

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



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

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242578

Luminaire Tested: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242578
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-30)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1165D840-X4F0-XX-UDD-A-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

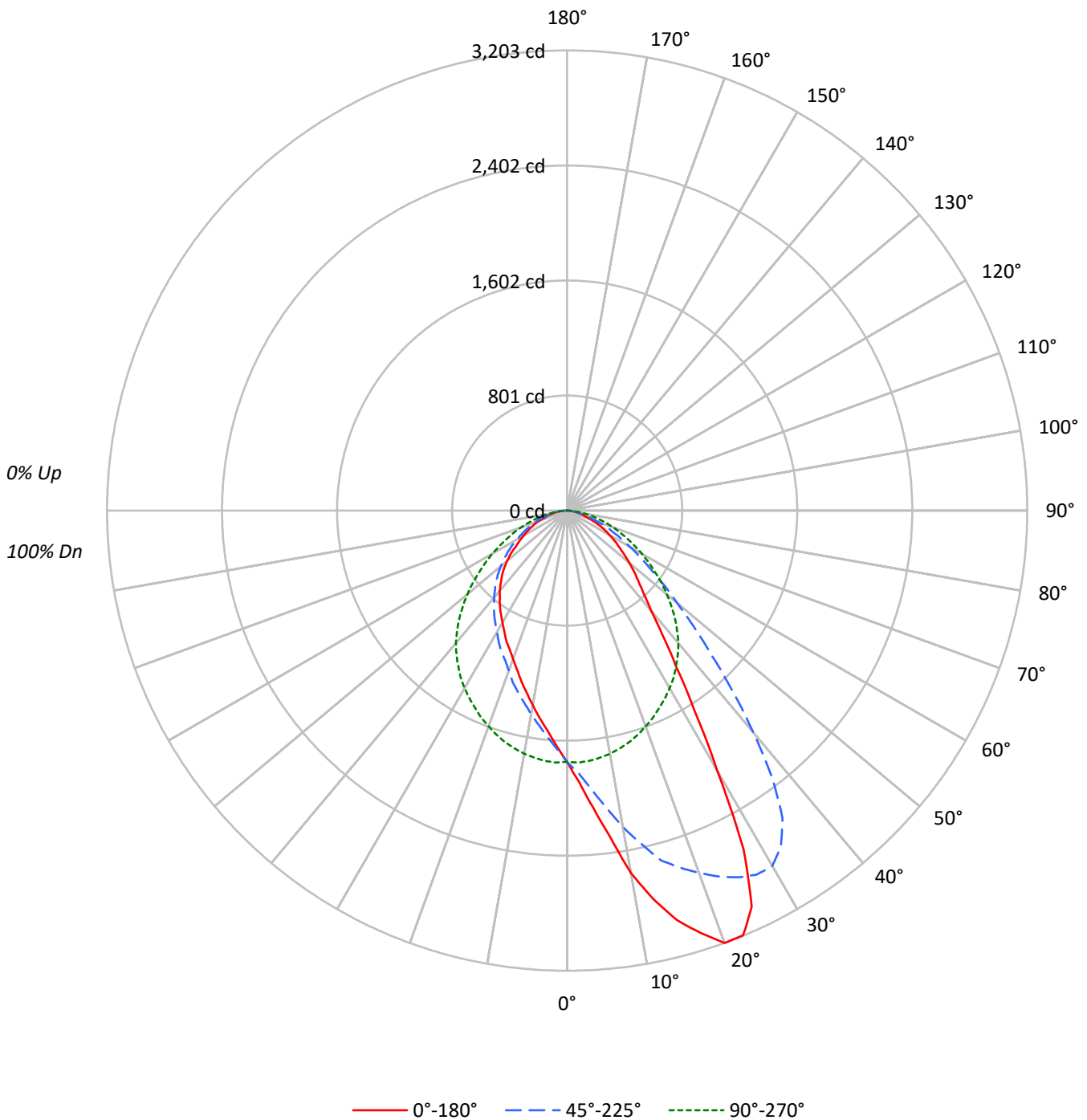
Lumens per Lamp: N/A
Luminaire Lumens: 4353.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.22 / 1.35
Luminous Opening: Rectangular (W 3.88' x L: 0.23' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
Input Voltage (V): 120
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: 24 FT

TEST NUMBER: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot



TEST NUMBER: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | |
| RC | 80 | | | | | 70 | | | | | 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 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 89 | | | | | 87 | | | | |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 78 | 83 | 79 | 77 | | | | | 74 | | | | |
| 3 | 93 | 84 | 76 | 71 | 91 | 82 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | | | | | 64 | | | | |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | | | | | 56 | | | | |
| 5 | 80 | 68 | 60 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | | | | | 50 | | | | |
| 6 | 74 | 62 | 53 | 47 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 57 | 51 | 46 | 56 | 50 | 46 | | | | | 44 | | | | |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | | | | | 39 | | | | |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | | | | | 36 | | | | |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | | | | | 32 | | | | |
| 10 | 57 | 44 | 37 | 32 | 55 | 44 | 36 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | | | | | 29 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|-------|-------|-------|-------|-------|
| 0° | 21190 | 21190 | 21190 | 21190 | 21190 |
| 5° | 25260 | 23693 | 21280 | 19213 | 18739 |
| 10° | 31539 | 27522 | 21158 | 17704 | 16930 |
| 15° | 37020 | 31610 | 20943 | 16463 | 15439 |
| 20° | 41316 | 34616 | 20619 | 15301 | 14171 |
| 25° | 40657 | 37673 | 20278 | 14492 | 13392 |
| 30° | 29223 | 39971 | 19964 | 13659 | 12590 |
| 35° | 19512 | 38670 | 19556 | 13090 | 12070 |
| 40° | 14375 | 31877 | 19065 | 12516 | 11533 |
| 45° | 12059 | 24323 | 18203 | 11982 | 11007 |
| 50° | 10641 | 18755 | 17075 | 11331 | 10273 |
| 55° | 9330 | 14962 | 15784 | 10659 | 9267 |
| 60° | 8310 | 12208 | 14550 | 9796 | 8490 |
| 65° | 7297 | 10001 | 13222 | 9037 | 7899 |
| 70° | 5727 | 8038 | 12043 | 8300 | 7216 |
| 75° | 5049 | 5924 | 10514 | 7498 | 6589 |
| 80° | 4391 | 5068 | 8935 | 6582 | 6478 |
| 85° | 3533 | 3852 | 7176 | 6662 | 6870 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 60°
 Vertical Angle: 45°
 Luminance: 34226 cd/sqm



TEST NUMBER: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 171.7 | 3.9 |
| 10°-20° | 537.4 | 12.3 |
| 20°-30° | 846.4 | 19.4 |
| 30°-40° | 880.2 | 20.2 |
| 40°-50° | 753.1 | 17.3 |
| 50°-60° | 573.9 | 13.2 |
| 60°-70° | 367.7 | 8.4 |
| 70°-80° | 176.2 | 4.0 |
| 80°-90° | 46.3 | 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°-30° | 1555.5 | 35.7 |
| 0°-40° | 2435.7 | 56.0 |
| 0°-60° | 3762.7 | 86.4 |
| 0°-90° | 4353.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4353.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1748 | 1748 | 1748 | 1748 | 1748 | |
| 5° | 2076 | 1947 | 1749 | 1579 | 1540 | 213 |
| 15° | 2950 | 2519 | 1669 | 1312 | 1230 | 837 |
| 25° | 3040 | 2817 | 1516 | 1084 | 1001 | 1321 |
| 35° | 1319 | 2613 | 1322 | 885 | 816 | 857 |
| 45° | 704 | 1419 | 1062 | 699 | 642 | 552 |
| 55° | 442 | 708 | 747 | 504 | 438 | 399 |
| 65° | 254 | 349 | 461 | 315 | 275 | 250 |
| 75° | 108 | 126 | 224 | 160 | 141 | 115 |
| 85° | 25 | 28 | 52 | 48 | 49 | 29 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 |
| 2.5° | 1890.4 | 1893.4 | 1883.6 | 1882.1 | 1870.9 | 1867.9 | 1867.9 | 1852.2 | 1842.5 | 1829.8 | 1822.3 |
| 5° | 2076.0 | 2087.9 | 2081.9 | 2068.5 | 2046.0 | 2040.8 | 2026.6 | 2004.1 | 1978.7 | 1947.2 | 1932.3 |
| 7.5° | 2288.5 | 2313.2 | 2308.7 | 2287.7 | 2263.8 | 2248.8 | 2209.2 | 2177.0 | 2128.3 | 2084.2 | 2049.8 |
| 10° | 2562.4 | 2545.2 | 2531.7 | 2511.5 | 2489.8 | 2454.6 | 2412.7 | 2355.1 | 2288.5 | 2236.1 | 2177.7 |
| 12.5° | 2767.5 | 2768.2 | 2750.2 | 2729.3 | 2696.4 | 2663.4 | 2609.5 | 2536.2 | 2456.1 | 2374.6 | 2305.7 |
| 15° | 2950.1 | 2954.5 | 2943.3 | 2921.6 | 2878.2 | 2819.1 | 2741.3 | 2712.1 | 2601.3 | 2519.0 | 2436.7 |
| 17.5° | 3080.3 | 3081.0 | 3078.8 | 3049.6 | 3002.4 | 2962.0 | 2889.4 | 2821.3 | 2716.6 | 2605.1 | 2495.0 |
| 20° | 3203.0 | 3195.5 | 3197.0 | 3163.3 | 3130.4 | 3081.8 | 3011.4 | 2899.9 | 2817.6 | 2683.6 | 2569.1 |
| 22.5° | 3200.0 | 3200.0 | 3206.7 | 3200.8 | 3179.1 | 3144.6 | 3093.0 | 3003.2 | 2892.4 | 2757.0 | 2624.5 |
| 25° | 3039.9 | 3033.9 | 3069.0 | 3078.8 | 3116.9 | 3123.7 | 3107.2 | 3055.6 | 2956.0 | 2816.8 | 2657.4 |
| 27.5° | 2658.2 | 2636.5 | 2709.8 | 2782.4 | 2879.0 | 2940.3 | 3003.2 | 3017.4 | 2970.3 | 2856.5 | 2689.6 |
| 30° | 2087.9 | 2158.3 | 2191.2 | 2309.5 | 2441.2 | 2598.3 | 2736.0 | 2867.0 | 2899.2 | 2855.8 | 2724.8 |
| 32.5° | 1644.9 | 1704.0 | 1730.2 | 1827.5 | 1948.0 | 2138.8 | 2362.6 | 2561.7 | 2717.3 | 2769.7 | 2703.8 |
| 35° | 1318.6 | 1319.4 | 1382.2 | 1427.1 | 1540.9 | 1730.2 | 1930.8 | 2179.2 | 2426.2 | 2613.3 | 2632.7 |
| 37.5° | 1088.1 | 1091.1 | 1131.5 | 1176.4 | 1267.7 | 1374.0 | 1560.3 | 1769.9 | 2067.0 | 2346.1 | 2491.3 |
| 40° | 908.5 | 915.2 | 943.7 | 987.8 | 1049.2 | 1124.8 | 1262.5 | 1457.1 | 1695.0 | 2014.6 | 2275.8 |
| 42.5° | 793.3 | 805.2 | 816.5 | 847.9 | 880.1 | 949.7 | 1054.4 | 1193.6 | 1404.7 | 1702.5 | 2013.8 |
| 45° | 703.5 | 709.4 | 720.7 | 736.4 | 770.8 | 820.2 | 895.0 | 996.1 | 1175.7 | 1418.9 | 1720.5 |
| 47.5° | 634.6 | 630.9 | 643.6 | 657.1 | 680.3 | 716.2 | 768.6 | 856.1 | 990.8 | 1194.4 | 1455.6 |
| 50° | 564.3 | 563.5 | 571.8 | 581.5 | 603.2 | 627.9 | 669.0 | 731.2 | 832.9 | 994.6 | 1228.8 |
| 52.5° | 498.4 | 502.2 | 507.4 | 520.1 | 534.3 | 553.0 | 589.0 | 629.4 | 713.2 | 847.1 | 1032.7 |
| 55° | 441.5 | 443.8 | 452.0 | 458.7 | 470.0 | 490.2 | 513.4 | 550.8 | 610.7 | 708.0 | 868.9 |
| 57.5° | 392.1 | 391.4 | 399.6 | 400.4 | 414.6 | 431.8 | 450.5 | 479.7 | 525.4 | 602.4 | 714.7 |
| 60° | 342.8 | 340.5 | 347.2 | 352.5 | 359.2 | 372.7 | 387.7 | 416.1 | 450.5 | 503.6 | 596.4 |
| 62.5° | 297.8 | 297.1 | 301.6 | 306.8 | 312.1 | 324.0 | 336.0 | 356.2 | 381.7 | 424.3 | 493.2 |
| 65° | 254.4 | 256.7 | 258.9 | 261.2 | 264.2 | 271.7 | 283.6 | 298.6 | 317.3 | 348.7 | 401.9 |
| 67.5° | 209.5 | 212.5 | 213.3 | 218.5 | 224.5 | 228.3 | 235.0 | 249.2 | 263.4 | 291.9 | 323.3 |
| 70° | 161.6 | 160.9 | 161.6 | 163.9 | 172.1 | 180.4 | 190.1 | 199.8 | 208.0 | 226.8 | 252.2 |
| 72.5° | 133.2 | 131.7 | 134.0 | 134.0 | 137.0 | 137.7 | 142.9 | 151.9 | 163.1 | 174.4 | 190.8 |
| 75° | 107.8 | 107.8 | 107.8 | 107.8 | 110.8 | 112.3 | 114.5 | 116.7 | 120.5 | 126.5 | 139.9 |
| 77.5° | 83.8 | 83.8 | 85.3 | 86.1 | 86.8 | 87.6 | 89.1 | 91.3 | 92.8 | 95.8 | 102.5 |
| 80° | 62.9 | 63.6 | 62.9 | 63.6 | 63.6 | 65.1 | 65.9 | 68.1 | 68.8 | 72.6 | 74.8 |
| 82.5° | 43.4 | 42.7 | 43.4 | 44.2 | 44.2 | 45.7 | 45.7 | 47.1 | 47.1 | 48.6 | 50.9 |
| 85° | 25.4 | 23.9 | 25.4 | 24.7 | 26.2 | 24.7 | 25.4 | 26.9 | 26.9 | 27.7 | 30.7 |
| 87.5° | 7.5 | 9.0 | 7.5 | 8.2 | 8.2 | 9.0 | 9.0 | 9.0 | 10.5 | 9.7 | 10.5 |
| 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: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | 100° | 105° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 |
| 2.5° | 1819.3 | 1817.0 | 1806.6 | 1794.6 | 1778.9 | 1768.4 | 1760.2 | 1755.7 | 1742.2 | 1725.7 | 1714.5 |
| 5° | 1916.6 | 1894.1 | 1870.2 | 1841.0 | 1814.0 | 1786.3 | 1769.1 | 1748.9 | 1724.2 | 1696.5 | 1677.1 |
| 7.5° | 2013.1 | 1974.2 | 1931.5 | 1887.4 | 1842.5 | 1802.8 | 1766.1 | 1736.2 | 1698.8 | 1660.6 | 1634.4 |
| 10° | 2127.6 | 2063.2 | 1996.6 | 1928.5 | 1866.4 | 1808.0 | 1763.1 | 1719.0 | 1671.8 | 1626.2 | 1591.8 |
| 12.5° | 2231.6 | 2141.8 | 2062.5 | 1974.9 | 1891.1 | 1818.5 | 1748.9 | 1695.0 | 1635.9 | 1586.5 | 1546.1 |
| 15° | 2316.2 | 2229.4 | 2136.6 | 2009.4 | 1903.8 | 1815.5 | 1737.0 | 1668.9 | 1600.0 | 1540.1 | 1502.0 |
| 17.5° | 2404.5 | 2272.8 | 2150.8 | 2052.0 | 1914.3 | 1807.3 | 1715.3 | 1635.9 | 1561.1 | 1499.7 | 1451.8 |
| 20° | 2455.4 | 2328.9 | 2193.5 | 2058.0 | 1923.3 | 1799.8 | 1688.3 | 1598.5 | 1519.9 | 1448.1 | 1404.7 |
| 22.5° | 2486.1 | 2338.6 | 2194.2 | 2046.0 | 1900.8 | 1771.4 | 1661.4 | 1560.3 | 1473.5 | 1406.2 | 1350.0 |
| 25° | 2508.5 | 2337.9 | 2180.7 | 2037.0 | 1891.1 | 1751.9 | 1621.0 | 1516.2 | 1424.1 | 1351.5 | 1294.7 |
| 27.5° | 2526.5 | 2328.9 | 2148.6 | 1992.1 | 1844.7 | 1703.3 | 1585.0 | 1472.8 | 1380.7 | 1305.1 | 1243.0 |
| 30° | 2531.0 | 2317.7 | 2110.4 | 1937.5 | 1787.1 | 1659.9 | 1532.6 | 1426.4 | 1327.6 | 1246.0 | 1189.2 |
| 32.5° | 2537.0 | 2290.0 | 2058.7 | 1872.4 | 1717.5 | 1591.8 | 1479.5 | 1379.2 | 1277.5 | 1197.4 | 1139.0 |
| 35° | 2516.0 | 2283.3 | 2006.4 | 1795.3 | 1641.2 | 1519.2 | 1415.2 | 1321.6 | 1222.1 | 1144.2 | 1085.1 |
| 37.5° | 2452.4 | 2246.6 | 1954.0 | 1709.3 | 1549.9 | 1437.6 | 1350.8 | 1265.5 | 1173.4 | 1088.1 | 1033.5 |
| 40° | 2345.4 | 2186.7 | 1891.1 | 1632.2 | 1463.8 | 1347.8 | 1271.5 | 1204.9 | 1116.6 | 1038.0 | 978.1 |
| 42.5° | 2186.0 | 2105.1 | 1831.2 | 1551.4 | 1366.5 | 1255.8 | 1194.4 | 1133.0 | 1058.2 | 978.1 | 922.7 |
| 45° | 1983.9 | 1996.6 | 1745.2 | 1464.5 | 1278.2 | 1166.0 | 1105.3 | 1061.9 | 993.1 | 927.2 | 869.6 |
| 47.5° | 1738.4 | 1844.7 | 1653.1 | 1373.2 | 1182.4 | 1076.9 | 1023.8 | 984.1 | 936.2 | 868.1 | 815.0 |
| 50° | 1499.0 | 1668.9 | 1537.9 | 1281.2 | 1093.4 | 988.6 | 936.2 | 905.5 | 865.1 | 814.2 | 764.1 |
| 52.5° | 1278.2 | 1463.8 | 1398.7 | 1178.7 | 996.8 | 903.3 | 852.4 | 828.4 | 798.5 | 751.4 | 707.2 |
| 55° | 1078.4 | 1263.2 | 1245.3 | 1075.4 | 900.3 | 814.2 | 775.3 | 746.9 | 725.2 | 689.2 | 653.3 |
| 57.5° | 904.8 | 1083.6 | 1087.4 | 960.9 | 816.5 | 728.9 | 695.2 | 672.8 | 657.8 | 629.4 | 594.2 |
| 60° | 742.4 | 903.3 | 934.7 | 844.9 | 725.2 | 650.3 | 617.4 | 600.2 | 589.0 | 567.3 | 541.8 |
| 62.5° | 607.7 | 738.6 | 775.3 | 716.9 | 637.6 | 568.8 | 544.8 | 528.3 | 521.6 | 503.6 | 481.9 |
| 65° | 485.7 | 599.4 | 633.9 | 597.9 | 552.3 | 496.2 | 475.2 | 461.0 | 454.3 | 443.8 | 427.3 |
| 67.5° | 383.2 | 471.5 | 508.9 | 479.0 | 461.7 | 422.1 | 407.9 | 399.6 | 393.6 | 386.2 | 371.9 |
| 70° | 293.4 | 354.7 | 393.6 | 386.9 | 373.4 | 354.7 | 345.0 | 339.8 | 333.8 | 327.8 | 315.8 |
| 72.5° | 221.5 | 258.9 | 294.9 | 300.8 | 290.4 | 290.4 | 282.1 | 280.6 | 277.6 | 270.2 | 264.9 |
| 75° | 156.4 | 185.6 | 211.0 | 220.8 | 225.3 | 229.0 | 225.3 | 224.5 | 223.8 | 217.8 | 214.0 |
| 77.5° | 108.5 | 127.2 | 144.4 | 161.6 | 167.6 | 172.9 | 173.6 | 176.6 | 174.4 | 170.6 | 169.1 |
| 80° | 78.6 | 82.3 | 93.5 | 107.8 | 119.0 | 123.5 | 126.5 | 128.0 | 127.2 | 126.5 | 123.5 |
| 82.5° | 51.6 | 54.6 | 58.4 | 67.4 | 76.3 | 84.6 | 86.1 | 85.3 | 87.6 | 88.3 | 86.1 |
| 85° | 30.7 | 31.4 | 32.9 | 34.4 | 39.7 | 47.9 | 50.1 | 51.6 | 53.1 | 53.1 | 48.6 |
| 87.5° | 12.0 | 11.2 | 12.7 | 12.7 | 15.0 | 15.7 | 20.2 | 23.9 | 24.7 | 21.7 | 21.7 |
| 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: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

| | 110° | 115° | 120° | 125° | 130° | 135° | 140° | 145° | 150° | 155° | 160° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 | 1748.2 |
| 2.5° | 1710.8 | 1701.0 | 1694.3 | 1679.3 | 1669.6 | 1659.1 | 1648.6 | 1655.4 | 1654.6 | 1653.9 | 1653.9 |
| 5° | 1660.6 | 1643.4 | 1627.7 | 1607.5 | 1594.8 | 1579.0 | 1567.1 | 1565.6 | 1568.6 | 1558.1 | 1552.1 |
| 7.5° | 1613.5 | 1591.0 | 1568.6 | 1547.6 | 1524.4 | 1506.5 | 1495.2 | 1490.7 | 1482.5 | 1475.8 | 1469.8 |
| 10° | 1563.3 | 1535.6 | 1513.9 | 1486.3 | 1460.8 | 1438.4 | 1424.1 | 1414.4 | 1409.2 | 1403.9 | 1394.2 |
| 12.5° | 1511.7 | 1484.8 | 1455.6 | 1423.4 | 1399.4 | 1372.5 | 1362.8 | 1351.5 | 1340.3 | 1334.3 | 1320.1 |
| 15° | 1461.6 | 1426.4 | 1397.2 | 1364.3 | 1337.3 | 1311.9 | 1296.9 | 1275.2 | 1272.2 | 1264.7 | 1251.3 |
| 17.5° | 1412.9 | 1374.0 | 1331.3 | 1308.9 | 1281.9 | 1255.0 | 1231.1 | 1224.3 | 1201.9 | 1194.4 | 1181.7 |
| 20° | 1353.0 | 1317.9 | 1287.2 | 1255.0 | 1210.9 | 1186.2 | 1168.2 | 1158.5 | 1141.3 | 1130.8 | 1123.3 |
| 22.5° | 1301.4 | 1265.5 | 1228.8 | 1189.9 | 1155.5 | 1127.0 | 1115.1 | 1098.6 | 1091.1 | 1075.4 | 1067.2 |
| 25° | 1252.8 | 1213.8 | 1171.2 | 1130.8 | 1104.6 | 1083.6 | 1062.7 | 1049.2 | 1035.7 | 1029.0 | 1014.0 |
| 27.5° | 1193.6 | 1154.7 | 1113.6 | 1082.1 | 1052.2 | 1031.2 | 1011.0 | 999.8 | 982.6 | 971.4 | 963.1 |
| 30° | 1146.5 | 1098.6 | 1064.2 | 1036.5 | 995.3 | 975.9 | 961.6 | 946.7 | 934.7 | 922.7 | 914.5 |
| 32.5° | 1091.9 | 1049.2 | 1017.0 | 981.1 | 951.9 | 930.2 | 910.8 | 898.0 | 888.3 | 877.1 | 868.9 |
| 35° | 1034.2 | 997.6 | 963.9 | 929.5 | 906.3 | 884.6 | 862.9 | 851.6 | 841.9 | 831.4 | 823.9 |
| 37.5° | 981.9 | 947.4 | 916.0 | 883.1 | 854.6 | 835.9 | 818.0 | 810.5 | 797.0 | 789.5 | 782.0 |
| 40° | 934.0 | 900.3 | 865.9 | 834.4 | 804.5 | 791.0 | 775.3 | 762.6 | 750.6 | 745.4 | 737.1 |
| 42.5° | 881.6 | 847.9 | 820.2 | 785.8 | 762.6 | 743.1 | 728.9 | 714.7 | 706.5 | 698.2 | 694.5 |
| 45° | 829.9 | 800.0 | 771.6 | 737.9 | 714.7 | 699.0 | 682.5 | 669.8 | 661.6 | 656.3 | 648.1 |
| 47.5° | 780.5 | 749.9 | 721.4 | 691.5 | 669.0 | 651.1 | 633.9 | 625.6 | 614.4 | 608.4 | 602.4 |
| 50° | 725.9 | 699.0 | 668.3 | 641.3 | 618.9 | 600.9 | 587.5 | 576.2 | 566.5 | 558.3 | 554.5 |
| 52.5° | 675.8 | 646.6 | 621.1 | 596.4 | 572.5 | 551.5 | 539.6 | 527.6 | 520.9 | 511.1 | 506.6 |
| 55° | 619.6 | 592.0 | 569.5 | 544.8 | 521.6 | 504.4 | 489.4 | 479.0 | 471.5 | 461.0 | 455.0 |
| 57.5° | 568.0 | 544.1 | 516.4 | 494.7 | 470.0 | 456.5 | 443.8 | 428.8 | 419.8 | 411.6 | 405.6 |
| 60° | 515.6 | 487.2 | 464.0 | 443.8 | 422.8 | 404.1 | 392.9 | 381.7 | 371.9 | 363.7 | 358.5 |
| 62.5° | 461.0 | 437.0 | 415.3 | 392.9 | 374.2 | 358.5 | 345.0 | 336.0 | 327.8 | 323.3 | 318.1 |
| 65° | 404.9 | 385.4 | 363.0 | 345.0 | 327.0 | 315.1 | 304.6 | 296.4 | 290.4 | 286.6 | 282.1 |
| 67.5° | 353.2 | 334.5 | 314.3 | 295.6 | 283.6 | 273.9 | 266.4 | 258.9 | 255.9 | 251.5 | 248.5 |
| 70° | 303.1 | 283.6 | 266.4 | 252.9 | 241.0 | 234.2 | 229.7 | 224.5 | 221.5 | 215.5 | 212.5 |
| 72.5° | 248.5 | 235.7 | 224.5 | 214.0 | 205.1 | 199.1 | 193.1 | 186.3 | 181.1 | 174.4 | 171.4 |
| 75° | 204.3 | 191.6 | 181.9 | 174.4 | 168.4 | 160.1 | 151.9 | 145.2 | 142.9 | 140.7 | 139.9 |
| 77.5° | 159.4 | 151.2 | 143.7 | 137.7 | 129.5 | 122.0 | 119.7 | 118.2 | 117.5 | 116.0 | 116.0 |
| 80° | 119.0 | 111.5 | 106.3 | 98.8 | 94.3 | 94.3 | 94.3 | 92.8 | 93.5 | 93.5 | 93.5 |
| 82.5° | 80.8 | 74.1 | 71.8 | 70.3 | 70.3 | 71.1 | 71.1 | 71.8 | 71.1 | 72.6 | 71.8 |
| 85° | 45.7 | 46.4 | 47.9 | 47.1 | 47.9 | 47.9 | 49.4 | 48.6 | 49.4 | 47.9 | 49.4 |
| 87.5° | 21.0 | 23.2 | 23.9 | 24.7 | 25.4 | 24.7 | 25.4 | 25.4 | 26.2 | 26.2 | 26.2 |
| 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: P242578

CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

| | 165° | 170° | 175° | 180° |
|-------|--------|--------|--------|--------|
| 0° | 1748.2 | 1748.2 | 1748.2 | 1748.2 |
| 2.5° | 1644.9 | 1644.2 | 1644.9 | 1641.9 |
| 5° | 1549.9 | 1549.1 | 1546.9 | 1540.1 |
| 7.5° | 1463.8 | 1462.3 | 1456.3 | 1457.8 |
| 10° | 1389.0 | 1389.7 | 1380.7 | 1375.5 |
| 12.5° | 1316.4 | 1311.9 | 1305.1 | 1299.2 |
| 15° | 1254.3 | 1246.8 | 1228.8 | 1230.3 |
| 17.5° | 1177.2 | 1171.2 | 1170.4 | 1160.0 |
| 20° | 1111.3 | 1107.6 | 1109.1 | 1098.6 |
| 22.5° | 1059.7 | 1055.9 | 1047.7 | 1046.2 |
| 25° | 1009.5 | 1003.6 | 997.6 | 1001.3 |
| 27.5° | 958.7 | 954.2 | 947.4 | 947.4 |
| 30° | 910.8 | 906.3 | 903.3 | 899.5 |
| 32.5° | 862.1 | 862.1 | 856.1 | 856.1 |
| 35° | 821.0 | 816.5 | 815.0 | 815.7 |
| 37.5° | 781.3 | 775.3 | 772.3 | 769.3 |
| 40° | 737.9 | 731.9 | 730.4 | 728.9 |
| 42.5° | 689.2 | 687.7 | 687.0 | 684.0 |
| 45° | 645.8 | 645.1 | 640.6 | 642.1 |
| 47.5° | 599.4 | 595.7 | 593.5 | 595.7 |
| 50° | 551.5 | 550.0 | 543.3 | 544.8 |
| 52.5° | 503.6 | 496.9 | 495.4 | 493.9 |
| 55° | 449.8 | 443.0 | 440.0 | 438.5 |
| 57.5° | 396.6 | 394.4 | 391.4 | 393.6 |
| 60° | 351.0 | 351.0 | 351.0 | 350.2 |
| 62.5° | 315.8 | 313.6 | 312.8 | 314.3 |
| 65° | 279.9 | 279.1 | 276.1 | 275.4 |
| 67.5° | 247.0 | 244.0 | 244.0 | 242.5 |
| 70° | 208.8 | 207.3 | 202.8 | 203.6 |
| 72.5° | 167.6 | 166.1 | 166.1 | 164.6 |
| 75° | 139.2 | 138.4 | 137.7 | 140.7 |
| 77.5° | 116.0 | 116.0 | 116.7 | 115.2 |
| 80° | 93.5 | 93.5 | 92.8 | 92.8 |
| 82.5° | 70.3 | 71.1 | 71.8 | 70.3 |
| 85° | 49.4 | 48.6 | 50.1 | 49.4 |
| 87.5° | 27.7 | 26.2 | 26.2 | 26.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P242578
 CATALOG NUMBER: S123RDRP-S1165D840-X4F0-XX-UDD-A-W

CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 18.25 | 19.74 | 18.61 | 20.05 | 20.37 | 21.64 | 23.14 | 22.01 | 23.45 | 23.77 |
| | 3H | 19.34 | 20.68 | 19.72 | 21.00 | 21.37 | 23.05 | 24.39 | 23.43 | 24.72 | 25.08 |
| | 4H | 19.68 | 20.93 | 20.08 | 21.28 | 21.66 | 23.55 | 24.81 | 23.95 | 25.16 | 25.53 |
| | 6H | 19.92 | 21.08 | 20.33 | 21.45 | 21.84 | 23.90 | 25.06 | 24.32 | 25.43 | 25.82 |
| | 8H | 19.99 | 21.09 | 20.42 | 21.48 | 21.88 | 24.01 | 25.11 | 24.43 | 25.50 | 25.90 |
| | 12H | 20.03 | 21.08 | 20.46 | 21.46 | 21.89 | 24.07 | 25.12 | 24.50 | 25.50 | 25.93 |
| 4H | 2H | 19.23 | 20.48 | 19.63 | 20.83 | 21.21 | 21.88 | 23.14 | 22.28 | 23.48 | 23.86 |
| | 3H | 20.40 | 21.43 | 20.81 | 21.83 | 22.23 | 23.57 | 24.61 | 23.99 | 25.01 | 25.41 |
| | 4H | 20.78 | 21.72 | 21.22 | 22.13 | 22.57 | 24.19 | 25.12 | 24.62 | 25.54 | 25.98 |
| | 6H | 21.09 | 21.90 | 21.55 | 22.35 | 22.81 | 24.66 | 25.46 | 25.11 | 25.91 | 26.37 |
| | 8H | 21.18 | 21.94 | 21.65 | 22.39 | 22.85 | 24.80 | 25.55 | 25.26 | 26.00 | 26.47 |
| | 12H | 21.24 | 21.92 | 21.72 | 22.40 | 22.87 | 24.90 | 25.57 | 25.38 | 26.05 | 26.52 |
| 8H | 4H | 21.15 | 21.91 | 21.61 | 22.35 | 22.82 | 24.24 | 25.00 | 24.71 | 25.44 | 25.91 |
| | 6H | 21.52 | 22.15 | 22.02 | 22.64 | 23.12 | 24.78 | 25.40 | 25.27 | 25.89 | 26.37 |
| | 8H | 21.66 | 22.22 | 22.17 | 22.73 | 23.22 | 24.97 | 25.53 | 25.49 | 26.04 | 26.53 |
| | 12H | 21.76 | 22.25 | 22.27 | 22.74 | 23.31 | 25.13 | 25.62 | 25.64 | 26.11 | 26.68 |
| 12H | 4H | 21.18 | 21.85 | 21.66 | 22.33 | 22.81 | 24.23 | 24.90 | 24.71 | 25.38 | 25.85 |
| | 6H | 21.57 | 22.13 | 22.08 | 22.64 | 23.13 | 24.76 | 25.32 | 25.28 | 25.84 | 26.32 |
| | 8H | 21.74 | 22.24 | 22.25 | 22.73 | 23.30 | 25.00 | 25.49 | 25.51 | 25.98 | 26.55 |