

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: **LD4C35D010 EX4C359027 4LBSQLI**

Issue Date: 2/9/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P209151)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/9/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C35D010 EX4C359027 4LBSQLI  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBSQ TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

**Summary**

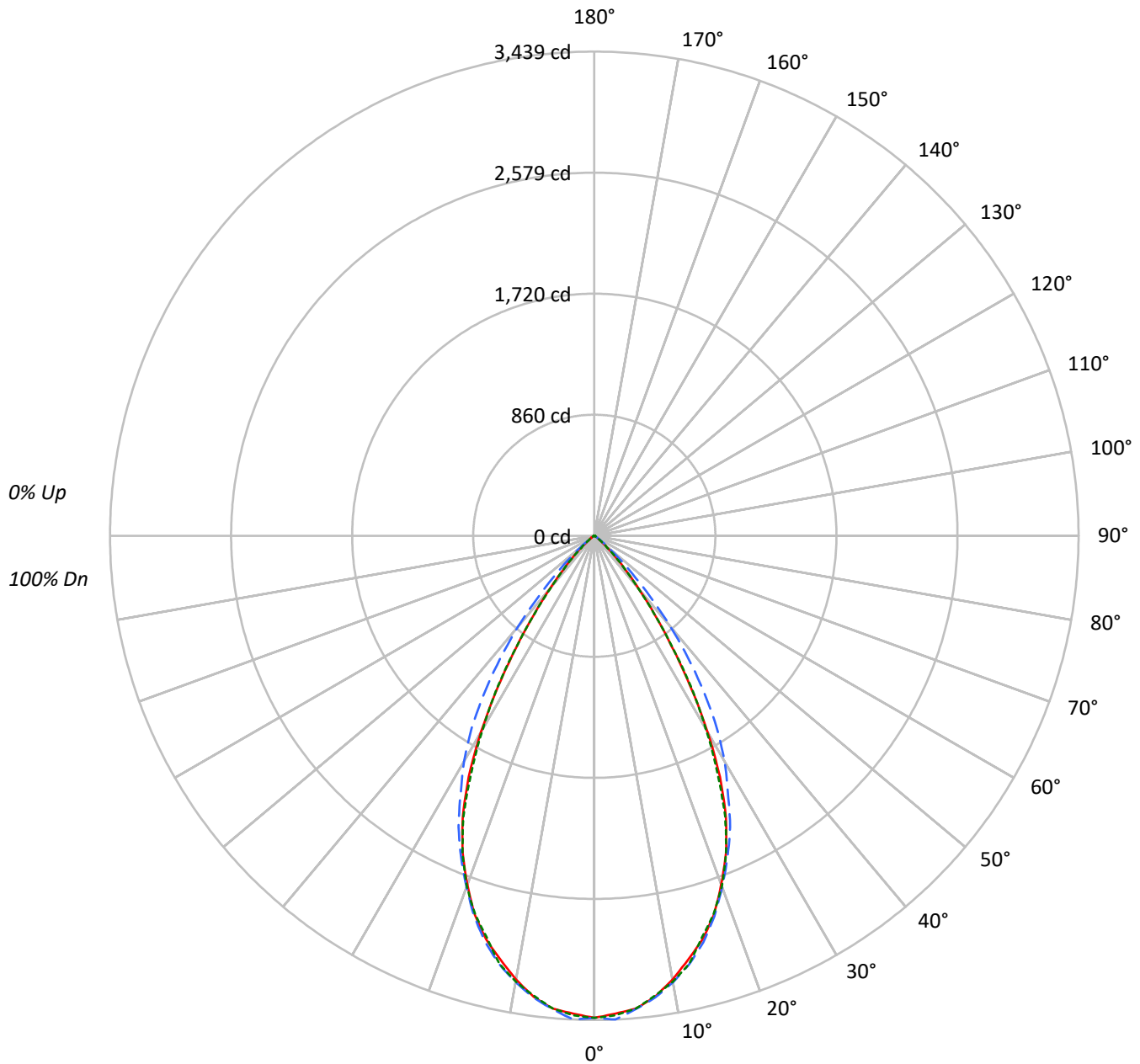
Lumens per Lamp: N/A  
Luminaire Lumens: 3161.0 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.4  
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: 25 FT

TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359027 4LBSQLI

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359027 4LBSQLI

**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   | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 |  | 101 | 99  | 98  |  | 97  |
| 2   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 94  | 98  | 95  | 92  |  | 95  | 92  | 90  |  | 92  |
| 3   | 102 | 96  | 91  | 87  | 100 | 94  | 90  | 86  | 92  | 88  | 84  |  | 89  | 86  | 83  |  | 87  |
| 4   | 97  | 89  | 84  | 79  | 95  | 88  | 83  | 79  | 86  | 81  | 78  |  | 84  | 80  | 77  |  | 82  |
| 5   | 92  | 83  | 77  | 73  | 90  | 82  | 77  | 73  | 81  | 76  | 72  |  | 79  | 75  | 71  |  | 77  |
| 6   | 87  | 78  | 72  | 68  | 86  | 77  | 71  | 67  | 76  | 71  | 67  |  | 74  | 70  | 66  |  | 73  |
| 7   | 83  | 73  | 67  | 63  | 81  | 73  | 67  | 63  | 71  | 66  | 62  |  | 70  | 65  | 62  |  | 69  |
| 8   | 79  | 69  | 63  | 59  | 77  | 68  | 62  | 58  | 67  | 62  | 58  |  | 66  | 61  | 58  |  | 65  |
| 9   | 75  | 65  | 59  | 55  | 74  | 64  | 59  | 55  | 63  | 58  | 55  |  | 63  | 58  | 54  |  | 62  |
| 10  | 71  | 61  | 55  | 51  | 70  | 61  | 55  | 51  | 60  | 55  | 51  |  | 59  | 54  | 51  |  | 58  |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 330368 | 330368 | 330368 |
| 5°  | 326574 | 326991 | 326574 |
| 10° | 313508 | 315428 | 315007 |
| 15° | 296391 | 298559 | 294863 |
| 20° | 270493 | 272496 | 271828 |
| 25° | 235530 | 242940 | 233901 |
| 30° | 179101 | 205997 | 176438 |
| 35° | 112738 | 160149 | 113763 |
| 40° | 60825  | 105766 | 59729  |
| 45° | 28792  | 52249  | 28492  |
| 50° | 10778  | 19589  | 10778  |
| 55° | 5114   | 6224   | 4761   |
| 60° | 3358   | 2953   | 3358   |
| 65° | 1986   | 1986   | 1986   |
| 70° | 1213   | 1862   | 1213   |
| 75° | 820    | 820    | 820    |
| 80° | 1222   | 1222   | 1222   |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 317.4  | 10.0      |
| 10°-20°   | 832.0  | 26.3      |
| 20°-30°   | 1016.3 | 32.2      |
| 30°-40°   | 710.8  | 22.5      |
| 40°-50°   | 233.0  | 7.4       |
| 50°-60°   | 37.0   | 1.2       |
| 60°-70°   | 10.1   | 0.3       |
| 70°-80°   | 3.4    | 0.1       |
| 80°-90°   | 0.9    | 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°    | 2165.7 | 68.5      |
| 0°-40°    | 2876.6 | 91.0      |
| 0°-60°    | 3146.6 | 99.5      |
| 0°-90°    | 3161.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3161.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3424 | 3424  | 3424 | 3424  | 3424 |      |
| 5°  | 3372 | 3373  | 3376 | 3355  | 3372 | 316  |
| 15° | 2967 | 2979  | 2989 | 2969  | 2952 | 828  |
| 25° | 2212 | 2246  | 2282 | 2240  | 2197 | 994  |
| 35° | 957  | 1130  | 1360 | 1113  | 966  | 611  |
| 45° | 211  | 260   | 383  | 257   | 209  | 177  |
| 55° | 30   | 33    | 37   | 33    | 28   | 30   |
| 65° | 9    | 11    | 9    | 11    | 9    | 10   |
| 75° | 2    | 2     | 2    | 2     | 2    | 3    |
| 85° | 0    | 0     | 0    | 0     | 0    | 1    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359027 4LBSQLI

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 |
| 2.5°  | 3397.8 | 3421.7 | 3415.2 | 3430.4 | 3430.4 | 3413.0 | 3417.4 | 3423.9 | 3432.6 | 3439.1 | 3386.8 |
| 5°    | 3371.7 | 3393.4 | 3373.8 | 3395.5 | 3382.5 | 3363.0 | 3395.5 | 3378.1 | 3389.1 | 3376.0 | 3384.7 |
| 7.5°  | 3302.1 | 3336.9 | 3297.7 | 3323.8 | 3315.1 | 3304.2 | 3317.2 | 3312.9 | 3319.5 | 3308.5 | 3284.7 |
| 10°   | 3199.8 | 3228.1 | 3202.0 | 3239.0 | 3221.6 | 3210.7 | 3221.6 | 3232.5 | 3230.3 | 3219.4 | 3232.5 |
| 12.5° | 3082.4 | 3114.9 | 3101.9 | 3123.6 | 3104.1 | 3104.1 | 3130.2 | 3123.6 | 3125.9 | 3117.2 | 3132.3 |
| 15°   | 2967.1 | 2991.0 | 2971.4 | 2999.7 | 2991.0 | 2967.1 | 2977.9 | 2977.9 | 2995.4 | 2988.8 | 2971.4 |
| 17.5° | 2823.5 | 2843.0 | 2821.3 | 2827.9 | 2819.2 | 2814.8 | 2860.4 | 2830.0 | 2847.4 | 2834.4 | 2836.6 |
| 20°   | 2634.3 | 2643.0 | 2636.4 | 2653.8 | 2643.0 | 2656.0 | 2651.7 | 2647.3 | 2647.3 | 2653.8 | 2638.6 |
| 22.5° | 2442.8 | 2442.8 | 2449.4 | 2453.7 | 2462.4 | 2449.4 | 2475.5 | 2453.7 | 2455.8 | 2471.1 | 2466.8 |
| 25°   | 2212.3 | 2205.7 | 2221.0 | 2242.7 | 2251.4 | 2240.5 | 2275.3 | 2257.9 | 2270.9 | 2281.9 | 2257.9 |
| 27.5° | 1931.7 | 1931.7 | 1946.9 | 1983.9 | 1990.3 | 2003.4 | 2051.2 | 2051.2 | 2068.6 | 2053.5 | 2070.9 |
| 30°   | 1607.5 | 1631.5 | 1651.0 | 1698.8 | 1714.1 | 1742.4 | 1792.4 | 1816.4 | 1855.5 | 1848.9 | 1840.2 |
| 32.5° | 1274.7 | 1307.4 | 1309.5 | 1359.6 | 1400.8 | 1448.7 | 1516.2 | 1572.7 | 1601.0 | 1620.5 | 1598.8 |
| 35°   | 957.1  | 976.7  | 994.1  | 1028.9 | 1098.5 | 1161.6 | 1222.5 | 1296.5 | 1346.5 | 1359.6 | 1339.9 |
| 37.5° | 700.5  | 704.8  | 722.2  | 754.8  | 807.0  | 868.0  | 941.9  | 1022.3 | 1074.6 | 1094.1 | 1072.4 |
| 40°   | 482.9  | 487.2  | 495.9  | 524.3  | 567.8  | 611.3  | 670.0  | 752.7  | 800.5  | 839.7  | 811.3  |
| 42.5° | 324.1  | 328.4  | 337.1  | 358.9  | 382.9  | 424.1  | 469.8  | 522.0  | 567.8  | 585.2  | 569.9  |
| 45°   | 211.0  | 211.0  | 215.4  | 230.6  | 243.7  | 276.2  | 308.9  | 341.5  | 371.9  | 382.9  | 371.9  |
| 47.5° | 124.0  | 126.1  | 130.5  | 141.4  | 156.6  | 169.6  | 193.6  | 215.4  | 224.0  | 232.7  | 228.4  |
| 50°   | 71.8   | 71.8   | 78.3   | 84.9   | 95.7   | 104.4  | 113.1  | 121.8  | 126.1  | 130.5  | 126.1  |
| 52.5° | 39.1   | 41.4   | 43.5   | 45.7   | 50.1   | 58.8   | 65.2   | 65.2   | 67.5   | 69.6   | 67.5   |
| 55°   | 30.4   | 30.4   | 30.4   | 30.4   | 32.7   | 32.7   | 32.7   | 34.8   | 34.8   | 37.0   | 34.8   |
| 57.5° | 21.7   | 21.7   | 21.7   | 24.0   | 24.0   | 24.0   | 21.7   | 21.7   | 21.7   | 21.7   | 21.7   |
| 60°   | 17.4   | 17.4   | 17.4   | 17.4   | 17.4   | 17.4   | 17.4   | 15.3   | 15.3   | 15.3   | 15.3   |
| 62.5° | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   |
| 65°   | 8.7    | 8.7    | 10.9   | 10.9   | 10.9   | 10.9   | 10.9   | 8.7    | 8.7    | 8.7    | 8.7    |
| 67.5° | 6.6    | 6.6    | 6.6    | 6.6    | 8.7    | 8.7    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    |
| 70°   | 4.3    | 4.3    | 4.3    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    |
| 72.5° | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    |
| 75°   | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 77.5° | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 80°   | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 2.2    | 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° | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 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#

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**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 | 3423.9 |
| 2.5°  | 3423.9 | 3386.8 | 3391.2 | 3410.8 | 3399.9 | 3410.8 | 3408.7 | 3408.7 |
| 5°    | 3386.8 | 3376.0 | 3358.6 | 3352.0 | 3365.1 | 3393.4 | 3389.1 | 3371.7 |
| 7.5°  | 3317.2 | 3289.0 | 3308.5 | 3317.2 | 3306.4 | 3323.8 | 3332.5 | 3295.5 |
| 10°   | 3234.6 | 3223.8 | 3219.4 | 3223.8 | 3219.4 | 3236.8 | 3215.1 | 3215.1 |
| 12.5° | 3117.2 | 3099.8 | 3099.8 | 3125.9 | 3110.6 | 3097.5 | 3114.9 | 3112.8 |
| 15°   | 2999.7 | 2964.8 | 2964.8 | 2973.5 | 2980.1 | 2971.4 | 2973.5 | 2951.8 |
| 17.5° | 2825.7 | 2814.8 | 2799.6 | 2823.5 | 2830.0 | 2821.3 | 2827.9 | 2817.0 |
| 20°   | 2662.5 | 2662.5 | 2634.3 | 2645.1 | 2653.8 | 2660.4 | 2664.7 | 2647.3 |
| 22.5° | 2453.7 | 2458.1 | 2438.4 | 2460.2 | 2466.8 | 2445.0 | 2449.4 | 2445.0 |
| 25°   | 2262.2 | 2260.1 | 2244.8 | 2236.1 | 2240.5 | 2231.8 | 2229.7 | 2197.0 |
| 27.5° | 2051.2 | 2029.5 | 1996.9 | 2005.6 | 1968.6 | 1938.2 | 1938.2 | 1888.1 |
| 30°   | 1822.8 | 1785.9 | 1742.4 | 1698.8 | 1666.3 | 1631.5 | 1611.8 | 1583.6 |
| 32.5° | 1555.3 | 1505.3 | 1450.9 | 1392.1 | 1355.2 | 1303.0 | 1274.7 | 1290.0 |
| 35°   | 1290.0 | 1215.9 | 1142.0 | 1083.3 | 1026.7 | 996.2  | 961.4  | 965.8  |
| 37.5° | 1033.3 | 928.9  | 863.6  | 800.5  | 752.7  | 713.5  | 698.2  | 693.9  |
| 40°   | 754.8  | 672.1  | 606.9  | 561.2  | 528.6  | 498.2  | 480.8  | 474.2  |
| 42.5° | 522.0  | 463.4  | 411.1  | 374.2  | 352.4  | 332.8  | 324.1  | 322.0  |
| 45°   | 339.4  | 304.6  | 269.8  | 243.7  | 226.3  | 213.2  | 211.0  | 208.8  |
| 47.5° | 213.2  | 195.7  | 174.0  | 154.5  | 139.2  | 130.5  | 124.0  | 124.0  |
| 50°   | 121.8  | 115.3  | 104.4  | 93.6   | 84.9   | 80.5   | 73.9   | 71.8   |
| 52.5° | 65.2   | 65.2   | 60.9   | 52.2   | 45.7   | 41.4   | 41.4   | 39.1   |
| 55°   | 34.8   | 34.8   | 32.7   | 32.7   | 30.4   | 30.4   | 30.4   | 28.3   |
| 57.5° | 21.7   | 21.7   | 24.0   | 24.0   | 21.7   | 21.7   | 21.7   | 21.7   |
| 60°   | 15.3   | 17.4   | 17.4   | 17.4   | 17.4   | 17.4   | 17.4   | 17.4   |
| 62.5° | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   | 13.0   |
| 65°   | 8.7    | 10.9   | 10.9   | 10.9   | 10.9   | 8.7    | 8.7    | 8.7    |
| 67.5° | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    |
| 70°   | 6.6    | 6.6    | 6.6    | 6.6    | 6.6    | 4.3    | 4.3    | 4.3    |
| 72.5° | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    | 4.3    |
| 75°   | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 77.5° | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 80°   | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 82.5° | 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    |
| 87.5° | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 90°   | 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)