

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

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

Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1502925

Luminaire Tested: PRV-P-50-727-U-T2RE-HSS

Issue Date: 07/22/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1502925  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 7/22/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: PRV-P-50-727-U-T2RE-HSS  
Description: PREVAIL PETITE DISCRETE LED 1 SQUARE 50W 70CRI 2700K FIXTURE w/ TYPE II  
ROADWAY ILLUMINANCE DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4461.5 lumens  
Efficiency: N/A  
Efficacy: 85.0 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 52.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): 6.0%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

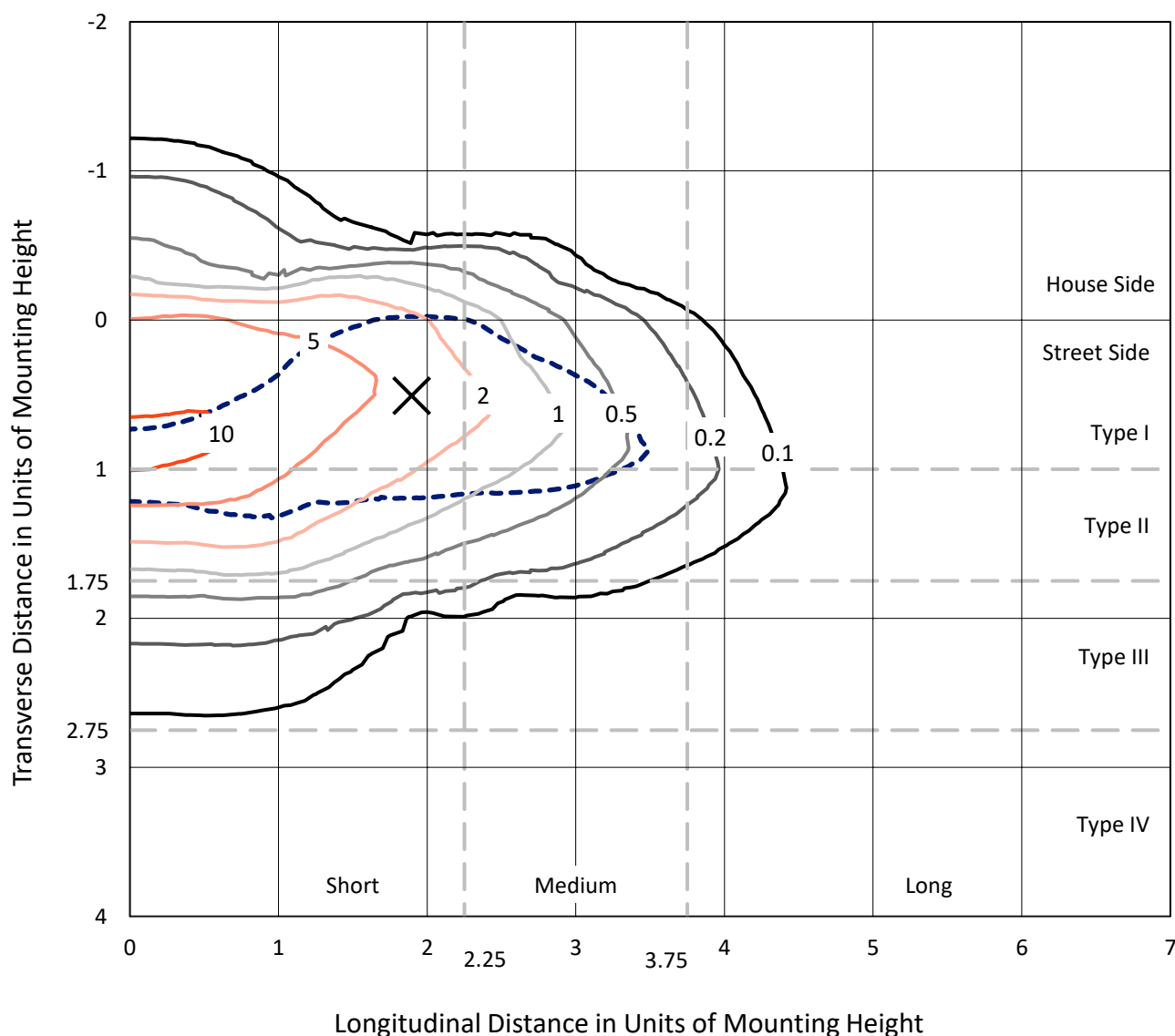
REPORT NUMBER: P1502925

CATALOG NUMBER: PRV-P-50-727-U-T2RE-HSS

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

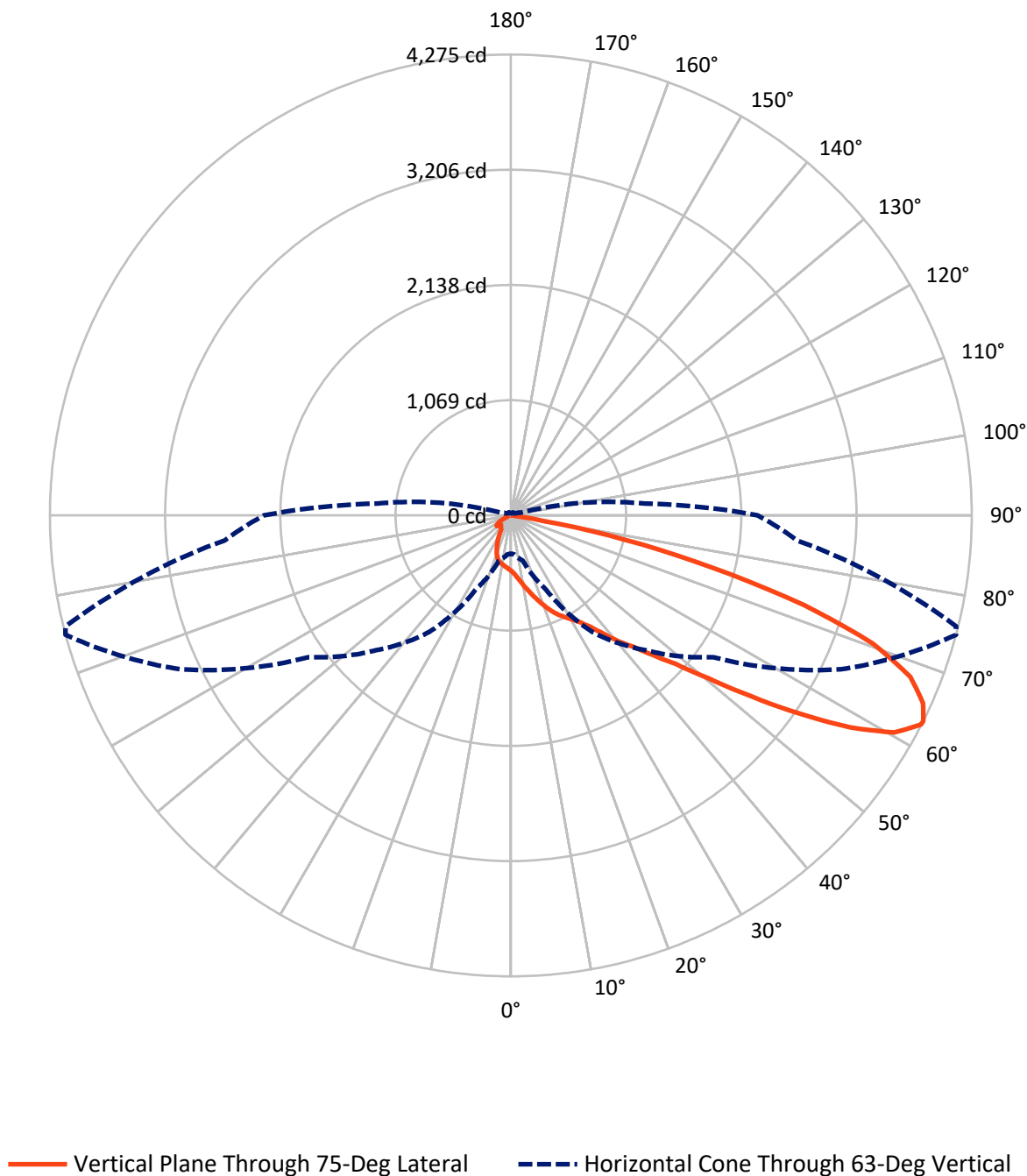


Based on 10 foot mounting height. Maximum calculated value = 11.4 fc  
 Type II - Short - N/A

REPORT NUMBER: P1502925

CATALOG NUMBER: PRV-P-50-727-U-T2RE-HSS

## Luminous Intensity Polar Plot



REPORT NUMBER: P1502925

CATALOG NUMBER: PRV-P-50-727-U-T2RE-HSS

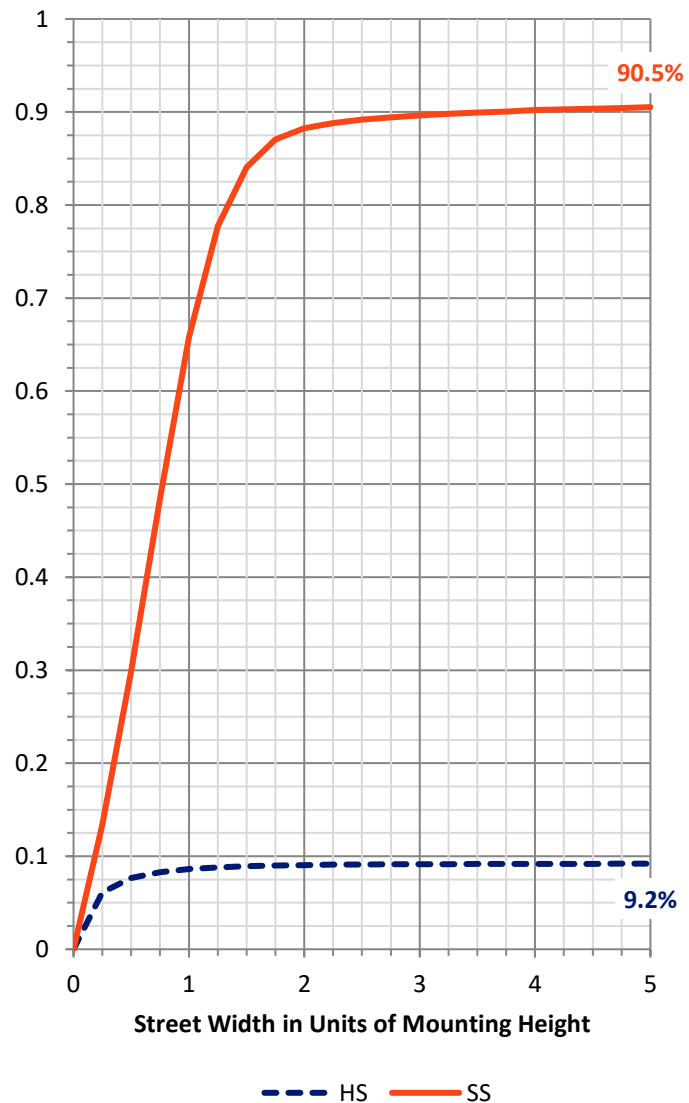
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 413.5    | 0.0    | 413.5  |
|                    | % Fixture | 9.3      | 0.0    | 9.3    |
| <b>Street Side</b> | Lumens    | 4048.0   | 0.0    | 4048.0 |
|                    | % Fixture | 90.7     | 0.0    | 90.7   |
| <b>Total</b>       | Lumens    | 4461.5   | 0.0    | 4461.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.1   | 1.1       |
| 10°-20°   | 140.1  | 3.1       |
| 20°-30°   | 268.0  | 6.0       |
| 30°-40°   | 557.9  | 12.5      |
| 40°-50°   | 992.1  | 22.2      |
| 50°-60°   | 1185.3 | 26.6      |
| 60°-70°   | 914.8  | 20.5      |
| 70°-80°   | 329.6  | 7.4       |
| 80°-90°   | 24.7   | 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°    | 4461.5 | 100.0     |
| 0°-180°   | 4461.5 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P1502925

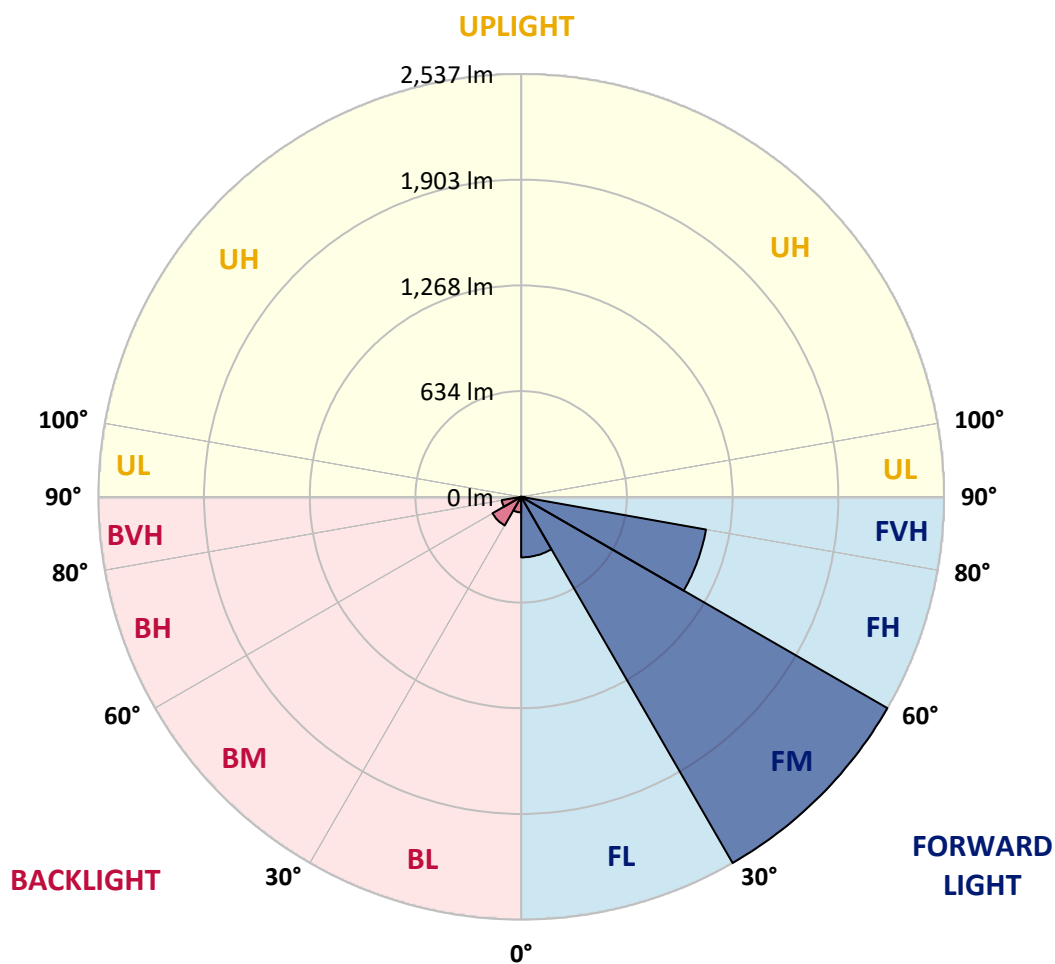
CATALOG NUMBER: PRV-P-50-727-U-T2RE-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 363.3  | 8.1       |                         |      |         |
| FM   | (30°-60°)   | 2536.8 | 56.9      |                         |      |         |
| FH   | (60°-80°)   | 1125.9 | 25.2      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 21.9   | 0.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 93.8   | 2.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 198.5  | 4.4       | B0/220                  |      |         |
| BH   | (60°-80°)   | 118.4  | 2.7       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 2.8    | 0.1       |                         |      | 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 II Short



REPORT NUMBER: P1502925

CATALOG NUMBER: PRV-P-50-727-U-T2RE-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 76°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  | 513.4  |
| 2.5°  | 602.0  | 602.0  | 604.6  | 599.4  | 591.5  | 575.9  | 566.8  | 549.9  | 536.8  | 535.5  | 523.8  |
| 5°    | 689.3  | 693.2  | 694.5  | 689.3  | 680.1  | 660.6  | 635.8  | 600.7  | 570.7  | 565.5  | 540.7  |
| 7.5°  | 693.2  | 695.8  | 703.6  | 714.0  | 720.5  | 715.3  | 699.7  | 663.2  | 611.1  | 605.9  | 564.2  |
| 10°   | 663.2  | 663.2  | 671.0  | 684.1  | 710.1  | 736.2  | 744.0  | 719.2  | 660.6  | 652.8  | 595.5  |
| 12.5° | 671.0  | 671.0  | 678.8  | 686.7  | 703.6  | 724.5  | 770.1  | 767.4  | 712.7  | 704.9  | 635.8  |
| 15°   | 699.7  | 699.7  | 707.5  | 717.9  | 728.4  | 738.8  | 775.3  | 814.4  | 771.4  | 764.8  | 676.2  |
| 17.5° | 727.1  | 725.8  | 738.8  | 758.3  | 774.0  | 775.3  | 794.8  | 849.5  | 831.3  | 826.1  | 721.8  |
| 20°   | 754.4  | 757.0  | 774.0  | 802.6  | 830.0  | 837.8  | 840.4  | 882.1  | 896.4  | 891.2  | 776.6  |
| 22.5° | 792.2  | 796.1  | 817.0  | 857.4  | 892.5  | 909.5  | 906.9  | 919.9  | 961.6  | 953.8  | 828.7  |
| 25°   | 853.4  | 854.7  | 892.5  | 942.0  | 979.8  | 1000.7 | 990.3  | 968.1  | 1018.9 | 1012.4 | 878.2  |
| 27.5° | 974.6  | 983.7  | 1011.1 | 1067.1 | 1111.4 | 1114.0 | 1095.8 | 1034.6 | 1067.1 | 1064.5 | 919.9  |
| 30°   | 1297.8 | 1278.2 | 1249.5 | 1241.7 | 1266.5 | 1261.3 | 1232.6 | 1121.9 | 1117.9 | 1114.0 | 961.6  |
| 32.5° | 1653.5 | 1656.1 | 1605.3 | 1503.6 | 1469.7 | 1428.1 | 1381.1 | 1243.0 | 1180.5 | 1180.5 | 1007.2 |
| 35°   | 1998.8 | 1977.9 | 1959.7 | 1848.9 | 1726.4 | 1633.9 | 1563.6 | 1389.0 | 1266.5 | 1263.9 | 1065.8 |
| 37.5° | 2306.3 | 2288.0 | 2268.5 | 2192.9 | 2047.0 | 1872.4 | 1748.6 | 1563.6 | 1389.0 | 1385.1 | 1136.2 |
| 40°   | 2527.8 | 2523.8 | 2512.1 | 2474.3 | 2344.0 | 2142.1 | 1958.4 | 1734.3 | 1533.6 | 1524.5 | 1220.9 |
| 42.5° | 2721.9 | 2724.5 | 2721.9 | 2724.5 | 2641.1 | 2420.9 | 2173.4 | 1908.8 | 1667.8 | 1660.0 | 1319.9 |
| 45°   | 2874.3 | 2875.7 | 2909.5 | 2938.2 | 2897.8 | 2686.7 | 2383.1 | 2117.3 | 1847.6 | 1842.4 | 1448.9 |
| 47.5° | 2728.4 | 2734.9 | 2853.5 | 3038.5 | 3093.2 | 2912.1 | 2603.3 | 2325.8 | 2060.0 | 2061.3 | 1596.1 |
| 50°   | 2290.6 | 2324.5 | 2551.2 | 2916.0 | 3144.1 | 3090.6 | 2801.4 | 2555.1 | 2370.1 | 2375.3 | 1828.1 |
| 52.5° | 1719.9 | 1755.1 | 2005.3 | 2566.8 | 2991.6 | 3110.2 | 2981.2 | 2798.8 | 2783.1 | 2775.3 | 2062.6 |
| 55°   | 1306.9 | 1329.0 | 1575.3 | 2097.8 | 2619.0 | 2914.7 | 3077.6 | 3084.1 | 3241.8 | 3239.2 | 2297.1 |
| 57.5° | 931.6  | 962.9  | 1162.2 | 1783.8 | 2216.3 | 2556.4 | 3020.3 | 3372.1 | 3709.6 | 3697.8 | 2482.2 |
| 60°   | 605.9  | 608.5  | 766.1  | 1366.8 | 1936.2 | 2109.5 | 2775.3 | 3514.1 | 4087.4 | 4087.4 | 2619.0 |
| 62.5° | 388.3  | 400.0  | 475.6  | 841.7  | 1464.5 | 1826.8 | 2402.7 | 3430.7 | 4269.8 | 4251.6 | 2675.0 |
| 63°   | 354.4  | 363.5  | 435.2  | 744.0  | 1319.9 | 1768.1 | 2291.9 | 3377.3 | 4275.0 | 4256.8 | 2665.9 |
| 65°   | 271.0  | 276.2  | 317.9  | 449.5  | 832.6  | 1362.9 | 2020.9 | 3029.4 | 4202.1 | 4211.2 | 2585.1 |
| 67.5° | 237.1  | 238.4  | 261.9  | 312.7  | 398.7  | 686.7  | 1594.8 | 2553.8 | 3996.2 | 4031.4 | 2368.8 |
| 70°   | 218.9  | 221.5  | 247.6  | 268.4  | 256.7  | 225.4  | 968.1  | 2122.5 | 3564.9 | 3661.3 | 2091.3 |
| 72.5° | 187.6  | 192.8  | 220.2  | 251.5  | 208.5  | 136.8  | 358.3  | 1605.3 | 2843.1 | 2936.9 | 1704.3 |
| 75°   | 151.1  | 156.4  | 179.8  | 212.4  | 188.9  | 113.4  | 112.1  | 893.8  | 1924.5 | 1918.0 | 1107.5 |
| 77.5° | 114.7  | 118.6  | 144.6  | 162.9  | 166.8  | 104.2  | 89.9   | 384.4  | 1080.2 | 1039.8 | 506.9  |
| 80°   | 79.5   | 84.7   | 106.8  | 118.6  | 129.0  | 96.4   | 75.6   | 110.8  | 303.6  | 288.0  | 117.3  |
| 82.5° | 41.7   | 43.0   | 67.8   | 76.9   | 86.0   | 79.5   | 58.6   | 65.1   | 57.3   | 54.7   | 31.3   |
| 85°   | 14.3   | 16.9   | 27.4   | 31.3   | 35.2   | 39.1   | 36.5   | 39.1   | 33.9   | 32.6   | 20.8   |
| 87.5° | 2.6    | 2.6    | 3.9    | 5.2    | 5.2    | 5.2    | 6.5    | 6.5    | 5.2    | 5.2    | 3.9    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

REPORT NUMBER: P1502925

CATALOG NUMBER: PRV-P-50-727-U-T2RE-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 513.4  | 513.4  | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 |
| 2.5°  | 517.3  | 510.8  | 499.0 | 487.3 | 474.3 | 462.6 | 453.4 | 449.5 | 441.7 | 440.4 | 435.2 |
| 5°    | 527.7  | 513.4  | 484.7 | 454.7 | 427.4 | 401.3 | 381.8 | 362.2 | 350.5 | 346.6 | 347.9 |
| 7.5°  | 542.0  | 521.2  | 473.0 | 423.5 | 375.3 | 333.6 | 299.7 | 269.7 | 254.1 | 247.6 | 246.3 |
| 10°   | 565.5  | 534.2  | 461.3 | 387.0 | 317.9 | 259.3 | 215.0 | 188.9 | 172.0 | 170.7 | 166.8 |
| 12.5° | 598.1  | 553.8  | 450.8 | 345.3 | 255.4 | 192.8 | 157.7 | 139.4 | 132.9 | 130.3 | 130.3 |
| 15°   | 633.2  | 577.2  | 439.1 | 297.1 | 196.7 | 144.6 | 125.1 | 121.2 | 118.6 | 117.3 | 117.3 |
| 17.5° | 672.3  | 599.4  | 415.6 | 246.3 | 151.1 | 119.9 | 113.4 | 110.8 | 108.1 | 106.8 | 106.8 |
| 20°   | 714.0  | 617.6  | 385.7 | 198.1 | 121.2 | 108.1 | 102.9 | 99.0  | 96.4  | 96.4  | 95.1  |
| 22.5° | 750.5  | 629.3  | 347.9 | 152.4 | 109.4 | 100.3 | 95.1  | 91.2  | 89.9  | 88.6  | 88.6  |
| 25°   | 784.4  | 631.9  | 307.5 | 122.5 | 101.6 | 92.5  | 86.0  | 83.4  | 82.1  | 82.1  | 80.8  |
| 27.5° | 810.4  | 626.7  | 267.1 | 108.1 | 93.8  | 86.0  | 79.5  | 76.9  | 76.9  | 75.6  | 75.6  |
| 30°   | 831.3  | 616.3  | 221.5 | 101.6 | 88.6  | 79.5  | 74.3  | 73.0  | 71.7  | 71.7  | 71.7  |
| 32.5° | 854.7  | 605.9  | 181.1 | 99.0  | 84.7  | 75.6  | 71.7  | 70.4  | 69.1  | 67.8  | 67.8  |
| 35°   | 878.2  | 603.3  | 159.0 | 99.0  | 82.1  | 74.3  | 70.4  | 67.8  | 66.5  | 65.1  | 65.1  |
| 37.5° | 905.6  | 604.6  | 151.1 | 101.6 | 82.1  | 73.0  | 69.1  | 66.5  | 65.1  | 62.5  | 62.5  |
| 40°   | 943.3  | 603.3  | 144.6 | 101.6 | 80.8  | 71.7  | 67.8  | 65.1  | 62.5  | 59.9  | 59.9  |
| 42.5° | 992.9  | 616.3  | 136.8 | 99.0  | 79.5  | 70.4  | 66.5  | 62.5  | 58.6  | 56.0  | 56.0  |
| 45°   | 1084.1 | 655.4  | 129.0 | 93.8  | 76.9  | 67.8  | 62.5  | 58.6  | 54.7  | 50.8  | 50.8  |
| 47.5° | 1215.7 | 745.3  | 125.1 | 88.6  | 73.0  | 63.8  | 57.3  | 52.1  | 49.5  | 46.9  | 46.9  |
| 50°   | 1441.1 | 906.9  | 138.1 | 80.8  | 67.8  | 58.6  | 52.1  | 46.9  | 43.0  | 40.4  | 40.4  |
| 52.5° | 1673.0 | 1089.3 | 160.3 | 75.6  | 62.5  | 52.1  | 45.6  | 40.4  | 36.5  | 33.9  | 33.9  |
| 55°   | 1881.5 | 1237.8 | 161.6 | 69.1  | 56.0  | 46.9  | 40.4  | 35.2  | 30.0  | 28.7  | 28.7  |
| 57.5° | 2065.2 | 1319.9 | 145.9 | 59.9  | 49.5  | 41.7  | 35.2  | 30.0  | 24.8  | 23.5  | 23.5  |
| 60°   | 2225.5 | 1305.6 | 125.1 | 52.1  | 43.0  | 36.5  | 32.6  | 27.4  | 22.2  | 20.8  | 22.2  |
| 62.5° | 2295.8 | 1263.9 | 104.2 | 43.0  | 37.8  | 32.6  | 31.3  | 27.4  | 19.5  | 18.2  | 18.2  |
| 63°   | 2288.0 | 1246.9 | 99.0  | 41.7  | 36.5  | 32.6  | 31.3  | 26.1  | 19.5  | 18.2  | 18.2  |
| 65°   | 2225.5 | 1170.1 | 76.9  | 36.5  | 32.6  | 30.0  | 30.0  | 23.5  | 18.2  | 15.6  | 16.9  |
| 67.5° | 2045.7 | 990.3  | 56.0  | 31.3  | 30.0  | 27.4  | 26.1  | 19.5  | 13.0  | 10.4  | 10.4  |
| 70°   | 1669.1 | 690.6  | 43.0  | 28.7  | 27.4  | 23.5  | 18.2  | 14.3  | 10.4  | 7.8   | 7.8   |
| 72.5° | 1193.5 | 359.6  | 37.8  | 24.8  | 24.8  | 18.2  | 14.3  | 11.7  | 9.1   | 5.2   | 5.2   |
| 75°   | 699.7  | 165.5  | 33.9  | 22.2  | 20.8  | 14.3  | 11.7  | 9.1   | 6.5   | 3.9   | 3.9   |
| 77.5° | 304.9  | 74.3   | 30.0  | 19.5  | 15.6  | 13.0  | 10.4  | 7.8   | 5.2   | 2.6   | 1.3   |
| 80°   | 69.1   | 35.2   | 23.5  | 15.6  | 13.0  | 10.4  | 7.8   | 6.5   | 3.9   | 0.0   | 0.0   |
| 82.5° | 27.4   | 23.5   | 16.9  | 10.4  | 7.8   | 5.2   | 3.9   | 3.9   | 1.3   | 0.0   | 0.0   |
| 85°   | 16.9   | 13.0   | 7.8   | 5.2   | 3.9   | 2.6   | 2.6   | 1.3   | 0.0   | 0.0   | 0.0   |
| 87.5° | 3.9    | 2.6    | 2.6   | 2.6   | 1.3   | 1.3   | 1.3   | 0.0   | 0.0   | 0.0   | 0.0   |
| 90°   | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 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: SP2-2501-321-3

Test Date: 04/09/2025

Luminaire Tested: GKO-PB1E-727-U-T4W

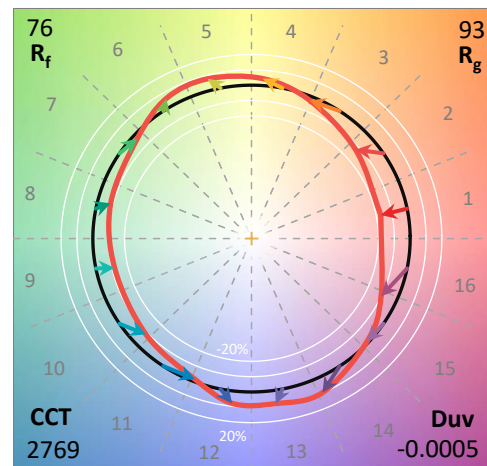
Data in this report applies to families of products including GKO-PB1E-727-U-T4W

### Test Information

Test Method: LM-79-2019  
 Report Number: SP2-2501-321-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP2 - 165CM SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/10/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GKO-PB1E-727-U-T4W**  
 Description: Gekko Wedge Wall Pack Fixture 1 SQ w/ T4W distribution

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 2769     | CRI (Ra): | 71.7 |      |       |
| CIE u':                   | 0.2596   | R1:       | 68.0 | R9:  | -34.5 |
| CIE v':                   | 0.5253   | R2:       | 84.0 | R10: | 64.3  |
| Duv:                      | -0.0005  | R3:       | 94.6 | R11: | 60.9  |
| CIE x:                    | 0.4535   | R4:       | 65.9 | R12: | 54.4  |
| CIE y:                    | 0.4078   | R5:       | 67.3 | R13: | 71.2  |
| CIE z:                    | 0.1387   | R6:       | 78.7 | R14: | 97.6  |
| Peak Wavelength (nm):     | 597      | R7:       | 75.2 | R15: | 59.5  |
| Dominant Wavelength (nm): | 584      | R8:       | 39.8 |      |       |
| Purity:                   | 58.54014 |           |      |      |       |
| Rf:                       | 75.7     |           |      |      |       |
| Rg:                       | 93.2     |           |      |      |       |



### Test Conditions

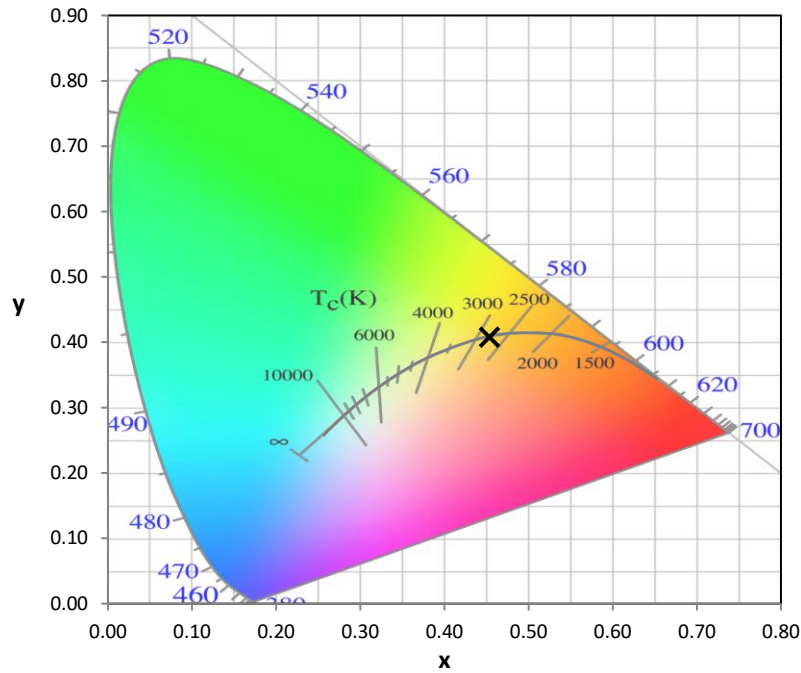
Stabilization Time: 36M  
 Operation Time: 1H 36M  
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP2-2501-321-3

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN2187                | 1/6/2025         | 7/6/2025             |
| Power Meter                    | INXT2011002           | 1/21/2025        | 1/21/2026            |
| AC Power Source                | IN0458                | 10/22/2024       | 10/22/2025           |
| DC Power Source                | IN0212                | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | IN4036B               | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | IN0046                | 10/22/2024       | 10/22/2025           |

REPORT NUMBER: SP2-2501-321-3

**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

REPORT NUMBER: SP2-2501-321-3

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| 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       | 114                         | NR               | 620       | 844                         | NR               | 750       | 22                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 138                         | NR               | 625       | 785                         | NR               | 755       | 19                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 176                         | NR               | 630       | 722                         | NR               | 760       | 16                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 222                         | NR               | 635       | 655                         | NR               | 765       | 14                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 268                         | NR               | 640       | 591                         | NR               | 770       | 12                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 311                         | NR               | 645       | 527                         | NR               | 775       | 10                          | NR               | 905       | 0                           | NR               |
| 390       | 0                           | NR               | 520       | 348                         | NR               | 650       | 467                         | NR               | 780       | 9                           | NR               | 910       | 0                           | NR               |
| 395       | 0                           | NR               | 525       | 381                         | NR               | 655       | 412                         | NR               | 785       | 8                           | NR               | 915       | 0                           | NR               |
| 400       | 2                           | NR               | 530       | 410                         | NR               | 660       | 360                         | NR               | 790       | 7                           | NR               | 920       | 0                           | NR               |
| 405       | 4                           | NR               | 535       | 438                         | NR               | 665       | 314                         | NR               | 795       | 6                           | NR               | 925       | 0                           | NR               |
| 410       | 7                           | NR               | 540       | 469                         | NR               | 670       | 272                         | NR               | 800       | 5                           | NR               | 930       | 0                           | NR               |
| 415       | 13                          | NR               | 545       | 503                         | NR               | 675       | 236                         | NR               | 805       | 4                           | NR               | 935       | 0                           | NR               |
| 420       | 25                          | NR               | 550       | 544                         | NR               | 680       | 203                         | NR               | 810       | 4                           | NR               | 940       | 0                           | NR               |
| 425       | 46                          | NR               | 555       | 594                         | NR               | 685       | 175                         | NR               | 815       | 3                           | NR               | 945       | 0                           | NR               |
| 430       | 79                          | NR               | 560       | 652                         | NR               | 690       | 149                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 128                         | NR               | 565       | 714                         | NR               | 695       | 128                         | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 196                         | NR               | 570       | 783                         | NR               | 700       | 109                         | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 299                         | NR               | 575       | 847                         | NR               | 705       | 93                          | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 433                         | NR               | 580       | 906                         | NR               | 710       | 80                          | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 433                         | NR               | 585       | 953                         | NR               | 715       | 68                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 293                         | NR               | 590       | 985                         | NR               | 720       | 58                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 215                         | NR               | 595       | 998                         | NR               | 725       | 50                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 173                         | NR               | 600       | 997                         | NR               | 730       | 42                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 127                         | NR               | 605       | 978                         | NR               | 735       | 36                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 104                         | NR               | 610       | 945                         | NR               | 740       | 30                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 104                         | NR               | 615       | 902                         | NR               | 745       | 26                          | NR               | 875       | 1                           | NR               |           |                             |                  |

REPORT NUMBER: SP2-2501-321-3

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.14

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 114                      | NR            | 620    | 844                      | NR            | 750    | 22                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 138                      | NR            | 625    | 785                      | NR            | 755    | 19                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 176                      | NR            | 630    | 722                      | NR            | 760    | 16                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 222                      | NR            | 635    | 655                      | NR            | 765    | 14                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 268                      | NR            | 640    | 591                      | NR            | 770    | 12                       | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 311                      | NR            | 645    | 527                      | NR            | 775    | 10                       | NR            | 905    | 0                        | NR            |
| 390    | 0                        | NR            | 520    | 348                      | NR            | 650    | 467                      | NR            | 780    | 9                        | NR            | 910    | 0                        | NR            |
| 395    | 0                        | NR            | 525    | 381                      | NR            | 655    | 412                      | NR            | 785    | 8                        | NR            | 915    | 0                        | NR            |
| 400    | 2                        | NR            | 530    | 410                      | NR            | 660    | 360                      | NR            | 790    | 7                        | NR            | 920    | 0                        | NR            |
| 405    | 4                        | NR            | 535    | 438                      | NR            | 665    | 314                      | NR            | 795    | 6                        | NR            | 925    | 0                        | NR            |
| 410    | 7                        | NR            | 540    | 469                      | NR            | 670    | 272                      | NR            | 800    | 5                        | NR            | 930    | 0                        | NR            |
| 415    | 13                       | NR            | 545    | 503                      | NR            | 675    | 236                      | NR            | 805    | 4                        | NR            | 935    | 0                        | NR            |
| 420    | 25                       | NR            | 550    | 544                      | NR            | 680    | 203                      | NR            | 810    | 4                        | NR            | 940    | 0                        | NR            |
| 425    | 46                       | NR            | 555    | 594                      | NR            | 685    | 175                      | NR            | 815    | 3                        | NR            | 945    | 0                        | NR            |
| 430    | 79                       | NR            | 560    | 652                      | NR            | 690    | 149                      | NR            | 820    | 3                        | NR            | 950    | 0                        | NR            |
| 435    | 128                      | NR            | 565    | 714                      | NR            | 695    | 128                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 196                      | NR            | 570    | 783                      | NR            | 700    | 109                      | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 299                      | NR            | 575    | 847                      | NR            | 705    | 93                       | NR            | 835    | 2                        | NR            | 965    | 0                        | NR            |
| 450    | 433                      | NR            | 580    | 906                      | NR            | 710    | 80                       | NR            | 840    | 2                        | NR            | 970    | 0                        | NR            |
| 455    | 433                      | NR            | 585    | 953                      | NR            | 715    | 68                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 293                      | NR            | 590    | 985                      | NR            | 720    | 58                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 215                      | NR            | 595    | 998                      | NR            | 725    | 50                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 173                      | NR            | 600    | 997                      | NR            | 730    | 42                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 127                      | NR            | 605    | 978                      | NR            | 735    | 36                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 104                      | NR            | 610    | 945                      | NR            | 740    | 30                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 104                      | NR            | 615    | 902                      | NR            | 745    | 26                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP2-2501-321-3

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.08

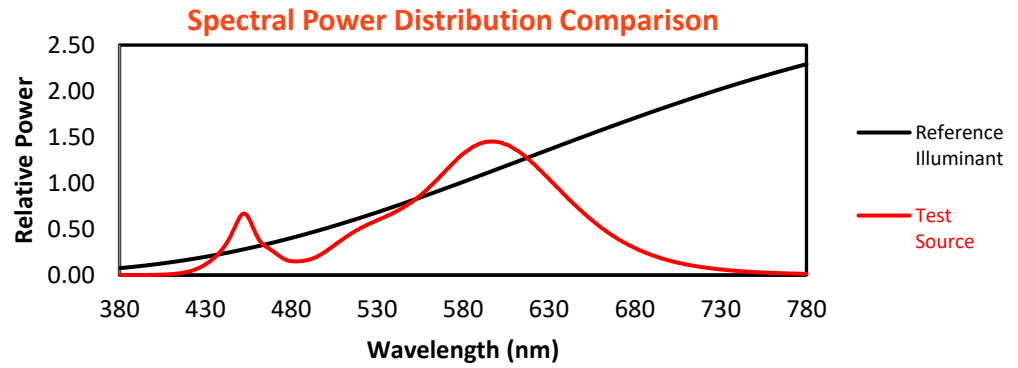
| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | 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               | 114                                    | NR                             | 620               | 844                                    | NR                             | 750               | 22                                     | NR                             | 880               | 1                                      | NR                             |
| 365               | 0                                      | NR                             | 495               | 138                                    | NR                             | 625               | 785                                    | NR                             | 755               | 19                                     | NR                             | 885               | 1                                      | NR                             |
| 370               | 0                                      | NR                             | 500               | 176                                    | NR                             | 630               | 722                                    | NR                             | 760               | 16                                     | NR                             | 890               | 1                                      | NR                             |
| 375               | 0                                      | NR                             | 505               | 222                                    | NR                             | 635               | 655                                    | NR                             | 765               | 14                                     | NR                             | 895               | 0                                      | NR                             |
| 380               | 0                                      | NR                             | 510               | 268                                    | NR                             | 640               | 591                                    | NR                             | 770               | 12                                     | NR                             | 900               | 0                                      | NR                             |
| 385               | 0                                      | NR                             | 515               | 311                                    | NR                             | 645               | 527                                    | NR                             | 775               | 10                                     | NR                             | 905               | 0                                      | NR                             |
| 390               | 0                                      | NR                             | 520               | 348                                    | NR                             | 650               | 467                                    | NR                             | 780               | 9                                      | NR                             | 910               | 0                                      | NR                             |
| 395               | 0                                      | NR                             | 525               | 381                                    | NR                             | 655               | 412                                    | NR                             | 785               | 8                                      | NR                             | 915               | 0                                      | NR                             |
| 400               | 2                                      | NR                             | 530               | 410                                    | NR                             | 660               | 360                                    | NR                             | 790               | 7                                      | NR                             | 920               | 0                                      | NR                             |
| 405               | 4                                      | NR                             | 535               | 438                                    | NR                             | 665               | 314                                    | NR                             | 795               | 6                                      | NR                             | 925               | 0                                      | NR                             |
| 410               | 7                                      | NR                             | 540               | 469                                    | NR                             | 670               | 272                                    | NR                             | 800               | 5                                      | NR                             | 930               | 0                                      | NR                             |
| 415               | 13                                     | NR                             | 545               | 503                                    | NR                             | 675               | 236                                    | NR                             | 805               | 4                                      | NR                             | 935               | 0                                      | NR                             |
| 420               | 25                                     | NR                             | 550               | 544                                    | NR                             | 680               | 203                                    | NR                             | 810               | 4                                      | NR                             | 940               | 0                                      | NR                             |
| 425               | 46                                     | NR                             | 555               | 594                                    | NR                             | 685               | 175                                    | NR                             | 815               | 3                                      | NR                             | 945               | 0                                      | NR                             |
| 430               | 79                                     | NR                             | 560               | 652                                    | NR                             | 690               | 149                                    | NR                             | 820               | 3                                      | NR                             | 950               | 0                                      | NR                             |
| 435               | 128                                    | NR                             | 565               | 714                                    | NR                             | 695               | 128                                    | NR                             | 825               | 2                                      | NR                             | 955               | 0                                      | NR                             |
| 440               | 196                                    | NR                             | 570               | 783                                    | NR                             | 700               | 109                                    | NR                             | 830               | 2                                      | NR                             | 960               | 0                                      | NR                             |
| 445               | 299                                    | NR                             | 575               | 847                                    | NR                             | 705               | 93                                     | NR                             | 835               | 2                                      | NR                             | 965               | 0                                      | NR                             |
| 450               | 433                                    | NR                             | 580               | 906                                    | NR                             | 710               | 80                                     | NR                             | 840               | 2                                      | NR                             | 970               | 0                                      | NR                             |
| 455               | 433                                    | NR                             | 585               | 953                                    | NR                             | 715               | 68                                     | NR                             | 845               | 1                                      | NR                             | 975               | 0                                      | NR                             |
| 460               | 293                                    | NR                             | 590               | 985                                    | NR                             | 720               | 58                                     | NR                             | 850               | 1                                      | NR                             | 980               | 0                                      | NR                             |
| 465               | 215                                    | NR                             | 595               | 998                                    | NR                             | 725               | 50                                     | NR                             | 855               | 1                                      | NR                             | 985               | 0                                      | NR                             |
| 470               | 173                                    | NR                             | 600               | 997                                    | NR                             | 730               | 42                                     | NR                             | 860               | 1                                      | NR                             | 990               | 0                                      | NR                             |
| 475               | 127                                    | NR                             | 605               | 978                                    | NR                             | 735               | 36                                     | NR                             | 865               | 1                                      | NR                             | 995               | 0                                      | NR                             |
| 480               | 104                                    | NR                             | 610               | 945                                    | NR                             | 740               | 30                                     | NR                             | 870               | 1                                      | NR                             | 1000              | 0                                      | NR                             |
| 485               | 104                                    | NR                             | 615               | 902                                    | NR                             | 745               | 26                                     | NR                             | 875               | 1                                      | NR                             |                   |                                        |                                |

REPORT NUMBER: SP2-2501-321-3

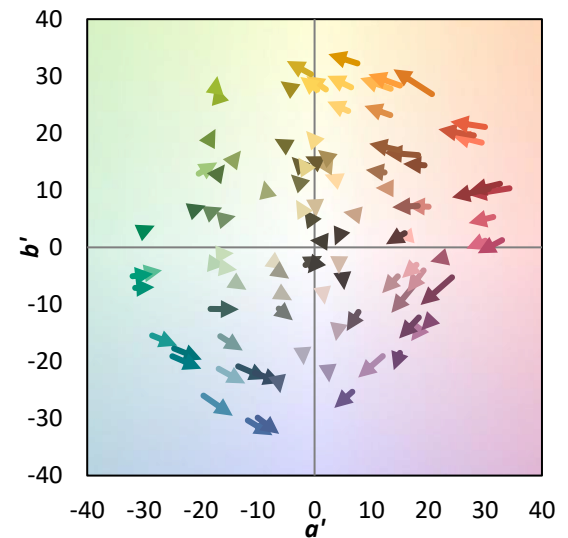
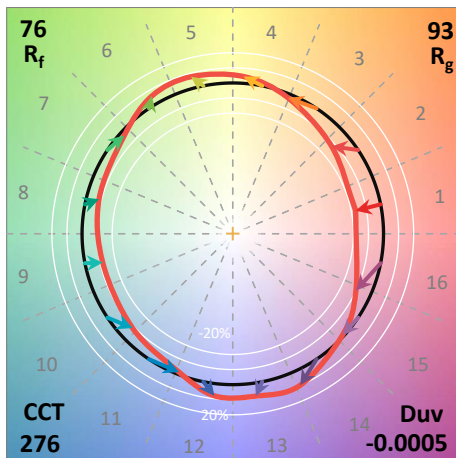
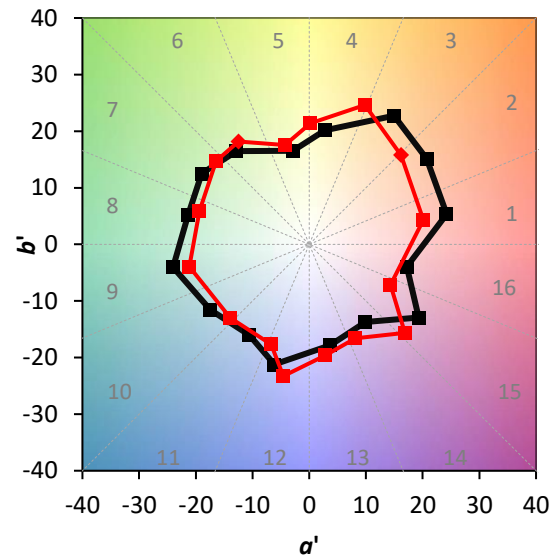
TM-30-18

### Summary

$R_f = 75.7$   
 $R_g = 93.2$   
 $CIE\ R_a = 71.7$   
 $R_g = -34.5$

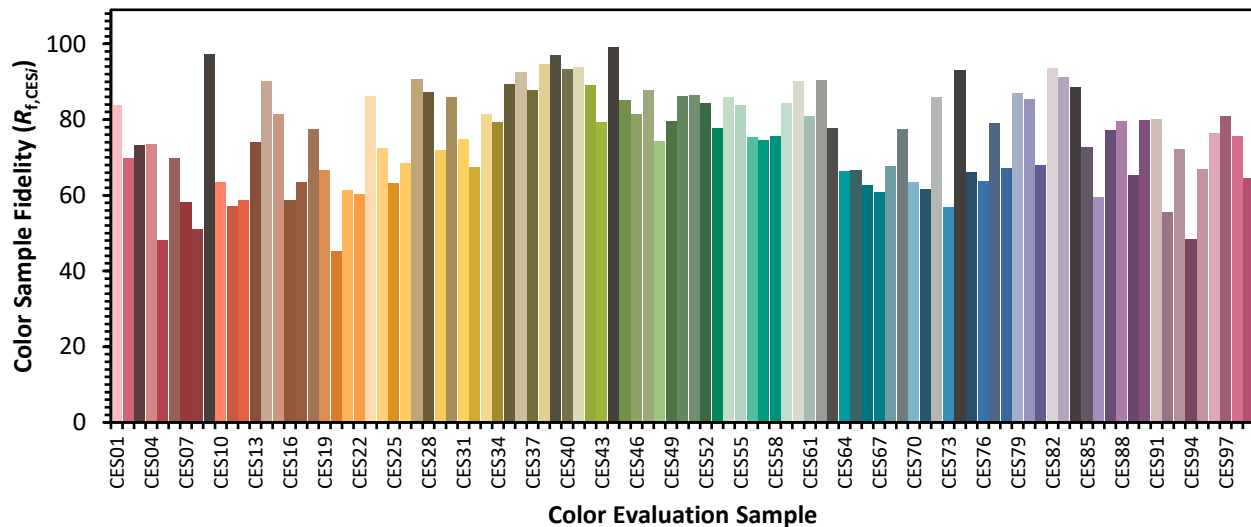


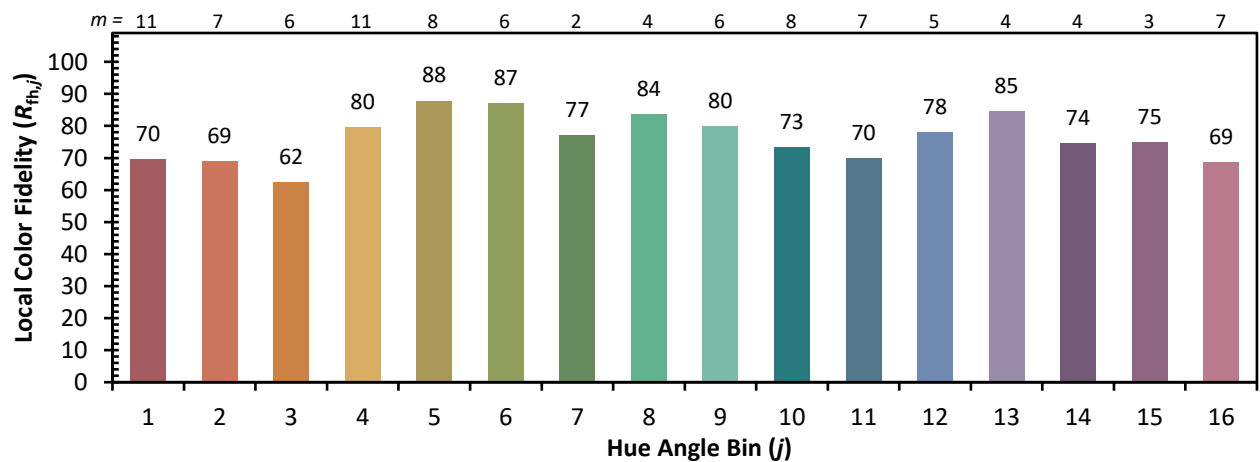
### Color Vector Graphics



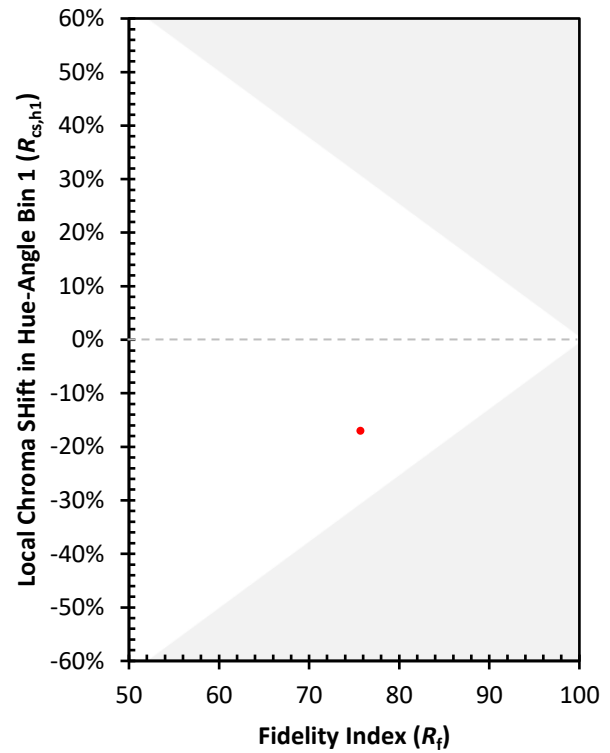
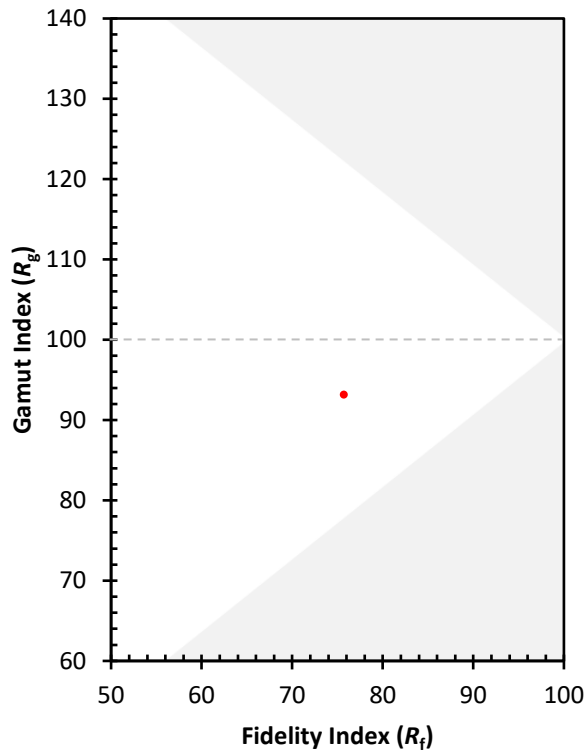
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 68 | CES51 = 87 | CES76 = 64 |
| CES02 = 63 | CES27 = 91 | CES52 = 84 | CES77 = 79 |
| CES03 = 31 | CES28 = 87 | CES53 = 78 | CES78 = 67 |
| CES04 = 71 | CES29 = 72 | CES54 = 86 | CES79 = 87 |
| CES05 = 50 | CES30 = 86 | CES55 = 84 | CES80 = 85 |
| CES06 = 52 | CES31 = 75 | CES56 = 75 | CES81 = 68 |
| CES07 = 42 | CES32 = 67 | CES57 = 74 | CES82 = 94 |
| CES08 = 41 | CES33 = 81 | CES58 = 76 | CES83 = 91 |
| CES09 = 29 | CES34 = 79 | CES59 = 84 | CES84 = 89 |
| CES10 = 77 | CES35 = 89 | CES60 = 90 | CES85 = 73 |
| CES11 = 60 | CES36 = 92 | CES61 = 81 | CES86 = 59 |
| CES12 = 66 | CES37 = 88 | CES62 = 90 | CES87 = 77 |
| CES13 = 43 | CES38 = 95 | CES63 = 78 | CES88 = 79 |
| CES14 = 74 | CES39 = 97 | CES64 = 66 | CES89 = 65 |
| CES15 = 72 | CES40 = 93 | CES65 = 67 | CES90 = 80 |
| CES16 = 48 | CES41 = 94 | CES66 = 63 | CES91 = 80 |
| CES17 = 50 | CES42 = 89 | CES67 = 61 | CES92 = 55 |
| CES18 = 57 | CES43 = 79 | CES68 = 68 | CES93 = 72 |
| CES19 = 73 | CES44 = 99 | CES69 = 77 | CES94 = 48 |
| CES20 = 67 | CES45 = 85 | CES70 = 63 | CES95 = 67 |
| CES21 = 87 | CES46 = 81 | CES71 = 62 | CES96 = 76 |
| CES22 = 80 | CES47 = 88 | CES72 = 86 | CES97 = 81 |
| CES23 = 92 | CES48 = 74 | CES73 = 57 | CES98 = 76 |
| CES24 = 91 | CES49 = 80 | CES74 = 93 | CES99 = 64 |
| CES25 = 73 | CES50 = 86 | CES75 = 66 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)