

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: CORELITE

Report Number: P855149

Luminaire Tested: SQ2-PH1-150U-075D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855149  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-150U-075D-835-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 750 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

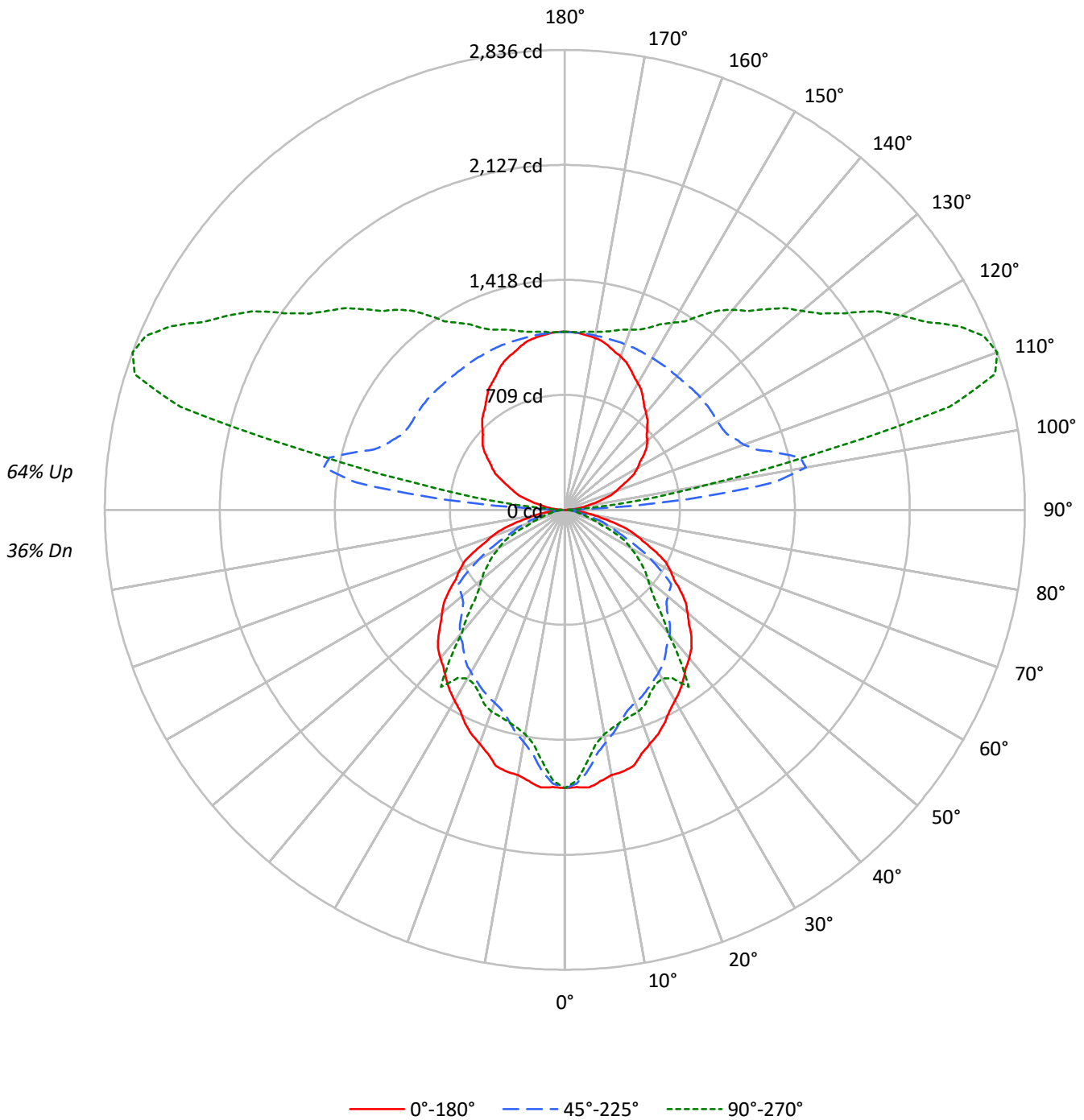
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10569.1 lumens  
Efficiency: N/A  
Efficacy: 126.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 83.3  
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





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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 | 0  |    |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 76 | 76 | 76 | 59 | 59 | 59 | 43 | 43 | 43 | 36 |    |    |    | 36 |
| 1   | 95  | 91  | 87  | 84  | 86 | 82 | 79 | 76 | 66 | 64 | 62 | 52 | 50 | 49 | 38 | 38 | 37 | 31 |    |    |    | 31 |
| 2   | 86  | 79  | 73  | 68  | 78 | 72 | 67 | 63 | 58 | 55 | 52 | 46 | 43 | 41 | 34 | 32 | 31 | 26 |    |    |    | 26 |
| 3   | 79  | 70  | 63  | 57  | 71 | 63 | 57 | 52 | 51 | 47 | 43 | 40 | 37 | 35 | 30 | 28 | 27 | 22 |    |    |    | 22 |
| 4   | 72  | 62  | 54  | 48  | 65 | 56 | 49 | 44 | 46 | 41 | 37 | 36 | 33 | 30 | 27 | 25 | 23 | 19 |    |    |    | 19 |
| 5   | 66  | 55  | 47  | 41  | 60 | 50 | 43 | 38 | 41 | 36 | 32 | 32 | 29 | 26 | 24 | 22 | 20 | 16 |    |    |    | 16 |
| 6   | 61  | 49  | 41  | 36  | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 29 | 25 | 23 | 22 | 20 | 18 | 14 |    |    |    | 14 |
| 7   | 56  | 44  | 36  | 31  | 51 | 40 | 34 | 29 | 33 | 28 | 24 | 26 | 23 | 20 | 20 | 18 | 16 | 13 |    |    |    | 13 |
| 8   | 52  | 40  | 33  | 27  | 47 | 37 | 30 | 25 | 30 | 25 | 22 | 24 | 20 | 18 | 18 | 16 | 14 | 11 |    |    |    | 11 |
| 9   | 48  | 36  | 29  | 24  | 44 | 33 | 27 | 23 | 28 | 23 | 19 | 22 | 18 | 16 | 17 | 14 | 13 | 10 |    |    |    | 10 |
| 10  | 45  | 33  | 26  | 22  | 41 | 31 | 24 | 20 | 25 | 21 | 17 | 20 | 17 | 14 | 16 | 13 | 11 | 9  |    |    |    | 9  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 27703 | 27703 | 27703 |
| 5°  | 27861 | 26195 | 25321 |
| 10° | 27220 | 23846 | 23017 |
| 15° | 27343 | 22430 | 22567 |
| 20° | 26366 | 21739 | 22747 |
| 25° | 25883 | 21638 | 22219 |
| 30° | 25322 | 21580 | 22400 |
| 35° | 25131 | 21333 | 26256 |
| 40° | 25151 | 21195 | 20818 |
| 45° | 25160 | 20390 | 17931 |
| 50° | 24810 | 20791 | 16814 |
| 55° | 24493 | 22565 | 16130 |
| 60° | 24251 | 19769 | 15129 |
| 65° | 23828 | 16027 | 13161 |
| 70° | 22504 | 13638 | 9404  |
| 75° | 20062 | 10287 | 7130  |
| 80° | 16392 | 6685  | 6685  |
| 85° | 10282 | 6058  | 4520  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 25160 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 151.0   | 1.4       |
| 10°-20°   | 397.1   | 3.8       |
| 20°-30°   | 582.3   | 5.5       |
| 30°-40°   | 705.1   | 6.7       |
| 40°-50°   | 693.5   | 6.6       |
| 50°-60°   | 603.7   | 5.7       |
| 60°-70°   | 419.7   | 4.0       |
| 70°-80°   | 199.0   | 1.9       |
| 80°-90°   | 45.1    | 0.4       |
| 90°-100°  | 418.1   | 4.0       |
| 100°-110° | 1369.1  | 13.0      |
| 110°-120° | 1353.5  | 12.8      |
| 120°-130° | 1106.4  | 10.5      |
| 130°-140° | 902.9   | 8.5       |
| 140°-150° | 702.7   | 6.6       |
| 150°-160° | 505.9   | 4.8       |
| 160°-170° | 309.5   | 2.9       |
| 170°-180° | 104.6   | 1.0       |
| 0°-30°    | 1130.4  | 10.7      |
| 0°-40°    | 1835.5  | 17.4      |
| 0°-60°    | 3132.6  | 29.6      |
| 0°-90°    | 3796.3  | 35.9      |
| 90°-120°  | 3140.7  | 29.7      |
| 90°-150°  | 5852.7  | 55.4      |
| 90°-180°  | 6773.0  | 64.1      |
| 0°-180°   | 10569.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1716 | 1716  | 1716 | 1716  | 1716 |      |
| 5°   | 1719 | 1717  | 1616 | 1566  | 1562 | 162  |
| 15°  | 1636 | 1457  | 1342 | 1332  | 1350 | 456  |
| 25°  | 1453 | 1236  | 1215 | 1252  | 1247 | 668  |
| 35°  | 1275 | 1031  | 1082 | 1176  | 1332 | 799  |
| 45°  | 1102 | 816   | 893  | 924   | 785  | 847  |
| 55°  | 870  | 635   | 802  | 578   | 573  | 777  |
| 65°  | 624  | 437   | 420  | 344   | 344  | 613  |
| 75°  | 322  | 223   | 165  | 118   | 114  | 341  |
| 85°  | 56   | 36    | 33   | 26    | 24   | 74   |
| 90°  | 1    | 3     | 9    | 8     | 9    | 5    |
| 95°  | 59   | 170   | 760  | 271   | 176  | 67   |
| 105° | 238  | 339   | 1359 | 2582  | 2453 | 251  |
| 115° | 429  | 512   | 1104 | 2281  | 2678 | 423  |
| 125° | 597  | 665   | 1088 | 1799  | 2113 | 531  |
| 135° | 718  | 794   | 1079 | 1552  | 1749 | 556  |
| 145° | 840  | 902   | 1077 | 1335  | 1463 | 526  |
| 155° | 958  | 989   | 1084 | 1194  | 1240 | 441  |
| 165° | 1045 | 1055  | 1088 | 1130  | 1142 | 295  |
| 175° | 1093 | 1093  | 1094 | 1102  | 1100 | 104  |
| 180° | 1097 | 1097  | 1097 | 1097  | 1097 |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1715.8 | 1715.8 | 1715.8 | 1715.8 | 1715.8 |
| 2.5°   | 1711.9 | 1729.7 | 1689.7 | 1674.0 | 1671.4 |
| 5°     | 1719.0 | 1717.4 | 1616.2 | 1565.5 | 1562.3 |
| 7.5°   | 1687.7 | 1638.2 | 1517.2 | 1461.3 | 1458.8 |
| 10°    | 1660.3 | 1585.2 | 1454.5 | 1403.9 | 1403.9 |
| 12.5°  | 1653.7 | 1535.3 | 1403.6 | 1366.3 | 1374.0 |
| 15°    | 1635.8 | 1457.0 | 1341.9 | 1332.5 | 1350.1 |
| 17.5°  | 1576.4 | 1383.8 | 1293.9 | 1315.3 | 1335.7 |
| 20°    | 1534.5 | 1344.6 | 1265.2 | 1304.8 | 1323.9 |
| 22.5°  | 1499.3 | 1306.8 | 1244.3 | 1287.6 | 1297.9 |
| 25°    | 1452.9 | 1235.9 | 1214.6 | 1252.1 | 1247.2 |
| 27.5°  | 1397.4 | 1170.8 | 1184.9 | 1207.8 | 1210.7 |
| 30°    | 1358.2 | 1131.6 | 1157.5 | 1180.8 | 1201.5 |
| 32.5°  | 1320.4 | 1086.1 | 1127.4 | 1182.7 | 1230.2 |
| 35°    | 1275.0 | 1030.7 | 1082.3 | 1175.7 | 1332.1 |
| 37.5°  | 1227.3 | 965.5  | 1036.9 | 1115.5 | 1165.3 |
| 40°    | 1193.3 | 918.8  | 1005.6 | 1102.6 | 987.7  |
| 42.5°  | 1156.8 | 882.2  | 958.6  | 1083.8 | 889.7  |
| 45°    | 1101.9 | 816.3  | 893.0  | 924.1  | 785.3  |
| 47.5°  | 1037.3 | 765.0  | 848.6  | 770.7  | 716.3  |
| 50°    | 987.7  | 730.7  | 827.7  | 704.5  | 669.4  |
| 52.5°  | 939.4  | 695.2  | 813.3  | 649.8  | 626.3  |
| 55°    | 870.1  | 635.4  | 801.6  | 577.8  | 573.0  |
| 57.5°  | 796.7  | 574.8  | 708.9  | 515.1  | 523.4  |
| 60°    | 751.0  | 535.5  | 612.2  | 478.1  | 468.5  |
| 62.5°  | 702.7  | 497.4  | 522.0  | 431.1  | 421.5  |
| 65°    | 623.7  | 436.8  | 419.5  | 344.5  | 344.5  |
| 67.5°  | 536.7  | 373.9  | 339.8  | 281.9  | 243.5  |
| 70°    | 476.7  | 333.0  | 288.9  | 224.7  | 199.2  |
| 72.5°  | 412.7  | 289.5  | 236.7  | 184.1  | 154.8  |
| 75°    | 321.6  | 222.6  | 164.9  | 117.5  | 114.3  |
| 77.5°  | 232.4  | 160.4  | 111.0  | 87.1   | 87.5   |
| 80°    | 176.3  | 122.0  | 71.9   | 70.3   | 71.9   |
| 82.5°  | 124.0  | 83.9   | 53.5   | 55.8   | 56.1   |
| 85°    | 55.5   | 36.3   | 32.7   | 26.0   | 24.4   |
| 87.5°  | 12.0   | 11.1   | 8.4    | 8.1    | 8.4    |
| 90°    | 1.1    | 3.3    | 9.1    | 7.9    | 9.1    |
| 92.5°  | 19.1   | 69.9   | 214.7  | 69.8   | 55.9   |
| 95°    | 58.6   | 170.0  | 760.1  | 270.8  | 176.0  |
| 97.5°  | 106.5  | 224.2  | 1304.1 | 788.9  | 489.0  |
| 100°   | 139.9  | 252.4  | 1509.0 | 1347.5 | 893.2  |
| 102.5° | 177.8  | 287.6  | 1486.4 | 1985.5 | 1539.2 |
| 105°   | 238.0  | 339.4  | 1358.9 | 2581.9 | 2452.9 |
| 107.5° | 297.3  | 390.3  | 1234.6 | 2637.7 | 2779.5 |
| 110°   | 336.1  | 426.5  | 1175.1 | 2572.7 | 2836.3 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 373.1  | 460.8  | 1139.0 | 2459.9 | 2797.5 |
| 115°   | 428.6  | 512.3  | 1104.1 | 2281.4 | 2678.4 |
| 117.5° | 482.4  | 560.7  | 1090.8 | 2106.1 | 2509.2 |
| 120°   | 517.6  | 591.5  | 1087.2 | 2004.0 | 2396.5 |
| 122.5° | 549.2  | 621.3  | 1087.2 | 1915.8 | 2280.1 |
| 125°   | 596.6  | 665.0  | 1088.3 | 1799.1 | 2113.4 |
| 127.5° | 636.8  | 706.4  | 1087.0 | 1713.2 | 1986.6 |
| 130°   | 662.0  | 732.5  | 1086.1 | 1661.2 | 1908.2 |
| 132.5° | 684.5  | 756.9  | 1083.3 | 1616.5 | 1840.5 |
| 135°   | 718.4  | 794.4  | 1079.3 | 1551.7 | 1749.1 |
| 137.5° | 754.0  | 829.4  | 1076.8 | 1484.4 | 1662.8 |
| 140°   | 779.3  | 852.0  | 1075.9 | 1441.7 | 1610.5 |
| 142.5° | 804.5  | 873.0  | 1075.9 | 1396.2 | 1549.1 |
| 145°   | 840.1  | 901.9  | 1077.0 | 1334.8 | 1462.7 |
| 147.5° | 877.6  | 929.0  | 1078.6 | 1281.3 | 1377.9 |
| 150°   | 901.0  | 946.3  | 1080.4 | 1250.3 | 1331.9 |
| 152.5° | 924.6  | 964.4  | 1081.3 | 1224.7 | 1292.1 |
| 155°   | 957.5  | 989.4  | 1083.8 | 1194.2 | 1240.5 |
| 157.5° | 987.0  | 1010.1 | 1086.3 | 1170.3 | 1203.8 |
| 160°   | 1005.9 | 1024.7 | 1087.2 | 1156.6 | 1183.0 |
| 162.5° | 1022.2 | 1037.4 | 1087.2 | 1145.6 | 1164.9 |
| 165°   | 1045.4 | 1055.4 | 1088.3 | 1130.3 | 1142.4 |
| 167.5° | 1065.0 | 1069.9 | 1089.7 | 1118.4 | 1125.1 |
| 170°   | 1075.9 | 1078.1 | 1090.6 | 1112.0 | 1114.2 |
| 172.5° | 1084.0 | 1085.4 | 1093.3 | 1107.4 | 1107.9 |
| 175°   | 1092.8 | 1092.8 | 1094.0 | 1101.8 | 1099.5 |
| 177.5° | 1097.3 | 1096.5 | 1095.5 | 1100.9 | 1097.3 |
| 180°   | 1097.3 | 1097.3 | 1097.3 | 1097.3 | 1097.3 |

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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 | 17.40            | 18.15 | 18.47 | 19.22 | 20.68 | 16.08          | 16.82 | 17.15 | 17.89 | 19.35 |
|                 | 3H   | 19.42            | 20.08 | 20.50 | 21.16 | 22.64 | 17.10          | 17.76 | 18.18 | 18.84 | 20.32 |
|                 | 4H   | 20.14            | 20.77 | 21.24 | 21.86 | 23.34 | 17.31          | 17.94 | 18.40 | 19.02 | 20.50 |
|                 | 6H   | 20.62            | 21.20 | 21.72 | 22.29 | 23.78 | 17.45          | 18.03 | 18.55 | 19.11 | 20.61 |
|                 | 8H   | 20.74            | 21.30 | 21.85 | 22.40 | 23.89 | 17.48          | 18.03 | 18.58 | 19.13 | 20.62 |
|                 | 12H  | 20.78            | 21.31 | 21.89 | 22.40 | 23.92 | 17.47          | 17.99 | 18.58 | 19.09 | 20.60 |
| 4H              | 2H   | 17.76            | 18.39 | 18.86 | 19.47 | 20.96 | 16.70          | 17.33 | 17.80 | 18.41 | 19.90 |
|                 | 3H   | 19.86            | 20.38 | 20.96 | 21.49 | 22.99 | 17.87          | 18.39 | 18.98 | 19.50 | 21.00 |
|                 | 4H   | 20.67            | 21.15 | 21.78 | 22.25 | 23.76 | 18.14          | 18.62 | 19.25 | 19.72 | 21.24 |
|                 | 6H   | 21.25            | 21.66 | 22.36 | 22.78 | 24.29 | 18.34          | 18.75 | 19.46 | 19.88 | 21.39 |
|                 | 8H   | 21.41            | 21.80 | 22.53 | 22.91 | 24.44 | 18.40          | 18.78 | 19.51 | 19.89 | 21.42 |
|                 | 12H  | 21.47            | 21.82 | 22.61 | 22.95 | 24.48 | 18.40          | 18.75 | 19.53 | 19.87 | 21.40 |
| 8H              | 4H   | 20.68            | 21.06 | 21.79 | 22.17 | 23.70 | 18.35          | 18.73 | 19.46 | 19.85 | 21.37 |
|                 | 6H   | 21.32            | 21.64 | 22.46 | 22.80 | 24.32 | 18.62          | 18.93 | 19.75 | 20.09 | 21.61 |
|                 | 8H   | 21.55            | 21.82 | 22.69 | 22.96 | 24.50 | 18.72          | 18.99 | 19.86 | 20.13 | 21.67 |
|                 | 12H  | 21.66            | 21.90 | 22.80 | 23.03 | 24.61 | 18.76          | 19.00 | 19.90 | 20.13 | 21.71 |
| 12H             | 4H   | 20.62            | 20.97 | 21.76 | 22.10 | 23.63 | 18.34          | 18.69 | 19.47 | 19.81 | 21.34 |
|                 | 6H   | 21.30            | 21.57 | 22.44 | 22.71 | 24.25 | 18.64          | 18.92 | 19.79 | 20.06 | 21.60 |
|                 | 8H   | 21.52            | 21.77 | 22.67 | 22.90 | 24.48 | 18.75          | 19.00 | 19.90 | 20.13 | 21.71 |