7 | 58.9 | 55.2 |
| 135° | 45.5 | 45.7 | 48.3 | 53.9 | 54.1 | 55.0 | *55.2* | 60.5 | 61.8 | 56.3 | 52.1 |
| 137.5° | 49.7 | 49.7 | 47.7 | 48.8 | 51.2 | 57.8 | *60.0* | 64.2 | 63.1 | 53.2 | 47.0 |
| 140° | 54.7 | 53.6 | 47.5 | 47.7 | 51.9 | 60.0 | *62.9* | 65.6 | 64.2 | 52.1 | 44.8 |
| 142.5° | 45.3 | 45.7 | 46.8 | 51.0 | 55.9 | 74.4 | *72.0* | 78.6 | 75.9 | 55.2 | 43.7 |
| 145° | 70.6 | 70.9 | 69.5 | 71.3 | 74.4 | 98.9 | *91.4* | 102.0 | 105.1 | 72.2 | 51.9 |
| 147.5° | 77.3 | 78.1 | 75.7 | 74.2 | 83.0 | 90.5 | *82.1* | 91.0 | 96.9 | 75.7 | 55.6 |
| 150° | 60.3 | 60.0 | 58.5 | 60.7 | 66.7 | 66.2 | *61.8* | 64.9 | 67.3 | 57.8 | 47.7 |
| 152.5° | 42.8 | 42.2 | 41.3 | 41.5 | 48.6 | 46.8 | *45.5* | 48.1 | 48.1 | 44.4 | 38.2 |
| 155° | 35.5 | 35.5 | 35.1 | 36.2 | 40.2 | 37.1 | *36.0* | 35.5 | 35.1 | 34.0 | 31.6 |
| 157.5° | 30.0 | 30.7 | 30.0 | 31.3 | 34.0 | 31.1 | *30.5* | 29.8 | 30.0 | 30.0 | 29.4 |
| 160° | 24.9 | 24.9 | 24.5 | 26.7 | 27.6 | 25.4 | *24.3* | 23.8 | 23.8 | 25.2 | 25.2 |
| 162.5° | 21.0 | 21.0 | 21.2 | 22.1 | 22.7 | 21.2 | *20.5* | 20.5 | 21.2 | 23.2 | 23.2 |
| 165° | 18.1 | 18.1 | 18.3 | 19.0 | 19.4 | 18.5 | *18.1* | 18.3 | 20.1 | 21.9 | 21.9 |
| 167.5° | 16.6 | 16.6 | 16.6 | 16.8 | 17.0 | 16.6 | *16.6* | 17.4 | 19.0 | 20.1 | 20.1 |
| 170° | 15.7 | 15.7 | 15.5 | 15.7 | 15.7 | 15.7 | *16.6* | 17.4 | 18.1 | 18.1 | 18.1 |
| 172.5° | 15.9 | 15.9 | 15.7 | 15.9 | 15.9 | 15.7 | *16.8* | 17.9 | 17.4 | 17.2 | 17.2 |
| 175° | 16.3 | 16.3 | 16.3 | 16.6 | 16.6 | 16.1 | *15.9* | 16.3 | 16.8 | 16.8 | 16.6 |
| 177.5° | 16.3 | 16.3 | 16.1 | 16.3 | 16.1 | 15.7 | *15.5* | 15.2 | 15.2 | 15.0 | 15.0 |
| 180° | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | *15.2* | 15.2 | 15.2 | 15.2 | 15.2 |

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**CANDELA DISTRIBUTION (continued):**

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 |
| 2.5° | 108.0 | 93.2 | 82.1 | 90.7 | 109.7 | 119.2 | 109.7 | 83.4 | 58.7 | 51.4 |
| 5° | 64.7 | 62.9 | 56.7 | 55.4 | 57.8 | 55.6 | 61.8 | 58.5 | 46.4 | 46.8 |
| 7.5° | 48.3 | 58.5 | 56.5 | 40.4 | 37.8 | 35.3 | 37.3 | 42.6 | 43.9 | 41.1 |
| 10° | 56.1 | 50.6 | 44.2 | 41.1 | 44.8 | 48.3 | 45.9 | 40.0 | 34.4 | 32.9 |
| 12.5° | 61.8 | 61.4 | 62.0 | 55.6 | 45.7 | 42.2 | 40.8 | 43.9 | 53.4 | 55.6 |
| 15° | 66.4 | 61.4 | 56.7 | 55.4 | 48.8 | 45.3 | 43.5 | 42.6 | 40.8 | 39.5 |
| 17.5° | 71.1 | 62.7 | 57.6 | 52.5 | 49.2 | 45.9 | 42.2 | 40.2 | 40.0 | 40.2 |
| 20° | 74.2 | 66.4 | 60.5 | 54.7 | 50.6 | 46.1 | 42.4 | 40.6 | 40.6 | 40.6 |
| 22.5° | 77.9 | 70.4 | 64.0 | 56.7 | 51.9 | 47.0 | 43.9 | 42.2 | 41.9 | 41.9 |
| 25° | 84.1 | 75.7 | 68.2 | 60.3 | 55.0 | 50.6 | 46.4 | 44.2 | 43.5 | 43.3 |
| 27.5° | 91.2 | 81.9 | 72.9 | 64.7 | 59.2 | 54.3 | 48.8 | 45.5 | 44.6 | 44.4 |
| 30° | 100.2 | 89.6 | 78.1 | 69.5 | 62.7 | 58.1 | 51.4 | 47.5 | 45.7 | 45.5 |
| 32.5° | 115.0 | 101.1 | 86.1 | 76.6 | 68.4 | 62.3 | 55.0 | 50.1 | 47.2 | 46.6 |
| 35° | 143.5 | 126.5 | 104.0 | 90.3 | 77.3 | 67.6 | 58.1 | 51.7 | 48.8 | 48.3 |
| 37.5° | 175.3 | 149.5 | 127.6 | 111.7 | 95.8 | 79.5 | 62.9 | 54.1 | 50.6 | 49.9 |
| 40° | 189.0 | 164.5 | 141.3 | 116.3 | 112.8 | 100.0 | 77.3 | 60.0 | 53.0 | 51.9 |
| 42.5° | 219.0 | 184.1 | 152.8 | 102.9 | 111.0 | 110.4 | 95.4 | 73.5 | 59.6 | 57.0 |
| 45° | 257.9 | 209.5 | 170.0 | 109.9 | 111.9 | 108.0 | 97.8 | 85.0 | 72.4 | 69.5 |
| 47.5° | 321.2 | 234.2 | 175.5 | 123.6 | 125.8 | 116.3 | 102.4 | 89.6 | 80.6 | 79.5 |
| 50° | 458.7 | 306.9 | 195.8 | 149.7 | 156.7 | 134.9 | 117.7 | 106.6 | 95.8 | 93.8 |
| 52.5° | 623.7 | 363.6 | 216.8 | 186.8 | 212.2 | 180.8 | 154.8 | 134.4 | 133.8 | 131.1 |
| 55° | 797.4 | 385.5 | 244.6 | 227.6 | 267.1 | 240.0 | 214.6 | 196.0 | 205.5 | 206.4 |
| 57.5° | 992.5 | 408.9 | 284.8 | 281.0 | 333.8 | 290.5 | 269.1 | 274.2 | 341.5 | 367.8 |
| 60° | 1122.6 | 428.1 | 319.4 | 325.2 | 394.7 | 352.6 | 336.4 | 347.7 | 462.1 | 510.0 |
| 62.5° | 1180.4 | 418.3 | 336.4 | 346.4 | 421.0 | 390.3 | 387.7 | 393.6 | 490.5 | 535.3 |
| 65° | *1188.4* | *404.0* | *345.7* | *354.3* | *425.6* | *394.3* | *383.0* | *374.6* | *439.1* | *465.4* |
| 67.5° | 1090.8 | 373.5 | 338.4 | 347.5 | 404.7 | 367.1 | 339.1 | 320.1 | 357.4 | 360.1 |
| 70° | 887.7 | 333.6 | 313.7 | 317.0 | 345.7 | 307.3 | 280.8 | 264.5 | 273.1 | 269.6 |
| 72.5° | 688.3 | 294.1 | 279.5 | 271.8 | 280.4 | 247.5 | 216.1 | 207.7 | 215.9 | 212.2 |
| 75° | 523.0 | 262.7 | 246.6 | 220.5 | 234.7 | 190.5 | 155.6 | 148.1 | 151.7 | 146.6 |
| 77.5° | 384.6 | 211.7 | 192.9 | 163.1 | 182.6 | 138.2 | 105.1 | 97.4 | 98.7 | 93.8 |
| 80° | 280.6 | 156.5 | 141.1 | 117.0 | 131.6 | 98.2 | 75.9 | 74.6 | 74.4 | 71.3 |
| 82.5° | 216.8 | 124.3 | 112.8 | 100.7 | 103.1 | 86.8 | 72.0 | 69.8 | 69.8 | 65.1 |
| 85° | 201.1 | 120.3 | 108.6 | 100.0 | 100.7 | 84.1 | 68.4 | 67.1 | 67.8 | 62.9 |
| 87.5° | 187.9 | 117.7 | 108.2 | 97.8 | 92.7 | 76.2 | 61.6 | 63.1 | 63.6 | 59.4 |
| 90° | 161.2 | 104.6 | 96.0 | 86.1 | 80.1 | 64.7 | 55.2 | 58.1 | 58.5 | 54.7 |
| 92.5° | 141.3 | 89.9 | 82.6 | 74.8 | 72.2 | 60.7 | 53.0 | 55.2 | 55.2 | 51.9 |
| 95° | 112.6 | 73.5 | 70.2 | 66.4 | 65.8 | 56.7 | 49.5 | 50.6 | 50.1 | 47.2 |
| 97.5° | 91.6 | 63.8 | 60.9 | 57.4 | 55.2 | 48.6 | 43.5 | 44.6 | 44.8 | 42.8 |
| 100° | 80.6 | 58.9 | 55.0 | 51.0 | 48.8 | 43.7 | 39.7 | 41.7 | 43.0 | 41.3 |
| 102.5° | 75.3 | 56.3 | 51.9 | 47.7 | 45.9 | 41.3 | 37.5 | 39.3 | 41.1 | 39.5 |
| 105° | 71.5 | 54.3 | 49.7 | 45.9 | 43.7 | 39.1 | 35.3 | 35.8 | 38.0 | 37.1 |
| 107.5° | 66.7 | 54.3 | 48.3 | 44.6 | 41.9 | 37.8 | 33.3 | 32.9 | 34.2 | 34.0 |
| 110° | 64.9 | 54.3 | 47.5 | 43.7 | 40.8 | 37.1 | 33.1 | 31.3 | 32.0 | 32.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P981486
CATALOG NUMBER: FFX-CLB-20-740-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|
| 112.5° | 63.4 | 53.9 | 46.6 | 42.2 | 39.7 | 36.6 | 32.7 | 30.0 | 30.7 | 31.1 |
| 115° | 59.8 | 49.7 | 43.9 | 39.3 | 36.9 | 33.6 | 30.9 | 28.9 | 29.1 | 29.6 |
| 117.5° | 57.8 | 45.9 | 42.6 | 38.4 | 36.6 | 34.7 | 32.2 | 28.5 | 28.5 | 28.9 |
| 120° | 57.8 | 45.3 | 43.7 | 42.2 | 41.3 | 38.0 | 34.0 | 28.5 | 27.8 | 27.8 |
| 122.5° | 57.0 | 50.3 | 47.7 | 44.2 | 41.7 | 37.3 | 32.5 | 27.8 | 27.4 | 27.4 |
| 125° | 52.3 | 48.1 | 43.9 | 39.7 | 36.9 | 33.3 | 30.5 | 28.0 | 27.2 | 27.2 |
| 127.5° | 49.9 | 43.3 | 39.3 | 36.0 | 34.0 | 32.2 | 30.5 | 28.0 | 26.9 | 26.7 |
| 130° | 50.6 | 43.7 | 38.6 | 36.0 | 34.4 | 32.7 | 30.7 | 27.6 | 25.8 | 25.6 |
| 132.5° | 51.0 | 42.2 | 37.3 | 35.1 | 34.0 | 32.7 | 30.0 | 26.0 | 24.1 | 24.1 |
| 135° | 46.1 | 38.0 | 35.8 | 34.2 | 33.6 | 32.5 | 28.5 | 24.7 | 23.2 | 23.0 |
| 137.5° | 41.9 | 36.9 | 35.3 | 33.8 | 32.7 | 31.1 | 28.0 | 24.3 | 22.3 | 22.1 |
| 140° | 40.2 | 36.0 | 33.8 | 30.9 | 29.6 | 26.5 | 24.3 | 22.1 | 21.4 | 21.2 |
| 142.5° | 38.2 | 33.8 | 31.1 | 28.7 | 28.0 | 26.9 | 25.6 | 22.1 | 19.9 | 19.9 |
| 145° | 45.7 | 40.6 | 37.5 | 35.1 | 32.0 | 29.8 | 25.6 | 21.2 | 18.3 | 17.9 |
| 147.5° | 47.9 | 43.3 | 40.2 | 36.9 | 31.1 | 26.3 | 21.6 | 18.5 | 17.4 | 17.0 |
| 150° | 41.9 | 38.0 | 34.7 | 31.1 | 26.0 | 22.7 | 19.6 | 17.7 | 17.2 | 17.2 |
| 152.5° | 33.3 | 31.1 | 27.6 | 25.2 | 21.9 | 19.9 | 18.1 | 17.0 | 16.6 | 16.6 |
| 155° | 27.6 | 25.8 | 23.8 | 21.9 | 20.1 | 18.8 | 17.7 | 16.8 | 16.3 | 16.3 |
| 157.5° | 26.7 | 24.1 | 22.3 | 20.5 | 19.4 | 18.1 | 17.2 | 16.3 | 16.1 | 15.9 |
| 160° | 24.3 | 21.2 | 19.6 | 18.5 | 18.3 | 17.9 | 17.2 | 16.6 | 16.3 | 16.1 |
| 162.5° | 22.5 | 19.4 | 18.3 | 17.7 | 18.3 | 18.8 | 18.3 | 17.4 | 16.8 | 16.6 |
| 165° | 21.2 | 18.3 | 17.4 | 17.4 | 18.8 | 19.4 | 18.3 | 17.4 | 17.4 | 17.2 |
| 167.5° | 19.6 | 18.8 | 17.7 | 17.4 | 18.5 | 19.9 | 20.1 | 18.5 | 17.9 | 17.7 |
| 170° | 18.3 | 18.5 | 18.5 | 17.9 | 18.1 | 19.2 | 19.6 | 19.2 | 18.3 | 18.1 |
| 172.5° | 17.4 | 17.9 | 18.8 | 18.3 | 18.3 | 18.8 | 19.2 | 18.8 | 18.1 | 17.9 |
| 175° | 16.6 | 16.8 | 16.3 | 16.6 | 17.2 | 17.9 | 17.7 | 17.4 | 17.2 | 17.2 |
| 177.5° | 15.0 | 15.0 | 15.2 | 15.2 | 15.5 | 16.1 | 16.3 | 16.3 | 16.8 | 16.8 |
| 180° | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2501-332-1

Test Date: 03/20/2025

Luminaire Tested: FFX-CLB-100-740-U-FR-T5

Data in this report applies to families of products including FFX-CLB-100-740-U-FR-T5

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

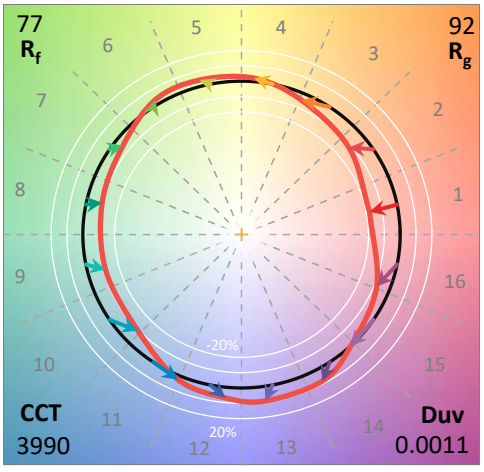
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2501-332-1 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 03/31/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | Streetworks |
| Catalog Number: | **FFX-CLB-100-740-U-FR-T5** |
| Description: | FAIRFAX ACORN W/ FAIRFAX REFRACTOR 100W T5 |

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3990 | CRI (Ra): | 73.9 | | |
| CIE u': | 0.2247 | R1: | 69.6 | R9: | -36.4 |
| CIE v': | 0.5031 | R2: | 83.0 | R10: | 60.9 |
| Duv: | 0.0011 | R3: | 93.1 | R11: | 66.8 |
| CIE x: | 0.3816 | R4: | 70.6 | R12: | 52.5 |
| CIE y: | 0.3798 | R5: | 70.6 | R13: | 72.5 |
| CIE z: | 0.2386 | R6: | 76.4 | R14: | 96.4 |
| Peak Wavelength (nm): | 450 | R7: | 79.8 | R15: | 61.3 |
| Dominant Wavelength (nm): | 578 | R8: | 48.1 | | |
| Purity: | 28.50862 | | | | |

| | |
|---|---|
| Rf: | 77.5 |
| Rg: | 91.9 |




## Test Conditions

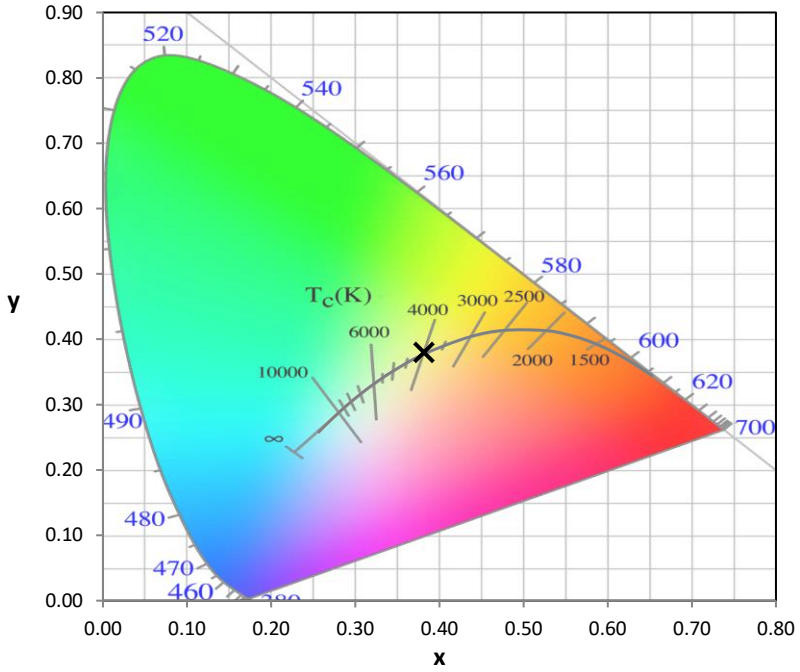
| | |
|---|---|
| Stabilization Time: | 70M |
| Operation Time: | 2H 10M |
| Sphere Temperature (°C): | 25.0 |

REPORT NUMBER: SP1-2501-332-1

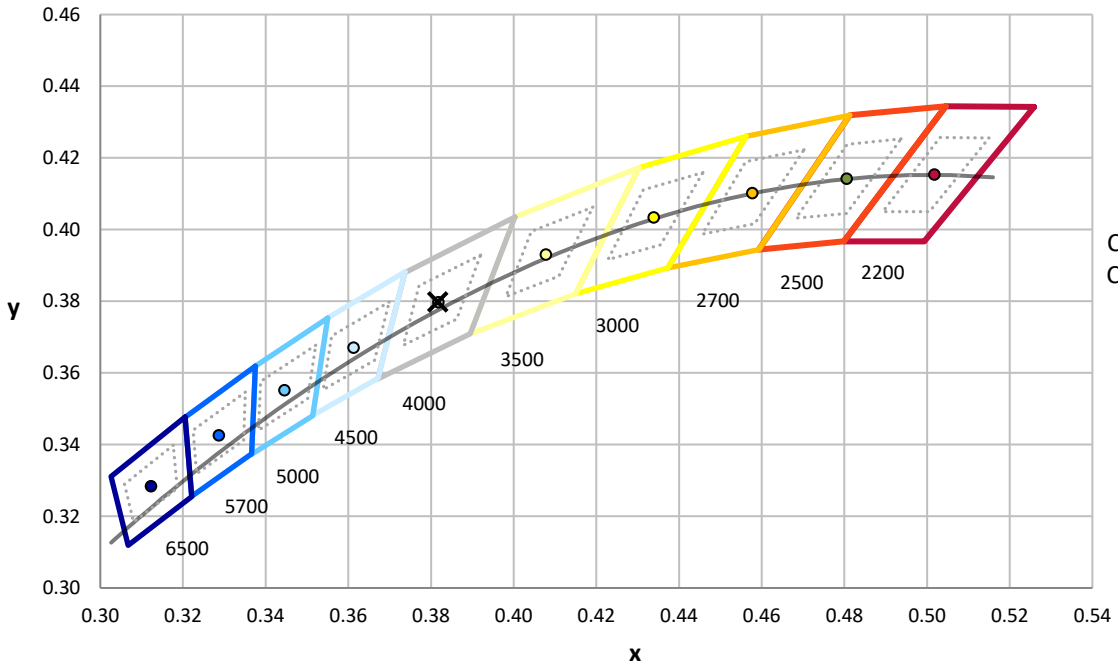
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 12/16/2024 | 6/16/2025 |
| Power Meter | INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | IN0063 | 10/22/2024 | 10/22/2025 |
| DC Power Source | IN0208 | 10/22/2024 | 10/22/2025 |
| Sphere Thermometer | IN0085 | 10/22/2024 | 10/22/2025 |
| Room Thermometer | IN0046 | 10/22/2024 | 10/22/2025 |

REPORT NUMBER: SP1-2501-332-1

## CIE 1931 Chromaticity Diagram




## CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

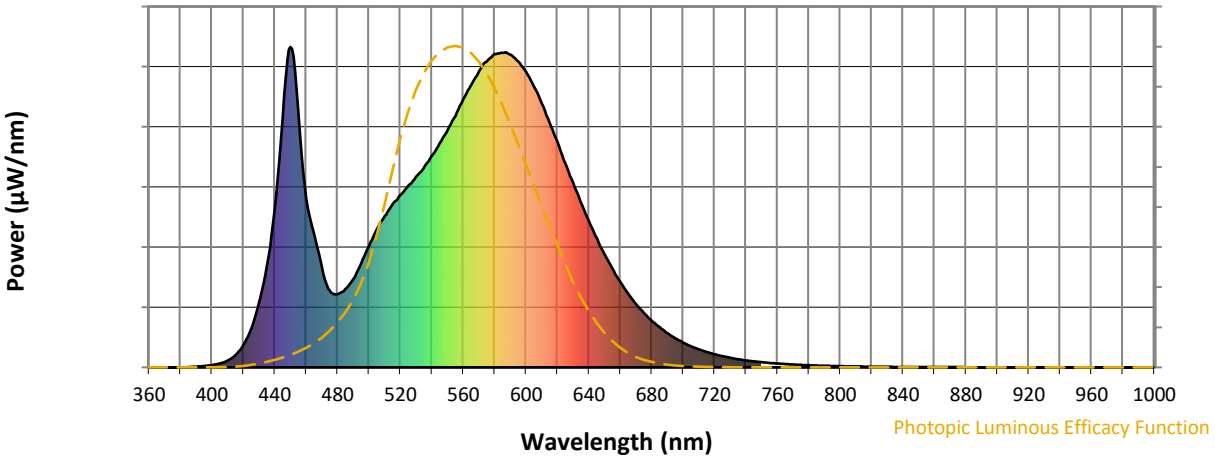



CCT = 3990K
CIE x = 0.3816
CIE y = 0.3798
Duv = 0.0011

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2501-332-1

## Photopic Flux vs. Wavelength

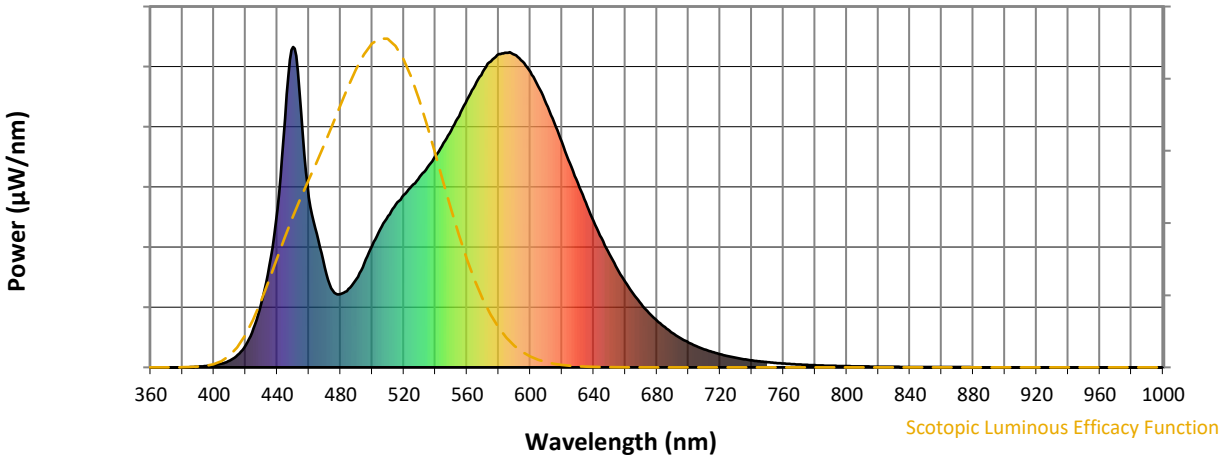



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 275 | NR | 620 | 703 | NR | 750 | 16 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 324 | NR | 625 | 637 | NR | 755 | 14 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 380 | NR | 630 | 576 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 431 | NR | 635 | 514 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 472 | NR | 640 | 456 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 508 | NR | 645 | 403 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 538 | NR | 650 | 353 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 567 | NR | 655 | 307 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 595 | NR | 660 | 266 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 12 | NR | 535 | 624 | NR | 665 | 230 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 21 | NR | 540 | 660 | NR | 670 | 198 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 39 | NR | 545 | 700 | NR | 675 | 170 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 739 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 121 | NR | 555 | 784 | NR | 685 | 125 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 202 | NR | 560 | 836 | NR | 690 | 107 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 319 | NR | 565 | 881 | NR | 695 | 91 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 492 | NR | 570 | 923 | NR | 700 | 77 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 777 | NR | 575 | 955 | NR | 705 | 66 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 1000 | NR | 580 | 978 | NR | 710 | 56 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 797 | NR | 585 | 982 | NR | 715 | 48 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 530 | NR | 590 | 976 | NR | 720 | 41 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 418 | NR | 595 | 955 | NR | 725 | 35 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 311 | NR | 600 | 922 | NR | 730 | 30 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 239 | NR | 605 | 877 | NR | 735 | 25 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 229 | NR | 610 | 823 | NR | 740 | 22 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 245 | NR | 615 | 764 | NR | 745 | 19 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2501-332-1

## Scotopic Flux vs. Wavelength

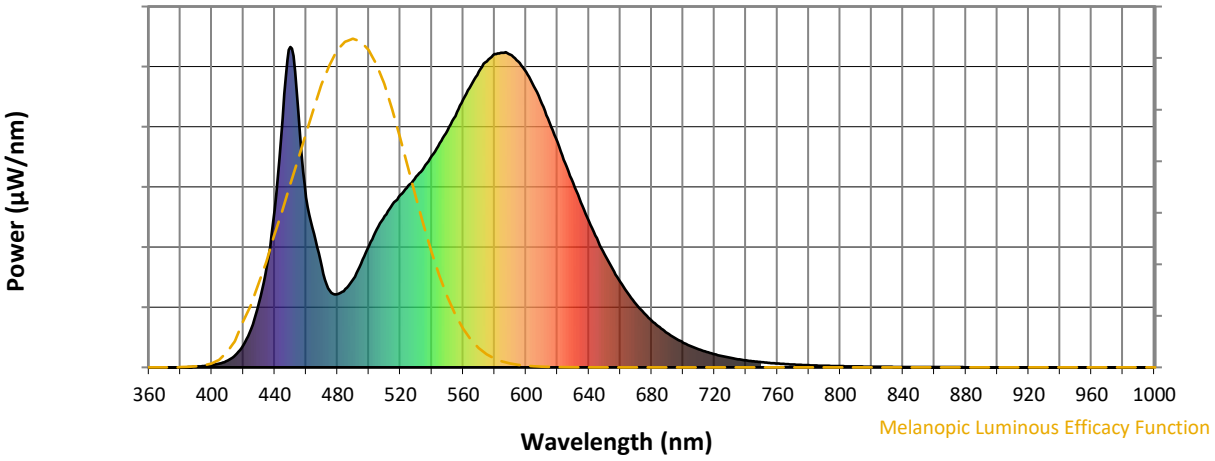



**Scotopic Lumens: NR** **S/P: 1.59**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 275 | NR | 620 | 703 | NR | 750 | 16 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 324 | NR | 625 | 637 | NR | 755 | 14 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 380 | NR | 630 | 576 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 431 | NR | 635 | 514 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 472 | NR | 640 | 456 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 508 | NR | 645 | 403 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 538 | NR | 650 | 353 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 567 | NR | 655 | 307 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 595 | NR | 660 | 266 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 12 | NR | 535 | 624 | NR | 665 | 230 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 21 | NR | 540 | 660 | NR | 670 | 198 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 39 | NR | 545 | 700 | NR | 675 | 170 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 739 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 121 | NR | 555 | 784 | NR | 685 | 125 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 202 | NR | 560 | 836 | NR | 690 | 107 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 319 | NR | 565 | 881 | NR | 695 | 91 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 492 | NR | 570 | 923 | NR | 700 | 77 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 777 | NR | 575 | 955 | NR | 705 | 66 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 1000 | NR | 580 | 978 | NR | 710 | 56 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 797 | NR | 585 | 982 | NR | 715 | 48 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 530 | NR | 590 | 976 | NR | 720 | 41 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 418 | NR | 595 | 955 | NR | 725 | 35 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 311 | NR | 600 | 922 | NR | 730 | 30 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 239 | NR | 605 | 877 | NR | 735 | 25 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 229 | NR | 610 | 823 | NR | 740 | 22 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 245 | NR | 615 | 764 | NR | 745 | 19 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2501-332-1

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.21**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 275 | NR | 620 | 703 | NR | 750 | 16 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 324 | NR | 625 | 637 | NR | 755 | 14 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 380 | NR | 630 | 576 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 431 | NR | 635 | 514 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 472 | NR | 640 | 456 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 508 | NR | 645 | 403 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 538 | NR | 650 | 353 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 567 | NR | 655 | 307 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 595 | NR | 660 | 266 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 12 | NR | 535 | 624 | NR | 665 | 230 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 21 | NR | 540 | 660 | NR | 670 | 198 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 39 | NR | 545 | 700 | NR | 675 | 170 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 739 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 121 | NR | 555 | 784 | NR | 685 | 125 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 202 | NR | 560 | 836 | NR | 690 | 107 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 319 | NR | 565 | 881 | NR | 695 | 91 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 492 | NR | 570 | 923 | NR | 700 | 77 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 777 | NR | 575 | 955 | NR | 705 | 66 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 1000 | NR | 580 | 978 | NR | 710 | 56 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 797 | NR | 585 | 982 | NR | 715 | 48 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 530 | NR | 590 | 976 | NR | 720 | 41 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 418 | NR | 595 | 955 | NR | 725 | 35 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 311 | NR | 600 | 922 | NR | 730 | 30 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 239 | NR | 605 | 877 | NR | 735 | 25 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 229 | NR | 610 | 823 | NR | 740 | 22 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 245 | NR | 615 | 764 | NR | 745 | 19 | NR | 875 | 1 | NR | | | |

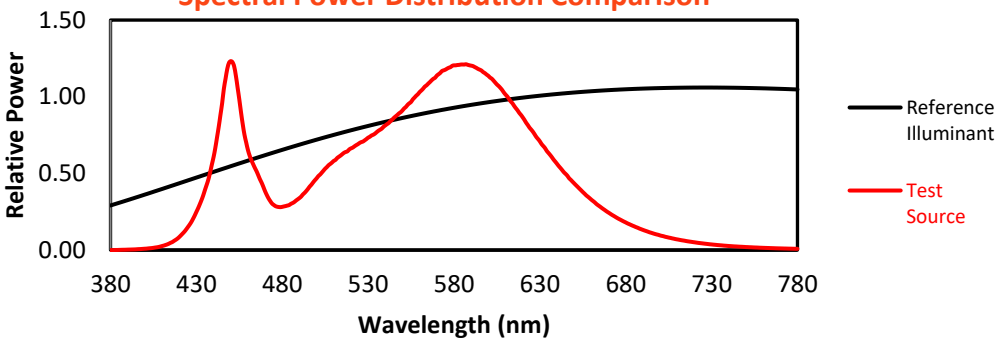
REPORT NUMBER: SP1-2501-332-1

# TM-30-18

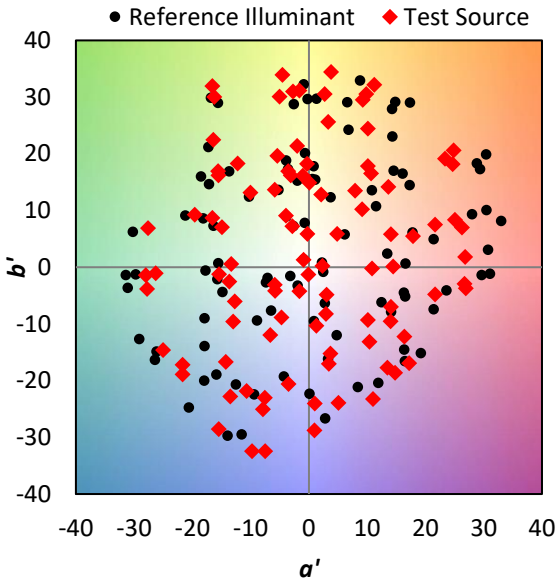
## Summary

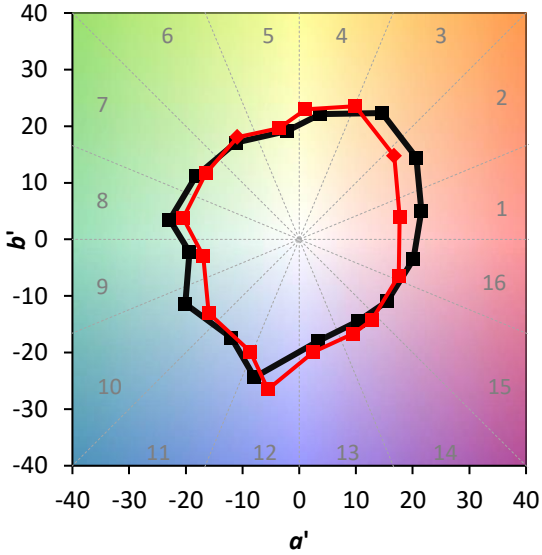
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$R_g$ = 91.9
CIE $R_a$ = 73.9
$R_9$ = -36.4

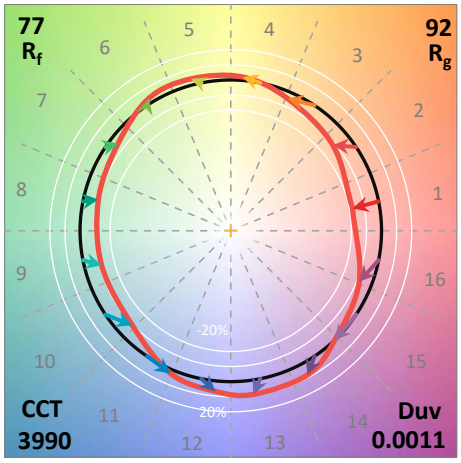
## Spectral Power Distribution Comparison

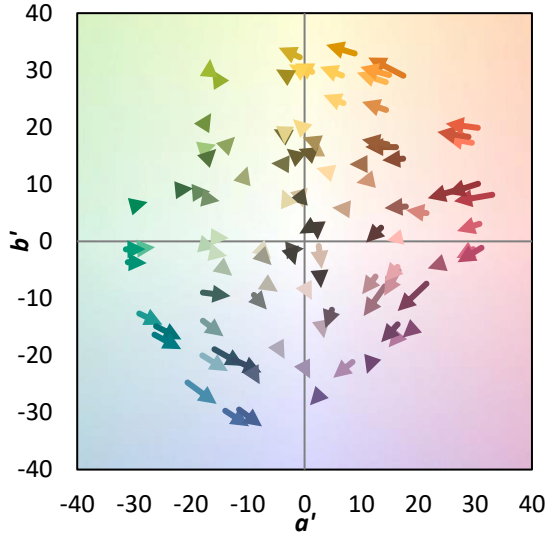



## Color Vector Graphics



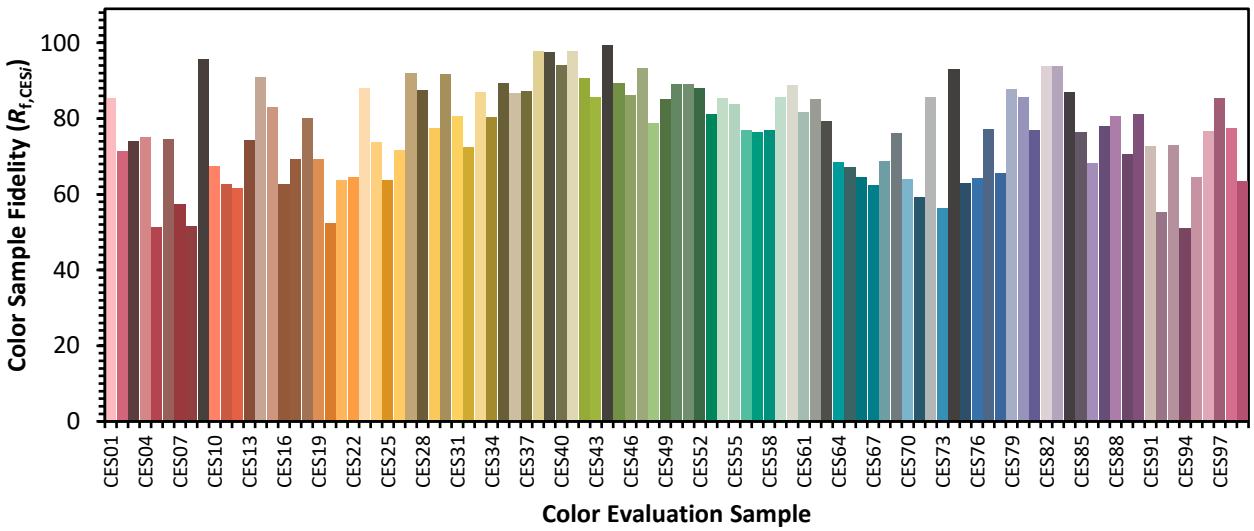



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**Individual Sample Fidelity Index ($R_{f,i}$)**

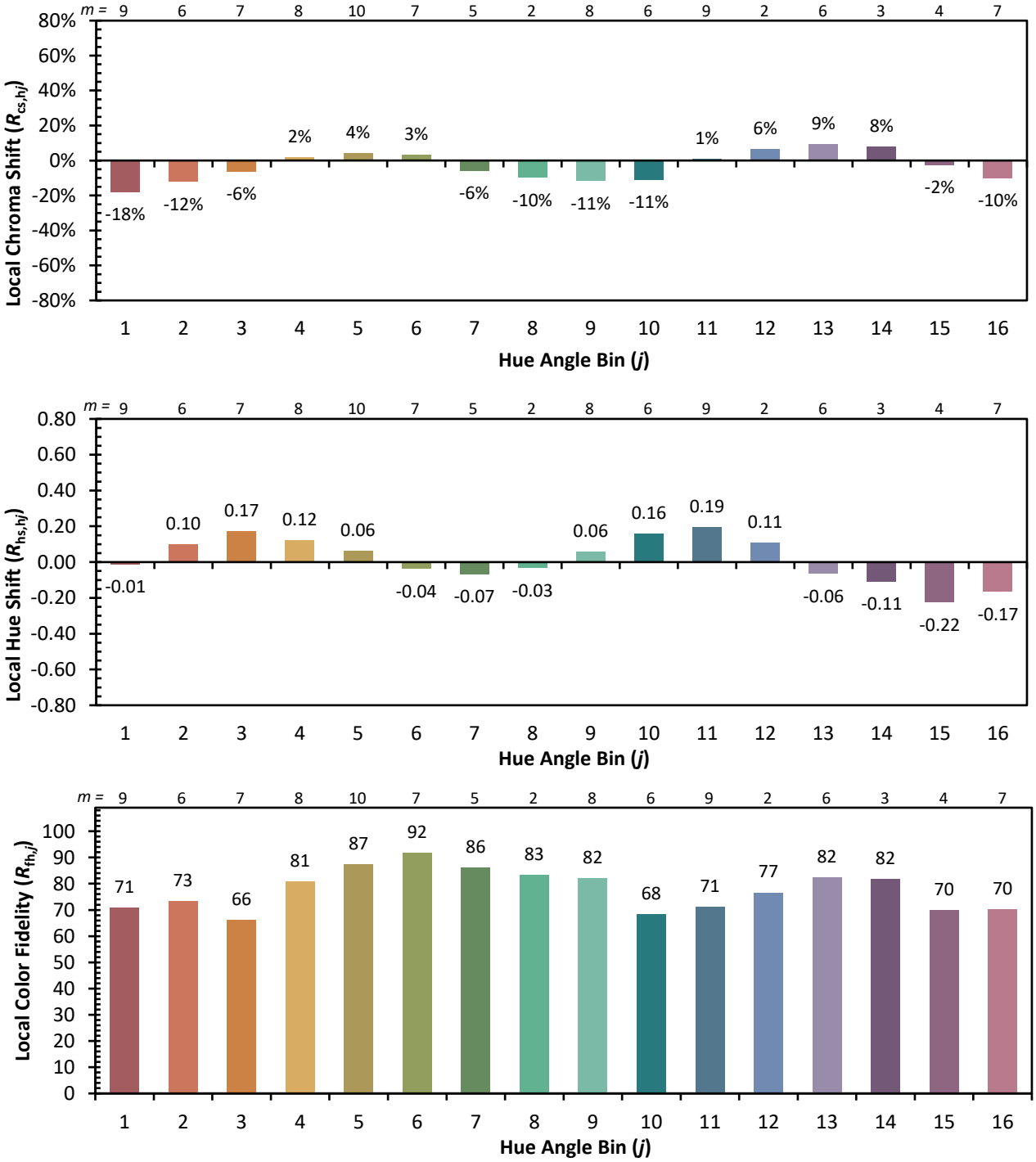
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 72 | CES51 = 89 | CES76 = 64 |
| CES02 = 61 | CES27 = 92 | CES52 = 88 | CES77 = 77 |
| CES03 = 30 | CES28 = 88 | CES53 = 81 | CES78 = 65 |
| CES04 = 70 | CES29 = 78 | CES54 = 85 | CES79 = 88 |
| CES05 = 47 | CES30 = 92 | CES55 = 84 | CES80 = 86 |
| CES06 = 50 | CES31 = 81 | CES56 = 77 | CES81 = 77 |
| CES07 = 40 | CES32 = 72 | CES57 = 76 | CES82 = 94 |
| CES08 = 39 | CES33 = 87 | CES58 = 77 | CES83 = 94 |
| CES09 = 29 | CES34 = 80 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 89 | CES60 = 89 | CES85 = 76 |
| CES11 = 57 | CES36 = 87 | CES61 = 82 | CES86 = 68 |
| CES12 = 63 | CES37 = 87 | CES62 = 85 | CES87 = 78 |
| CES13 = 42 | CES38 = 98 | CES63 = 79 | CES88 = 81 |
| CES14 = 74 | CES39 = 98 | CES64 = 68 | CES89 = 71 |
| CES15 = 71 | CES40 = 94 | CES65 = 67 | CES90 = 81 |
| CES16 = 46 | CES41 = 98 | CES66 = 65 | CES91 = 73 |
| CES17 = 49 | CES42 = 91 | CES67 = 62 | CES92 = 55 |
| CES18 = 56 | CES43 = 86 | CES68 = 69 | CES93 = 73 |
| CES19 = 72 | CES44 = 99 | CES69 = 76 | CES94 = 51 |
| CES20 = 65 | CES45 = 89 | CES70 = 64 | CES95 = 65 |
| CES21 = 86 | CES46 = 86 | CES71 = 59 | CES96 = 77 |
| CES22 = 78 | CES47 = 93 | CES72 = 86 | CES97 = 85 |
| CES23 = 92 | CES48 = 79 | CES73 = 56 | CES98 = 77 |
| CES24 = 91 | CES49 = 85 | CES74 = 93 | CES99 = 63 |
| CES25 = 72 | CES50 = 89 | CES75 = 63 | |



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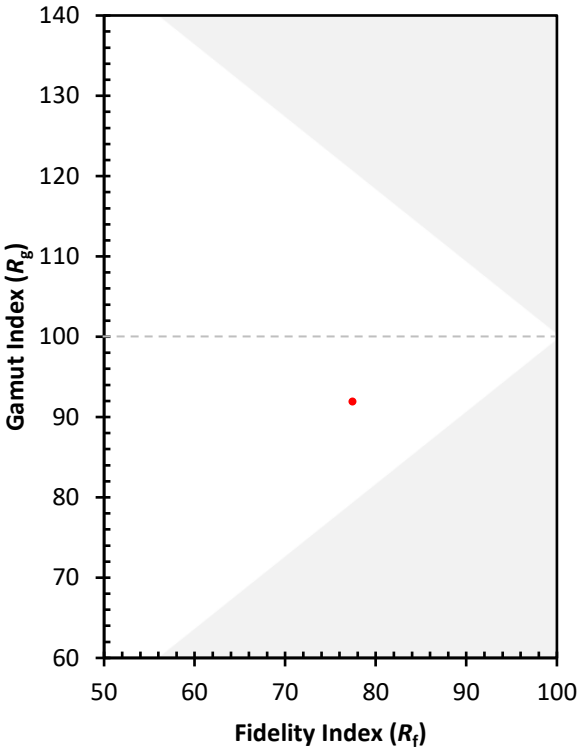
## Color Rendition by Hue-Angle Bin

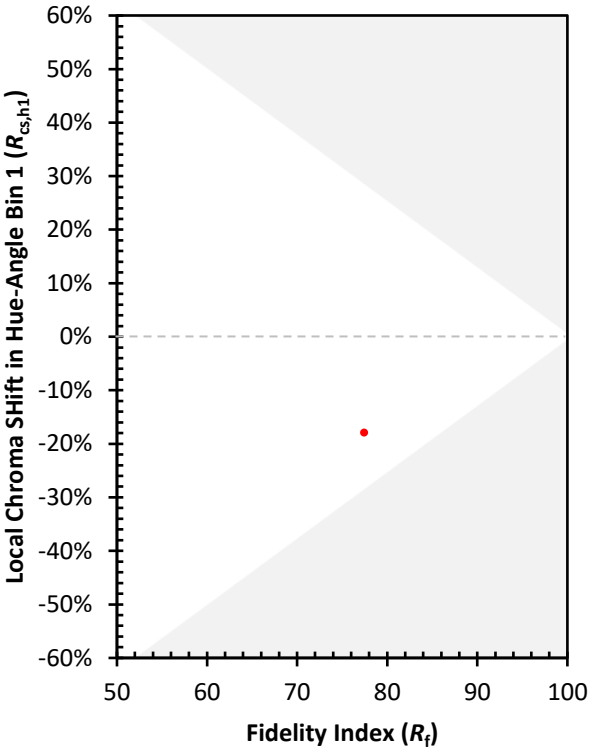


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## Measure Comparisons




(END OF REPORT)