

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P147881

Luminaire Tested: **TLM-E05-LED-E1-5WQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P147881
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33675)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-E05-LED-E1-5WQ-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE
Light Source: (105) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

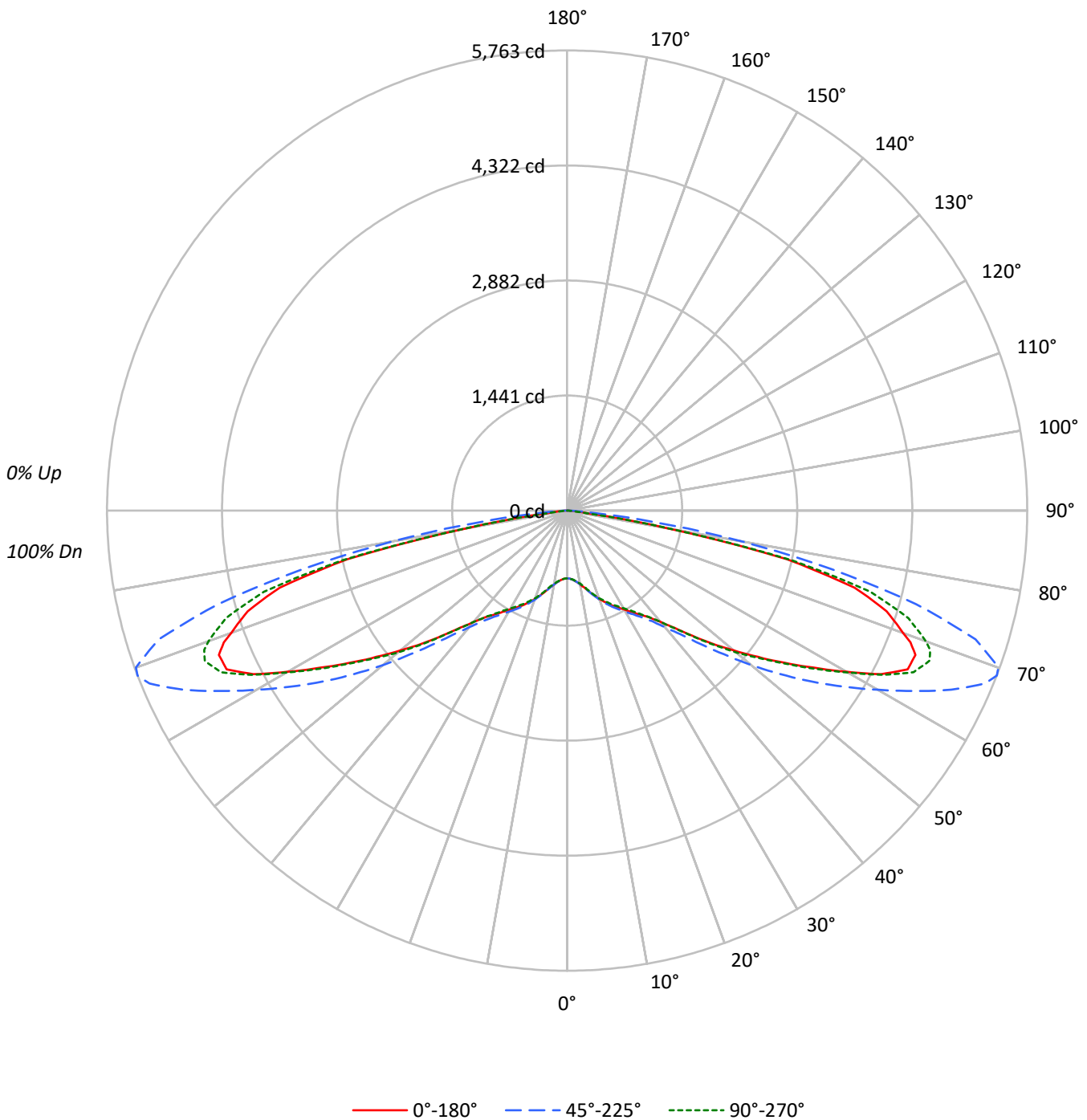
Lumens per Lamp: N/A
Luminaire Lumens: 16334.6 lumens
Efficiency: N/A
Efficacy: 128.3 lumens/watt
Spacing Criteria (0/90/45): 3.9 / 3.92 / 3.98
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 127.3
Input Voltage (V): NR
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: 25 FT



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CATALOG NUMBER: TLM-E05-LED-E1-5WQ-7050

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 103 | 96 | 90 | 84 | 100 | 94 | 88 | 82 | 89 | 84 | 80 | 85 | 81 | 77 | 81 | 78 | 75 | 72 |
| 2 | 89 | 77 | 67 | 58 | 86 | 75 | 65 | 58 | 71 | 63 | 56 | 67 | 60 | 55 | 64 | 58 | 53 | 51 |
| 3 | 78 | 63 | 51 | 42 | 75 | 61 | 50 | 42 | 58 | 48 | 41 | 54 | 46 | 40 | 52 | 45 | 39 | 36 |
| 4 | 69 | 52 | 41 | 31 | 66 | 51 | 40 | 31 | 48 | 38 | 31 | 45 | 37 | 30 | 43 | 36 | 29 | 27 |
| 5 | 62 | 45 | 33 | 24 | 59 | 44 | 32 | 24 | 41 | 31 | 24 | 39 | 30 | 23 | 37 | 29 | 23 | 20 |
| 6 | 56 | 39 | 28 | 19 | 54 | 38 | 27 | 19 | 36 | 26 | 19 | 34 | 25 | 19 | 32 | 24 | 18 | 16 |
| 7 | 51 | 34 | 24 | 16 | 49 | 34 | 23 | 16 | 32 | 22 | 16 | 30 | 22 | 15 | 29 | 21 | 15 | 13 |
| 8 | 47 | 31 | 20 | 13 | 45 | 30 | 20 | 13 | 29 | 20 | 13 | 27 | 19 | 13 | 26 | 18 | 13 | 10 |
| 9 | 44 | 28 | 18 | 11 | 42 | 27 | 18 | 11 | 26 | 17 | 11 | 25 | 17 | 11 | 23 | 16 | 11 | 9 |
| 10 | 41 | 25 | 16 | 10 | 39 | 25 | 16 | 10 | 24 | 15 | 10 | 23 | 15 | 10 | 22 | 15 | 10 | 7 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 11000 | 11000 | 11000 |
| 5° | 11354 | 11354 | 11310 |
| 10° | 12364 | 12342 | 12228 |
| 15° | 14029 | 14097 | 13892 |
| 20° | 16238 | 16380 | 16096 |
| 25° | 18696 | 18990 | 18427 |
| 30° | 21409 | 21896 | 21153 |
| 35° | 25180 | 25856 | 24963 |
| 40° | 30776 | 32194 | 30776 |
| 45° | 40650 | 43283 | 40805 |
| 50° | 54964 | 60658 | 55723 |
| 55° | 75131 | 84410 | 75556 |
| 60° | 104682 | 116393 | 105082 |
| 65° | 144370 | 162947 | 146889 |
| 70° | 169636 | 217946 | 181178 |
| 75° | 186637 | 226568 | 197005 |
| 80° | 94384 | 165147 | 97192 |
| 85° | 12216 | 44788 | 9419 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 85.2 | 0.5 |
| 10°-20° | 300.8 | 1.8 |
| 20°-30° | 609.0 | 3.7 |
| 30°-40° | 1021.1 | 6.3 |
| 40°-50° | 1801.1 | 11.0 |
| 50°-60° | 3176.2 | 19.4 |
| 60°-70° | 4849.1 | 29.7 |
| 70°-80° | 4051.9 | 24.8 |
| 80°-90° | 440.3 | 2.7 |
| 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° | 995.0 | 6.1 |
| 0°-40° | 2016.0 | 12.3 |
| 0°-60° | 6993.3 | 42.8 |
| 0°-90° | 16334.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 16334.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 848 | 848 | 848 | 848 | 848 | |
| 5° | 872 | 874 | 872 | 870 | 869 | 85 |
| 15° | 1045 | 1050 | 1050 | 1041 | 1035 | 301 |
| 25° | 1307 | 1313 | 1327 | 1304 | 1288 | 607 |
| 35° | 1590 | 1601 | 1633 | 1598 | 1577 | 1010 |
| 45° | 2216 | 2267 | 2360 | 2287 | 2225 | 1741 |
| 55° | 3323 | 3480 | 3733 | 3508 | 3342 | 3011 |
| 65° | 4705 | 4959 | 5310 | 4998 | 4787 | 4503 |
| 75° | 3725 | 3934 | 4522 | 4186 | 3932 | 3587 |
| 85° | 82 | 137 | 301 | 119 | 63 | 270 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P147881

CATALOG NUMBER: TLM-E05-LED-E1-5WQ-7050

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 |
| 2.5° | 855.1 | 856.8 | 855.1 | 855.1 | 855.1 | 855.1 | 855.1 | 853.4 | 853.4 | 853.4 | 855.1 |
| 5° | 872.2 | 873.9 | 872.2 | 873.9 | 873.9 | 873.9 | 873.9 | 872.2 | 872.2 | 872.2 | 872.2 |
| 7.5° | 899.6 | 899.6 | 899.6 | 901.3 | 899.6 | 899.6 | 901.3 | 899.6 | 899.6 | 899.6 | 899.6 |
| 10° | 938.9 | 937.2 | 937.2 | 937.2 | 937.2 | 937.2 | 938.9 | 938.9 | 938.9 | 937.2 | 937.2 |
| 12.5° | 986.8 | 985.1 | 986.8 | 986.8 | 988.5 | 988.5 | 988.5 | 988.5 | 988.5 | 988.5 | 986.8 |
| 15° | 1044.9 | 1044.9 | 1044.9 | 1046.6 | 1050.0 | 1050.0 | 1048.3 | 1050.0 | 1050.0 | 1050.0 | 1050.0 |
| 17.5° | 1109.9 | 1113.3 | 1109.9 | 1111.6 | 1113.3 | 1111.6 | 1115.0 | 1116.7 | 1118.5 | 1116.7 | 1111.6 |
| 20° | 1176.6 | 1178.3 | 1178.3 | 1178.3 | 1178.3 | 1181.7 | 1183.4 | 1183.4 | 1188.6 | 1186.9 | 1185.2 |
| 22.5° | 1239.9 | 1243.3 | 1243.3 | 1245.0 | 1245.0 | 1250.1 | 1250.1 | 1250.1 | 1253.6 | 1257.0 | 1253.6 |
| 25° | 1306.6 | 1304.9 | 1304.9 | 1308.3 | 1310.0 | 1316.8 | 1316.8 | 1320.3 | 1325.4 | 1327.1 | 1323.7 |
| 27.5° | 1366.4 | 1364.7 | 1364.7 | 1369.9 | 1371.6 | 1380.1 | 1380.1 | 1387.0 | 1390.4 | 1392.1 | 1388.7 |
| 30° | 1429.7 | 1429.7 | 1428.0 | 1433.1 | 1438.3 | 1445.1 | 1448.5 | 1455.4 | 1460.5 | 1462.2 | 1458.8 |
| 32.5° | 1505.0 | 1501.5 | 1503.2 | 1506.7 | 1510.1 | 1516.9 | 1522.1 | 1530.6 | 1537.4 | 1539.2 | 1535.7 |
| 35° | 1590.5 | 1585.3 | 1587.0 | 1590.5 | 1595.6 | 1605.9 | 1614.4 | 1619.5 | 1629.8 | 1633.2 | 1626.4 |
| 37.5° | 1684.5 | 1686.2 | 1684.5 | 1693.1 | 1701.6 | 1713.6 | 1723.9 | 1730.7 | 1741.0 | 1746.1 | 1741.0 |
| 40° | 1817.9 | 1812.8 | 1817.9 | 1826.5 | 1840.1 | 1855.5 | 1876.1 | 1881.2 | 1891.5 | 1901.7 | 1889.7 |
| 42.5° | 1990.6 | 1987.2 | 1999.2 | 2006.0 | 2021.4 | 2038.5 | 2064.2 | 2077.9 | 2093.3 | 2100.1 | 2089.8 |
| 45° | 2216.4 | 2216.4 | 2230.1 | 2231.8 | 2255.7 | 2278.0 | 2313.9 | 2331.0 | 2360.0 | 2360.0 | 2360.0 |
| 47.5° | 2466.1 | 2476.3 | 2484.9 | 2502.0 | 2519.1 | 2560.1 | 2596.0 | 2633.7 | 2661.0 | 2664.5 | 2659.3 |
| 50° | 2724.3 | 2734.6 | 2760.2 | 2784.2 | 2821.8 | 2873.1 | 2912.4 | 2962.0 | 2986.0 | 3006.5 | 2999.6 |
| 52.5° | 3009.9 | 3011.6 | 3042.4 | 3073.2 | 3127.9 | 3184.3 | 3247.6 | 3298.9 | 3341.7 | 3360.5 | 3345.1 |
| 55° | 3322.9 | 3326.3 | 3353.7 | 3386.1 | 3447.7 | 3512.7 | 3591.4 | 3644.4 | 3699.1 | 3733.3 | 3707.7 |
| 57.5° | 3661.5 | 3663.2 | 3690.6 | 3729.9 | 3803.4 | 3868.4 | 3943.7 | 4018.9 | 4070.2 | 4101.0 | 4083.9 |
| 60° | 4036.0 | 4044.6 | 4065.1 | 4114.7 | 4184.8 | 4253.2 | 4328.5 | 4395.2 | 4455.0 | 4487.5 | 4470.4 |
| 62.5° | 4436.2 | 4444.7 | 4473.8 | 4513.2 | 4574.7 | 4650.0 | 4721.8 | 4807.3 | 4856.9 | 4892.8 | 4867.2 |
| 65° | 4704.7 | 4720.1 | 4766.3 | 4819.3 | 4909.9 | 5007.4 | 5091.2 | 5207.5 | 5267.3 | 5310.1 | 5286.2 |
| 67.5° | 4721.8 | 4730.3 | 4786.8 | 4867.2 | 4988.6 | 5135.7 | 5306.7 | 5488.0 | 5606.0 | 5662.4 | 5621.3 |
| 69° | 4605.5 | 4617.5 | 4672.2 | 4762.8 | 4897.9 | 5069.0 | 5272.5 | 5498.2 | 5679.5 | 5763.3 | 5724.0 |
| 70° | 4473.8 | 4499.5 | 4559.3 | 4658.5 | 4790.2 | 4969.8 | 5180.1 | 5421.3 | 5633.3 | 5747.9 | 5718.8 |
| 72.5° | 4196.8 | 4203.6 | 4242.9 | 4321.6 | 4422.5 | 4571.3 | 4769.7 | 4997.1 | 5198.9 | 5363.1 | 5387.1 |
| 75° | 3724.8 | 3747.0 | 3776.1 | 3829.1 | 3880.4 | 3988.1 | 4121.5 | 4277.1 | 4395.2 | 4521.7 | 4526.8 |
| 77.5° | 2814.9 | 2881.6 | 2903.9 | 2915.8 | 2938.1 | 3023.6 | 3139.9 | 3275.0 | 3372.5 | 3393.0 | 3389.6 |
| 80° | 1263.8 | 1352.7 | 1373.3 | 1470.8 | 1530.6 | 1672.6 | 1850.4 | 2057.3 | 2195.9 | 2211.3 | 2173.6 |
| 82.5° | 248.0 | 265.1 | 309.5 | 386.5 | 526.7 | 610.5 | 726.8 | 872.2 | 1005.6 | 1082.5 | 1036.4 |
| 85° | 82.1 | 87.2 | 100.9 | 111.2 | 128.3 | 145.4 | 176.1 | 218.9 | 271.9 | 301.0 | 268.5 |
| 87.5° | 32.5 | 32.5 | 37.6 | 41.0 | 44.5 | 44.5 | 44.5 | 41.0 | 39.3 | 32.5 | 29.1 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 | 848.2 |
| 2.5° | 853.4 | 853.4 | 853.4 | 853.4 | 853.4 | 853.4 | 853.4 | 853.4 |
| 5° | 872.2 | 870.5 | 870.5 | 868.8 | 868.8 | 868.8 | 868.8 | 868.8 |
| 7.5° | 897.8 | 896.1 | 894.4 | 896.1 | 894.4 | 894.4 | 894.4 | 894.4 |
| 10° | 937.2 | 933.8 | 932.0 | 930.3 | 930.3 | 930.3 | 928.6 | 928.6 |
| 12.5° | 983.4 | 983.4 | 981.6 | 979.9 | 976.5 | 978.2 | 976.5 | 973.1 |
| 15° | 1046.6 | 1043.2 | 1041.5 | 1039.8 | 1036.4 | 1036.4 | 1036.4 | 1034.7 |
| 17.5° | 1109.9 | 1106.5 | 1106.5 | 1101.4 | 1099.6 | 1099.6 | 1099.6 | 1101.4 |
| 20° | 1180.0 | 1174.9 | 1171.5 | 1168.1 | 1164.6 | 1166.3 | 1162.9 | 1166.3 |
| 22.5° | 1250.1 | 1243.3 | 1239.9 | 1234.7 | 1229.6 | 1229.6 | 1227.9 | 1224.5 |
| 25° | 1318.5 | 1310.0 | 1306.6 | 1301.4 | 1294.6 | 1294.6 | 1291.2 | 1287.8 |
| 27.5° | 1383.5 | 1375.0 | 1371.6 | 1361.3 | 1354.5 | 1352.7 | 1349.3 | 1347.6 |
| 30° | 1455.4 | 1445.1 | 1440.0 | 1429.7 | 1419.4 | 1417.7 | 1412.6 | 1412.6 |
| 32.5° | 1530.6 | 1520.3 | 1516.9 | 1501.5 | 1493.0 | 1493.0 | 1489.6 | 1486.1 |
| 35° | 1624.7 | 1609.3 | 1605.9 | 1590.5 | 1578.5 | 1578.5 | 1575.1 | 1576.8 |
| 37.5° | 1735.8 | 1723.9 | 1711.9 | 1699.9 | 1686.2 | 1684.5 | 1681.1 | 1677.7 |
| 40° | 1884.6 | 1870.9 | 1857.3 | 1840.1 | 1828.2 | 1824.8 | 1819.6 | 1817.9 |
| 42.5° | 2083.0 | 2069.3 | 2041.9 | 2028.3 | 2016.3 | 2006.0 | 2004.3 | 2002.6 |
| 45° | 2336.1 | 2319.0 | 2300.2 | 2274.5 | 2259.1 | 2236.9 | 2233.5 | 2224.9 |
| 47.5° | 2640.5 | 2608.0 | 2575.5 | 2553.3 | 2529.3 | 2503.7 | 2498.6 | 2484.9 |
| 50° | 2963.7 | 2938.1 | 2883.4 | 2847.4 | 2809.8 | 2784.2 | 2767.1 | 2761.9 |
| 52.5° | 3310.9 | 3263.0 | 3208.3 | 3160.4 | 3105.7 | 3071.5 | 3040.7 | 3032.1 |
| 55° | 3673.5 | 3605.1 | 3536.6 | 3480.2 | 3425.5 | 3384.4 | 3355.4 | 3341.7 |
| 57.5° | 4036.0 | 3960.8 | 3885.5 | 3824.0 | 3777.8 | 3724.8 | 3695.7 | 3688.8 |
| 60° | 4414.0 | 4342.1 | 4265.2 | 4203.6 | 4147.2 | 4101.0 | 4083.9 | 4051.4 |
| 62.5° | 4814.1 | 4738.9 | 4667.1 | 4607.2 | 4535.4 | 4502.9 | 4473.8 | 4455.0 |
| 65° | 5207.5 | 5120.3 | 5029.6 | 4966.4 | 4894.5 | 4848.3 | 4812.4 | 4786.8 |
| 67.5° | 5511.9 | 5380.2 | 5258.8 | 5152.8 | 5055.3 | 4983.5 | 4937.3 | 4913.3 |
| 69° | 5597.4 | 5433.2 | 5277.6 | 5139.1 | 5024.5 | 4944.1 | 4892.8 | 4868.9 |
| 70° | 5587.1 | 5405.9 | 5234.8 | 5082.6 | 4957.8 | 4872.3 | 4822.7 | 4778.2 |
| 72.5° | 5270.8 | 5104.9 | 4915.0 | 4749.2 | 4636.3 | 4554.2 | 4504.6 | 4480.7 |
| 75° | 4497.8 | 4386.6 | 4249.8 | 4121.5 | 4039.4 | 3991.6 | 3930.0 | 3931.7 |
| 77.5° | 3275.0 | 3278.4 | 3186.1 | 3054.4 | 2962.0 | 2944.9 | 2917.6 | 2890.2 |
| 80° | 2031.7 | 1869.2 | 1763.2 | 1621.2 | 1516.9 | 1426.3 | 1387.0 | 1301.4 |
| 82.5° | 937.2 | 732.0 | 567.8 | 429.3 | 330.1 | 258.2 | 225.7 | 184.7 |
| 85° | 208.6 | 159.0 | 131.7 | 106.0 | 90.6 | 83.8 | 68.4 | 63.3 |
| 87.5° | 29.1 | 25.7 | 23.9 | 22.2 | 18.8 | 13.7 | 10.3 | 8.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)