

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: CORELITE

Report Number: P572164

Luminaire Tested: 24ID-45-L850-DBR

Issue Date: 10/5/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P572164  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2109-397-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/5/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 24ID-45-L850-DBR  
Description: 4500 LUMEN, 2X4 INDEPTH TROFFER WITH 2IN REGRESSED DOUBLE BARRELL LENS AND 5000K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

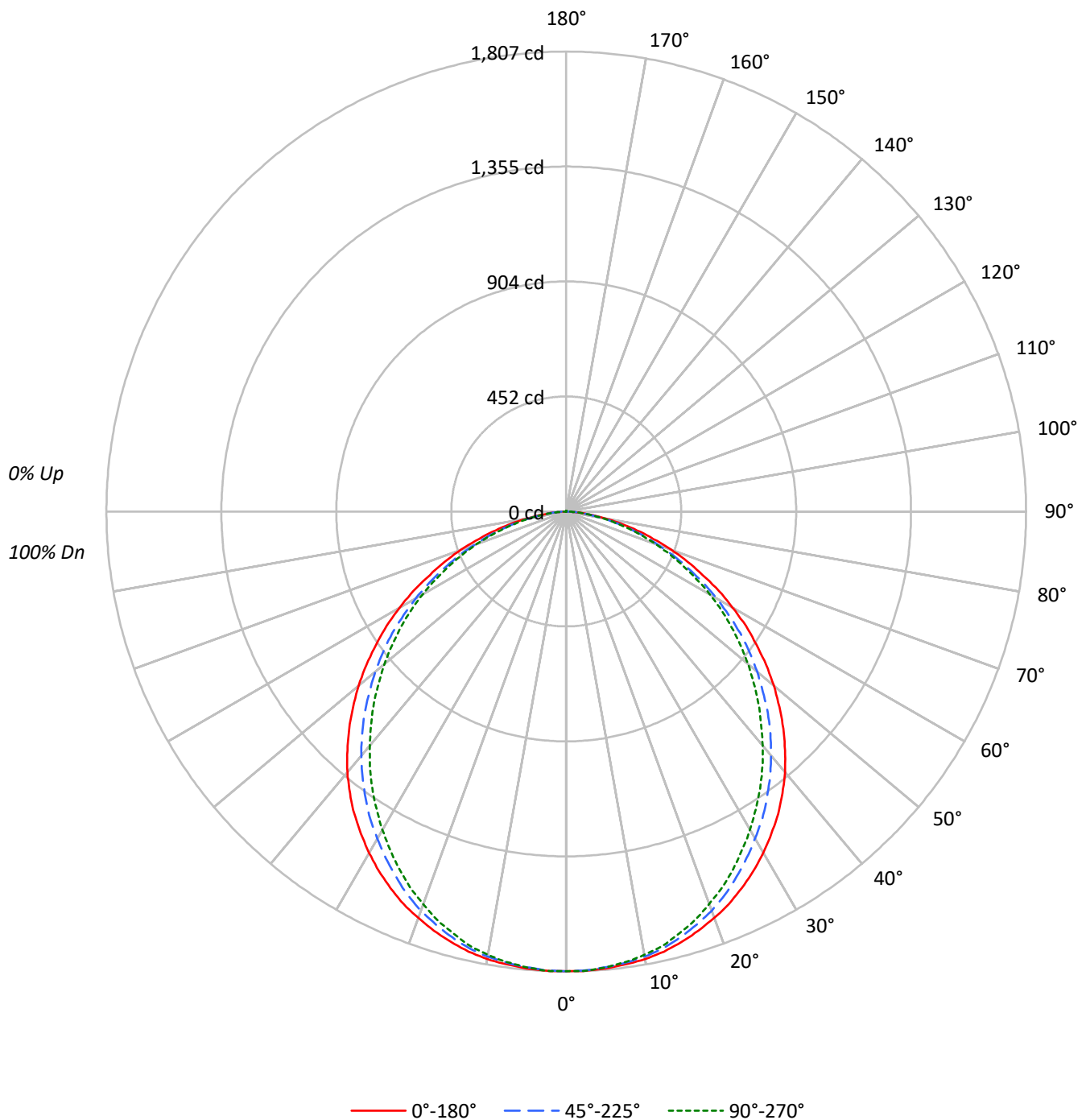
Lumens per Lamp: N/A  
Luminaire Lumens: 4748.0 lumens  
Efficiency: N/A  
Efficacy: 118.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.19 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 40  
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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CATALOG NUMBER: 24ID-45-L850-DBR

### 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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 95  | 98  | 95  | 92  |  | 94  | 92  | 90  |  | 91  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  |  | 83  | 79  | 75  |  | 80  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  |  | 74  | 68  | 64  |  | 71  |
| 4   | 84  | 72  | 63  | 57  | 81  | 71  | 63  | 56  | 68  | 61  | 56  |  | 66  | 60  | 55  |  | 64  |
| 5   | 77  | 64  | 56  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 48  |  | 59  | 53  | 48  |  | 57  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 49  | 43  | 55  | 48  | 42  |  | 54  | 47  | 42  |  | 52  |
| 7   | 66  | 53  | 44  | 38  | 64  | 52  | 44  | 38  | 50  | 43  | 38  |  | 49  | 42  | 37  |  | 48  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 34  |  | 45  | 38  | 33  |  | 44  |
| 9   | 57  | 44  | 36  | 31  | 56  | 44  | 36  | 31  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  |
| 10  | 54  | 41  | 33  | 28  | 53  | 40  | 33  | 28  | 39  | 32  | 28  |  | 38  | 32  | 27  |  | 37  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2431 | 2431 | 2431 |
| 5°  | 2434 | 2427 | 2427 |
| 10° | 2440 | 2427 | 2418 |
| 15° | 2439 | 2413 | 2390 |
| 20° | 2434 | 2391 | 2351 |
| 25° | 2424 | 2352 | 2303 |
| 30° | 2407 | 2306 | 2245 |
| 35° | 2385 | 2259 | 2183 |
| 40° | 2350 | 2200 | 2110 |
| 45° | 2295 | 2131 | 2034 |
| 50° | 2228 | 2049 | 1951 |
| 55° | 2138 | 1958 | 1860 |
| 60° | 2028 | 1835 | 1754 |
| 65° | 1883 | 1684 | 1617 |
| 70° | 1724 | 1515 | 1469 |
| 75° | 1495 | 1302 | 1266 |
| 80° | 1204 | 1024 | 1024 |
| 85° | 608  | 644  | 608  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2295 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 170.9  | 3.6       |
| 10°-20°   | 488.6  | 10.3      |
| 20°-30°   | 731.5  | 15.4      |
| 30°-40°   | 864.6  | 18.2      |
| 40°-50°   | 870.3  | 18.3      |
| 50°-60°   | 753.1  | 15.9      |
| 60°-70°   | 536.4  | 11.3      |
| 70°-80°   | 275.4  | 5.8       |
| 80°-90°   | 57.0   | 1.2       |
| 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° | 0.2    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1391.1 | 29.3      |
| 0°-40°    | 2255.7 | 47.5      |
| 0°-60°    | 3879.1 | 81.7      |
| 0°-90°    | 4747.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4748.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1807 | 1807  | 1807 | 1807  | 1807 |      |
| 5°   | 1802 | 1800  | 1797 | 1795  | 1797 | 171  |
| 15°  | 1751 | 1744  | 1732 | 1718  | 1716 | 494  |
| 25°  | 1633 | 1619  | 1584 | 1558  | 1552 | 752  |
| 35°  | 1452 | 1429  | 1375 | 1340  | 1329 | 907  |
| 45°  | 1206 | 1180  | 1120 | 1081  | 1069 | 930  |
| 55°  | 911  | 886   | 835  | 800   | 793  | 816  |
| 65°  | 591  | 570   | 529  | 510   | 508  | 589  |
| 75°  | 288  | 274   | 250  | 241   | 244  | 307  |
| 85°  | 39   | 39    | 42   | 42    | 39   | 59   |
| 90°  | 0    | 0     | 0    | 0     | 0    | 2    |
| 95°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 105° | 0    | 0     | 0    | 0     | 0    | 0    |
| 115° | 0    | 0     | 0    | 0     | 0    | 0    |
| 125° | 0    | 0     | 0    | 0     | 0    | 0    |
| 135° | 0    | 0     | 0    | 0     | 0    | 0    |
| 145° | 0    | 0     | 0    | 0     | 0    | 0    |
| 155° | 0    | 0     | 0    | 0     | 0    | 0    |
| 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 175° | 0    | 0     | 0    | 0     | 2    | 0    |
| 180° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1806.6 | 1806.6 | 1806.6 | 1806.6 | 1806.6 |
| 2.5°   | 1806.6 | 1804.3 | 1804.3 | 1802.0 | 1806.6 |
| 5°     | 1802.0 | 1799.6 | 1797.3 | 1795.0 | 1797.3 |
| 7.5°   | 1795.0 | 1790.4 | 1788.0 | 1783.4 | 1785.7 |
| 10°    | 1785.7 | 1781.1 | 1776.4 | 1769.5 | 1769.5 |
| 12.5°  | 1771.8 | 1767.2 | 1757.9 | 1748.6 | 1748.6 |
| 15°    | 1750.9 | 1744.0 | 1732.4 | 1718.5 | 1716.1 |
| 17.5°  | 1727.7 | 1718.5 | 1702.2 | 1686.0 | 1683.7 |
| 20°    | 1699.9 | 1690.6 | 1669.8 | 1648.9 | 1641.9 |
| 22.5°  | 1669.8 | 1658.2 | 1630.3 | 1607.2 | 1600.2 |
| 25°    | 1632.7 | 1618.7 | 1584.0 | 1558.4 | 1551.5 |
| 27.5°  | 1593.2 | 1574.7 | 1535.3 | 1507.4 | 1498.2 |
| 30°    | 1549.2 | 1530.6 | 1484.2 | 1456.4 | 1444.8 |
| 32.5°  | 1500.5 | 1479.6 | 1433.2 | 1398.4 | 1386.8 |
| 35°    | 1451.8 | 1428.6 | 1375.2 | 1340.5 | 1328.9 |
| 37.5°  | 1396.1 | 1370.6 | 1314.9 | 1277.8 | 1266.2 |
| 40°    | 1338.1 | 1312.6 | 1252.3 | 1215.2 | 1201.3 |
| 42.5°  | 1273.2 | 1247.7 | 1187.4 | 1148.0 | 1134.0 |
| 45°    | 1205.9 | 1180.4 | 1120.1 | 1080.7 | 1069.1 |
| 47.5°  | 1136.4 | 1106.2 | 1048.2 | 1011.1 | 999.5  |
| 50°    | 1064.5 | 1034.3 | 978.7  | 941.6  | 932.3  |
| 52.5°  | 990.3  | 960.1  | 906.8  | 869.7  | 862.7  |
| 55°    | 911.4  | 885.9  | 834.9  | 800.1  | 793.1  |
| 57.5°  | 837.2  | 809.4  | 756.0  | 730.5  | 723.6  |
| 60°    | 753.7  | 730.5  | 681.8  | 658.6  | 651.7  |
| 62.5°  | 677.2  | 654.0  | 605.3  | 579.8  | 577.5  |
| 65°    | 591.4  | 570.5  | 528.8  | 510.2  | 507.9  |
| 67.5°  | 517.2  | 494.0  | 459.2  | 440.6  | 440.6  |
| 70°    | 438.3  | 417.4  | 385.0  | 373.4  | 373.4  |
| 72.5°  | 359.5  | 345.5  | 317.7  | 306.1  | 308.4  |
| 75°    | 287.6  | 273.7  | 250.5  | 241.2  | 243.5  |
| 77.5°  | 220.3  | 204.1  | 190.2  | 183.2  | 185.5  |
| 80°    | 155.4  | 143.8  | 132.2  | 129.9  | 132.2  |
| 82.5°  | 92.8   | 85.8   | 83.5   | 83.5   | 83.5   |
| 85°    | 39.4   | 39.4   | 41.7   | 41.7   | 39.4   |
| 87.5°  | 16.2   | 13.9   | 13.9   | 16.2   | 16.2   |
| 90°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 100°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 102.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 105°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 115°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 117.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 120°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 122.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 125°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 127.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 130°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 132.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 135°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 137.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 140°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 142.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 145°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 147.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 150°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 152.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 155°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 157.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 160°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 162.5° | 2.3 | 0.0   | 2.3 | 2.3   | 2.3 |
| 165°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 167.5° | 0.0 | 0.0   | 0.0 | 2.3   | 0.0 |
| 170°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 172.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 175°   | 0.0 | 0.0   | 0.0 | 0.0   | 2.3 |
| 177.5° | 0.0 | 0.0   | 2.3 | 2.3   | 2.3 |
| 180°   | 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 | 14.82            | 16.42 | 15.18 | 16.73 | 17.05 | 14.05          | 15.65 | 14.41 | 15.96 | 16.28 |
|                 | 3H   | 16.44            | 17.88 | 16.82 | 18.21 | 18.57 | 15.60          | 17.04 | 15.98 | 17.37 | 17.73 |
|                 | 4H   | 16.99            | 18.35 | 17.39 | 18.70 | 19.07 | 16.12          | 17.48 | 16.52 | 17.83 | 18.20 |
|                 | 6H   | 17.34            | 18.60 | 17.75 | 18.96 | 19.36 | 16.45          | 17.71 | 16.86 | 18.07 | 18.46 |
|                 | 8H   | 17.42            | 18.62 | 17.85 | 19.01 | 19.41 | 16.53          | 17.73 | 16.96 | 18.12 | 18.52 |
|                 | 12H  | 17.44            | 18.59 | 17.87 | 18.97 | 19.40 | 16.56          | 17.71 | 16.99 | 18.09 | 18.52 |
| 4H              | 2H   | 15.28            | 16.64 | 15.68 | 16.98 | 17.36 | 14.65          | 16.01 | 15.05 | 16.36 | 16.74 |
|                 | 3H   | 17.11            | 18.24 | 17.52 | 18.64 | 19.04 | 16.40          | 17.54 | 16.81 | 17.93 | 18.33 |
|                 | 4H   | 17.78            | 18.80 | 18.21 | 19.21 | 19.65 | 17.03          | 18.05 | 17.46 | 18.46 | 18.90 |
|                 | 6H   | 18.24            | 19.13 | 18.69 | 19.57 | 20.02 | 17.45          | 18.34 | 17.91 | 18.78 | 19.24 |
|                 | 8H   | 18.34            | 19.18 | 18.81 | 19.62 | 20.08 | 17.56          | 18.40 | 18.03 | 18.84 | 19.30 |
|                 | 12H  | 18.39            | 19.13 | 18.87 | 19.61 | 20.08 | 17.62          | 18.36 | 18.10 | 18.84 | 19.31 |
| 8H              | 4H   | 17.97            | 18.80 | 18.43 | 19.24 | 19.71 | 17.28          | 18.12 | 17.75 | 18.56 | 19.02 |
|                 | 6H   | 18.50            | 19.19 | 19.00 | 19.68 | 20.15 | 17.80          | 18.48 | 18.29 | 18.97 | 19.45 |
|                 | 8H   | 18.65            | 19.27 | 19.16 | 19.77 | 20.26 | 17.95          | 18.57 | 18.46 | 19.07 | 19.56 |
|                 | 12H  | 18.72            | 19.27 | 19.23 | 19.76 | 20.32 | 18.04          | 18.59 | 18.55 | 19.08 | 19.64 |
| 12H             | 4H   | 17.97            | 18.72 | 18.45 | 19.19 | 19.66 | 17.30          | 18.05 | 17.78 | 18.52 | 18.99 |
|                 | 6H   | 18.51            | 19.13 | 19.02 | 19.64 | 20.12 | 17.82          | 18.44 | 18.33 | 18.95 | 19.43 |
|                 | 8H   | 18.70            | 19.24 | 19.20 | 19.73 | 20.29 | 18.02          | 18.56 | 18.53 | 19.05 | 19.62 |

END OF REPORT