

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



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: NEO-RAY

Report Number: P998066

Luminaire Tested: SA2XXDIP-B1005D925UB40-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998066  
REPORT IS A COMBINATION OF REPORTS P983803 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B1005D925UB40-4F0-XX-W2A-D  
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

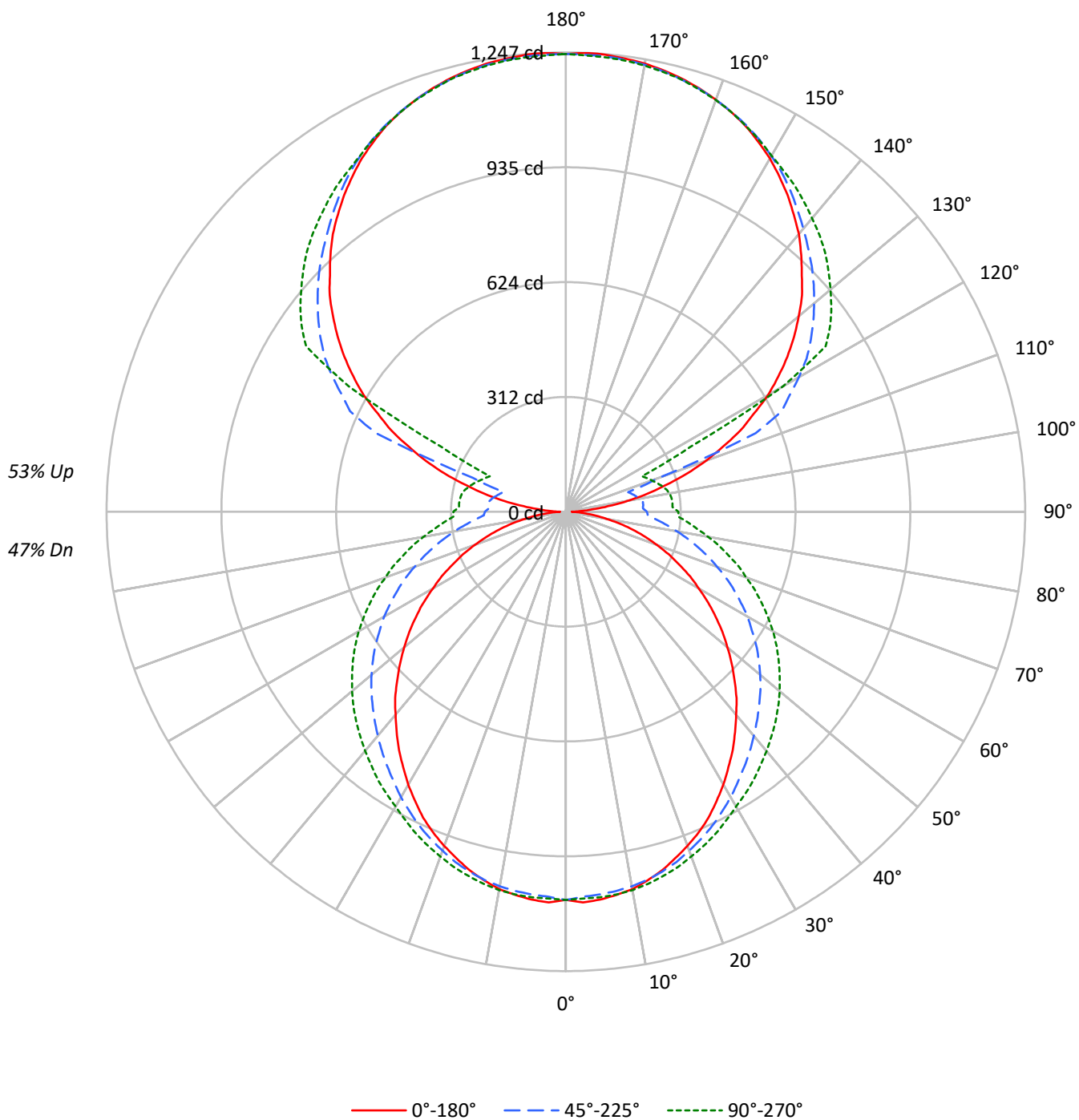
Lumens per Lamp: N/A  
Luminaire Lumens: 7666.0 lumens  
Efficiency: N/A  
Efficacy: 85.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 89.8  
Input Voltage (V):  
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 |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 106 | 106 | 106 | 106 | 98 | 98 | 98 | 98 | 81 | 81 | 81 | 67 | 67 | 67 | 53 | 53 | 53 |
| 1   | 96  | 91  | 86  | 82  | 87 | 83 | 79 | 76 | 69 | 67 | 64 | 56 | 54 | 53 | 45 | 43 | 42 |
| 2   | 86  | 78  | 72  | 66  | 79 | 72 | 66 | 61 | 60 | 56 | 52 | 49 | 46 | 43 | 38 | 36 | 34 |
| 3   | 79  | 68  | 61  | 54  | 72 | 63 | 56 | 51 | 52 | 47 | 43 | 43 | 39 | 36 | 34 | 31 | 29 |
| 4   | 72  | 60  | 52  | 46  | 65 | 55 | 48 | 42 | 46 | 41 | 36 | 38 | 34 | 30 | 30 | 27 | 24 |
| 5   | 66  | 53  | 45  | 39  | 60 | 49 | 42 | 36 | 41 | 35 | 31 | 34 | 29 | 26 | 27 | 23 | 21 |
| 6   | 60  | 48  | 39  | 33  | 55 | 44 | 37 | 31 | 37 | 31 | 27 | 30 | 26 | 22 | 24 | 21 | 18 |
| 7   | 56  | 43  | 35  | 29  | 51 | 40 | 32 | 27 | 33 | 28 | 23 | 27 | 23 | 20 | 22 | 19 | 16 |
| 8   | 52  | 39  | 31  | 26  | 47 | 36 | 29 | 24 | 30 | 25 | 21 | 25 | 21 | 17 | 20 | 17 | 14 |
| 9   | 48  | 35  | 28  | 23  | 44 | 33 | 26 | 21 | 28 | 22 | 18 | 23 | 19 | 16 | 19 | 15 | 13 |
| 10  | 45  | 32  | 25  | 20  | 41 | 30 | 23 | 19 | 26 | 20 | 16 | 21 | 17 | 14 | 17 | 14 | 12 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16681 | 16681 | 16681 |
| 5°  | 16757 | 15969 | 15880 |
| 10° | 16645 | 15416 | 15191 |
| 15° | 16409 | 14845 | 14486 |
| 20° | 16112 | 14243 | 13816 |
| 25° | 15821 | 13668 | 13209 |
| 30° | 15411 | 13083 | 12607 |
| 35° | 14996 | 12520 | 12166 |
| 40° | 14558 | 12033 | 11726 |
| 45° | 14144 | 11591 | 11345 |
| 50° | 13695 | 11183 | 10966 |
| 55° | 13227 | 10751 | 10583 |
| 60° | 12651 | 10300 | 10179 |
| 65° | 12055 | 9782  | 9714  |
| 70° | 11377 | 9225  | 9213  |
| 75° | 10511 | 8668  | 8741  |
| 80° | 9141  | 8090  | 8252  |
| 85° | 7769  | 7544  | 7828  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14144 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.9   | 1.3       |
| 10°-20°   | 286.5  | 3.7       |
| 20°-30°   | 434.1  | 5.7       |
| 30°-40°   | 528.7  | 6.9       |
| 40°-50°   | 568.8  | 7.4       |
| 50°-60°   | 552.4  | 7.2       |
| 60°-70°   | 482.4  | 6.3       |
| 70°-80°   | 371.3  | 4.8       |
| 80°-90°   | 250.9  | 3.3       |
| 90°-100°  | 212.6  | 2.8       |
| 100°-110° | 278.0  | 3.6       |
| 110°-120° | 487.8  | 6.4       |
| 120°-130° | 718.0  | 9.4       |
| 130°-140° | 733.0  | 9.6       |
| 140°-150° | 666.6  | 8.7       |
| 150°-160° | 533.3  | 7.0       |
| 160°-170° | 343.6  | 4.5       |
| 170°-180° | 118.3  | 1.5       |
| 0°-30°    | 820.6  | 10.7      |
| 0°-40°    | 1349.2 | 17.6      |
| 0°-60°    | 2470.4 | 32.2      |
| 0°-90°    | 3574.9 | 46.6      |
| 90°-120°  | 978.4  | 12.8      |
| 90°-150°  | 3095.9 | 40.4      |
| 90°-180°  | 4091.0 | 53.4      |
| 0°-180°   | 7666.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1054 | 1054  | 1054 | 1054  | 1054 |      |
| 5°   | 1057 | 1052  | 1043 | 1052  | 1051 | 100  |
| 15°  | 1008 | 1011  | 1011 | 1025  | 1023 | 284  |
| 25°  | 916  | 927   | 941  | 959   | 964  | 421  |
| 35°  | 790  | 816   | 845  | 878   | 889  | 494  |
| 45°  | 648  | 689   | 742  | 790   | 805  | 500  |
| 55°  | 496  | 551   | 631  | 686   | 706  | 444  |
| 65°  | 339  | 414   | 504  | 567   | 586  | 337  |
| 75°  | 188  | 273   | 371  | 437   | 457  | 199  |
| 85°  | 55   | 150   | 247  | 312   | 333  | 58   |
| 90°  | 16   | 115   | 220  | 285   | 305  | 14   |
| 95°  | 71   | 113   | 211  | 273   | 291  | 79   |
| 105° | 281  | 352   | 186  | 250   | 270  | 301  |
| 115° | 523  | 555   | 646  | 276   | 228  | 514  |
| 125° | 734  | 746   | 812  | 859   | 876  | 655  |
| 135° | 906  | 920   | 944  | 985   | 995  | 700  |
| 145° | 1049 | 1048  | 1064 | 1079  | 1082 | 657  |
| 155° | 1155 | 1147  | 1158 | 1164  | 1156 | 532  |
| 165° | 1217 | 1212  | 1215 | 1221  | 1215 | 344  |
| 175° | 1245 | 1239  | 1241 | 1247  | 1238 | 119  |
| 180° | 1243 | 1243  | 1243 | 1243  | 1243 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1053.8 | 1053.8 | 1053.8 | 1053.8 | 1053.8 |
| 2.5°   | 1061.5 | 1056.9 | 1046.2 | 1053.8 | 1050.8 |
| 5°     | 1056.9 | 1052.3 | 1043.1 | 1052.3 | 1050.8 |
| 7.5°   | 1049.2 | 1046.2 | 1038.5 | 1049.2 | 1047.7 |
| 10°    | 1040.1 | 1037.0 | 1032.4 | 1044.7 | 1043.1 |
| 12.5°  | 1024.8 | 1026.3 | 1023.3 | 1035.5 | 1034.0 |
| 15°    | 1008.0 | 1011.1 | 1011.1 | 1024.8 | 1023.3 |
| 17.5°  | 986.6  | 992.7  | 997.3  | 1011.1 | 1011.1 |
| 20°    | 965.2  | 972.9  | 979.0  | 995.8  | 995.8  |
| 22.5°  | 942.3  | 951.5  | 960.7  | 977.5  | 980.5  |
| 25°    | 916.4  | 927.1  | 940.8  | 959.1  | 963.7  |
| 27.5°  | 885.8  | 902.6  | 917.9  | 940.8  | 943.9  |
| 30°    | 855.3  | 875.1  | 895.0  | 919.4  | 924.0  |
| 32.5°  | 821.7  | 844.6  | 869.0  | 898.0  | 907.2  |
| 35°    | 789.6  | 815.6  | 844.6  | 878.2  | 888.9  |
| 37.5°  | 754.5  | 783.5  | 820.1  | 856.8  | 867.5  |
| 40°    | 719.3  | 752.9  | 794.2  | 833.9  | 847.6  |
| 42.5°  | 685.7  | 719.3  | 768.2  | 812.5  | 826.3  |
| 45°    | 647.6  | 688.8  | 742.3  | 789.6  | 804.9  |
| 47.5°  | 610.9  | 655.2  | 716.3  | 765.2  | 782.0  |
| 50°    | 572.7  | 620.1  | 688.8  | 740.7  | 757.5  |
| 52.5°  | 536.1  | 586.5  | 659.8  | 713.2  | 731.6  |
| 55°    | 496.4  | 551.3  | 630.8  | 685.7  | 705.6  |
| 57.5°  | 458.2  | 519.3  | 598.7  | 658.3  | 678.1  |
| 60°    | 416.9  | 482.6  | 569.7  | 627.7  | 649.1  |
| 62.5°  | 380.3  | 449.0  | 536.1  | 598.7  | 618.5  |
| 65°    | 339.1  | 413.9  | 504.0  | 566.6  | 586.5  |
| 67.5°  | 302.4  | 380.3  | 471.9  | 534.5  | 555.9  |
| 70°    | 262.7  | 342.1  | 436.8  | 502.5  | 520.8  |
| 72.5°  | 226.0  | 308.5  | 404.7  | 468.9  | 491.8  |
| 75°    | 187.9  | 273.4  | 371.1  | 436.8  | 456.7  |
| 77.5°  | 151.2  | 239.8  | 339.1  | 404.7  | 426.1  |
| 80°    | 114.5  | 207.7  | 307.0  | 371.1  | 392.5  |
| 82.5°  | 84.0   | 175.6  | 276.4  | 340.6  | 360.4  |
| 85°    | 55.0   | 149.7  | 247.4  | 311.6  | 332.9  |
| 87.5°  | 33.6   | 125.2  | 223.0  | 285.6  | 305.5  |
| 90°    | 16.2   | 114.7  | 219.6  | 285.2  | 305.3  |
| 92.5°  | 36.2   | 113.6  | 209.5  | 270.8  | 290.0  |
| 95°    | 70.6   | 112.8  | 210.7  | 273.3  | 290.7  |
| 97.5°  | 115.9  | 107.9  | 210.8  | 270.1  | 289.3  |
| 100°   | 169.8  | 103.2  | 203.9  | 267.6  | 286.2  |
| 102.5° | 227.7  | 276.3  | 195.0  | 259.9  | 279.4  |
| 105°   | 280.9  | 352.2  | 186.1  | 249.5  | 269.9  |
| 107.5° | 344.8  | 403.9  | 177.3  | 239.1  | 259.5  |
| 110°   | 404.4  | 453.9  | 268.8  | 227.8  | 248.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 462.0  | 502.5  | 557.6  | 218.9  | 238.4  |
| 115°   | 523.1  | 555.2  | 646.4  | 276.0  | 228.0  |
| 117.5° | 574.6  | 604.8  | 684.2  | 601.5  | 381.2  |
| 120°   | 634.0  | 653.6  | 730.9  | 784.3  | 679.8  |
| 122.5° | 684.3  | 700.2  | 774.7  | 821.4  | 836.0  |
| 125°   | 734.1  | 745.8  | 811.7  | 859.2  | 875.6  |
| 127.5° | 780.8  | 791.8  | 846.6  | 893.7  | 908.4  |
| 130°   | 824.9  | 837.7  | 879.7  | 926.3  | 937.6  |
| 132.5° | 869.9  | 879.9  | 912.7  | 956.0  | 967.3  |
| 135°   | 906.0  | 920.4  | 943.8  | 984.9  | 995.3  |
| 137.5° | 945.6  | 956.4  | 973.1  | 1011.0 | 1019.0 |
| 140°   | 984.2  | 989.9  | 1002.9 | 1035.4 | 1040.1 |
| 142.5° | 1016.6 | 1021.4 | 1033.1 | 1058.6 | 1061.8 |
| 145°   | 1049.3 | 1048.4 | 1063.7 | 1079.2 | 1082.3 |
| 147.5° | 1078.9 | 1076.2 | 1091.5 | 1097.5 | 1098.5 |
| 150°   | 1107.7 | 1101.4 | 1115.8 | 1121.2 | 1116.7 |
| 152.5° | 1132.0 | 1124.8 | 1138.3 | 1143.7 | 1137.4 |
| 155°   | 1155.4 | 1147.3 | 1158.1 | 1163.5 | 1156.3 |
| 157.5° | 1174.2 | 1167.1 | 1175.1 | 1181.4 | 1174.2 |
| 160°   | 1190.4 | 1185.0 | 1190.4 | 1195.8 | 1189.5 |
| 162.5° | 1204.8 | 1199.4 | 1203.9 | 1210.2 | 1202.1 |
| 165°   | 1217.4 | 1212.0 | 1214.7 | 1221.0 | 1214.7 |
| 167.5° | 1227.3 | 1221.9 | 1224.6 | 1230.9 | 1222.8 |
| 170°   | 1235.4 | 1230.0 | 1231.8 | 1238.1 | 1230.0 |
| 172.5° | 1240.8 | 1235.4 | 1237.2 | 1243.5 | 1235.4 |
| 175°   | 1245.3 | 1239.0 | 1240.8 | 1247.1 | 1238.1 |
| 177.5° | 1247.1 | 1240.8 | 1241.7 | 1248.0 | 1239.9 |
| 180°   | 1242.6 | 1242.6 | 1242.6 | 1242.6 | 1242.6 |

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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 | 14.67            | 15.55 | 15.65 | 16.55 | 17.86 | 17.75          | 18.63 | 18.72 | 19.62 | 20.94 |
|                 | 3H   | 16.13            | 16.93 | 17.12 | 17.93 | 19.27 | 20.34          | 21.13 | 21.32 | 22.14 | 23.47 |
|                 | 4H   | 16.61            | 17.36 | 17.61 | 18.37 | 19.72 | 21.59          | 22.35 | 22.59 | 23.35 | 24.70 |
|                 | 6H   | 16.90            | 17.59 | 17.90 | 18.61 | 19.96 | 22.89          | 23.59 | 23.90 | 24.60 | 25.96 |
|                 | 8H   | 16.95            | 17.62 | 17.97 | 18.65 | 20.00 | 23.55          | 24.22 | 24.56 | 25.25 | 26.60 |
|                 | 12H  | 16.97            | 17.61 | 17.99 | 18.63 | 20.01 | 24.27          | 24.91 | 25.29 | 25.93 | 27.31 |
| 4H              | 2H   | 15.72            | 16.48 | 16.73 | 17.49 | 18.83 | 18.08          | 18.83 | 19.08 | 19.84 | 21.18 |
|                 | 3H   | 17.43            | 18.07 | 18.45 | 19.11 | 20.47 | 20.87          | 21.51 | 21.88 | 22.55 | 23.90 |
|                 | 4H   | 18.06            | 18.65 | 19.08 | 19.67 | 21.05 | 22.29          | 22.88 | 23.31 | 23.91 | 25.28 |
|                 | 6H   | 18.47            | 18.99 | 19.50 | 20.04 | 21.41 | 23.76          | 24.27 | 24.79 | 25.32 | 26.70 |
|                 | 8H   | 18.58            | 19.06 | 19.61 | 20.11 | 21.50 | 24.52          | 25.00 | 25.55 | 26.04 | 27.43 |
|                 | 12H  | 18.63            | 19.06 | 19.68 | 20.12 | 21.52 | 25.34          | 25.78 | 26.40 | 26.84 | 28.24 |
| 8H              | 4H   | 18.85            | 19.33 | 19.88 | 20.37 | 21.76 | 22.43          | 22.92 | 23.47 | 23.96 | 25.35 |
|                 | 6H   | 19.48            | 19.89 | 20.54 | 20.97 | 22.36 | 24.06          | 24.47 | 25.12 | 25.55 | 26.94 |
|                 | 8H   | 19.70            | 20.06 | 20.76 | 21.13 | 22.54 | 24.95          | 25.31 | 26.02 | 26.38 | 27.79 |
|                 | 12H  | 19.84            | 20.16 | 20.90 | 21.22 | 22.67 | 25.95          | 26.27 | 27.02 | 27.33 | 28.78 |
| 12H             | 4H   | 19.05            | 19.48 | 20.10 | 20.54 | 21.94 | 22.41          | 22.85 | 23.46 | 23.91 | 25.30 |
|                 | 6H   | 19.82            | 20.17 | 20.88 | 21.24 | 22.65 | 24.09          | 24.45 | 25.15 | 25.52 | 26.92 |
|                 | 8H   | 20.12            | 20.44 | 21.19 | 21.50 | 22.95 | 25.02          | 25.34 | 26.09 | 26.40 | 27.85 |

END OF REPORT