

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776339

Luminaire Tested: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776339
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B035-HCD61TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD61TRC-4000lm-5000K
Description: 6 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

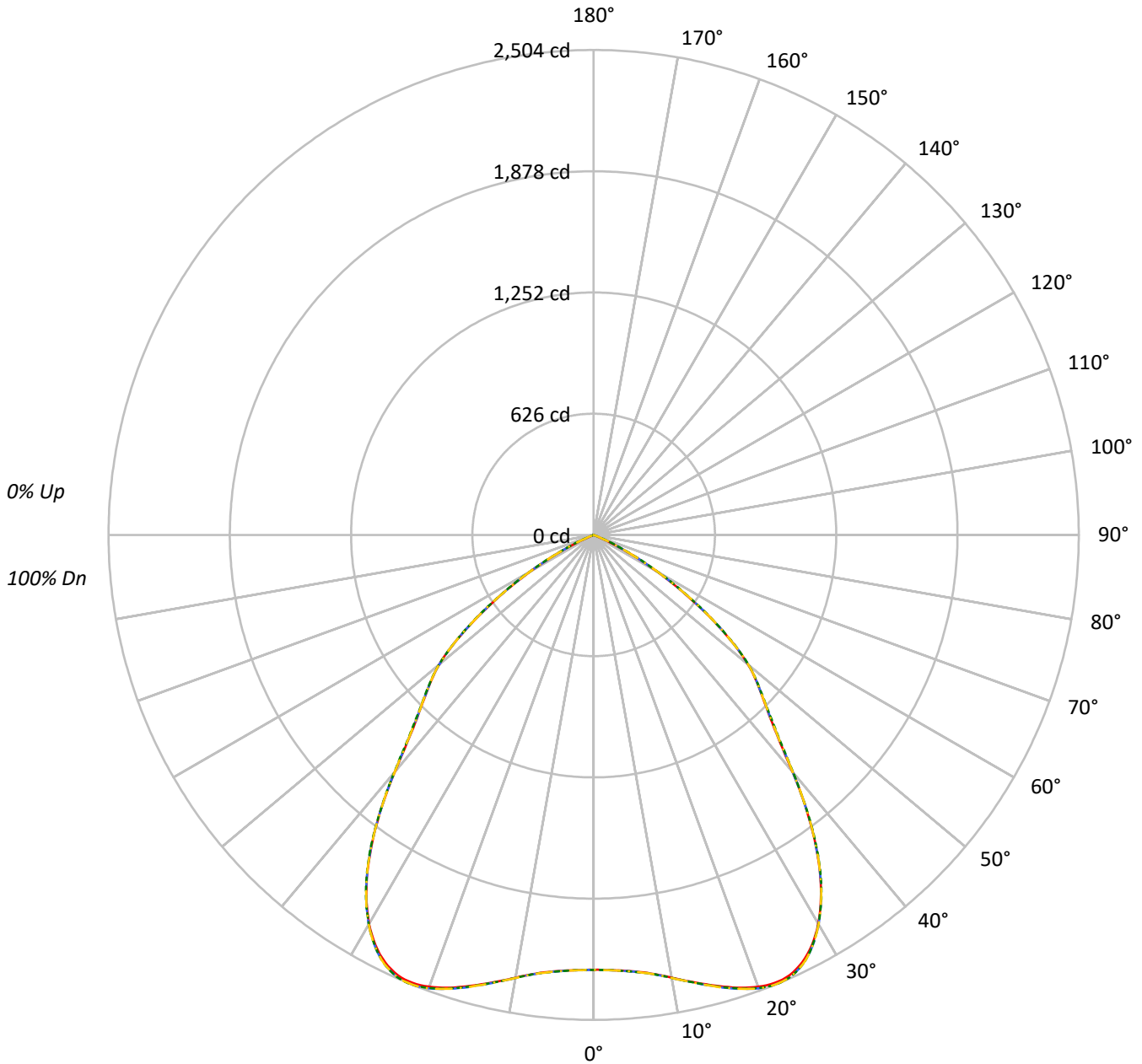
Lumens per Lamp: N/A
Luminaire Lumens: 5047.1 lumens
Efficiency: N/A
Efficacy: 131.1 lumens/watt
Spacing Criteria (0/90/45): 1.39 / 1.39 / 1.3
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776339
CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 50 | | | | | | | | | 30 | | | | | | | | | 10 | | | | | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 112 | 108 | 105 | 103 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 97 | 95 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 84 | 87 | 84 | 82 | 80 | | | | | | | | | | | | | | | | | | | |
| 3 | 97 | 88 | 82 | 77 | 95 | 87 | 81 | 76 | 84 | 79 | 75 | 82 | 77 | 74 | 79 | 76 | 73 | 71 | | | | | | | | | | | | | | | | | | | |
| 4 | 90 | 80 | 73 | 67 | 88 | 79 | 72 | 67 | 76 | 71 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 63 | | | | | | | | | | | | | | | | | | | |
| 5 | 83 | 73 | 65 | 60 | 82 | 72 | 65 | 59 | 70 | 63 | 59 | 68 | 62 | 58 | 66 | 61 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 6 | 78 | 66 | 59 | 53 | 76 | 65 | 58 | 53 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 52 | 50 | | | | | | | | | | | | | | | | | | | |
| 7 | 72 | 61 | 53 | 48 | 71 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 45 | | | | | | | | | | | | | | | | | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 42 | 52 | 46 | 42 | 40 | | | | | | | | | | | | | | | | | | | |
| 9 | 63 | 51 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 42 | 38 | 37 | | | | | | | | | | | | | | | | | | | |
| 10 | 60 | 48 | 40 | 36 | 58 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 34 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|--------|--------|--------|--------|
| 0° | 123126 | 123126 | 123126 | 123126 |
| 5° | 124477 | 124565 | 124477 | 124565 |
| 10° | 129239 | 129284 | 129239 | 129284 |
| 15° | 136732 | 136874 | 136732 | 136874 |
| 20° | 144843 | 145251 | 144843 | 145251 |
| 25° | 149658 | 150281 | 149658 | 150281 |
| 30° | 146731 | 146915 | 146731 | 146915 |
| 35° | 134709 | 135151 | 134709 | 135151 |
| 40° | 114200 | 114665 | 114200 | 114665 |
| 45° | 97816 | 98320 | 97816 | 98320 |
| 50° | 88731 | 88944 | 88731 | 88944 |
| 55° | 68327 | 69025 | 68327 | 69025 |
| 60° | 41159 | 42464 | 41159 | 42464 |
| 65° | 12894 | 16448 | 12894 | 16448 |
| 70° | 64 | 657 | 64 | 657 |
| 75° | 0 | 85 | 0 | 85 |
| 80° | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 98320 cd/sqm



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 217.9 | 4.3 |
| 10°-20° | 685.9 | 13.6 |
| 20°-30° | 1134.0 | 22.5 |
| 30°-40° | 1244.7 | 24.7 |
| 40°-50° | 988.4 | 19.6 |
| 50°-60° | 636.6 | 12.6 |
| 60°-70° | 139.4 | 2.8 |
| 70°-80° | 0.4 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 2037.7 | 40.4 |
| 0°-40° | 3282.3 | 65.0 |
| 0°-60° | 4907.3 | 97.2 |
| 0°-90° | 5047.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5047.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2246 | 2246 | 2246 | 2246 | 2246 | |
| 5° | 2262 | 2264 | 2262 | 2264 | 2262 | 218 |
| 15° | 2409 | 2412 | 2409 | 2412 | 2409 | 685 |
| 25° | 2474 | 2484 | 2474 | 2484 | 2474 | 1131 |
| 35° | 2013 | 2020 | 2013 | 2020 | 2013 | 1243 |
| 45° | 1262 | 1268 | 1262 | 1268 | 1262 | 986 |
| 55° | 715 | 722 | 715 | 722 | 715 | 633 |
| 65° | 99 | 127 | 99 | 127 | 99 | 127 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 |
| 0.5° | 2245.2 | 2246.0 | 2246.4 | 2246.9 | 2246.9 | 2246.9 | 2246.4 | 2246.0 | 2245.2 | 2246.0 | 2246.4 |
| 1° | 2246.0 | 2246.4 | 2246.9 | 2247.3 | 2246.9 | 2247.3 | 2246.9 | 2246.4 | 2246.0 | 2246.4 | 2246.9 |
| 1.5° | 2246.9 | 2247.3 | 2247.7 | 2248.1 | 2247.7 | 2248.1 | 2247.7 | 2247.3 | 2246.9 | 2247.3 | 2247.7 |
| 2° | 2248.1 | 2248.5 | 2248.9 | 2248.9 | 2248.5 | 2248.9 | 2248.9 | 2248.5 | 2248.1 | 2248.5 | 2248.9 |
| 2.5° | 2249.3 | 2249.7 | 2250.5 | 2250.5 | 2250.1 | 2250.5 | 2250.5 | 2249.7 | 2249.3 | 2249.7 | 2250.5 |
| 3° | 2251.4 | 2251.8 | 2252.2 | 2252.2 | 2251.8 | 2252.2 | 2252.2 | 2251.8 | 2251.4 | 2251.8 | 2252.2 |
| 3.5° | 2253.4 | 2253.8 | 2254.6 | 2254.6 | 2254.2 | 2254.6 | 2254.6 | 2253.8 | 2253.4 | 2253.8 | 2254.6 |
| 4° | 2255.9 | 2256.3 | 2257.1 | 2257.5 | 2257.1 | 2257.5 | 2257.1 | 2256.3 | 2255.9 | 2256.3 | 2257.1 |
| 4.5° | 2258.7 | 2259.1 | 2259.9 | 2260.4 | 2259.9 | 2260.4 | 2259.9 | 2259.1 | 2258.7 | 2259.1 | 2259.9 |
| 5° | 2262.0 | 2262.4 | 2263.2 | 2263.6 | 2263.2 | 2263.6 | 2263.2 | 2262.4 | 2262.0 | 2262.4 | 2263.2 |
| 5.5° | 2265.3 | 2266.1 | 2266.9 | 2267.7 | 2267.3 | 2267.7 | 2266.9 | 2266.1 | 2265.3 | 2266.1 | 2266.9 |
| 6° | 2269.4 | 2269.8 | 2271.0 | 2271.8 | 2271.4 | 2271.8 | 2271.0 | 2269.8 | 2269.4 | 2269.8 | 2271.0 |
| 6.5° | 2273.8 | 2274.3 | 2275.5 | 2275.9 | 2275.5 | 2275.9 | 2275.5 | 2274.3 | 2273.8 | 2274.3 | 2275.5 |
| 7° | 2278.8 | 2279.2 | 2280.4 | 2280.8 | 2280.4 | 2280.8 | 2280.4 | 2279.2 | 2278.8 | 2279.2 | 2280.4 |
| 7.5° | 2284.5 | 2284.9 | 2286.1 | 2286.1 | 2285.7 | 2286.1 | 2286.1 | 2284.9 | 2284.5 | 2284.9 | 2286.1 |
| 8° | 2290.2 | 2291.0 | 2292.3 | 2292.7 | 2292.3 | 2292.7 | 2292.3 | 2291.0 | 2290.2 | 2291.0 | 2292.3 |
| 8.5° | 2297.2 | 2298.0 | 2299.6 | 2299.6 | 2299.2 | 2299.6 | 2299.6 | 2298.0 | 2297.2 | 2298.0 | 2299.6 |
| 9° | 2304.9 | 2305.7 | 2307.0 | 2307.4 | 2306.6 | 2307.4 | 2307.0 | 2305.7 | 2304.9 | 2305.7 | 2307.0 |
| 9.5° | 2313.1 | 2313.9 | 2315.2 | 2315.6 | 2314.3 | 2315.6 | 2315.2 | 2313.9 | 2313.1 | 2313.9 | 2315.2 |
| 10° | 2321.7 | 2322.5 | 2323.7 | 2323.7 | 2322.5 | 2323.7 | 2323.7 | 2322.5 | 2321.7 | 2322.5 | 2323.7 |
| 10.5° | 2330.3 | 2331.1 | 2331.9 | 2331.9 | 2331.1 | 2331.9 | 2331.9 | 2331.1 | 2330.3 | 2331.1 | 2331.9 |
| 11° | 2338.9 | 2340.1 | 2340.9 | 2340.5 | 2339.7 | 2340.5 | 2340.9 | 2340.1 | 2338.9 | 2340.1 | 2340.9 |
| 11.5° | 2347.9 | 2348.7 | 2349.5 | 2349.1 | 2348.3 | 2349.1 | 2349.5 | 2348.7 | 2347.9 | 2348.7 | 2349.5 |
| 12° | 2356.5 | 2357.3 | 2358.1 | 2358.1 | 2357.3 | 2358.1 | 2358.1 | 2357.3 | 2356.5 | 2357.3 | 2358.1 |
| 12.5° | 2365.0 | 2366.3 | 2367.1 | 2367.1 | 2366.3 | 2367.1 | 2367.1 | 2366.3 | 2365.0 | 2366.3 | 2367.1 |
| 13° | 2373.6 | 2375.3 | 2376.1 | 2376.1 | 2375.3 | 2376.1 | 2376.1 | 2375.3 | 2373.6 | 2375.3 | 2376.1 |
| 13.5° | 2382.6 | 2384.3 | 2385.5 | 2385.1 | 2384.3 | 2385.1 | 2385.5 | 2384.3 | 2382.6 | 2384.3 | 2385.5 |
| 14° | 2391.2 | 2393.3 | 2394.9 | 2394.9 | 2393.3 | 2394.9 | 2394.9 | 2393.3 | 2391.2 | 2393.3 | 2394.9 |
| 14.5° | 2400.2 | 2402.3 | 2403.9 | 2404.3 | 2402.7 | 2404.3 | 2403.9 | 2402.3 | 2400.2 | 2402.3 | 2403.9 |
| 15° | 2409.2 | 2411.3 | 2413.3 | 2413.7 | 2411.7 | 2413.7 | 2413.3 | 2411.3 | 2409.2 | 2411.3 | 2413.3 |
| 15.5° | 2417.8 | 2420.3 | 2422.7 | 2422.7 | 2420.7 | 2422.7 | 2422.7 | 2420.3 | 2417.8 | 2420.3 | 2422.7 |
| 16° | 2426.4 | 2429.3 | 2431.7 | 2431.7 | 2429.7 | 2431.7 | 2431.7 | 2429.3 | 2426.4 | 2429.3 | 2431.7 |
| 16.5° | 2434.6 | 2437.4 | 2440.3 | 2440.3 | 2438.3 | 2440.3 | 2440.3 | 2437.4 | 2434.6 | 2437.4 | 2440.3 |
| 17° | 2443.2 | 2446.0 | 2448.9 | 2448.9 | 2446.4 | 2448.9 | 2448.9 | 2446.0 | 2443.2 | 2446.0 | 2448.9 |
| 17.5° | 2450.9 | 2454.2 | 2457.1 | 2457.1 | 2454.6 | 2457.1 | 2457.1 | 2454.2 | 2450.9 | 2454.2 | 2457.1 |
| 18° | 2458.3 | 2462.0 | 2464.8 | 2464.8 | 2462.8 | 2464.8 | 2464.8 | 2462.0 | 2458.3 | 2462.0 | 2464.8 |
| 18.5° | 2465.2 | 2469.3 | 2472.2 | 2472.2 | 2470.2 | 2472.2 | 2472.2 | 2469.3 | 2465.2 | 2469.3 | 2472.2 |
| 19° | 2471.8 | 2475.9 | 2479.2 | 2478.7 | 2477.1 | 2478.7 | 2479.2 | 2475.9 | 2471.8 | 2475.9 | 2479.2 |
| 19.5° | 2477.5 | 2481.6 | 2485.7 | 2484.9 | 2483.6 | 2484.9 | 2485.7 | 2481.6 | 2477.5 | 2481.6 | 2485.7 |
| 20° | 2482.8 | 2486.9 | 2491.4 | 2490.2 | 2489.8 | 2490.2 | 2491.4 | 2486.9 | 2482.8 | 2486.9 | 2491.4 |
| 20.5° | 2487.3 | 2491.4 | 2495.9 | 2494.7 | 2494.7 | 2494.7 | 2495.9 | 2491.4 | 2487.3 | 2491.4 | 2495.9 |
| 21° | 2490.6 | 2494.7 | 2499.6 | 2498.0 | 2498.8 | 2498.0 | 2499.6 | 2494.7 | 2490.6 | 2494.7 | 2499.6 |



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CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22.5° | 2494.7 | 2498.4 | 2504.1 | 2502.1 | 2504.5 | 2502.1 | 2504.1 | 2498.4 | 2494.7 | 2498.4 | 2504.1 |
| 23° | 2493.9 | 2497.1 | 2503.3 | 2500.8 | 2503.7 | 2500.8 | 2503.3 | 2497.1 | 2493.9 | 2497.1 | 2503.3 |
| 23.5° | 2491.4 | 2494.7 | 2500.8 | 2498.0 | 2501.6 | 2498.0 | 2500.8 | 2494.7 | 2491.4 | 2494.7 | 2500.8 |
| 24° | 2487.3 | 2490.6 | 2496.7 | 2494.3 | 2497.6 | 2494.3 | 2496.7 | 2490.6 | 2487.3 | 2490.6 | 2496.7 |
| 24.5° | 2481.6 | 2484.9 | 2491.0 | 2489.0 | 2491.8 | 2489.0 | 2491.0 | 2484.9 | 2481.6 | 2484.9 | 2491.0 |
| 25° | 2474.2 | 2477.9 | 2483.6 | 2482.0 | 2484.5 | 2482.0 | 2483.6 | 2477.9 | 2474.2 | 2477.9 | 2483.6 |
| 25.5° | 2466.1 | 2469.3 | 2475.1 | 2473.8 | 2475.1 | 2473.8 | 2475.1 | 2469.3 | 2466.1 | 2469.3 | 2475.1 |
| 26° | 2455.8 | 2459.1 | 2464.4 | 2464.0 | 2464.4 | 2464.0 | 2464.4 | 2459.1 | 2455.8 | 2459.1 | 2464.4 |
| 26.5° | 2443.2 | 2446.8 | 2452.2 | 2452.6 | 2451.7 | 2452.6 | 2452.2 | 2446.8 | 2443.2 | 2446.8 | 2452.2 |
| 27° | 2430.1 | 2433.8 | 2438.3 | 2439.5 | 2437.4 | 2439.5 | 2438.3 | 2433.8 | 2430.1 | 2433.8 | 2438.3 |
| 27.5° | 2414.9 | 2418.6 | 2422.7 | 2424.8 | 2421.5 | 2424.8 | 2422.7 | 2418.6 | 2414.9 | 2418.6 | 2422.7 |
| 28° | 2398.2 | 2401.9 | 2405.1 | 2408.4 | 2403.9 | 2408.4 | 2405.1 | 2401.9 | 2398.2 | 2401.9 | 2405.1 |
| 28.5° | 2380.6 | 2383.5 | 2386.7 | 2390.8 | 2385.1 | 2390.8 | 2386.7 | 2383.5 | 2380.6 | 2383.5 | 2386.7 |
| 29° | 2361.0 | 2363.8 | 2366.3 | 2371.2 | 2365.0 | 2371.2 | 2366.3 | 2363.8 | 2361.0 | 2363.8 | 2366.3 |
| 29.5° | 2340.1 | 2342.6 | 2345.4 | 2349.5 | 2343.8 | 2349.5 | 2345.4 | 2342.6 | 2340.1 | 2342.6 | 2345.4 |
| 30° | 2318.0 | 2319.7 | 2321.7 | 2326.6 | 2320.9 | 2326.6 | 2321.7 | 2319.7 | 2318.0 | 2319.7 | 2321.7 |
| 30.5° | 2294.3 | 2295.1 | 2297.6 | 2302.5 | 2296.8 | 2302.5 | 2297.6 | 2295.1 | 2294.3 | 2295.1 | 2297.6 |
| 31° | 2268.5 | 2269.4 | 2271.8 | 2276.3 | 2271.4 | 2276.3 | 2271.8 | 2269.4 | 2268.5 | 2269.4 | 2271.8 |
| 31.5° | 2242.0 | 2242.0 | 2244.8 | 2248.5 | 2244.8 | 2248.5 | 2244.8 | 2242.0 | 2242.0 | 2242.0 | 2244.8 |
| 32° | 2213.7 | 2213.3 | 2215.8 | 2219.5 | 2217.0 | 2219.5 | 2215.8 | 2213.3 | 2213.7 | 2213.3 | 2215.8 |
| 32.5° | 2183.9 | 2183.1 | 2186.3 | 2188.8 | 2188.0 | 2188.8 | 2186.3 | 2183.1 | 2183.9 | 2183.1 | 2186.3 |
| 33° | 2152.8 | 2152.0 | 2154.8 | 2156.9 | 2157.3 | 2156.9 | 2154.8 | 2152.0 | 2152.8 | 2152.0 | 2154.8 |
| 33.5° | 2120.1 | 2118.4 | 2122.1 | 2123.4 | 2124.6 | 2123.4 | 2122.1 | 2118.4 | 2120.1 | 2118.4 | 2122.1 |
| 34° | 2086.1 | 2084.5 | 2087.8 | 2088.2 | 2091.5 | 2088.2 | 2087.8 | 2084.5 | 2086.1 | 2084.5 | 2087.8 |
| 34.5° | 2049.7 | 2049.7 | 2051.8 | 2052.2 | 2055.9 | 2052.2 | 2051.8 | 2049.7 | 2049.7 | 2049.7 | 2051.8 |
| 35° | 2012.9 | 2012.5 | 2014.6 | 2015.4 | 2019.5 | 2015.4 | 2014.6 | 2012.5 | 2012.9 | 2012.5 | 2014.6 |
| 35.5° | 1975.3 | 1975.3 | 1976.9 | 1977.8 | 1981.8 | 1977.8 | 1976.9 | 1975.3 | 1975.3 | 1975.3 | 1976.9 |
| 36° | 1936.9 | 1936.9 | 1938.1 | 1939.3 | 1942.2 | 1939.3 | 1938.1 | 1936.9 | 1936.9 | 1936.9 | 1938.1 |
| 36.5° | 1897.2 | 1897.6 | 1898.4 | 1899.2 | 1902.5 | 1899.2 | 1898.4 | 1897.6 | 1897.2 | 1897.6 | 1898.4 |
| 37° | 1855.9 | 1856.7 | 1857.1 | 1858.3 | 1860.8 | 1858.3 | 1857.1 | 1856.7 | 1855.9 | 1856.7 | 1857.1 |
| 37.5° | 1814.6 | 1815.0 | 1815.8 | 1817.0 | 1818.3 | 1817.0 | 1815.8 | 1815.0 | 1814.6 | 1815.0 | 1815.8 |
| 38° | 1772.5 | 1772.5 | 1773.7 | 1774.5 | 1775.7 | 1774.5 | 1773.7 | 1772.5 | 1772.5 | 1772.5 | 1773.7 |
| 38.5° | 1729.5 | 1729.5 | 1730.7 | 1731.6 | 1732.4 | 1731.6 | 1730.7 | 1729.5 | 1729.5 | 1729.5 | 1730.7 |
| 39° | 1685.8 | 1685.8 | 1687.4 | 1688.6 | 1689.0 | 1688.6 | 1687.4 | 1685.8 | 1685.8 | 1685.8 | 1687.4 |
| 39.5° | 1640.8 | 1641.2 | 1642.8 | 1645.3 | 1645.7 | 1645.3 | 1642.8 | 1641.2 | 1640.8 | 1641.2 | 1642.8 |
| 40° | 1595.8 | 1596.2 | 1599.1 | 1601.1 | 1602.3 | 1601.1 | 1599.1 | 1596.2 | 1595.8 | 1596.2 | 1599.1 |
| 40.5° | 1551.6 | 1552.4 | 1556.1 | 1559.8 | 1560.6 | 1559.8 | 1556.1 | 1552.4 | 1551.6 | 1552.4 | 1556.1 |
| 41° | 1509.9 | 1511.1 | 1514.8 | 1518.9 | 1520.5 | 1518.9 | 1514.8 | 1511.1 | 1509.9 | 1511.1 | 1514.8 |
| 41.5° | 1470.6 | 1472.3 | 1475.5 | 1479.6 | 1480.9 | 1479.6 | 1475.5 | 1472.3 | 1470.6 | 1472.3 | 1475.5 |
| 42° | 1434.7 | 1435.5 | 1438.7 | 1441.6 | 1444.1 | 1441.6 | 1438.7 | 1435.5 | 1434.7 | 1435.5 | 1438.7 |
| 42.5° | 1401.1 | 1401.5 | 1405.6 | 1408.5 | 1410.1 | 1408.5 | 1405.6 | 1401.5 | 1401.1 | 1401.5 | 1405.6 |
| 43° | 1368.4 | 1368.8 | 1373.3 | 1376.6 | 1380.3 | 1376.6 | 1373.3 | 1368.8 | 1368.4 | 1368.8 | 1373.3 |
| 43.5° | 1338.1 | 1339.4 | 1342.6 | 1345.9 | 1348.8 | 1345.9 | 1342.6 | 1339.4 | 1338.1 | 1339.4 | 1342.6 |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45° | 1261.7 | 1261.7 | 1264.5 | 1265.7 | 1268.2 | 1265.7 | 1264.5 | 1261.7 | 1261.7 | 1261.7 | 1264.5 |
| 45.5° | 1238.3 | 1238.3 | 1241.2 | 1242.4 | 1243.7 | 1242.4 | 1241.2 | 1238.3 | 1238.3 | 1238.3 | 1241.2 |
| 46° | 1215.9 | 1216.3 | 1218.3 | 1219.9 | 1220.8 | 1219.9 | 1218.3 | 1216.3 | 1215.9 | 1216.3 | 1218.3 |
| 46.5° | 1194.2 | 1194.2 | 1196.2 | 1197.5 | 1199.1 | 1197.5 | 1196.2 | 1194.2 | 1194.2 | 1194.2 | 1196.2 |
| 47° | 1172.9 | 1172.9 | 1174.5 | 1176.2 | 1177.4 | 1176.2 | 1174.5 | 1172.9 | 1172.9 | 1172.9 | 1174.5 |
| 47.5° | 1151.6 | 1151.6 | 1153.7 | 1154.9 | 1155.3 | 1154.9 | 1153.7 | 1151.6 | 1151.6 | 1151.6 | 1153.7 |
| 48° | 1131.2 | 1130.8 | 1132.8 | 1134.1 | 1134.9 | 1134.1 | 1132.8 | 1130.8 | 1131.2 | 1130.8 | 1132.8 |
| 48.5° | 1109.9 | 1109.9 | 1111.6 | 1113.2 | 1113.6 | 1113.2 | 1111.6 | 1109.9 | 1109.9 | 1109.9 | 1111.6 |
| 49° | 1087.8 | 1088.3 | 1089.9 | 1091.1 | 1091.9 | 1091.1 | 1089.9 | 1088.3 | 1087.8 | 1088.3 | 1089.9 |
| 49.5° | 1065.4 | 1064.9 | 1067.0 | 1068.2 | 1068.6 | 1068.2 | 1067.0 | 1064.9 | 1065.4 | 1064.9 | 1067.0 |
| 50° | 1040.4 | 1040.4 | 1041.6 | 1042.9 | 1042.9 | 1042.9 | 1041.6 | 1040.4 | 1040.4 | 1040.4 | 1041.6 |
| 50.5° | 1013.0 | 1013.0 | 1013.8 | 1015.5 | 1015.5 | 1015.5 | 1013.8 | 1013.0 | 1013.0 | 1013.0 | 1013.8 |
| 51° | 984.0 | 983.6 | 984.8 | 986.0 | 987.2 | 986.0 | 984.8 | 983.6 | 984.0 | 983.6 | 984.8 |
| 51.5° | 953.3 | 952.9 | 954.5 | 956.2 | 956.6 | 956.2 | 954.5 | 952.9 | 953.3 | 952.9 | 954.5 |
| 52° | 921.4 | 921.8 | 923.0 | 924.3 | 925.1 | 924.3 | 923.0 | 921.8 | 921.4 | 921.8 | 923.0 |
| 52.5° | 888.7 | 888.3 | 890.3 | 892.0 | 892.4 | 892.0 | 890.3 | 888.3 | 888.7 | 888.3 | 890.3 |
| 53° | 854.3 | 854.7 | 856.8 | 858.8 | 858.4 | 858.8 | 856.8 | 854.7 | 854.3 | 854.7 | 856.8 |
| 53.5° | 820.0 | 820.4 | 822.8 | 824.5 | 825.3 | 824.5 | 822.8 | 820.4 | 820.0 | 820.4 | 822.8 |
| 54° | 784.8 | 785.6 | 788.1 | 789.7 | 790.1 | 789.7 | 788.1 | 785.6 | 784.8 | 785.6 | 788.1 |
| 54.5° | 750.0 | 750.0 | 753.3 | 755.4 | 756.2 | 755.4 | 753.3 | 750.0 | 750.0 | 750.0 | 753.3 |
| 55° | 714.9 | 715.3 | 719.0 | 720.6 | 722.2 | 720.6 | 719.0 | 715.3 | 714.9 | 715.3 | 719.0 |
| 55.5° | 678.9 | 679.7 | 683.4 | 685.8 | 687.5 | 685.8 | 683.4 | 679.7 | 678.9 | 679.7 | 683.4 |
| 56° | 643.3 | 644.5 | 648.6 | 650.7 | 652.7 | 650.7 | 648.6 | 644.5 | 643.3 | 644.5 | 648.6 |
| 56.5° | 608.1 | 609.4 | 613.4 | 615.9 | 617.9 | 615.9 | 613.4 | 609.4 | 608.1 | 609.4 | 613.4 |
| 57° | 573.0 | 575.0 | 578.7 | 581.5 | 583.6 | 581.5 | 578.7 | 575.0 | 573.0 | 575.0 | 578.7 |
| 57.5° | 538.6 | 540.7 | 544.3 | 547.6 | 549.7 | 547.6 | 544.3 | 540.7 | 538.6 | 540.7 | 544.3 |
| 58° | 504.7 | 506.3 | 510.4 | 514.5 | 516.1 | 514.5 | 510.4 | 506.3 | 504.7 | 506.3 | 510.4 |
| 58.5° | 470.7 | 473.2 | 477.3 | 482.2 | 483.4 | 482.2 | 477.3 | 473.2 | 470.7 | 473.2 | 477.3 |
| 59° | 438.0 | 440.9 | 444.1 | 449.5 | 450.7 | 449.5 | 444.1 | 440.9 | 438.0 | 440.9 | 444.1 |
| 59.5° | 406.5 | 408.6 | 412.2 | 417.6 | 418.8 | 417.6 | 412.2 | 408.6 | 406.5 | 408.6 | 412.2 |
| 60° | 375.4 | 377.1 | 380.7 | 385.7 | 387.3 | 385.7 | 380.7 | 377.1 | 375.4 | 377.1 | 380.7 |
| 60.5° | 344.3 | 346.0 | 349.7 | 354.6 | 357.0 | 354.6 | 349.7 | 346.0 | 344.3 | 346.0 | 349.7 |
| 61° | 314.1 | 315.7 | 320.2 | 324.7 | 327.2 | 324.7 | 320.2 | 315.7 | 314.1 | 315.7 | 320.2 |
| 61.5° | 283.4 | 286.7 | 291.2 | 295.7 | 299.4 | 295.7 | 291.2 | 286.7 | 283.4 | 286.7 | 291.2 |
| 62° | 254.4 | 258.5 | 263.0 | 267.9 | 271.6 | 267.9 | 263.0 | 258.5 | 254.4 | 258.5 | 263.0 |
| 62.5° | 225.3 | 230.7 | 235.6 | 240.5 | 244.6 | 240.5 | 235.6 | 230.7 | 225.3 | 230.7 | 235.6 |
| 63° | 197.1 | 204.5 | 209.0 | 213.9 | 218.4 | 213.9 | 209.0 | 204.5 | 197.1 | 204.5 | 209.0 |
| 63.5° | 170.1 | 179.5 | 184.4 | 188.9 | 193.8 | 188.9 | 184.4 | 179.5 | 170.1 | 179.5 | 184.4 |
| 64° | 144.0 | 156.2 | 162.0 | 166.0 | 170.9 | 166.0 | 162.0 | 156.2 | 144.0 | 156.2 | 162.0 |
| 64.5° | 120.6 | 135.0 | 140.3 | 144.0 | 148.9 | 144.0 | 140.3 | 135.0 | 120.6 | 135.0 | 140.3 |
| 65° | 99.4 | 114.5 | 119.8 | 123.1 | 126.8 | 123.1 | 119.8 | 114.5 | 99.4 | 114.5 | 119.8 |
| 65.5° | 79.3 | 96.5 | 101.0 | 102.7 | 105.9 | 102.7 | 101.0 | 96.5 | 79.3 | 96.5 | 101.0 |
| 66° | 62.2 | 80.2 | 83.4 | 85.9 | 87.5 | 85.9 | 83.4 | 80.2 | 62.2 | 80.2 | 83.4 |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|------|-------|------|-------|------|--------|------|--------|------|--------|------|
| 67.5° | 19.2 | 37.2 | 40.1 | 42.5 | 45.0 | 42.5 | 40.1 | 37.2 | 19.2 | 37.2 | 40.1 |
| 68° | 11.5 | 26.2 | 28.6 | 31.9 | 36.8 | 31.9 | 28.6 | 26.2 | 11.5 | 26.2 | 28.6 |
| 68.5° | 7.0 | 17.2 | 20.4 | 22.5 | 28.6 | 22.5 | 20.4 | 17.2 | 7.0 | 17.2 | 20.4 |
| 69° | 4.1 | 10.2 | 12.7 | 14.3 | 20.4 | 14.3 | 12.7 | 10.2 | 4.1 | 10.2 | 12.7 |
| 69.5° | 2.5 | 6.5 | 7.4 | 7.4 | 12.3 | 7.4 | 7.4 | 6.5 | 2.5 | 6.5 | 7.4 |
| 70° | 0.4 | 3.3 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 3.3 | 0.4 | 3.3 | 4.1 |
| 70.5° | 0.4 | 1.2 | 2.5 | 2.5 | 1.6 | 2.5 | 2.5 | 1.2 | 0.4 | 1.2 | 2.5 |
| 71° | 0.4 | 0.4 | 1.2 | 1.2 | 0.4 | 1.2 | 1.2 | 0.4 | 0.4 | 0.4 | 1.2 |
| 71.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 72° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 72.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 73° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 73.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 74° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 74.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 75° | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 |
| 75.5° | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 76° | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 76.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P776339
CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-----|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 0° | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 | 2246.0 |
| 0.5° | 2246.9 | 2246.4 | 2246.9 | 2246.4 | 2246.0 | 2245.2 |
| 1° | 2247.3 | 2246.9 | 2247.3 | 2246.9 | 2246.4 | 2246.0 |
| 1.5° | 2248.1 | 2247.7 | 2248.1 | 2247.7 | 2247.3 | 2246.9 |
| 2° | 2248.9 | 2248.5 | 2248.9 | 2248.9 | 2248.5 | 2248.1 |
| 2.5° | 2250.5 | 2250.1 | 2250.5 | 2250.5 | 2249.7 | 2249.3 |
| 3° | 2252.2 | 2251.8 | 2252.2 | 2252.2 | 2251.8 | 2251.4 |
| 3.5° | 2254.6 | 2254.2 | 2254.6 | 2254.6 | 2253.8 | 2253.4 |
| 4° | 2257.5 | 2257.1 | 2257.5 | 2257.1 | 2256.3 | 2255.9 |
| 4.5° | 2260.4 | 2259.9 | 2260.4 | 2259.9 | 2259.1 | 2258.7 |
| 5° | 2263.6 | 2263.6 | 2263.6 | 2263.2 | 2262.4 | 2262.0 |
| 5.5° | 2267.7 | 2267.3 | 2267.7 | 2266.9 | 2266.1 | 2265.3 |
| 6° | 2271.8 | 2271.4 | 2271.8 | 2271.0 | 2269.8 | 2269.4 |
| 6.5° | 2275.9 | 2275.5 | 2275.9 | 2275.5 | 2274.3 | 2273.8 |
| 7° | 2280.8 | 2280.4 | 2280.8 | 2280.4 | 2279.2 | 2278.8 |
| 7.5° | 2286.1 | 2285.7 | 2286.1 | 2286.1 | 2284.9 | 2284.5 |
| 8° | 2292.7 | 2292.3 | 2292.7 | 2292.3 | 2291.0 | 2290.2 |
| 8.5° | 2299.6 | 2299.2 | 2299.6 | 2299.6 | 2298.0 | 2297.2 |
| 9° | 2307.4 | 2306.6 | 2307.4 | 2307.0 | 2305.7 | 2304.9 |
| 9.5° | 2315.6 | 2314.3 | 2315.6 | 2315.2 | 2313.9 | 2313.1 |
| 10° | 2323.7 | 2322.5 | 2323.7 | 2323.7 | 2322.5 | 2321.7 |
| 10.5° | 2331.9 | 2331.1 | 2331.9 | 2331.9 | 2331.1 | 2330.3 |
| 11° | 2340.5 | 2339.7 | 2340.5 | 2340.9 | 2340.1 | 2338.9 |
| 11.5° | 2349.1 | 2348.3 | 2349.1 | 2349.5 | 2348.7 | 2347.9 |
| 12° | 2358.1 | 2357.3 | 2358.1 | 2358.1 | 2357.3 | 2356.5 |
| 12.5° | 2367.1 | 2366.3 | 2367.1 | 2367.1 | 2366.3 | 2365.0 |
| 13° | 2376.1 | 2375.3 | 2376.1 | 2376.1 | 2375.3 | 2373.6 |
| 13.5° | 2385.1 | 2384.3 | 2385.1 | 2385.5 | 2384.3 | 2382.6 |
| 14° | 2394.9 | 2393.3 | 2394.9 | 2394.9 | 2393.3 | 2391.2 |
| 14.5° | 2404.3 | 2402.7 | 2404.3 | 2403.9 | 2402.3 | 2400.2 |
| 15° | 2413.7 | 2411.7 | 2413.7 | 2413.3 | 2411.3 | 2409.2 |
| 15.5° | 2422.7 | 2420.7 | 2422.7 | 2422.7 | 2420.3 | 2417.8 |
| 16° | 2431.7 | 2429.7 | 2431.7 | 2431.7 | 2429.3 | 2426.4 |
| 16.5° | 2440.3 | 2438.3 | 2440.3 | 2440.3 | 2437.4 | 2434.6 |
| 17° | 2448.9 | 2446.4 | 2448.9 | 2448.9 | 2446.0 | 2443.2 |
| 17.5° | 2457.1 | 2454.6 | 2457.1 | 2457.1 | 2454.2 | 2450.9 |
| 18° | 2464.8 | 2462.8 | 2464.8 | 2464.8 | 2462.0 | 2458.3 |
| 18.5° | 2472.2 | 2470.2 | 2472.2 | 2472.2 | 2469.3 | 2465.2 |
| 19° | 2478.7 | 2477.1 | 2478.7 | 2479.2 | 2475.9 | 2471.8 |
| 19.5° | 2484.9 | 2483.6 | 2484.9 | 2485.7 | 2481.6 | 2477.5 |
| 20° | 2490.2 | 2489.8 | 2490.2 | 2491.4 | 2486.9 | 2482.8 |
| 20.5° | 2494.7 | 2494.7 | 2494.7 | 2495.9 | 2491.4 | 2487.3 |
| 21° | 2498.0 | 2498.8 | 2498.0 | 2499.6 | 2494.7 | 2490.6 |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 22.5° | 2502.1 | 2504.5 | 2502.1 | 2504.1 | 2498.4 | 2494.7 |
| 23° | 2500.8 | 2503.7 | 2500.8 | 2503.3 | 2497.1 | 2493.9 |
| 23.5° | 2498.0 | 2501.6 | 2498.0 | 2500.8 | 2494.7 | 2491.4 |
| 24° | 2494.3 | 2497.6 | 2494.3 | 2496.7 | 2490.6 | 2487.3 |
| 24.5° | 2489.0 | 2491.8 | 2489.0 | 2491.0 | 2484.9 | 2481.6 |
| 25° | 2482.0 | 2484.5 | 2482.0 | 2483.6 | 2477.9 | 2474.2 |
| 25.5° | 2473.8 | 2475.1 | 2473.8 | 2475.1 | 2469.3 | 2466.1 |
| 26° | 2464.0 | 2464.4 | 2464.0 | 2464.4 | 2459.1 | 2455.8 |
| 26.5° | 2452.6 | 2451.7 | 2452.6 | 2452.2 | 2446.8 | 2443.2 |
| 27° | 2439.5 | 2437.4 | 2439.5 | 2438.3 | 2433.8 | 2430.1 |
| 27.5° | 2424.8 | 2421.5 | 2424.8 | 2422.7 | 2418.6 | 2414.9 |
| 28° | 2408.4 | 2403.9 | 2408.4 | 2405.1 | 2401.9 | 2398.2 |
| 28.5° | 2390.8 | 2385.1 | 2390.8 | 2386.7 | 2383.5 | 2380.6 |
| 29° | 2371.2 | 2365.0 | 2371.2 | 2366.3 | 2363.8 | 2361.0 |
| 29.5° | 2349.5 | 2343.8 | 2349.5 | 2345.4 | 2342.6 | 2340.1 |
| 30° | 2326.6 | 2320.9 | 2326.6 | 2321.7 | 2319.7 | 2318.0 |
| 30.5° | 2302.5 | 2296.8 | 2302.5 | 2297.6 | 2295.1 | 2294.3 |
| 31° | 2276.3 | 2271.4 | 2276.3 | 2271.8 | 2269.4 | 2268.5 |
| 31.5° | 2248.5 | 2244.8 | 2248.5 | 2244.8 | 2242.0 | 2242.0 |
| 32° | 2219.5 | 2217.0 | 2219.5 | 2215.8 | 2213.3 | 2213.7 |
| 32.5° | 2188.8 | 2188.0 | 2188.8 | 2186.3 | 2183.1 | 2183.9 |
| 33° | 2156.9 | 2157.3 | 2156.9 | 2154.8 | 2152.0 | 2152.8 |
| 33.5° | 2123.4 | 2124.6 | 2123.4 | 2122.1 | 2118.4 | 2120.1 |
| 34° | 2088.2 | 2091.5 | 2088.2 | 2087.8 | 2084.5 | 2086.1 |
| 34.5° | 2052.2 | 2055.9 | 2052.2 | 2051.8 | 2049.7 | 2049.7 |
| 35° | 2015.4 | 2019.5 | 2015.4 | 2014.6 | 2012.5 | 2012.9 |
| 35.5° | 1977.8 | 1981.8 | 1977.8 | 1976.9 | 1975.3 | 1975.3 |
| 36° | 1939.3 | 1942.2 | 1939.3 | 1938.1 | 1936.9 | 1936.9 |
| 36.5° | 1899.2 | 1902.5 | 1899.2 | 1898.4 | 1897.6 | 1897.2 |
| 37° | 1858.3 | 1860.8 | 1858.3 | 1857.1 | 1856.7 | 1855.9 |
| 37.5° | 1817.0 | 1818.3 | 1817.0 | 1815.8 | 1815.0 | 1814.6 |
| 38° | 1774.5 | 1775.7 | 1774.5 | 1773.7 | 1772.5 | 1772.5 |
| 38.5° | 1731.6 | 1732.4 | 1731.6 | 1730.7 | 1729.5 | 1729.5 |
| 39° | 1688.6 | 1689.0 | 1688.6 | 1687.4 | 1685.8 | 1685.8 |
| 39.5° | 1645.3 | 1645.7 | 1645.3 | 1642.8 | 1641.2 | 1640.8 |
| 40° | 1601.1 | 1602.3 | 1601.1 | 1599.1 | 1596.2 | 1595.8 |
| 40.5° | 1559.8 | 1560.6 | 1559.8 | 1556.1 | 1552.4 | 1551.6 |
| 41° | 1518.9 | 1520.5 | 1518.9 | 1514.8 | 1511.1 | 1509.9 |
| 41.5° | 1479.6 | 1480.9 | 1479.6 | 1475.5 | 1472.3 | 1470.6 |
| 42° | 1441.6 | 1444.1 | 1441.6 | 1438.7 | 1435.5 | 1434.7 |
| 42.5° | 1408.5 | 1410.1 | 1408.5 | 1405.6 | 1401.5 | 1401.1 |
| 43° | 1376.6 | 1380.3 | 1376.6 | 1373.3 | 1368.8 | 1368.4 |
| 43.5° | 1345.9 | 1348.8 | 1345.9 | 1342.6 | 1339.4 | 1338.1 |

TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 45° | 1265.7 | 1268.2 | 1265.7 | 1264.5 | 1261.7 | 1261.7 |
| 45.5° | 1242.4 | 1243.7 | 1242.4 | 1241.2 | 1238.3 | 1238.3 |
| 46° | 1219.9 | 1220.8 | 1219.9 | 1218.3 | 1216.3 | 1215.9 |
| 46.5° | 1197.5 | 1199.1 | 1197.5 | 1196.2 | 1194.2 | 1194.2 |
| 47° | 1176.2 | 1177.4 | 1176.2 | 1174.5 | 1172.9 | 1172.9 |
| 47.5° | 1154.9 | 1155.3 | 1154.9 | 1153.7 | 1151.6 | 1151.6 |
| 48° | 1134.1 | 1134.9 | 1134.1 | 1132.8 | 1130.8 | 1131.2 |
| 48.5° | 1113.2 | 1113.6 | 1113.2 | 1111.6 | 1109.9 | 1109.9 |
| 49° | 1091.1 | 1091.9 | 1091.1 | 1089.9 | 1088.3 | 1087.8 |
| 49.5° | 1068.2 | 1068.6 | 1068.2 | 1067.0 | 1064.9 | 1065.4 |
| 50° | 1042.9 | 1042.9 | 1042.9 | 1041.6 | 1040.4 | 1040.4 |
| 50.5° | 1015.5 | 1015.5 | 1015.5 | 1013.8 | 1013.0 | 1013.0 |
| 51° | 986.0 | 987.2 | 986.0 | 984.8 | 983.6 | 984.0 |
| 51.5° | 956.2 | 956.6 | 956.2 | 954.5 | 952.9 | 953.3 |
| 52° | 924.3 | 925.1 | 924.3 | 923.0 | 921.8 | 921.4 |
| 52.5° | 892.0 | 892.4 | 892.0 | 890.3 | 888.3 | 888.7 |
| 53° | 858.8 | 858.4 | 858.8 | 856.8 | 854.7 | 854.3 |
| 53.5° | 824.5 | 825.3 | 824.5 | 822.8 | 820.4 | 820.0 |
| 54° | 789.7 | 790.1 | 789.7 | 788.1 | 785.6 | 784.8 |
| 54.5° | 755.4 | 756.2 | 755.4 | 753.3 | 750.0 | 750.0 |
| 55° | 720.6 | 722.2 | 720.6 | 719.0 | 715.3 | 714.9 |
| 55.5° | 685.8 | 687.5 | 685.8 | 683.4 | 679.7 | 678.9 |
| 56° | 650.7 | 652.7 | 650.7 | 648.6 | 644.5 | 643.3 |
| 56.5° | 615.9 | 617.9 | 615.9 | 613.4 | 609.4 | 608.1 |
| 57° | 581.5 | 583.6 | 581.5 | 578.7 | 575.0 | 573.0 |
| 57.5° | 547.6 | 549.7 | 547.6 | 544.3 | 540.7 | 538.6 |
| 58° | 514.5 | 516.1 | 514.5 | 510.4 | 506.3 | 504.7 |
| 58.5° | 482.2 | 483.4 | 482.2 | 477.3 | 473.2 | 470.7 |
| 59° | 449.5 | 450.7 | 449.5 | 444.1 | 440.9 | 438.0 |
| 59.5° | 417.6 | 418.8 | 417.6 | 412.2 | 408.6 | 406.5 |
| 60° | 385.7 | 387.3 | 385.7 | 380.7 | 377.1 | 375.4 |
| 60.5° | 354.6 | 357.0 | 354.6 | 349.7 | 346.0 | 344.3 |
| 61° | 324.7 | 327.2 | 324.7 | 320.2 | 315.7 | 314.1 |
| 61.5° | 295.7 | 299.4 | 295.7 | 291.2 | 286.7 | 283.4 |
| 62° | 267.9 | 271.6 | 267.9 | 263.0 | 258.5 | 254.4 |
| 62.5° | 240.5 | 244.6 | 240.5 | 235.6 | 230.7 | 225.3 |
| 63° | 213.9 | 218.4 | 213.9 | 209.0 | 204.5 | 197.1 |
| 63.5° | 188.9 | 193.8 | 188.9 | 184.4 | 179.5 | 170.1 |
| 64° | 166.0 | 170.9 | 166.0 | 162.0 | 156.2 | 144.0 |
| 64.5° | 144.0 | 148.9 | 144.0 | 140.3 | 135.0 | 120.6 |
| 65° | 123.1 | 126.8 | 123.1 | 119.8 | 114.5 | 99.4 |
| 65.5° | 102.7 | 105.9 | 102.7 | 101.0 | 96.5 | 79.3 |
| 66° | 85.9 | 87.5 | 85.9 | 83.4 | 80.2 | 62.2 |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|------|--------|------|
| 67.5° | 42.5 | 45.0 | 42.5 | 40.1 | 37.2 | 19.2 |
| 68° | 31.9 | 36.8 | 31.9 | 28.6 | 26.2 | 11.5 |
| 68.5° | 22.5 | 28.6 | 22.5 | 20.4 | 17.2 | 7.0 |
| 69° | 14.3 | 20.4 | 14.3 | 12.7 | 10.2 | 4.1 |
| 69.5° | 7.4 | 12.3 | 7.4 | 7.4 | 6.5 | 2.5 |
| 70° | 4.1 | 4.1 | 4.1 | 4.1 | 3.3 | 0.4 |
| 70.5° | 2.5 | 1.6 | 2.5 | 2.5 | 1.2 | 0.4 |
| 71° | 1.2 | 0.4 | 1.2 | 1.2 | 0.4 | 0.4 |
| 71.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 72° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 72.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 73° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 73.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 74° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 74.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| 75° | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 75.5° | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 |
| 76° | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 76.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P776339

CATALOG NUMBER: HCDJBL3040CSD-HCD61TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-----|--------|------|--------|------|--------|------|
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report



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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





| | | | | | | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 21.5° | 2493.5 | 2497.1 | 2502.5 | 2500.4 | 2502.1 | 2500.4 | 2502.5 | 2497.1 | 2493.5 | 2497.1 | 2502.5 |
| 22° | 2494.7 | 2498.4 | 2504.1 | 2501.6 | 2503.7 | 2501.6 | 2504.1 | 2498.4 | 2494.7 | 2498.4 | 2504.1 |



| | | | | | | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 44° | 1310.7 | 1311.6 | 1314.8 | 1316.9 | 1320.1 | 1316.9 | 1314.8 | 1311.6 | 1310.7 | 1311.6 | 1314.8 |
| 44.5° | 1285.8 | 1286.2 | 1289.1 | 1290.7 | 1292.7 | 1290.7 | 1289.1 | 1286.2 | 1285.8 | 1286.2 | 1289.1 |



| | | | | | | | | | | | |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 66.5° | 45.4 | 63.8 | 67.9 | 70.3 | 70.8 | 70.3 | 67.9 | 63.8 | 45.4 | 63.8 | 67.9 |
| 67° | 31.5 | 50.3 | 52.8 | 55.2 | 55.6 | 55.2 | 52.8 | 50.3 | 31.5 | 50.3 | 52.8 |



| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 89° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 89.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





| | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|
| 21.5° | 2500.4 | 2502.1 | 2500.4 | 2502.5 | 2497.1 | 2493.5 |
| 22° | 2501.6 | 2503.7 | 2501.6 | 2504.1 | 2498.4 | 2494.7 |



| | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|
| 44° | 1316.9 | 1320.1 | 1316.9 | 1314.8 | 1311.6 | 1310.7 |
| 44.5° | 1290.7 | 1292.7 | 1290.7 | 1289.1 | 1286.2 | 1285.8 |

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



| | | | | | | |
|-------|------|------|------|------|------|------|
| 66.5° | 70.3 | 70.8 | 70.3 | 67.9 | 63.8 | 45.4 |
| 67° | 55.2 | 55.6 | 55.2 | 52.8 | 50.3 | 31.5 |

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 89° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 89.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Cooper Lighting Solutions Photometric Lab
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Scaled Data Report



(END OF REPORT)