

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



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: IRiS

Report Number: P1248319

Luminaire Tested: P3A05R109027DE010 E3D1LI

Issue Date: 1/30/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1248319  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2501-338-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/30/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A05R109027DE010 E3D1LI  
Description: 3in Adjustable LED luminaire with, R10 optic, 2700K CCT AND, 90CRI , E3D1LI TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

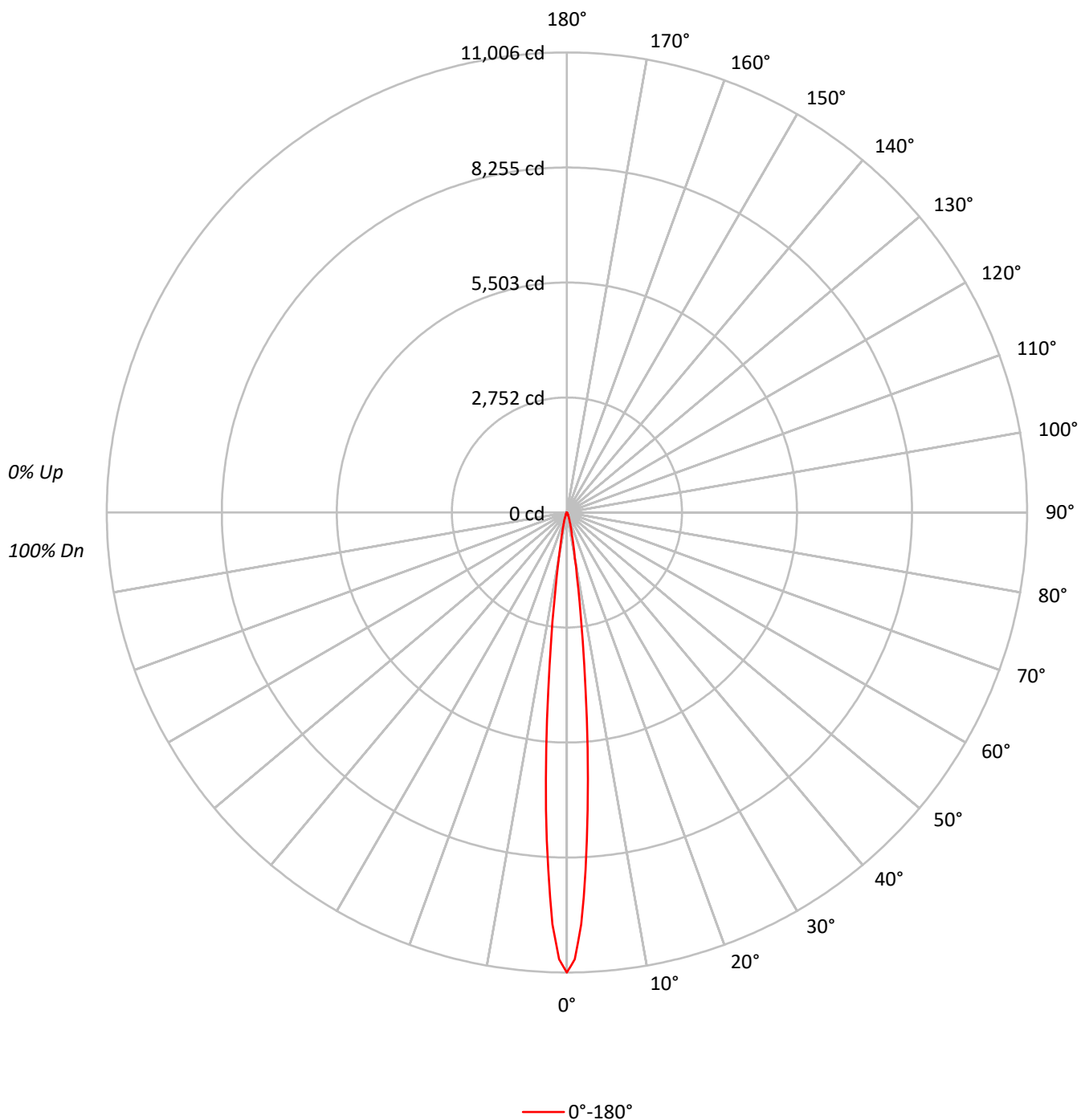
Lumens per Lamp: N/A  
Luminaire Lumens: 533.0 lumens  
Efficiency: N/A  
Efficacy: 67.5 lumens/watt  
Spacing Criteria (0/90/45): 0.18 / 0.18 / 0.18  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 7.9  
Input Voltage (V): NR  
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: P1248319

CATALOG NUMBER: P3A05R109027DE010 E3D1LI

### Luminous Intensity Polar Plot



TEST NUMBER: P1248319

CATALOG NUMBER: P3A05R109027DE010 E3D1LI

**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 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 116 | 114 | 113 | 111 | 114 | 112 | 111 | 110 | 108 | 107 | 106 |  | 105 | 104 | 103 |  | 101 |
| 2   | 113 | 110 | 108 | 106 | 111 | 109 | 107 | 105 | 106 | 104 | 103 |  | 103 | 102 | 101 |  | 100 |
| 3   | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 101 | 104 | 102 | 100 |  | 101 | 100 | 98  |  | 99  |
| 4   | 109 | 105 | 102 | 99  | 107 | 104 | 101 | 99  | 102 | 99  | 98  |  | 100 | 98  | 97  |  | 98  |
| 5   | 107 | 102 | 99  | 97  | 105 | 101 | 99  | 97  | 100 | 98  | 96  |  | 99  | 97  | 95  |  | 97  |
| 6   | 105 | 100 | 97  | 95  | 104 | 100 | 97  | 95  | 98  | 96  | 94  |  | 97  | 95  | 94  |  | 96  |
| 7   | 103 | 99  | 96  | 93  | 102 | 98  | 95  | 93  | 97  | 95  | 93  |  | 96  | 94  | 92  |  | 95  |
| 8   | 102 | 97  | 94  | 92  | 101 | 97  | 94  | 92  | 96  | 93  | 92  |  | 95  | 93  | 91  |  | 94  |
| 9   | 100 | 96  | 93  | 91  | 100 | 95  | 93  | 91  | 95  | 92  | 90  |  | 94  | 92  | 90  |  | 93  |
| 10  | 99  | 94  | 92  | 90  | 98  | 94  | 91  | 90  | 94  | 91  | 89  |  | 93  | 91  | 89  |  | 92  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 2413315 |
| 5°  | 1246728 |
| 10° | 245019  |
| 15° | 77140   |
| 20° | 33696   |
| 25° | 14904   |
| 30° | 8027    |
| 35° | 4230    |
| 40° | 1517    |
| 45° | 558     |
| 50° | 0       |
| 55° | 0       |
| 60° | 0       |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47.5°

Luminance: 584 cd/sqm

TEST NUMBER: P1248319

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 381.0  | 71.5      |
| 10°-20°   | 108.3  | 20.3      |
| 20°-30°   | 31.6   | 5.9       |
| 30°-40°   | 10.3   | 1.9       |
| 40°-50°   | 1.8    | 0.3       |
| 50°-60°   | 0.0    | 0.0       |
| 60°-70°   | 0.0    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.0    | 0.0       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 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       |
| <hr/>     |        |           |
| 0°-30°    | 520.9  | 97.7      |
| 0°-40°    | 531.2  | 99.7      |
| 0°-60°    | 533.0  | 100.0     |
| 0°-90°    | 533.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 533.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 11006 |      |
| 5°  | 5664  | 381  |
| 15° | 340   | 108  |
| 25° | 62    | 32   |
| 35° | 16    | 10   |
| 45° | 2     | 2    |
| 55° | 0     | 0    |
| 65° | 0     | 0    |
| 75° | 0     | 0    |
| 85° | 0     | 0    |
| 90° | 0     |      |

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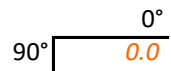
**CANDELA DISTRIBUTION (FULL):**

| 0°    |         |
|-------|---------|
| 0°    | 11005.6 |
| 1°    | 10688.7 |
| 2°    | 9859.5  |
| 3°    | 8558.4  |
| 4°    | 7135.8  |
| 5°    | 5663.9  |
| 6°    | 4271.3  |
| 7°    | 3093.4  |
| 8°    | 2176.1  |
| 9°    | 1530.0  |
| 10°   | 1100.4  |
| 11°   | 815.2   |
| 12°   | 626.8   |
| 13°   | 503.5   |
| 14°   | 410.2   |
| 15°   | 339.8   |
| 17.5° | 225.4   |
| 20°   | 144.4   |
| 22.5° | 91.6    |
| 25°   | 61.6    |
| 27.5° | 44.0    |
| 30°   | 31.7    |
| 32.5° | 22.9    |
| 35°   | 15.8    |
| 37.5° | 10.6    |
| 40°   | 5.3     |
| 42.5° | 3.5     |
| 45°   | 1.8     |
| 47.5° | 1.8     |
| 50°   | 0.0     |
| 52.5° | 0.0     |
| 55°   | 0.0     |
| 57.5° | 0.0     |
| 60°   | 0.0     |
| 62.5° | 0.0     |
| 65°   | 0.0     |
| 67.5° | 0.0     |
| 70°   | 0.0     |
| 72.5° | 0.0     |
| 75°   | 0.0     |
| 77.5° | 0.0     |
| 80°   | 0.0     |
| 82.5° | 0.0     |
| 85°   | 0.0     |
| 87.5° | 0.0     |



TEST NUMBER: P1248319  
CATALOG NUMBER: P3A05R109027DE010 E3D1LI

CANDELA DISTRIBUTION (continued):



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

Report Prepared for

Cooper Lighting Solutions

IRiS

Report Number: SP1-2504-409-27

Test Date: 05/16/2025

Luminaire Tested: LD3A13R159027D010 E3D1H

Data in this report applies to families of products including LD3A

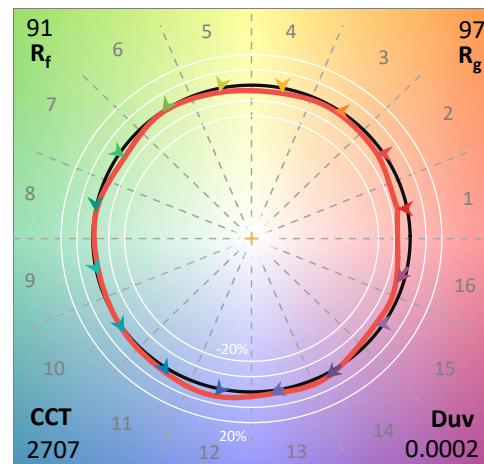
### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2504-409-27  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 01/06/2026  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: IRiS  
 Catalog Number: **LD3A13R159027D010 E3D1H**  
 Description: 3in Adjustable LED luminaire with, R15 optic, 2700K CCT AND, 90CRI LEDS, E3D1H TRIM

### Spectral Parameters

CCT (K): 2707  
 CIE  $u'$ : 0.2622  
 CIE  $v'$ : 0.5275  
 Duv: 0.0002  
 CIE x: 0.4597  
 CIE y: 0.4111  
 CIE z: 0.1292  
 Peak Wavelength (nm): 618  
 Dominant Wavelength (nm): 584  
 Purity: 61.37764  
 R<sub>f</sub>: 91.2  
 R<sub>g</sub>: 97.1

CRI (Ra): 92.2  
 R1: 93.3  
 R2: 98.1  
 R3: 97.1  
 R4: 93.2  
 R5: 93.7  
 R6: 97.0  
 R7: 88.8  
 R8: 76.6  
 R9: 50.2  
 R10: 95.3  
 R11: 96.2  
 R12: 85.7  
 R13: 94.9  
 R14: 99.3  
 R15: 87.0



### Test Conditions

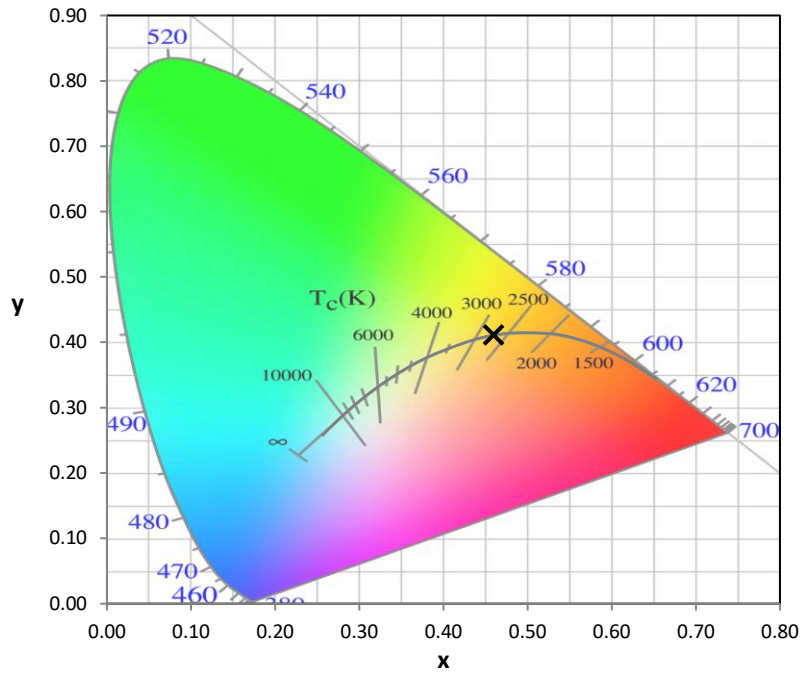
Stabilization Time: 48M  
 Operation Time: 1H 48M  
 Sphere Temperature (°C): 25.0

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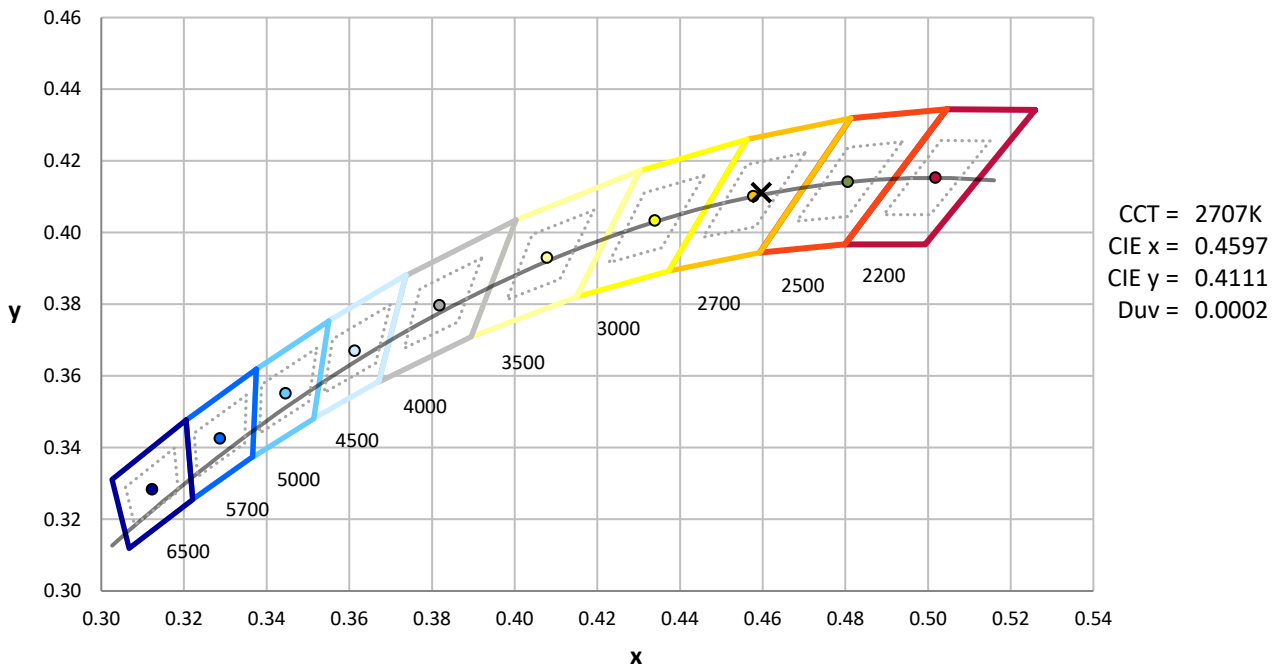
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | 76INCH SPHERE IN0058  | 12/16/2024       | 6/16/2025            |
| Power Meter                    | XITRON INXT2011004    | 1/21/2025        | 1/21/2026            |
| AC Power Source                | CHROMA 61603 IN0063   | 10/22/2024       | 10/22/2025           |
| DC Power Source                | AGILENT E3634A IN0208 | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | ONSET IN0085          | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | ONSET IN0046          | 10/22/2024       | 10/22/2025           |

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**CIE 1931 Chromaticity Diagram**



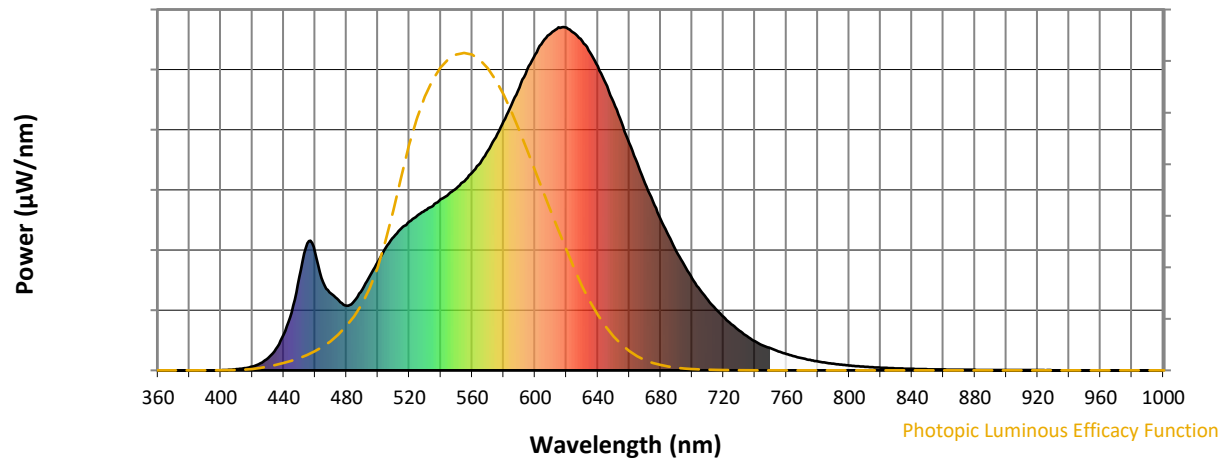
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 2700K 4-step quadrangle

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### Photopic Flux vs. Wavelength

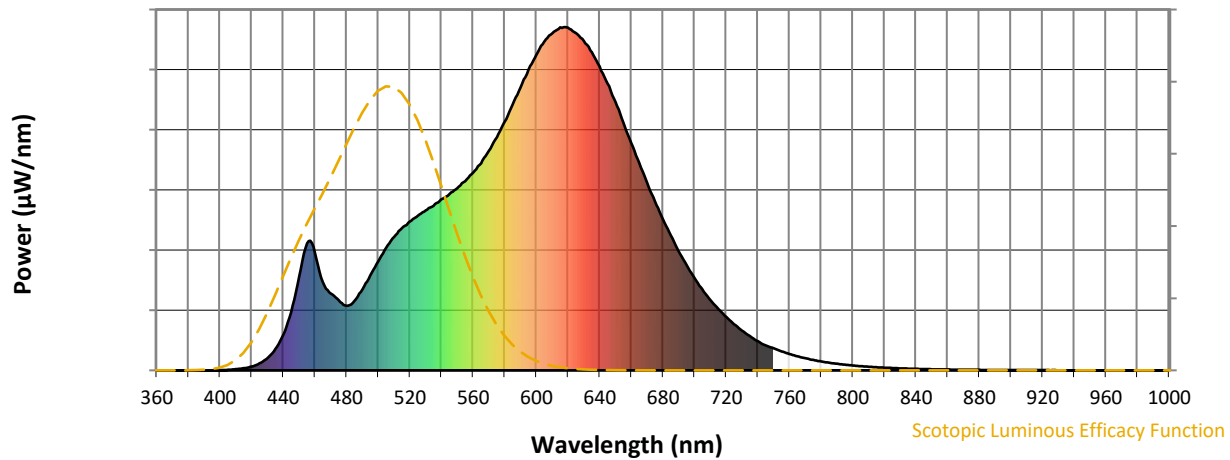


### Photopic Lumens: NR

| λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 236                      | NR            | 620    | 998                      | NR            | 750    | 64                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 276                      | NR            | 625    | 983                      | NR            | 755    | 55                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 317                      | NR            | 630    | 960                      | NR            | 760    | 48                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 357                      | NR            | 635    | 927                      | NR            | 765    | 41                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 389                      | NR            | 640    | 885                      | NR            | 770    | 35                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 414                      | NR            | 645    | 836                      | NR            | 775    | 30                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 434                      | NR            | 650    | 781                      | NR            | 780    | 26                       | NR            | 910    | 1                        | NR            |
| 395    | 0                        | NR            | 525    | 450                      | NR            | 655    | 723                      | NR            | 785    | 22                       | NR            | 915    | 1                        | NR            |
| 400    | 1                        | NR            | 530    | 466                      | NR            | 660    | 662                      | NR            | 790    | 19                       | NR            | 920    | 1                        | NR            |
| 405    | 2                        | NR            | 535    | 480                      | NR            | 665    | 604                      | NR            | 795    | 16                       | NR            | 925    | 0                        | NR            |
| 410    | 3                        | NR            | 540    | 498                      | NR            | 670    | 546                      | NR            | 800    | 14                       | NR            | 930    | 0                        | NR            |
| 415    | 6                        | NR            | 545    | 514                      | NR            | 675    | 492                      | NR            | 805    | 12                       | NR            | 935    | 0                        | NR            |
| 420    | 11                       | NR            | 550    | 530                      | NR            | 680    | 440                      | NR            | 810    | 10                       | NR            | 940    | 0                        | NR            |
| 425    | 20                       | NR            | 555    | 551                      | NR            | 685    | 393                      | NR            | 815    | 9                        | NR            | 945    | 0                        | NR            |
| 430    | 35                       | NR            | 560    | 577                      | NR            | 690    | 347                      | NR            | 820    | 8                        | NR            | 950    | 0                        | NR            |
| 435    | 62                       | NR            | 565    | 604                      | NR            | 695    | 306                      | NR            | 825    | 7                        | NR            | 955    | 0                        | NR            |
| 440    | 104                      | NR            | 570    | 640                      | NR            | 700    | 268                      | NR            | 830    | 6                        | NR            | 960    | 0                        | NR            |
| 445    | 168                      | NR            | 575    | 679                      | NR            | 705    | 235                      | NR            | 835    | 5                        | NR            | 965    | 0                        | NR            |
| 450    | 272                      | NR            | 580    | 726                      | NR            | 710    | 205                      | NR            | 840    | 4                        | NR            | 970    | 0                        | NR            |
| 455    | 370                      | NR            | 585    | 774                      | NR            | 715    | 179                      | NR            | 845    | 4                        | NR            | 975    | 0                        | NR            |
| 460    | 344                      | NR            | 590    | 824                      | NR            | 720    | 156                      | NR            | 850    | 3                        | NR            | 980    | 0                        | NR            |
| 465    | 257                      | NR            | 595    | 877                      | NR            | 725    | 134                      | NR            | 855    | 3                        | NR            | 985    | 0                        | NR            |
| 470    | 224                      | NR            | 600    | 920                      | NR            | 730    | 116                      | NR            | 860    | 2                        | NR            | 990    | 0                        | NR            |
| 475    | 204                      | NR            | 605    | 957                      | NR            | 735    | 100                      | NR            | 865    | 2                        | NR            | 995    | 0                        | NR            |
| 480    | 188                      | NR            | 610    | 982                      | NR            | 740    | 85                       | NR            | 870    | 2                        | NR            | 1000   | 0                        | NR            |
| 485    | 202                      | NR            | 615    | 999                      | NR            | 745    | 73                       | NR            | 875    | 2                        | NR            |        |                          |               |

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### Scotopic Flux vs. Wavelength



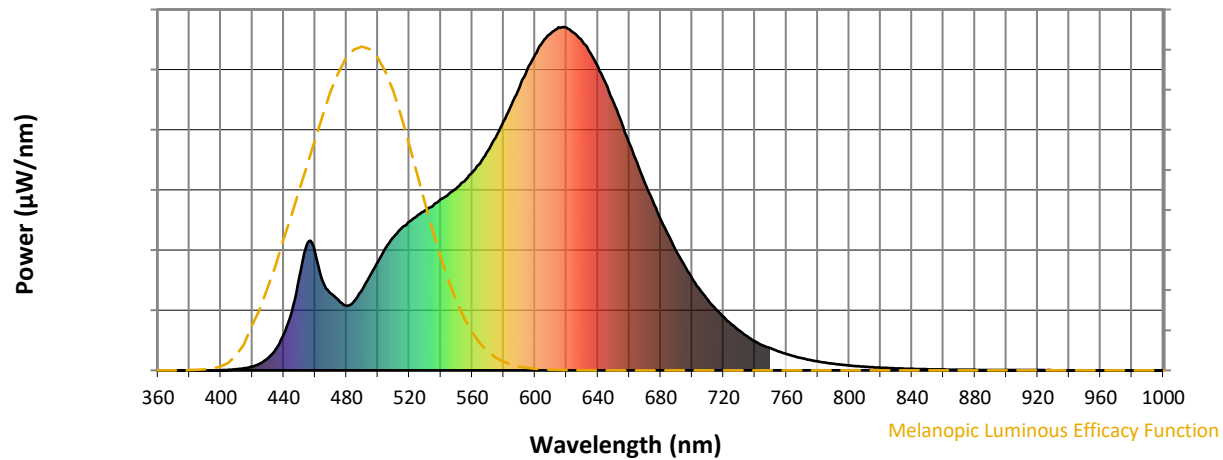
Scotopic Lumens: NR

S/P: 1.31

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 236                         | NR               | 620       | 998                         | NR               | 750       | 64                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 276                         | NR               | 625       | 983                         | NR               | 755       | 55                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 317                         | NR               | 630       | 960                         | NR               | 760       | 48                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 357                         | NR               | 635       | 927                         | NR               | 765       | 41                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 389                         | NR               | 640       | 885                         | NR               | 770       | 35                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 414                         | NR               | 645       | 836                         | NR               | 775       | 30                          | NR               | 905       | 1                           | NR               |
| 390       | 0                           | NR               | 520       | 434                         | NR               | 650       | 781                         | NR               | 780       | 26                          | NR               | 910       | 1                           | NR               |
| 395       | 0                           | NR               | 525       | 450                         | NR               | 655       | 723                         | NR               | 785       | 22                          | NR               | 915       | 1                           | NR               |
| 400       | 1                           | NR               | 530       | 466                         | NR               | 660       | 662                         | NR               | 790       | 19                          | NR               | 920       | 1                           | NR               |
| 405       | 2                           | NR               | 535       | 480                         | NR               | 665       | 604                         | NR               | 795       | 16                          | NR               | 925       | 0                           | NR               |
| 410       | 3                           | NR               | 540       | 498                         | NR               | 670       | 546                         | NR               | 800       | 14                          | NR               | 930       | 0                           | NR               |
| 415       | 6                           | NR               | 545       | 514                         | NR               | 675       | 492                         | NR               | 805       | 12                          | NR               | 935       | 0                           | NR               |
| 420       | 11                          | NR               | 550       | 530                         | NR               | 680       | 440                         | NR               | 810       | 10                          | NR               | 940       | 0                           | NR               |
| 425       | 20                          | NR               | 555       | 551                         | NR               | 685       | 393                         | NR               | 815       | 9                           | NR               | 945       | 0                           | NR               |
| 430       | 35                          | NR               | 560       | 577                         | NR               | 690       | 347                         | NR               | 820       | 8                           | NR               | 950       | 0                           | NR               |
| 435       | 62                          | NR               | 565       | 604                         | NR               | 695       | 306                         | NR               | 825       | 7                           | NR               | 955       | 0                           | NR               |
| 440       | 104                         | NR               | 570       | 640                         | NR               | 700       | 268                         | NR               | 830       | 6                           | NR               | 960       | 0                           | NR               |
| 445       | 168                         | NR               | 575       | 679                         | NR               | 705       | 235                         | NR               | 835       | 5                           | NR               | 965       | 0                           | NR               |
| 450       | 272                         | NR               | 580       | 726                         | NR               | 710       | 205                         | NR               | 840       | 4                           | NR               | 970       | 0                           | NR               |
| 455       | 370                         | NR               | 585       | 774                         | NR               | 715       | 179                         | NR               | 845       | 4                           | NR               | 975       | 0                           | NR               |
| 460       | 344                         | NR               | 590       | 824                         | NR               | 720       | 156                         | NR               | 850       | 3                           | NR               | 980       | 0                           | NR               |
| 465       | 257                         | NR               | 595       | 877                         | NR               | 725       | 134                         | NR               | 855       | 3                           | NR               | 985       | 0                           | NR               |
| 470       | 224                         | NR               | 600       | 920                         | NR               | 730       | 116                         | NR               | 860       | 2                           | NR               | 990       | 0                           | NR               |
| 475       | 204                         | NR               | 605       | 957                         | NR               | 735       | 100                         | NR               | 865       | 2                           | NR               | 995       | 0                           | NR               |
| 480       | 188                         | NR               | 610       | 982                         | NR               | 740       | 85                          | NR               | 870       | 2                           | NR               | 1000      | 0                           | NR               |
| 485       | 202                         | NR               | 615       | 999                         | NR               | 745       | 73                          | NR               | 875       | 2                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2504-409-27

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.5

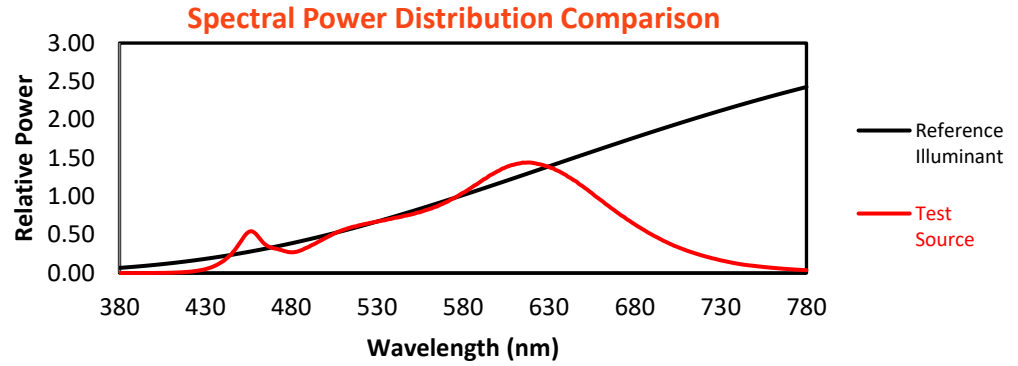
| λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 236                         | NR               | 620       | 998                         | NR               | 750       | 64                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 276                         | NR               | 625       | 983                         | NR               | 755       | 55                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 317                         | NR               | 630       | 960                         | NR               | 760       | 48                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 357                         | NR               | 635       | 927                         | NR               | 765       | 41                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 389                         | NR               | 640       | 885                         | NR               | 770       | 35                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 414                         | NR               | 645       | 836                         | NR               | 775       | 30                          | NR               | 905       | 1                           | NR               |
| 390       | 0                           | NR               | 520       | 434                         | NR               | 650       | 781                         | NR               | 780       | 26                          | NR               | 910       | 1                           | NR               |
| 395       | 0                           | NR               | 525       | 450                         | NR               | 655       | 723                         | NR               | 785       | 22                          | NR               | 915       | 1                           | NR               |
| 400       | 1                           | NR               | 530       | 466                         | NR               | 660       | 662                         | NR               | 790       | 19                          | NR               | 920       | 1                           | NR               |
| 405       | 2                           | NR               | 535       | 480                         | NR               | 665       | 604                         | NR               | 795       | 16                          | NR               | 925       | 0                           | NR               |
| 410       | 3                           | NR               | 540       | 498                         | NR               | 670       | 546                         | NR               | 800       | 14                          | NR               | 930       | 0                           | NR               |
| 415       | 6                           | NR               | 545       | 514                         | NR               | 675       | 492                         | NR               | 805       | 12                          | NR               | 935       | 0                           | NR               |
| 420       | 11                          | NR               | 550       | 530                         | NR               | 680       | 440                         | NR               | 810       | 10                          | NR               | 940       | 0                           | NR               |
| 425       | 20                          | NR               | 555       | 551                         | NR               | 685       | 393                         | NR               | 815       | 9                           | NR               | 945       | 0                           | NR               |
| 430       | 35                          | NR               | 560       | 577                         | NR               | 690       | 347                         | NR               | 820       | 8                           | NR               | 950       | 0                           | NR               |
| 435       | 62                          | NR               | 565       | 604                         | NR               | 695       | 306                         | NR               | 825       | 7                           | NR               | 955       | 0                           | NR               |
| 440       | 104                         | NR               | 570       | 640                         | NR               | 700       | 268                         | NR               | 830       | 6                           | NR               | 960       | 0                           | NR               |
| 445       | 168                         | NR               | 575       | 679                         | NR               | 705       | 235                         | NR               | 835       | 5                           | NR               | 965       | 0                           | NR               |
| 450       | 272                         | NR               | 580       | 726                         | NR               | 710       | 205                         | NR               | 840       | 4                           | NR               | 970       | 0                           | NR               |
| 455       | 370                         | NR               | 585       | 774                         | NR               | 715       | 179                         | NR               | 845       | 4                           | NR               | 975       | 0                           | NR               |
| 460       | 344                         | NR               | 590       | 824                         | NR               | 720       | 156                         | NR               | 850       | 3                           | NR               | 980       | 0                           | NR               |
| 465       | 257                         | NR               | 595       | 877                         | NR               | 725       | 134                         | NR               | 855       | 3                           | NR               | 985       | 0                           | NR               |
| 470       | 224                         | NR               | 600       | 920                         | NR               | 730       | 116                         | NR               | 860       | 2                           | NR               | 990       | 0                           | NR               |
| 475       | 204                         | NR               | 605       | 957                         | NR               | 735       | 100                         | NR               | 865       | 2                           | NR               | 995       | 0                           | NR               |
| 480       | 188                         | NR               | 610       | 982                         | NR               | 740       | 85                          | NR               | 870       | 2                           | NR               | 1000      | 0                           | NR               |
| 485       | 202                         | NR               | 615       | 999                         | NR               | 745       | 73                          | NR               | 875       | 2                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2504-409-27

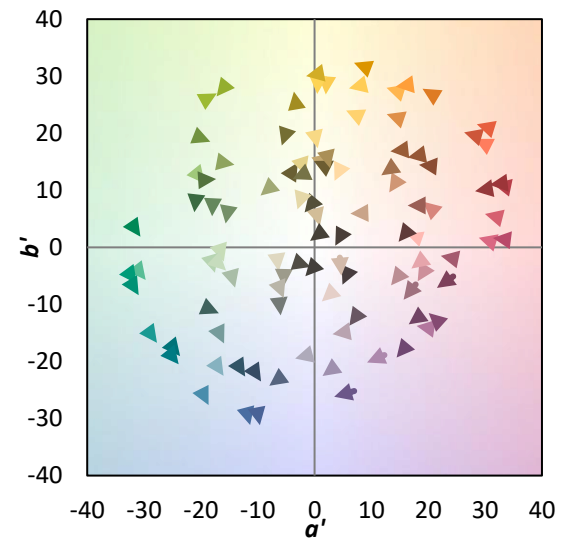
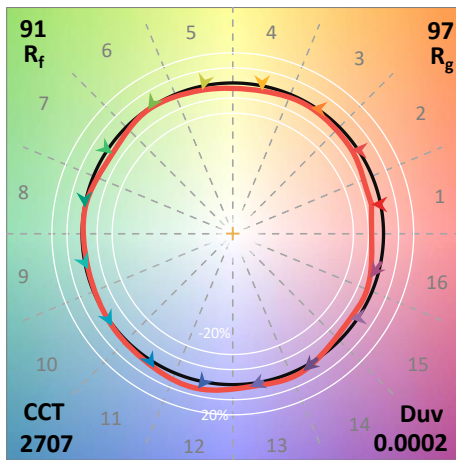
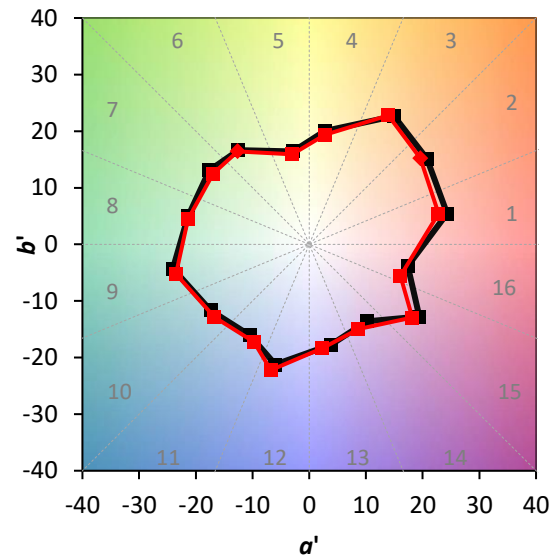
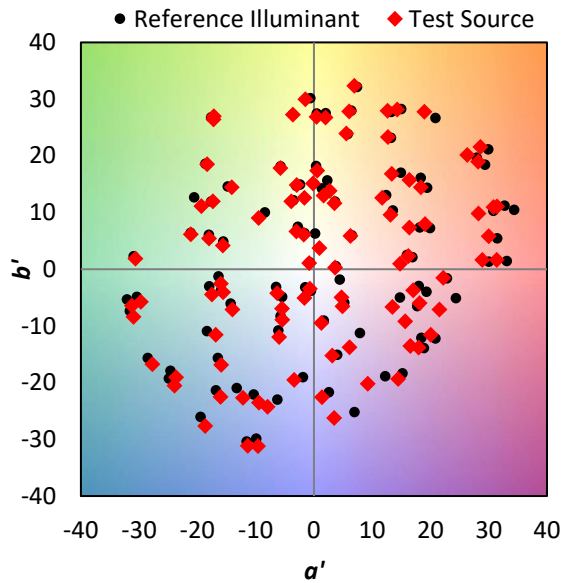
TM-30-18

### Summary

$R_f = 91.2$   
 $R_g = 97.1$   
 $CIE R_a = 92.2$   
 $R_9 = 50.2$

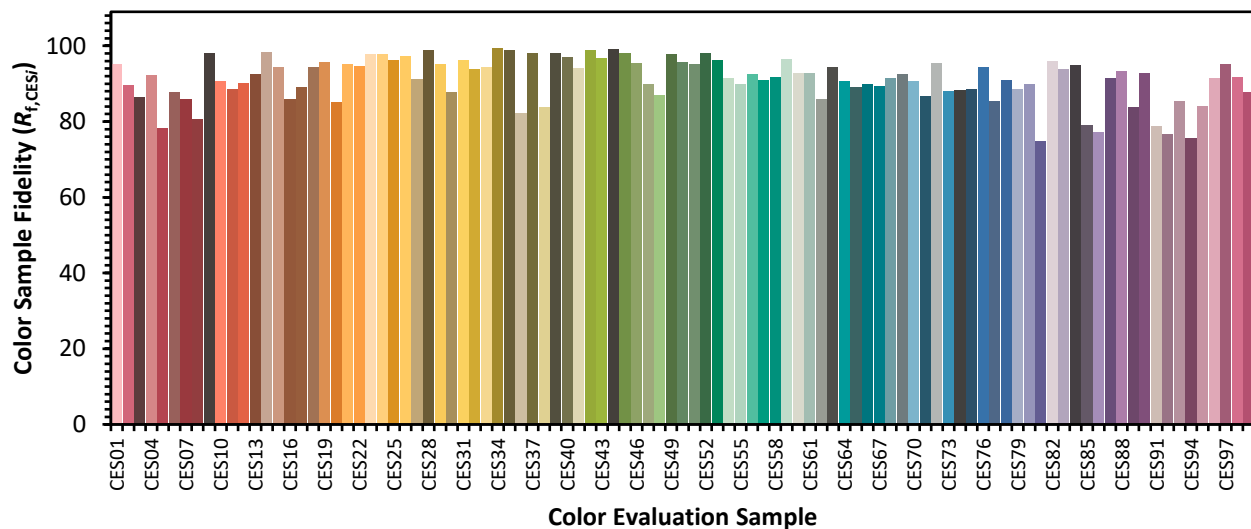


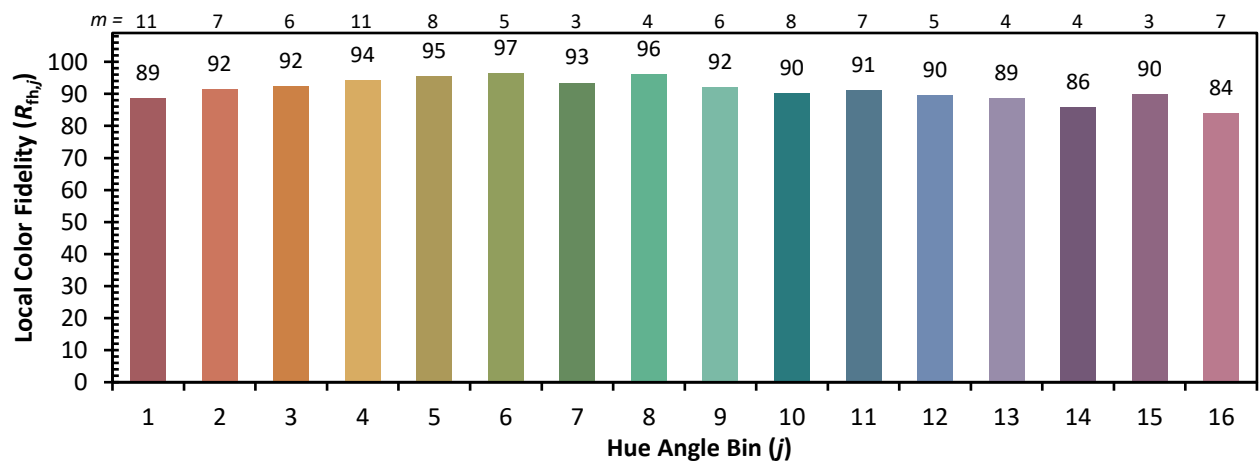
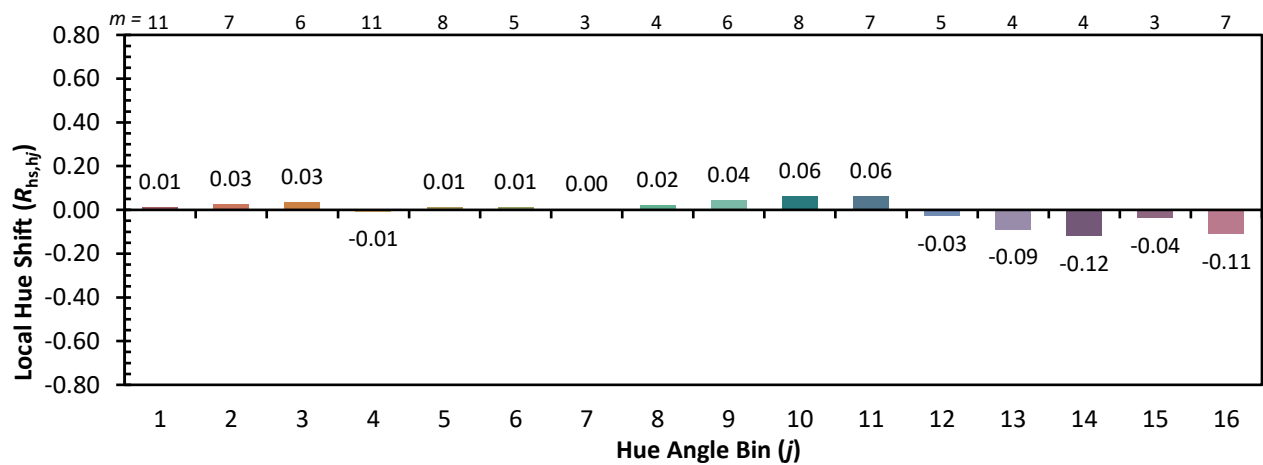
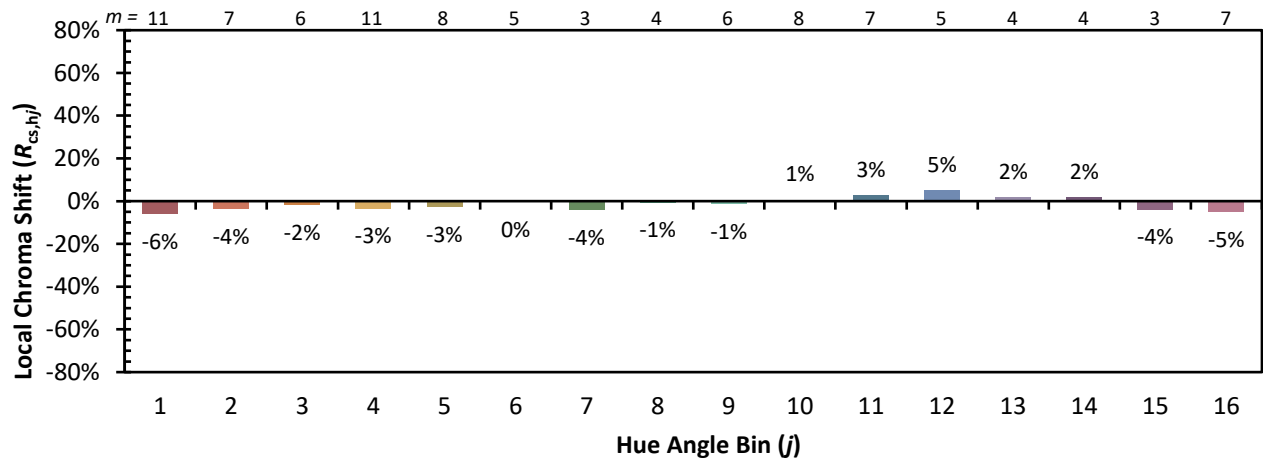
### Color Vector Graphics



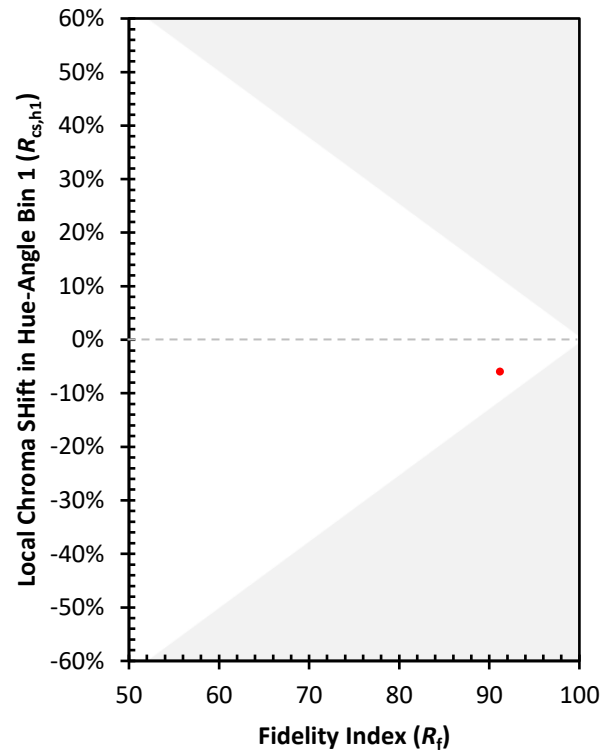
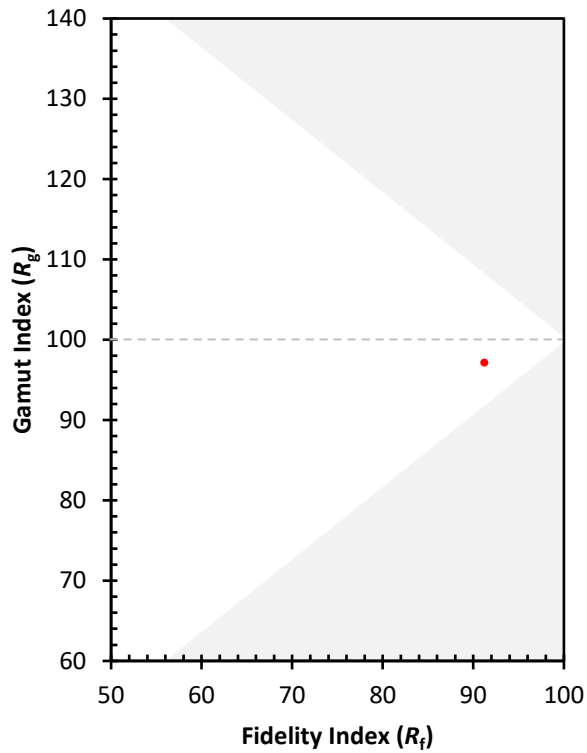
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 97 | CES51 = 95 | CES76 = 94 |
| CES02 = 64 | CES27 = 91 | CES52 = 98 | CES77 = 85 |
| CES03 = 32 | CES28 = 99 | CES53 = 96 | CES78 = 91 |
| CES04 = 71 | CES29 = 95 | CES54 = 91 | CES79 = 89 |
| CES05 = 51 | CES30 = 88 | CES55 = 90 | CES80 = 90 |
| CES06 = 52 | CES31 = 96 | CES56 = 93 | CES81 = 75 |
| CES07 = 44 | CES32 = 94 | CES57 = 91 | CES82 = 96 |
| CES08 = 43 | CES33 = 94 | CES58 = 92 | CES83 = 94 |
| CES09 = 29 | CES34 = 99 | CES59 = 97 | CES84 = 95 |
| CES10 = 77 | CES35 = 99 | CES60 = 93 | CES85 = 79 |
| CES11 = 59 | CES36 = 82 | CES61 = 93 | CES86 = 77 |
| CES12 = 66 | CES37 = 98 | CES62 = 86 | CES87 = 91 |
| CES13 = 44 | CES38 = 84 | CES63 = 94 | CES88 = 93 |
| CES14 = 74 | CES39 = 98 | CES64 = 91 | CES89 = 84 |
| CES15 = 72 | CES40 = 97 | CES65 = 89 | CES90 = 93 |
| CES16 = 48 | CES41 = 94 | CES66 = 90 | CES91 = 79 |
| CES17 = 50 | CES42 = 99 | CES67 = 89 | CES92 = 77 |
| CES18 = 57 | CES43 = 97 | CES68 = 91 | CES93 = 86 |
| CES19 = 72 | CES44 = 99 | CES69 = 93 | CES94 = 76 |
| CES20 = 68 | CES45 = 98 | CES70 = 91 | CES95 = 84 |
| CES21 = 87 | CES46 = 96 | CES71 = 87 | CES96 = 91 |
| CES22 = 79 | CES47 = 90 | CES72 = 96 | CES97 = 95 |
| CES23 = 92 | CES48 = 87 | CES73 = 88 | CES98 = 92 |
| CES24 = 91 | CES49 = 98 | CES74 = 88 | CES99 = 88 |
| CES25 = 72 | CES50 = 96 | CES75 = 89 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)