

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: LUMARK

Report Number: P1449857

Luminaire Tested: **TWC150_T2_60W_3000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ()
Test Lab: INNOVATION CENTER
Issue Date: 5/19/2026
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: TWC150_T2_60W_3000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T2 distribution, 60W
3000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9449 lumens
Efficiency: N/A
Efficacy: 161.8 lumens/watt
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

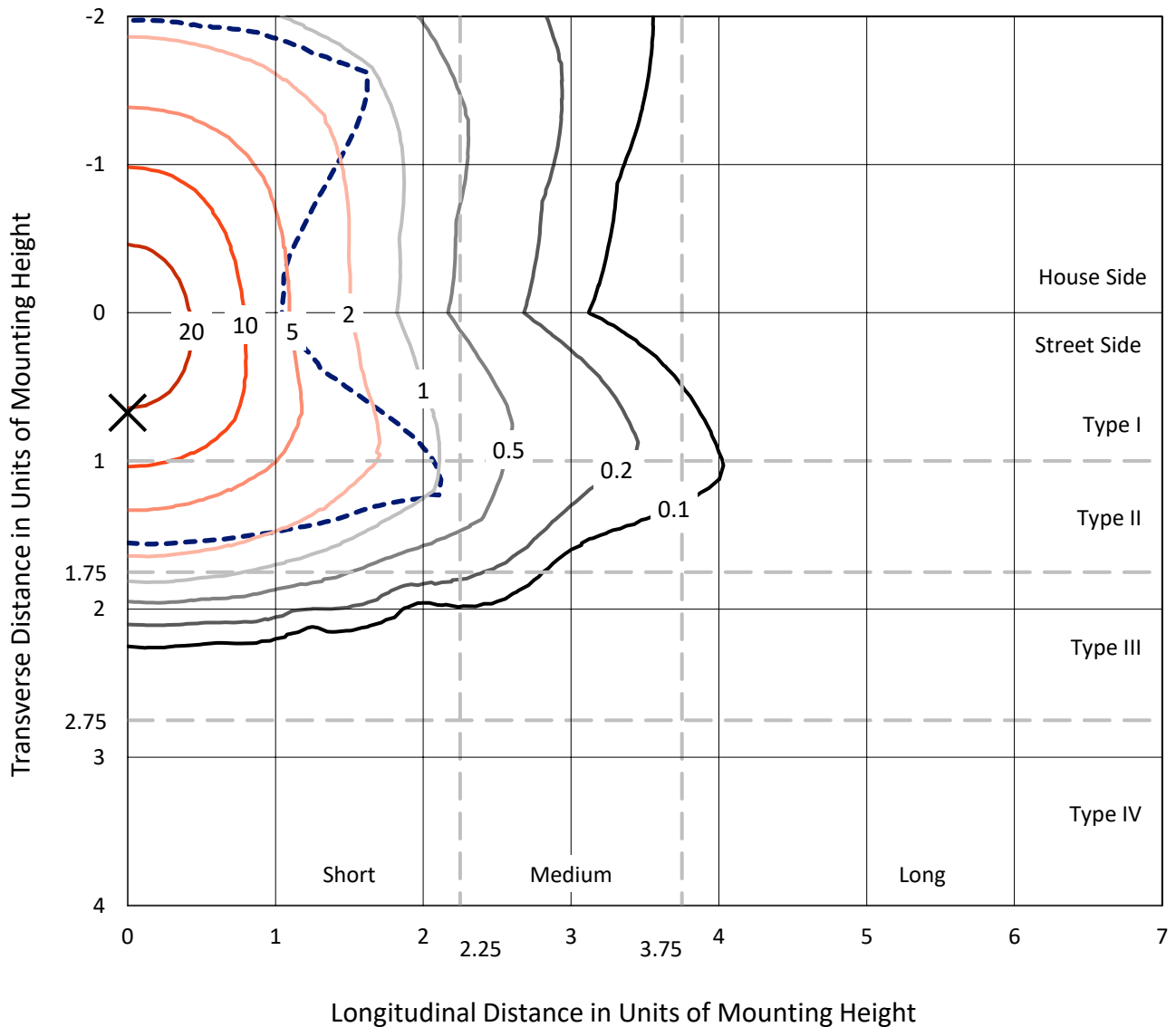
Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

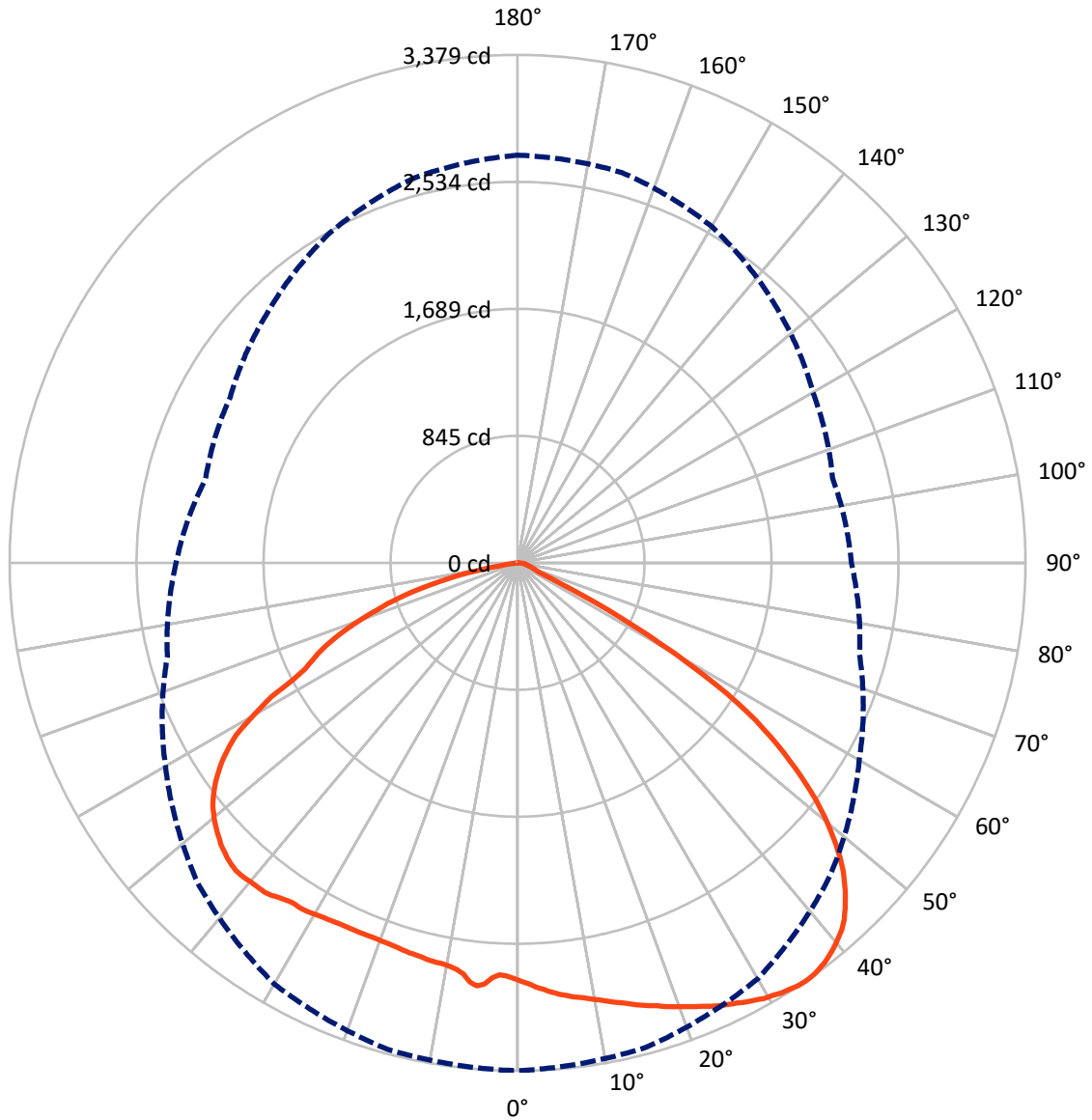
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 28.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 34-Deg Vertical

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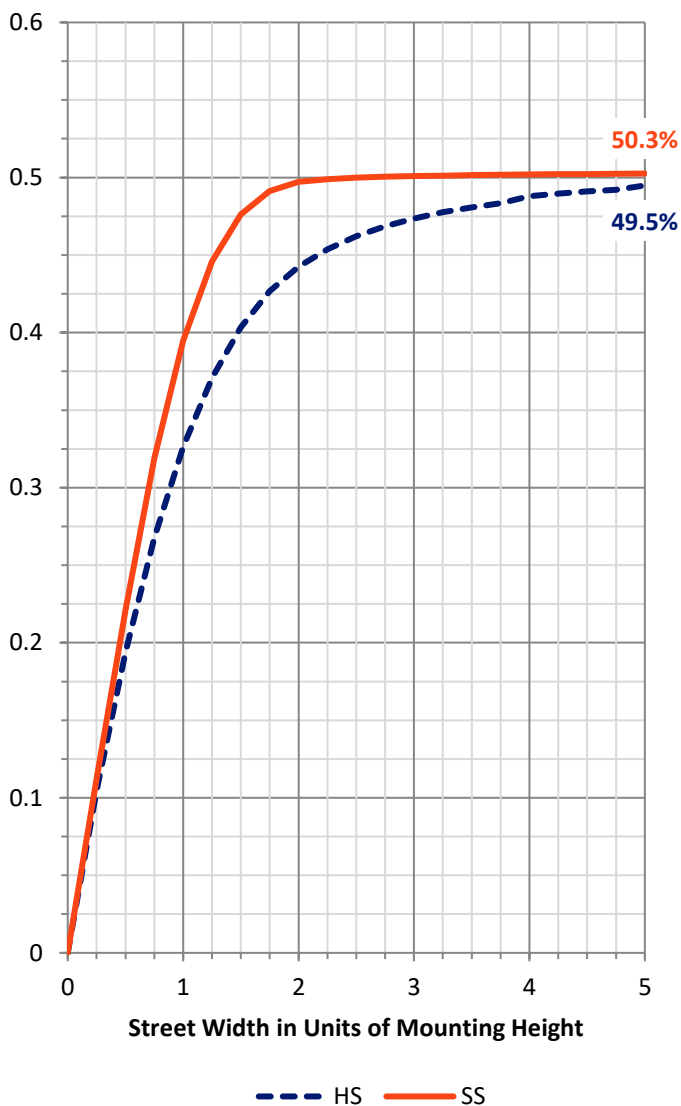
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 4701.3 | 0.0 | 4701.3 |
| | % Fixture | 49.8 | 0.0 | 49.8 |
| Street Side | Lumens | 4747.7 | 0.0 | 4747.7 |
| | % Fixture | 50.2 | 0.0 | 50.2 |
| Total | Lumens | 9449.0 | 0.0 | 9449.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 267.7 | 2.8 |
| 10°-20° | 789.0 | 8.4 |
| 20°-30° | 1265.9 | 13.4 |
| 30°-40° | 1656.7 | 17.5 |
| 40°-50° | 1887.7 | 20.0 |
| 50°-60° | 1797.5 | 19.0 |
| 60°-70° | 1166.9 | 12.3 |
| 70°-80° | 517.2 | 5.5 |
| 80°-90° | 100.3 | 1.1 |
| 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° | 9449.0 | 100.0 |
| 0°-180° | 9449.0 | 100.0 |

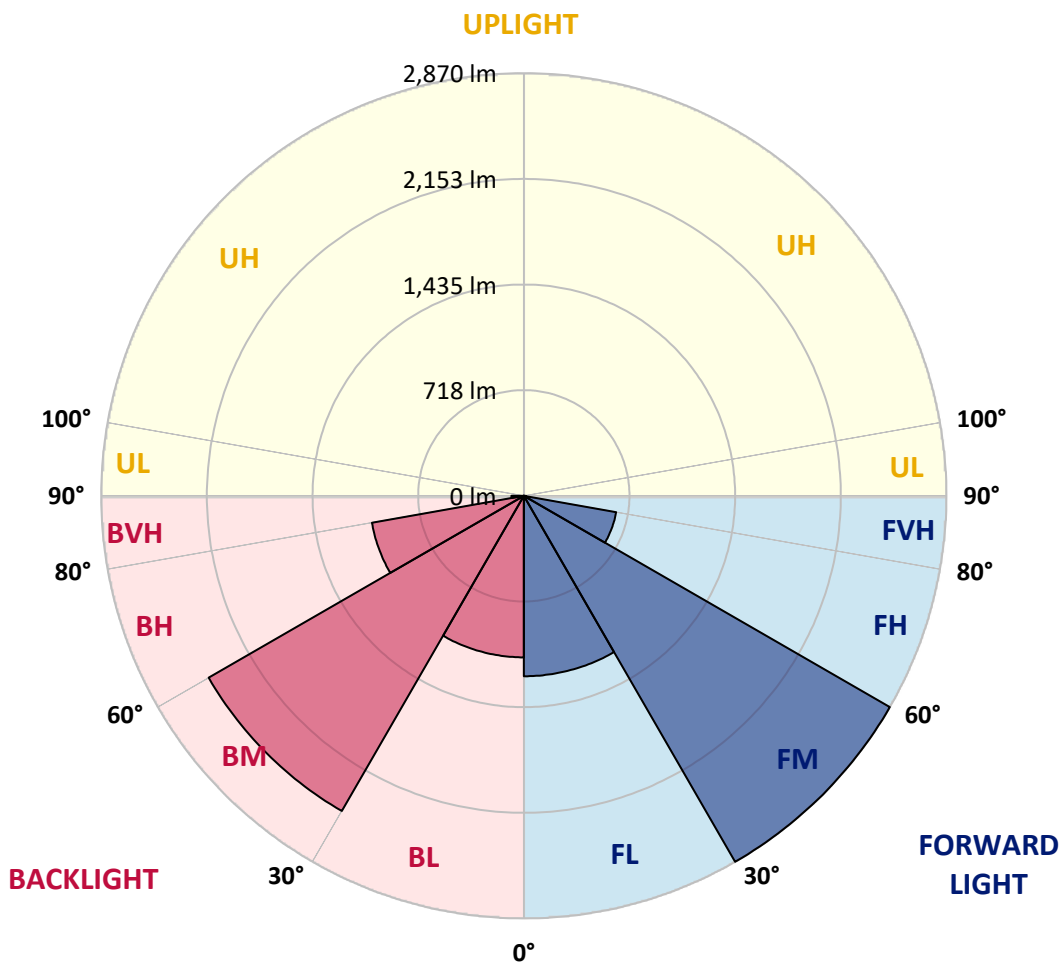


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 CATALOG NUMBER: TWC150_T2_60W_3000K

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1225.5 | 13.0 | | | |
| FM (30°-60°) | 2870.3 | 30.4 | | | |
| FH (60°-80°) | 636.6 | 6.7 | | | G0/660 |
| FVH (80°-90°) | 15.4 | 0.2 | | | G1/100 |
| BL (0°-30°) | 1097.2 | 11.6 | B3/2500 | | |
| BM (30°-60°) | 2471.6 | 26.2 | B2/2500 | | |
| BH (60°-80°) | 1047.5 | 11.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 85.0 | 0.9 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3
 Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 |
| 1° | 2800.5 | 2798.9 | 2799.9 | 2793.1 | 2787.9 | 2785.7 | 2783.3 | 2778.1 | 2773.4 | 2770.0 | 2767.2 |
| 2° | 2824.4 | 2819.9 | 2814.9 | 2807.0 | 2797.5 | 2788.2 | 2780.8 | 2771.2 | 2763.4 | 2759.5 | 2754.5 |
| 3° | 2843.2 | 2841.0 | 2832.0 | 2819.6 | 2806.8 | 2789.0 | 2777.6 | 2763.7 | 2752.5 | 2745.1 | 2741.3 |
| 4° | 2864.6 | 2858.4 | 2848.6 | 2832.9 | 2811.5 | 2789.7 | 2772.1 | 2755.6 | 2742.9 | 2741.9 | 2752.9 |
| 5° | 2882.3 | 2876.5 | 2863.0 | 2844.3 | 2817.3 | 2790.8 | 2768.8 | 2747.4 | 2735.6 | 2755.3 | 2788.9 |
| 6° | 2897.7 | 2890.4 | 2876.9 | 2854.2 | 2823.0 | 2787.6 | 2757.1 | 2734.1 | 2738.4 | 2787.9 | 2819.6 |
| 7° | 2912.7 | 2903.1 | 2884.5 | 2860.7 | 2825.4 | 2786.9 | 2751.3 | 2726.0 | 2754.6 | 2813.6 | 2823.7 |
| 8° | 2925.6 | 2916.3 | 2896.9 | 2865.9 | 2829.3 | 2784.8 | 2743.0 | 2719.0 | 2776.2 | 2816.3 | 2787.7 |
| 9° | 2941.6 | 2931.1 | 2904.5 | 2874.8 | 2828.4 | 2779.6 | 2732.4 | 2712.5 | 2796.3 | 2794.5 | 2745.8 |
| 10° | 2956.8 | 2942.5 | 2917.4 | 2878.8 | 2830.8 | 2772.0 | 2722.1 | 2716.1 | 2795.4 | 2749.3 | 2726.6 |
| 11° | 2974.7 | 2960.8 | 2925.5 | 2883.0 | 2827.3 | 2768.0 | 2712.3 | 2724.2 | 2783.4 | 2716.8 | 2712.6 |
| 12° | 2993.6 | 2977.8 | 2937.5 | 2890.0 | 2827.9 | 2761.6 | 2696.5 | 2732.5 | 2744.7 | 2700.4 | 2702.5 |
| 13° | 3010.3 | 2993.2 | 2950.3 | 2892.5 | 2826.9 | 2752.6 | 2682.3 | 2738.1 | 2707.1 | 2685.7 | 2695.5 |
| 14° | 3031.9 | 3011.7 | 2963.7 | 2898.0 | 2824.9 | 2743.4 | 2668.9 | 2741.7 | 2677.8 | 2673.4 | 2690.8 |
| 15° | 3053.6 | 3032.2 | 2976.4 | 2904.0 | 2819.6 | 2732.2 | 2653.5 | 2730.4 | 2656.2 | 2663.0 | 2678.6 |
| 16° | 3071.6 | 3049.6 | 2993.8 | 2908.7 | 2820.2 | 2725.2 | 2638.5 | 2710.5 | 2639.7 | 2651.6 | 2670.9 |
| 17° | 3090.0 | 3068.3 | 3005.5 | 2917.9 | 2818.9 | 2715.7 | 2624.0 | 2679.3 | 2620.3 | 2639.7 | 2664.3 |
| 18° | 3112.5 | 3083.6 | 3018.5 | 2925.1 | 2817.1 | 2705.0 | 2611.4 | 2636.6 | 2605.6 | 2624.9 | 2657.7 |
| 19° | 3132.9 | 3103.6 | 3033.0 | 2932.5 | 2812.6 | 2691.7 | 2597.9 | 2597.8 | 2590.3 | 2614.0 | 2647.0 |
| 20° | 3151.5 | 3118.0 | 3043.0 | 2937.1 | 2812.5 | 2682.3 | 2588.1 | 2565.0 | 2571.5 | 2600.6 | 2636.3 |
| 21° | 3172.7 | 3137.2 | 3058.1 | 2940.9 | 2805.0 | 2672.5 | 2582.7 | 2540.0 | 2550.1 | 2586.0 | 2630.5 |
| 22° | 3194.2 | 3153.4 | 3066.4 | 2945.5 | 2797.9 | 2660.9 | 2576.8 | 2515.3 | 2528.7 | 2573.2 | 2624.0 |
| 23° | 3216.4 | 3175.2 | 3077.3 | 2946.3 | 2789.7 | 2644.3 | 2570.4 | 2490.5 | 2510.8 | 2560.0 | 2613.3 |
| 24° | 3237.7 | 3193.7 | 3088.8 | 2949.0 | 2782.9 | 2629.8 | 2560.8 | 2468.4 | 2490.7 | 2548.0 | 2607.1 |
| 25° | 3255.3 | 3210.9 | 3101.3 | 2947.3 | 2772.5 | 2606.4 | 2548.2 | 2446.1 | 2470.9 | 2534.8 | 2604.4 |
| 26° | 3272.2 | 3228.6 | 3113.0 | 2946.0 | 2758.6 | 2584.1 | 2527.0 | 2415.7 | 2446.7 | 2518.6 | 2599.3 |
| 27° | 3293.3 | 3244.7 | 3129.0 | 2948.4 | 2747.7 | 2563.4 | 2501.3 | 2390.1 | 2425.1 | 2505.5 | 2593.0 |
| 28° | 3309.6 | 3259.5 | 3136.9 | 2943.5 | 2732.2 | 2537.7 | 2466.2 | 2359.9 | 2404.0 | 2494.4 | 2591.3 |
| 29° | 3329.7 | 3278.1 | 3148.7 | 2944.5 | 2714.6 | 2513.1 | 2429.4 | 2330.4 | 2384.6 | 2480.1 | 2590.1 |
| 30° | 3340.3 | 3295.1 | 3155.4 | 2941.8 | 2699.5 | 2482.4 | 2383.6 | 2300.0 | 2361.8 | 2467.7 | 2585.0 |
| 31° | 3355.7 | 3306.1 | 3168.5 | 2944.8 | 2681.6 | 2452.7 | 2340.8 | 2269.7 | 2337.0 | 2456.7 | 2584.6 |
| 32° | 3364.9 | 3319.3 | 3175.3 | 2943.1 | 2661.9 | 2422.7 | 2298.4 | 2236.2 | 2316.0 | 2444.9 | 2581.9 |
| 33° | 3375.1 | 3326.1 | 3186.5 | 2941.4 | 2643.1 | 2388.9 | 2256.7 | 2203.5 | 2290.4 | 2433.9 | 2583.6 |
| 34° | 3378.8 | 3333.7 | 3194.7 | 2941.0 | 2624.5 | 2354.5 | 2219.9 | 2169.6 | 2268.7 | 2423.3 | 2582.8 |
| 35° | 3376.7 | 3335.3 | 3203.1 | 2939.6 | 2606.1 | 2321.4 | 2179.8 | 2135.8 | 2241.6 | 2410.5 | 2580.3 |
| 36° | 3366.0 | 3333.9 | 3203.0 | 2934.4 | 2587.0 | 2283.7 | 2139.1 | 2101.9 | 2218.2 | 2402.9 | 2568.9 |
| 37° | 3354.4 | 3323.2 | 3208.1 | 2935.7 | 2568.4 | 2246.5 | 2097.4 | 2067.2 | 2194.2 | 2388.8 | 2567.8 |
| 38° | 3334.7 | 3309.0 | 3204.4 | 2937.8 | 2553.1 | 2211.5 | 2055.8 | 2032.7 | 2171.9 | 2373.5 | 2568.6 |
| 39° | 3310.9 | 3291.8 | 3195.8 | 2937.2 | 2536.5 | 2174.1 | 2012.7 | 2000.5 | 2148.1 | 2354.3 | 2574.2 |
| 40° | 3285.0 | 3267.9 | 3188.3 | 2938.5 | 2521.2 | 2135.7 | 1969.4 | 1968.3 | 2124.6 | 2341.0 | 2580.4 |
| 41° | 3256.2 | 3241.0 | 3172.5 | 2938.5 | 2506.8 | 2100.7 | 1926.1 | 1936.0 | 2100.0 | 2336.7 | 2578.0 |
| 42° | 3216.4 | 3208.0 | 3153.8 | 2936.8 | 2492.4 | 2064.0 | 1883.7 | 1898.8 | 2072.1 | 2329.3 | 2576.9 |
| 43° | 3165.5 | 3169.8 | 3128.2 | 2935.4 | 2480.7 | 2029.5 | 1836.1 | 1861.7 | 2039.4 | 2314.2 | 2576.6 |
| 44° | 3111.1 | 3122.2 | 3098.9 | 2932.6 | 2469.2 | 1996.8 | 1787.3 | 1825.0 | 2016.1 | 2297.4 | 2578.3 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 3051.5 | 3071.5 | 3068.0 | 2924.8 | 2459.0 | 1965.3 | 1739.1 | 1785.2 | 1992.9 | 2279.8 | 2578.2 |
| 46° | 2987.7 | 3012.2 | 3028.3 | 2914.9 | 2449.8 | 1935.4 | 1693.0 | 1746.2 | 1969.7 | 2274.5 | 2572.0 |
| 47° | 2910.6 | 2947.1 | 2988.5 | 2899.1 | 2443.9 | 1903.7 | 1641.4 | 1707.1 | 1944.1 | 2266.5 | 2558.0 |
| 48° | 2827.3 | 2873.9 | 2935.6 | 2883.7 | 2434.9 | 1867.9 | 1592.6 | 1664.4 | 1913.8 | 2255.1 | 2541.7 |
| 49° | 2738.1 | 2790.8 | 2877.9 | 2857.0 | 2428.6 | 1830.2 | 1540.9 | 1618.1 | 1883.8 | 2240.6 | 2523.2 |
| 50° | 2641.0 | 2696.2 | 2814.7 | 2829.3 | 2424.2 | 1789.3 | 1490.6 | 1567.7 | 1860.4 | 2224.6 | 2501.8 |
| 51° | 2534.6 | 2602.3 | 2743.0 | 2799.5 | 2419.0 | 1747.4 | 1439.0 | 1518.9 | 1835.1 | 2204.3 | 2478.5 |
| 52° | 2422.3 | 2494.1 | 2663.9 | 2766.2 | 2416.6 | 1703.5 | 1385.5 | 1477.2 | 1804.1 | 2186.4 | 2456.5 |
| 53° | 2300.7 | 2381.5 | 2573.1 | 2722.7 | 2410.6 | 1652.3 | 1334.5 | 1437.7 | 1770.6 | 2169.7 | 2431.2 |
| 54° | 2175.0 | 2260.1 | 2470.1 | 2672.2 | 2403.2 | 1608.0 | 1284.0 | 1389.3 | 1735.7 | 2149.8 | 2403.9 |
| 55° | 2041.7 | 2131.1 | 2360.8 | 2612.3 | 2397.7 | 1562.7 | 1229.0 | 1339.7 | 1697.4 | 2127.4 | 2374.2 |
| 56° | 1898.6 | 1994.8 | 2243.5 | 2547.9 | 2388.0 | 1518.5 | 1175.2 | 1294.0 | 1665.6 | 2101.3 | 2341.7 |
| 57° | 1736.8 | 1847.1 | 2114.2 | 2473.6 | 2373.5 | 1475.8 | 1121.8 | 1248.8 | 1628.9 | 2074.6 | 2306.0 |
| 58° | 1542.4 | 1685.9 | 1977.7 | 2383.5 | 2350.5 | 1433.4 | 1066.4 | 1201.5 | 1594.1 | 2047.4 | 2264.9 |
| 59° | 1323.8 | 1494.7 | 1830.8 | 2282.9 | 2324.8 | 1391.5 | 1011.2 | 1150.4 | 1556.2 | 2020.0 | 2216.4 |
| 60° | 1097.3 | 1274.7 | 1671.3 | 2166.0 | 2290.5 | 1349.6 | 954.0 | 1098.1 | 1517.3 | 1992.5 | 2162.4 |
| 61° | 884.1 | 1047.8 | 1495.5 | 2035.2 | 2253.5 | 1310.7 | 899.4 | 1045.7 | 1477.7 | 1964.9 | 2097.3 |
| 62° | 671.0 | 835.2 | 1284.3 | 1881.0 | 2207.4 | 1277.0 | 848.4 | 996.6 | 1440.5 | 1927.2 | 1999.6 |
| 63° | 457.9 | 622.7 | 1064.3 | 1715.4 | 2153.2 | 1246.9 | 793.5 | 944.3 | 1405.7 | 1886.1 | 1901.9 |
| 64° | 296.9 | 410.2 | 844.7 | 1543.0 | 2088.3 | 1222.2 | 739.5 | 895.6 | 1368.7 | 1839.5 | 1802.1 |
| 65° | 195.1 | 256.2 | 625.2 | 1341.2 | 2012.9 | 1205.3 | 687.8 | 847.5 | 1330.8 | 1791.8 | 1632.8 |
| 66° | 150.2 | 168.7 | 405.6 | 1116.8 | 1922.6 | 1197.4 | 636.7 | 799.6 | 1290.0 | 1727.9 | 1509.9 |
| 67° | 136.3 | 132.4 | 247.9 | 886.3 | 1811.5 | 1193.1 | 588.0 | 751.6 | 1250.0 | 1625.1 | 1437.7 |
| 68° | 126.7 | 120.4 | 157.0 | 655.7 | 1674.1 | 1190.9 | 538.8 | 705.3 | 1202.9 | 1497.7 | 1377.4 |
| 69° | 117.3 | 110.8 | 122.8 | 425.1 | 1519.9 | 1187.1 | 491.4 | 660.0 | 1156.4 | 1398.8 | 1318.1 |
| 70° | 108.0 | 101.8 | 110.5 | 247.7 | 1323.7 | 1186.3 | 445.4 | 616.7 | 1111.8 | 1336.7 | 1261.1 |
| 71° | 99.4 | 94.1 | 101.5 | 146.2 | 1064.7 | 1192.5 | 400.8 | 572.9 | 1061.5 | 1276.4 | 1208.6 |
| 72° | 92.4 | 86.4 | 92.5 | 106.0 | 788.2 | 1193.6 | 360.5 | 530.0 | 981.2 | 1210.2 | 1153.3 |
| 73° | 85.6 | 78.8 | 83.4 | 94.1 | 511.5 | 1165.6 | 320.4 | 485.8 | 905.7 | 1141.7 | 1094.8 |
| 74° | 78.7 | 72.0 | 74.4 | 82.6 | 234.7 | 1084.3 | 282.2 | 442.9 | 855.8 | 1077.0 | 1029.2 |
| 75° | 71.6 | 64.7 | 65.9 | 71.2 | 130.2 | 980.3 | 246.1 | 402.6 | 813.9 | 1015.8 | 960.4 |
| 76° | 65.7 | 58.1 | 56.3 | 63.4 | 109.7 | 868.6 | 210.1 | 362.6 | 767.8 | 956.3 | 877.6 |
| 77° | 61.2 | 53.0 | 48.9 | 57.4 | 90.5 | 756.8 | 174.3 | 324.8 | 722.1 | 900.8 | 782.2 |
| 78° | 58.3 | 48.7 | 42.8 | 50.5 | 71.2 | 644.9 | 144.2 | 279.3 | 680.0 | 847.3 | 696.0 |
| 79° | 55.9 | 46.0 | 38.4 | 41.9 | 64.6 | 492.0 | 117.2 | 243.5 | 635.1 | 796.1 | 616.1 |
| 80° | 52.8 | 43.7 | 35.0 | 34.1 | 64.5 | 371.8 | 93.0 | 207.8 | 591.2 | 729.6 | 554.2 |
| 81° | 49.3 | 40.8 | 32.3 | 29.0 | 60.0 | 260.0 | 72.7 | 172.1 | 549.2 | 660.0 | 490.5 |
| 82° | 45.1 | 37.6 | 29.8 | 25.3 | 51.3 | 169.2 | 55.2 | 144.5 | 503.7 | 589.1 | 349.6 |
| 83° | 37.2 | 32.7 | 27.2 | 22.1 | 42.5 | 99.7 | 40.0 | 118.4 | 458.6 | 534.9 | 208.7 |
| 84° | 29.4 | 26.7 | 23.1 | 19.2 | 29.2 | 74.4 | 30.6 | 92.9 | 396.3 | 485.9 | 70.4 |
| 85° | 21.1 | 19.8 | 17.3 | 16.3 | 17.2 | 49.4 | 21.2 | 70.2 | 319.1 | 388.2 | 40.5 |
| 86° | 14.8 | 15.0 | 12.6 | 12.1 | 11.1 | 24.3 | 11.9 | 49.0 | 255.4 | 290.5 | 11.1 |
| 87° | 10.1 | 10.2 | 8.6 | 8.3 | 7.5 | 13.3 | 6.8 | 33.2 | 191.6 | 192.9 | 5.5 |
| 88° | 5.4 | 5.5 | 4.7 | 4.6 | 3.9 | 8.9 | 3.1 | 17.3 | 127.9 | 95.2 | 1.9 |
| 89° | 0.7 | 0.8 | 0.7 | 0.8 | 0.8 | 4.6 | 1.0 | 1.9 | 64.1 | 0.7 | 0.4 |



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 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 98° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 103° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 104° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 106° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 108° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 111° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 116° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 118° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 119° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 121° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 124° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 126° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 129° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 134° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 138° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 139° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 143° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 146° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 149° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 151° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 153° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 156° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 158° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 159° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 161° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 163° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 164° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 166° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 168° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 169° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 171° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 173° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 174° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 176° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 178° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 179° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 | 2782.8 |
| 1° | 2764.6 | 2764.4 | 2766.6 | 2764.7 | 2768.9 | 2772.1 | 2775.6 | 2783.7 | 2788.1 | 2791.0 | 2794.6 |
| 2° | 2748.1 | 2749.6 | 2748.7 | 2750.5 | 2760.1 | 2764.8 | 2771.7 | 2781.3 | 2792.9 | 2799.3 | 2808.4 |
| 3° | 2740.1 | 2743.4 | 2738.9 | 2739.5 | 2743.5 | 2755.6 | 2763.1 | 2777.4 | 2792.1 | 2807.0 | 2824.1 |
| 4° | 2766.1 | 2765.5 | 2756.7 | 2742.4 | 2733.5 | 2743.4 | 2755.9 | 2775.6 | 2798.1 | 2815.4 | 2836.2 |
| 5° | 2807.7 | 2809.8 | 2796.8 | 2773.4 | 2738.4 | 2731.8 | 2748.1 | 2769.8 | 2796.8 | 2824.6 | 2848.5 |
| 6° | 2827.4 | 2827.9 | 2827.2 | 2803.3 | 2761.0 | 2725.1 | 2738.4 | 2763.1 | 2796.3 | 2831.0 | 2857.8 |
| 7° | 2811.5 | 2806.1 | 2814.3 | 2817.2 | 2788.7 | 2727.8 | 2728.3 | 2758.1 | 2796.8 | 2835.6 | 2867.7 |
| 8° | 2762.2 | 2756.9 | 2766.3 | 2799.0 | 2805.0 | 2738.5 | 2716.9 | 2751.6 | 2797.4 | 2839.1 | 2874.5 |
| 9° | 2735.2 | 2735.2 | 2735.5 | 2751.1 | 2800.4 | 2758.1 | 2703.2 | 2740.6 | 2791.2 | 2840.2 | 2881.6 |
| 10° | 2723.2 | 2722.4 | 2721.7 | 2721.1 | 2766.6 | 2771.5 | 2694.7 | 2732.3 | 2789.0 | 2843.1 | 2889.5 |
| 11° | 2713.1 | 2714.1 | 2711.3 | 2707.0 | 2726.7 | 2773.8 | 2686.8 | 2722.3 | 2781.1 | 2841.7 | 2892.8 |
| 12° | 2711.1 | 2711.7 | 2704.2 | 2692.3 | 2698.1 | 2761.6 | 2682.3 | 2707.6 | 2777.4 | 2841.6 | 2900.4 |
| 13° | 2705.0 | 2707.7 | 2700.9 | 2684.0 | 2681.5 | 2731.4 | 2685.2 | 2694.0 | 2770.6 | 2841.3 | 2907.5 |
| 14° | 2698.3 | 2700.7 | 2689.6 | 2677.2 | 2664.3 | 2692.4 | 2692.0 | 2683.0 | 2764.8 | 2841.6 | 2914.5 |
| 15° | 2691.7 | 2693.8 | 2683.2 | 2668.2 | 2648.7 | 2658.5 | 2691.4 | 2671.4 | 2756.1 | 2844.3 | 2924.5 |
| 16° | 2687.0 | 2691.6 | 2679.7 | 2655.2 | 2637.3 | 2632.6 | 2693.6 | 2652.3 | 2748.1 | 2846.5 | 2932.3 |
| 17° | 2682.5 | 2686.4 | 2673.7 | 2647.2 | 2621.4 | 2614.1 | 2682.8 | 2638.1 | 2738.9 | 2845.5 | 2942.3 |
| 18° | 2675.0 | 2679.0 | 2664.0 | 2636.2 | 2605.3 | 2592.6 | 2664.0 | 2620.3 | 2734.3 | 2845.5 | 2952.7 |
| 19° | 2667.5 | 2676.3 | 2659.3 | 2628.5 | 2587.9 | 2573.0 | 2637.6 | 2606.5 | 2725.7 | 2843.8 | 2961.8 |
| 20° | 2666.0 | 2674.2 | 2652.0 | 2615.7 | 2576.8 | 2553.9 | 2602.3 | 2586.0 | 2716.3 | 2842.7 | 2964.1 |
| 21° | 2663.7 | 2671.4 | 2648.1 | 2604.7 | 2562.5 | 2535.3 | 2562.5 | 2569.7 | 2709.4 | 2843.1 | 2971.3 |
| 22° | 2660.9 | 2670.7 | 2645.4 | 2595.7 | 2545.2 | 2512.3 | 2523.0 | 2552.1 | 2696.5 | 2837.2 | 2976.0 |
| 23° | 2661.2 | 2673.5 | 2642.6 | 2588.8 | 2528.3 | 2484.5 | 2489.5 | 2537.1 | 2683.8 | 2833.3 | 2982.0 |
| 24° | 2658.8 | 2673.5 | 2641.5 | 2576.2 | 2511.6 | 2461.4 | 2459.9 | 2521.7 | 2666.2 | 2825.2 | 2986.9 |
| 25° | 2657.4 | 2674.5 | 2640.5 | 2571.1 | 2497.8 | 2441.4 | 2430.7 | 2512.9 | 2647.4 | 2816.6 | 2989.0 |
| 26° | 2660.9 | 2676.3 | 2636.6 | 2562.9 | 2482.0 | 2415.6 | 2402.7 | 2504.5 | 2629.8 | 2807.0 | 2992.5 |
| 27° | 2659.8 | 2678.2 | 2637.6 | 2557.8 | 2466.3 | 2389.1 | 2373.1 | 2492.3 | 2606.2 | 2800.2 | 2995.0 |
| 28° | 2662.0 | 2683.4 | 2637.6 | 2549.5 | 2448.7 | 2362.0 | 2347.3 | 2480.2 | 2582.1 | 2785.1 | 2996.8 |
| 29° | 2667.9 | 2688.6 | 2638.8 | 2540.3 | 2434.2 | 2339.7 | 2318.6 | 2463.2 | 2556.8 | 2774.4 | 3000.6 |
| 30° | 2669.0 | 2694.4 | 2643.0 | 2534.4 | 2417.8 | 2312.3 | 2285.6 | 2435.9 | 2528.7 | 2759.3 | 3006.2 |
| 31° | 2680.2 | 2703.5 | 2644.6 | 2532.2 | 2402.4 | 2288.3 | 2250.9 | 2405.1 | 2499.1 | 2746.8 | 3008.8 |
| 32° | 2684.4 | 2711.1 | 2652.0 | 2525.3 | 2385.2 | 2260.3 | 2219.1 | 2366.9 | 2472.3 | 2735.3 | 3006.7 |
| 33° | 2686.8 | 2713.1 | 2653.1 | 2523.5 | 2365.1 | 2233.6 | 2181.9 | 2320.6 | 2441.9 | 2719.0 | 3012.7 |
| 34° | 2686.5 | 2711.4 | 2651.3 | 2520.7 | 2352.4 | 2206.7 | 2149.5 | 2271.1 | 2411.6 | 2705.2 | 3009.8 |
| 35° | 2687.0 | 2721.2 | 2648.6 | 2516.1 | 2333.5 | 2181.0 | 2114.1 | 2220.8 | 2380.0 | 2691.0 | 3014.0 |
| 36° | 2697.7 | 2734.4 | 2650.8 | 2507.2 | 2318.1 | 2153.5 | 2077.1 | 2169.7 | 2348.6 | 2682.7 | 3016.1 |
| 37° | 2711.5 | 2751.2 | 2661.7 | 2495.0 | 2302.8 | 2126.0 | 2038.6 | 2126.0 | 2317.3 | 2667.2 | 3020.5 |
| 38° | 2721.3 | 2761.7 | 2673.0 | 2492.3 | 2286.6 | 2097.0 | 2002.9 | 2079.7 | 2287.5 | 2659.6 | 3020.6 |
| 39° | 2725.8 | 2763.4 | 2680.5 | 2490.5 | 2266.2 | 2066.6 | 1967.2 | 2035.8 | 2256.3 | 2648.3 | 3021.7 |
| 40° | 2728.0 | 2766.0 | 2679.0 | 2486.3 | 2243.4 | 2038.7 | 1931.5 | 1989.7 | 2222.8 | 2637.9 | 3019.3 |
| 41° | 2731.8 | 2770.4 | 2678.1 | 2482.2 | 2225.7 | 2011.7 | 1887.5 | 1946.9 | 2190.0 | 2626.0 | 3022.4 |
| 42° | 2735.6 | 2775.6 | 2686.9 | 2475.8 | 2210.0 | 1984.7 | 1844.7 | 1902.3 | 2157.3 | 2619.8 | 3015.8 |
| 43° | 2739.7 | 2775.0 | 2688.6 | 2475.5 | 2198.0 | 1957.7 | 1799.7 | 1855.0 | 2126.0 | 2616.0 | 3010.6 |
| 44° | 2733.8 | 2765.8 | 2688.2 | 2475.4 | 2184.9 | 1922.4 | 1756.4 | 1807.8 | 2091.0 | 2614.1 | 2998.5 |



REPORT NUMBER: P1449857

CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 2722.7 | 2753.8 | 2679.1 | 2472.7 | 2161.5 | 1884.2 | 1713.0 | 1760.0 | 2056.2 | 2611.7 | 2983.6 |
| 46° | 2706.1 | 2736.5 | 2663.8 | 2468.6 | 2141.1 | 1846.8 | 1669.7 | 1712.0 | 2024.4 | 2607.2 | 2963.6 |
| 47° | 2689.1 | 2720.6 | 2645.4 | 2459.9 | 2122.8 | 1810.7 | 1626.8 | 1661.3 | 1990.6 | 2602.4 | 2938.9 |
| 48° | 2670.2 | 2696.9 | 2627.5 | 2448.3 | 2106.7 | 1782.5 | 1582.8 | 1613.1 | 1959.9 | 2599.8 | 2908.4 |
| 49° | 2647.7 | 2674.6 | 2605.2 | 2432.7 | 2086.8 | 1748.0 | 1538.3 | 1560.3 | 1927.7 | 2596.0 | 2879.1 |
| 50° | 2623.7 | 2649.5 | 2585.0 | 2414.9 | 2065.4 | 1712.4 | 1492.3 | 1508.0 | 1894.4 | 2590.4 | 2843.2 |
| 51° | 2596.9 | 2620.7 | 2561.2 | 2389.9 | 2040.8 | 1677.8 | 1445.6 | 1457.8 | 1864.3 | 2584.1 | 2801.9 |
| 52° | 2570.5 | 2590.6 | 2533.7 | 2368.9 | 2018.4 | 1644.0 | 1394.5 | 1405.8 | 1833.0 | 2576.8 | 2748.2 |
| 53° | 2534.8 | 2549.0 | 2503.6 | 2343.2 | 2000.7 | 1613.5 | 1342.7 | 1354.1 | 1804.6 | 2564.3 | 2691.4 |
| 54° | 2496.7 | 2506.6 | 2472.3 | 2318.2 | 1983.2 | 1577.4 | 1290.8 | 1300.1 | 1780.0 | 2545.9 | 2623.5 |
| 55° | 2453.1 | 2458.7 | 2430.9 | 2289.9 | 1965.6 | 1539.2 | 1244.5 | 1245.4 | 1756.5 | 2524.0 | 2548.5 |
| 56° | 2403.4 | 2402.4 | 2386.0 | 2262.2 | 1942.1 | 1494.9 | 1195.3 | 1190.0 | 1738.4 | 2490.9 | 2465.0 |
| 57° | 2346.4 | 2342.9 | 2333.4 | 2227.9 | 1916.3 | 1452.4 | 1143.1 | 1134.3 | 1726.2 | 2458.9 | 2364.9 |
| 58° | 2282.8 | 2271.7 | 2274.6 | 2196.0 | 1892.0 | 1408.0 | 1090.9 | 1078.6 | 1711.2 | 2419.6 | 2257.8 |
| 59° | 2214.4 | 2198.1 | 2211.2 | 2156.8 | 1868.9 | 1366.5 | 1040.5 | 1024.2 | 1699.0 | 2373.4 | 2132.6 |
| 60° | 2139.3 | 2084.5 | 2141.3 | 2116.0 | 1838.1 | 1324.2 | 990.5 | 971.0 | 1683.8 | 2321.5 | 1996.2 |
| 61° | 2003.5 | 1970.9 | 2022.1 | 2065.6 | 1806.2 | 1283.5 | 940.9 | 918.1 | 1669.1 | 2257.9 | 1847.0 |
| 62° | 1867.9 | 1856.9 | 1903.0 | 1999.7 | 1772.5 | 1240.2 | 889.3 | 865.2 | 1662.9 | 2187.4 | 1683.2 |
| 63° | 1732.2 | 1680.1 | 1783.5 | 1933.7 | 1730.8 | 1194.4 | 835.6 | 810.7 | 1656.1 | 2098.4 | 1505.0 |
| 64° | 1594.0 | 1576.0 | 1620.3 | 1866.4 | 1690.3 | 1152.5 | 782.1 | 755.9 | 1653.0 | 1998.7 | 1308.1 |
| 65° | 1520.0 | 1515.5 | 1523.4 | 1736.1 | 1643.5 | 1108.9 | 728.8 | 704.9 | 1645.9 | 1879.6 | 1085.6 |
| 66° | 1464.3 | 1459.0 | 1459.0 | 1578.4 | 1596.1 | 1063.5 | 677.4 | 654.6 | 1641.7 | 1739.3 | 861.0 |
| 67° | 1408.4 | 1396.0 | 1406.9 | 1467.8 | 1541.1 | 1018.3 | 627.1 | 604.4 | 1638.6 | 1580.1 | 636.4 |
| 68° | 1343.5 | 1322.9 | 1351.8 | 1395.3 | 1472.9 | 971.9 | 577.5 | 550.8 | 1620.2 | 1383.9 | 411.7 |
| 69° | 1272.9 | 1241.3 | 1288.1 | 1325.2 | 1369.7 | 923.6 | 529.1 | 498.9 | 1580.1 | 1155.9 | 247.5 |
| 70° | 1199.2 | 1160.2 | 1224.4 | 1259.5 | 1276.0 | 877.5 | 482.4 | 448.8 | 1510.2 | 892.4 | 151.1 |
| 71° | 1115.7 | 1068.5 | 1150.5 | 1198.6 | 1219.5 | 830.8 | 439.5 | 399.2 | 1408.5 | 627.7 | 112.5 |
| 72° | 1030.8 | 985.2 | 1073.3 | 1147.2 | 1171.7 | 785.7 | 399.5 | 353.3 | 1313.4 | 363.1 | 100.2 |
| 73° | 949.7 | 907.4 | 990.4 | 1099.1 | 1115.2 | 736.8 | 358.2 | 309.5 | 1236.0 | 198.5 | 90.5 |
| 74° | 864.4 | 820.8 | 905.0 | 1049.8 | 1060.1 | 665.8 | 320.6 | 270.5 | 1112.3 | 117.8 | 80.9 |
| 75° | 780.2 | 732.6 | 818.7 | 998.5 | 1004.2 | 607.8 | 284.4 | 232.3 | 969.6 | 100.5 | 71.3 |
| 76° | 689.9 | 633.2 | 735.5 | 941.6 | 948.6 | 565.1 | 253.0 | 197.7 | 771.1 | 84.4 | 61.1 |
| 77° | 598.1 | 538.3 | 649.3 | 869.9 | 891.0 | 523.9 | 221.6 | 169.0 | 570.6 | 68.2 | 52.4 |
| 78° | 514.3 | 447.1 | 571.7 | 782.7 | 829.3 | 480.9 | 190.3 | 144.9 | 370.1 | 62.3 | 44.3 |
| 79° | 423.9 | 336.5 | 490.9 | 689.2 | 769.6 | 440.6 | 163.9 | 124.5 | 206.8 | 59.4 | 36.9 |
| 80° | 306.2 | 225.9 | 403.7 | 603.7 | 706.4 | 402.8 | 134.5 | 103.7 | 111.8 | 54.3 | 31.4 |
| 81° | 188.4 | 116.1 | 265.7 | 543.6 | 637.5 | 364.0 | 109.2 | 84.5 | 90.8 | 44.3 | 27.9 |
| 82° | 73.2 | 38.0 | 128.3 | 496.0 | 573.0 | 325.6 | 88.9 | 65.4 | 70.8 | 35.1 | 24.8 |
| 83° | 53.5 | 30.0 | 90.5 | 348.3 | 501.2 | 286.0 | 69.7 | 46.2 | 50.8 | 25.4 | 22.1 |
| 84° | 33.9 | 21.9 | 52.7 | 200.6 | 446.2 | 242.5 | 53.2 | 33.1 | 49.1 | 17.8 | 19.5 |
| 85° | 14.5 | 13.9 | 15.2 | 53.1 | 394.1 | 199.1 | 38.8 | 23.0 | 42.7 | 13.8 | 16.1 |
| 86° | 8.8 | 8.3 | 9.6 | 29.5 | 246.6 | 155.7 | 28.0 | 14.9 | 31.6 | 10.9 | 11.1 |
| 87° | 4.2 | 4.1 | 4.4 | 5.8 | 100.8 | 116.2 | 17.3 | 10.1 | 18.7 | 7.3 | 6.9 |
| 88° | 1.6 | 1.6 | 1.7 | 1.7 | 49.9 | 77.3 | 6.7 | 5.4 | 12.5 | 3.6 | 2.7 |
| 89° | 0.3 | 0.3 | 0.3 | 0.4 | 0.7 | 38.4 | 0.9 | 0.7 | 6.4 | 0.7 | 0.8 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 91° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 93° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 96° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 98° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 103° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 104° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 106° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 108° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 111° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 116° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 118° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 119° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 121° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 124° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 126° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 129° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 134° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 138° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 139° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 143° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 146° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 149° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 151° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 153° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 154° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 156° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 158° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 159° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 161° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 163° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 164° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 166° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 168° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 169° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 171° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 173° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 174° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 176° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 178° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 179° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|-----|--------|--------|--------|
| 0° | 2782.8 | 2782.8 | 2782.8 |
| 1° | 2799.1 | 2801.1 | 2800.5 |
| 2° | 2816.6 | 2819.3 | 2824.4 |
| 3° | 2831.7 | 2839.7 | 2843.2 |
| 4° | 2850.7 | 2858.7 | 2864.6 |
| 5° | 2865.3 | 2875.9 | 2882.3 |
| 6° | 2878.1 | 2892.0 | 2897.7 |
| 7° | 2890.5 | 2909.3 | 2912.7 |
| 8° | 2903.0 | 2922.9 | 2925.6 |
| 9° | 2913.7 | 2934.2 | 2941.6 |
| 10° | 2923.6 | 2946.8 | 2956.8 |
| 11° | 2935.5 | 2964.3 | 2974.7 |
| 12° | 2948.2 | 2984.2 | 2993.6 |
| 13° | 2964.4 | 3001.3 | 3010.3 |
| 14° | 2978.5 | 3023.1 | 3031.9 |
| 15° | 2995.0 | 3039.3 | 3053.6 |
| 16° | 3010.4 | 3059.0 | 3071.6 |
| 17° | 3023.2 | 3073.7 | 3090.0 |
| 18° | 3037.3 | 3094.9 | 3112.5 |
| 19° | 3051.8 | 3113.7 | 3132.9 |
| 20° | 3066.9 | 3131.5 | 3151.5 |
| 21° | 3082.5 | 3148.7 | 3172.7 |
| 22° | 3094.6 | 3171.8 | 3194.2 |
| 23° | 3105.9 | 3191.2 | 3216.4 |
| 24° | 3123.4 | 3210.4 | 3237.7 |
| 25° | 3135.3 | 3232.7 | 3255.3 |
| 26° | 3150.9 | 3248.4 | 3272.2 |
| 27° | 3165.2 | 3262.2 | 3293.3 |
| 28° | 3177.3 | 3281.8 | 3309.6 |
| 29° | 3185.1 | 3300.4 | 3329.7 |
| 30° | 3201.8 | 3314.9 | 3340.3 |
| 31° | 3212.6 | 3327.3 | 3355.7 |
| 32° | 3222.8 | 3338.1 | 3364.9 |
| 33° | 3232.6 | 3345.5 | 3375.1 |
| 34° | 3235.2 | 3349.3 | 3378.8 |
| 35° | 3244.3 | 3350.0 | 3376.7 |
| 36° | 3247.8 | 3345.5 | 3366.0 |
| 37° | 3243.1 | 3335.7 | 3354.4 |
| 38° | 3240.5 | 3321.7 | 3334.7 |
| 39° | 3230.5 | 3298.1 | 3310.9 |
| 40° | 3215.2 | 3272.3 | 3285.0 |
| 41° | 3193.2 | 3245.8 | 3256.2 |
| 42° | 3170.1 | 3208.2 | 3216.4 |
| 43° | 3140.9 | 3169.7 | 3165.5 |
| 44° | 3108.0 | 3120.0 | 3111.1 |



REPORT NUMBER: P1449857
 CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|-----|--------|--------|--------|
| 45° | 3070.5 | 3061.0 | 3051.5 |
| 46° | 3026.2 | 2998.4 | 2987.7 |
| 47° | 2970.9 | 2930.8 | 2910.6 |
| 48° | 2913.7 | 2851.6 | 2827.3 |
| 49° | 2845.3 | 2761.6 | 2738.1 |
| 50° | 2770.6 | 2668.9 | 2641.0 |
| 51° | 2687.8 | 2571.0 | 2534.6 |
| 52° | 2596.4 | 2460.8 | 2422.3 |
| 53° | 2501.5 | 2341.8 | 2300.7 |
| 54° | 2391.0 | 2219.6 | 2175.0 |
| 55° | 2272.9 | 2089.0 | 2041.7 |
| 56° | 2146.2 | 1946.0 | 1898.6 |
| 57° | 2011.2 | 1795.9 | 1736.8 |
| 58° | 1864.8 | 1620.5 | 1542.4 |
| 59° | 1711.6 | 1414.2 | 1323.8 |
| 60° | 1535.0 | 1190.8 | 1097.3 |
| 61° | 1335.2 | 956.1 | 884.1 |
| 62° | 1108.4 | 742.1 | 671.0 |
| 63° | 889.6 | 528.2 | 457.9 |
| 64° | 670.8 | 350.5 | 296.9 |
| 65° | 452.1 | 220.6 | 195.1 |
| 66° | 285.1 | 155.8 | 150.2 |
| 67° | 176.5 | 132.5 | 136.3 |
| 68° | 129.8 | 122.0 | 126.7 |
| 69° | 114.6 | 112.9 | 117.3 |
| 70° | 104.9 | 104.0 | 108.0 |
| 71° | 96.6 | 96.2 | 99.4 |
| 72° | 87.9 | 88.5 | 92.4 |
| 73° | 79.2 | 80.7 | 85.6 |
| 74° | 72.4 | 74.0 | 78.7 |
| 75° | 64.5 | 66.9 | 71.6 |
| 76° | 55.8 | 60.5 | 65.7 |
| 77° | 48.5 | 55.6 | 61.2 |
| 78° | 43.4 | 52.0 | 58.3 |
| 79° | 39.4 | 49.3 | 55.9 |
| 80° | 36.4 | 46.9 | 52.8 |
| 81° | 33.9 | 43.7 | 49.3 |
| 82° | 31.2 | 40.1 | 45.1 |
| 83° | 28.1 | 34.3 | 37.2 |
| 84° | 22.6 | 27.8 | 29.4 |
| 85° | 17.8 | 20.6 | 21.1 |
| 86° | 11.5 | 14.9 | 14.8 |
| 87° | 7.9 | 10.1 | 10.1 |
| 88° | 4.3 | 5.4 | 5.4 |
| 89° | 0.8 | 0.7 | 0.7 |



REPORT NUMBER: P1449857
CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|------|------|------|------|
| 90° | 0.0 | 0.0 | 0.0 |
| 91° | 0.0 | 0.0 | 0.0 |
| 92° | 0.0 | 0.0 | 0.0 |
| 93° | 0.0 | 0.0 | 0.0 |
| 94° | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 |
| 96° | 0.0 | 0.0 | 0.0 |
| 97° | 0.0 | 0.0 | 0.0 |
| 98° | 0.0 | 0.0 | 0.0 |
| 99° | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 |
| 101° | 0.0 | 0.0 | 0.0 |
| 102° | 0.0 | 0.0 | 0.0 |
| 103° | 0.0 | 0.0 | 0.0 |
| 104° | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 |
| 106° | 0.0 | 0.0 | 0.0 |
| 107° | 0.0 | 0.0 | 0.0 |
| 108° | 0.0 | 0.0 | 0.0 |
| 109° | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 |
| 111° | 0.0 | 0.0 | 0.0 |
| 112° | 0.0 | 0.0 | 0.0 |
| 113° | 0.0 | 0.0 | 0.0 |
| 114° | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 |
| 116° | 0.0 | 0.0 | 0.0 |
| 117° | 0.0 | 0.0 | 0.0 |
| 118° | 0.0 | 0.0 | 0.0 |
| 119° | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 |
| 121° | 0.0 | 0.0 | 0.0 |
| 122° | 0.0 | 0.0 | 0.0 |
| 123° | 0.0 | 0.0 | 0.0 |
| 124° | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 |
| 126° | 0.0 | 0.0 | 0.0 |
| 127° | 0.0 | 0.0 | 0.0 |
| 128° | 0.0 | 0.0 | 0.0 |
| 129° | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 |
| 131° | 0.0 | 0.0 | 0.0 |
| 132° | 0.0 | 0.0 | 0.0 |
| 133° | 0.0 | 0.0 | 0.0 |
| 134° | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | 330° | 345° | 360° |
|------|------|------|------|
| 135° | 0.0 | 0.0 | 0.0 |
| 136° | 0.0 | 0.0 | 0.0 |
| 137° | 0.0 | 0.0 | 0.0 |
| 138° | 0.0 | 0.0 | 0.0 |
| 139° | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 |
| 141° | 0.0 | 0.0 | 0.0 |
| 142° | 0.0 | 0.0 | 0.0 |
| 143° | 0.0 | 0.0 | 0.0 |
| 144° | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 |
| 146° | 0.0 | 0.0 | 0.0 |
| 147° | 0.0 | 0.0 | 0.0 |
| 148° | 0.0 | 0.0 | 0.0 |
| 149° | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 |
| 151° | 0.0 | 0.0 | 0.0 |
| 152° | 0.0 | 0.0 | 0.0 |
| 153° | 0.0 | 0.0 | 0.0 |
| 154° | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 |
| 156° | 0.0 | 0.0 | 0.0 |
| 157° | 0.0 | 0.0 | 0.0 |
| 158° | 0.0 | 0.0 | 0.0 |
| 159° | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 |
| 161° | 0.0 | 0.0 | 0.0 |
| 162° | 0.0 | 0.0 | 0.0 |
| 163° | 0.0 | 0.0 | 0.0 |
| 164° | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 |
| 166° | 0.0 | 0.0 | 0.0 |
| 167° | 0.0 | 0.0 | 0.0 |
| 168° | 0.0 | 0.0 | 0.0 |
| 169° | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 |
| 171° | 0.0 | 0.0 | 0.0 |
| 172° | 0.0 | 0.0 | 0.0 |
| 173° | 0.0 | 0.0 | 0.0 |
| 174° | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 |
| 176° | 0.0 | 0.0 | 0.0 |
| 177° | 0.0 | 0.0 | 0.0 |
| 178° | 0.0 | 0.0 | 0.0 |
| 179° | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449857
CATALOG NUMBER: TWC150_T2_60W_3000K

CANDELA DISTRIBUTION (continued):

| | | | |
|------|------|------|------|
| | 330° | 345° | 360° |
| 180° | 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

Lumark

Report Number: SP1-2601-659-1

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-3000K

Data in this report applies to families of products including ;MWP2460W34VDDKYYAD

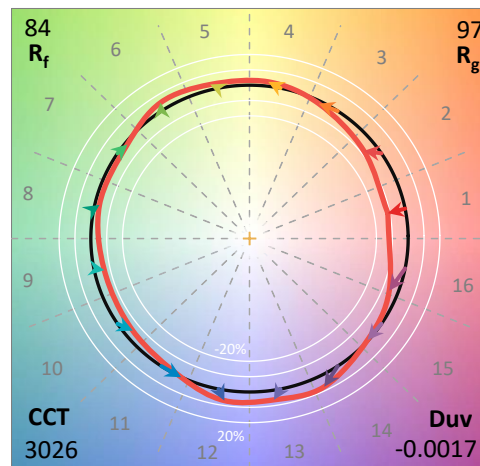
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2601-659-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 02/16/2026
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Lumark
 Catalog Number: **MWP2460W34VDDKYYAD-T4-24W-3000K**
 Description: Mester Wedge, at T4 beam setting, 24W output, 3000K

Spectral Parameters

CCT (K): 3026
 CIE u': 0.2503
 CIE v': 0.5184
 Duv: -0.0017
 CIE x: 0.4326
 CIE y: 0.3983
 CIE z: 0.1691
 Peak Wavelength (nm): 604
 Dominant Wavelength (nm): 583
 Purity: 49.3886
 Rf: 84
 Rg: 97.4

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 82.7 | | |
| R1: | 81.4 | R9: | 7.5 |
| R2: | 90.7 | R10: | 78.8 |
| R3: | 96.3 | R11: | 80.8 |
| R4: | 81.1 | R12: | 70.7 |
| R5: | 81.6 | R13: | 83.7 |
| R6: | 88.6 | R14: | 98.6 |
| R7: | 82.6 | R15: | 74.2 |
| R8: | 59.3 | | |



Test Conditions

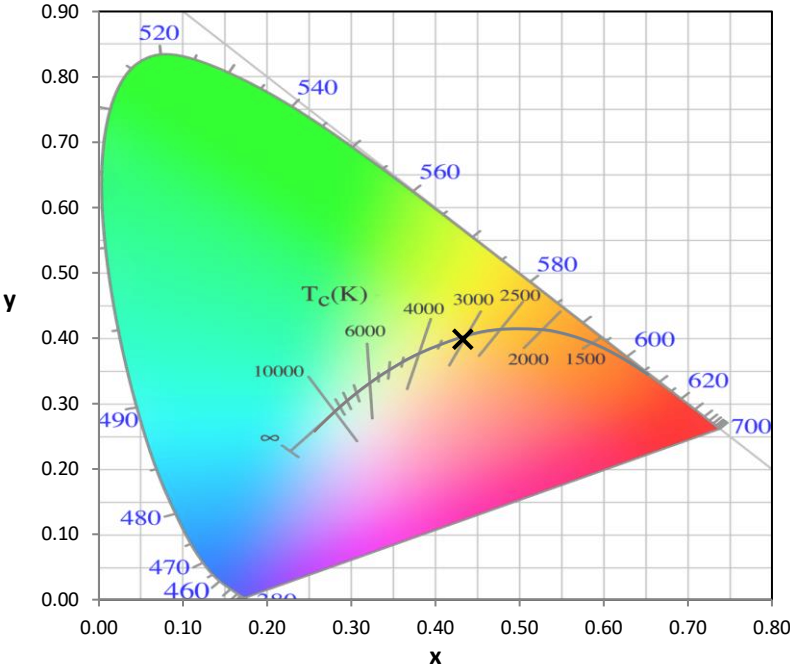
Stabilization Time: 64M
 Operation Time: 2H 4M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-1

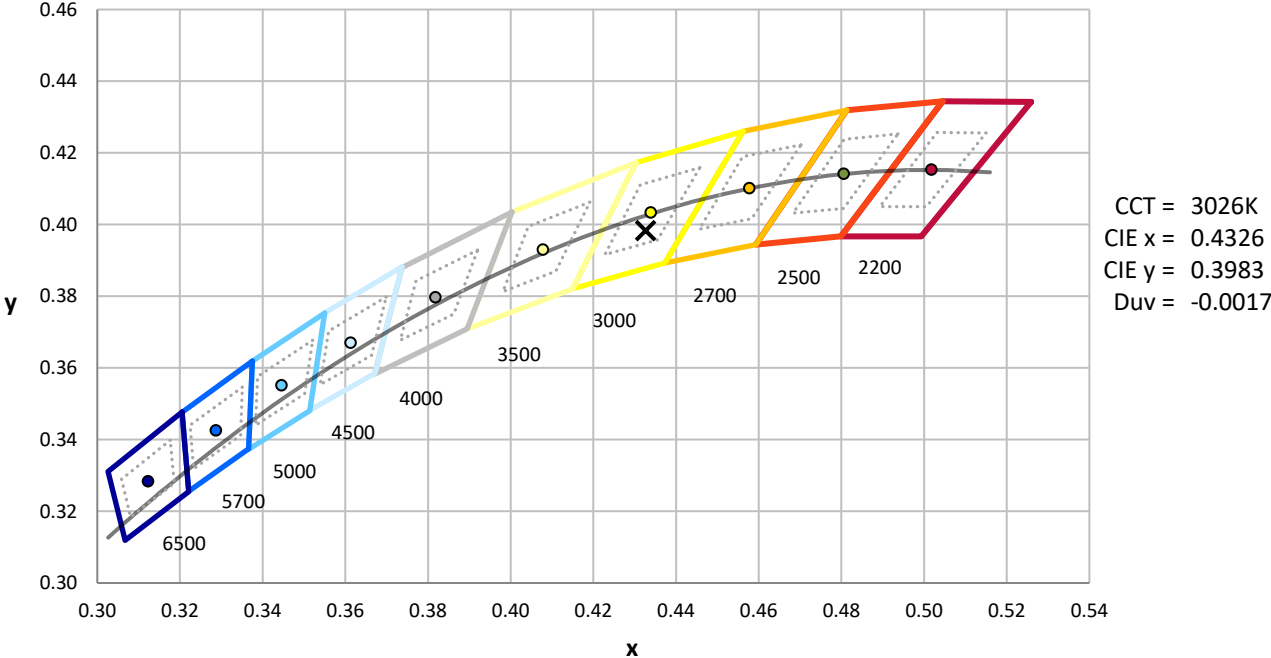
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 12/16/2025 | 6/16/2026 |
| Power Meter |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

REPORT NUMBER: SP1-2601-659-1

CIE 1931 Chromaticity Diagram



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

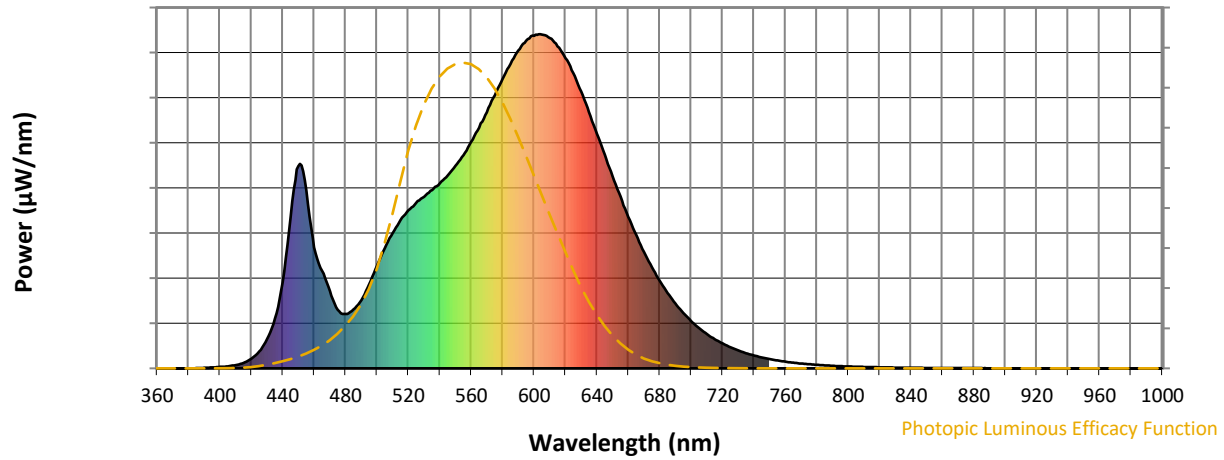


CCT = 3026K
 CIE x = 0.4326
 CIE y = 0.3983
 Duv = -0.0017

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-1

Photopic Flux vs. Wavelength

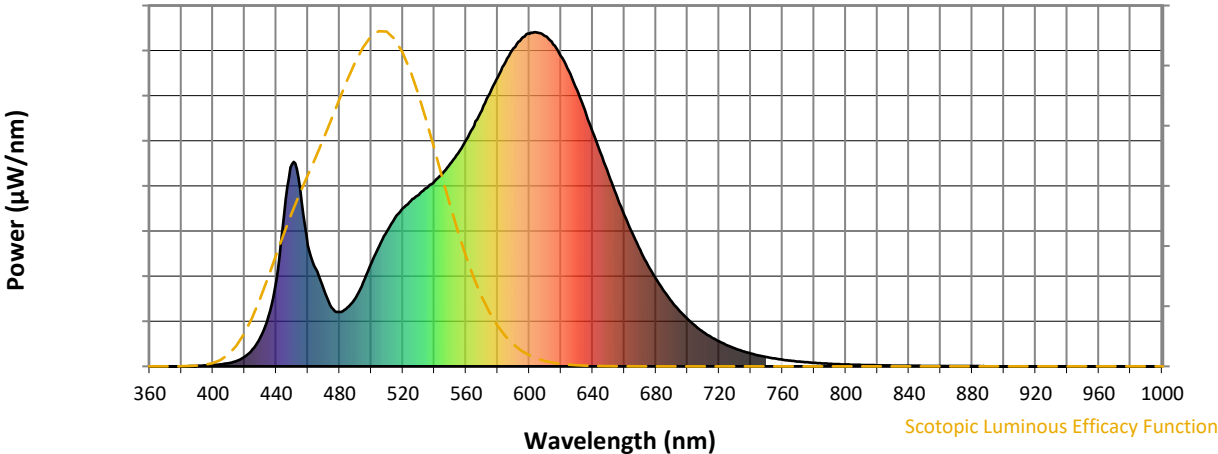


Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 204 | NR | 620 | 928 | NR | 750 | 28 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 251 | NR | 625 | 884 | NR | 755 | 24 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 307 | NR | 630 | 828 | NR | 760 | 20 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 360 | NR | 635 | 767 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 405 | NR | 640 | 702 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 444 | NR | 645 | 639 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 473 | NR | 650 | 574 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 495 | NR | 655 | 514 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 513 | NR | 660 | 453 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 534 | NR | 665 | 399 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 10 | NR | 540 | 554 | NR | 670 | 348 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 17 | NR | 545 | 577 | NR | 675 | 303 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 29 | NR | 550 | 606 | NR | 680 | 263 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 51 | NR | 555 | 638 | NR | 685 | 226 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 87 | NR | 560 | 678 | NR | 690 | 194 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 150 | NR | 565 | 720 | NR | 695 | 166 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 258 | NR | 570 | 767 | NR | 700 | 142 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 454 | NR | 575 | 817 | NR | 705 | 121 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 605 | NR | 580 | 866 | NR | 710 | 103 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 533 | NR | 585 | 911 | NR | 715 | 87 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 362 | NR | 590 | 952 | NR | 720 | 74 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 293 | NR | 595 | 981 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 231 | NR | 600 | 995 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 176 | NR | 605 | 999 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 163 | NR | 610 | 989 | NR | 740 | 38 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 176 | NR | 615 | 964 | NR | 745 | 33 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2601-659-1

Scotopic Flux vs. Wavelength

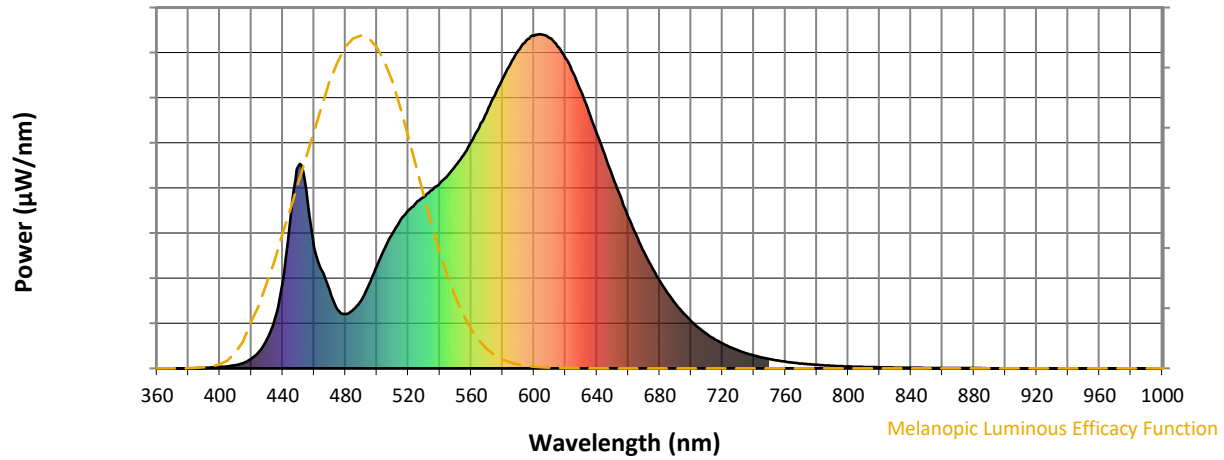


Scotopic Lumens: NR S/P: 1.35

| 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 | 204 | NR | 620 | 928 | NR | 750 | 28 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 251 | NR | 625 | 884 | NR | 755 | 24 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 307 | NR | 630 | 828 | NR | 760 | 20 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 360 | NR | 635 | 767 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 405 | NR | 640 | 702 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 444 | NR | 645 | 639 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 473 | NR | 650 | 574 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 495 | NR | 655 | 514 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 513 | NR | 660 | 453 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 534 | NR | 665 | 399 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 10 | NR | 540 | 554 | NR | 670 | 348 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 17 | NR | 545 | 577 | NR | 675 | 303 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 29 | NR | 550 | 606 | NR | 680 | 263 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 51 | NR | 555 | 638 | NR | 685 | 226 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 87 | NR | 560 | 678 | NR | 690 | 194 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 150 | NR | 565 | 720 | NR | 695 | 166 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 258 | NR | 570 | 767 | NR | 700 | 142 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 454 | NR | 575 | 817 | NR | 705 | 121 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 605 | NR | 580 | 866 | NR | 710 | 103 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 533 | NR | 585 | 911 | NR | 715 | 87 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 362 | NR | 590 | 952 | NR | 720 | 74 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 293 | NR | 595 | 981 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 231 | NR | 600 | 995 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 176 | NR | 605 | 999 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 163 | NR | 610 | 989 | NR | 740 | 38 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 176 | NR | 615 | 964 | NR | 745 | 33 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2601-659-1

Melanopic Flux vs. Wavelength



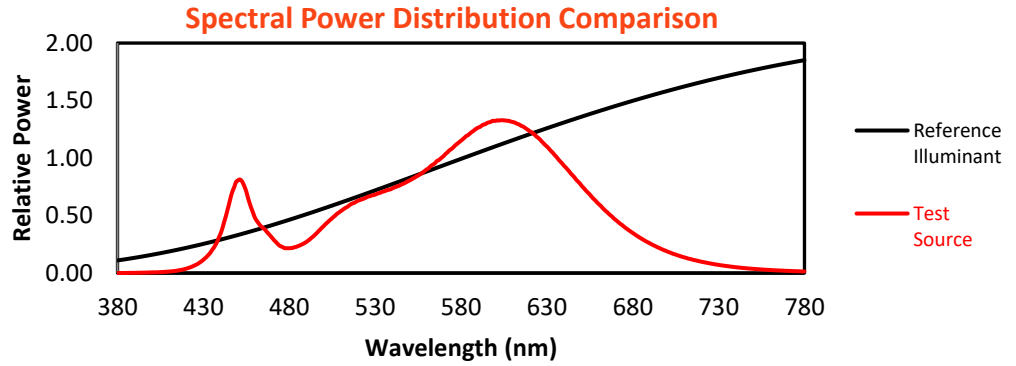
Melanopic Lumens: NR

M/P: 2.61

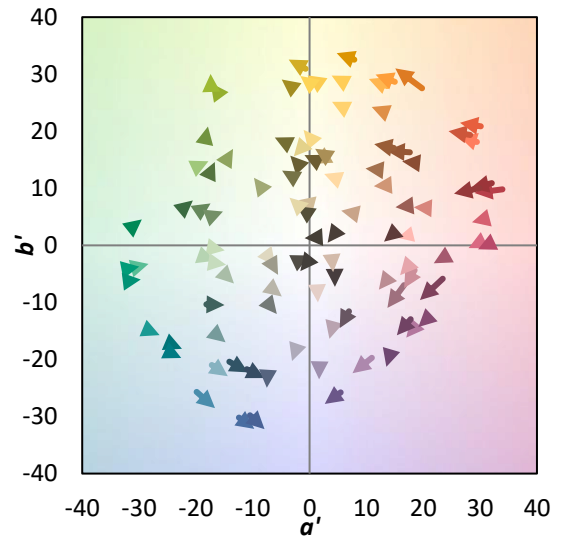
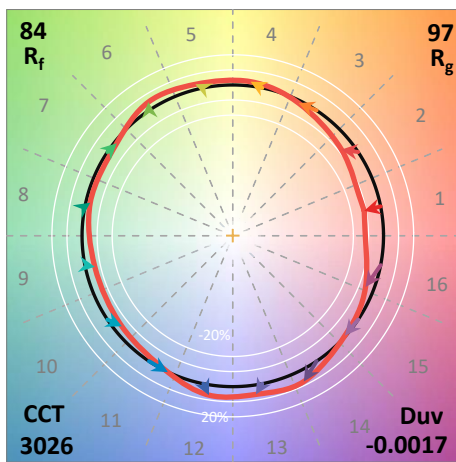
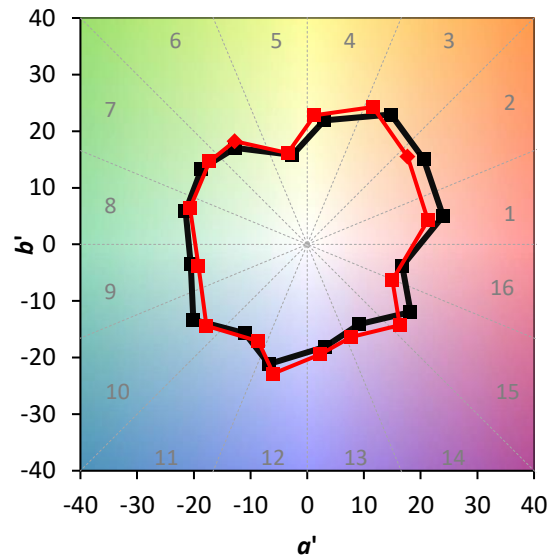
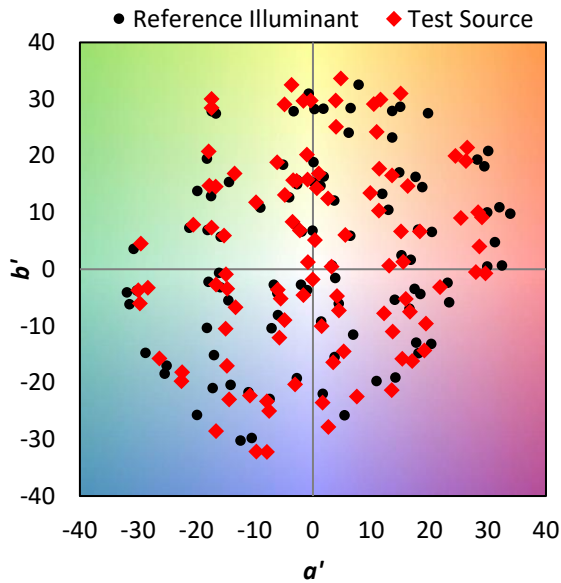
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 204 | NR | 620 | 928 | NR | 750 | 28 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 251 | NR | 625 | 884 | NR | 755 | 24 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 307 | NR | 630 | 828 | NR | 760 | 20 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 360 | NR | 635 | 767 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 405 | NR | 640 | 702 | NR | 770 | 14 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 444 | NR | 645 | 639 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 473 | NR | 650 | 574 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 495 | NR | 655 | 514 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 513 | NR | 660 | 453 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 534 | NR | 665 | 399 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 10 | NR | 540 | 554 | NR | 670 | 348 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 17 | NR | 545 | 577 | NR | 675 | 303 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 29 | NR | 550 | 606 | NR | 680 | 263 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 51 | NR | 555 | 638 | NR | 685 | 226 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 87 | NR | 560 | 678 | NR | 690 | 194 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 150 | NR | 565 | 720 | NR | 695 | 166 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 258 | NR | 570 | 767 | NR | 700 | 142 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 454 | NR | 575 | 817 | NR | 705 | 121 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 605 | NR | 580 | 866 | NR | 710 | 103 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 533 | NR | 585 | 911 | NR | 715 | 87 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 362 | NR | 590 | 952 | NR | 720 | 74 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 293 | NR | 595 | 981 | NR | 725 | 63 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 231 | NR | 600 | 995 | NR | 730 | 54 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 176 | NR | 605 | 999 | NR | 735 | 46 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 163 | NR | 610 | 989 | NR | 740 | 38 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 176 | NR | 615 | 964 | NR | 745 | 33 | NR | 875 | 1 | NR | | | |

Summary

$R_f = 84$
 $R_g = 97.4$
 $CIE R_a = 82.7$
 $R_9 = 7.5$

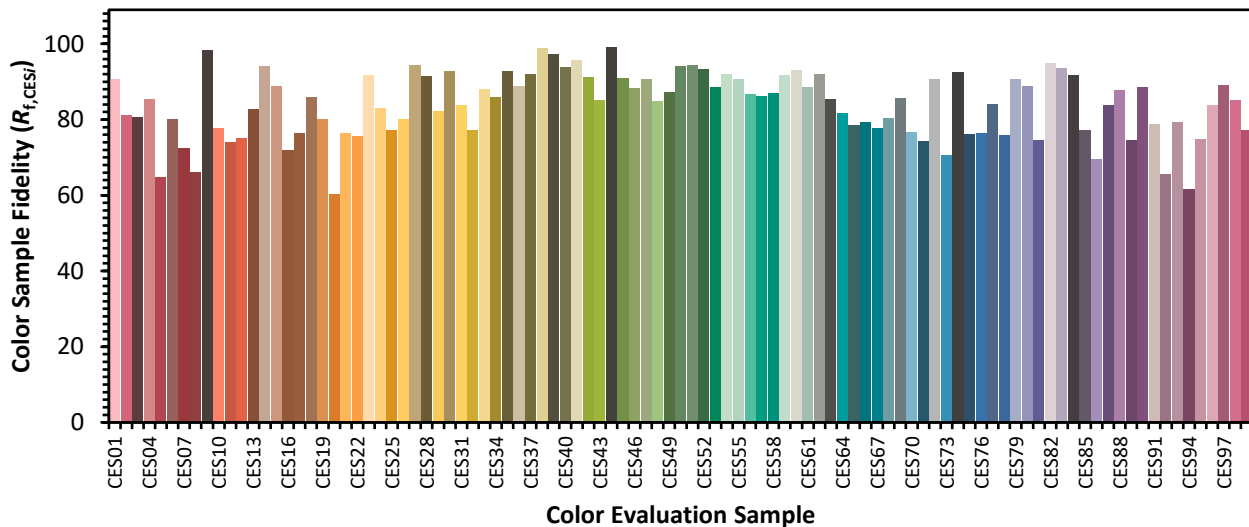


Color Vector Graphics

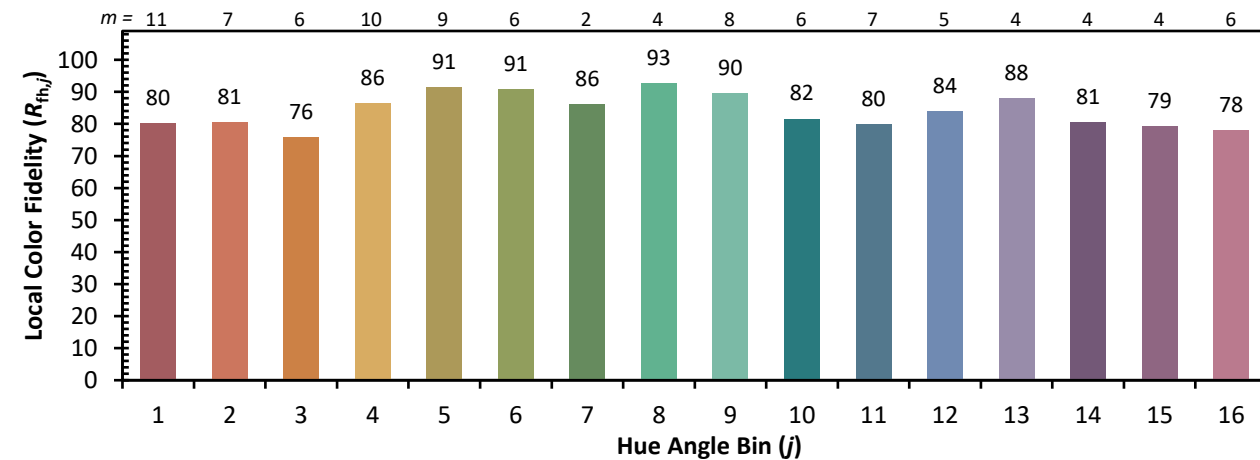
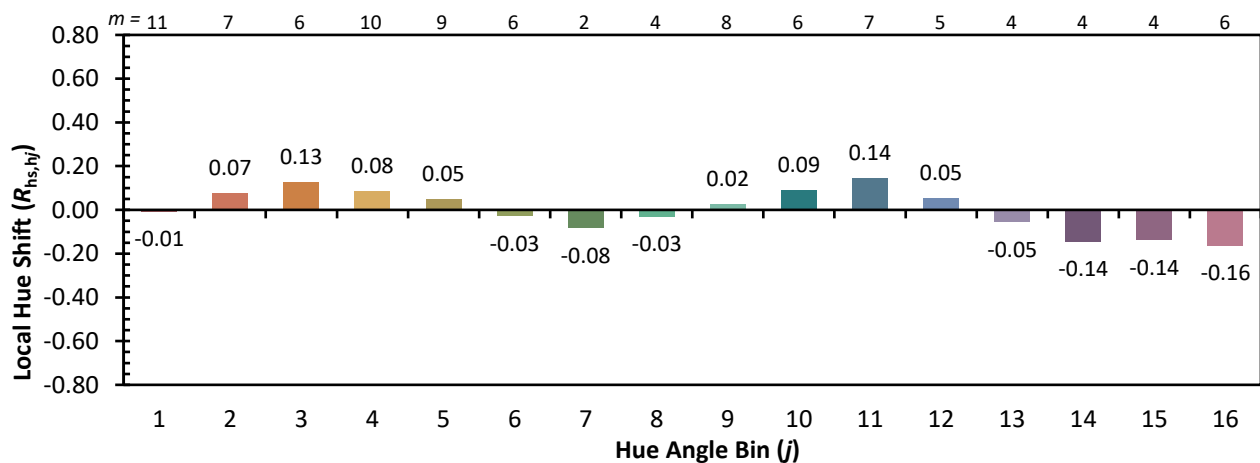
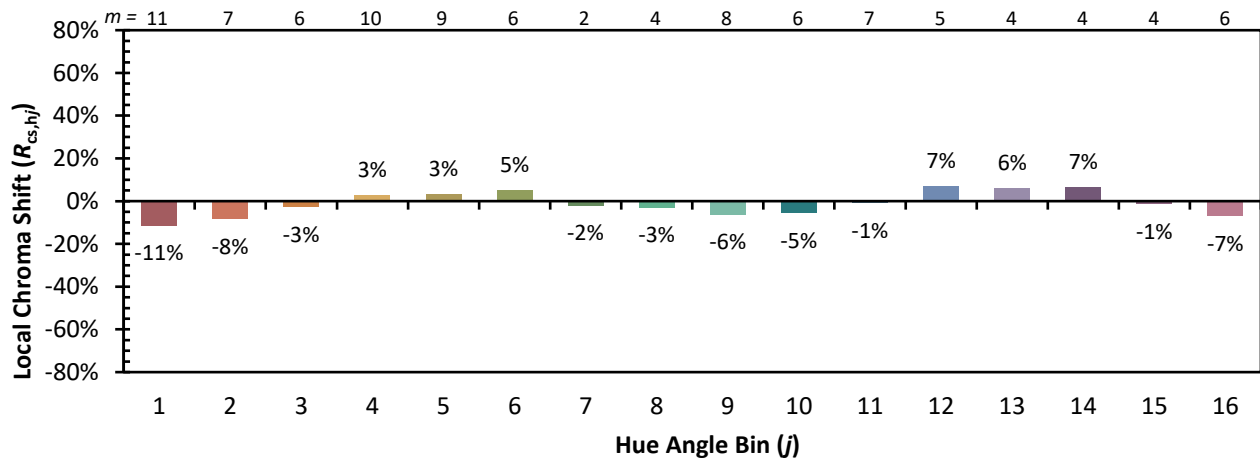


Individual Sample Fidelity Index ($R_{f,i}$)

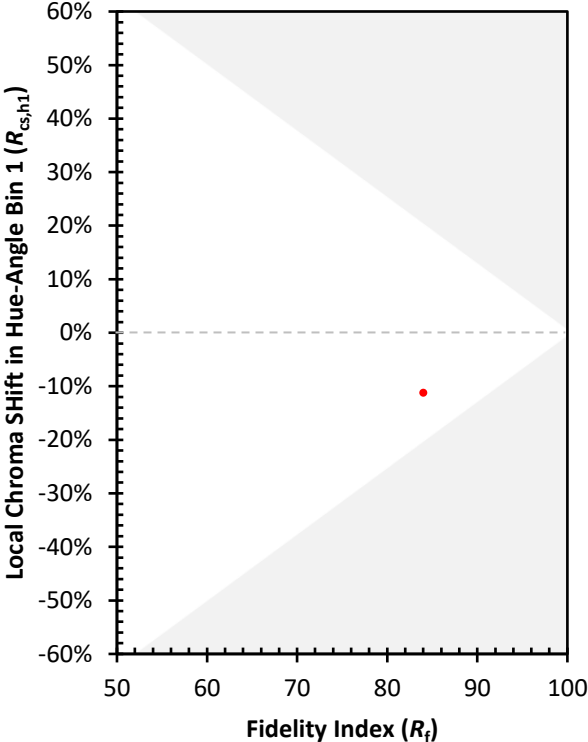
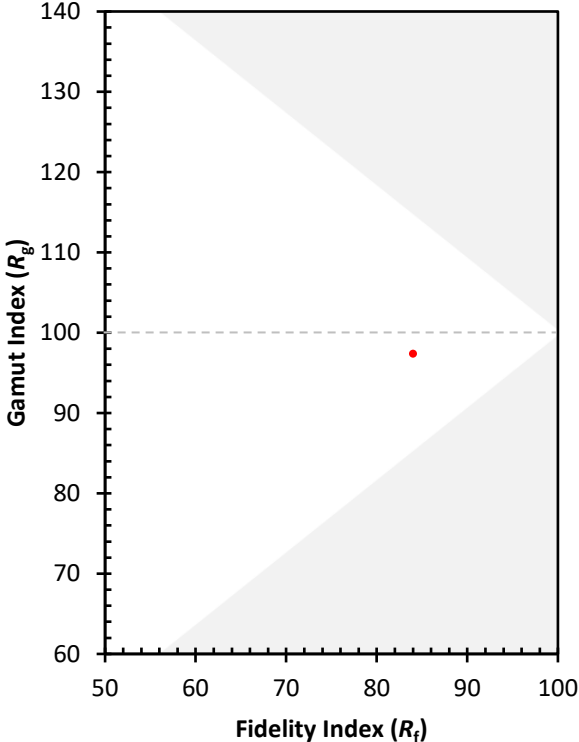
| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 80 | CES51 = 94 | CES76 = 76 |
| CES02 = 63 | CES27 = 94 | CES52 = 93 | CES77 = 84 |
| CES03 = 31 | CES28 = 92 | CES53 = 88 | CES78 = 76 |
| CES04 = 70 | CES29 = 82 | CES54 = 92 | CES79 = 91 |
| CES05 = 50 | CES30 = 93 | CES55 = 91 | CES80 = 89 |
| CES06 = 51 | CES31 = 84 | CES56 = 87 | CES81 = 75 |
| CES07 = 42 | CES32 = 77 | CES57 = 86 | CES82 = 95 |
| CES08 = 41 | CES33 = 88 | CES58 = 87 | CES83 = 93 |
| CES09 = 29 | CES34 = 86 | CES59 = 92 | CES84 = 92 |
| CES10 = 76 | CES35 = 93 | CES60 = 93 | CES85 = 77 |
| CES11 = 59 | CES36 = 89 | CES61 = 89 | CES86 = 69 |
| CES12 = 65 | CES37 = 92 | CES62 = 92 | CES87 = 84 |
| CES13 = 43 | CES38 = 99 | CES63 = 85 | CES88 = 88 |
| CES14 = 74 | CES39 = 97 | CES64 = 82 | CES89 = 75 |
| CES15 = 72 | CES40 = 94 | CES65 = 79 | CES90 = 89 |
| CES16 = 48 | CES41 = 96 | CES66 = 79 | CES91 = 79 |
| CES17 = 50 | CES42 = 91 | CES67 = 78 | CES92 = 66 |
| CES18 = 57 | CES43 = 85 | CES68 = 80 | CES93 = 79 |
| CES19 = 72 | CES44 = 99 | CES69 = 86 | CES94 = 62 |
| CES20 = 67 | CES45 = 91 | CES70 = 77 | CES95 = 75 |
| CES21 = 87 | CES46 = 88 | CES71 = 74 | CES96 = 84 |
| CES22 = 79 | CES47 = 91 | CES72 = 91 | CES97 = 89 |
| CES23 = 92 | CES48 = 85 | CES73 = 71 | CES98 = 85 |
| CES24 = 91 | CES49 = 87 | CES74 = 93 | CES99 = 77 |
| CES25 = 72 | CES50 = 94 | CES75 = 76 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)