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: LUMARK

Report Number: P1460864

Luminaire Tested: PRV-PC1D-722-U-T3R

Issue Date: 06/10/2026

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1460864 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 6/10/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | LUMARK |
| Catalog Number: | PRV-PC1D-722-U-T3R |
| Description: | PREVAIL DISCRETE LED 1 SQUARE AT 1170MA 70CRI 2200K FIXTURE w/ TYPE III DISTRIBUTION OPTIC |
| Light Source: | (40) 2200K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 17924.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 117.9 lumens/watt |
| Luminous Opening: | Rectangular (W 0.67' x L: 0.67' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G3 |
| Input Watts (W): | 152 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 2.75% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

Cooper Lighting Solutions Photometric Lab
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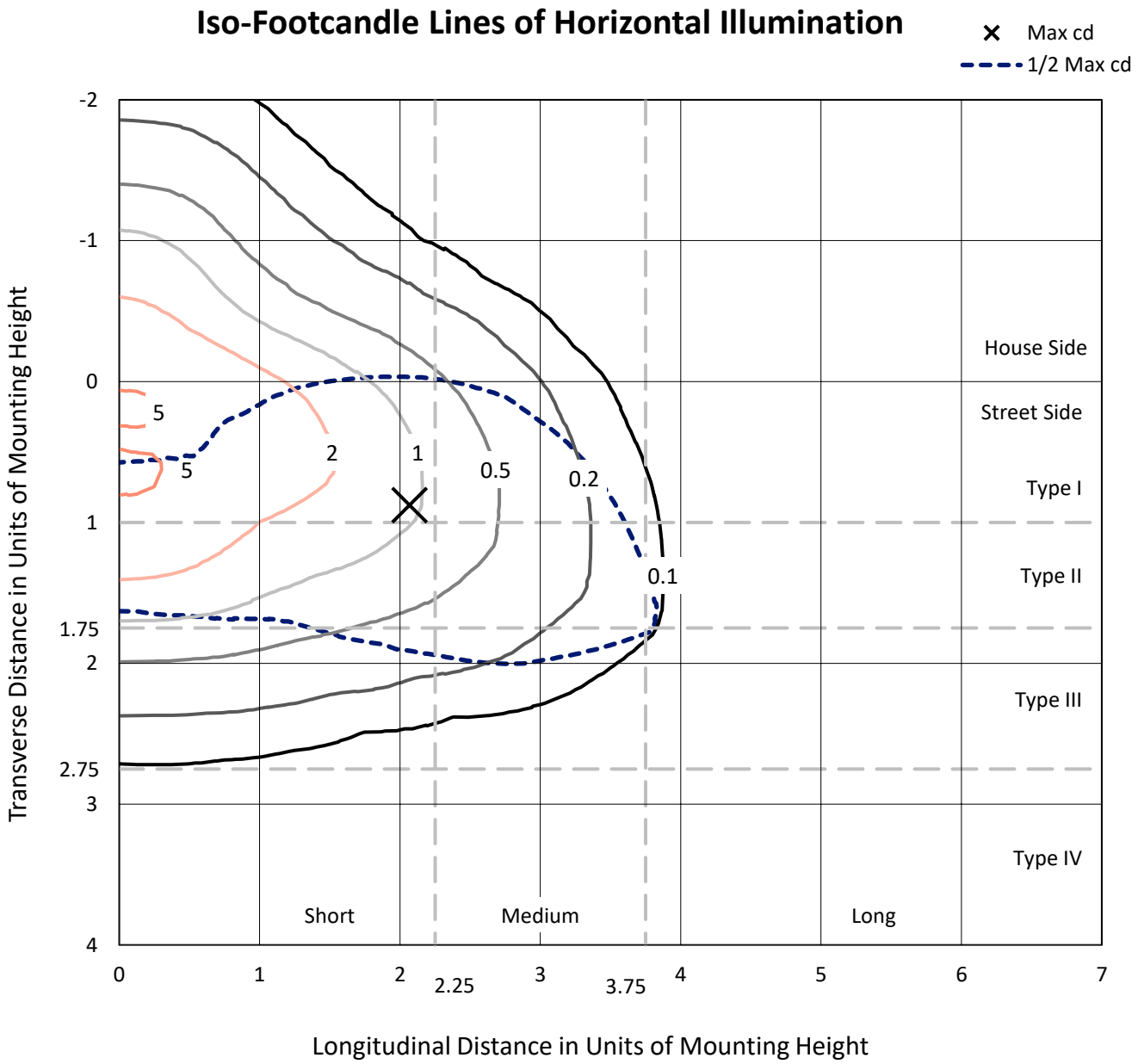
Peachtree City, GA 30269

Scaled Data Report

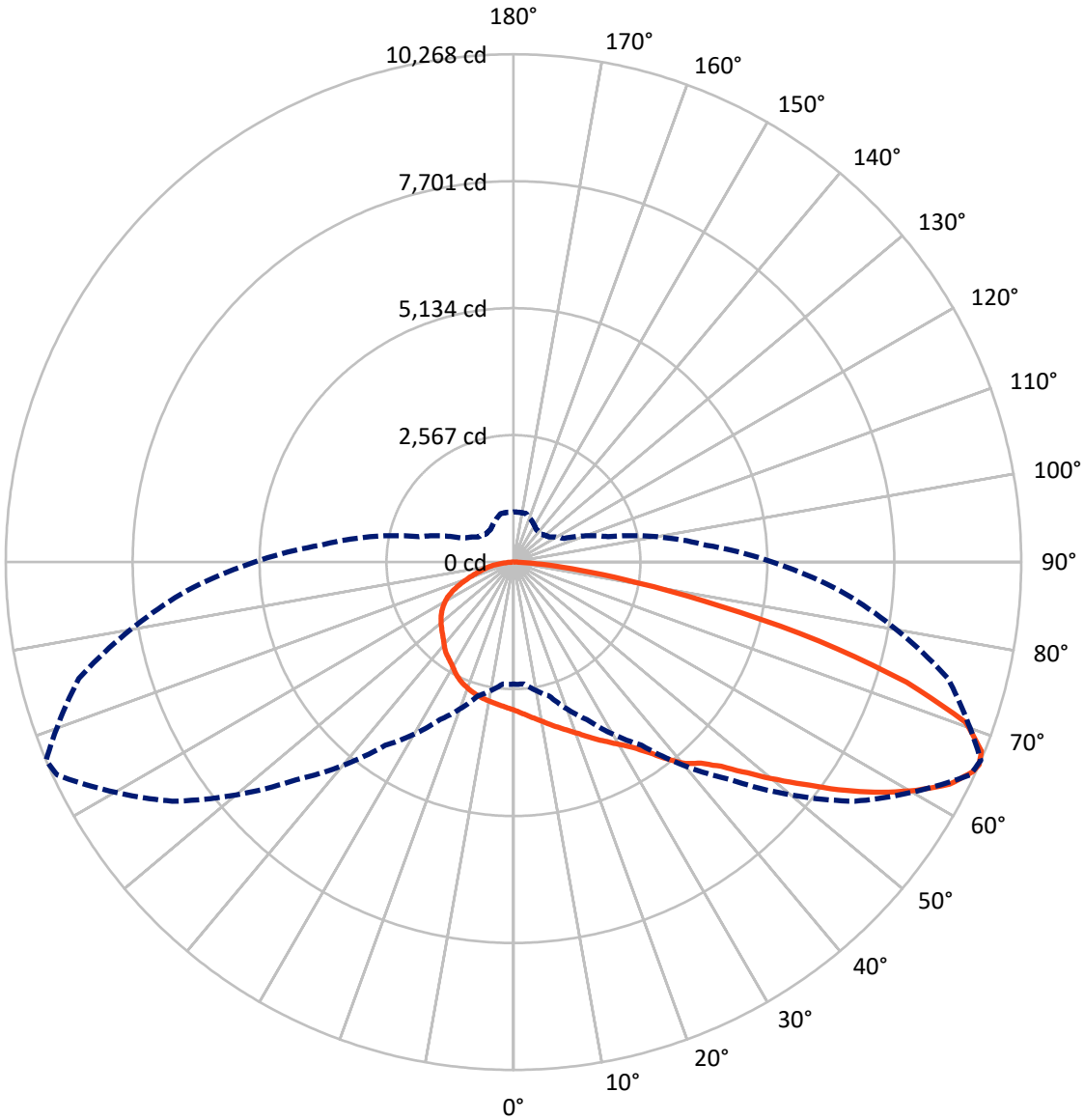
REPORT NUMBER: P1460864
CATALOG NUMBER: PRV-PC1D-722-U-T3R




Based on 25 foot mounting height. Maximum calculated value = 5.5 fc
Type III - Short - N/A

REPORT NUMBER: P1460864
CATALOG NUMBER: PRV-PC1D-722-U-T3R

## Luminous Intensity Polar Plot




Vertical Plane Through 67-Deg Lateral  Horizontal Cone Through 66-Deg Vertical

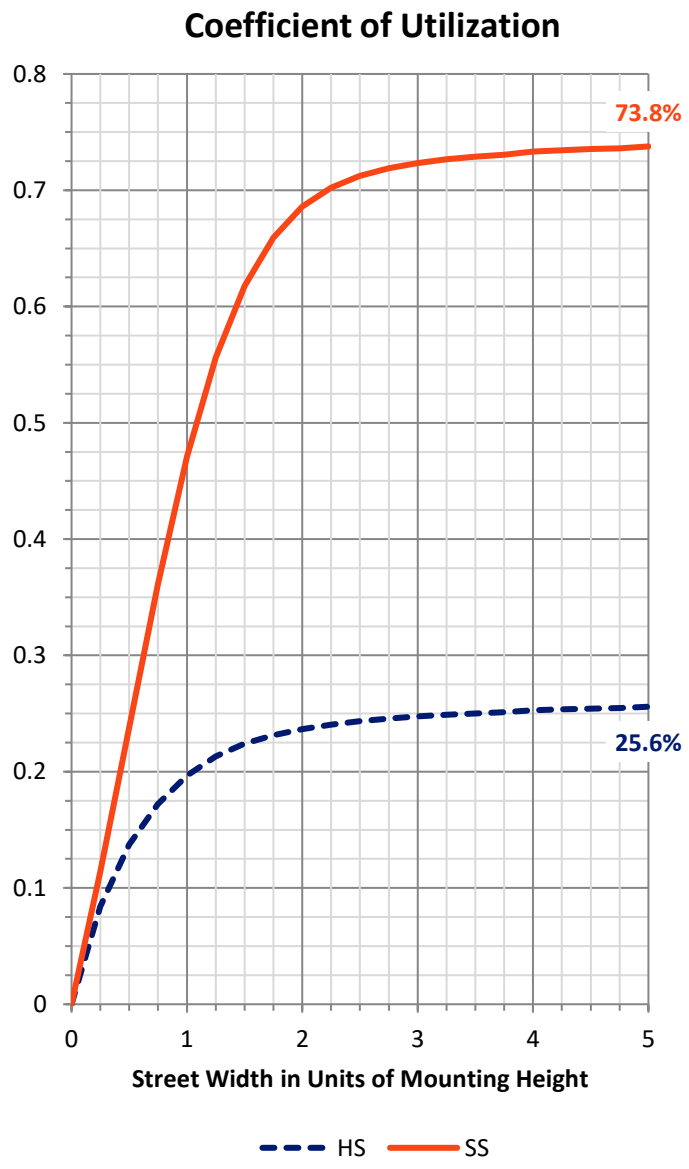
REPORT NUMBER: P1460864
CATALOG NUMBER: PRV-PC1D-722-U-T3R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 4645.3 | 0.0 | 4645.3 |
| | % Fixture | 25.9 | 0.0 | 25.9 |
| **Street Side** | Lumens | 13278.9 | 0.0 | 13278.9 |
| | % Fixture | 74.1 | 0.0 | 74.1 |
| **Total** | Lumens | 17924.2 | 0.0 | 17924.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 288.6 | 1.6 |
| 10°-20° | 868.7 | 4.8 |
| 20°-30° | 1478.6 | 8.2 |
| 30°-40° | 2311.4 | 12.9 |
| 40°-50° | 3196.3 | 17.8 |
| 50°-60° | 3833.0 | 21.4 |
| 60°-70° | 3698.8 | 20.6 |
| 70°-80° | 1908.9 | 10.6 |
| 80°-90° | 339.9 | 1.9 |
| 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° | 17924.2 | 100.0 |
| 0°-180° | 17924.2 | 100.0 |

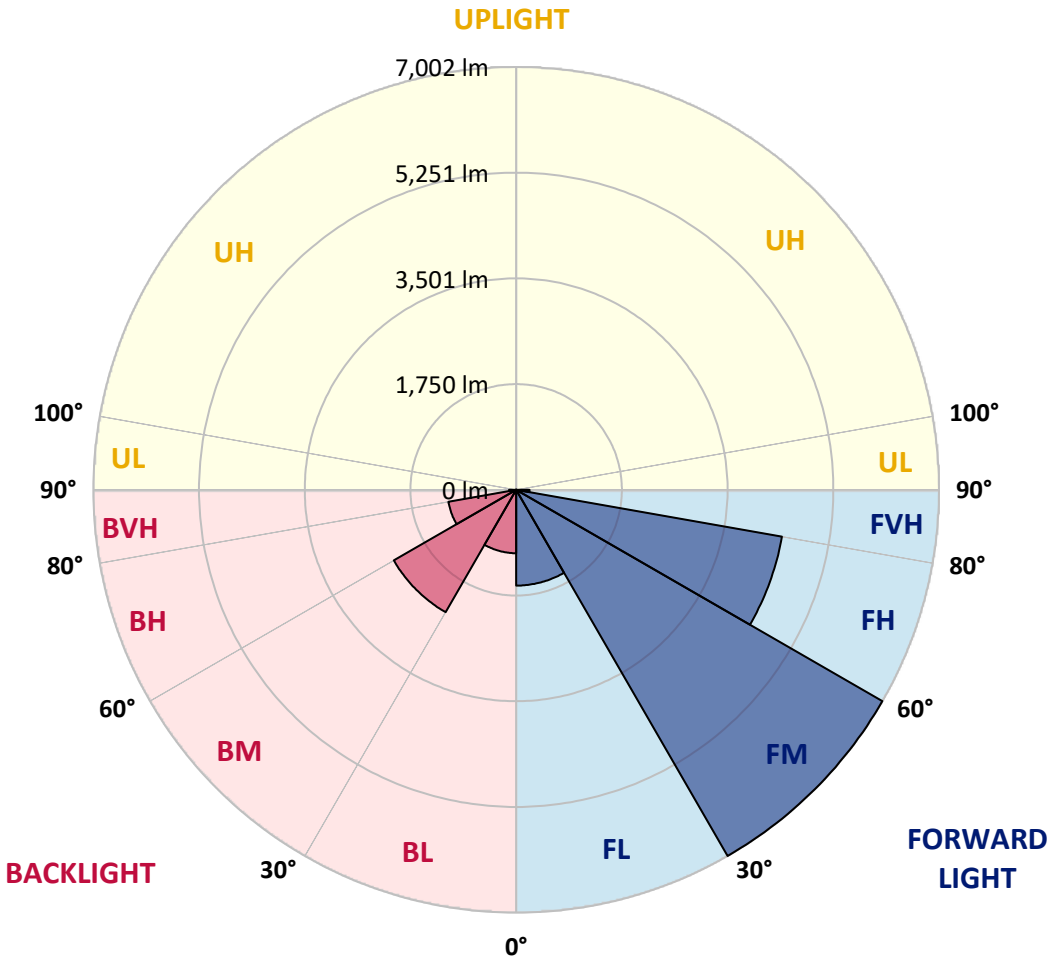


REPORT NUMBER: P1460864
CATALOG NUMBER: PRV-PC1D-722-U-T3R

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

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1586.2 | 8.8 | | | |
| FM | (30°-60°) | 7001.9 | 39.1 | | | |
| FH | (60°-80°) | 4468.8 | 24.9 | | | G2/5000 |
| FVH | (80°-90°) | 222.0 | 1.2 | | | G2/225 |
| BL | (0°-30°) | 1049.7 | 5.9 | B3/2500 | | |
| BM | (30°-60°) | 2338.9 | 13.0 | B2/2500 | | |
| BH | (60°-80°) | 1138.8 | 6.4 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 117.9 | 0.7 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G3**
Type III Short



REPORT NUMBER: P1460864
CATALOG NUMBER: PRV-PC1D-722-U-T3R

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | *2995.5* | 2995.5 | 2995.5 |
| 2.5° | 3117.1 | 3119.6 | 3121.3 | 3116.3 | 3100.4 | 3089.6 | 3081.3 | 3054.6 | *3055.4* | 3038.8 | 3008.0 |
| 5° | 3236.2 | 3248.7 | 3245.4 | 3236.2 | 3217.0 | 3190.4 | 3161.2 | 3118.8 | *3122.1* | 3086.3 | 3033.0 |
| 7.5° | 3349.5 | 3365.3 | 3359.5 | 3352.0 | 3330.3 | 3296.2 | 3262.0 | 3200.4 | *3197.9* | 3143.7 | 3062.9 |
| 10° | 3439.5 | 3456.1 | 3456.1 | 3451.1 | 3442.0 | 3402.8 | 3358.7 | 3292.0 | *3278.7* | 3202.9 | 3106.3 |
| 12.5° | 3513.6 | 3528.6 | 3538.6 | 3534.4 | 3537.8 | 3511.1 | 3462.8 | 3390.3 | *3377.0* | 3276.2 | 3154.6 |
| 15° | 3557.7 | 3586.1 | 3593.6 | 3606.9 | 3624.4 | 3613.6 | 3580.2 | 3482.8 | *3474.4* | 3361.2 | 3205.4 |
| 17.5° | 3602.7 | 3618.6 | 3636.9 | 3670.2 | 3698.5 | 3715.2 | 3681.9 | 3600.2 | *3578.6* | 3442.0 | 3258.7 |
| 20° | 3655.2 | 3684.4 | 3704.4 | 3739.3 | 3779.3 | 3820.1 | 3812.6 | 3716.0 | *3694.4* | 3542.7 | 3323.7 |
| 22.5° | 3794.3 | 3815.1 | 3824.3 | 3848.5 | 3895.9 | 3936.8 | 3941.8 | 3856.8 | *3830.1* | 3665.2 | 3401.1 |
| 25° | 4074.2 | 4097.5 | 4062.5 | 4035.9 | 4022.6 | 4058.4 | 4083.4 | 4005.1 | *3975.9* | 3786.8 | 3476.9 |
| 27.5° | 4572.3 | 4571.5 | 4469.9 | 4361.6 | 4245.8 | 4203.3 | 4220.8 | 4154.2 | *4122.5* | 3905.1 | 3565.2 |
| 30° | 5137.9 | 5165.4 | 5079.6 | 4817.2 | 4544.8 | 4373.2 | 4384.1 | 4309.1 | *4285.0* | 4048.4 | 3667.7 |
| 32.5° | 5729.4 | 5745.2 | 5642.7 | 5390.3 | 4951.4 | 4635.6 | 4571.5 | 4509.0 | *4474.0* | 4239.1 | 3800.1 |
| 35° | 6016.8 | 6048.4 | 5993.4 | 5751.9 | 5309.5 | 4957.2 | 4847.2 | 4780.6 | *4733.1* | 4464.9 | 3970.9 |
| 37.5° | 6388.3 | 6434.1 | 6423.3 | 6080.1 | 5532.8 | 5214.6 | 5137.1 | 5072.1 | *5051.3* | 4747.3 | 4187.5 |
| 40° | 6935.6 | 6933.9 | 6958.0 | 6409.9 | 5770.2 | 5392.8 | 5395.3 | 5397.8 | *5357.0* | 4979.7 | 4348.3 |
| 42.5° | 7200.5 | 7193.0 | 7112.2 | 6592.4 | 6046.7 | 5568.6 | 5600.3 | 5596.9 | *5554.4* | 5156.3 | 4475.7 |
| 45° | 7281.3 | 7272.1 | 7079.7 | 6732.3 | 6479.9 | 5766.9 | 5857.7 | 5926.0 | *5891.0* | 5477.8 | 4729.8 |
| 47.5° | 7224.6 | 7206.3 | 7100.5 | 6815.6 | 6717.3 | 6115.9 | 6152.5 | 6375.8 | *6369.1* | 5878.5 | 5024.7 |
| 50° | 7083.8 | 7033.0 | 7001.4 | 6845.6 | 6648.2 | 6271.7 | 6517.4 | 6931.4 | *6915.6* | 6370.0 | 5339.5 |
| 52.5° | 6773.1 | 6766.5 | 6806.4 | 6704.0 | 6504.9 | 6341.6 | 6916.4 | 7488.7 | *7492.0* | 6869.8 | 5656.9 |
| 55° | 6386.6 | 6362.5 | 6488.2 | 6479.9 | 6355.0 | 6480.7 | 7308.7 | 8128.4 | *8151.7* | 7386.2 | 5997.6 |
| 57.5° | 5458.6 | 5486.1 | 6023.4 | 6174.2 | 6198.4 | 6623.2 | 7727.7 | 8732.3 | *8780.7* | 7909.3 | 6289.1 |
| 60° | 4551.5 | 4604.8 | 4991.3 | 5671.9 | 5953.5 | 6697.3 | 8120.1 | 9347.1 | *9367.1* | 8433.3 | 6554.0 |
| 62.5° | 3773.5 | 3757.7 | 4110.9 | 4878.9 | 5559.4 | 6668.2 | 8397.5 | 9822.7 | *9895.2* | 8850.6 | 6705.6 |
| 65° | 2798.9 | 2836.4 | 3219.5 | 3900.1 | 4892.2 | 6392.4 | 8484.9 | 10151.8 | *10211.7* | 9082.2 | 6699.8 |
| 66° | *2468.2* | *2474.8* | *2803.9* | *3513.6* | *4520.7* | *6221.7* | *8429.1* | *10182.6* | *10267.6* | *9098.9* | *6629.0* |
| 67.5° | 2040.0 | 2049.2 | 2310.7 | 2891.3 | 3935.1 | 5850.2 | 8215.9 | 10125.9 | *10207.6* | 9006.4 | 6406.6 |
| 70° | 1448.6 | 1497.7 | 1637.7 | 2028.4 | 2773.9 | 4758.9 | 7530.3 | 9512.9 | *9699.5* | 8420.0 | 5757.7 |
| 72.5° | 1048.7 | 1062.1 | 1175.4 | 1377.8 | 1743.5 | 3172.9 | 6231.7 | 8192.6 | *8312.5* | 7041.3 | 4589.8 |
| 75° | 748.0 | 764.7 | 860.5 | 941.3 | 1153.7 | 1957.5 | 4394.1 | 6417.4 | *6389.1* | 5038.0 | 3127.1 |
| 77.5° | 581.4 | 593.9 | 628.9 | 672.2 | 774.7 | 1119.6 | 2644.8 | 4336.6 | *4275.0* | 3157.9 | 1949.2 |
| 80° | 472.3 | 475.6 | 464.8 | 482.3 | 534.0 | 705.6 | 1513.6 | 2589.8 | *2534.8* | 1781.8 | 1180.4 |
| 82.5° | 368.2 | 372.4 | 364.0 | 352.4 | 378.2 | 476.5 | 883.8 | 1369.5 | *1362.0* | 1032.9 | 639.7 |
| 85° | 235.7 | 244.9 | 234.9 | 218.2 | 235.7 | 289.9 | 465.6 | 583.9 | *561.4* | 467.3 | 243.2 |
| 87.5° | 131.6 | 129.9 | 119.1 | 95.8 | 83.3 | 105.0 | 129.9 | 130.8 | *125.8* | 110.0 | 66.6 |
| 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: P1460864
CATALOG NUMBER: PRV-PC1D-722-U-T3R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 | 2995.5 |
| 2.5° | 3001.3 | 2995.5 | 2971.3 | 2949.7 | 2927.2 | 2913.8 | 2893.8 | 2884.7 | 2873.8 | 2864.7 | 2856.4 |
| 5° | 3018.0 | 2998.0 | 2952.2 | 2909.7 | 2868.9 | 2842.2 | 2806.4 | 2788.9 | 2768.9 | 2761.4 | 2751.4 |
| 7.5° | 3038.0 | 2999.6 | 2938.0 | 2872.2 | 2817.2 | 2768.1 | 2722.2 | 2694.8 | 2672.3 | 2665.6 | 2664.8 |
| 10° | 3063.8 | 3017.1 | 2925.5 | 2839.7 | 2763.1 | 2696.4 | 2638.1 | 2596.5 | 2571.5 | 2562.3 | 2558.1 |
| 12.5° | 3094.6 | 3033.0 | 2917.2 | 2808.0 | 2708.1 | 2626.4 | 2554.0 | 2501.5 | 2477.3 | 2462.3 | 2464.0 |
| 15° | 3131.2 | 3052.9 | 2908.0 | 2771.4 | 2644.8 | 2547.3 | 2459.0 | 2399.0 | 2370.7 | 2359.9 | 2358.2 |
| 17.5° | 3169.6 | 3071.3 | 2898.0 | 2728.1 | 2574.8 | 2454.9 | 2362.4 | 2294.9 | 2259.1 | 2256.6 | 2263.3 |
| 20° | 3213.7 | 3098.8 | 2886.3 | 2678.9 | 2501.5 | 2364.1 | 2261.6 | 2202.5 | 2166.6 | 2163.3 | 2176.6 |
| 22.5° | 3265.4 | 3125.4 | 2868.9 | 2622.3 | 2419.9 | 2269.9 | 2169.1 | 2112.5 | 2084.2 | 2087.5 | 2098.3 |
| 25° | 3323.7 | 3154.6 | 2846.4 | 2559.0 | 2329.1 | 2171.6 | 2078.3 | 2038.4 | 2020.9 | 2027.5 | 2042.5 |
| 27.5° | 3381.1 | 3187.1 | 2812.2 | 2480.7 | 2231.6 | 2081.7 | 2015.0 | 1985.9 | 1980.9 | 1993.4 | 2010.9 |
| 30° | 3452.0 | 3218.7 | 2771.4 | 2388.2 | 2126.6 | 2003.4 | 1955.9 | 1949.2 | 1954.2 | 1965.0 | 1985.0 |
| 32.5° | 3550.2 | 3282.9 | 2743.1 | 2303.2 | 2034.2 | 1925.9 | 1917.6 | 1928.4 | 1941.7 | 1955.9 | 1978.4 |
| 35° | 3682.7 | 3364.5 | 2735.6 | 2233.3 | 1950.1 | 1864.3 | 1885.1 | 1928.4 | 1950.9 | 1967.5 | 1989.2 |
| 37.5° | 3849.3 | 3464.4 | 2724.7 | 2168.3 | 1870.9 | 1802.6 | 1862.6 | 1940.1 | 1970.0 | 1978.4 | 1995.0 |
| 40° | 3942.6 | 3493.6 | 2647.3 | 2083.3 | 1795.1 | 1748.5 | 1839.3 | 1942.6 | 1968.4 | 1980.9 | 1995.0 |
| 42.5° | 4028.4 | 3507.8 | 2574.8 | 1997.5 | 1736.0 | 1692.7 | 1799.3 | 1912.6 | 1955.1 | 2009.2 | 2027.5 |
| 45° | 4194.2 | 3600.2 | 2545.6 | 1920.9 | 1674.3 | 1630.2 | 1721.8 | 1841.8 | 1949.2 | 2009.2 | 2024.2 |
| 47.5° | 4409.1 | 3703.5 | 2517.3 | 1850.1 | 1605.2 | 1546.0 | 1603.5 | 1788.5 | 1908.4 | 1954.2 | 1960.0 |
| 50° | 4632.3 | 3796.0 | 2479.8 | 1782.6 | 1519.4 | 1431.9 | 1503.6 | 1711.0 | 1838.4 | 1860.1 | 1865.1 |
| 52.5° | 4833.9 | 3880.9 | 2443.2 | 1711.8 | 1429.4 | 1319.5 | 1400.3 | 1602.7 | 1717.6 | 1723.5 | 1736.0 |
| 55° | 5035.5 | 3962.6 | 2398.2 | 1637.7 | 1322.0 | 1203.7 | 1282.8 | 1461.1 | 1551.9 | 1542.7 | 1542.7 |
| 57.5° | 5193.8 | 4035.9 | 2357.4 | 1546.0 | 1221.2 | 1103.7 | 1161.2 | 1301.1 | 1386.9 | 1378.6 | 1371.1 |
| 60° | 5327.0 | 4083.4 | 2309.1 | 1439.4 | 1119.6 | 1007.1 | 1042.9 | 1167.0 | 1250.3 | 1232.0 | 1232.0 |
| 62.5° | 5380.3 | 4084.2 | 2229.9 | 1326.1 | 1015.4 | 913.8 | 937.1 | 1047.9 | 1142.0 | 1131.2 | 1137.9 |
| 65° | 5319.5 | 4006.7 | 2065.0 | 1187.0 | 917.1 | 824.7 | 843.8 | 938.8 | 1049.6 | 1046.2 | 1052.9 |
| 66° | *5235.4* | *3916.8* | *1976.7* | *1130.4* | *882.1* | *797.2* | *803.8* | *901.3* | *1011.3* | *1012.9* | *1012.1* |
| 67.5° | 5052.1 | 3755.2 | 1818.4 | 1049.6 | 825.5 | 744.7 | 753.0 | 850.5 | 959.6 | 951.3 | 954.6 |
| 70° | 4582.3 | 3231.2 | 1493.6 | 906.3 | 740.5 | 659.7 | 673.1 | 773.9 | 854.7 | 846.3 | 844.7 |
| 72.5° | 3662.7 | 2438.2 | 1206.2 | 773.9 | 654.7 | 584.8 | 604.8 | 674.7 | 774.7 | 770.5 | 773.0 |
| 75° | 2429.0 | 1593.5 | 948.8 | 651.4 | 564.8 | 525.6 | 527.3 | 587.3 | 683.9 | 696.4 | 703.9 |
| 77.5° | 1512.7 | 1090.4 | 763.0 | 547.3 | 474.0 | 439.8 | 443.2 | 506.5 | 585.6 | 591.4 | 598.1 |
| 80° | 970.4 | 803.8 | 601.4 | 444.0 | 362.4 | 354.9 | 365.7 | 424.0 | 489.8 | 494.8 | 491.5 |
| 82.5° | 585.6 | 520.6 | 449.8 | 317.4 | 279.9 | 279.9 | 294.9 | 340.7 | 364.9 | 283.2 | 264.9 |
| 85° | 233.2 | 270.7 | 244.9 | 174.9 | 179.9 | 184.1 | 193.3 | 230.7 | 243.2 | 128.3 | 100.8 |
| 87.5° | 54.1 | 74.1 | 72.5 | 50.8 | 55.8 | 60.8 | 60.0 | 97.5 | 121.6 | 55.0 | 31.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP2-2501-321-2

Test Date: 04/09/2025

Luminaire Tested: GKO-PB1E-722-U-T4W

Data in this report applies to families of products including GKO-PB1E-722-U-T4W

Report Generated By FNC07603 / LDUCLS01DT447
Version: v7.04

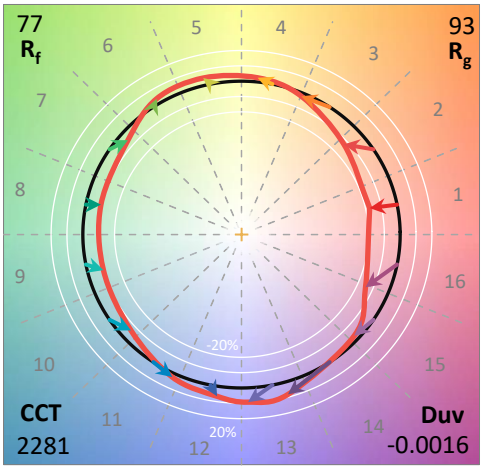
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP2-2501-321-2 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP2 - 165CM SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 04/10/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GKO-PB1E-722-U-T4W** |
| Description: | Gekko Wedge Wall Pack Fixture 1 SQ w/ T4W distribution |

## Spectral Parameters

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CCT (K): | 2281 | CRI (Ra): | | 70.6 | | | |
| CIE u': | 0.2851 | R1: | | 68.4 | R9: | | -35.1 |
| CIE v': | 0.5324 | R2: | | 88.7 | R10: | | 78.0 |
| Duv: | -0.0016 | R3: | | 85.7 | R11: | | 60.2 |
| CIE x: | 0.4942 | R4: | | 63.2 | R12: | | 73.8 |
| CIE y: | 0.4102 | R5: | | 69.0 | R13: | | 72.8 |
| CIE z: | 0.0956 | R6: | | 88.6 | R14: | | 92.4 |
| Peak Wavelength (nm): | 602 | R7: | | 68.8 | R15: | | 58.4 |
| Dominant Wavelength (nm): | 587 | R8: | | 32.6 | | | |
| Purity: | 71.48321 | | | | | | |

| | |
|---|---|
| Rf: | 76.9 |
| Rg: | 92.6 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 40M |
| Operation Time: | 1H 40M |
| Sphere Temperature (°C): | 25.0 |

| 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 |

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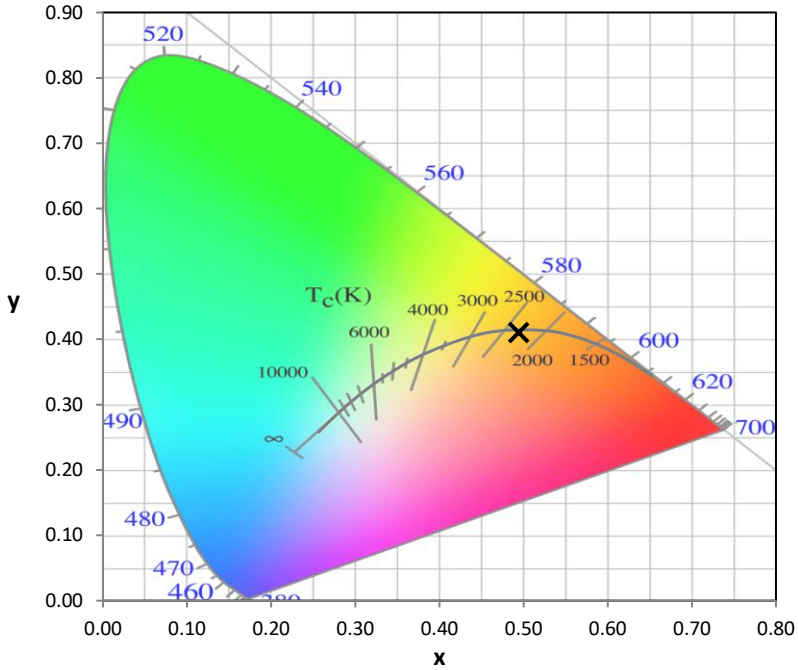
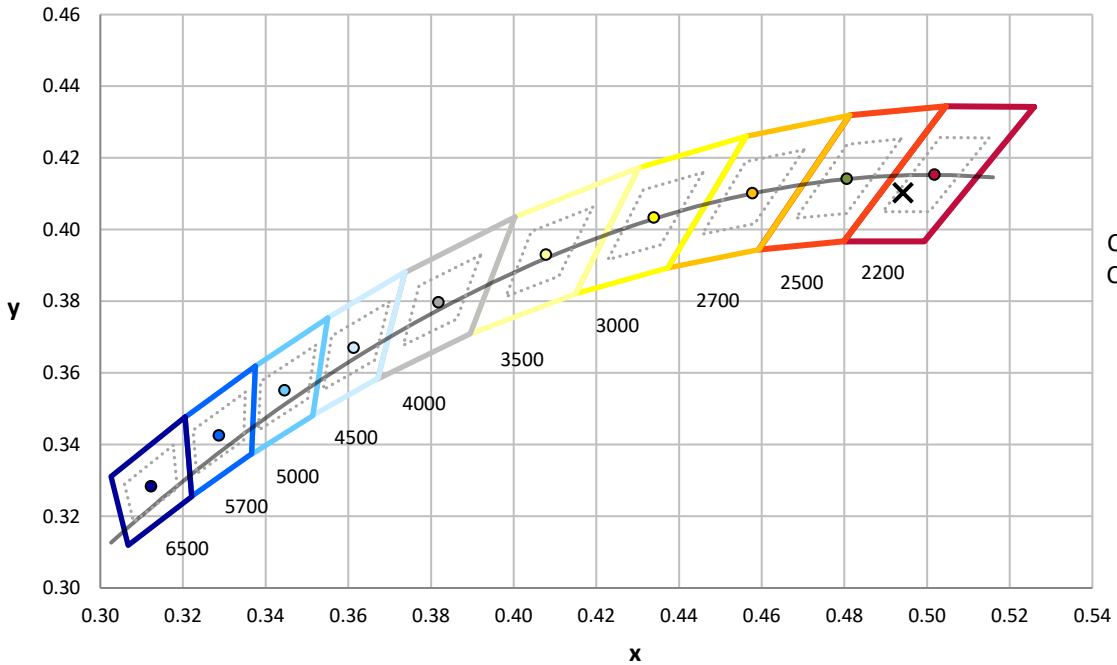
## CIE 1931 Chromaticity Diagram




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




CCT = 2281K
CIE x = 0.4942
CIE y = 0.4102
Duv = -0.0016

Point lies inside the ANSI 2200K 4-step quadrangle

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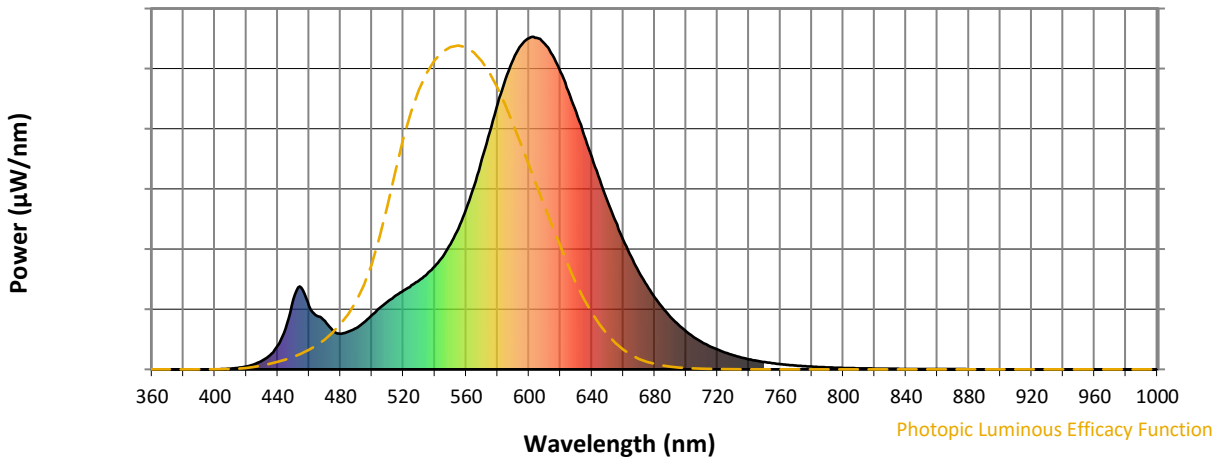
## Photopic Flux vs. Wavelength




## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 124 | NR | 620 | 894 | NR | 750 | 22 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 141 | NR | 625 | 837 | NR | 755 | 19 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 163 | NR | 630 | 774 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 184 | NR | 635 | 706 | NR | 765 | 13 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 204 | NR | 640 | 638 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 221 | NR | 645 | 570 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 237 | NR | 650 | 505 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 0 | NR | 525 | 252 | NR | 655 | 446 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 0 | NR | 530 | 268 | NR | 660 | 389 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 1 | NR | 535 | 287 | NR | 665 | 339 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 2 | NR | 540 | 310 | NR | 670 | 292 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 5 | NR | 545 | 339 | NR | 675 | 253 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 9 | NR | 550 | 377 | NR | 680 | 217 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 15 | NR | 555 | 424 | NR | 685 | 186 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 26 | NR | 560 | 482 | NR | 690 | 158 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 43 | NR | 565 | 551 | NR | 695 | 135 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 71 | NR | 570 | 632 | NR | 700 | 114 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 123 | NR | 575 | 714 | NR | 705 | 97 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 210 | NR | 580 | 797 | NR | 710 | 82 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 873 | NR | 715 | 70 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 190 | NR | 590 | 934 | NR | 720 | 59 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 161 | NR | 595 | 975 | NR | 725 | 50 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 145 | NR | 600 | 996 | NR | 730 | 43 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 117 | NR | 605 | 997 | NR | 735 | 36 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 107 | NR | 610 | 978 | NR | 740 | 30 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 113 | NR | 615 | 945 | NR | 745 | 26 | NR | 875 | 1 | NR | | | |

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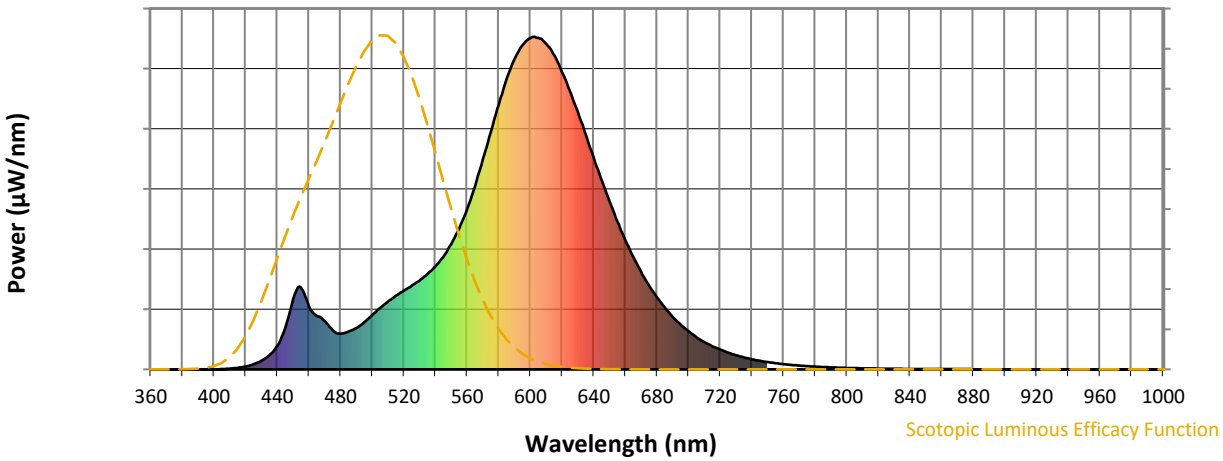
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 0.98**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 124 | NR | 620 | 894 | NR | 750 | 22 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 141 | NR | 625 | 837 | NR | 755 | 19 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 163 | NR | 630 | 774 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 184 | NR | 635 | 706 | NR | 765 | 13 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 204 | NR | 640 | 638 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 221 | NR | 645 | 570 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 237 | NR | 650 | 505 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 0 | NR | 525 | 252 | NR | 655 | 446 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 0 | NR | 530 | 268 | NR | 660 | 389 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 1 | NR | 535 | 287 | NR | 665 | 339 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 2 | NR | 540 | 310 | NR | 670 | 292 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 5 | NR | 545 | 339 | NR | 675 | 253 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 9 | NR | 550 | 377 | NR | 680 | 217 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 15 | NR | 555 | 424 | NR | 685 | 186 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 26 | NR | 560 | 482 | NR | 690 | 158 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 43 | NR | 565 | 551 | NR | 695 | 135 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 71 | NR | 570 | 632 | NR | 700 | 114 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 123 | NR | 575 | 714 | NR | 705 | 97 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 210 | NR | 580 | 797 | NR | 710 | 82 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 873 | NR | 715 | 70 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 190 | NR | 590 | 934 | NR | 720 | 59 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 161 | NR | 595 | 975 | NR | 725 | 50 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 145 | NR | 600 | 996 | NR | 730 | 43 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 117 | NR | 605 | 997 | NR | 735 | 36 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 107 | NR | 610 | 978 | NR | 740 | 30 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 113 | NR | 615 | 945 | NR | 745 | 26 | NR | 875 | 1 | NR | | | |

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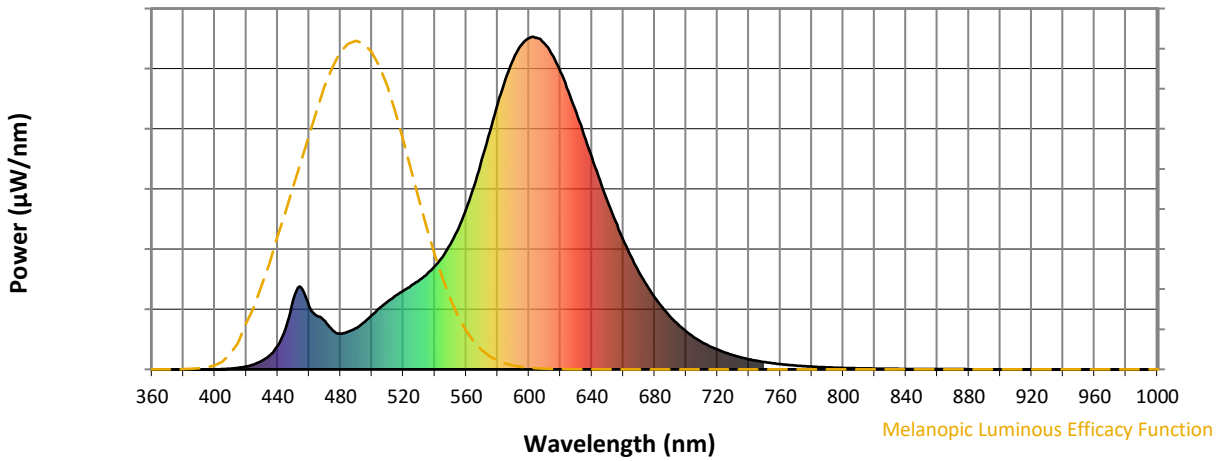
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.75**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 124 | NR | 620 | 894 | NR | 750 | 22 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 141 | NR | 625 | 837 | NR | 755 | 19 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 163 | NR | 630 | 774 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 184 | NR | 635 | 706 | NR | 765 | 13 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 204 | NR | 640 | 638 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 221 | NR | 645 | 570 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 237 | NR | 650 | 505 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 0 | NR | 525 | 252 | NR | 655 | 446 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 0 | NR | 530 | 268 | NR | 660 | 389 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 1 | NR | 535 | 287 | NR | 665 | 339 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 2 | NR | 540 | 310 | NR | 670 | 292 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 5 | NR | 545 | 339 | NR | 675 | 253 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 9 | NR | 550 | 377 | NR | 680 | 217 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 15 | NR | 555 | 424 | NR | 685 | 186 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 26 | NR | 560 | 482 | NR | 690 | 158 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 43 | NR | 565 | 551 | NR | 695 | 135 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 71 | NR | 570 | 632 | NR | 700 | 114 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 123 | NR | 575 | 714 | NR | 705 | 97 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 210 | NR | 580 | 797 | NR | 710 | 82 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 873 | NR | 715 | 70 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 190 | NR | 590 | 934 | NR | 720 | 59 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 161 | NR | 595 | 975 | NR | 725 | 50 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 145 | NR | 600 | 996 | NR | 730 | 43 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 117 | NR | 605 | 997 | NR | 735 | 36 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 107 | NR | 610 | 978 | NR | 740 | 30 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 113 | NR | 615 | 945 | NR | 745 | 26 | NR | 875 | 1 | NR | | | |

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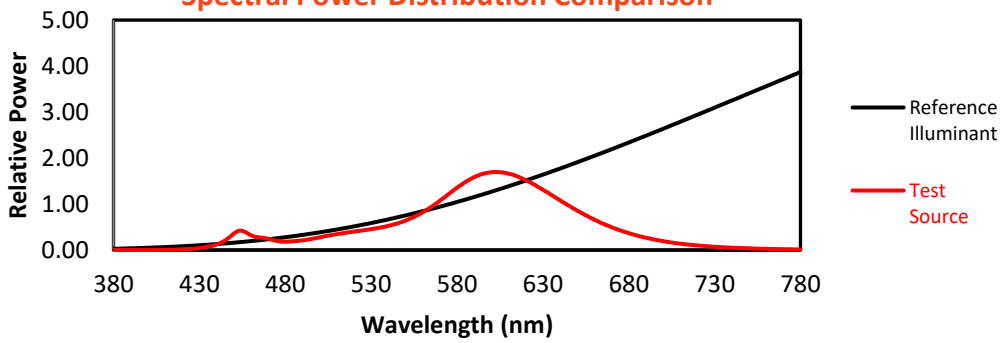
# TM-30-18

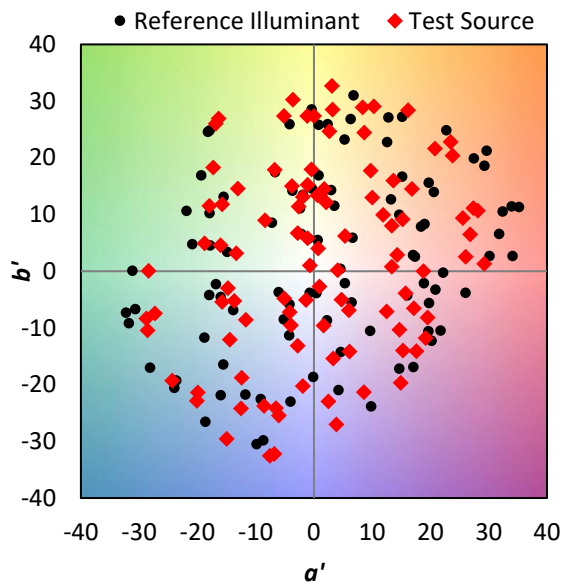
## Summary

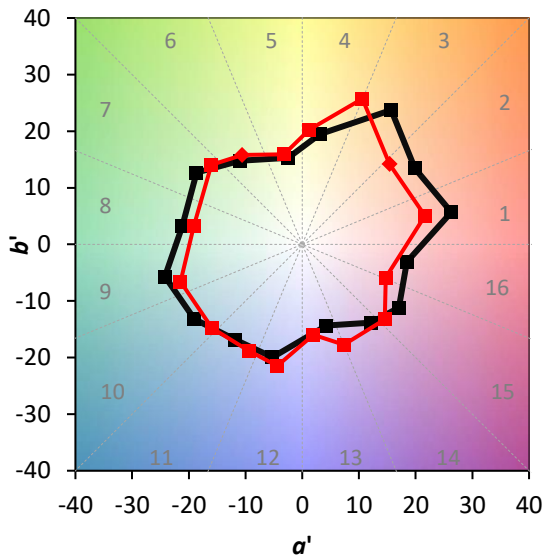
$R_f$ = 76.9
$R_g$ = 92.6
CIE $R_a$ = 70.6
$R_9$ = -35.1

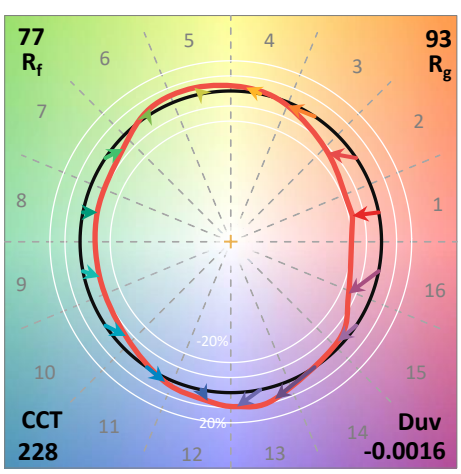
## Spectral Power Distribution Comparison

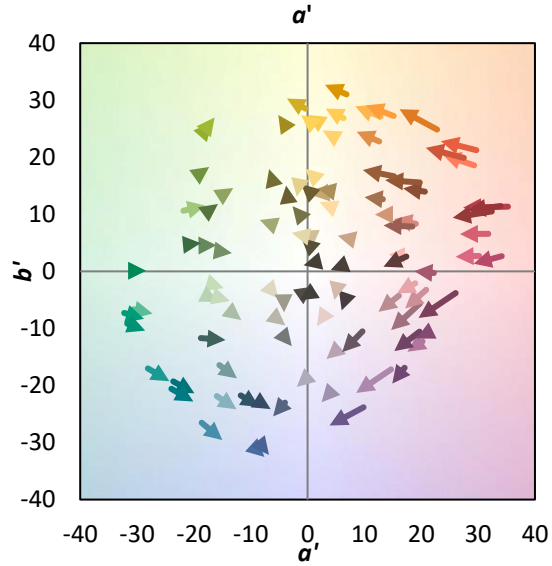



## Color Vector Graphics



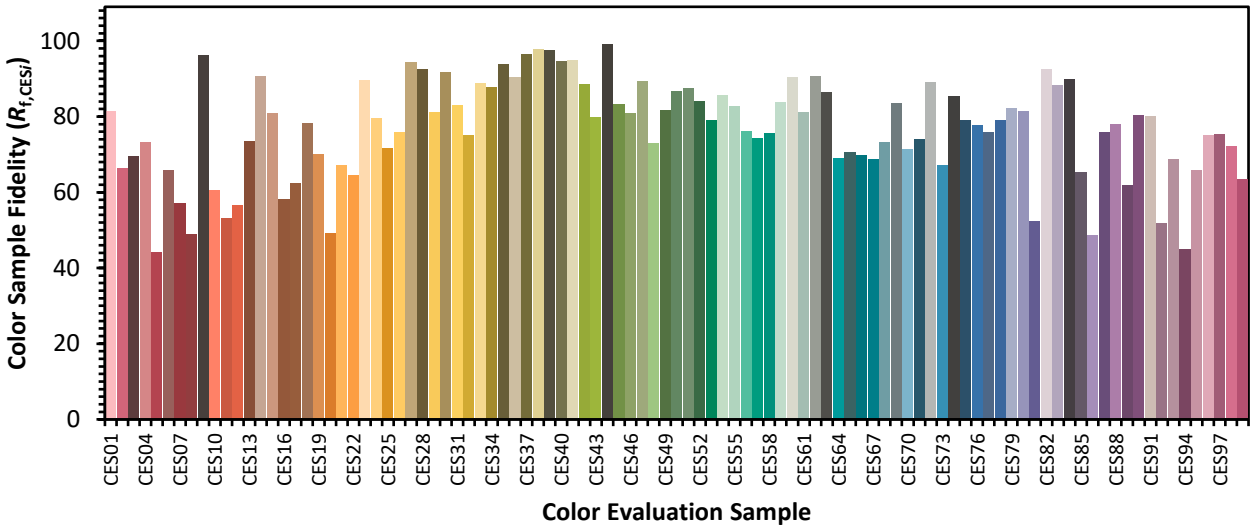



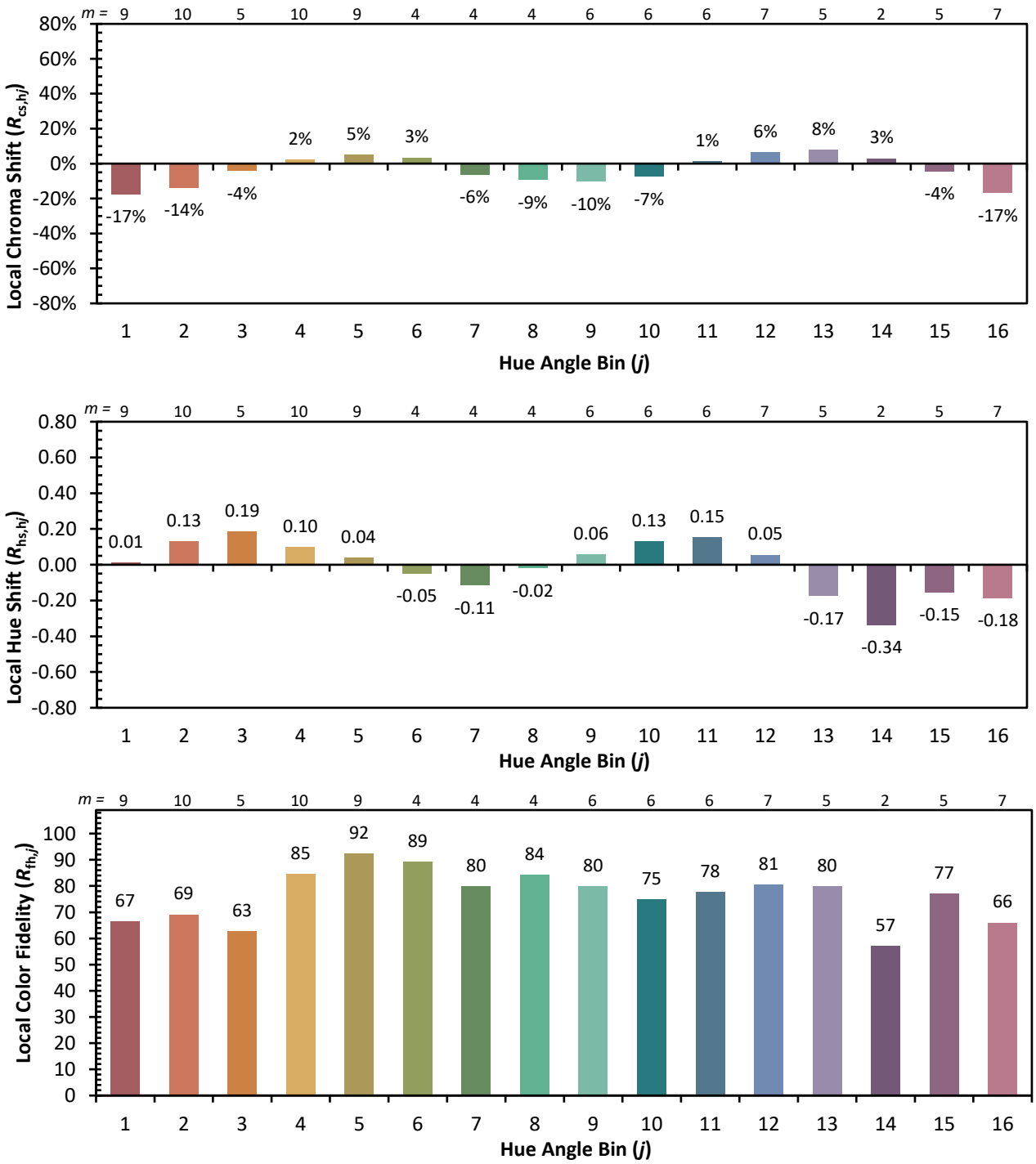



**Individual Sample Fidelity Index ($R_{f,i}$)**

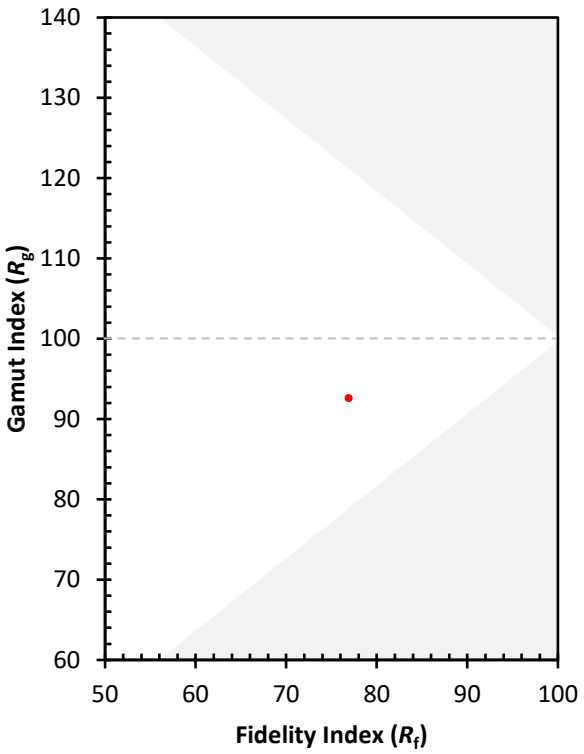
| | | | |
|---|---|---|---|
| CES01 = 87 | CES26 = 76 | CES51 = 88 | CES76 = 78 |
| CES02 = 65 | CES27 = 94 | CES52 = 84 | CES77 = 76 |
| CES03 = 32 | CES28 = 93 | CES53 = 79 | CES78 = 79 |
| CES04 = 72 | CES29 = 81 | CES54 = 86 | CES79 = 82 |
| CES05 = 51 | CES30 = 92 | CES55 = 83 | CES80 = 81 |
| CES06 = 52 | CES31 = 83 | CES56 = 76 | CES81 = 52 |
| CES07 = 44 | CES32 = 75 | CES57 = 74 | CES82 = 92 |
| CES08 = 42 | CES33 = 89 | CES58 = 76 | CES83 = 88 |
| CES09 = 29 | CES34 = 88 | CES59 = 84 | CES84 = 90 |
| CES10 = 79 | CES35 = 94 | CES60 = 91 | CES85 = 65 |
| CES11 = 62 | CES36 = 90 | CES61 = 81 | CES86 = 49 |
| CES12 = 68 | CES37 = 96 | CES62 = 91 | CES87 = 76 |
| CES13 = 44 | CES38 = 98 | CES63 = 86 | CES88 = 78 |
| CES14 = 75 | CES39 = 98 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 95 | CES65 = 71 | CES90 = 80 |
| CES16 = 48 | CES41 = 95 | CES66 = 70 | CES91 = 80 |
| CES17 = 51 | CES42 = 89 | CES67 = 69 | CES92 = 52 |
| CES18 = 57 | CES43 = 80 | CES68 = 73 | CES93 = 69 |
| CES19 = 74 | CES44 = 99 | CES69 = 84 | CES94 = 45 |
| CES20 = 68 | CES45 = 83 | CES70 = 71 | CES95 = 66 |
| CES21 = 88 | CES46 = 81 | CES71 = 74 | CES96 = 75 |
| CES22 = 81 | CES47 = 89 | CES72 = 89 | CES97 = 75 |
| CES23 = 92 | CES48 = 73 | CES73 = 67 | CES98 = 72 |
| CES24 = 92 | CES49 = 82 | CES74 = 85 | CES99 = 64 |
| CES25 = 73 | CES50 = 87 | CES75 = 79 | |

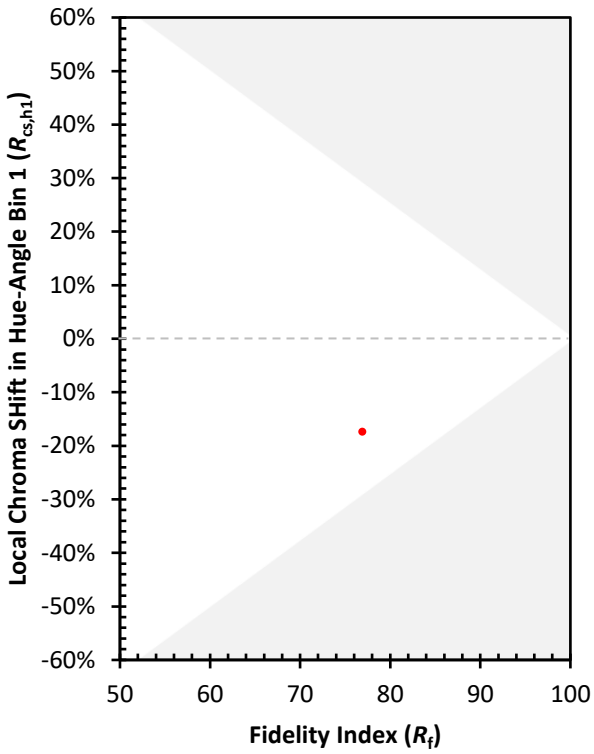


## Color Rendition by Hue-Angle Bin



## Measure Comparisons




(END OF REPORT)