

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: P735919

Luminaire Tested: S122RDRP-S485D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735919
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S485D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

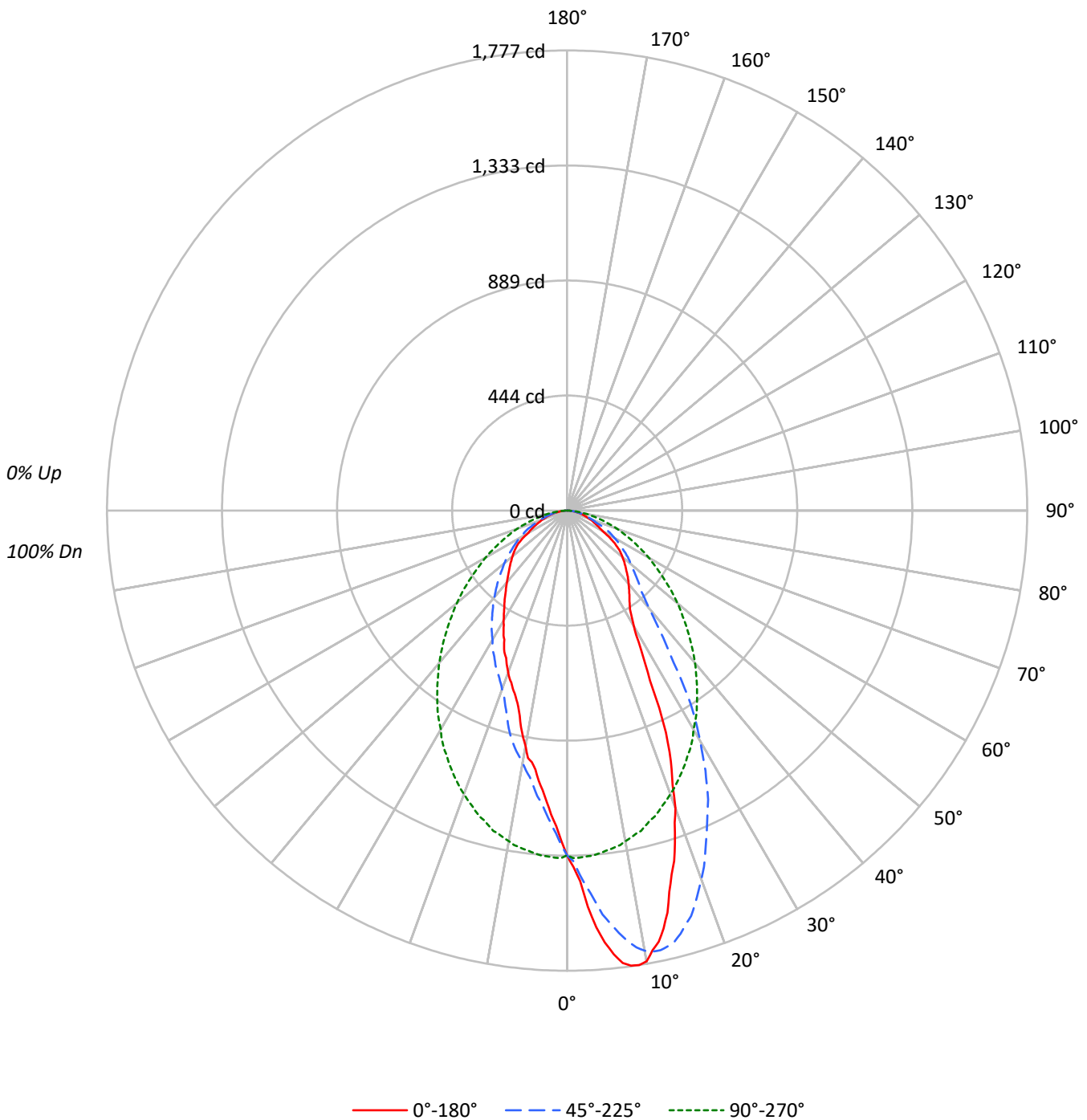
Lumens per Lamp: N/A
Luminaire Lumens: 2282.0 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
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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Luminous Intensity Polar Plot





TEST NUMBER: P735919

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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 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 92 | 91 | 89 | | | | | 87 | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | | | | | 75 | | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | | | | | 66 | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | | | | | 58 | | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | | | | | 52 | | | | |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | | | | | 46 | | | | |
| 7 | 71 | 58 | 50 | 45 | 69 | 57 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | | | | | 42 | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | | | | | 38 | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | | | | | 35 | | | | |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | | | | | 32 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|-------|-------|-------|-------|-------|
| 0° | 25599 | 25599 | 25599 | 25599 | 25599 |
| 5° | 32295 | 30210 | 25697 | 21834 | 20906 |
| 10° | 34498 | 33684 | 25307 | 19319 | 18054 |
| 15° | 30342 | 33674 | 24637 | 17322 | 15044 |
| 20° | 25014 | 30993 | 23850 | 15038 | 13613 |
| 25° | 17834 | 27210 | 22894 | 13928 | 12246 |
| 30° | 11410 | 22823 | 21667 | 12780 | 10878 |
| 35° | 9827 | 16820 | 20539 | 11857 | 9865 |
| 40° | 9264 | 12297 | 19270 | 10973 | 9063 |
| 45° | 8750 | 10536 | 17916 | 10166 | 8554 |
| 50° | 8334 | 9602 | 16644 | 9458 | 8238 |
| 55° | 7647 | 8884 | 15217 | 8696 | 7946 |
| 60° | 6035 | 8096 | 13978 | 8158 | 6712 |
| 65° | 5462 | 7250 | 12676 | 7577 | 6117 |
| 70° | 5041 | 5850 | 11521 | 6525 | 5626 |
| 75° | 4701 | 5295 | 10048 | 5830 | 5295 |
| 80° | 4339 | 4782 | 8512 | 5225 | 4782 |
| 85° | 3881 | 4234 | 6528 | 4587 | 4234 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 25079 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.2 | 5.7 |
| 10°-20° | 347.1 | 15.2 |
| 20°-30° | 435.4 | 19.1 |
| 30°-40° | 414.8 | 18.2 |
| 40°-50° | 365.9 | 16.0 |
| 50°-60° | 287.9 | 12.6 |
| 60°-70° | 183.7 | 8.0 |
| 70°-80° | 93.4 | 4.1 |
| 80°-90° | 24.7 | 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° | 911.6 | 39.9 |
| 0°-40° | 1326.4 | 58.1 |
| 0°-60° | 1980.2 | 86.8 |
| 0°-90° | 2282.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2282.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1332 | 1332 | 1332 | 1332 | 1332 | |
| 5° | 1674 | 1566 | 1332 | 1132 | 1084 | 163 |
| 15° | 1525 | 1692 | 1238 | 870 | 756 | 422 |
| 25° | 841 | 1283 | 1080 | 657 | 577 | 379 |
| 35° | 419 | 717 | 875 | 505 | 420 | 266 |
| 45° | 322 | 388 | 659 | 374 | 315 | 250 |
| 55° | 228 | 265 | 454 | 260 | 237 | 200 |
| 65° | 120 | 159 | 279 | 167 | 134 | 120 |
| 75° | 63 | 71 | 135 | 78 | 71 | 67 |
| 85° | 18 | 19 | 30 | 21 | 19 | 20 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P735919

CATALOG NUMBER: S122RDRP-S485D850-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1331.8 | 1331.8 | 1331.8 | 1331.8 | 1331.8 | 1331.8 | 1331.8 | 1331.8 | 1331.8 |
| 1° | 1376.7 | 1383.1 | 1353.4 | 1356.6 | 1342.2 | 1316.6 | 1291.8 | 1294.2 | 1276.5 |
| 2° | 1431.9 | 1448.7 | 1407.9 | 1383.1 | 1341.4 | 1296.6 | 1246.9 | 1240.5 | 1218.9 |
| 3° | 1532.0 | 1524.0 | 1456.7 | 1406.3 | 1338.2 | 1270.9 | 1208.5 | 1194.1 | 1175.6 |
| 4° | 1612.9 | 1588.9 | 1506.4 | 1435.9 | 1336.6 | 1241.3 | 1170.8 | 1146.0 | 1127.6 |
| 5° | 1673.8 | 1643.3 | 1565.7 | 1458.3 | 1331.8 | 1224.5 | 1131.6 | 1103.6 | 1083.5 |
| 6° | 1722.6 | 1699.4 | 1604.1 | 1479.2 | 1325.4 | 1199.7 | 1108.4 | 1070.7 | 1049.9 |
| 7° | 1760.3 | 1741.0 | 1643.3 | 1507.2 | 1319.8 | 1174.8 | 1071.5 | 1032.3 | 1007.5 |
| 8° | 1774.7 | 1765.9 | 1679.4 | 1527.2 | 1313.4 | 1157.2 | 1038.7 | 1003.5 | 981.0 |
| 9° | 1777.1 | 1777.9 | 1708.2 | 1546.4 | 1307.8 | 1125.2 | 1015.5 | 979.4 | 967.4 |
| 10° | 1767.5 | 1774.7 | 1725.8 | 1568.1 | 1296.6 | 1109.2 | 989.8 | 955.4 | 925.0 |
| 11° | 1729.8 | 1761.9 | 1734.6 | 1582.5 | 1287.0 | 1083.5 | 967.4 | 922.6 | 892.1 |
| 12° | 1701.8 | 1732.2 | 1735.4 | 1600.9 | 1275.7 | 1071.5 | 948.2 | 888.1 | 856.1 |
| 13° | 1655.3 | 1687.4 | 1727.4 | 1605.7 | 1269.3 | 1041.9 | 924.2 | 852.9 | 813.7 |
| 14° | 1600.1 | 1651.3 | 1714.6 | 1616.1 | 1253.3 | 1016.3 | 900.2 | 803.2 | 780.0 |
| 15° | 1524.8 | 1597.7 | 1692.2 | 1620.1 | 1238.1 | 998.7 | 870.5 | 778.4 | 756.0 |
| 16° | 1462.3 | 1544.8 | 1661.8 | 1620.1 | 1228.5 | 974.6 | 838.5 | 756.8 | 734.4 |
| 17° | 1415.1 | 1482.4 | 1636.9 | 1620.9 | 1212.5 | 957.8 | 806.5 | 736.8 | 719.2 |
| 18° | 1348.6 | 1423.9 | 1597.7 | 1617.7 | 1195.7 | 937.8 | 779.2 | 720.0 | 698.3 |
| 19° | 1274.9 | 1364.6 | 1556.0 | 1612.1 | 1181.2 | 917.0 | 750.4 | 702.3 | 683.9 |
| 20° | 1222.9 | 1305.4 | 1515.2 | 1603.3 | 1166.0 | 903.4 | 735.2 | 682.3 | 665.5 |
| 21° | 1135.6 | 1236.5 | 1474.4 | 1591.3 | 1150.0 | 880.1 | 714.4 | 664.7 | 646.3 |
| 22.5° | 1046.7 | 1139.6 | 1399.1 | 1571.3 | 1123.6 | 851.3 | 691.1 | 643.1 | 615.9 |
| 23° | 1012.3 | 1116.4 | 1375.9 | 1565.7 | 1114.8 | 844.1 | 683.9 | 633.5 | 609.4 |
| 24° | 938.6 | 1046.7 | 1327.8 | 1548.0 | 1095.6 | 820.1 | 670.3 | 614.2 | 597.4 |
| 25° | 840.9 | 987.4 | 1283.0 | 1529.6 | 1079.5 | 802.4 | 656.7 | 599.0 | 577.4 |
| 26° | 730.4 | 906.6 | 1242.1 | 1507.2 | 1057.1 | 778.4 | 638.3 | 584.6 | 554.2 |
| 27° | 662.3 | 836.9 | 1186.9 | 1483.2 | 1041.1 | 760.8 | 623.1 | 563.0 | 541.4 |
| 28° | 607.8 | 727.2 | 1137.2 | 1459.9 | 1021.9 | 739.2 | 612.6 | 547.8 | 522.2 |
| 29° | 548.6 | 667.1 | 1078.7 | 1428.7 | 1001.1 | 714.4 | 595.8 | 532.6 | 505.3 |
| 30° | 514.1 | 603.0 | 1028.3 | 1405.5 | 976.2 | 697.5 | 575.8 | 517.3 | 490.1 |
| 32.5° | 451.7 | 497.3 | 891.3 | 1339.0 | 929.0 | 649.5 | 543.0 | 475.7 | 452.5 |
| 35° | 418.8 | 442.9 | 716.8 | 1261.3 | 875.3 | 609.4 | 505.3 | 441.3 | 420.4 |
| 37.5° | 394.0 | 408.4 | 591.8 | 1178.0 | 820.9 | 574.2 | 470.9 | 409.2 | 389.2 |
| 40° | 369.2 | 380.4 | 490.1 | 1098.0 | 768.0 | 539.8 | 437.3 | 376.4 | 361.2 |
| 42.5° | 346.8 | 355.6 | 425.2 | 1018.7 | 713.6 | 504.5 | 404.4 | 350.8 | 337.2 |
| 45° | 321.9 | 329.9 | 387.6 | 922.6 | 659.1 | 468.5 | 374.0 | 322.7 | 314.7 |
| 47.5° | 301.1 | 306.7 | 351.6 | 836.9 | 605.4 | 434.1 | 342.8 | 300.3 | 294.7 |
| 50° | 278.7 | 285.9 | 321.1 | 741.6 | 556.6 | 400.4 | 316.3 | 280.3 | 275.5 |
| 52.5° | 257.1 | 260.3 | 295.5 | 646.3 | 505.3 | 367.6 | 288.3 | 260.3 | 257.1 |
| 55° | 228.2 | 241.1 | 265.1 | 548.6 | 454.1 | 337.2 | 259.5 | 239.5 | 237.1 |
| 57.5° | 195.4 | 212.2 | 237.9 | 460.5 | 406.0 | 303.5 | 236.2 | 220.2 | 209.8 |
| 60° | 157.0 | 177.0 | 210.6 | 382.8 | 363.6 | 273.1 | 212.2 | 187.4 | 174.6 |
| 62.5° | 137.7 | 144.2 | 185.8 | 320.3 | 320.3 | 244.3 | 188.2 | 161.0 | 155.4 |
| 65° | 120.1 | 124.9 | 159.4 | 265.1 | 278.7 | 212.2 | 166.6 | 139.3 | 134.5 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 67.5° | 104.9 | 108.9 | 121.7 | 221.0 | 240.3 | 185.0 | 137.7 | 121.7 | 116.1 |
| 70° | 89.7 | 92.9 | 104.1 | 180.2 | 205.0 | 157.8 | 116.1 | 104.1 | 100.1 |
| 72.5° | 76.1 | 79.3 | 85.7 | 135.3 | 168.2 | 131.3 | 97.7 | 88.9 | 85.7 |
| 75° | 63.3 | 64.9 | 71.3 | 100.9 | 135.3 | 104.9 | 78.5 | 72.9 | 71.3 |
| 77.5° | 51.3 | 52.1 | 56.1 | 72.1 | 104.9 | 80.1 | 63.3 | 58.5 | 57.7 |
| 80° | 39.2 | 40.0 | 43.2 | 52.1 | 76.9 | 57.7 | 47.2 | 44.8 | 43.2 |
| 82.5° | 28.0 | 28.8 | 30.4 | 35.2 | 52.1 | 39.2 | 33.6 | 32.8 | 30.4 |
| 85° | 17.6 | 17.6 | 19.2 | 21.6 | 29.6 | 22.4 | 20.8 | 20.0 | 19.2 |
| 87.5° | 8.0 | 8.0 | 8.8 | 8.8 | 13.6 | 9.6 | 9.6 | 8.8 | 8.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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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 | 17.70 | 19.17 | 18.07 | 19.48 | 19.80 | 20.40 | 21.86 | 20.76 | 22.18 | 22.49 |
| | 3H | 18.82 | 20.13 | 19.20 | 20.46 | 20.82 | 21.84 | 23.15 | 22.21 | 23.48 | 23.84 |
| | 4H | 19.26 | 20.49 | 19.66 | 20.84 | 21.22 | 22.34 | 23.57 | 22.74 | 23.92 | 24.30 |
| | 6H | 19.60 | 20.74 | 20.02 | 21.11 | 21.50 | 22.67 | 23.80 | 23.08 | 24.17 | 24.56 |
| | 8H | 19.72 | 20.80 | 20.15 | 21.19 | 21.59 | 22.75 | 23.84 | 23.18 | 24.23 | 24.63 |
| | 12H | 19.79 | 20.83 | 20.22 | 21.21 | 21.64 | 22.80 | 23.84 | 23.23 | 24.22 | 24.65 |
| 4H | 2H | 18.87 | 20.10 | 19.27 | 20.45 | 20.83 | 20.85 | 22.08 | 21.25 | 22.43 | 22.81 |
| | 3H | 20.10 | 21.12 | 20.51 | 21.52 | 21.92 | 22.51 | 23.53 | 22.92 | 23.93 | 24.33 |
| | 4H | 20.58 | 21.49 | 21.01 | 21.91 | 22.35 | 23.14 | 24.06 | 23.58 | 24.48 | 24.92 |
| | 6H | 20.98 | 21.77 | 21.44 | 22.22 | 22.68 | 23.60 | 24.40 | 24.06 | 24.84 | 25.30 |
| | 8H | 21.11 | 21.86 | 21.58 | 22.30 | 22.77 | 23.73 | 24.47 | 24.19 | 24.92 | 25.38 |
| | 12H | 21.21 | 21.87 | 21.70 | 22.35 | 22.83 | 23.81 | 24.47 | 24.29 | 24.95 | 25.42 |
| 8H | 4H | 20.98 | 21.72 | 21.44 | 22.17 | 22.64 | 23.26 | 24.00 | 23.72 | 24.45 | 24.91 |
| | 6H | 21.47 | 22.08 | 21.97 | 22.58 | 23.05 | 23.82 | 24.43 | 24.32 | 24.92 | 25.40 |
| | 8H | 21.66 | 22.21 | 22.18 | 22.72 | 23.21 | 24.02 | 24.57 | 24.53 | 25.08 | 25.57 |
| | 12H | 21.82 | 22.30 | 22.33 | 22.79 | 23.36 | 24.17 | 24.65 | 24.68 | 25.14 | 25.71 |
| 12H | 4H | 21.03 | 21.69 | 21.51 | 22.17 | 22.64 | 23.25 | 23.91 | 23.73 | 24.39 | 24.86 |
| | 6H | 21.54 | 22.09 | 22.06 | 22.60 | 23.09 | 23.82 | 24.37 | 24.33 | 24.88 | 25.37 |
| | 8H | 21.78 | 22.27 | 22.29 | 22.76 | 23.33 | 24.06 | 24.55 | 24.57 | 25.04 | 25.61 |