

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P#

Luminaire Tested: **LD4C80D010 EX4C809050 4LBCSSQMMS**

Issue Date: 5/25/2022



Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209253)
Test Lab: INNOVATION CENTER
Issue Date: 5/25/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C80D010 EX4C809050 4LBCSSQMMS
Description: 4 INCH 8000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBCSSQ TRIM WITH MMS FINISH
Light Source: -
Ballast/Driver: -

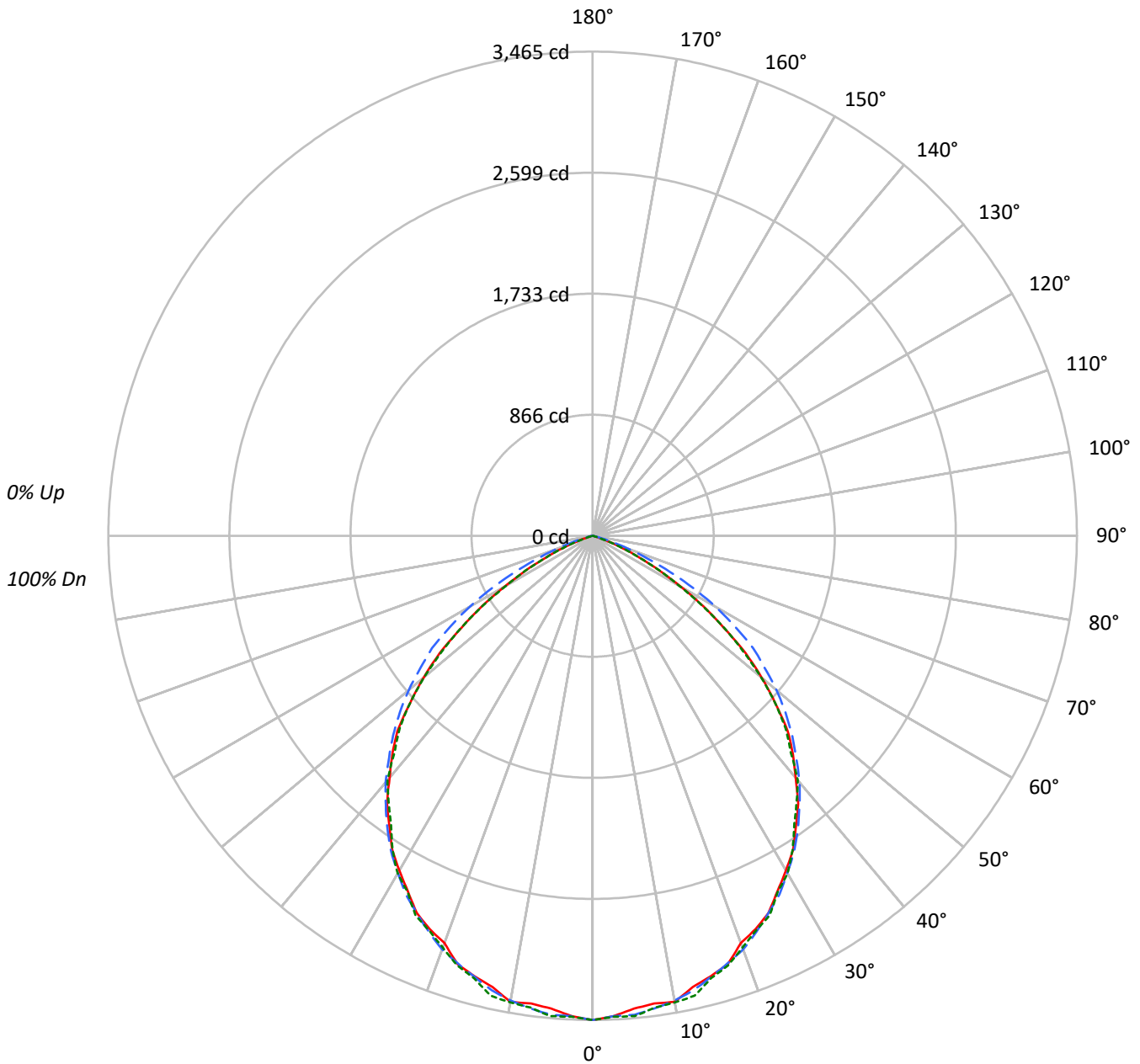
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7402.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 89.5
Input Voltage (V):
Input Current (A_{in}): 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

TEST NUMBER: P#
CATALOG NUMBER: LD4C80D010 EX4C809050 4LBCSSQMMS

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C80D010 EX4C809050 4LBCSSQMMS

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 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 96 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | 89 | | | |
| 2 | 103 | 96 | 91 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 86 | 79 | 74 | 93 | 85 | 78 | 73 | 82 | 76 | 72 | 79 | 74 | 71 | 77 | 73 | 69 | 67 | | | | | 67 | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 63 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | 59 | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 49 | 44 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 39 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 33 | | | | | 33 | | | |
| 10 | 57 | 45 | 38 | 33 | 56 | 44 | 37 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 31 | | | | | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 334344 | 334344 | 334344 |
| 5° | 328947 | 333228 | 334178 |
| 10° | 331791 | 330821 | 332261 |
| 15° | 325980 | 326459 | 327438 |
| 20° | 318394 | 323446 | 321947 |
| 25° | 317017 | 317017 | 319114 |
| 30° | 308187 | 310371 | 310939 |
| 35° | 298565 | 301475 | 296245 |
| 40° | 284563 | 290130 | 287649 |
| 45° | 269309 | 275368 | 266635 |
| 50° | 237174 | 257859 | 235703 |
| 55° | 192094 | 235967 | 192935 |
| 60° | 140565 | 195660 | 137728 |
| 65° | 85412 | 139339 | 83174 |
| 70° | 33318 | 75014 | 31964 |
| 75° | 3653 | 20206 | 3653 |
| 80° | 2778 | 2778 | 2778 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 327.1 | 4.4 |
| 10°-20° | 925.5 | 12.5 |
| 20°-30° | 1373.3 | 18.6 |
| 30°-40° | 1591.2 | 21.5 |
| 40°-50° | 1525.6 | 20.6 |
| 50°-60° | 1121.7 | 15.2 |
| 60°-70° | 484.5 | 6.5 |
| 70°-80° | 52.3 | 0.7 |
| 80°-90° | 0.7 | 0.0 |
| 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° | 2625.9 | 35.5 |
| 0°-40° | 4217.1 | 57.0 |
| 0°-60° | 6864.5 | 92.7 |
| 0°-90° | 7402.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 7402.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3465 | 3465 | 3465 | 3465 | 3465 | |
| 5° | 3396 | 3431 | 3440 | 3445 | 3450 | 324 |
| 15° | 3263 | 3283 | 3268 | 3273 | 3278 | 920 |
| 25° | 2978 | 2973 | 2978 | 2983 | 2997 | 1363 |
| 35° | 2535 | 2550 | 2559 | 2554 | 2515 | 1585 |
| 45° | 1974 | 1979 | 2018 | 1988 | 1954 | 1500 |
| 55° | 1142 | 1260 | 1403 | 1255 | 1147 | 1028 |
| 65° | 374 | 468 | 610 | 463 | 364 | 385 |
| 75° | 10 | 15 | 54 | 10 | 10 | 30 |
| 85° | 0 | 0 | 0 | 0 | 0 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P#

CATALOG NUMBER: LD4C80D010 EX4C809050 4LBCSSQMMS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 |
| 2.5° | 3440.4 | 3479.8 | 3484.8 | 3460.1 | 3450.2 | 3435.6 | 3469.9 | 3445.4 | 3455.3 | 3445.4 | 3440.4 |
| 5° | 3396.2 | 3440.4 | 3445.4 | 3445.4 | 3435.6 | 3430.6 | 3445.4 | 3440.4 | 3435.6 | 3425.7 | 3440.4 |
| 7.5° | 3376.5 | 3401.0 | 3425.7 | 3396.2 | 3410.9 | 3406.1 | 3440.4 | 3425.7 | 3420.7 | 3420.7 | 3410.9 |
| 10° | 3386.4 | 3381.4 | 3401.0 | 3371.5 | 3381.4 | 3371.5 | 3401.0 | 3401.0 | 3391.2 | 3381.4 | 3376.5 |
| 12.5° | 3307.5 | 3346.8 | 3346.8 | 3342.0 | 3332.2 | 3317.3 | 3346.8 | 3366.7 | 3337.0 | 3337.0 | 3332.2 |
| 15° | 3263.3 | 3273.1 | 3277.9 | 3277.9 | 3273.1 | 3283.0 | 3297.6 | 3277.9 | 3283.0 | 3258.3 | 3268.1 |
| 17.5° | 3214.1 | 3194.4 | 3209.1 | 3199.2 | 3204.2 | 3214.1 | 3233.8 | 3233.8 | 3204.2 | 3199.2 | 3209.1 |
| 20° | 3100.8 | 3159.9 | 3164.9 | 3135.4 | 3140.2 | 3140.2 | 3174.7 | 3145.2 | 3164.9 | 3140.2 | 3150.0 |
| 22.5° | 3046.6 | 3086.0 | 3091.0 | 3051.6 | 3076.1 | 3046.6 | 3081.1 | 3036.8 | 3086.0 | 3051.6 | 3066.3 |
| 25° | 2977.7 | 2972.9 | 2987.6 | 2967.9 | 2972.9 | 2972.9 | 2997.4 | 2977.7 | 2992.6 | 2972.9 | 2977.7 |
| 27.5° | 2864.7 | 2904.0 | 2899.0 | 2879.3 | 2889.2 | 2884.3 | 2933.5 | 2879.3 | 2908.8 | 2884.3 | 2894.2 |
| 30° | 2766.1 | 2800.6 | 2790.8 | 2771.1 | 2771.1 | 2756.2 | 2810.4 | 2795.6 | 2790.8 | 2790.8 | 2785.7 |
| 32.5° | 2667.7 | 2672.7 | 2662.8 | 2667.7 | 2672.7 | 2653.0 | 2697.2 | 2677.5 | 2672.7 | 2677.5 | 2682.5 |
| 35° | 2534.7 | 2534.7 | 2544.6 | 2529.9 | 2549.6 | 2549.6 | 2588.9 | 2564.2 | 2559.4 | 2544.6 | 2559.4 |
| 37.5° | 2416.6 | 2402.0 | 2406.8 | 2406.8 | 2416.6 | 2426.5 | 2446.2 | 2436.3 | 2436.3 | 2421.7 | 2431.5 |
| 40° | 2259.2 | 2249.4 | 2264.0 | 2264.0 | 2278.9 | 2278.9 | 2298.6 | 2288.7 | 2303.4 | 2303.4 | 2303.4 |
| 42.5° | 2121.4 | 2121.4 | 2111.6 | 2126.3 | 2131.3 | 2126.3 | 2160.8 | 2155.8 | 2160.8 | 2151.0 | 2155.8 |
| 45° | 1973.6 | 1973.6 | 1963.8 | 1959.0 | 1983.5 | 1978.7 | 2018.0 | 2003.2 | 2022.8 | 2013.0 | 2018.0 |
| 47.5° | 1771.8 | 1796.5 | 1781.7 | 1796.5 | 1826.0 | 1831.1 | 1855.6 | 1845.7 | 1865.4 | 1850.7 | 1870.4 |
| 50° | 1580.0 | 1580.0 | 1594.7 | 1614.4 | 1643.9 | 1648.9 | 1678.4 | 1698.1 | 1708.0 | 1712.8 | 1717.8 |
| 52.5° | 1378.2 | 1373.2 | 1388.0 | 1412.6 | 1437.2 | 1456.9 | 1486.5 | 1516.0 | 1535.7 | 1565.2 | 1550.3 |
| 55° | 1141.9 | 1151.7 | 1166.5 | 1196.1 | 1235.4 | 1259.9 | 1284.6 | 1324.0 | 1358.5 | 1373.2 | 1402.7 |
| 57.5° | 940.0 | 930.2 | 940.0 | 979.4 | 1023.8 | 1043.4 | 1078.0 | 1117.3 | 1166.5 | 1196.1 | 1205.9 |
| 60° | 728.4 | 733.4 | 743.2 | 777.8 | 812.1 | 841.6 | 856.5 | 920.3 | 964.7 | 994.2 | 1013.9 |
| 62.5° | 536.6 | 546.4 | 556.3 | 585.8 | 620.1 | 644.8 | 669.3 | 723.5 | 762.9 | 792.4 | 812.1 |
| 65° | 374.1 | 378.9 | 393.8 | 408.5 | 443.0 | 467.5 | 487.2 | 531.6 | 570.9 | 595.6 | 610.3 |
| 67.5° | 231.3 | 236.2 | 246.0 | 265.9 | 290.4 | 310.1 | 329.7 | 359.3 | 393.8 | 418.3 | 423.3 |
| 70° | 118.1 | 123.1 | 127.9 | 142.8 | 162.5 | 172.3 | 187.0 | 211.7 | 236.2 | 255.8 | 265.9 |
| 72.5° | 39.4 | 39.4 | 44.4 | 54.2 | 64.1 | 73.9 | 78.7 | 103.4 | 123.1 | 132.9 | 137.8 |
| 75° | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 14.9 | 14.9 | 29.5 | 39.4 | 49.2 | 54.2 |
| 77.5° | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 9.8 | 9.8 |
| 80° | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P#

CATALOG NUMBER: LD4C80D010 EX4C809050 4LBCSSQMMS

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 | 3465.1 |
| 2.5° | 3465.1 | 3455.3 | 3450.2 | 3455.3 | 3455.3 | 3450.2 | 3465.1 | 3484.8 | 3509.3 | 3445.4 |
| 5° | 3460.1 | 3450.2 | 3460.1 | 3430.6 | 3445.4 | 3435.6 | 3455.3 | 3450.2 | 3469.9 | 3450.2 |
| 7.5° | 3445.4 | 3425.7 | 3430.6 | 3415.9 | 3435.6 | 3410.9 | 3425.7 | 3455.3 | 3435.6 | 3406.1 |
| 10° | 3396.2 | 3386.4 | 3420.7 | 3371.5 | 3361.7 | 3381.4 | 3420.7 | 3391.2 | 3381.4 | 3391.2 |
| 12.5° | 3346.8 | 3346.8 | 3361.7 | 3322.3 | 3327.1 | 3337.0 | 3356.7 | 3337.0 | 3346.8 | 3371.5 |
| 15° | 3292.8 | 3283.0 | 3307.5 | 3277.9 | 3273.1 | 3263.3 | 3283.0 | 3283.0 | 3292.8 | 3277.9 |
| 17.5° | 3228.7 | 3214.1 | 3214.1 | 3204.2 | 3199.2 | 3223.9 | 3233.8 | 3238.6 | 3243.6 | 3223.9 |
| 20° | 3150.0 | 3145.2 | 3159.9 | 3145.2 | 3150.0 | 3155.0 | 3155.0 | 3145.2 | 3189.4 | 3135.4 |
| 22.5° | 3066.3 | 3081.1 | 3061.5 | 3051.6 | 3061.5 | 3071.3 | 3071.3 | 3076.1 | 3066.3 | 3056.4 |
| 25° | 2982.7 | 2992.6 | 2997.4 | 2967.9 | 2982.7 | 2967.9 | 3002.4 | 3007.2 | 2987.6 | 2997.4 |
| 27.5° | 2908.8 | 2894.2 | 2889.2 | 2869.5 | 2879.3 | 2874.5 | 2879.3 | 2879.3 | 2908.8 | 2869.5 |
| 30° | 2795.6 | 2780.9 | 2785.7 | 2771.1 | 2775.9 | 2771.1 | 2775.9 | 2775.9 | 2795.6 | 2790.8 |
| 32.5° | 2687.3 | 2672.7 | 2677.5 | 2662.8 | 2662.8 | 2667.7 | 2657.8 | 2657.8 | 2672.7 | 2662.8 |
| 35° | 2583.9 | 2549.6 | 2554.4 | 2549.6 | 2554.4 | 2534.7 | 2534.7 | 2529.9 | 2539.7 | 2515.0 |
| 37.5° | 2436.3 | 2421.7 | 2416.6 | 2411.8 | 2416.6 | 2406.8 | 2416.6 | 2402.0 | 2416.6 | 2397.0 |
| 40° | 2303.4 | 2293.5 | 2298.6 | 2269.0 | 2269.0 | 2273.9 | 2264.0 | 2259.2 | 2264.0 | 2283.7 |
| 42.5° | 2170.6 | 2151.0 | 2141.1 | 2131.3 | 2136.1 | 2121.4 | 2116.4 | 2106.6 | 2116.4 | 2096.7 |
| 45° | 2013.0 | 2013.0 | 2008.2 | 1983.5 | 1988.5 | 1988.5 | 1968.8 | 1949.1 | 1954.0 | 1954.0 |
| 47.5° | 1870.4 | 1860.6 | 1855.6 | 1831.1 | 1826.0 | 1821.2 | 1801.3 | 1786.7 | 1786.7 | 1771.8 |
| 50° | 1712.8 | 1702.9 | 1688.3 | 1663.6 | 1653.7 | 1624.2 | 1609.5 | 1589.9 | 1570.2 | 1570.2 |
| 52.5° | 1565.2 | 1530.6 | 1511.0 | 1471.6 | 1456.9 | 1442.1 | 1402.7 | 1388.0 | 1373.2 | 1358.5 |
| 55° | 1388.0 | 1358.5 | 1319.2 | 1274.8 | 1255.1 | 1230.4 | 1191.1 | 1161.5 | 1141.9 | 1146.9 |
| 57.5° | 1215.7 | 1166.5 | 1127.2 | 1068.1 | 1043.4 | 1028.6 | 989.2 | 949.9 | 930.2 | 930.2 |
| 60° | 1004.1 | 964.7 | 915.5 | 861.3 | 841.6 | 817.1 | 767.7 | 743.2 | 728.4 | 713.7 |
| 62.5° | 802.3 | 772.7 | 728.4 | 659.5 | 644.8 | 620.1 | 585.8 | 556.3 | 541.4 | 541.4 |
| 65° | 600.4 | 570.9 | 531.6 | 482.4 | 462.7 | 443.0 | 413.5 | 384.0 | 369.1 | 364.3 |
| 67.5° | 423.3 | 388.8 | 354.4 | 315.1 | 300.2 | 290.4 | 260.9 | 241.2 | 231.3 | 226.3 |
| 70° | 255.8 | 236.2 | 211.7 | 182.1 | 167.3 | 157.4 | 137.8 | 123.1 | 118.1 | 113.3 |
| 72.5° | 132.9 | 118.1 | 98.4 | 78.7 | 68.9 | 59.0 | 49.2 | 39.4 | 34.5 | 34.5 |
| 75° | 49.2 | 39.4 | 24.7 | 14.9 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 |
| 77.5° | 9.8 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 80° | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)