

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: P775872

Luminaire Tested: HCDJBL510CSD-HCD8TRH-1000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775872
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-3500K
Description: 8 INCH ROUND MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

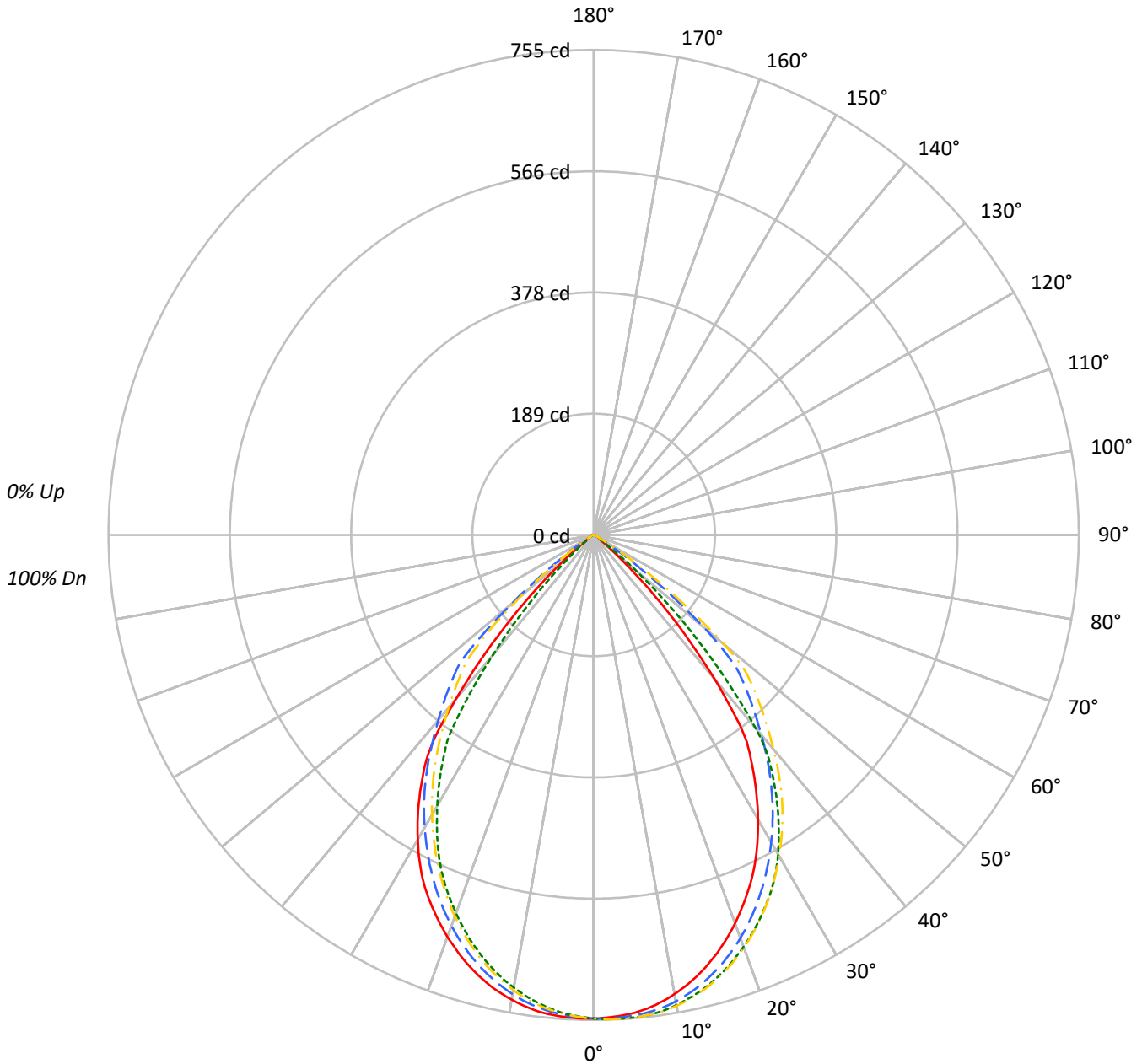
Lumens per Lamp: N/A
Luminaire Lumens: 1043.5 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{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: 24 FT



TEST NUMBER: P775872
CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 22986 | 22986 | 22986 | 22986 |
| 5° | 22872 | 23099 | 22985 | 22722 |
| 10° | 22501 | 23037 | 22780 | 22188 |
| 15° | 21847 | 22722 | 22331 | 21404 |
| 20° | 20910 | 22168 | 21625 | 20355 |
| 25° | 19713 | 21391 | 20714 | 19040 |
| 30° | 18036 | 20232 | 19301 | 17168 |
| 35° | 15903 | 18460 | 17346 | 14938 |
| 40° | 11645 | 15599 | 13291 | 9732 |
| 45° | 5868 | 9499 | 7336 | 4292 |
| 50° | 1791 | 3942 | 2408 | 1230 |
| 55° | 660 | 745 | 660 | 575 |
| 60° | 507 | 556 | 507 | 434 |
| 65° | 397 | 426 | 390 | 340 |
| 70° | 312 | 339 | 303 | 268 |
| 75° | 260 | 283 | 248 | 212 |
| 80° | 193 | 229 | 193 | 158 |
| 85° | 140 | 210 | 140 | 105 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 15608 cd/sqm



TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 70.9 | 6.8 |
| 10°-20° | 196.7 | 18.9 |
| 20°-30° | 276.0 | 26.5 |
| 30°-40° | 283.5 | 27.2 |
| 40°-50° | 173.3 | 16.6 |
| 50°-60° | 33.7 | 3.2 |
| 60°-70° | 6.1 | 0.6 |
| 70°-80° | 2.7 | 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° | 543.6 | 52.1 |
| 0°-40° | 827.1 | 79.3 |
| 0°-60° | 1034.1 | 99.1 |
| 0°-90° | 1043.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1043.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|-----|-----|------|------|------|------|
| 0° | 753 | 753 | 753 | 753 | 753 | |
| 5° | 746 | 754 | 750 | 741 | 746 | 71 |
| 15° | 691 | 719 | 706 | 677 | 691 | 194 |
| 25° | 585 | 635 | 615 | 565 | 585 | 268 |
| 35° | 427 | 495 | 465 | 401 | 427 | 261 |
| 45° | 136 | 220 | 170 | 99 | 136 | 109 |
| 55° | 12 | 14 | 12 | 11 | 12 | 14 |
| 65° | 6 | 6 | 5 | 5 | 6 | 6 |
| 75° | 2 | 2 | 2 | 2 | 2 | 2 |
| 85° | 0 | 1 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0° | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 |
| 0.5° | 752.7 | 752.6 | 753.1 | 753.5 | 753.2 | 753.5 | 753.7 | 753.7 | 753.0 | 752.5 | 752.5 |
| 1° | 752.3 | 752.5 | 753.1 | 753.8 | 753.6 | 753.9 | 754.1 | 753.9 | 753.0 | 752.2 | 752.1 |
| 1.5° | 751.8 | 752.3 | 753.1 | 754.0 | 753.9 | 754.3 | 754.4 | 754.0 | 752.9 | 751.8 | 751.5 |
| 2° | 751.3 | 752.0 | 753.1 | 754.1 | 754.2 | 754.5 | 754.6 | 754.0 | 752.7 | 751.4 | 750.9 |
| 2.5° | 750.7 | 751.5 | 752.9 | 754.1 | 754.3 | 754.7 | 754.6 | 754.0 | 752.5 | 750.9 | 750.3 |
| 3° | 750.0 | 751.0 | 752.6 | 753.9 | 754.3 | 754.7 | 754.6 | 753.9 | 752.1 | 750.4 | 749.5 |
| 3.5° | 749.2 | 750.4 | 752.2 | 753.6 | 754.3 | 754.7 | 754.5 | 753.6 | 751.6 | 749.7 | 748.6 |
| 4° | 748.3 | 749.8 | 751.6 | 753.3 | 754.1 | 754.5 | 754.3 | 753.4 | 751.2 | 749.1 | 747.7 |
| 4.5° | 747.4 | 749.1 | 751.0 | 752.9 | 753.9 | 754.3 | 754.0 | 753.1 | 750.7 | 748.3 | 746.6 |
| 5° | 746.3 | 748.2 | 750.4 | 752.5 | 753.7 | 754.0 | 753.7 | 752.6 | 750.0 | 747.4 | 745.5 |
| 5.5° | 745.0 | 747.2 | 749.6 | 752.0 | 753.3 | 753.7 | 753.3 | 752.0 | 749.3 | 746.5 | 744.3 |
| 6° | 743.6 | 746.0 | 748.8 | 751.3 | 752.9 | 753.3 | 752.8 | 751.3 | 748.2 | 745.3 | 742.8 |
| 6.5° | 741.9 | 744.6 | 747.9 | 750.6 | 752.3 | 752.8 | 752.3 | 750.4 | 747.0 | 744.0 | 741.3 |
| 7° | 740.0 | 743.1 | 746.9 | 749.7 | 751.4 | 752.1 | 751.6 | 749.4 | 745.6 | 742.5 | 739.6 |
| 7.5° | 738.1 | 741.4 | 745.7 | 748.5 | 750.4 | 751.2 | 750.8 | 748.0 | 744.2 | 740.8 | 737.8 |
| 8° | 735.8 | 739.5 | 744.5 | 747.3 | 749.3 | 750.2 | 749.9 | 746.8 | 742.6 | 739.1 | 735.7 |
| 8.5° | 733.4 | 737.3 | 742.9 | 745.9 | 747.9 | 748.9 | 748.7 | 745.3 | 740.8 | 737.1 | 733.5 |
| 9° | 731.0 | 735.3 | 741.3 | 744.4 | 746.5 | 747.7 | 747.5 | 743.7 | 738.9 | 735.0 | 731.1 |
| 9.5° | 728.3 | 732.9 | 739.4 | 742.7 | 744.9 | 746.2 | 746.0 | 741.9 | 736.8 | 732.8 | 728.7 |
| 10° | 725.8 | 730.6 | 737.3 | 741.0 | 743.1 | 744.6 | 744.4 | 740.0 | 734.8 | 730.5 | 726.0 |
| 10.5° | 723.0 | 728.0 | 735.2 | 739.0 | 741.2 | 742.9 | 742.7 | 738.2 | 732.6 | 728.0 | 723.2 |
| 11° | 720.0 | 725.4 | 732.8 | 736.9 | 739.2 | 741.0 | 740.9 | 736.1 | 730.2 | 725.5 | 720.4 |
| 11.5° | 716.8 | 722.6 | 730.3 | 734.7 | 737.1 | 738.9 | 738.8 | 733.9 | 727.7 | 722.7 | 717.3 |
| 12° | 713.5 | 719.8 | 727.6 | 732.4 | 735.0 | 736.8 | 736.5 | 731.7 | 725.1 | 720.0 | 714.2 |
| 12.5° | 710.2 | 716.8 | 724.9 | 729.9 | 732.6 | 734.7 | 734.1 | 729.3 | 722.3 | 716.9 | 710.8 |
| 13° | 706.7 | 713.7 | 722.0 | 727.4 | 730.2 | 732.4 | 731.8 | 726.7 | 719.5 | 713.8 | 707.5 |
| 13.5° | 703.0 | 710.5 | 718.9 | 724.7 | 727.5 | 729.9 | 729.2 | 724.1 | 716.4 | 710.6 | 704.1 |
| 14° | 699.1 | 707.1 | 715.8 | 721.9 | 724.8 | 727.3 | 726.4 | 721.3 | 713.3 | 707.3 | 700.4 |
| 14.5° | 695.1 | 703.4 | 712.5 | 718.9 | 721.9 | 724.5 | 723.6 | 718.3 | 709.9 | 703.7 | 696.8 |
| 15° | 691.2 | 699.8 | 709.1 | 715.7 | 718.9 | 721.6 | 720.6 | 715.3 | 706.5 | 700.1 | 692.9 |
| 15.5° | 686.8 | 695.9 | 705.6 | 712.4 | 715.8 | 718.5 | 717.5 | 712.1 | 703.0 | 696.3 | 689.0 |
| 16° | 682.5 | 691.9 | 701.9 | 709.1 | 712.6 | 715.4 | 714.3 | 708.7 | 699.2 | 692.4 | 684.8 |
| 16.5° | 678.1 | 687.8 | 698.1 | 705.7 | 709.2 | 712.2 | 711.0 | 705.0 | 695.4 | 688.4 | 680.6 |
| 17° | 673.6 | 683.7 | 694.2 | 702.0 | 705.7 | 708.8 | 707.5 | 701.6 | 691.6 | 684.1 | 676.1 |
| 17.5° | 668.8 | 679.4 | 690.0 | 698.1 | 702.0 | 705.1 | 703.9 | 697.8 | 687.4 | 679.9 | 671.7 |
| 18° | 664.0 | 674.8 | 685.9 | 694.2 | 698.3 | 701.5 | 700.3 | 693.9 | 683.3 | 675.5 | 667.1 |
| 18.5° | 659.1 | 670.1 | 681.5 | 690.1 | 694.4 | 697.7 | 696.3 | 689.9 | 678.9 | 671.0 | 662.3 |
| 19° | 654.0 | 665.5 | 677.1 | 686.0 | 690.4 | 693.6 | 692.3 | 685.8 | 674.6 | 666.4 | 657.5 |
| 19.5° | 648.9 | 660.6 | 672.5 | 681.6 | 686.4 | 689.6 | 688.3 | 681.5 | 670.1 | 661.6 | 652.5 |
| 20° | 643.6 | 655.6 | 667.9 | 677.4 | 682.3 | 685.4 | 684.0 | 677.2 | 665.6 | 656.9 | 647.5 |
| 20.5° | 638.1 | 650.4 | 663.1 | 672.8 | 678.0 | 681.2 | 679.7 | 672.6 | 660.8 | 651.8 | 642.3 |
| 21° | 632.5 | 645.1 | 658.2 | 668.3 | 673.6 | 676.8 | 675.2 | 668.1 | 656.2 | 646.8 | 637.0 |



TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 615.4 | 628.6 | 642.8 | 653.9 | 660.0 | 663.1 | 661.1 | 653.9 | 641.0 | 631.2 | 620.4 |
| 23° | 609.5 | 622.7 | 637.5 | 648.9 | 655.1 | 658.2 | 656.3 | 648.9 | 636.0 | 625.8 | 614.7 |
| 23.5° | 603.5 | 617.0 | 632.1 | 643.8 | 650.2 | 653.5 | 651.2 | 643.7 | 630.9 | 620.2 | 608.9 |
| 24° | 597.5 | 611.0 | 626.4 | 638.7 | 645.3 | 648.4 | 646.0 | 638.6 | 625.7 | 614.6 | 603.1 |
| 24.5° | 591.4 | 605.1 | 620.7 | 633.4 | 640.2 | 643.2 | 640.7 | 633.4 | 620.4 | 608.9 | 597.1 |
| 25° | 585.2 | 599.0 | 614.9 | 627.9 | 635.0 | 637.9 | 635.5 | 628.0 | 614.9 | 603.1 | 590.9 |
| 25.5° | 578.6 | 592.9 | 609.1 | 622.5 | 630.0 | 632.8 | 630.1 | 622.6 | 609.2 | 597.3 | 584.8 |
| 26° | 571.8 | 586.8 | 603.2 | 616.9 | 624.8 | 627.4 | 624.6 | 617.2 | 603.2 | 591.5 | 578.6 |
| 26.5° | 564.8 | 580.6 | 597.1 | 611.4 | 619.3 | 621.8 | 618.9 | 611.7 | 596.9 | 585.4 | 572.3 |
| 27° | 557.7 | 574.0 | 591.0 | 605.7 | 613.5 | 616.2 | 613.3 | 606.0 | 590.4 | 579.2 | 565.9 |
| 27.5° | 550.3 | 567.2 | 584.7 | 599.8 | 607.5 | 610.7 | 607.5 | 600.1 | 583.7 | 572.8 | 559.2 |
| 28° | 542.9 | 560.2 | 578.4 | 593.8 | 601.2 | 605.0 | 601.6 | 593.8 | 576.8 | 565.9 | 552.7 |
| 28.5° | 535.3 | 553.1 | 572.1 | 587.8 | 594.6 | 599.0 | 595.6 | 587.4 | 569.8 | 559.0 | 546.2 |
| 29° | 527.3 | 545.8 | 565.4 | 581.5 | 588.0 | 592.8 | 589.7 | 580.9 | 562.6 | 552.1 | 539.5 |
| 29.5° | 519.6 | 538.6 | 559.0 | 575.0 | 581.1 | 586.4 | 583.5 | 574.1 | 555.1 | 544.9 | 532.8 |
| 30° | 511.6 | 531.1 | 552.4 | 568.0 | 573.9 | 579.8 | 577.2 | 567.0 | 547.5 | 537.6 | 525.9 |
| 30.5° | 503.4 | 523.5 | 545.9 | 561.1 | 566.6 | 572.9 | 570.9 | 559.8 | 539.9 | 530.1 | 519.1 |
| 31° | 495.2 | 515.6 | 539.0 | 553.9 | 559.1 | 566.2 | 564.7 | 552.6 | 532.1 | 522.6 | 512.3 |
| 31.5° | 486.9 | 508.1 | 532.4 | 546.7 | 551.5 | 558.9 | 558.2 | 545.2 | 524.2 | 514.9 | 505.4 |
| 32° | 478.8 | 500.0 | 525.5 | 539.2 | 543.8 | 551.7 | 551.8 | 537.8 | 516.1 | 507.2 | 498.3 |
| 32.5° | 470.4 | 492.3 | 518.6 | 531.5 | 536.0 | 544.2 | 545.2 | 530.1 | 508.2 | 499.7 | 491.3 |
| 33° | 461.8 | 484.4 | 511.7 | 523.9 | 528.1 | 536.9 | 538.7 | 522.3 | 499.9 | 491.7 | 484.0 |
| 33.5° | 453.2 | 476.3 | 504.8 | 515.8 | 519.9 | 529.1 | 532.1 | 514.4 | 491.5 | 483.9 | 476.6 |
| 34° | 444.6 | 468.1 | 497.2 | 508.3 | 511.9 | 521.4 | 525.4 | 506.5 | 483.0 | 476.2 | 469.1 |
| 34.5° | 435.7 | 460.1 | 490.2 | 500.2 | 503.6 | 513.8 | 518.5 | 498.5 | 474.1 | 468.2 | 461.3 |
| 35° | 426.7 | 451.7 | 482.7 | 492.2 | 495.3 | 506.0 | 511.6 | 490.5 | 465.4 | 460.0 | 453.6 |
| 35.5° | 418.2 | 443.4 | 475.4 | 484.0 | 486.6 | 498.0 | 504.4 | 482.3 | 456.7 | 451.9 | 445.7 |
| 36° | 409.1 | 435.2 | 467.8 | 476.4 | 478.0 | 490.3 | 497.1 | 474.0 | 448.1 | 443.8 | 438.0 |
| 36.5° | 401.1 | 426.7 | 460.2 | 468.2 | 469.3 | 482.3 | 489.6 | 465.6 | 439.0 | 435.5 | 430.2 |
| 37° | 388.0 | 418.2 | 452.5 | 460.0 | 460.4 | 473.9 | 482.1 | 457.2 | 429.1 | 427.1 | 422.1 |
| 37.5° | 374.9 | 409.7 | 444.9 | 451.6 | 451.6 | 465.8 | 474.4 | 448.5 | 416.6 | 418.8 | 414.2 |
| 38° | 357.7 | 401.2 | 437.0 | 443.3 | 442.2 | 457.4 | 466.7 | 440.0 | 402.5 | 410.4 | 406.5 |
| 38.5° | 341.9 | 392.8 | 429.4 | 434.7 | 432.7 | 449.0 | 459.0 | 431.6 | 386.6 | 401.9 | 398.9 |
| 39° | 325.8 | 384.2 | 421.4 | 426.7 | 420.1 | 440.8 | 451.1 | 422.9 | 369.4 | 392.4 | 391.0 |
| 39.5° | 309.5 | 370.7 | 413.7 | 418.1 | 407.0 | 432.2 | 443.2 | 414.6 | 351.2 | 380.8 | 383.4 |
| 40° | 292.2 | 355.6 | 406.0 | 409.7 | 391.4 | 423.8 | 435.4 | 402.3 | 333.5 | 367.5 | 375.9 |
| 40.5° | 275.3 | 339.8 | 398.3 | 401.3 | 374.0 | 415.3 | 427.6 | 389.7 | 316.5 | 352.4 | 368.8 |
| 41° | 258.0 | 324.2 | 390.6 | 389.9 | 356.2 | 403.5 | 419.6 | 375.2 | 299.4 | 336.6 | 361.6 |
| 41.5° | 241.1 | 308.8 | 383.2 | 379.0 | 338.4 | 392.4 | 412.2 | 359.4 | 283.0 | 320.2 | 354.7 |
| 42° | 225.0 | 293.1 | 375.8 | 365.4 | 320.8 | 378.1 | 404.5 | 343.1 | 265.8 | 303.7 | 347.5 |
| 42.5° | 210.0 | 276.6 | 368.6 | 350.8 | 303.6 | 362.9 | 397.2 | 325.8 | 249.4 | 288.0 | 340.7 |
| 43° | 195.0 | 260.0 | 361.4 | 335.1 | 287.1 | 346.5 | 390.0 | 309.9 | 232.2 | 272.5 | 333.6 |
| 43.5° | 179.7 | 243.7 | 354.1 | 318.8 | 270.3 | 329.6 | 382.8 | 293.8 | 215.9 | 257.1 | 326.6 |



TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45° | 135.9 | 198.0 | 332.9 | 271.0 | 220.0 | 280.6 | 361.5 | 246.4 | 169.9 | 210.7 | 305.7 |
| 45.5° | 122.6 | 183.2 | 325.9 | 256.0 | 204.0 | 264.8 | 354.4 | 230.3 | 155.2 | 195.7 | 298.7 |
| 46° | 110.0 | 168.7 | 318.8 | 240.9 | 188.7 | 249.1 | 347.0 | 214.7 | 141.0 | 181.0 | 291.9 |
| 46.5° | 97.3 | 154.4 | 311.8 | 225.6 | 173.6 | 233.0 | 340.1 | 199.4 | 127.2 | 167.2 | 280.8 |
| 47° | 85.6 | 140.1 | 303.4 | 210.1 | 158.8 | 216.8 | 332.8 | 184.3 | 113.8 | 153.2 | 267.5 |
| 47.5° | 74.9 | 127.0 | 292.8 | 195.1 | 144.2 | 201.4 | 325.4 | 169.9 | 102.4 | 139.8 | 252.0 |
| 48° | 65.0 | 114.2 | 280.2 | 180.6 | 130.4 | 186.5 | 317.9 | 156.0 | 91.1 | 126.6 | 234.8 |
| 48.5° | 56.5 | 102.0 | 266.6 | 166.6 | 117.0 | 171.9 | 307.7 | 142.1 | 79.8 | 114.1 | 217.7 |
| 49° | 49.2 | 90.3 | 253.5 | 153.2 | 105.6 | 157.5 | 294.5 | 128.4 | 68.6 | 102.8 | 200.2 |
| 49.5° | 43.0 | 79.2 | 238.2 | 139.7 | 94.3 | 143.5 | 280.9 | 115.5 | 59.1 | 91.5 | 183.2 |
| 50° | 37.7 | 68.8 | 223.3 | 126.4 | 83.0 | 129.7 | 264.7 | 104.4 | 50.7 | 80.2 | 166.5 |
| 50.5° | 33.6 | 59.2 | 206.7 | 113.6 | 71.7 | 116.8 | 247.4 | 93.3 | 43.1 | 69.0 | 151.0 |
| 51° | 29.3 | 51.2 | 189.4 | 101.4 | 60.5 | 105.4 | 229.5 | 82.3 | 36.3 | 59.8 | 135.7 |
| 51.5° | 25.2 | 44.2 | 172.6 | 89.8 | 51.9 | 94.0 | 211.5 | 71.2 | 30.4 | 51.3 | 121.6 |
| 52° | 21.0 | 38.4 | 156.4 | 79.1 | 43.7 | 82.6 | 194.0 | 60.3 | 24.9 | 43.4 | 109.8 |
| 52.5° | 16.9 | 34.1 | 140.5 | 68.9 | 36.3 | 71.2 | 177.2 | 51.5 | 19.9 | 36.2 | 98.1 |
| 53° | 14.7 | 29.8 | 126.2 | 59.3 | 30.0 | 60.0 | 161.2 | 43.5 | 15.9 | 30.0 | 86.4 |
| 53.5° | 14.0 | 25.5 | 112.3 | 50.4 | 24.4 | 51.0 | 145.6 | 36.6 | 14.2 | 24.5 | 74.6 |
| 54° | 13.5 | 21.2 | 99.2 | 42.6 | 19.2 | 42.7 | 130.9 | 30.3 | 13.6 | 19.6 | 62.9 |
| 54.5° | 12.9 | 17.0 | 86.8 | 35.1 | 15.3 | 35.6 | 116.6 | 24.9 | 13.0 | 15.1 | 53.7 |
| 55° | 12.4 | 13.9 | 75.8 | 29.7 | 14.0 | 29.1 | 104.2 | 19.8 | 12.4 | 12.1 | 45.9 |
| 55.5° | 11.9 | 12.5 | 65.2 | 24.4 | 13.5 | 23.3 | 92.0 | 15.2 | 11.9 | 11.6 | 38.8 |
| 56° | 11.4 | 12.0 | 55.8 | 19.1 | 12.8 | 18.1 | 79.6 | 12.3 | 11.5 | 11.2 | 32.7 |
| 56.5° | 11.0 | 11.5 | 47.4 | 13.8 | 12.2 | 13.9 | 67.3 | 11.8 | 11.0 | 10.8 | 27.3 |
| 57° | 10.6 | 11.1 | 40.0 | 11.8 | 11.7 | 11.9 | 57.6 | 11.3 | 10.6 | 10.4 | 22.9 |
| 57.5° | 10.1 | 10.7 | 34.0 | 11.4 | 11.3 | 11.4 | 48.7 | 10.9 | 10.1 | 9.9 | 19.3 |
| 58° | 9.7 | 10.3 | 29.6 | 11.0 | 10.8 | 11.0 | 40.6 | 10.5 | 9.7 | 9.6 | 16.4 |
| 58.5° | 9.3 | 9.9 | 25.3 | 10.6 | 10.4 | 10.6 | 33.6 | 10.1 | 9.3 | 9.2 | 14.1 |
| 59° | 8.9 | 9.5 | 20.9 | 10.1 | 9.9 | 10.1 | 27.3 | 9.7 | 8.9 | 8.9 | 12.2 |
| 59.5° | 8.6 | 9.2 | 16.6 | 9.8 | 9.5 | 9.7 | 22.2 | 9.4 | 8.6 | 8.6 | 10.9 |
| 60° | 8.3 | 8.9 | 14.4 | 9.4 | 9.1 | 9.4 | 18.2 | 9.1 | 8.3 | 8.3 | 9.8 |
| 60.5° | 8.0 | 8.6 | 12.5 | 9.1 | 8.7 | 9.1 | 15.2 | 8.7 | 7.9 | 8.1 | 8.9 |
| 61° | 7.7 | 8.3 | 11.1 | 8.8 | 8.4 | 8.7 | 12.9 | 8.5 | 7.6 | 7.8 | 8.4 |
| 61.5° | 7.4 | 8.0 | 9.8 | 8.5 | 8.1 | 8.4 | 11.3 | 8.2 | 7.2 | 7.5 | 8.1 |
| 62° | 7.0 | 7.7 | 9.0 | 8.2 | 7.8 | 8.2 | 10.0 | 7.9 | 6.9 | 7.2 | 7.8 |
| 62.5° | 6.7 | 7.5 | 8.4 | 7.9 | 7.5 | 7.9 | 9.1 | 7.6 | 6.6 | 6.9 | 7.5 |
| 63° | 6.4 | 7.1 | 8.1 | 7.7 | 7.0 | 7.6 | 8.4 | 7.4 | 6.3 | 6.7 | 7.1 |
| 63.5° | 6.2 | 6.9 | 7.9 | 7.4 | 6.7 | 7.2 | 8.1 | 7.0 | 6.1 | 6.4 | 6.9 |
| 64° | 5.9 | 6.6 | 7.6 | 7.0 | 6.5 | 7.0 | 7.8 | 6.8 | 5.8 | 6.2 | 6.6 |
| 64.5° | 5.7 | 6.4 | 7.4 | 6.8 | 6.2 | 6.7 | 7.5 | 6.5 | 5.6 | 6.0 | 6.4 |
| 65° | 5.5 | 6.2 | 7.0 | 6.6 | 5.9 | 6.5 | 7.1 | 6.3 | 5.4 | 5.8 | 6.2 |
| 65.5° | 5.3 | 6.0 | 6.8 | 6.3 | 5.7 | 6.3 | 6.8 | 6.1 | 5.1 | 5.6 | 6.0 |
| 66° | 5.0 | 5.7 | 6.5 | 6.1 | 5.5 | 6.0 | 6.6 | 5.8 | 4.9 | 5.4 | 5.8 |



TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 67.5° | 4.5 | 5.1 | 5.9 | 5.5 | 4.8 | 5.4 | 6.0 | 5.2 | 4.2 | 4.8 | 5.2 |
| 68° | 4.2 | 4.9 | 5.7 | 5.3 | 4.6 | 5.2 | 5.7 | 5.0 | 4.1 | 4.6 | 5.0 |
| 68.5° | 4.0 | 4.8 | 5.5 | 5.1 | 4.3 | 5.0 | 5.5 | 4.8 | 3.9 | 4.3 | 4.8 |
| 69° | 3.8 | 4.6 | 5.3 | 4.9 | 4.1 | 4.8 | 5.3 | 4.7 | 3.7 | 4.2 | 4.6 |
| 69.5° | 3.7 | 4.3 | 5.1 | 4.7 | 4.0 | 4.7 | 5.1 | 4.5 | 3.6 | 4.0 | 4.3 |
| 70° | 3.5 | 4.1 | 4.9 | 4.5 | 3.8 | 4.5 | 4.9 | 4.2 | 3.4 | 3.8 | 4.1 |
| 70.5° | 3.4 | 4.0 | 4.7 | 4.3 | 3.6 | 4.2 | 4.8 | 4.0 | 3.3 | 3.7 | 4.0 |
| 71° | 3.2 | 3.8 | 4.5 | 4.1 | 3.5 | 4.1 | 4.6 | 3.9 | 3.1 | 3.5 | 3.8 |
| 71.5° | 3.1 | 3.7 | 4.2 | 3.9 | 3.3 | 3.9 | 4.3 | 3.7 | 3.0 | 3.4 | 3.6 |
| 72° | 2.9 | 3.5 | 4.1 | 3.8 | 3.2 | 3.7 | 4.1 | 3.6 | 2.8 | 3.2 | 3.5 |
| 72.5° | 2.8 | 3.4 | 3.9 | 3.6 | 3.0 | 3.6 | 3.9 | 3.4 | 2.7 | 3.1 | 3.3 |
| 73° | 2.7 | 3.2 | 3.7 | 3.5 | 2.9 | 3.4 | 3.8 | 3.3 | 2.6 | 3.0 | 3.2 |
| 73.5° | 2.5 | 3.1 | 3.6 | 3.3 | 2.8 | 3.3 | 3.6 | 3.1 | 2.5 | 2.8 | 3.0 |
| 74° | 2.4 | 2.9 | 3.4 | 3.2 | 2.7 | 3.2 | 3.5 | 3.0 | 2.3 | 2.7 | 2.9 |
| 74.5° | 2.3 | 2.8 | 3.2 | 3.0 | 2.5 | 3.0 | 3.3 | 2.9 | 2.2 | 2.6 | 2.7 |
| 75° | 2.2 | 2.7 | 3.1 | 2.9 | 2.4 | 2.9 | 3.2 | 2.7 | 2.1 | 2.4 | 2.6 |
| 75.5° | 2.1 | 2.5 | 2.9 | 2.8 | 2.3 | 2.8 | 3.0 | 2.6 | 2.0 | 2.3 | 2.5 |
| 76° | 2.0 | 2.4 | 2.8 | 2.7 | 2.2 | 2.7 | 2.9 | 2.5 | 1.9 | 2.2 | 2.3 |
| 76.5° | 1.9 | 2.3 | 2.7 | 2.5 | 2.1 | 2.5 | 2.7 | 2.3 | 1.8 | 2.1 | 2.2 |
| 77° | 1.8 | 2.2 | 2.5 | 2.4 | 2.0 | 2.4 | 2.6 | 2.2 | 1.7 | 2.0 | 2.1 |
| 77.5° | 1.7 | 2.1 | 2.4 | 2.3 | 1.9 | 2.3 | 2.5 | 2.1 | 1.6 | 1.9 | 2.0 |
| 78° | 1.6 | 2.0 | 2.3 | 2.2 | 1.8 | 2.2 | 2.3 | 2.0 | 1.4 | 1.8 | 1.8 |
| 78.5° | 1.4 | 1.8 | 2.1 | 2.1 | 1.7 | 2.1 | 2.2 | 1.9 | 1.3 | 1.6 | 1.7 |
| 79° | 1.3 | 1.7 | 2.0 | 1.9 | 1.6 | 2.0 | 2.1 | 1.8 | 1.3 | 1.4 | 1.6 |
| 79.5° | 1.2 | 1.6 | 1.9 | 1.8 | 1.4 | 1.9 | 2.0 | 1.7 | 1.2 | 1.3 | 1.4 |
| 80° | 1.1 | 1.4 | 1.8 | 1.7 | 1.3 | 1.7 | 1.8 | 1.6 | 1.1 | 1.2 | 1.3 |
| 80.5° | 1.0 | 1.3 | 1.7 | 1.6 | 1.3 | 1.6 | 1.7 | 1.3 | 1.0 | 1.1 | 1.2 |
| 81° | 0.9 | 1.2 | 1.6 | 1.4 | 1.2 | 1.4 | 1.6 | 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: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

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: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 0° | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 | 752.9 |
| 0.5° | 752.7 | 752.0 | 752.3 | 752.7 | 752.9 | 752.7 |
| 1° | 752.1 | 751.2 | 751.5 | 752.0 | 752.4 | 752.3 |
| 1.5° | 751.3 | 750.4 | 750.7 | 751.2 | 751.6 | 751.8 |
| 2° | 750.6 | 749.6 | 749.8 | 750.4 | 750.9 | 751.3 |
| 2.5° | 749.8 | 748.6 | 748.8 | 749.5 | 750.1 | 750.7 |
| 3° | 748.9 | 747.5 | 747.8 | 748.3 | 749.3 | 750.0 |
| 3.5° | 747.8 | 746.3 | 746.5 | 747.3 | 748.2 | 749.2 |
| 4° | 746.7 | 744.8 | 745.1 | 746.0 | 747.3 | 748.3 |
| 4.5° | 745.3 | 743.1 | 743.5 | 744.6 | 746.2 | 747.4 |
| 5° | 743.8 | 741.4 | 741.7 | 743.1 | 744.8 | 746.3 |
| 5.5° | 742.1 | 739.3 | 739.7 | 741.6 | 743.5 | 745.0 |
| 6° | 740.2 | 737.3 | 737.8 | 739.8 | 741.9 | 743.6 |
| 6.5° | 738.3 | 735.0 | 735.5 | 737.9 | 740.2 | 741.9 |
| 7° | 736.2 | 732.6 | 733.1 | 735.8 | 738.3 | 740.0 |
| 7.5° | 733.8 | 730.0 | 730.5 | 733.5 | 736.2 | 738.1 |
| 8° | 731.4 | 727.4 | 727.9 | 731.1 | 733.9 | 735.8 |
| 8.5° | 729.0 | 724.6 | 725.2 | 728.5 | 731.3 | 733.4 |
| 9° | 726.4 | 721.7 | 722.4 | 725.8 | 728.8 | 731.0 |
| 9.5° | 723.7 | 718.7 | 719.4 | 722.9 | 726.0 | 728.3 |
| 10° | 721.0 | 715.7 | 716.4 | 719.7 | 723.2 | 725.8 |
| 10.5° | 718.0 | 712.4 | 713.2 | 716.5 | 720.2 | 723.0 |
| 11° | 715.0 | 709.0 | 709.9 | 713.1 | 717.1 | 720.0 |
| 11.5° | 711.9 | 705.6 | 706.5 | 709.7 | 713.7 | 716.8 |
| 12° | 708.6 | 701.8 | 702.9 | 706.1 | 710.3 | 713.5 |
| 12.5° | 705.0 | 698.0 | 699.1 | 702.2 | 706.7 | 710.2 |
| 13° | 701.5 | 694.1 | 695.3 | 698.4 | 703.1 | 706.7 |
| 13.5° | 697.7 | 689.9 | 691.3 | 694.6 | 699.2 | 703.0 |
| 14° | 693.9 | 685.8 | 687.0 | 690.4 | 695.3 | 699.1 |
| 14.5° | 689.9 | 681.6 | 682.8 | 686.2 | 691.1 | 695.1 |
| 15° | 685.8 | 677.2 | 678.3 | 681.9 | 686.9 | 691.2 |
| 15.5° | 681.6 | 672.5 | 673.9 | 677.4 | 682.5 | 686.8 |
| 16° | 677.3 | 668.0 | 669.2 | 672.8 | 677.9 | 682.5 |
| 16.5° | 672.8 | 663.3 | 664.5 | 668.2 | 673.3 | 678.1 |
| 17° | 668.2 | 658.4 | 659.6 | 663.2 | 668.7 | 673.6 |
| 17.5° | 663.5 | 653.5 | 654.6 | 658.2 | 663.7 | 668.8 |
| 18° | 658.6 | 648.2 | 649.4 | 653.1 | 658.9 | 664.0 |
| 18.5° | 653.7 | 643.0 | 644.2 | 647.9 | 653.7 | 659.1 |
| 19° | 648.7 | 637.6 | 638.9 | 642.6 | 648.5 | 654.0 |
| 19.5° | 643.4 | 632.1 | 633.3 | 637.2 | 643.2 | 648.9 |
| 20° | 638.2 | 626.5 | 627.8 | 631.6 | 637.8 | 643.6 |
| 20.5° | 632.8 | 620.9 | 622.0 | 626.0 | 632.3 | 638.1 |
| 21° | 627.2 | 615.3 | 616.2 | 620.3 | 626.5 | 632.5 |

TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 610.1 | 597.8 | 598.3 | 602.5 | 609.0 | 615.4 |
| 23° | 604.3 | 591.6 | 592.1 | 596.5 | 602.8 | 609.5 |
| 23.5° | 598.4 | 585.5 | 586.2 | 590.4 | 596.7 | 603.5 |
| 24° | 592.5 | 579.0 | 579.7 | 584.1 | 590.6 | 597.5 |
| 24.5° | 586.3 | 572.4 | 573.5 | 577.7 | 584.3 | 591.4 |
| 25° | 580.1 | 565.2 | 567.0 | 571.1 | 578.0 | 585.2 |
| 25.5° | 573.8 | 558.1 | 560.4 | 564.7 | 571.4 | 578.6 |
| 26° | 567.4 | 550.7 | 553.3 | 558.2 | 565.0 | 571.8 |
| 26.5° | 560.4 | 543.3 | 546.4 | 551.6 | 558.5 | 564.8 |
| 27° | 553.3 | 535.5 | 539.0 | 544.6 | 551.8 | 557.7 |
| 27.5° | 546.2 | 527.7 | 531.6 | 537.8 | 544.8 | 550.3 |
| 28° | 538.7 | 519.7 | 523.8 | 531.0 | 537.6 | 542.9 |
| 28.5° | 531.2 | 511.6 | 516.2 | 523.8 | 530.2 | 535.3 |
| 29° | 523.5 | 503.3 | 508.5 | 517.1 | 522.9 | 527.3 |
| 29.5° | 515.9 | 495.3 | 500.6 | 510.1 | 515.4 | 519.6 |
| 30° | 508.0 | 487.0 | 492.5 | 503.0 | 507.4 | 511.6 |
| 30.5° | 500.0 | 478.6 | 484.6 | 495.7 | 499.8 | 503.4 |
| 31° | 491.9 | 470.0 | 476.4 | 488.8 | 491.9 | 495.2 |
| 31.5° | 483.7 | 461.7 | 468.2 | 481.5 | 484.0 | 486.9 |
| 32° | 475.7 | 453.1 | 459.9 | 474.1 | 475.9 | 478.8 |
| 32.5° | 467.7 | 444.4 | 451.8 | 466.4 | 468.1 | 470.4 |
| 33° | 459.4 | 435.7 | 443.5 | 459.2 | 460.1 | 461.8 |
| 33.5° | 451.0 | 426.7 | 435.3 | 451.6 | 451.9 | 453.2 |
| 34° | 442.6 | 418.1 | 426.8 | 444.0 | 443.9 | 444.6 |
| 34.5° | 434.2 | 409.2 | 418.2 | 436.1 | 435.8 | 435.7 |
| 35° | 425.8 | 400.8 | 409.8 | 428.2 | 427.6 | 426.7 |
| 35.5° | 417.6 | 390.7 | 401.3 | 420.5 | 419.6 | 418.2 |
| 36° | 409.0 | 377.4 | 392.7 | 412.6 | 411.2 | 409.1 |
| 36.5° | 400.6 | 361.4 | 384.3 | 404.7 | 403.0 | 401.1 |
| 37° | 392.2 | 345.0 | 376.2 | 396.7 | 394.7 | 388.0 |
| 37.5° | 383.8 | 328.9 | 367.3 | 388.9 | 386.4 | 374.9 |
| 38° | 376.1 | 312.0 | 354.5 | 381.1 | 378.1 | 357.7 |
| 38.5° | 363.2 | 295.4 | 339.5 | 373.4 | 369.5 | 341.9 |
| 39° | 349.0 | 278.1 | 324.1 | 366.0 | 362.2 | 325.8 |
| 39.5° | 333.6 | 260.8 | 309.0 | 358.3 | 349.2 | 309.5 |
| 40° | 318.1 | 244.2 | 293.8 | 350.9 | 335.9 | 292.2 |
| 40.5° | 302.8 | 227.8 | 278.3 | 343.6 | 320.6 | 275.3 |
| 41° | 286.9 | 212.3 | 262.0 | 336.5 | 305.6 | 258.0 |
| 41.5° | 270.8 | 197.2 | 245.9 | 329.3 | 291.2 | 241.1 |
| 42° | 254.2 | 182.1 | 230.2 | 322.2 | 276.7 | 225.0 |
| 42.5° | 238.4 | 166.8 | 215.4 | 315.3 | 261.6 | 210.0 |
| 43° | 222.9 | 152.2 | 200.9 | 308.4 | 246.0 | 195.0 |
| 43.5° | 208.1 | 138.3 | 186.5 | 301.6 | 230.3 | 179.7 |

TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|-------|--------|-------|
| 45° | 164.7 | 99.4 | 144.6 | 280.9 | 187.1 | 135.9 |
| 45.5° | 150.6 | 87.7 | 131.2 | 270.5 | 173.2 | 122.6 |
| 46° | 136.6 | 76.4 | 118.9 | 259.4 | 159.4 | 110.0 |
| 46.5° | 123.7 | 66.6 | 106.5 | 246.5 | 145.8 | 97.3 |
| 47° | 111.3 | 57.7 | 94.7 | 234.7 | 132.6 | 85.6 |
| 47.5° | 100.0 | 50.0 | 83.2 | 220.3 | 119.9 | 74.9 |
| 48° | 88.9 | 43.6 | 72.7 | 205.7 | 107.7 | 65.0 |
| 48.5° | 77.6 | 38.3 | 63.2 | 188.8 | 96.0 | 56.5 |
| 49° | 66.4 | 34.2 | 54.6 | 173.2 | 84.8 | 49.2 |
| 49.5° | 57.2 | 30.0 | 47.0 | 157.6 | 74.1 | 43.0 |
| 50° | 49.3 | 25.9 | 40.9 | 143.3 | 64.3 | 37.7 |
| 50.5° | 42.4 | 21.7 | 35.4 | 129.5 | 55.3 | 33.6 |
| 51° | 36.8 | 17.6 | 31.4 | 116.8 | 47.6 | 29.3 |
| 51.5° | 32.0 | 14.8 | 27.3 | 104.3 | 41.2 | 25.2 |
| 52° | 27.9 | 13.9 | 23.3 | 93.0 | 35.5 | 21.0 |
| 52.5° | 23.9 | 13.3 | 19.3 | 81.9 | 31.4 | 16.9 |
| 53° | 20.0 | 12.7 | 15.6 | 71.9 | 27.1 | 14.7 |
| 53.5° | 16.3 | 12.2 | 12.8 | 62.4 | 23.0 | 14.0 |
| 54° | 13.4 | 11.7 | 11.9 | 54.3 | 18.7 | 13.5 |
| 54.5° | 11.9 | 11.2 | 11.5 | 46.6 | 15.1 | 12.9 |
| 55° | 11.5 | 10.8 | 11.1 | 40.0 | 12.5 | 12.4 |
| 55.5° | 11.1 | 10.4 | 10.7 | 35.3 | 11.8 | 11.9 |
| 56° | 10.7 | 9.9 | 10.3 | 30.8 | 11.4 | 11.4 |
| 56.5° | 10.3 | 9.5 | 9.8 | 26.2 | 11.0 | 11.0 |
| 57° | 9.9 | 9.1 | 9.5 | 21.5 | 10.6 | 10.6 |
| 57.5° | 9.5 | 8.7 | 9.1 | 17.1 | 10.1 | 10.1 |
| 58° | 9.2 | 8.4 | 8.8 | 14.7 | 9.8 | 9.7 |
| 58.5° | 8.9 | 8.1 | 8.5 | 12.7 | 9.5 | 9.3 |
| 59° | 8.6 | 7.8 | 8.2 | 11.2 | 9.2 | 8.9 |
| 59.5° | 8.3 | 7.5 | 7.9 | 9.9 | 8.9 | 8.6 |
| 60° | 8.0 | 7.1 | 7.7 | 9.0 | 8.6 | 8.3 |
| 60.5° | 7.8 | 6.8 | 7.4 | 8.5 | 8.3 | 8.0 |
| 61° | 7.5 | 6.5 | 7.1 | 8.2 | 8.0 | 7.7 |
| 61.5° | 7.1 | 6.3 | 6.8 | 7.9 | 7.7 | 7.4 |
| 62° | 6.9 | 6.0 | 6.6 | 7.6 | 7.5 | 7.0 |
| 62.5° | 6.6 | 5.8 | 6.3 | 7.4 | 7.1 | 6.7 |
| 63° | 6.4 | 5.5 | 6.1 | 7.0 | 6.9 | 6.4 |
| 63.5° | 6.2 | 5.3 | 5.9 | 6.8 | 6.6 | 6.2 |
| 64° | 5.9 | 5.1 | 5.7 | 6.6 | 6.4 | 5.9 |
| 64.5° | 5.7 | 4.9 | 5.5 | 6.3 | 6.2 | 5.7 |
| 65° | 5.5 | 4.7 | 5.3 | 6.1 | 6.0 | 5.5 |
| 65.5° | 5.3 | 4.5 | 5.1 | 5.9 | 5.7 | 5.3 |
| 66° | 5.1 | 4.2 | 4.9 | 5.7 | 5.5 | 5.0 |



TEST NUMBER: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|------|--------|------|
| 67.5° | 4.6 | 3.7 | 4.3 | 5.1 | 4.9 | 4.5 |
| 68° | 4.3 | 3.5 | 4.1 | 4.9 | 4.7 | 4.2 |
| 68.5° | 4.1 | 3.4 | 4.0 | 4.7 | 4.6 | 4.0 |
| 69° | 4.0 | 3.2 | 3.8 | 4.5 | 4.3 | 3.8 |
| 69.5° | 3.8 | 3.1 | 3.7 | 4.3 | 4.1 | 3.7 |
| 70° | 3.7 | 3.0 | 3.5 | 4.1 | 3.9 | 3.5 |
| 70.5° | 3.5 | 2.8 | 3.4 | 3.9 | 3.8 | 3.4 |
| 71° | 3.4 | 2.7 | 3.2 | 3.8 | 3.6 | 3.2 |
| 71.5° | 3.2 | 2.6 | 3.1 | 3.6 | 3.5 | 3.1 |
| 72° | 3.1 | 2.5 | 3.0 | 3.4 | 3.3 | 2.9 |
| 72.5° | 3.0 | 2.3 | 2.8 | 3.3 | 3.2 | 2.8 |
| 73° | 2.8 | 2.2 | 2.7 | 3.1 | 3.0 | 2.7 |
| 73.5° | 2.7 | 2.1 | 2.6 | 3.0 | 2.9 | 2.5 |
| 74° | 2.6 | 2.0 | 2.5 | 2.8 | 2.7 | 2.4 |
| 74.5° | 2.4 | 1.9 | 2.3 | 2.7 | 2.6 | 2.3 |
| 75° | 2.3 | 1.8 | 2.2 | 2.6 | 2.5 | 2.2 |
| 75.5° | 2.2 | 1.7 | 2.1 | 2.4 | 2.4 | 2.1 |
| 76° | 2.1 | 1.6 | 2.0 | 2.3 | 2.2 | 2.0 |
| 76.5° | 2.0 | 1.6 | 1.9 | 2.2 | 2.1 | 1.9 |
| 77° | 1.9 | 1.4 | 1.8 | 2.0 | 2.0 | 1.8 |
| 77.5° | 1.8 | 1.3 | 1.7 | 1.9 | 1.9 | 1.7 |
| 78° | 1.7 | 1.2 | 1.6 | 1.8 | 1.8 | 1.6 |
| 78.5° | 1.6 | 1.1 | 1.4 | 1.7 | 1.6 | 1.4 |
| 79° | 1.4 | 1.0 | 1.3 | 1.6 | 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: P775872

CATALOG NUMBER: HCDJBL510CSD-HCD8TRH-1000lm-3500K

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 |



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° | 626.9 | 639.7 | 653.2 | 663.6 | 669.1 | 672.3 | 670.6 | 663.4 | 651.2 | 641.7 | 631.6 |
| 22° | 621.2 | 634.2 | 648.0 | 658.9 | 664.5 | 667.8 | 666.0 | 658.6 | 646.2 | 636.6 | 626.1 |



| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44° | 164.2 | 227.8 | 346.9 | 302.6 | 253.6 | 313.0 | 375.6 | 278.1 | 199.9 | 241.6 | 319.4 |
| 44.5° | 149.9 | 212.7 | 339.9 | 286.7 | 236.7 | 296.4 | 368.6 | 261.8 | 185.0 | 226.2 | 312.6 |



| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 66.5° | 4.8 | 5.5 | 6.3 | 5.9 | 5.2 | 5.8 | 6.4 | 5.6 | 4.7 | 5.2 | 5.5 |
| 67° | 4.6 | 5.3 | 6.1 | 5.7 | 5.0 | 5.6 | 6.2 | 5.4 | 4.5 | 5.0 | 5.3 |



| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 |

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

Scaled Data Report





| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 21.5° | 621.5 | 609.5 | 610.3 | 614.5 | 620.7 | 626.9 |
| 22° | 615.9 | 603.5 | 604.3 | 608.6 | 614.8 | 621.2 |



| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 44° | 193.1 | 124.6 | 172.3 | 294.7 | 215.1 | 164.2 |
| 44.5° | 178.8 | 112.2 | 158.3 | 287.8 | 201.1 | 149.9 |

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

Scaled Data Report



| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 66.5° | 4.9 | 4.0 | 4.7 | 5.5 | 5.3 | 4.8 |
| 67° | 4.8 | 3.9 | 4.6 | 5.3 | 5.1 | 4.6 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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 |

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

Scaled Data Report



(END OF REPORT)