

Signify Classified - Internal  
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: McGRAW-EDISON

Report Number: P1212015

Luminaire Tested: **GKO-PB1B-827-U-T1**

Issue Date: 11/5/2025



**Test Information**

Test Method: LM-79-08  
Report Number: P1212015  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 11/5/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GKO-PB1B-827-U-T1  
Description: GEKKO WALL PACK 1500LM PACKAGE 80CRI 2700K FIXTURE w/ TYPE I DISTRIBUTION OPTIC  
Light Source: (10) 2700K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

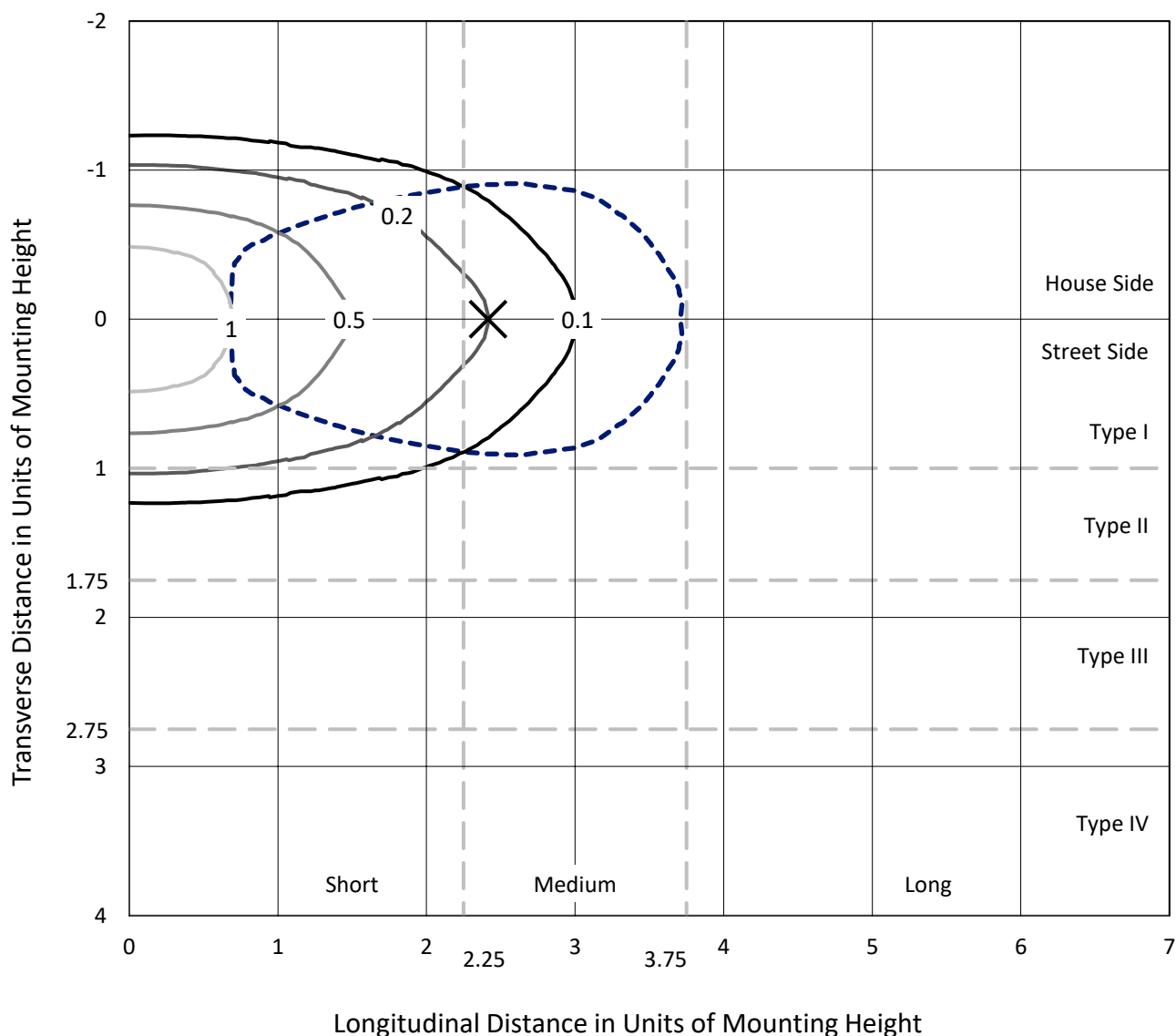
Lumens per Lamp: N/A  
Luminaire Lumens: 1335.4 lumens  
Efficiency: N/A  
Efficacy: 143.6 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type I - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 9.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): 14%  
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

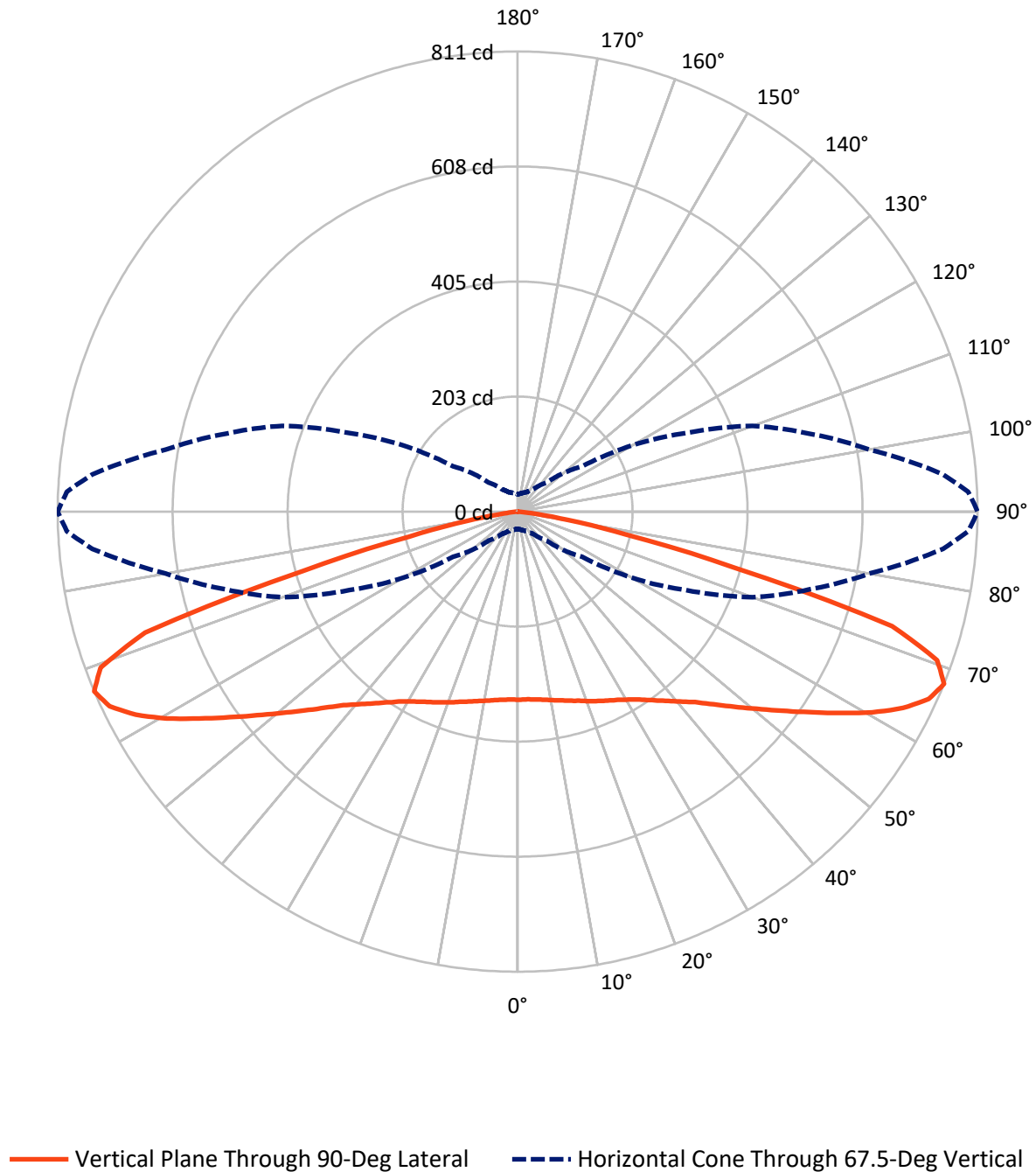
✕ Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.5 fc  
 Type I - Short - N/A

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## Luminous Intensity Polar Plot



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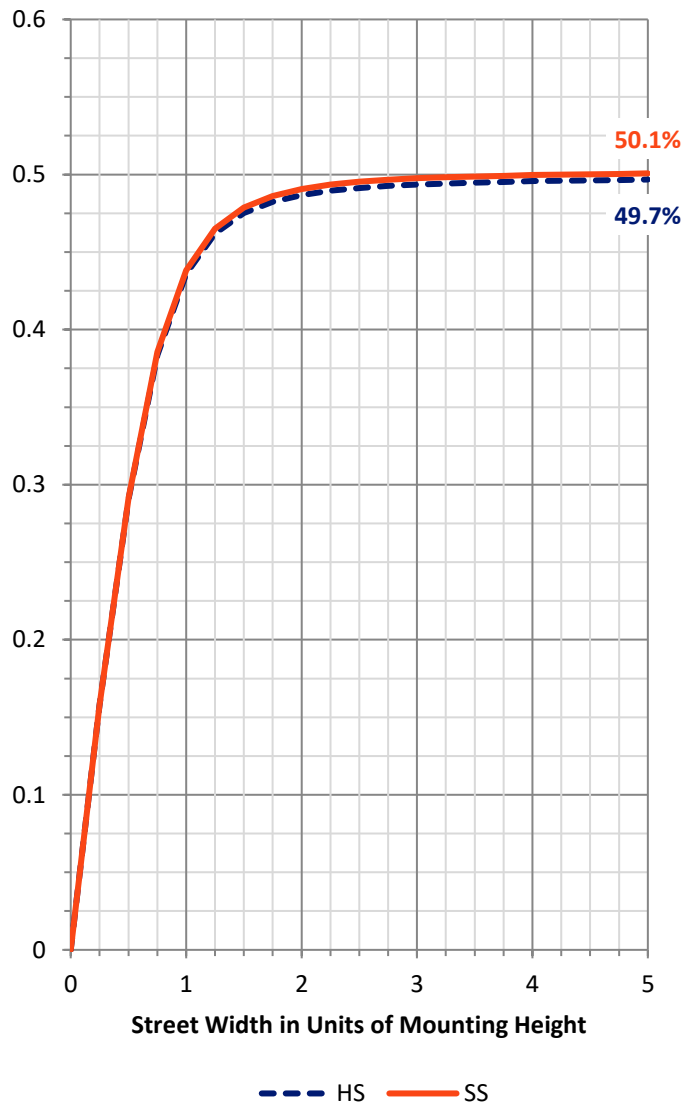
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 667.7    | 0.0    | 667.7  |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 667.7    | 0.0    | 667.7  |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 1335.4   | 0.0    | 1335.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 31.8   | 2.4       |
| 10°-20°   | 95.8   | 7.2       |
| 20°-30°   | 159.2  | 11.9      |
| 30°-40°   | 211.6  | 15.8      |
| 40°-50°   | 238.5  | 17.9      |
| 50°-60°   | 245.2  | 18.4      |
| 60°-70°   | 231.8  | 17.4      |
| 70°-80°   | 113.5  | 8.5       |
| 80°-90°   | 8.1    | 0.6       |
| 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       |
| 0°-90°    | 1335.4 | 100.0     |
| 0°-180°   | 1335.4 | 100.0     |



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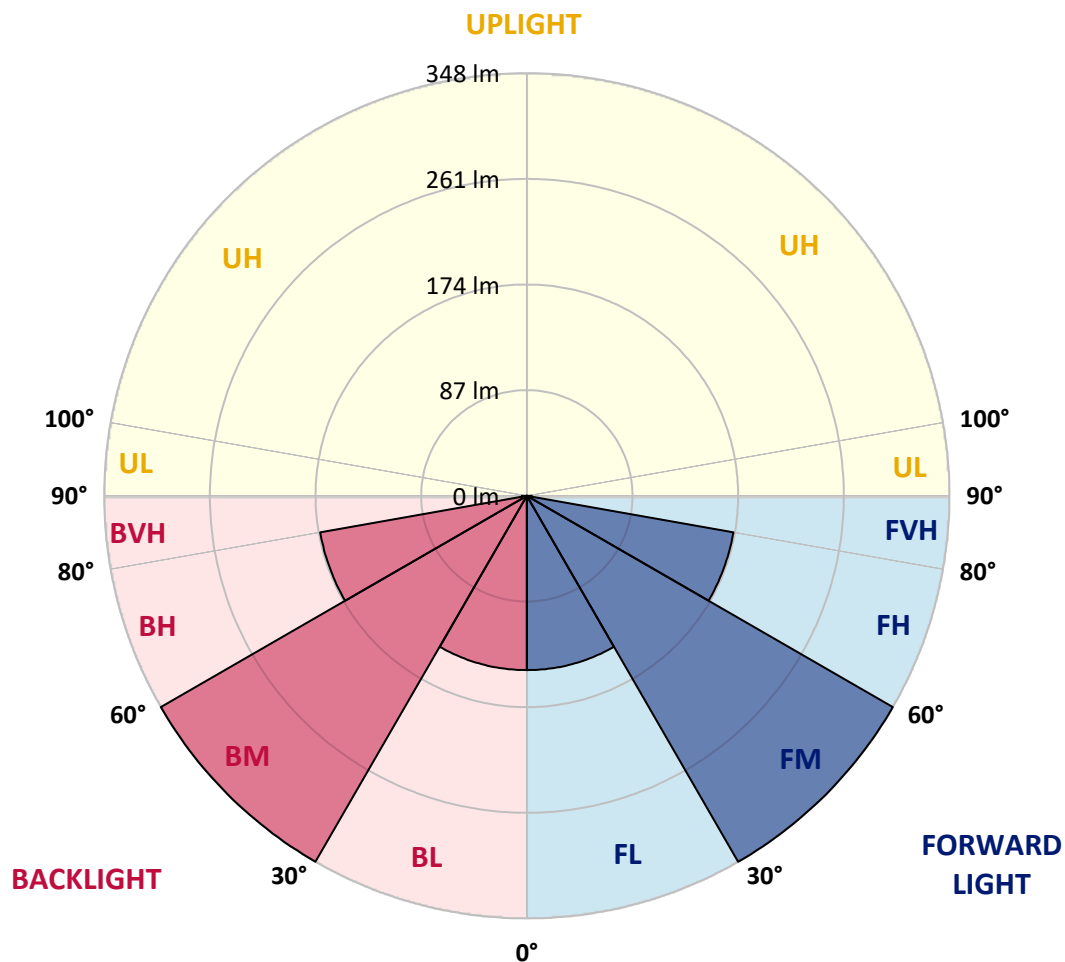
CATALOG NUMBER: GKO-PB1B-827-U-T1

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|--------|-----------|-------------------------|------|--------|
|      |             |        |           | B                       | U    | G      |
| FL   | (0°-30°)    | 143.4  | 10.7      |                         |      |        |
| FM   | (30°-60°)   | 347.6  | 26.0      |                         |      |        |
| FH   | (60°-80°)   | 172.6  | 12.9      |                         |      | G0/660 |
| FVH  | (80°-90°)   | 4.1    | 0.3       |                         |      | G0/10  |
| BL   | (0°-30°)    | 143.4  | 10.7      | B1/500                  |      |        |
| BM   | (30°-60°)   | 347.6  | 26.0      | B1/1000                 |      |        |
| BH   | (60°-80°)   | 172.6  | 12.9      | B1/500                  |      | G1/500 |
| BVH  | (80°-90°)   | 4.1    | 0.3       |                         |      | G0/10  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |        |

**BUG Rating: B1-U0-G1**

Type I Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 15°   | 25°   | 35°   | 45°   | 55°   | 65°   | 70°   | 75°   | 80°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 | 331.4 |
| 2.5°  | 331.6 | 332.1 | 331.1 | 331.1 | 331.6 | 331.9 | 331.9 | 332.1 | 331.6 | 331.6 | 331.4 |
| 5°    | 331.6 | 331.9 | 331.4 | 331.4 | 331.9 | 332.6 | 332.4 | 332.9 | 332.9 | 332.6 | 332.6 |
| 7.5°  | 331.4 | 331.9 | 331.4 | 331.6 | 332.4 | 333.8 | 333.8 | 333.8 | 334.3 | 334.8 | 334.8 |
| 10°   | 331.1 | 331.6 | 331.9 | 332.1 | 333.1 | 335.3 | 335.8 | 336.1 | 336.8 | 337.5 | 337.5 |
| 12.5° | 329.9 | 330.4 | 331.1 | 332.1 | 333.8 | 336.8 | 337.8 | 338.5 | 339.7 | 340.5 | 341.0 |
| 15°   | 328.2 | 328.4 | 330.1 | 332.1 | 334.8 | 338.5 | 340.5 | 341.7 | 343.4 | 344.4 | 345.2 |
| 17.5° | 325.7 | 326.0 | 328.7 | 331.6 | 335.6 | 340.7 | 343.9 | 345.9 | 347.6 | 349.1 | 350.1 |
| 20°   | 322.5 | 323.3 | 326.5 | 331.1 | 336.8 | 342.9 | 347.6 | 351.1 | 352.8 | 354.3 | 355.7 |
| 22.5° | 318.6 | 319.3 | 323.3 | 329.9 | 338.0 | 345.9 | 352.1 | 356.5 | 358.7 | 360.7 | 362.4 |
| 25°   | 312.7 | 313.6 | 318.3 | 326.9 | 338.5 | 349.1 | 357.0 | 362.6 | 364.6 | 367.1 | 368.5 |
| 27.5° | 303.6 | 304.3 | 310.0 | 321.0 | 337.0 | 352.5 | 362.6 | 369.3 | 371.5 | 374.2 | 375.7 |
| 30°   | 289.3 | 290.8 | 297.6 | 311.4 | 333.3 | 355.3 | 369.3 | 375.9 | 378.6 | 381.4 | 383.3 |
| 32.5° | 270.8 | 273.0 | 280.7 | 298.4 | 326.2 | 356.2 | 376.4 | 384.1 | 387.5 | 390.5 | 392.9 |
| 35°   | 247.9 | 250.1 | 259.2 | 281.6 | 314.9 | 354.3 | 383.6 | 393.4 | 397.6 | 401.5 | 404.5 |
| 37.5° | 221.8 | 223.8 | 234.9 | 260.5 | 298.6 | 348.1 | 389.2 | 403.8 | 409.4 | 414.6 | 418.5 |
| 40°   | 195.5 | 197.7 | 209.8 | 237.1 | 278.9 | 336.3 | 391.7 | 415.1 | 422.2 | 428.9 | 433.8 |
| 42.5° | 166.9 | 169.6 | 183.2 | 212.2 | 256.0 | 320.0 | 389.7 | 426.2 | 435.0 | 444.1 | 451.5 |
| 45°   | 141.6 | 142.1 | 156.8 | 184.9 | 230.9 | 299.1 | 382.8 | 436.7 | 448.8 | 461.6 | 472.2 |
| 47.5° | 117.2 | 118.2 | 131.0 | 158.8 | 204.8 | 275.5 | 370.3 | 445.1 | 464.3 | 480.8 | 496.3 |
| 50°   | 95.5  | 96.8  | 108.3 | 133.2 | 178.7 | 249.6 | 353.3 | 450.0 | 477.6 | 500.0 | 521.7 |
| 52.5° | 77.8  | 79.3  | 88.9  | 110.8 | 152.4 | 222.6 | 332.4 | 450.8 | 489.7 | 519.2 | 548.0 |
| 55°   | 64.7  | 65.7  | 73.1  | 90.6  | 127.0 | 194.5 | 308.5 | 447.1 | 497.6 | 536.5 | 574.9 |
| 57.5° | 54.7  | 55.6  | 60.8  | 74.6  | 104.1 | 165.7 | 279.4 | 438.5 | 501.7 | 551.5 | 601.9 |
| 60°   | 47.5  | 48.3  | 51.9  | 61.8  | 85.7  | 138.6 | 248.2 | 423.2 | 500.5 | 560.8 | 624.3 |
| 62.5° | 42.3  | 42.6  | 45.8  | 52.7  | 70.7  | 113.0 | 213.0 | 400.3 | 490.4 | 562.1 | 639.6 |
| 65°   | 37.7  | 37.9  | 39.9  | 44.8  | 58.1  | 90.8  | 176.3 | 368.8 | 471.2 | 553.4 | 641.8 |
| 67.5° | 30.5  | 31.0  | 34.0  | 37.7  | 47.8  | 71.9  | 138.9 | 327.4 | 441.2 | 531.0 | 629.3 |
| 70°   | 24.4  | 24.6  | 27.6  | 31.8  | 38.9  | 56.6  | 106.6 | 271.8 | 394.2 | 494.6 | 596.8 |
| 72.5° | 18.2  | 18.7  | 21.4  | 25.6  | 31.8  | 43.8  | 77.1  | 205.6 | 315.1 | 417.0 | 519.7 |
| 75°   | 14.5  | 14.8  | 15.8  | 19.7  | 24.6  | 33.2  | 51.9  | 124.6 | 189.8 | 258.0 | 318.6 |
| 77.5° | 12.3  | 12.6  | 12.6  | 15.3  | 18.2  | 22.4  | 27.6  | 49.5  | 80.3  | 114.2 | 151.4 |
| 80°   | 10.1  | 10.6  | 9.6   | 11.3  | 13.0  | 13.0  | 12.8  | 23.6  | 37.9  | 53.7  | 70.4  |
| 82.5° | 7.4   | 7.9   | 7.4   | 7.9   | 7.9   | 7.1   | 6.6   | 8.9   | 12.1  | 16.5  | 18.0  |
| 85°   | 5.2   | 5.4   | 5.9   | 5.4   | 5.2   | 4.2   | 3.2   | 2.5   | 1.5   | 1.7   | 2.5   |
| 87.5° | 3.4   | 4.2   | 4.9   | 4.7   | 3.9   | 3.2   | 2.2   | 1.5   | 0.7   | 1.0   | 1.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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 CATALOG NUMBER: GKO-PB1B-827-U-T1

**CANDELA DISTRIBUTION (continued):**

|       | 85°   | 87.5° | 90°   |
|-------|-------|-------|-------|
| 0°    | 331.4 | 331.4 | 331.4 |
| 2.5°  | 331.6 | 331.4 | 331.1 |
| 5°    | 332.9 | 332.6 | 332.4 |
| 7.5°  | 334.6 | 334.6 | 334.6 |
| 10°   | 337.3 | 337.8 | 337.8 |
| 12.5° | 340.7 | 341.2 | 341.2 |
| 15°   | 344.9 | 345.2 | 345.7 |
| 17.5° | 350.1 | 350.3 | 350.3 |
| 20°   | 356.2 | 356.0 | 356.5 |
| 22.5° | 362.4 | 362.4 | 362.4 |
| 25°   | 368.8 | 368.8 | 368.8 |
| 27.5° | 376.2 | 376.2 | 375.7 |
| 30°   | 384.3 | 384.3 | 384.3 |
| 32.5° | 394.2 | 394.4 | 394.6 |
| 35°   | 406.7 | 407.2 | 407.9 |
| 37.5° | 421.0 | 422.2 | 423.0 |
| 40°   | 438.0 | 438.5 | 439.7 |
| 42.5° | 456.9 | 458.4 | 458.7 |
| 45°   | 480.6 | 483.0 | 484.0 |
| 47.5° | 508.4 | 511.8 | 513.6 |
| 50°   | 539.4 | 543.3 | 545.8 |
| 52.5° | 573.1 | 579.5 | 582.5 |
| 55°   | 609.1 | 620.2 | 623.4 |
| 57.5° | 649.7 | 664.7 | 669.1 |
| 60°   | 689.6 | 710.8 | 717.9 |
| 62.5° | 723.6 | 753.3 | 762.2 |
| 65°   | 747.4 | 783.4 | 796.4 |
| 67.5° | 752.4 | 795.0 | 810.5 |
| 70°   | 722.8 | 766.4 | 784.4 |
| 72.5° | 628.5 | 667.9 | 690.3 |
| 75°   | 371.3 | 399.6 | 392.7 |
| 77.5° | 186.4 | 194.5 | 195.7 |
| 80°   | 81.7  | 86.7  | 88.6  |
| 82.5° | 20.2  | 20.7  | 23.4  |
| 85°   | 2.7   | 3.2   | 3.0   |
| 87.5° | 1.0   | 1.0   | 1.2   |
| 90°   | 0.0   | 0.0   | 0.0   |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP3-2511-595-2

Test Date: 11/12/2025

Luminaire Tested: GKO-PB1C-827-U-T4W

Data in this report applies to families of products including GKO-PB1C-827\*

### Test Information

Test Method: LM-79-2019  
 Report Number: SP3-2511-595-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP3 - 3M SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 01/27/2026  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GKO-PB1C-827-U-T4W**  
 Description: Gekko Wedge Wall Pack Fixture 1 SQ w/ T4W distribution

### Spectral Parameters

CCT (K): 2740  
 CIE  $u'$ : 0.2602  
 CIE  $v'$ : 0.5290  
 Duv: 0.0017  
 CIE x: 0.4595  
 CIE y: 0.4151  
 CIE z: 0.1255  
 Peak Wavelength (nm): 605  
 Dominant Wavelength (nm): 583  
 Purity: 62.5206  
 R<sub>f</sub>: 84.8  
 R<sub>g</sub>: 94.5

CRI (Ra): 81.1  
 R1: 79.2  
 R2: 90.4  
 R3: 95.8  
 R4: 79.2  
 R5: 79.6  
 R6: 89.5  
 R7: 81.1  
 R8: 54.5  
 R9: -0.3  
 R10: 79.1  
 R11: 79.0  
 R12: 72.7  
 R13: 81.7  
 R14: 98.3  
 R15: 70.3



### Test Conditions

Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 25.0

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| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | 3M SPHERE IN02505     | 7/1/2025         | 1/1/2026             |
| Power Meter                    | XITRON INXT2011006    | 10/21/2025       | 10/21/2026           |
| AC Power Source                | CHROMA 61604 IN6064A  | 10/20/2025       | 10/20/2026           |
| DC Power Source                | EYSIGHT N5770A IN0534 | 10/20/2025       | 10/20/2026           |
| Sphere Thermometer             | TANDD IN4036E         | 10/21/2025       | 10/21/2026           |
|                                |                       |                  |                      |

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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

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 193                                  | NR                             | 620               | 932                                  | NR                             | 750               | 29                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 235                                  | NR                             | 625               | 886                                  | NR                             | 755               | 25                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 278                                  | NR                             | 630               | 832                                  | NR                             | 760               | 21                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 318                                  | NR                             | 635               | 771                                  | NR                             | 765               | 18                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 351                                  | NR                             | 640               | 708                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 380                                  | NR                             | 645               | 642                                  | NR                             | 775               | 13                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 402                                  | NR                             | 650               | 578                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 0                                    | NR                             | 525               | 423                                  | NR                             | 655               | 517                                  | NR                             | 785               | 9                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 1                                    | NR                             | 530               | 440                                  | NR                             | 660               | 457                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 2                                    | NR                             | 535               | 460                                  | NR                             | 665               | 404                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 5                                    | NR                             | 540               | 480                                  | NR                             | 670               | 352                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 10                                   | NR                             | 545               | 507                                  | NR                             | 675               | 308                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 19                                   | NR                             | 550               | 539                                  | NR                             | 680               | 267                                  | NR                             | 810               | 4                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 32                                   | NR                             | 555               | 574                                  | NR                             | 685               | 231                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 55                                   | NR                             | 560               | 617                                  | NR                             | 690               | 198                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 90                                   | NR                             | 565               | 668                                  | NR                             | 695               | 171                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 151                                  | NR                             | 570               | 718                                  | NR                             | 700               | 146                                  | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 275                                  | NR                             | 575               | 777                                  | NR                             | 705               | 124                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 381                                  | NR                             | 580               | 832                                  | NR                             | 710               | 106                                  | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 304                                  | NR                             | 585               | 886                                  | NR                             | 715               | 90                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 227                                  | NR                             | 590               | 933                                  | NR                             | 720               | 77                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 208                                  | NR                             | 595               | 970                                  | NR                             | 725               | 66                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 167                                  | NR                             | 600               | 992                                  | NR                             | 730               | 56                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 138                                  | NR                             | 605               | 1000                                 | NR                             | 735               | 47                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 146                                  | NR                             | 610               | 991                                  | NR                             | 740               | 40                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 164                                  | NR                             | 615               | 969                                  | NR                             | 745               | 34                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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### Scotopic Flux vs. Wavelength



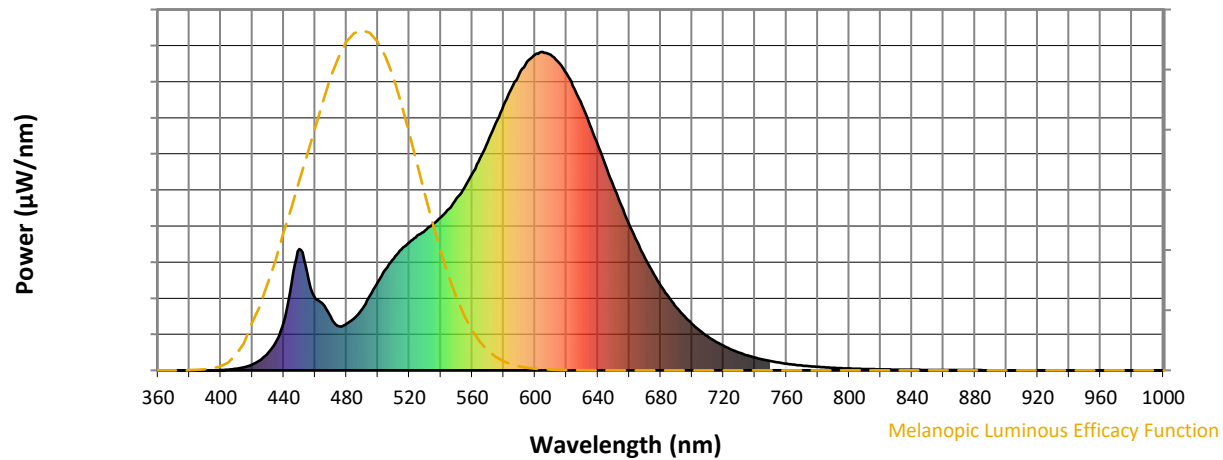
Scotopic Lumens: NR

S/P: 1.22

| 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       | 193                         | NR               | 620       | 932                         | NR               | 750       | 29                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 235                         | NR               | 625       | 886                         | NR               | 755       | 25                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 278                         | NR               | 630       | 832                         | NR               | 760       | 21                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 318                         | NR               | 635       | 771                         | NR               | 765       | 18                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 351                         | NR               | 640       | 708                         | NR               | 770       | 15                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 380                         | NR               | 645       | 642                         | NR               | 775       | 13                          | NR               | 905       | 0                           | NR               |
| 390       | 0                           | NR               | 520       | 402                         | NR               | 650       | 578                         | NR               | 780       | 11                          | NR               | 910       | 0                           | NR               |
| 395       | 0                           | NR               | 525       | 423                         | NR               | 655       | 517                         | NR               | 785       | 9                           | NR               | 915       | 0                           | NR               |
| 400       | 1                           | NR               | 530       | 440                         | NR               | 660       | 457                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 2                           | NR               | 535       | 460                         | NR               | 665       | 404                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 5                           | NR               | 540       | 480                         | NR               | 670       | 352                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 10                          | NR               | 545       | 507                         | NR               | 675       | 308                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 19                          | NR               | 550       | 539                         | NR               | 680       | 267                         | NR               | 810       | 4                           | NR               | 940       | 0                           | NR               |
| 425       | 32                          | NR               | 555       | 574                         | NR               | 685       | 231                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 55                          | NR               | 560       | 617                         | NR               | 690       | 198                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 90                          | NR               | 565       | 668                         | NR               | 695       | 171                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 151                         | NR               | 570       | 718                         | NR               | 700       | 146                         | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 275                         | NR               | 575       | 777                         | NR               | 705       | 124                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 381                         | NR               | 580       | 832                         | NR               | 710       | 106                         | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 304                         | NR               | 585       | 886                         | NR               | 715       | 90                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 227                         | NR               | 590       | 933                         | NR               | 720       | 77                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 208                         | NR               | 595       | 970                         | NR               | 725       | 66                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 167                         | NR               | 600       | 992                         | NR               | 730       | 56                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 138                         | NR               | 605       | 1000                        | NR               | 735       | 47                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 146                         | NR               | 610       | 991                         | NR               | 740       | 40                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 164                         | NR               | 615       | 969                         | NR               | 745       | 34                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.26**

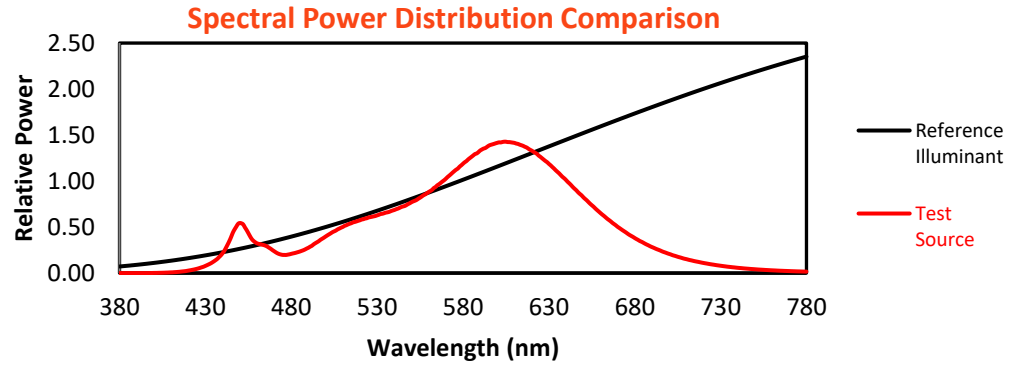
| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 193                                  | NR                             | 620               | 932                                  | NR                             | 750               | 29                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 235                                  | NR                             | 625               | 886                                  | NR                             | 755               | 25                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 278                                  | NR                             | 630               | 832                                  | NR                             | 760               | 21                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 318                                  | NR                             | 635               | 771                                  | NR                             | 765               | 18                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 351                                  | NR                             | 640               | 708                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 380                                  | NR                             | 645               | 642                                  | NR                             | 775               | 13                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 402                                  | NR                             | 650               | 578                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 0                                    | NR                             | 525               | 423                                  | NR                             | 655               | 517                                  | NR                             | 785               | 9                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 1                                    | NR                             | 530               | 440                                  | NR                             | 660               | 457                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 2                                    | NR                             | 535               | 460                                  | NR                             | 665               | 404                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 5                                    | NR                             | 540               | 480                                  | NR                             | 670               | 352                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 10                                   | NR                             | 545               | 507                                  | NR                             | 675               | 308                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 19                                   | NR                             | 550               | 539                                  | NR                             | 680               | 267                                  | NR                             | 810               | 4                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 32                                   | NR                             | 555               | 574                                  | NR                             | 685               | 231                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 55                                   | NR                             | 560               | 617                                  | NR                             | 690               | 198                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 90                                   | NR                             | 565               | 668                                  | NR                             | 695               | 171                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 151                                  | NR                             | 570               | 718                                  | NR                             | 700               | 146                                  | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 275                                  | NR                             | 575               | 777                                  | NR                             | 705               | 124                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 381                                  | NR                             | 580               | 832                                  | NR                             | 710               | 106                                  | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 304                                  | NR                             | 585               | 886                                  | NR                             | 715               | 90                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 227                                  | NR                             | 590               | 933                                  | NR                             | 720               | 77                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 208                                  | NR                             | 595               | 970                                  | NR                             | 725               | 66                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 167                                  | NR                             | 600               | 992                                  | NR                             | 730               | 56                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 138                                  | NR                             | 605               | 1000                                 | NR                             | 735               | 47                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 146                                  | NR                             | 610               | 991                                  | NR                             | 740               | 40                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 164                                  | NR                             | 615               | 969                                  | NR                             | 745               | 34                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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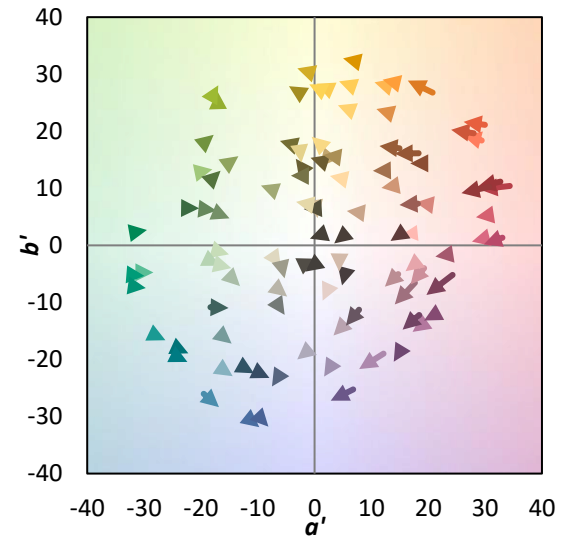
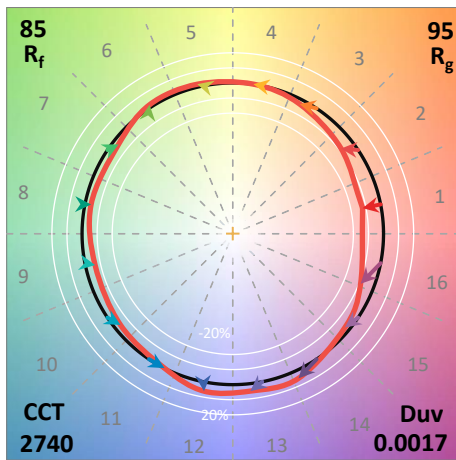
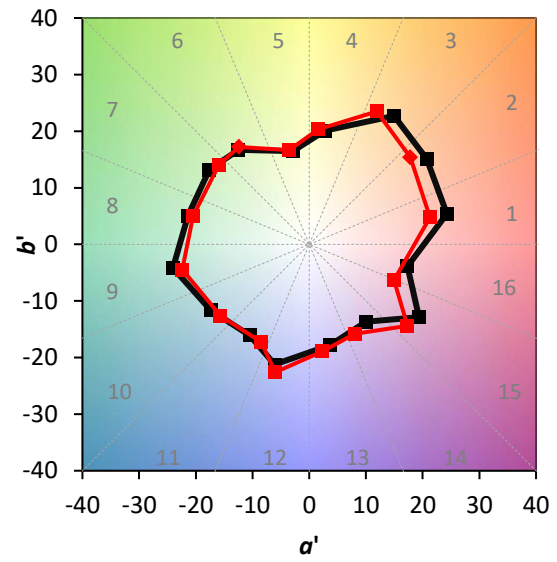
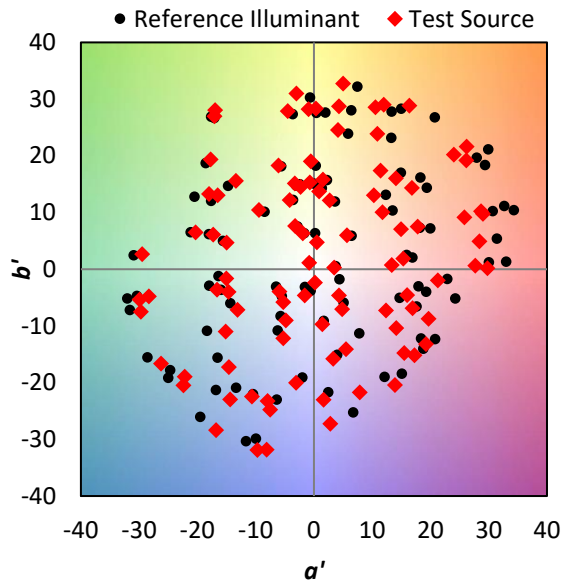
TM-30-18

### Summary

$R_f = 84.8$   
 $R_g = 94.5$   
 $CIE R_a = 81.1$   
 $R_g = -0.3$

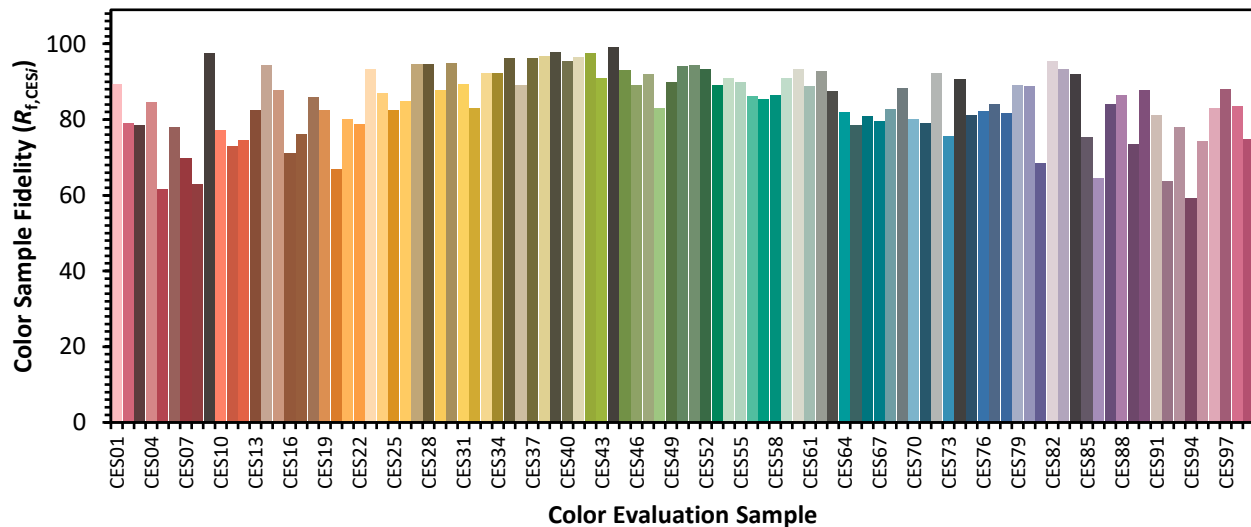


### Color Vector Graphics

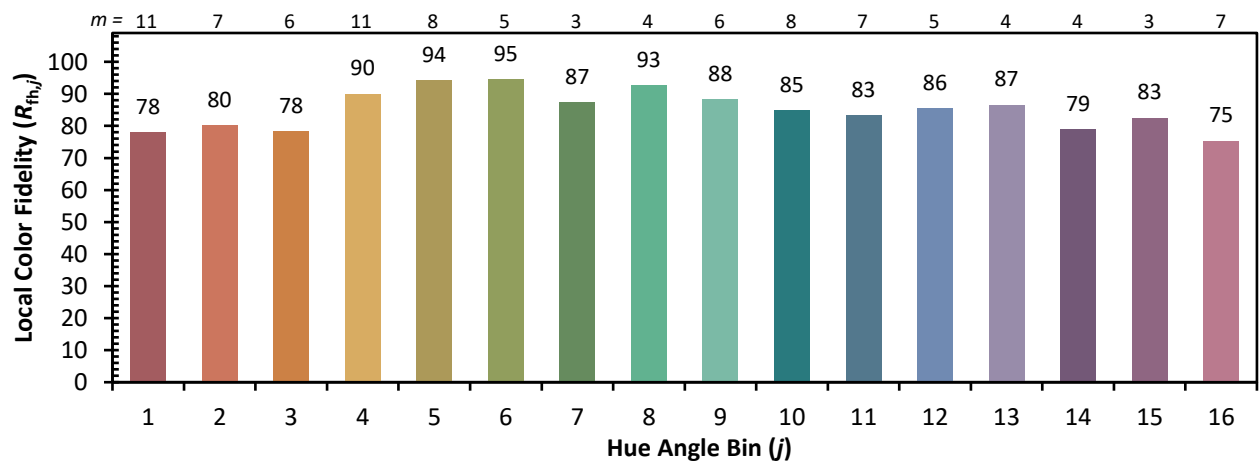
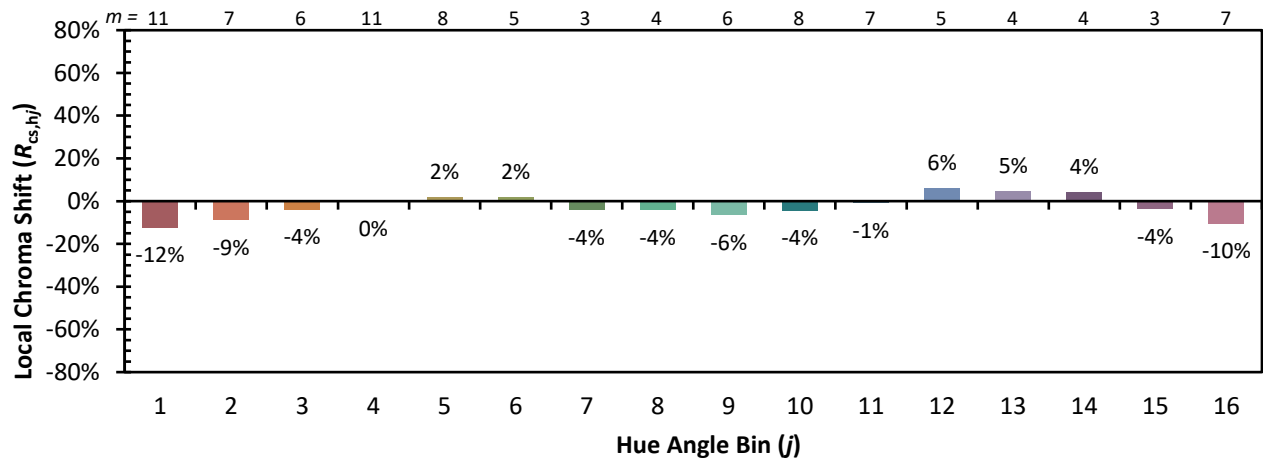


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 85 | CES51 = 94 | CES76 = 82 |
| CES02 = 63 | CES27 = 95 | CES52 = 93 | CES77 = 84 |
| CES03 = 31 | CES28 = 95 | CES53 = 89 | CES78 = 82 |
| CES04 = 71 | CES29 = 88 | CES54 = 91 | CES79 = 89 |
| CES05 = 50 | CES30 = 95 | CES55 = 90 | CES80 = 89 |
| CES06 = 52 | CES31 = 89 | CES56 = 86 | CES81 = 68 |
| CES07 = 43 | CES32 = 83 | CES57 = 85 | CES82 = 96 |
| CES08 = 41 | CES33 = 92 | CES58 = 86 | CES83 = 93 |
| CES09 = 29 | CES34 = 92 | CES59 = 91 | CES84 = 92 |
| CES10 = 77 | CES35 = 96 | CES60 = 93 | CES85 = 75 |
| CES11 = 60 | CES36 = 89 | CES61 = 89 | CES86 = 65 |
| CES12 = 66 | CES37 = 96 | CES62 = 93 | CES87 = 84 |
| CES13 = 44 | CES38 = 97 | CES63 = 87 | CES88 = 86 |
| CES14 = 74 | CES39 = 98 | CES64 = 82 | CES89 = 73 |
| CES15 = 72 | CES40 = 95 | CES65 = 79 | CES90 = 88 |
| CES16 = 48 | CES41 = 96 | CES66 = 81 | CES91 = 81 |
| CES17 = 50 | CES42 = 98 | CES67 = 80 | CES92 = 64 |
| CES18 = 57 | CES43 = 91 | CES68 = 83 | CES93 = 78 |
| CES19 = 73 | CES44 = 99 | CES69 = 88 | CES94 = 59 |
| CES20 = 67 | CES45 = 93 | CES70 = 80 | CES95 = 74 |
| CES21 = 87 | CES46 = 89 | CES71 = 79 | CES96 = 83 |
| CES22 = 79 | CES47 = 92 | CES72 = 92 | CES97 = 88 |
| CES23 = 92 | CES48 = 83 | CES73 = 76 | CES98 = 84 |
| CES24 = 91 | CES49 = 90 | CES74 = 91 | CES99 = 75 |
| CES25 = 72 | CES50 = 94 | CES75 = 81 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)