

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: io LED

Report Number: P209313

Luminaire Tested: **LDSQ6B10D010 EU6B10209040 6LBSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P209313  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35360)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ6B10D010 EU6B10209040 6LBSQ1LI  
Description: PORTFOLIO LD6 SERIES 6" RECESSED FIXTURE WITH A SQUARE LOW  
IRIDESCENT TRIM.  
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM  
WATTAGE D010TR-10.05 W DE010-10.58 W D5LT-10.2 W DMX-10.6 W DL2-11.8 W  
DL3-11.1 W DLE-11.39 W  
Light Source: HIGH LUMEN LED 4000 K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 912.2 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Spacing Criteria (0/90/45): 0.92 / 0.92 / 0.95  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

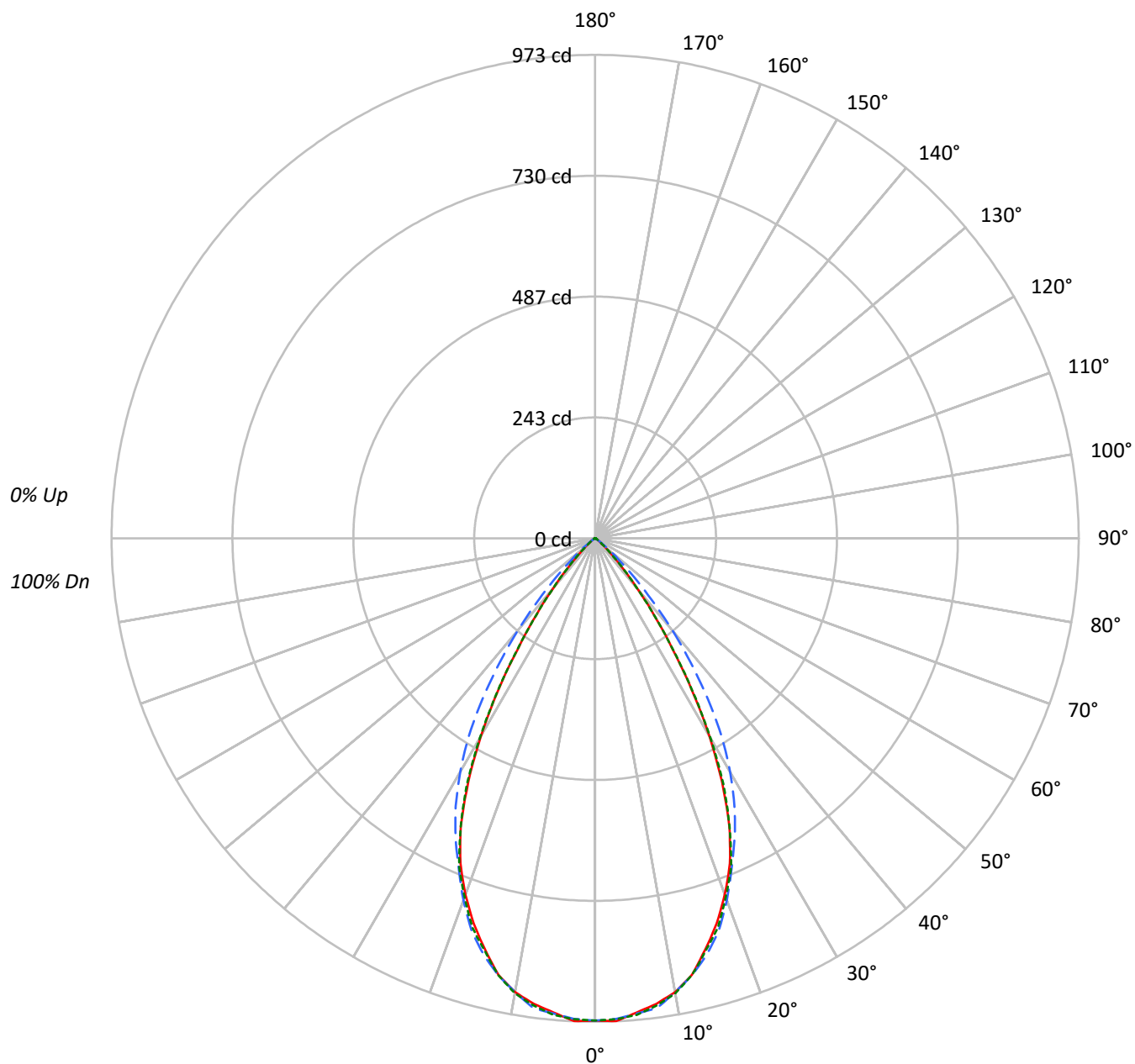
Input Watts (W): 10.05  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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   | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 |  | 101 | 99  | 98  |  | 97  |
| 2   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 94  | 98  | 95  | 92  |  | 95  | 92  | 90  |  | 92  |
| 3   | 102 | 96  | 91  | 87  | 100 | 94  | 90  | 86  | 92  | 88  | 85  |  | 89  | 86  | 83  |  | 87  |
| 4   | 97  | 89  | 84  | 79  | 95  | 88  | 83  | 79  | 86  | 82  | 78  |  | 84  | 80  | 77  |  | 82  |
| 5   | 92  | 83  | 78  | 73  | 90  | 82  | 77  | 73  | 81  | 76  | 72  |  | 79  | 75  | 72  |  | 77  |
| 6   | 87  | 78  | 72  | 68  | 86  | 77  | 72  | 67  | 76  | 71  | 67  |  | 74  | 70  | 67  |  | 73  |
| 7   | 83  | 73  | 67  | 63  | 81  | 73  | 67  | 63  | 71  | 66  | 62  |  | 70  | 66  | 62  |  | 69  |
| 8   | 79  | 69  | 63  | 59  | 77  | 68  | 63  | 59  | 67  | 62  | 58  |  | 66  | 62  | 58  |  | 65  |
| 9   | 75  | 65  | 59  | 55  | 74  | 64  | 59  | 55  | 64  | 58  | 55  |  | 63  | 58  | 54  |  | 62  |
| 10  | 71  | 61  | 55  | 52  | 70  | 61  | 55  | 51  | 60  | 55  | 51  |  | 59  | 55  | 51  |  | 59  |

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

|     | 0°                                                           | 45° | 90° |
|-----|--------------------------------------------------------------|-----|-----|
| 0°  | Luminaire represents a point source (luminous area is zero). |     |     |
| 5°  | No luminance values can be calculated.                       |     |     |
| 10° |                                                              |     |     |
| 15° |                                                              |     |     |
| 20° |                                                              |     |     |
| 25° |                                                              |     |     |
| 30° |                                                              |     |     |
| 35° |                                                              |     |     |
| 40° |                                                              |     |     |
| 45° |                                                              |     |     |
| 50° |                                                              |     |     |
| 55° |                                                              |     |     |
| 60° |                                                              |     |     |
| 65° |                                                              |     |     |
| 70° |                                                              |     |     |
| 75° |                                                              |     |     |
| 80° |                                                              |     |     |
| 85° |                                                              |     |     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.9   | 10.0      |
| 10°-20°   | 241.8  | 26.5      |
| 20°-30°   | 296.7  | 32.5      |
| 30°-40°   | 204.8  | 22.5      |
| 40°-50°   | 64.0   | 7.0       |
| 50°-60°   | 10.0   | 1.1       |
| 60°-70°   | 2.9    | 0.3       |
| 70°-80°   | 0.9    | 0.1       |
| 80°-90°   | 0.2    | 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°    | 629.3  | 69.0      |
| 0°-40°    | 834.1  | 91.4      |
| 0°-60°    | 908.2  | 99.6      |
| 0°-90°    | 912.2  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 912.2  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 971 | 971   | 971 | 971   | 971 |      |
| 5°  | 958 | 962   | 960 | 961   | 963 | 91   |
| 15° | 856 | 869   | 867 | 866   | 859 | 240  |
| 25° | 639 | 656   | 664 | 660   | 640 | 286  |
| 35° | 270 | 319   | 396 | 322   | 271 | 172  |
| 45° | 51  | 69    | 111 | 69    | 52  | 45   |
| 55° | 9   | 9     | 10  | 9     | 8   | 8    |
| 65° | 2   | 3     | 2   | 3     | 2   | 3    |
| 75° | 1   | 1     | 1   | 1     | 1   | 1    |
| 85° | 0   | 0     | 0   | 0     | 0   | 0    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 |
| 2.5°  | 972.6 | 959.1 | 967.7 | 965.9 | 970.7 | 973.8 | 970.7 | 976.3 | 972.6 | 968.3 | 969.5 |
| 5°    | 957.9 | 959.7 | 959.1 | 960.3 | 961.6 | 961.6 | 967.7 | 968.3 | 969.5 | 960.3 | 962.8 |
| 7.5°  | 945.1 | 945.1 | 948.1 | 946.9 | 951.2 | 950.0 | 950.6 | 955.5 | 956.1 | 953.6 | 951.8 |
| 10°   | 927.3 | 924.9 | 921.8 | 921.8 | 927.3 | 927.9 | 932.8 | 933.4 | 937.1 | 927.3 | 928.5 |
| 12.5° | 899.8 | 898.6 | 893.7 | 896.1 | 900.4 | 898.0 | 905.9 | 906.5 | 905.3 | 901.0 | 903.5 |
| 15°   | 856.4 | 861.3 | 860.0 | 859.4 | 869.2 | 868.0 | 867.4 | 869.2 | 869.8 | 867.4 | 865.5 |
| 17.5° | 812.9 | 817.2 | 817.8 | 819.0 | 820.9 | 822.7 | 825.2 | 831.9 | 829.4 | 827.6 | 833.7 |
| 20°   | 762.8 | 760.9 | 765.8 | 770.7 | 772.6 | 772.6 | 776.2 | 781.1 | 777.5 | 775.0 | 775.6 |
| 22.5° | 708.3 | 711.4 | 708.9 | 713.8 | 716.3 | 719.3 | 723.0 | 727.3 | 724.2 | 717.5 | 725.5 |
| 25°   | 639.2 | 641.0 | 649.0 | 648.4 | 652.1 | 659.4 | 664.9 | 664.9 | 664.9 | 664.3 | 664.3 |
| 27.5° | 552.4 | 551.1 | 560.9 | 567.6 | 576.8 | 588.4 | 595.8 | 607.4 | 609.2 | 607.4 | 603.1 |
| 30°   | 459.4 | 458.2 | 470.4 | 479.0 | 495.5 | 501.0 | 521.2 | 532.2 | 543.8 | 543.2 | 540.1 |
| 32.5° | 362.7 | 365.2 | 375.0 | 387.2 | 400.7 | 417.8 | 436.7 | 461.2 | 471.6 | 474.1 | 468.6 |
| 35°   | 269.8 | 273.4 | 282.6 | 293.0 | 309.5 | 328.5 | 354.8 | 378.0 | 395.8 | 395.8 | 391.5 |
| 37.5° | 194.5 | 195.7 | 204.3 | 211.0 | 228.2 | 245.3 | 267.9 | 299.7 | 310.7 | 315.0 | 310.7 |
| 40°   | 132.7 | 132.7 | 137.6 | 145.0 | 159.0 | 173.7 | 194.5 | 218.4 | 234.3 | 241.0 | 233.7 |
| 42.5° | 84.4  | 85.6  | 89.3  | 94.2  | 104.6 | 117.4 | 133.3 | 151.1 | 162.7 | 167.6 | 160.9 |
| 45°   | 50.8  | 52.0  | 55.1  | 58.7  | 65.5  | 73.4  | 84.4  | 97.3  | 107.0 | 111.3 | 108.3 |
| 47.5° | 30.6  | 31.8  | 33.0  | 35.5  | 40.4  | 45.9  | 51.4  | 58.7  | 64.8  | 65.5  | 64.2  |
| 50°   | 17.7  | 17.7  | 19.0  | 20.8  | 23.2  | 26.3  | 29.4  | 33.6  | 35.5  | 37.9  | 35.5  |
| 52.5° | 11.6  | 11.6  | 11.6  | 12.2  | 13.5  | 14.7  | 15.9  | 18.4  | 19.6  | 19.6  | 19.0  |
| 55°   | 8.6   | 8.6   | 8.6   | 8.6   | 9.2   | 9.2   | 9.2   | 9.8   | 10.4  | 10.4  | 10.4  |
| 57.5° | 6.1   | 6.1   | 6.1   | 6.7   | 6.7   | 6.7   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   |
| 60°   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.3   | 4.3   | 4.3   |
| 62.5° | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |
| 65°   | 2.4   | 2.4   | 2.4   | 3.1   | 3.1   | 3.1   | 3.1   | 2.4   | 2.4   | 2.4   | 2.4   |
| 67.5° | 1.8   | 1.8   | 1.8   | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 1.8   | 1.8   | 1.8   |
| 70°   | 1.2   | 1.2   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |
| 72.5° | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   |
| 75°   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 77.5° | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 80°   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 82.5° | 0.0   | 0.0   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 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   |



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**CANDELA DISTRIBUTION (continued):**

|       | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 | 970.7 |
| 2.5°  | 973.2 | 970.1 | 970.1 | 970.1 | 968.9 | 970.1 | 972.0 | 968.9 |
| 5°    | 962.8 | 964.0 | 958.5 | 962.8 | 964.6 | 961.6 | 968.9 | 962.8 |
| 7.5°  | 953.6 | 951.8 | 943.2 | 949.3 | 953.0 | 954.2 | 953.6 | 948.7 |
| 10°   | 935.3 | 931.0 | 927.3 | 927.3 | 926.1 | 925.5 | 932.2 | 929.8 |
| 12.5° | 902.2 | 905.3 | 899.8 | 902.9 | 900.4 | 901.0 | 901.6 | 900.4 |
| 15°   | 874.1 | 871.0 | 863.7 | 868.6 | 865.5 | 862.5 | 868.6 | 859.4 |
| 17.5° | 830.1 | 829.4 | 825.2 | 822.1 | 823.3 | 822.7 | 825.8 | 821.5 |
| 20°   | 778.1 | 779.3 | 776.8 | 775.6 | 773.8 | 769.5 | 773.2 | 768.3 |
| 22.5° | 721.8 | 723.0 | 725.5 | 720.6 | 721.2 | 715.1 | 720.6 | 715.1 |
| 25°   | 664.9 | 664.3 | 661.2 | 658.8 | 652.1 | 645.3 | 644.1 | 639.8 |
| 27.5° | 602.5 | 598.2 | 590.9 | 582.9 | 572.5 | 563.4 | 562.8 | 559.7 |
| 30°   | 534.0 | 524.8 | 511.4 | 498.5 | 482.6 | 468.6 | 468.6 | 463.7 |
| 32.5° | 461.8 | 441.0 | 422.7 | 406.8 | 386.0 | 378.0 | 370.1 | 365.8 |
| 35°   | 375.6 | 357.2 | 335.2 | 308.9 | 299.1 | 279.5 | 280.8 | 271.0 |
| 37.5° | 294.2 | 271.6 | 250.8 | 229.4 | 212.3 | 203.1 | 198.2 | 193.3 |
| 40°   | 218.4 | 196.4 | 173.7 | 159.7 | 144.4 | 136.4 | 133.3 | 132.1 |
| 42.5° | 149.3 | 130.9 | 116.2 | 104.6 | 96.6  | 88.1  | 85.6  | 84.4  |
| 45°   | 97.3  | 86.9  | 73.4  | 64.2  | 58.7  | 53.8  | 53.8  | 52.0  |
| 47.5° | 58.1  | 51.4  | 44.7  | 38.5  | 34.9  | 31.8  | 30.6  | 30.0  |
| 50°   | 32.4  | 28.7  | 25.1  | 22.6  | 20.2  | 18.4  | 17.7  | 17.7  |
| 52.5° | 17.7  | 15.9  | 14.7  | 12.8  | 11.6  | 11.6  | 11.6  | 11.0  |
| 55°   | 9.2   | 9.2   | 9.2   | 9.2   | 8.6   | 8.6   | 8.6   | 8.0   |
| 57.5° | 6.1   | 6.1   | 6.7   | 6.7   | 6.7   | 6.1   | 6.1   | 6.1   |
| 60°   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   |
| 62.5° | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   | 3.7   |
| 65°   | 2.4   | 3.1   | 3.1   | 3.1   | 3.1   | 2.4   | 2.4   | 2.4   |
| 67.5° | 1.8   | 2.4   | 2.4   | 2.4   | 1.8   | 1.8   | 1.8   | 1.8   |
| 70°   | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   | 1.2   | 1.2   | 1.2   |
| 72.5° | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   |
| 75°   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 77.5° | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 80°   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
| 82.5° | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 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° | 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   |



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









(END OF REPORT)