

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: HALO COMMERCIAL

Report Number: P775870

Luminaire Tested: HCDJBL510CSD-HCD8TRH-1000lm-2700K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775870  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2310613A001)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD8TRH-1000lm-2700K  
Description: 8 INCH ROUND MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

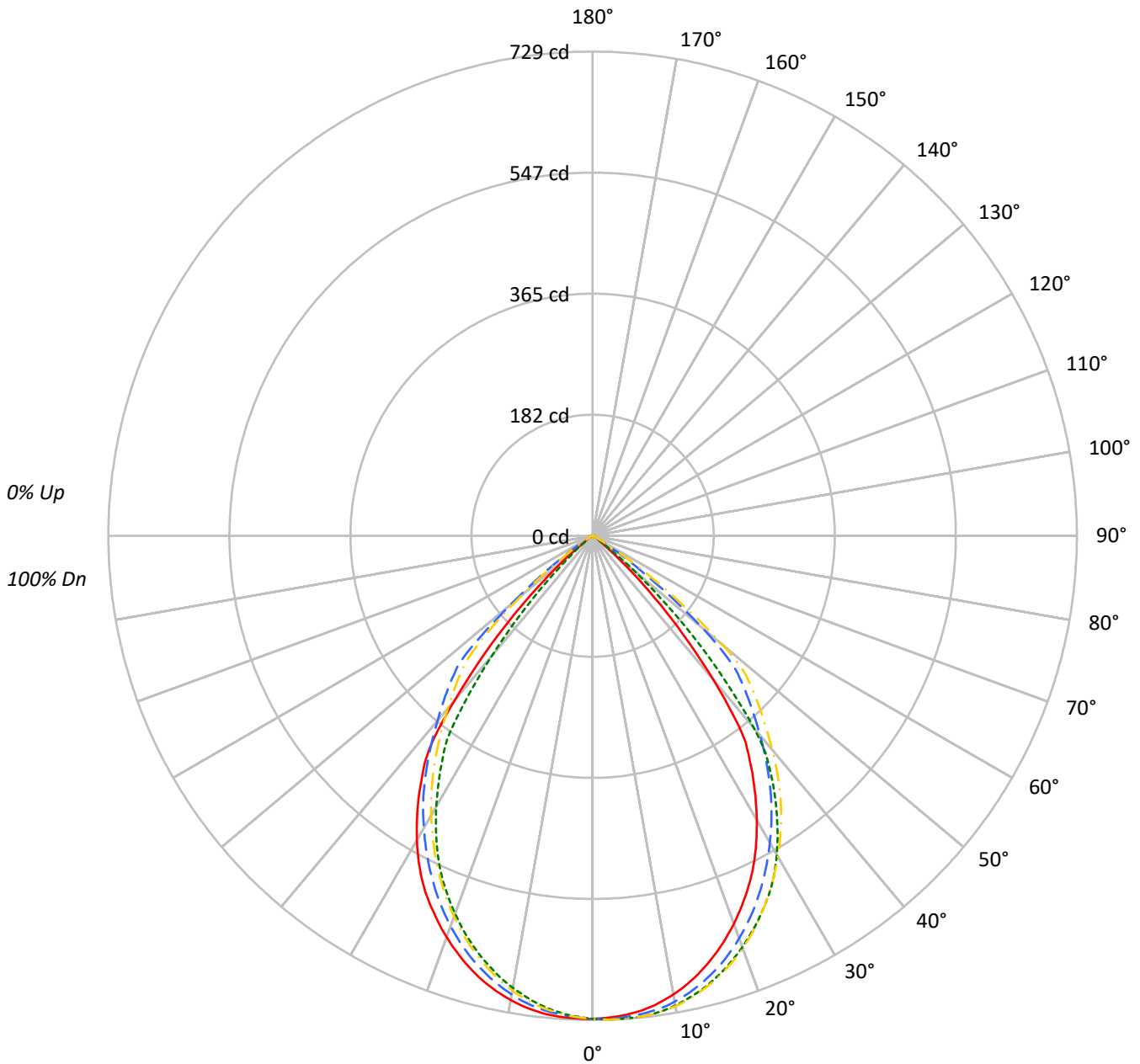
Lumens per Lamp: N/A  
Luminaire Lumens: 1008.0 lumens  
Efficiency: N/A  
Efficacy: 100.8 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P775870  
CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

### Luminous Intensity Polar Plot





TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
| 1   | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 99  | 100 | 98  | 97  | 96  | 95  | 94  | 92  | 92  | 92  | 92  |
| 2   | 106 | 101 | 96  | 92  | 104 | 99  | 95  | 91  | 96  | 92  | 89  | 92  | 90  | 87  | 90  | 87  | 85  | 84  | 84  | 84  | 84  |
| 3   | 100 | 92  | 87  | 82  | 98  | 91  | 86  | 81  | 88  | 84  | 80  | 86  | 82  | 79  | 83  | 80  | 78  | 76  | 76  | 76  | 76  |
| 4   | 94  | 85  | 79  | 74  | 92  | 84  | 78  | 73  | 82  | 76  | 72  | 79  | 75  | 72  | 78  | 74  | 71  | 69  | 69  | 69  | 69  |
| 5   | 88  | 78  | 72  | 67  | 86  | 77  | 71  | 66  | 75  | 70  | 66  | 74  | 69  | 65  | 72  | 68  | 65  | 63  | 63  | 63  | 63  |
| 6   | 83  | 72  | 66  | 61  | 81  | 72  | 65  | 60  | 70  | 64  | 60  | 68  | 63  | 60  | 67  | 63  | 59  | 57  | 57  | 57  | 57  |
| 7   | 78  | 67  | 60  | 55  | 76  | 66  | 60  | 55  | 65  | 59  | 55  | 64  | 58  | 55  | 62  | 58  | 54  | 53  | 53  | 53  | 53  |
| 8   | 73  | 62  | 55  | 51  | 72  | 62  | 55  | 51  | 60  | 55  | 50  | 59  | 54  | 50  | 58  | 54  | 50  | 48  | 48  | 48  | 48  |
| 9   | 69  | 58  | 51  | 47  | 68  | 57  | 51  | 47  | 56  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 45  | 45  | 45  | 45  |
| 10  | 65  | 54  | 48  | 43  | 64  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 47  | 43  | 51  | 46  | 43  | 41  | 41  | 41  | 41  |

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

|     | 0°    | 90°   | 180°  | 270°  |
|-----|-------|-------|-------|-------|
| 0°  | 22205 | 22205 | 22205 | 22205 |
| 5°  | 22093 | 22314 | 22204 | 21949 |
| 10° | 21735 | 22256 | 22005 | 21431 |
| 15° | 21101 | 21948 | 21569 | 20674 |
| 20° | 20199 | 21411 | 20888 | 19663 |
| 25° | 19043 | 20663 | 20010 | 18393 |
| 30° | 17422 | 19544 | 18645 | 16587 |
| 35° | 15359 | 17834 | 16757 | 14427 |
| 40° | 11251 | 15065 | 12837 | 9402  |
| 45° | 5665  | 9175  | 7090  | 4145  |
| 50° | 1729  | 3804  | 2327  | 1187  |
| 55° | 639   | 719   | 639   | 554   |
| 60° | 488   | 537   | 488   | 421   |
| 65° | 383   | 412   | 376   | 325   |
| 70° | 303   | 330   | 295   | 259   |
| 75° | 248   | 271   | 236   | 201   |
| 80° | 193   | 229   | 193   | 158   |
| 85° | 140   | 210   | 140   | 105   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 135°  
 Vertical Angle: 45°  
 Luminance: 15077 cd/sqm



TEST NUMBER: P775870

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 68.5   | 6.8       |
| 10°-20°   | 190.0  | 18.8      |
| 20°-30°   | 266.6  | 26.5      |
| 30°-40°   | 273.8  | 27.2      |
| 40°-50°   | 167.4  | 16.6      |
| 50°-60°   | 32.5   | 3.2       |
| 60°-70°   | 5.9    | 0.6       |
| 70°-80°   | 2.6    | 0.3       |
| 80°-90°   | 0.6    | 0.1       |
| 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°    | 525.1  | 52.1      |
| 0°-40°    | 798.9  | 79.3      |
| 0°-60°    | 998.9  | 99.1      |
| 0°-90°    | 1008.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1008.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 90° | 180° | 270° | 360° | Flux |
|-----|-----|-----|------|------|------|------|
| 0°  | 727 | 727 | 727  | 727  | 727  |      |
| 5°  | 721 | 728 | 724  | 716  | 721  | 68   |
| 15° | 668 | 694 | 682  | 654  | 668  | 187  |
| 25° | 565 | 613 | 594  | 546  | 565  | 259  |
| 35° | 412 | 478 | 450  | 387  | 412  | 252  |
| 45° | 131 | 212 | 164  | 96   | 131  | 106  |
| 55° | 12  | 14  | 12   | 10   | 12   | 13   |
| 65° | 5   | 6   | 5    | 4    | 5    | 5    |
| 75° | 2   | 2   | 2    | 2    | 2    | 2    |
| 85° | 0   | 1   | 0    | 0    | 0    | 0    |
| 90° | 0   | 0   | 0    | 0    | 0    |      |



TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0°    | 727.3 | 727.3 | 727.3 | 727.3 | 727.3 | 727.3  | 727.3 | 727.3  | 727.3 | 727.3  | 727.3 |
| 0.5°  | 727.1 | 727.0 | 727.5 | 727.9 | 727.6 | 727.9  | 728.1 | 728.1  | 727.4 | 726.9  | 726.9 |
| 1°    | 726.7 | 726.9 | 727.5 | 728.2 | 728.0 | 728.3  | 728.5 | 728.3  | 727.4 | 726.6  | 726.5 |
| 1.5°  | 726.3 | 726.7 | 727.5 | 728.4 | 728.3 | 728.7  | 728.8 | 728.4  | 727.3 | 726.3  | 726.0 |
| 2°    | 725.8 | 726.4 | 727.5 | 728.5 | 728.6 | 728.9  | 729.0 | 728.4  | 727.1 | 725.9  | 725.4 |
| 2.5°  | 725.2 | 726.0 | 727.3 | 728.5 | 728.7 | 729.1  | 729.0 | 728.4  | 726.9 | 725.4  | 724.8 |
| 3°    | 724.5 | 725.5 | 727.0 | 728.3 | 728.7 | 729.1  | 729.0 | 728.3  | 726.5 | 724.9  | 724.0 |
| 3.5°  | 723.7 | 724.9 | 726.6 | 728.0 | 728.7 | 729.1  | 728.9 | 728.0  | 726.1 | 724.2  | 723.2 |
| 4°    | 722.9 | 724.3 | 726.1 | 727.7 | 728.5 | 728.9  | 728.7 | 727.8  | 725.7 | 723.6  | 722.3 |
| 4.5°  | 722.0 | 723.6 | 725.5 | 727.3 | 728.3 | 728.7  | 728.4 | 727.5  | 725.2 | 722.9  | 721.2 |
| 5°    | 720.9 | 722.8 | 724.9 | 726.9 | 728.1 | 728.4  | 728.1 | 727.0  | 724.5 | 722.0  | 720.2 |
| 5.5°  | 719.7 | 721.8 | 724.1 | 726.4 | 727.7 | 728.1  | 727.7 | 726.4  | 723.8 | 721.1  | 719.0 |
| 6°    | 718.3 | 720.7 | 723.4 | 725.8 | 727.3 | 727.7  | 727.2 | 725.8  | 722.8 | 720.0  | 717.6 |
| 6.5°  | 716.7 | 719.3 | 722.5 | 725.1 | 726.7 | 727.2  | 726.7 | 724.9  | 721.6 | 718.7  | 716.1 |
| 7°    | 714.9 | 717.9 | 721.5 | 724.2 | 725.9 | 726.5  | 726.1 | 723.9  | 720.3 | 717.3  | 714.5 |
| 7.5°  | 713.0 | 716.2 | 720.4 | 723.1 | 724.9 | 725.7  | 725.3 | 722.6  | 718.9 | 715.6  | 712.7 |
| 8°    | 710.8 | 714.4 | 719.2 | 721.9 | 723.8 | 724.7  | 724.4 | 721.4  | 717.4 | 714.0  | 710.7 |
| 8.5°  | 708.5 | 712.3 | 717.7 | 720.6 | 722.5 | 723.5  | 723.3 | 720.0  | 715.6 | 712.1  | 708.6 |
| 9°    | 706.2 | 710.3 | 716.1 | 719.1 | 721.1 | 722.3  | 722.1 | 718.4  | 713.8 | 710.0  | 706.3 |
| 9.5°  | 703.6 | 708.0 | 714.3 | 717.5 | 719.6 | 720.8  | 720.7 | 716.7  | 711.8 | 707.9  | 703.9 |
| 10°   | 701.1 | 705.8 | 712.3 | 715.8 | 717.9 | 719.3  | 719.1 | 714.9  | 709.8 | 705.7  | 701.3 |
| 10.5° | 698.3 | 703.3 | 710.2 | 713.9 | 716.0 | 717.7  | 717.5 | 713.1  | 707.7 | 703.3  | 698.5 |
| 11°   | 695.4 | 700.8 | 707.9 | 711.9 | 714.1 | 715.8  | 715.7 | 711.1  | 705.4 | 700.9  | 695.8 |
| 11.5° | 692.4 | 698.0 | 705.5 | 709.7 | 712.1 | 713.8  | 713.7 | 709.0  | 703.0 | 698.1  | 692.8 |
| 12°   | 689.2 | 695.3 | 702.9 | 707.5 | 710.0 | 711.8  | 711.5 | 706.8  | 700.5 | 695.4  | 689.8 |
| 12.5° | 686.0 | 692.4 | 700.3 | 705.1 | 707.7 | 709.7  | 709.2 | 704.5  | 697.7 | 692.5  | 686.6 |
| 13°   | 682.6 | 689.4 | 697.4 | 702.7 | 705.4 | 707.5  | 706.9 | 702.0  | 695.0 | 689.5  | 683.4 |
| 13.5° | 679.0 | 686.3 | 694.4 | 700.0 | 702.8 | 705.1  | 704.4 | 699.4  | 692.0 | 686.4  | 680.1 |
| 14°   | 675.3 | 683.0 | 691.4 | 697.3 | 700.2 | 702.6  | 701.7 | 696.7  | 689.0 | 683.2  | 676.5 |
| 14.5° | 671.4 | 679.4 | 688.2 | 694.4 | 697.3 | 699.8  | 698.9 | 693.8  | 685.7 | 679.7  | 673.0 |
| 15°   | 667.6 | 675.9 | 684.9 | 691.3 | 694.4 | 697.0  | 696.0 | 690.9  | 682.4 | 676.2  | 669.3 |
| 15.5° | 663.4 | 672.2 | 681.5 | 688.1 | 691.4 | 694.0  | 693.0 | 687.8  | 679.0 | 672.6  | 665.5 |
| 16°   | 659.2 | 668.3 | 678.0 | 684.9 | 688.3 | 691.0  | 689.9 | 684.5  | 675.4 | 668.8  | 661.5 |
| 16.5° | 655.0 | 664.4 | 674.3 | 681.6 | 685.0 | 687.9  | 686.8 | 681.0  | 671.7 | 664.9  | 657.4 |
| 17°   | 650.6 | 660.4 | 670.5 | 678.1 | 681.6 | 684.6  | 683.4 | 677.7  | 668.0 | 660.8  | 653.1 |
| 17.5° | 646.0 | 656.2 | 666.5 | 674.3 | 678.1 | 681.1  | 679.9 | 674.0  | 664.0 | 656.7  | 648.8 |
| 18°   | 641.4 | 651.8 | 662.5 | 670.5 | 674.5 | 677.6  | 676.4 | 670.2  | 660.0 | 652.5  | 644.4 |
| 18.5° | 636.6 | 647.3 | 658.3 | 666.6 | 670.7 | 673.9  | 672.6 | 666.4  | 655.8 | 648.1  | 639.7 |
| 19°   | 631.7 | 642.8 | 654.0 | 662.6 | 666.9 | 670.0  | 668.7 | 662.4  | 651.6 | 643.7  | 635.1 |
| 19.5° | 626.8 | 638.1 | 649.6 | 658.4 | 663.0 | 666.1  | 664.8 | 658.3  | 647.3 | 639.1  | 630.3 |
| 20°   | 621.7 | 633.3 | 645.1 | 654.3 | 659.0 | 662.0  | 660.7 | 654.1  | 642.9 | 634.5  | 625.4 |
| 20.5° | 616.4 | 628.2 | 640.5 | 649.9 | 654.9 | 658.0  | 656.5 | 649.7  | 638.3 | 629.6  | 620.4 |
| 21°   | 611.0 | 623.1 | 635.8 | 645.5 | 650.6 | 653.7  | 652.2 | 645.3  | 633.8 | 624.8  | 615.3 |



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CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 594.4 | 607.2 | 620.9 | 631.6 | 637.5 | 640.5  | 638.6 | 631.6  | 619.2 | 609.7  | 599.3 |
| 23°   | 588.7 | 601.5 | 615.8 | 626.8 | 632.8 | 635.8  | 633.9 | 626.8  | 614.3 | 604.5  | 593.8 |
| 23.5° | 583.0 | 596.0 | 610.6 | 621.9 | 628.0 | 631.2  | 629.0 | 621.8  | 609.4 | 599.1  | 588.2 |
| 24°   | 577.2 | 590.2 | 605.1 | 616.9 | 623.3 | 626.3  | 624.0 | 616.8  | 604.4 | 593.7  | 582.6 |
| 24.5° | 571.3 | 584.5 | 599.6 | 611.8 | 618.4 | 621.3  | 618.9 | 611.8  | 599.3 | 588.2  | 576.8 |
| 25°   | 565.3 | 578.6 | 594.0 | 606.5 | 613.4 | 616.2  | 613.9 | 606.6  | 594.0 | 582.6  | 570.8 |
| 25.5° | 558.9 | 572.7 | 588.4 | 601.3 | 608.5 | 611.2  | 608.6 | 601.4  | 588.5 | 577.0  | 564.9 |
| 26°   | 552.3 | 566.8 | 582.7 | 595.9 | 603.5 | 606.0  | 603.3 | 596.2  | 582.7 | 571.4  | 558.9 |
| 26.5° | 545.6 | 560.8 | 576.8 | 590.6 | 598.2 | 600.6  | 597.8 | 590.9  | 576.6 | 565.5  | 552.8 |
| 27°   | 538.7 | 554.5 | 570.9 | 585.1 | 592.6 | 595.2  | 592.4 | 585.4  | 570.3 | 559.5  | 546.6 |
| 27.5° | 531.6 | 547.9 | 564.8 | 579.4 | 586.8 | 589.9  | 586.8 | 579.7  | 563.8 | 553.3  | 540.2 |
| 28°   | 524.4 | 541.1 | 558.7 | 573.6 | 580.7 | 584.4  | 581.1 | 573.6  | 557.2 | 546.6  | 533.9 |
| 28.5° | 517.1 | 534.3 | 552.6 | 567.8 | 574.4 | 578.6  | 575.3 | 567.4  | 550.4 | 540.0  | 527.6 |
| 29°   | 509.4 | 527.2 | 546.2 | 561.7 | 568.0 | 572.6  | 569.6 | 561.1  | 543.5 | 533.3  | 521.2 |
| 29.5° | 501.9 | 520.3 | 540.0 | 555.4 | 561.3 | 566.4  | 563.6 | 554.6  | 536.2 | 526.4  | 514.7 |
| 30°   | 494.2 | 513.0 | 533.6 | 548.7 | 554.4 | 560.1  | 557.6 | 547.7  | 528.9 | 519.3  | 508.0 |
| 30.5° | 486.3 | 505.7 | 527.3 | 542.0 | 547.3 | 553.4  | 551.5 | 540.8  | 521.5 | 512.1  | 501.5 |
| 31°   | 478.4 | 498.1 | 520.7 | 535.1 | 540.1 | 546.9  | 545.5 | 533.8  | 514.0 | 504.8  | 494.9 |
| 31.5° | 470.4 | 490.8 | 514.3 | 528.1 | 532.7 | 539.9  | 539.2 | 526.7  | 506.4 | 497.4  | 488.2 |
| 32°   | 462.5 | 483.0 | 507.6 | 520.9 | 525.3 | 532.9  | 533.0 | 519.5  | 498.6 | 490.0  | 481.4 |
| 32.5° | 454.4 | 475.6 | 501.0 | 513.4 | 517.8 | 525.7  | 526.7 | 512.1  | 490.9 | 482.7  | 474.6 |
| 33°   | 446.1 | 467.9 | 494.3 | 506.1 | 510.1 | 518.6  | 520.4 | 504.5  | 482.9 | 475.0  | 467.6 |
| 33.5° | 437.8 | 460.1 | 487.6 | 498.3 | 502.2 | 511.1  | 514.0 | 496.9  | 474.8 | 467.5  | 460.4 |
| 34°   | 429.5 | 452.2 | 480.3 | 491.0 | 494.5 | 503.7  | 507.5 | 489.3  | 466.6 | 460.0  | 453.2 |
| 34.5° | 420.9 | 444.5 | 473.5 | 483.2 | 486.5 | 496.3  | 500.9 | 481.6  | 458.0 | 452.3  | 445.6 |
| 35°   | 412.1 | 436.4 | 466.3 | 475.5 | 478.5 | 488.8  | 494.2 | 473.8  | 449.6 | 444.4  | 438.2 |
| 35.5° | 403.9 | 428.4 | 459.3 | 467.6 | 470.1 | 481.1  | 487.3 | 465.9  | 441.2 | 436.6  | 430.6 |
| 36°   | 395.1 | 420.4 | 451.9 | 460.2 | 461.8 | 473.6  | 480.2 | 457.9  | 432.9 | 428.7  | 423.1 |
| 36.5° | 387.4 | 412.1 | 444.6 | 452.3 | 453.4 | 465.9  | 473.0 | 449.8  | 424.1 | 420.7  | 415.5 |
| 37°   | 374.8 | 403.9 | 437.1 | 444.4 | 444.8 | 457.8  | 465.7 | 441.7  | 414.4 | 412.5  | 407.7 |
| 37.5° | 362.1 | 395.7 | 429.8 | 436.3 | 436.3 | 450.0  | 458.3 | 433.3  | 402.4 | 404.5  | 400.1 |
| 38°   | 345.5 | 387.5 | 422.2 | 428.3 | 427.2 | 441.9  | 450.9 | 425.1  | 388.8 | 396.4  | 392.6 |
| 38.5° | 330.2 | 379.4 | 414.7 | 419.9 | 417.9 | 433.8  | 443.4 | 416.9  | 373.4 | 388.2  | 385.3 |
| 39°   | 314.7 | 371.1 | 407.0 | 412.1 | 405.8 | 425.8  | 435.8 | 408.5  | 356.8 | 379.0  | 377.7 |
| 39.5° | 299.0 | 358.1 | 399.6 | 403.8 | 393.1 | 417.4  | 428.2 | 400.4  | 339.2 | 367.8  | 370.3 |
| 40°   | 282.3 | 343.5 | 392.1 | 395.7 | 378.0 | 409.3  | 420.6 | 388.6  | 322.1 | 355.0  | 363.1 |
| 40.5° | 265.9 | 328.2 | 384.7 | 387.6 | 361.2 | 401.1  | 413.0 | 376.4  | 305.7 | 340.4  | 356.2 |
| 41°   | 249.2 | 313.2 | 377.3 | 376.6 | 344.1 | 389.7  | 405.3 | 362.4  | 289.2 | 325.1  | 349.3 |
| 41.5° | 232.9 | 298.3 | 370.1 | 366.1 | 326.9 | 379.0  | 398.1 | 347.1  | 273.4 | 309.3  | 342.6 |
| 42°   | 217.4 | 283.1 | 363.0 | 352.9 | 309.9 | 365.2  | 390.7 | 331.4  | 256.8 | 293.4  | 335.7 |
| 42.5° | 202.9 | 267.2 | 356.0 | 338.8 | 293.3 | 350.5  | 383.6 | 314.7  | 240.9 | 278.2  | 329.1 |
| 43°   | 188.4 | 251.2 | 349.1 | 323.7 | 277.3 | 334.7  | 376.7 | 299.3  | 224.3 | 263.2  | 322.2 |
| 43.5° | 173.6 | 235.4 | 342.0 | 307.9 | 261.1 | 318.4  | 369.7 | 283.8  | 208.6 | 248.4  | 315.5 |



TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45°   | 131.2 | 191.3 | 321.6 | 261.8 | 212.5 | 271.1  | 349.2 | 238.0  | 164.2 | 203.6  | 295.3 |
| 45.5° | 118.4 | 177.0 | 314.8 | 247.3 | 197.1 | 255.8  | 342.3 | 222.5  | 150.0 | 189.1  | 288.5 |
| 46°   | 106.2 | 163.0 | 307.9 | 232.7 | 182.3 | 240.6  | 335.2 | 207.4  | 136.2 | 174.9  | 282.0 |
| 46.5° | 94.0  | 149.2 | 301.2 | 217.9 | 167.7 | 225.1  | 328.5 | 192.6  | 122.8 | 161.6  | 271.2 |
| 47°   | 82.7  | 135.3 | 293.1 | 203.0 | 153.4 | 209.4  | 321.5 | 178.1  | 109.9 | 148.0  | 258.4 |
| 47.5° | 72.3  | 122.6 | 282.8 | 188.5 | 139.2 | 194.6  | 314.3 | 164.2  | 98.9  | 135.0  | 243.4 |
| 48°   | 62.8  | 110.3 | 270.7 | 174.5 | 125.9 | 180.2  | 307.1 | 150.7  | 88.0  | 122.2  | 226.8 |
| 48.5° | 54.6  | 98.5  | 257.5 | 161.0 | 113.0 | 166.1  | 297.2 | 137.2  | 77.1  | 110.2  | 210.3 |
| 49°   | 47.5  | 87.2  | 244.9 | 148.0 | 102.0 | 152.2  | 284.5 | 124.0  | 66.2  | 99.3   | 193.4 |
| 49.5° | 41.5  | 76.5  | 230.1 | 134.9 | 91.1  | 138.6  | 271.3 | 111.5  | 57.1  | 88.4   | 177.0 |
| 50°   | 36.4  | 66.4  | 215.7 | 122.1 | 80.1  | 125.2  | 255.7 | 100.8  | 49.0  | 77.4   | 160.9 |
| 50.5° | 32.4  | 57.2  | 199.7 | 109.7 | 69.2  | 112.8  | 239.0 | 90.1   | 41.6  | 66.6   | 145.9 |
| 51°   | 28.3  | 49.4  | 183.0 | 97.9  | 58.4  | 101.8  | 221.7 | 79.5   | 35.1  | 57.7   | 131.0 |
| 51.5° | 24.3  | 42.7  | 166.8 | 86.7  | 50.1  | 90.8   | 204.3 | 68.8   | 29.4  | 49.5   | 117.4 |
| 52°   | 20.3  | 37.1  | 151.1 | 76.4  | 42.2  | 79.8   | 187.4 | 58.2   | 24.0  | 41.9   | 106.0 |
| 52.5° | 16.3  | 32.9  | 135.7 | 66.5  | 35.1  | 68.8   | 171.2 | 49.7   | 19.2  | 35.0   | 94.7  |
| 53°   | 14.2  | 28.8  | 121.9 | 57.3  | 29.0  | 57.9   | 155.8 | 42.0   | 15.4  | 29.0   | 83.4  |
| 53.5° | 13.5  | 24.6  | 108.4 | 48.7  | 23.6  | 49.2   | 140.7 | 35.3   | 13.7  | 23.7   | 72.0  |
| 54°   | 13.0  | 20.5  | 95.8  | 41.1  | 18.5  | 41.2   | 126.4 | 29.3   | 13.1  | 18.9   | 60.7  |
| 54.5° | 12.5  | 16.4  | 83.8  | 33.9  | 14.8  | 34.4   | 112.6 | 24.0   | 12.6  | 14.6   | 51.9  |
| 55°   | 12.0  | 13.4  | 73.2  | 28.7  | 13.5  | 28.1   | 100.6 | 19.1   | 12.0  | 11.7   | 44.3  |
| 55.5° | 11.5  | 12.1  | 63.0  | 23.6  | 13.0  | 22.5   | 88.8  | 14.7   | 11.5  | 11.2   | 37.5  |
| 56°   | 11.0  | 11.6  | 53.9  | 18.4  | 12.4  | 17.5   | 76.9  | 11.9   | 11.1  | 10.8   | 31.6  |
| 56.5° | 10.6  | 11.1  | 45.8  | 13.3  | 11.8  | 13.4   | 65.0  | 11.4   | 10.6  | 10.4   | 26.4  |
| 57°   | 10.2  | 10.7  | 38.6  | 11.4  | 11.3  | 11.5   | 55.6  | 10.9   | 10.2  | 10.0   | 22.1  |
| 57.5° | 9.8   | 10.3  | 32.8  | 11.0  | 10.9  | 11.0   | 47.0  | 10.5   | 9.8   | 9.6    | 18.6  |
| 58°   | 9.4   | 9.9   | 28.6  | 10.6  | 10.4  | 10.6   | 39.2  | 10.1   | 9.4   | 9.3    | 15.8  |
| 58.5° | 9.0   | 9.6   | 24.4  | 10.2  | 10.0  | 10.2   | 32.4  | 9.8    | 9.0   | 8.9    | 13.6  |
| 59°   | 8.6   | 9.2   | 20.2  | 9.8   | 9.6   | 9.8    | 26.4  | 9.4    | 8.6   | 8.6    | 11.8  |
| 59.5° | 8.3   | 8.9   | 16.0  | 9.5   | 9.2   | 9.4    | 21.4  | 9.1    | 8.3   | 8.3    | 10.5  |
| 60°   | 8.0   | 8.6   | 13.9  | 9.1   | 8.8   | 9.1    | 17.6  | 8.8    | 8.0   | 8.0    | 9.5   |
| 60.5° | 7.7   | 8.3   | 12.1  | 8.8   | 8.4   | 8.8    | 14.7  | 8.4    | 7.6   | 7.8    | 8.6   |
| 61°   | 7.4   | 8.0   | 10.7  | 8.5   | 8.1   | 8.4    | 12.5  | 8.2    | 7.3   | 7.5    | 8.1   |
| 61.5° | 7.1   | 7.7   | 9.5   | 8.2   | 7.8   | 8.1    | 10.9  | 7.9    | 7.0   | 7.2    | 7.8   |
| 62°   | 6.8   | 7.4   | 8.7   | 7.9   | 7.5   | 7.9    | 9.7   | 7.6    | 6.7   | 7.0    | 7.5   |
| 62.5° | 6.5   | 7.2   | 8.1   | 7.6   | 7.2   | 7.6    | 8.8   | 7.3    | 6.4   | 6.7    | 7.2   |
| 63°   | 6.2   | 6.9   | 7.8   | 7.4   | 6.8   | 7.3    | 8.1   | 7.1    | 6.1   | 6.5    | 6.9   |
| 63.5° | 6.0   | 6.7   | 7.6   | 7.1   | 6.5   | 7.0    | 7.8   | 6.8    | 5.9   | 6.2    | 6.7   |
| 64°   | 5.7   | 6.4   | 7.3   | 6.8   | 6.3   | 6.8    | 7.5   | 6.6    | 5.6   | 6.0    | 6.4   |
| 64.5° | 5.5   | 6.2   | 7.1   | 6.6   | 6.0   | 6.5    | 7.2   | 6.3    | 5.4   | 5.8    | 6.2   |
| 65°   | 5.3   | 6.0   | 6.8   | 6.4   | 5.7   | 6.3    | 6.9   | 6.1    | 5.2   | 5.6    | 6.0   |
| 65.5° | 5.1   | 5.8   | 6.6   | 6.1   | 5.5   | 6.1    | 6.6   | 5.9    | 4.9   | 5.4    | 5.8   |
| 66°   | 4.8   | 5.5   | 6.3   | 5.9   | 5.3   | 5.8    | 6.4   | 5.6    | 4.7   | 5.2    | 5.6   |





TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 67.5° | 4.3 | 4.9   | 5.7 | 5.3   | 4.6 | 5.2    | 5.8  | 5.0    | 4.1  | 4.6    | 5.0  |
| 68°   | 4.1 | 4.7   | 5.5 | 5.1   | 4.4 | 5.0    | 5.5  | 4.8    | 4.0  | 4.4    | 4.8  |
| 68.5° | 3.9 | 4.6   | 5.3 | 4.9   | 4.2 | 4.8    | 5.3  | 4.6    | 3.8  | 4.2    | 4.6  |
| 69°   | 3.7 | 4.4   | 5.1 | 4.7   | 4.0 | 4.6    | 5.1  | 4.5    | 3.6  | 4.1    | 4.4  |
| 69.5° | 3.6 | 4.2   | 4.9 | 4.5   | 3.9 | 4.5    | 4.9  | 4.3    | 3.5  | 3.9    | 4.2  |
| 70°   | 3.4 | 4.0   | 4.7 | 4.3   | 3.7 | 4.3    | 4.7  | 4.1    | 3.3  | 3.7    | 4.0  |
| 70.5° | 3.3 | 3.9   | 4.5 | 4.2   | 3.5 | 4.1    | 4.6  | 3.9    | 3.2  | 3.6    | 3.9  |
| 71°   | 3.1 | 3.7   | 4.3 | 4.0   | 3.4 | 4.0    | 4.4  | 3.8    | 3.0  | 3.4    | 3.7  |
| 71.5° | 3.0 | 3.6   | 4.1 | 3.8   | 3.2 | 3.8    | 4.2  | 3.6    | 2.9  | 3.3    | 3.5  |
| 72°   | 2.8 | 3.4   | 4.0 | 3.7   | 3.1 | 3.6    | 4.0  | 3.5    | 2.7  | 3.1    | 3.4  |
| 72.5° | 2.7 | 3.3   | 3.8 | 3.5   | 2.9 | 3.5    | 3.8  | 3.3    | 2.6  | 3.0    | 3.2  |
| 73°   | 2.6 | 3.1   | 3.6 | 3.4   | 2.8 | 3.3    | 3.7  | 3.2    | 2.5  | 2.9    | 3.1  |
| 73.5° | 2.4 | 3.0   | 3.5 | 3.2   | 2.7 | 3.2    | 3.5  | 3.0    | 2.4  | 2.7    | 2.9  |
| 74°   | 2.3 | 2.8   | 3.3 | 3.1   | 2.6 | 3.1    | 3.4  | 2.9    | 2.2  | 2.6    | 2.8  |
| 74.5° | 2.2 | 2.7   | 3.1 | 2.9   | 2.4 | 2.9    | 3.2  | 2.8    | 2.1  | 2.5    | 2.6  |
| 75°   | 2.1 | 2.6   | 3.0 | 2.8   | 2.3 | 2.8    | 3.1  | 2.6    | 2.0  | 2.3    | 2.5  |
| 75.5° | 2.0 | 2.4   | 2.8 | 2.7   | 2.2 | 2.7    | 2.9  | 2.5    | 1.9  | 2.2    | 2.4  |
| 76°   | 1.9 | 2.3   | 2.7 | 2.6   | 2.1 | 2.6    | 2.8  | 2.4    | 1.8  | 2.1    | 2.2  |
| 76.5° | 1.8 | 2.2   | 2.6 | 2.4   | 2.0 | 2.4    | 2.6  | 2.2    | 1.7  | 2.0    | 2.1  |
| 77°   | 1.7 | 2.1   | 2.4 | 2.3   | 1.9 | 2.3    | 2.5  | 2.1    | 1.6  | 1.9    | 2.0  |
| 77.5° | 1.6 | 2.0   | 2.3 | 2.2   | 1.8 | 2.2    | 2.4  | 2.0    | 1.5  | 1.8    | 1.9  |
| 78°   | 1.5 | 1.9   | 2.2 | 2.1   | 1.7 | 2.1    | 2.2  | 1.9    | 1.4  | 1.7    | 1.7  |
| 78.5° | 1.4 | 1.7   | 2.0 | 2.0   | 1.6 | 2.0    | 2.1  | 1.8    | 1.3  | 1.5    | 1.6  |
| 79°   | 1.3 | 1.6   | 1.9 | 1.8   | 1.5 | 1.9    | 2.0  | 1.7    | 1.3  | 1.4    | 1.5  |
| 79.5° | 1.2 | 1.5   | 1.8 | 1.7   | 1.4 | 1.8    | 1.9  | 1.6    | 1.2  | 1.3    | 1.4  |
| 80°   | 1.1 | 1.4   | 1.7 | 1.6   | 1.3 | 1.6    | 1.7  | 1.5    | 1.1  | 1.2    | 1.3  |
| 80.5° | 1.0 | 1.3   | 1.6 | 1.5   | 1.3 | 1.5    | 1.6  | 1.3    | 1.0  | 1.1    | 1.2  |
| 81°   | 0.9 | 1.2   | 1.5 | 1.4   | 1.2 | 1.4    | 1.5  | 1.2    | 0.9  | 1.0    | 1.1  |
| 81.5° | 0.9 | 1.1   | 1.3 | 1.3   | 1.1 | 1.4    | 1.4  | 1.2    | 0.9  | 1.0    | 1.0  |
| 82°   | 0.8 | 1.0   | 1.2 | 1.2   | 1.0 | 1.3    | 1.3  | 1.1    | 0.8  | 0.9    | 0.9  |
| 82.5° | 0.7 | 0.9   | 1.1 | 1.1   | 0.9 | 1.2    | 1.2  | 1.0    | 0.7  | 0.8    | 0.8  |
| 83°   | 0.6 | 0.8   | 1.0 | 1.0   | 0.9 | 1.1    | 1.1  | 0.9    | 0.6  | 0.7    | 0.7  |
| 83.5° | 0.6 | 0.7   | 0.9 | 0.9   | 0.8 | 1.0    | 1.0  | 0.8    | 0.6  | 0.6    | 0.6  |
| 84°   | 0.5 | 0.7   | 0.8 | 0.9   | 0.7 | 0.9    | 0.9  | 0.7    | 0.5  | 0.5    | 0.5  |
| 84.5° | 0.4 | 0.6   | 0.7 | 0.8   | 0.7 | 0.8    | 0.8  | 0.6    | 0.4  | 0.4    | 0.5  |
| 85°   | 0.4 | 0.5   | 0.6 | 0.7   | 0.6 | 0.7    | 0.7  | 0.5    | 0.4  | 0.4    | 0.4  |
| 85.5° | 0.3 | 0.4   | 0.6 | 0.6   | 0.6 | 0.7    | 0.6  | 0.4    | 0.3  | 0.3    | 0.3  |
| 86°   | 0.2 | 0.3   | 0.5 | 0.5   | 0.5 | 0.6    | 0.5  | 0.4    | 0.3  | 0.2    | 0.2  |
| 86.5° | 0.2 | 0.2   | 0.4 | 0.5   | 0.4 | 0.5    | 0.5  | 0.3    | 0.2  | 0.2    | 0.2  |
| 87°   | 0.1 | 0.2   | 0.3 | 0.4   | 0.4 | 0.4    | 0.4  | 0.2    | 0.2  | 0.1    | 0.1  |
| 87.5° | 0.1 | 0.1   | 0.3 | 0.3   | 0.3 | 0.4    | 0.3  | 0.2    | 0.1  | 0.1    | 0.1  |
| 88°   | 0.1 | 0.1   | 0.2 | 0.3   | 0.3 | 0.3    | 0.3  | 0.1    | 0.1  | 0.0    | 0.0  |
| 88.5° | 0.0 | 0.1   | 0.1 | 0.2   | 0.2 | 0.2    | 0.2  | 0.1    | 0.1  | 0.0    | 0.0  |



TEST NUMBER: P775870  
CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-----|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 90° | 0.0 | 0.0   | 0.0 | 0.0   | 0.1 | 0.0    | 0.1  | 0.0    | 0.0  | 0.0    | 0.0  |



TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|-------|--------|-------|--------|-------|--------|-------|
| 0°    | 727.3  | 727.3 | 727.3  | 727.3 | 727.3  | 727.3 |
| 0.5°  | 727.1  | 726.4 | 726.7  | 727.1 | 727.3  | 727.1 |
| 1°    | 726.5  | 725.7 | 726.0  | 726.4 | 726.8  | 726.7 |
| 1.5°  | 725.8  | 724.9 | 725.2  | 725.7 | 726.1  | 726.3 |
| 2°    | 725.1  | 724.1 | 724.3  | 724.9 | 725.4  | 725.8 |
| 2.5°  | 724.3  | 723.2 | 723.4  | 724.0 | 724.6  | 725.2 |
| 3°    | 723.5  | 722.1 | 722.4  | 722.9 | 723.8  | 724.5 |
| 3.5°  | 722.4  | 720.9 | 721.1  | 721.9 | 722.8  | 723.7 |
| 4°    | 721.3  | 719.5 | 719.8  | 720.7 | 721.9  | 722.9 |
| 4.5°  | 720.0  | 717.9 | 718.2  | 719.3 | 720.8  | 722.0 |
| 5°    | 718.5  | 716.2 | 716.5  | 717.9 | 719.5  | 720.9 |
| 5.5°  | 716.9  | 714.2 | 714.6  | 716.4 | 718.2  | 719.7 |
| 6°    | 715.1  | 712.3 | 712.7  | 714.7 | 716.7  | 718.3 |
| 6.5°  | 713.2  | 710.0 | 710.5  | 712.8 | 715.1  | 716.7 |
| 7°    | 711.2  | 707.7 | 708.2  | 710.8 | 713.2  | 714.9 |
| 7.5°  | 708.9  | 705.2 | 705.7  | 708.6 | 711.2  | 713.0 |
| 8°    | 706.6  | 702.7 | 703.2  | 706.3 | 709.0  | 710.8 |
| 8.5°  | 704.2  | 699.9 | 700.6  | 703.8 | 706.5  | 708.5 |
| 9°    | 701.7  | 697.1 | 697.8  | 701.1 | 704.0  | 706.2 |
| 9.5°  | 699.0  | 694.2 | 694.9  | 698.2 | 701.3  | 703.6 |
| 10°   | 696.4  | 691.3 | 692.0  | 695.2 | 698.5  | 701.1 |
| 10.5° | 693.5  | 688.1 | 688.9  | 692.1 | 695.6  | 698.3 |
| 11°   | 690.6  | 684.8 | 685.7  | 688.8 | 692.6  | 695.4 |
| 11.5° | 687.6  | 681.5 | 682.4  | 685.5 | 689.4  | 692.4 |
| 12°   | 684.4  | 677.9 | 678.9  | 682.0 | 686.1  | 689.2 |
| 12.5° | 681.0  | 674.2 | 675.3  | 678.3 | 682.6  | 686.0 |
| 13°   | 677.6  | 670.4 | 671.6  | 674.6 | 679.1  | 682.6 |
| 13.5° | 673.9  | 666.4 | 667.7  | 670.9 | 675.4  | 679.0 |
| 14°   | 670.2  | 662.4 | 663.6  | 666.9 | 671.6  | 675.3 |
| 14.5° | 666.4  | 658.4 | 659.5  | 662.8 | 667.5  | 671.4 |
| 15°   | 662.4  | 654.1 | 655.2  | 658.7 | 663.5  | 667.6 |
| 15.5° | 658.4  | 649.6 | 650.9  | 654.3 | 659.2  | 663.4 |
| 16°   | 654.2  | 645.2 | 646.4  | 649.9 | 654.8  | 659.2 |
| 16.5° | 649.9  | 640.7 | 641.9  | 645.4 | 650.4  | 655.0 |
| 17°   | 645.4  | 636.0 | 637.1  | 640.6 | 645.9  | 650.6 |
| 17.5° | 640.9  | 631.2 | 632.3  | 635.8 | 641.1  | 646.0 |
| 18°   | 636.2  | 626.1 | 627.3  | 630.8 | 636.4  | 641.4 |
| 18.5° | 631.4  | 621.1 | 622.3  | 625.8 | 631.4  | 636.6 |
| 19°   | 626.6  | 615.9 | 617.1  | 620.7 | 626.4  | 631.7 |
| 19.5° | 621.5  | 610.6 | 611.7  | 615.5 | 621.3  | 626.8 |
| 20°   | 616.5  | 605.2 | 606.4  | 610.1 | 616.1  | 621.7 |
| 20.5° | 611.2  | 599.8 | 600.8  | 604.7 | 610.8  | 616.4 |
| 21°   | 605.8  | 594.3 | 595.2  | 599.2 | 605.2  | 611.0 |

TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 589.3  | 577.4 | 577.9  | 582.0 | 588.3  | 594.4 |
| 23°   | 583.7  | 571.5 | 571.9  | 576.2 | 582.3  | 588.7 |
| 23.5° | 578.0  | 565.6 | 566.2  | 570.3 | 576.4  | 583.0 |
| 24°   | 572.3  | 559.3 | 560.0  | 564.2 | 570.5  | 577.2 |
| 24.5° | 566.3  | 552.9 | 554.0  | 558.0 | 564.4  | 571.3 |
| 25°   | 560.4  | 546.0 | 547.7  | 551.7 | 558.3  | 565.3 |
| 25.5° | 554.3  | 539.1 | 541.3  | 545.5 | 552.0  | 558.9 |
| 26°   | 548.1  | 532.0 | 534.5  | 539.2 | 545.8  | 552.3 |
| 26.5° | 541.3  | 524.8 | 527.8  | 532.8 | 539.5  | 545.6 |
| 27°   | 534.5  | 517.3 | 520.7  | 526.1 | 533.0  | 538.7 |
| 27.5° | 527.6  | 509.8 | 513.5  | 519.5 | 526.3  | 531.6 |
| 28°   | 520.4  | 502.0 | 506.0  | 512.9 | 519.3  | 524.4 |
| 28.5° | 513.1  | 494.2 | 498.7  | 506.0 | 512.2  | 517.1 |
| 29°   | 505.7  | 486.2 | 491.2  | 499.5 | 505.1  | 509.4 |
| 29.5° | 498.4  | 478.5 | 483.6  | 492.8 | 497.9  | 501.9 |
| 30°   | 490.7  | 470.5 | 475.8  | 485.9 | 490.2  | 494.2 |
| 30.5° | 483.0  | 462.3 | 468.1  | 478.9 | 482.8  | 486.3 |
| 31°   | 475.2  | 454.0 | 460.2  | 472.2 | 475.2  | 478.4 |
| 31.5° | 467.3  | 446.0 | 452.3  | 465.1 | 467.6  | 470.4 |
| 32°   | 459.5  | 437.7 | 444.3  | 458.0 | 459.7  | 462.5 |
| 32.5° | 451.8  | 429.3 | 436.5  | 450.6 | 452.2  | 454.4 |
| 33°   | 443.8  | 420.9 | 428.5  | 443.6 | 444.5  | 446.1 |
| 33.5° | 435.7  | 412.1 | 420.5  | 436.3 | 436.6  | 437.8 |
| 34°   | 427.6  | 403.8 | 412.2  | 428.9 | 428.8  | 429.5 |
| 34.5° | 419.4  | 395.2 | 403.9  | 421.3 | 421.0  | 420.9 |
| 35°   | 411.3  | 387.1 | 395.8  | 413.6 | 413.0  | 412.1 |
| 35.5° | 403.3  | 377.4 | 387.6  | 406.1 | 405.3  | 403.9 |
| 36°   | 395.0  | 364.5 | 379.3  | 398.5 | 397.2  | 395.1 |
| 36.5° | 386.9  | 349.1 | 371.2  | 390.9 | 389.2  | 387.4 |
| 37°   | 378.8  | 333.2 | 363.4  | 383.2 | 381.2  | 374.8 |
| 37.5° | 370.7  | 317.7 | 354.8  | 375.6 | 373.2  | 362.1 |
| 38°   | 363.3  | 301.4 | 342.4  | 368.1 | 365.2  | 345.5 |
| 38.5° | 350.8  | 285.3 | 327.9  | 360.7 | 356.9  | 330.2 |
| 39°   | 337.1  | 268.6 | 313.1  | 353.5 | 349.8  | 314.7 |
| 39.5° | 322.2  | 251.9 | 298.5  | 346.1 | 337.3  | 299.0 |
| 40°   | 307.3  | 235.9 | 283.8  | 338.9 | 324.5  | 282.3 |
| 40.5° | 292.5  | 220.1 | 268.8  | 331.9 | 309.7  | 265.9 |
| 41°   | 277.1  | 205.1 | 253.1  | 325.0 | 295.2  | 249.2 |
| 41.5° | 261.6  | 190.5 | 237.5  | 318.1 | 281.3  | 232.9 |
| 42°   | 245.6  | 175.9 | 222.4  | 311.2 | 267.3  | 217.4 |
| 42.5° | 230.3  | 161.2 | 208.1  | 304.6 | 252.7  | 202.9 |
| 43°   | 215.3  | 147.1 | 194.1  | 297.9 | 237.6  | 188.4 |
| 43.5° | 201.0  | 133.5 | 180.2  | 291.3 | 222.5  | 173.6 |



TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270° | 292.5° | 315°  | 337.5° | 360°  |
|-------|--------|------|--------|-------|--------|-------|
| 45°   | 159.1  | 96.0 | 139.6  | 271.3 | 180.8  | 131.2 |
| 45.5° | 145.5  | 84.7 | 126.7  | 261.3 | 167.3  | 118.4 |
| 46°   | 131.9  | 73.8 | 114.8  | 250.6 | 154.0  | 106.2 |
| 46.5° | 119.4  | 64.3 | 102.8  | 238.1 | 140.9  | 94.0  |
| 47°   | 107.5  | 55.7 | 91.4   | 226.7 | 128.0  | 82.7  |
| 47.5° | 96.6   | 48.3 | 80.3   | 212.8 | 115.8  | 72.3  |
| 48°   | 85.8   | 42.1 | 70.2   | 198.7 | 104.0  | 62.8  |
| 48.5° | 74.9   | 37.0 | 61.0   | 182.4 | 92.7   | 54.6  |
| 49°   | 64.1   | 33.0 | 52.7   | 167.3 | 81.9   | 47.5  |
| 49.5° | 55.2   | 29.0 | 45.4   | 152.3 | 71.6   | 41.5  |
| 50°   | 47.6   | 25.0 | 39.5   | 138.4 | 62.1   | 36.4  |
| 50.5° | 40.9   | 21.0 | 34.2   | 125.0 | 53.4   | 32.4  |
| 51°   | 35.5   | 17.0 | 30.3   | 112.8 | 46.0   | 28.3  |
| 51.5° | 30.9   | 14.3 | 26.4   | 100.7 | 39.8   | 24.3  |
| 52°   | 26.9   | 13.4 | 22.5   | 89.8  | 34.3   | 20.3  |
| 52.5° | 23.1   | 12.8 | 18.6   | 79.1  | 30.3   | 16.3  |
| 53°   | 19.3   | 12.3 | 15.1   | 69.4  | 26.2   | 14.2  |
| 53.5° | 15.7   | 11.8 | 12.4   | 60.3  | 22.2   | 13.5  |
| 54°   | 12.9   | 11.3 | 11.5   | 52.4  | 18.1   | 13.0  |
| 54.5° | 11.5   | 10.8 | 11.1   | 45.0  | 14.6   | 12.5  |
| 55°   | 11.1   | 10.4 | 10.7   | 38.6  | 12.1   | 12.0  |
| 55.5° | 10.7   | 10.0 | 10.3   | 34.1  | 11.4   | 11.5  |
| 56°   | 10.3   | 9.6  | 9.9    | 29.7  | 11.0   | 11.0  |
| 56.5° | 9.9    | 9.2  | 9.5    | 25.3  | 10.6   | 10.6  |
| 57°   | 9.6    | 8.8  | 9.2    | 20.8  | 10.2   | 10.2  |
| 57.5° | 9.2    | 8.4  | 8.8    | 16.5  | 9.8    | 9.8   |
| 58°   | 8.9    | 8.1  | 8.5    | 14.2  | 9.5    | 9.4   |
| 58.5° | 8.6    | 7.8  | 8.2    | 12.3  | 9.2    | 9.0   |
| 59°   | 8.3    | 7.5  | 7.9    | 10.8  | 8.9    | 8.6   |
| 59.5° | 8.0    | 7.2  | 7.6    | 9.6   | 8.6    | 8.3   |
| 60°   | 7.7    | 6.9  | 7.4    | 8.7   | 8.3    | 8.0   |
| 60.5° | 7.5    | 6.6  | 7.1    | 8.2   | 8.0    | 7.7   |
| 61°   | 7.2    | 6.3  | 6.9    | 7.9   | 7.7    | 7.4   |
| 61.5° | 6.9    | 6.1  | 6.6    | 7.6   | 7.4    | 7.1   |
| 62°   | 6.7    | 5.8  | 6.4    | 7.3   | 7.2    | 6.8   |
| 62.5° | 6.4    | 5.6  | 6.1    | 7.1   | 6.9    | 6.5   |
| 63°   | 6.2    | 5.3  | 5.9    | 6.8   | 6.7    | 6.2   |
| 63.5° | 6.0    | 5.1  | 5.7    | 6.6   | 6.4    | 6.0   |
| 64°   | 5.7    | 4.9  | 5.5    | 6.4   | 6.2    | 5.7   |
| 64.5° | 5.5    | 4.7  | 5.3    | 6.1   | 6.0    | 5.5   |
| 65°   | 5.3    | 4.5  | 5.1    | 5.9   | 5.8    | 5.3   |
| 65.5° | 5.1    | 4.3  | 4.9    | 5.7   | 5.5    | 5.1   |
| 66°   | 4.9    | 4.1  | 4.7    | 5.5   | 5.3    | 4.8   |



TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|------|--------|------|
| 67.5° | 4.4    | 3.6  | 4.2    | 4.9  | 4.7    | 4.3  |
| 68°   | 4.2    | 3.4  | 4.0    | 4.7  | 4.5    | 4.1  |
| 68.5° | 4.0    | 3.3  | 3.9    | 4.5  | 4.4    | 3.9  |
| 69°   | 3.9    | 3.1  | 3.7    | 4.3  | 4.2    | 3.7  |
| 69.5° | 3.7    | 3.0  | 3.6    | 4.2  | 4.0    | 3.6  |
| 70°   | 3.6    | 2.9  | 3.4    | 4.0  | 3.8    | 3.4  |
| 70.5° | 3.4    | 2.7  | 3.3    | 3.8  | 3.7    | 3.3  |
| 71°   | 3.3    | 2.6  | 3.1    | 3.7  | 3.5    | 3.1  |
| 71.5° | 3.1    | 2.5  | 3.0    | 3.5  | 3.4    | 3.0  |
| 72°   | 3.0    | 2.4  | 2.9    | 3.3  | 3.2    | 2.8  |
| 72.5° | 2.9    | 2.2  | 2.7    | 3.2  | 3.1    | 2.7  |
| 73°   | 2.7    | 2.1  | 2.6    | 3.0  | 2.9    | 2.6  |
| 73.5° | 2.6    | 2.0  | 2.5    | 2.9  | 2.8    | 2.4  |
| 74°   | 2.5    | 1.9  | 2.4    | 2.7  | 2.6    | 2.3  |
| 74.5° | 2.3    | 1.8  | 2.2    | 2.6  | 2.5    | 2.2  |
| 75°   | 2.2    | 1.7  | 2.1    | 2.5  | 2.4    | 2.1  |
| 75.5° | 2.1    | 1.6  | 2.0    | 2.3  | 2.3    | 2.0  |
| 76°   | 2.0    | 1.5  | 1.9    | 2.2  | 2.1    | 1.9  |
| 76.5° | 1.9    | 1.5  | 1.8    | 2.1  | 2.0    | 1.8  |
| 77°   | 1.8    | 1.4  | 1.7    | 1.9  | 1.9    | 1.7  |
| 77.5° | 1.7    | 1.3  | 1.6    | 1.8  | 1.8    | 1.6  |
| 78°   | 1.6    | 1.2  | 1.5    | 1.7  | 1.7    | 1.5  |
| 78.5° | 1.5    | 1.1  | 1.4    | 1.6  | 1.5    | 1.4  |
| 79°   | 1.4    | 1.0  | 1.3    | 1.5  | 1.4    | 1.3  |
| 79.5° | 1.3    | 1.0  | 1.2    | 1.4  | 1.3    | 1.2  |
| 80°   | 1.2    | 0.9  | 1.1    | 1.2  | 1.2    | 1.1  |
| 80.5° | 1.1    | 0.8  | 1.0    | 1.1  | 1.1    | 1.0  |
| 81°   | 1.0    | 0.8  | 0.9    | 1.0  | 1.0    | 0.9  |
| 81.5° | 0.9    | 0.7  | 0.8    | 0.9  | 0.9    | 0.9  |
| 82°   | 0.8    | 0.6  | 0.8    | 0.8  | 0.8    | 0.8  |
| 82.5° | 0.7    | 0.6  | 0.7    | 0.8  | 0.7    | 0.7  |
| 83°   | 0.6    | 0.5  | 0.6    | 0.7  | 0.6    | 0.6  |
| 83.5° | 0.6    | 0.4  | 0.5    | 0.6  | 0.5    | 0.6  |
| 84°   | 0.5    | 0.4  | 0.4    | 0.5  | 0.4    | 0.5  |
| 84.5° | 0.4    | 0.3  | 0.4    | 0.4  | 0.4    | 0.4  |
| 85°   | 0.3    | 0.3  | 0.3    | 0.4  | 0.3    | 0.4  |
| 85.5° | 0.3    | 0.2  | 0.2    | 0.3  | 0.2    | 0.3  |
| 86°   | 0.2    | 0.1  | 0.2    | 0.2  | 0.2    | 0.2  |
| 86.5° | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.2  |
| 87°   | 0.1    | 0.0  | 0.1    | 0.1  | 0.1    | 0.1  |
| 87.5° | 0.0    | 0.0  | 0.0    | 0.0  | 0.1    | 0.1  |
| 88°   | 0.0    | 0.0  | 0.0    | 0.0  | 0.0    | 0.1  |
| 88.5° | 0.0    | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |



TEST NUMBER: P775870

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-2700K

**CANDELA DISTRIBUTION (continued):**

|     | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-----|--------|------|--------|------|--------|------|
| 90° | 0.0    | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - 135°-315°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 21.5° | 605.5 | 617.9 | 630.9 | 641.0 | 646.3 | 649.4 | 647.7 | 640.8 | 629.0 | 619.8 | 610.1 |
| 22°   | 600.0 | 612.6 | 625.9 | 636.4 | 641.9 | 645.0 | 643.3 | 636.2 | 624.2 | 614.9 | 604.8 |



|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44°   | 158.7 | 220.1 | 335.1 | 292.3 | 245.0 | 302.3 | 362.8 | 268.6 | 193.1 | 233.4 | 308.5 |
| 44.5° | 144.8 | 205.5 | 328.3 | 276.9 | 228.7 | 286.3 | 356.0 | 252.9 | 178.7 | 218.5 | 302.0 |



|       |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 66.5° | 4.6 | 5.3 | 6.1 | 5.7 | 5.0 | 5.6 | 6.2 | 5.4 | 4.5 | 5.0 | 5.3 |
| 67°   | 4.4 | 5.1 | 5.9 | 5.5 | 4.8 | 5.4 | 6.0 | 5.2 | 4.3 | 4.8 | 5.1 |



|       |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 89°   | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| 89.5° | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |



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1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





|       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|
| 21.5° | 600.3 | 588.7 | 589.5 | 593.6 | 599.6 | 605.5 |
| 22°   | 594.9 | 583.0 | 583.7 | 587.9 | 593.9 | 600.0 |



|       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|
| 44°   | 186.6 | 120.3 | 166.5 | 284.7 | 207.8 | 158.7 |
| 44.5° | 172.8 | 108.3 | 153.0 | 278.0 | 194.3 | 144.8 |



|       |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|
| 66.5° | 4.7 | 3.9 | 4.5 | 5.3 | 5.1 | 4.6 |
| 67°   | 4.6 | 3.8 | 4.4 | 5.1 | 4.9 | 4.4 |

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Peachtree City, GA 30269

Scaled Data Report



|       |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|
| 89°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 89.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)