

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: P646677

Luminaire Tested: S123RDRP-S340D835-X4F0-XX-UDD-G-W

Issue Date: 3/20/2023

**Test Information**

Test Method: LM-79-2024  
Report Number: P646677  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/20/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S340D835-X4F0-XX-UDD-G-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH WALL GRAZE FLUSH OPTIC  
STANDARD LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

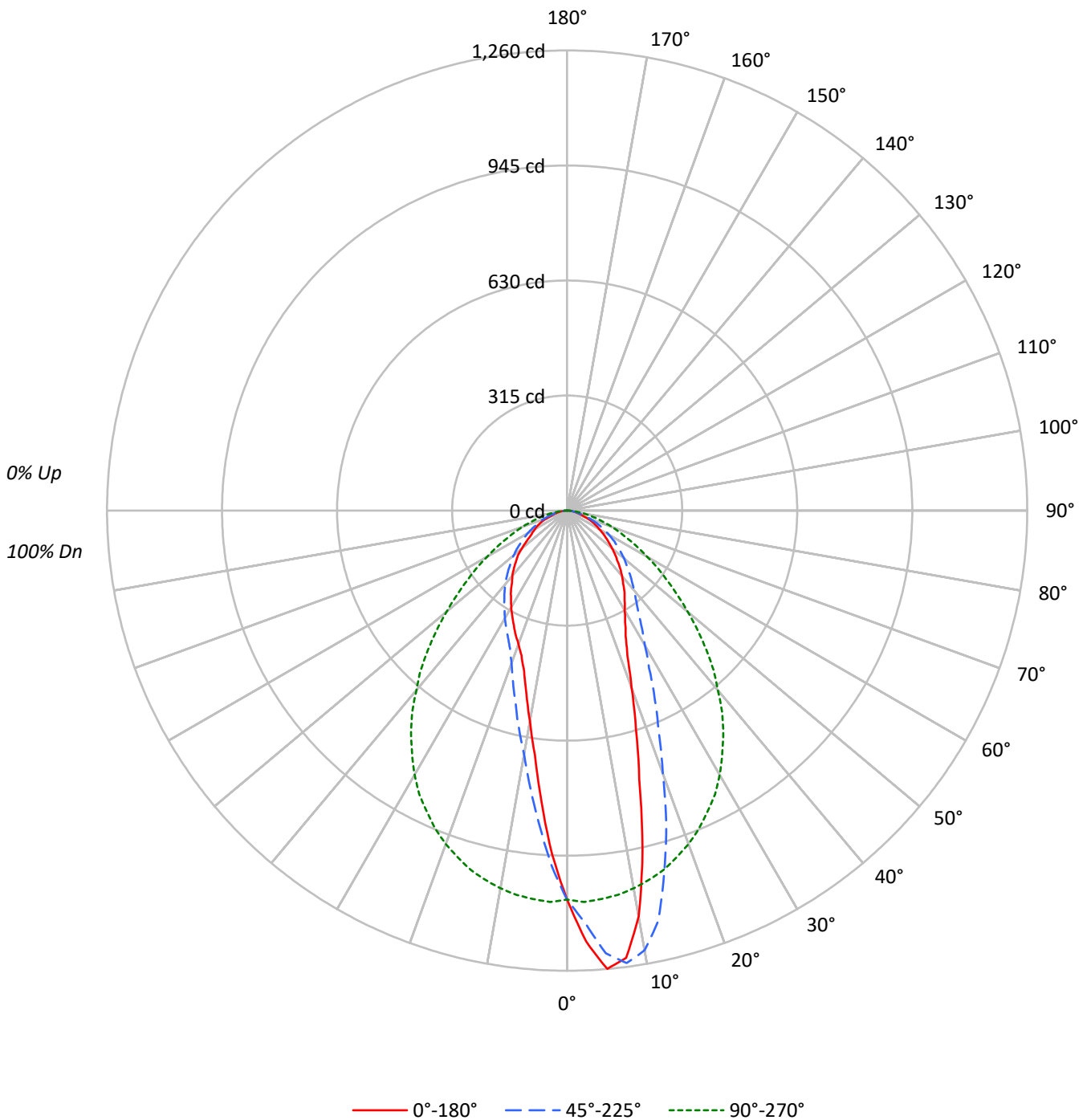
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1410.9 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.79  
Luminous Opening: Rectangular (W 4' x L: 0.22' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.9  
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

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CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-G-W

### Luminous Intensity Polar Plot



TEST NUMBER: P646677

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-G-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 | 0  |     |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    | 100 |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 93  | 91  | 89  |     |    |    | 87 |     |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  |     |    |    | 76 |     |
| 3   | 94  | 85  | 78  | 73  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 74  | 70  | 76  | 72  | 69  |     |    |    | 67 |     |
| 4   | 88  | 77  | 69  | 64  | 85  | 76  | 69  | 63  | 73  | 67  | 62  | 71  | 66  | 62  | 69  | 65  | 61  |     |    |    | 59 |     |
| 5   | 82  | 70  | 62  | 56  | 80  | 69  | 62  | 56  | 67  | 61  | 56  | 65  | 60  | 55  | 63  | 58  | 54  |     |    |    | 53 |     |
| 6   | 76  | 64  | 56  | 51  | 74  | 63  | 56  | 50  | 62  | 55  | 50  | 60  | 54  | 50  | 59  | 53  | 49  |     |    |    | 47 |     |
| 7   | 71  | 59  | 51  | 46  | 70  | 58  | 51  | 46  | 57  | 50  | 45  | 56  | 50  | 45  | 54  | 49  | 45  |     |    |    | 43 |     |
| 8   | 67  | 55  | 47  | 42  | 65  | 54  | 47  | 42  | 53  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  |     |    |    | 39 |     |
| 9   | 63  | 51  | 43  | 38  | 62  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  |     |    |    | 36 |     |
| 10  | 60  | 47  | 40  | 36  | 58  | 47  | 40  | 35  | 46  | 40  | 35  | 45  | 39  | 35  | 44  | 39  | 35  |     |    |    | 33 |     |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   | 135°  | 180°  |
|-----|-------|-------|-------|-------|-------|
| 0°  | 12831 | 12831 | 12831 | 12831 | 12831 |
| 5°  | 15236 | 14719 | 12912 | 10472 | 9691  |
| 10° | 13804 | 14957 | 12848 | 8290  | 7175  |
| 15° | 9504  | 12810 | 12712 | 6808  | 5676  |
| 20° | 6613  | 9826  | 12457 | 5705  | 4988  |
| 25° | 5039  | 7541  | 12086 | 5097  | 4597  |
| 30° | 4385  | 5928  | 11622 | 4739  | 4259  |
| 35° | 4027  | 4991  | 10963 | 4419  | 3949  |
| 40° | 3674  | 4478  | 10103 | 4148  | 3668  |
| 45° | 3318  | 4100  | 9174  | 3854  | 3386  |
| 50° | 3012  | 3805  | 8077  | 3584  | 3037  |
| 55° | 2725  | 3496  | 7027  | 3275  | 2605  |
| 60° | 2441  | 3179  | 6102  | 2998  | 2463  |
| 65° | 2252  | 2825  | 5255  | 2663  | 2326  |
| 70° | 1832  | 2413  | 4583  | 2413  | 1892  |
| 75° | 1606  | 1951  | 3883  | 2011  | 1667  |
| 80° | 1457  | 1638  | 3178  | 1700  | 1575  |
| 85° | 1327  | 1382  | 2419  | 1507  | 1452  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 9679 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 97.1   | 6.9       |
| 10°-20°   | 224.6  | 15.9      |
| 20°-30°   | 257.6  | 18.3      |
| 30°-40°   | 253.8  | 18.0      |
| 40°-50°   | 223.7  | 15.9      |
| 50°-60°   | 172.1  | 12.2      |
| 60°-70°   | 113.2  | 8.0       |
| 70°-80°   | 55.0   | 3.9       |
| 80°-90°   | 13.9   | 1.0       |
| 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°    | 579.2  | 41.1      |
| 0°-40°    | 833.0  | 59.0      |
| 0°-60°    | 1228.8 | 87.1      |
| 0°-90°    | 1410.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1410.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1065 | 1065 | 1065 | 1065 | 1065 |      |
| 5°  | 1260 | 1217 | 1068 | 866  | 801  | 115  |
| 15° | 762  | 1027 | 1019 | 546  | 455  | 215  |
| 25° | 379  | 567  | 909  | 383  | 346  | 179  |
| 35° | 274  | 339  | 745  | 300  | 268  | 171  |
| 45° | 195  | 241  | 538  | 226  | 199  | 151  |
| 55° | 130  | 166  | 334  | 156  | 124  | 116  |
| 65° | 79   | 99   | 184  | 93   | 82   | 77   |
| 75° | 34   | 42   | 83   | 43   | 36   | 37   |
| 85° | 10   | 10   | 18   | 11   | 10   | 11   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



TEST NUMBER: P646677

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-G-W

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 10°    | 20°    | 22.5°  | 30°    | 40°    | 45°    | 50°    | 60°    | 67.5°  | 70°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 |
| 2.5°  | 1180.2 | 1172.8 | 1170.6 | 1168.0 | 1163.6 | 1147.9 | 1130.0 | 1131.7 | 1129.5 | 1116.0 | 1108.6 |
| 5°    | 1259.7 | 1260.5 | 1258.3 | 1256.6 | 1249.2 | 1230.0 | 1216.9 | 1209.0 | 1192.4 | 1167.1 | 1159.2 |
| 7.5°  | 1235.2 | 1249.2 | 1251.8 | 1254.9 | 1258.8 | 1254.4 | 1249.6 | 1246.6 | 1233.0 | 1205.5 | 1192.9 |
| 10°   | 1128.2 | 1127.4 | 1143.1 | 1155.7 | 1189.8 | 1213.8 | 1222.5 | 1235.2 | 1246.6 | 1227.3 | 1213.4 |
| 12.5° | 953.6  | 954.9  | 1006.4 | 1006.4 | 1050.5 | 1111.6 | 1150.9 | 1177.6 | 1226.5 | 1227.8 | 1219.5 |
| 15°   | 761.9  | 783.3  | 829.1  | 838.8  | 895.5  | 977.6  | 1026.9 | 1082.0 | 1176.7 | 1206.4 | 1204.6 |
| 17.5° | 625.7  | 634.9  | 679.0  | 691.6  | 741.8  | 834.8  | 902.9  | 969.3  | 1102.0 | 1164.5 | 1175.8 |
| 20°   | 515.7  | 523.9  | 555.8  | 565.4  | 616.1  | 704.7  | 766.3  | 837.9  | 1011.7 | 1107.3 | 1127.4 |
| 22.5° | 430.5  | 446.7  | 468.1  | 482.9  | 511.7  | 602.1  | 654.9  | 723.5  | 906.9  | 1043.1 | 1066.7 |
| 25°   | 379.0  | 386.4  | 404.8  | 411.7  | 446.7  | 506.5  | 567.2  | 627.4  | 813.9  | 962.8  | 1004.2 |
| 27.5° | 344.1  | 346.2  | 359.8  | 365.9  | 386.8  | 442.3  | 486.0  | 541.9  | 719.1  | 880.2  | 928.7  |
| 30°   | 315.2  | 319.2  | 329.7  | 331.0  | 349.3  | 388.6  | 426.1  | 477.7  | 636.2  | 800.3  | 850.1  |
| 32.5° | 293.0  | 295.2  | 303.9  | 306.5  | 318.3  | 349.3  | 379.9  | 417.4  | 559.3  | 716.9  | 774.1  |
| 35°   | 273.8  | 274.2  | 280.7  | 284.2  | 294.7  | 320.5  | 339.3  | 370.7  | 497.8  | 647.9  | 698.2  |
| 37.5° | 251.9  | 255.0  | 259.8  | 262.8  | 272.0  | 293.0  | 310.0  | 334.5  | 441.0  | 582.5  | 629.2  |
| 40°   | 233.6  | 236.2  | 241.9  | 243.2  | 251.5  | 270.7  | 284.7  | 306.5  | 392.1  | 519.6  | 567.2  |
| 42.5° | 215.3  | 217.0  | 222.7  | 225.3  | 234.5  | 249.7  | 262.4  | 279.4  | 353.2  | 463.7  | 510.4  |
| 45°   | 194.7  | 199.1  | 205.2  | 206.5  | 215.3  | 231.0  | 240.6  | 256.3  | 318.3  | 415.2  | 456.7  |
| 47.5° | 177.7  | 179.9  | 185.1  | 187.3  | 197.4  | 211.3  | 221.4  | 234.9  | 288.2  | 371.1  | 411.7  |
| 50°   | 160.7  | 161.6  | 166.4  | 169.4  | 177.3  | 193.4  | 203.0  | 215.3  | 260.7  | 335.3  | 363.7  |
| 52.5° | 144.5  | 146.7  | 151.5  | 153.7  | 158.9  | 175.5  | 184.3  | 196.9  | 234.5  | 298.7  | 327.0  |
| 55°   | 129.7  | 131.0  | 134.5  | 137.1  | 143.2  | 157.6  | 166.4  | 177.3  | 211.8  | 265.0  | 289.9  |
| 57.5° | 115.7  | 117.5  | 120.1  | 122.3  | 127.9  | 140.6  | 149.3  | 160.2  | 190.4  | 234.5  | 253.7  |
| 60°   | 101.3  | 103.5  | 106.5  | 107.4  | 112.6  | 124.0  | 131.9  | 141.5  | 168.5  | 206.1  | 223.1  |
| 62.5° | 90.8   | 91.3   | 93.9   | 95.2   | 98.2   | 107.4  | 115.7  | 124.9  | 148.9  | 178.6  | 192.6  |
| 65°   | 79.0   | 80.3   | 81.6   | 82.5   | 85.1   | 93.0   | 99.1   | 106.1  | 129.7  | 155.4  | 165.0  |
| 67.5° | 66.8   | 68.1   | 70.3   | 71.2   | 73.4   | 78.6   | 83.8   | 90.8   | 110.5  | 132.3  | 141.0  |
| 70°   | 52.0   | 52.0   | 55.5   | 57.2   | 60.7   | 64.6   | 68.5   | 74.7   | 91.7   | 110.5  | 117.0  |
| 72.5° | 42.4   | 42.8   | 43.2   | 43.2   | 46.3   | 52.8   | 55.0   | 58.9   | 72.5   | 90.4   | 96.1   |
| 75°   | 34.5   | 34.9   | 35.4   | 35.8   | 36.2   | 38.4   | 41.9   | 45.4   | 55.5   | 68.5   | 73.8   |
| 77.5° | 27.5   | 27.9   | 28.4   | 28.4   | 29.3   | 30.1   | 31.0   | 32.7   | 39.7   | 49.3   | 53.7   |
| 80°   | 21.0   | 21.4   | 21.8   | 21.8   | 22.3   | 23.1   | 23.6   | 24.5   | 26.6   | 33.2   | 35.4   |
| 82.5° | 15.3   | 15.3   | 15.3   | 15.7   | 16.2   | 16.2   | 17.0   | 17.0   | 18.3   | 20.1   | 21.4   |
| 85°   | 9.6    | 9.6    | 10.0   | 10.0   | 10.0   | 10.5   | 10.0   | 10.5   | 10.9   | 11.4   | 12.2   |
| 87.5° | 4.4    | 3.9    | 4.4    | 4.4    | 4.4    | 4.8    | 4.8    | 4.8    | 4.8    | 5.2    | 5.2    |
| 90°   | 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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**CANDELA DISTRIBUTION (continued):**

|       | 80°    | 90°    | 100°   | 110°   | 112.5° | 120°   | 130°   | 135°   | 140°   | 150°   | 157.5° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 | 1064.9 |
| 2.5°  | 1088.1 | 1072.8 | 1047.0 | 1030.9 | 1024.8 | 1006.0 | 988.1  | 973.2  | 965.8  | 964.9  | 951.4  |
| 5°    | 1109.5 | 1067.5 | 1014.3 | 969.7  | 959.3  | 926.5  | 884.2  | 865.8  | 841.8  | 832.2  | 820.9  |
| 7.5°  | 1126.9 | 1061.4 | 982.8  | 915.6  | 896.0  | 846.6  | 792.5  | 768.5  | 750.1  | 721.3  | 704.3  |
| 10°   | 1139.2 | 1050.1 | 944.4  | 857.5  | 829.6  | 772.0  | 706.5  | 677.6  | 660.6  | 627.4  | 613.9  |
| 12.5° | 1144.0 | 1035.7 | 906.0  | 797.3  | 772.8  | 704.3  | 640.1  | 610.4  | 585.1  | 554.9  | 541.9  |
| 15°   | 1142.2 | 1019.1 | 866.7  | 741.8  | 711.3  | 641.8  | 573.7  | 545.8  | 522.2  | 492.1  | 475.0  |
| 17.5° | 1130.4 | 995.5  | 823.9  | 688.1  | 658.9  | 587.3  | 518.3  | 492.5  | 471.6  | 442.3  | 429.2  |
| 20°   | 1110.8 | 971.5  | 786.4  | 639.2  | 606.0  | 537.5  | 472.4  | 444.9  | 426.6  | 410.9  | 401.3  |
| 22.5° | 1083.7 | 943.1  | 740.5  | 590.8  | 561.9  | 492.9  | 430.5  | 408.2  | 397.3  | 384.7  | 377.7  |
| 25°   | 1042.7 | 909.1  | 699.0  | 550.1  | 521.3  | 452.8  | 398.2  | 383.4  | 372.4  | 364.1  | 356.7  |
| 27.5° | 998.6  | 876.3  | 657.6  | 509.1  | 482.0  | 416.5  | 372.9  | 361.5  | 351.9  | 341.4  | 334.9  |
| 30°   | 947.5  | 835.3  | 618.3  | 472.9  | 446.7  | 387.3  | 351.0  | 340.6  | 332.7  | 321.4  | 314.8  |
| 32.5° | 887.2  | 790.3  | 581.6  | 437.9  | 413.5  | 362.0  | 331.0  | 319.6  | 313.1  | 302.1  | 295.6  |
| 35°   | 824.8  | 745.3  | 541.4  | 405.6  | 383.4  | 339.7  | 311.3  | 300.4  | 293.4  | 282.5  | 275.9  |
| 37.5° | 763.7  | 697.3  | 505.6  | 377.2  | 357.2  | 317.4  | 290.8  | 281.6  | 275.1  | 263.7  | 255.9  |
| 40°   | 699.0  | 642.3  | 470.7  | 350.6  | 331.8  | 297.8  | 272.0  | 263.7  | 255.0  | 244.9  | 237.1  |
| 42.5° | 631.4  | 593.8  | 438.4  | 327.0  | 309.6  | 278.6  | 253.2  | 244.5  | 237.1  | 225.3  | 221.8  |
| 45°   | 568.0  | 538.4  | 404.3  | 302.1  | 288.2  | 259.4  | 234.9  | 226.2  | 217.9  | 207.8  | 204.3  |
| 47.5° | 511.7  | 484.2  | 373.3  | 280.3  | 266.3  | 240.6  | 216.6  | 207.4  | 201.3  | 193.4  | 188.2  |
| 50°   | 453.7  | 430.9  | 339.3  | 258.9  | 245.8  | 220.5  | 197.4  | 191.2  | 184.3  | 174.6  | 170.7  |
| 52.5° | 399.5  | 382.0  | 311.3  | 238.4  | 226.2  | 203.5  | 179.9  | 173.8  | 167.2  | 158.9  | 153.3  |
| 55°   | 351.9  | 334.5  | 279.4  | 215.3  | 206.1  | 184.7  | 163.7  | 155.9  | 150.6  | 141.0  | 134.0  |
| 57.5° | 303.0  | 294.7  | 248.9  | 196.0  | 187.3  | 165.9  | 147.1  | 141.0  | 134.5  | 124.0  | 117.0  |
| 60°   | 262.8  | 253.2  | 220.5  | 175.1  | 166.8  | 148.9  | 130.6  | 124.4  | 118.3  | 108.3  | 105.2  |
| 62.5° | 224.9  | 217.9  | 193.0  | 155.4  | 148.5  | 131.0  | 114.8  | 109.2  | 103.0  | 96.5   | 94.3   |
| 65°   | 190.4  | 184.3  | 165.5  | 135.4  | 129.7  | 114.4  | 99.6   | 93.4   | 89.5   | 86.5   | 84.3   |
| 67.5° | 158.1  | 154.6  | 140.2  | 116.6  | 112.2  | 98.7   | 85.6   | 80.8   | 78.6   | 75.1   | 73.4   |
| 70°   | 128.8  | 130.1  | 117.0  | 99.6   | 94.7   | 83.8   | 72.5   | 68.5   | 65.9   | 62.9   | 59.4   |
| 72.5° | 105.2  | 104.8  | 96.9   | 81.2   | 77.7   | 69.0   | 60.3   | 57.6   | 54.6   | 48.5   | 44.5   |
| 75°   | 81.6   | 83.4   | 76.0   | 67.2   | 63.7   | 55.0   | 46.7   | 43.2   | 40.2   | 38.0   | 36.7   |
| 77.5° | 62.4   | 63.3   | 59.8   | 51.5   | 48.5   | 41.0   | 34.5   | 32.7   | 31.4   | 30.1   | 29.7   |
| 80°   | 44.5   | 45.8   | 42.4   | 37.1   | 34.5   | 28.4   | 24.9   | 24.5   | 24.0   | 23.1   | 22.7   |
| 82.5° | 28.8   | 30.6   | 28.8   | 23.1   | 21.8   | 18.8   | 17.9   | 17.9   | 17.5   | 17.0   | 16.6   |
| 85°   | 15.7   | 17.5   | 16.6   | 13.5   | 12.7   | 11.8   | 11.4   | 10.9   | 10.9   | 10.9   | 10.9   |
| 87.5° | 6.1    | 8.3    | 7.0    | 5.7    | 5.7    | 5.7    | 5.7    | 5.7    | 5.7    | 5.7    | 5.7    |
| 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: P646677

CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-G-W

**CANDELA DISTRIBUTION (continued):**

|       | 160°   | 170°   | 180°   |
|-------|--------|--------|--------|
| 0°    | 1064.9 | 1064.9 | 1064.9 |
| 2.5°  | 948.3  | 944.0  | 942.2  |
| 5°    | 817.8  | 804.3  | 801.2  |
| 7.5°  | 699.0  | 693.4  | 674.6  |
| 10°   | 611.7  | 594.2  | 586.4  |
| 12.5° | 533.1  | 517.0  | 514.3  |
| 15°   | 470.2  | 458.9  | 455.0  |
| 17.5° | 428.8  | 420.9  | 416.1  |
| 20°   | 398.2  | 392.5  | 389.0  |
| 22.5° | 375.1  | 370.7  | 368.1  |
| 25°   | 354.5  | 348.0  | 345.8  |
| 27.5° | 333.6  | 327.9  | 325.7  |
| 30°   | 313.9  | 309.1  | 306.1  |
| 32.5° | 293.4  | 287.7  | 286.0  |
| 35°   | 273.8  | 270.3  | 268.5  |
| 37.5° | 254.6  | 250.2  | 247.6  |
| 40°   | 236.7  | 234.5  | 233.2  |
| 42.5° | 220.5  | 216.6  | 216.1  |
| 45°   | 203.5  | 199.5  | 198.7  |
| 47.5° | 187.3  | 183.8  | 183.4  |
| 50°   | 170.3  | 165.5  | 162.0  |
| 52.5° | 149.8  | 145.4  | 142.3  |
| 55°   | 131.4  | 126.6  | 124.0  |
| 57.5° | 116.1  | 114.0  | 112.6  |
| 60°   | 104.4  | 103.0  | 102.2  |
| 62.5° | 93.9   | 92.6   | 92.6   |
| 65°   | 84.3   | 83.0   | 81.6   |
| 67.5° | 72.5   | 69.9   | 69.4   |
| 70°   | 58.1   | 54.1   | 53.7   |
| 72.5° | 44.1   | 43.7   | 42.8   |
| 75°   | 36.7   | 35.8   | 35.8   |
| 77.5° | 29.7   | 28.8   | 28.8   |
| 80°   | 22.7   | 22.3   | 22.7   |
| 82.5° | 16.6   | 16.6   | 16.2   |
| 85°   | 10.9   | 10.5   | 10.5   |
| 87.5° | 5.2    | 5.2    | 5.2    |
| 90°   | 0.0    | 0.0    | 0.0    |



TEST NUMBER: P646677  
 CATALOG NUMBER: S123RDRP-S340D835-X4F0-XX-UDD-G-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 | 13.57            | 15.02 | 13.93 | 15.34 | 15.65 | 18.66          | 20.11 | 19.02 | 20.43 | 20.74 |
|                 | 3H   | 14.90            | 16.20 | 15.28 | 16.53 | 16.90 | 19.94          | 21.24 | 20.32 | 21.57 | 21.93 |
|                 | 4H   | 15.30            | 16.52 | 15.70 | 16.87 | 17.25 | 20.38          | 21.60 | 20.78 | 21.95 | 22.33 |
|                 | 6H   | 15.61            | 16.73 | 16.02 | 17.10 | 17.49 | 20.68          | 21.80 | 21.09 | 22.17 | 22.56 |
|                 | 8H   | 15.71            | 16.78 | 16.13 | 17.17 | 17.57 | 20.75          | 21.82 | 21.18 | 22.21 | 22.62 |
|                 | 12H  | 15.77            | 16.80 | 16.21 | 17.18 | 17.61 | 20.79          | 21.82 | 21.22 | 22.20 | 22.63 |
| 4H              | 2H   | 14.42            | 15.64 | 14.82 | 15.99 | 16.37 | 18.70          | 19.92 | 19.10 | 20.27 | 20.65 |
|                 | 3H   | 15.89            | 16.90 | 16.30 | 17.30 | 17.70 | 20.19          | 21.20 | 20.60 | 21.60 | 22.00 |
|                 | 4H   | 16.35            | 17.26 | 16.79 | 17.68 | 18.12 | 20.75          | 21.65 | 21.18 | 22.07 | 22.51 |
|                 | 6H   | 16.74            | 17.53 | 17.20 | 17.97 | 18.43 | 21.18          | 21.97 | 21.64 | 22.42 | 22.88 |
|                 | 8H   | 16.87            | 17.61 | 17.34 | 18.05 | 18.52 | 21.30          | 22.04 | 21.77 | 22.48 | 22.95 |
|                 | 12H  | 16.97            | 17.62 | 17.45 | 18.10 | 18.58 | 21.38          | 22.03 | 21.86 | 22.51 | 22.99 |
| 8H              | 4H   | 16.74            | 17.48 | 17.21 | 17.92 | 18.39 | 20.75          | 21.49 | 21.22 | 21.93 | 22.40 |
|                 | 6H   | 17.21            | 17.82 | 17.71 | 18.31 | 18.79 | 21.24          | 21.84 | 21.74 | 22.34 | 22.82 |
|                 | 8H   | 17.39            | 17.94 | 17.91 | 18.45 | 18.94 | 21.40          | 21.94 | 21.92 | 22.46 | 22.95 |
|                 | 12H  | 17.55            | 18.03 | 18.06 | 18.52 | 19.09 | 21.53          | 22.01 | 22.04 | 22.50 | 23.07 |
| 12H             | 4H   | 16.79            | 17.44 | 17.27 | 17.92 | 18.39 | 20.73          | 21.38 | 21.21 | 21.86 | 22.33 |
|                 | 6H   | 17.27            | 17.82 | 17.79 | 18.33 | 18.82 | 21.21          | 21.76 | 21.73 | 22.27 | 22.76 |
|                 | 8H   | 17.51            | 17.99 | 18.02 | 18.48 | 19.05 | 21.41          | 21.89 | 21.92 | 22.38 | 22.95 |