

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: P775908

Luminaire Tested: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B024-HCD8TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K
Description: 8 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 770.5 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.28
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

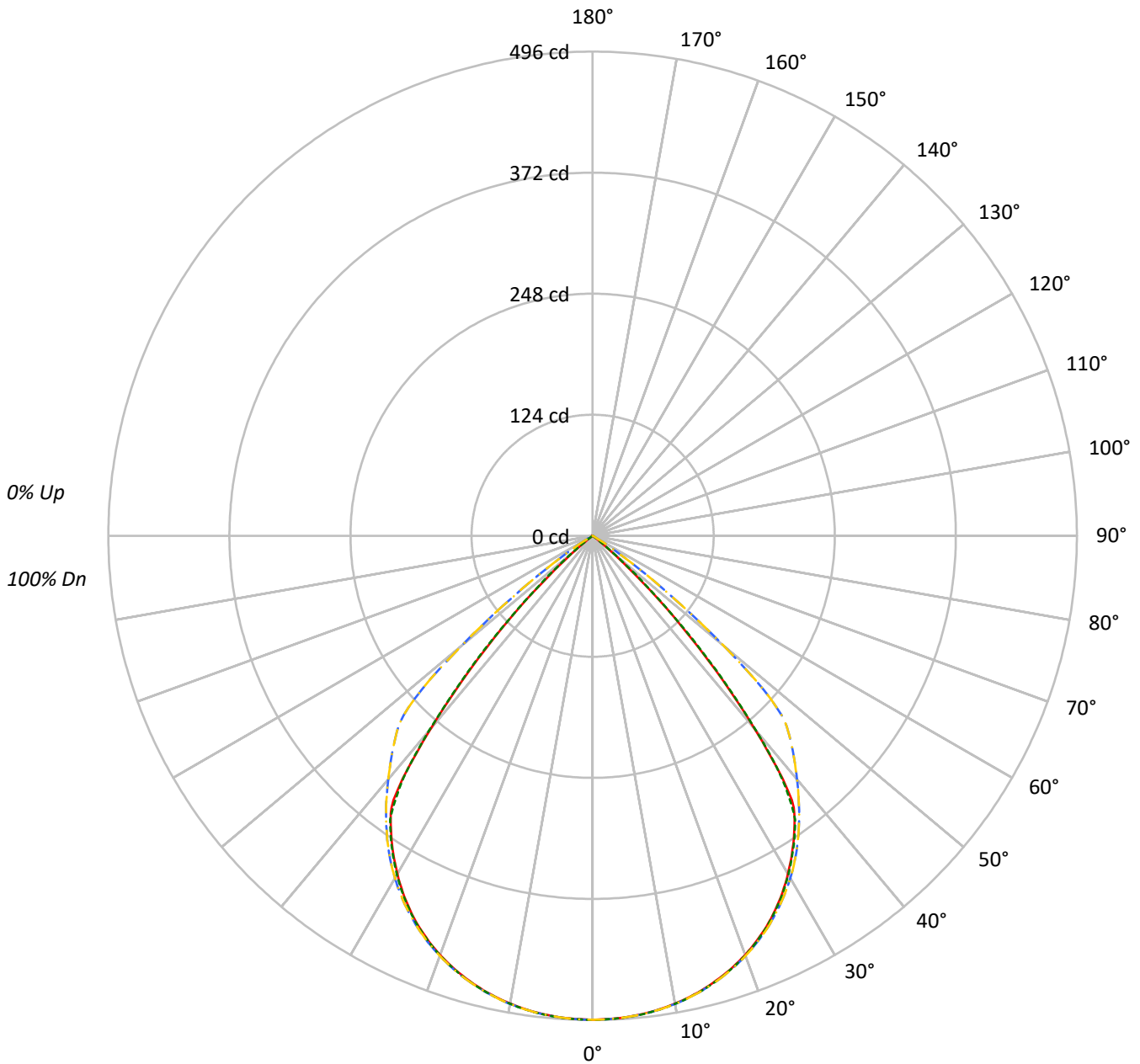
Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | | | | | | |
| RC | 80 | | | | | 70 | | | | | 50 | | | | | 30 | | | | | 10 | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 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 | 77 | 76 | | | | | 76 | | | |
| 4 | 93 | 85 | 78 | 73 | 91 | 84 | 78 | 73 | 81 | 76 | 72 | 79 | 75 | 71 | 77 | 74 | 70 | 69 | | | | | 69 | | | |
| 5 | 88 | 78 | 71 | 66 | 86 | 77 | 71 | 66 | 75 | 70 | 65 | 73 | 68 | 65 | 72 | 67 | 64 | 62 | | | | | 62 | | | |
| 6 | 82 | 72 | 65 | 60 | 81 | 71 | 64 | 60 | 69 | 64 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 57 | | | | | 57 | | | |
| 7 | 77 | 66 | 59 | 55 | 76 | 66 | 59 | 54 | 64 | 58 | 54 | 63 | 58 | 54 | 62 | 57 | 53 | 52 | | | | | 52 | | | |
| 8 | 72 | 62 | 55 | 50 | 71 | 61 | 54 | 50 | 60 | 54 | 50 | 59 | 53 | 49 | 58 | 53 | 49 | 47 | | | | | 47 | | | |
| 9 | 68 | 57 | 50 | 46 | 67 | 57 | 50 | 46 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 44 | | | | | 44 | | | |
| 10 | 64 | 53 | 47 | 42 | 63 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 50 | 45 | 42 | 40 | | | | | 40 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 11889 | 11889 | 11889 | 11889 |
| 5° | 11876 | 11883 | 11876 | 11883 |
| 10° | 11848 | 11855 | 11848 | 11855 |
| 15° | 11779 | 11789 | 11779 | 11789 |
| 20° | 11659 | 11669 | 11659 | 11669 |
| 25° | 11440 | 11453 | 11440 | 11453 |
| 30° | 11072 | 11097 | 11072 | 11097 |
| 35° | 10553 | 10582 | 10553 | 10582 |
| 40° | 8088 | 8157 | 8088 | 8157 |
| 45° | 4012 | 4113 | 4012 | 4113 |
| 50° | 880 | 1074 | 880 | 1074 |
| 55° | 13 | 17 | 13 | 17 |
| 60° | 10 | 14 | 10 | 14 |
| 65° | 11 | 11 | 11 | 11 |
| 70° | 7 | 7 | 7 | 7 |
| 75° | 9 | 9 | 9 | 9 |
| 80° | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9607 cd/sqm



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 46.9 | 6.1 |
| 10°-20° | 133.9 | 17.4 |
| 20°-30° | 199.4 | 25.9 |
| 30°-40° | 225.6 | 29.3 |
| 40°-50° | 144.0 | 18.7 |
| 50°-60° | 20.4 | 2.6 |
| 60°-70° | 0.2 | 0.0 |
| 70°-80° | 0.1 | 0.0 |
| 80°-90° | 0.0 | 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° | 380.3 | 49.4 |
| 0°-40° | 605.8 | 78.6 |
| 0°-60° | 770.2 | 100.0 |
| 0°-90° | 770.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 770.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|-----|-----|------|------|------|------|
| 0° | 496 | 496 | 496 | 496 | 496 | |
| 5° | 493 | 494 | 493 | 494 | 493 | 47 |
| 15° | 474 | 475 | 474 | 475 | 474 | 134 |
| 25° | 432 | 433 | 432 | 433 | 432 | 199 |
| 35° | 360 | 362 | 360 | 362 | 360 | 219 |
| 45° | 118 | 121 | 118 | 121 | 118 | 94 |
| 55° | 0 | 0 | 0 | 0 | 0 | 3 |
| 65° | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0° | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 |
| 0.5° | 495.6 | 495.7 | 495.8 | 495.9 | 495.9 | 495.9 | 495.8 | 495.7 | 495.6 | 495.7 | 495.8 |
| 1° | 495.5 | 495.6 | 495.7 | 495.8 | 495.8 | 495.8 | 495.7 | 495.6 | 495.5 | 495.6 | 495.7 |
| 1.5° | 495.4 | 495.5 | 495.6 | 495.7 | 495.7 | 495.7 | 495.6 | 495.5 | 495.4 | 495.5 | 495.6 |
| 2° | 495.3 | 495.3 | 495.5 | 495.6 | 495.5 | 495.6 | 495.5 | 495.3 | 495.3 | 495.3 | 495.5 |
| 2.5° | 495.1 | 495.2 | 495.3 | 495.4 | 495.4 | 495.4 | 495.3 | 495.2 | 495.1 | 495.2 | 495.3 |
| 3° | 494.9 | 494.9 | 495.1 | 495.2 | 495.1 | 495.2 | 495.1 | 494.9 | 494.9 | 494.9 | 495.1 |
| 3.5° | 494.6 | 494.7 | 494.8 | 494.9 | 494.9 | 494.9 | 494.8 | 494.7 | 494.6 | 494.7 | 494.8 |
| 4° | 494.3 | 494.4 | 494.5 | 494.6 | 494.5 | 494.6 | 494.5 | 494.4 | 494.3 | 494.4 | 494.5 |
| 4.5° | 493.8 | 493.9 | 494.0 | 494.1 | 494.1 | 494.1 | 494.0 | 493.9 | 493.8 | 493.9 | 494.0 |
| 5° | 493.4 | 493.5 | 493.7 | 493.7 | 493.7 | 493.7 | 493.7 | 493.5 | 493.4 | 493.5 | 493.7 |
| 5.5° | 493.0 | 493.1 | 493.2 | 493.3 | 493.2 | 493.3 | 493.2 | 493.1 | 493.0 | 493.1 | 493.2 |
| 6° | 492.5 | 492.6 | 492.7 | 492.8 | 492.8 | 492.8 | 492.7 | 492.6 | 492.5 | 492.6 | 492.7 |
| 6.5° | 491.9 | 492.0 | 492.2 | 492.3 | 492.2 | 492.3 | 492.2 | 492.0 | 491.9 | 492.0 | 492.2 |
| 7° | 491.3 | 491.4 | 491.6 | 491.6 | 491.6 | 491.6 | 491.6 | 491.4 | 491.3 | 491.4 | 491.6 |
| 7.5° | 490.7 | 490.8 | 490.9 | 491.0 | 490.9 | 491.0 | 490.9 | 490.8 | 490.7 | 490.8 | 490.9 |
| 8° | 489.9 | 490.1 | 490.3 | 490.3 | 490.3 | 490.3 | 490.3 | 490.1 | 489.9 | 490.1 | 490.3 |
| 8.5° | 489.2 | 489.3 | 489.5 | 489.5 | 489.4 | 489.5 | 489.5 | 489.3 | 489.2 | 489.3 | 489.5 |
| 9° | 488.4 | 488.5 | 488.7 | 488.8 | 488.7 | 488.8 | 488.7 | 488.5 | 488.4 | 488.5 | 488.7 |
| 9.5° | 487.5 | 487.6 | 487.8 | 488.0 | 487.7 | 488.0 | 487.8 | 487.6 | 487.5 | 487.6 | 487.8 |
| 10° | 486.6 | 486.8 | 487.0 | 487.0 | 486.9 | 487.0 | 487.0 | 486.8 | 486.6 | 486.8 | 487.0 |
| 10.5° | 485.6 | 485.9 | 486.1 | 486.1 | 486.0 | 486.1 | 486.1 | 485.9 | 485.6 | 485.9 | 486.1 |
| 11° | 484.6 | 484.8 | 485.1 | 485.0 | 484.9 | 485.0 | 485.1 | 484.8 | 484.6 | 484.8 | 485.1 |
| 11.5° | 483.5 | 483.8 | 484.1 | 484.0 | 483.9 | 484.0 | 484.1 | 483.8 | 483.5 | 483.8 | 484.1 |
| 12° | 482.4 | 482.6 | 482.9 | 482.9 | 482.7 | 482.9 | 482.9 | 482.6 | 482.4 | 482.6 | 482.9 |
| 12.5° | 481.2 | 481.4 | 481.8 | 481.8 | 481.5 | 481.8 | 481.8 | 481.4 | 481.2 | 481.4 | 481.8 |
| 13° | 480.0 | 480.3 | 480.6 | 480.6 | 480.4 | 480.6 | 480.6 | 480.3 | 480.0 | 480.3 | 480.6 |
| 13.5° | 478.7 | 479.0 | 479.3 | 479.3 | 479.1 | 479.3 | 479.3 | 479.0 | 478.7 | 479.0 | 479.3 |
| 14° | 477.3 | 477.7 | 478.0 | 478.0 | 477.8 | 478.0 | 478.0 | 477.7 | 477.3 | 477.7 | 478.0 |
| 14.5° | 476.0 | 476.3 | 476.6 | 476.6 | 476.4 | 476.6 | 476.6 | 476.3 | 476.0 | 476.3 | 476.6 |
| 15° | 474.5 | 474.8 | 475.2 | 475.1 | 474.9 | 475.1 | 475.2 | 474.8 | 474.5 | 474.8 | 475.2 |
| 15.5° | 473.0 | 473.4 | 473.8 | 473.7 | 473.5 | 473.7 | 473.8 | 473.4 | 473.0 | 473.4 | 473.8 |
| 16° | 471.5 | 471.8 | 472.2 | 472.2 | 471.9 | 472.2 | 472.2 | 471.8 | 471.5 | 471.8 | 472.2 |
| 16.5° | 469.9 | 470.2 | 470.6 | 470.6 | 470.3 | 470.6 | 470.6 | 470.2 | 469.9 | 470.2 | 470.6 |
| 17° | 468.1 | 468.5 | 469.0 | 468.9 | 468.6 | 468.9 | 469.0 | 468.5 | 468.1 | 468.5 | 469.0 |
| 17.5° | 466.4 | 466.8 | 467.3 | 467.3 | 466.9 | 467.3 | 467.3 | 466.8 | 466.4 | 466.8 | 467.3 |
| 18° | 464.6 | 465.1 | 465.6 | 465.5 | 465.1 | 465.5 | 465.6 | 465.1 | 464.6 | 465.1 | 465.6 |
| 18.5° | 462.7 | 463.3 | 463.7 | 463.6 | 463.2 | 463.6 | 463.7 | 463.3 | 462.7 | 463.3 | 463.7 |
| 19° | 460.9 | 461.4 | 461.8 | 461.7 | 461.3 | 461.7 | 461.8 | 461.4 | 460.9 | 461.4 | 461.8 |
| 19.5° | 458.9 | 459.4 | 459.9 | 459.8 | 459.4 | 459.8 | 459.9 | 459.4 | 458.9 | 459.4 | 459.9 |
| 20° | 456.9 | 457.4 | 457.9 | 457.8 | 457.3 | 457.8 | 457.9 | 457.4 | 456.9 | 457.4 | 457.9 |
| 20.5° | 454.7 | 455.3 | 455.9 | 455.7 | 455.2 | 455.7 | 455.9 | 455.3 | 454.7 | 455.3 | 455.9 |
| 21° | 452.5 | 453.2 | 453.8 | 453.6 | 453.0 | 453.6 | 453.8 | 453.2 | 452.5 | 453.2 | 453.8 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 445.5 | 446.4 | 447.1 | 446.8 | 446.0 | 446.8 | 447.1 | 446.4 | 445.5 | 446.4 | 447.1 |
| 23° | 443.0 | 443.9 | 444.8 | 444.4 | 443.5 | 444.4 | 444.8 | 443.9 | 443.0 | 443.9 | 444.8 |
| 23.5° | 440.5 | 441.5 | 442.4 | 441.8 | 441.0 | 441.8 | 442.4 | 441.5 | 440.5 | 441.5 | 442.4 |
| 24° | 438.0 | 438.9 | 439.9 | 439.3 | 438.4 | 439.3 | 439.9 | 438.9 | 438.0 | 438.9 | 439.9 |
| 24.5° | 435.2 | 436.3 | 437.3 | 436.7 | 435.8 | 436.7 | 437.3 | 436.3 | 435.2 | 436.3 | 437.3 |
| 25° | 432.4 | 433.7 | 434.7 | 434.0 | 432.9 | 434.0 | 434.7 | 433.7 | 432.4 | 433.7 | 434.7 |
| 25.5° | 429.5 | 430.9 | 432.1 | 431.2 | 430.1 | 431.2 | 432.1 | 430.9 | 429.5 | 430.9 | 432.1 |
| 26° | 426.6 | 428.1 | 429.3 | 428.4 | 427.2 | 428.4 | 429.3 | 428.1 | 426.6 | 428.1 | 429.3 |
| 26.5° | 423.5 | 425.1 | 426.5 | 425.5 | 424.2 | 425.5 | 426.5 | 425.1 | 423.5 | 425.1 | 426.5 |
| 27° | 420.4 | 422.1 | 423.7 | 422.4 | 421.1 | 422.4 | 423.7 | 422.1 | 420.4 | 422.1 | 423.7 |
| 27.5° | 417.3 | 419.1 | 420.7 | 419.4 | 417.9 | 419.4 | 420.7 | 419.1 | 417.3 | 419.1 | 420.7 |
| 28° | 413.9 | 415.9 | 417.7 | 416.2 | 414.6 | 416.2 | 417.7 | 415.9 | 413.9 | 415.9 | 417.7 |
| 28.5° | 410.5 | 412.6 | 414.6 | 413.1 | 411.3 | 413.1 | 414.6 | 412.6 | 410.5 | 412.6 | 414.6 |
| 29° | 407.1 | 409.3 | 411.5 | 409.7 | 407.9 | 409.7 | 411.5 | 409.3 | 407.1 | 409.3 | 411.5 |
| 29.5° | 403.6 | 405.9 | 408.2 | 406.3 | 404.4 | 406.3 | 408.2 | 405.9 | 403.6 | 405.9 | 408.2 |
| 30° | 399.9 | 402.5 | 405.0 | 403.0 | 400.8 | 403.0 | 405.0 | 402.5 | 399.9 | 402.5 | 405.0 |
| 30.5° | 396.3 | 399.0 | 401.6 | 399.4 | 397.2 | 399.4 | 401.6 | 399.0 | 396.3 | 399.0 | 401.6 |
| 31° | 392.6 | 395.3 | 398.2 | 395.8 | 393.5 | 395.8 | 398.2 | 395.3 | 392.6 | 395.3 | 398.2 |
| 31.5° | 388.8 | 391.7 | 394.7 | 392.3 | 389.6 | 392.3 | 394.7 | 391.7 | 388.8 | 391.7 | 394.7 |
| 32° | 385.0 | 388.1 | 391.1 | 388.6 | 385.9 | 388.6 | 391.1 | 388.1 | 385.0 | 388.1 | 391.1 |
| 32.5° | 381.1 | 384.3 | 387.4 | 384.8 | 382.0 | 384.8 | 387.4 | 384.3 | 381.1 | 384.3 | 387.4 |
| 33° | 377.1 | 380.5 | 383.8 | 381.0 | 378.1 | 381.0 | 383.8 | 380.5 | 377.1 | 380.5 | 383.8 |
| 33.5° | 373.1 | 376.6 | 379.9 | 377.3 | 374.1 | 377.3 | 379.9 | 376.6 | 373.1 | 376.6 | 379.9 |
| 34° | 368.9 | 372.8 | 376.0 | 373.4 | 370.0 | 373.4 | 376.0 | 372.8 | 368.9 | 372.8 | 376.0 |
| 34.5° | 364.7 | 368.9 | 372.1 | 369.4 | 365.8 | 369.4 | 372.1 | 368.9 | 364.7 | 368.9 | 372.1 |
| 35° | 360.5 | 364.9 | 368.0 | 365.4 | 361.5 | 365.4 | 368.0 | 364.9 | 360.5 | 364.9 | 368.0 |
| 35.5° | 356.0 | 360.9 | 364.0 | 361.4 | 357.1 | 361.4 | 364.0 | 360.9 | 356.0 | 360.9 | 364.0 |
| 36° | 351.6 | 356.8 | 359.9 | 357.3 | 350.1 | 357.3 | 359.9 | 356.8 | 351.6 | 356.8 | 359.9 |
| 36.5° | 346.4 | 352.5 | 355.7 | 353.1 | 342.3 | 353.1 | 355.7 | 352.5 | 346.4 | 352.5 | 355.7 |
| 37° | 339.1 | 348.2 | 351.5 | 348.9 | 333.1 | 348.9 | 351.5 | 348.2 | 339.1 | 348.2 | 351.5 |
| 37.5° | 328.1 | 343.9 | 347.2 | 344.5 | 324.3 | 344.5 | 347.2 | 343.9 | 328.1 | 343.9 | 347.2 |
| 38° | 316.1 | 339.6 | 342.9 | 339.6 | 314.2 | 339.6 | 342.9 | 339.6 | 316.1 | 339.6 | 342.9 |
| 38.5° | 302.0 | 334.9 | 338.6 | 332.5 | 302.7 | 332.5 | 338.6 | 334.9 | 302.0 | 334.9 | 338.6 |
| 39° | 287.6 | 328.8 | 334.4 | 324.3 | 289.8 | 324.3 | 334.4 | 328.8 | 287.6 | 328.8 | 334.4 |
| 39.5° | 273.0 | 320.5 | 330.0 | 315.8 | 275.4 | 315.8 | 330.0 | 320.5 | 273.0 | 320.5 | 330.0 |
| 40° | 258.4 | 309.8 | 325.6 | 306.6 | 260.6 | 306.6 | 325.6 | 309.8 | 258.4 | 309.8 | 325.6 |
| 40.5° | 243.7 | 297.3 | 321.4 | 296.2 | 245.4 | 296.2 | 321.4 | 297.3 | 243.7 | 297.3 | 321.4 |
| 41° | 228.7 | 283.8 | 317.1 | 284.6 | 231.0 | 284.6 | 317.1 | 283.8 | 228.7 | 283.8 | 317.1 |
| 41.5° | 214.4 | 270.1 | 312.9 | 271.9 | 216.7 | 271.9 | 312.9 | 270.1 | 214.4 | 270.1 | 312.9 |
| 42° | 199.8 | 256.4 | 308.7 | 258.2 | 202.7 | 258.2 | 308.7 | 256.4 | 199.8 | 256.4 | 308.7 |
| 42.5° | 185.7 | 242.7 | 304.5 | 244.2 | 188.8 | 244.2 | 304.5 | 242.7 | 185.7 | 242.7 | 304.5 |
| 43° | 171.6 | 228.7 | 300.3 | 230.0 | 174.8 | 230.0 | 300.3 | 228.7 | 171.6 | 228.7 | 300.3 |
| 43.5° | 157.9 | 214.8 | 296.0 | 216.4 | 160.8 | 216.4 | 296.0 | 214.8 | 157.9 | 214.8 | 296.0 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45° | 118.3 | 173.8 | 283.3 | 176.4 | 121.3 | 176.4 | 283.3 | 173.8 | 118.3 | 173.8 | 283.3 |
| 45.5° | 105.8 | 160.7 | 278.9 | 163.1 | 109.1 | 163.1 | 278.9 | 160.7 | 105.8 | 160.7 | 278.9 |
| 46° | 94.0 | 147.8 | 273.4 | 150.2 | 97.5 | 150.2 | 273.4 | 147.8 | 94.0 | 147.8 | 273.4 |
| 46.5° | 82.6 | 135.0 | 266.9 | 137.5 | 86.1 | 137.5 | 266.9 | 135.0 | 82.6 | 135.0 | 266.9 |
| 47° | 71.2 | 122.4 | 257.7 | 125.0 | 76.1 | 125.0 | 257.7 | 122.4 | 71.2 | 122.4 | 257.7 |
| 47.5° | 60.4 | 110.1 | 247.5 | 112.9 | 67.6 | 112.9 | 247.5 | 110.1 | 60.4 | 110.1 | 247.5 |
| 48° | 50.9 | 98.5 | 235.3 | 101.2 | 59.2 | 101.2 | 235.3 | 98.5 | 50.9 | 98.5 | 235.3 |
| 48.5° | 42.3 | 87.4 | 221.8 | 90.1 | 50.8 | 90.1 | 221.8 | 87.4 | 42.3 | 87.4 | 221.8 |
| 49° | 35.7 | 76.4 | 206.6 | 79.5 | 42.4 | 79.5 | 206.6 | 76.4 | 35.7 | 76.4 | 206.6 |
| 49.5° | 29.5 | 65.6 | 191.1 | 69.6 | 35.0 | 69.6 | 191.1 | 65.6 | 29.5 | 65.6 | 191.1 |
| 50° | 23.6 | 55.6 | 175.2 | 61.0 | 28.8 | 61.0 | 175.2 | 55.6 | 23.6 | 55.6 | 175.2 |
| 50.5° | 18.8 | 46.5 | 159.5 | 52.9 | 22.7 | 52.9 | 159.5 | 46.5 | 18.8 | 46.5 | 159.5 |
| 51° | 14.1 | 38.9 | 144.3 | 45.2 | 17.2 | 45.2 | 144.3 | 38.9 | 14.1 | 38.9 | 144.3 |
| 51.5° | 10.1 | 32.5 | 130.1 | 37.9 | 13.5 | 37.9 | 130.1 | 32.5 | 10.1 | 32.5 | 130.1 |
| 52° | 6.1 | 26.4 | 116.3 | 31.3 | 10.8 | 31.3 | 116.3 | 26.4 | 6.1 | 26.4 | 116.3 |
| 52.5° | 2.2 | 21.2 | 102.9 | 25.3 | 8.1 | 25.3 | 102.9 | 21.2 | 2.2 | 21.2 | 102.9 |
| 53° | 1.3 | 16.5 | 90.2 | 20.2 | 5.5 | 20.2 | 90.2 | 16.5 | 1.3 | 16.5 | 90.2 |
| 53.5° | 0.9 | 12.2 | 79.0 | 15.3 | 3.2 | 15.3 | 79.0 | 12.2 | 0.9 | 12.2 | 79.0 |
| 54° | 0.6 | 8.4 | 68.4 | 11.2 | 0.8 | 11.2 | 68.4 | 8.4 | 0.6 | 8.4 | 68.4 |
| 54.5° | 0.3 | 4.6 | 58.5 | 8.4 | 0.4 | 8.4 | 58.5 | 4.6 | 0.3 | 4.6 | 58.5 |
| 55° | 0.3 | 1.6 | 49.6 | 5.7 | 0.4 | 5.7 | 49.6 | 1.6 | 0.3 | 1.6 | 49.6 |
| 55.5° | 0.3 | 0.9 | 41.1 | 3.5 | 0.4 | 3.5 | 41.1 | 0.9 | 0.3 | 0.9 | 41.1 |
| 56° | 0.3 | 0.7 | 33.6 | 2.1 | 0.3 | 2.1 | 33.6 | 0.7 | 0.3 | 0.7 | 33.6 |
| 56.5° | 0.3 | 0.4 | 27.7 | 0.8 | 0.3 | 0.8 | 27.7 | 0.4 | 0.3 | 0.4 | 27.7 |
| 57° | 0.3 | 0.3 | 22.2 | 0.5 | 0.3 | 0.5 | 22.2 | 0.3 | 0.3 | 0.3 | 22.2 |
| 57.5° | 0.3 | 0.3 | 17.2 | 0.3 | 0.3 | 0.3 | 17.2 | 0.3 | 0.3 | 0.3 | 17.2 |
| 58° | 0.3 | 0.3 | 12.8 | 0.3 | 0.3 | 0.3 | 12.8 | 0.3 | 0.3 | 0.3 | 12.8 |
| 58.5° | 0.2 | 0.2 | 9.2 | 0.3 | 0.3 | 0.3 | 9.2 | 0.2 | 0.2 | 0.2 | 9.2 |
| 59° | 0.2 | 0.2 | 7.0 | 0.2 | 0.3 | 0.2 | 7.0 | 0.2 | 0.2 | 0.2 | 7.0 |
| 59.5° | 0.2 | 0.2 | 5.1 | 0.2 | 0.3 | 0.2 | 5.1 | 0.2 | 0.2 | 0.2 | 5.1 |
| 60° | 0.2 | 0.2 | 3.4 | 0.2 | 0.3 | 0.2 | 3.4 | 0.2 | 0.2 | 0.2 | 3.4 |
| 60.5° | 0.2 | 0.2 | 2.0 | 0.2 | 0.2 | 0.2 | 2.0 | 0.2 | 0.2 | 0.2 | 2.0 |
| 61° | 0.2 | 0.2 | 1.3 | 0.2 | 0.2 | 0.2 | 1.3 | 0.2 | 0.2 | 0.2 | 1.3 |
| 61.5° | 0.2 | 0.2 | 0.7 | 0.2 | 0.2 | 0.2 | 0.7 | 0.2 | 0.2 | 0.2 | 0.7 |
| 62° | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 |
| 62.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 63° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 63.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 64° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 64.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 65° | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 |
| 65.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 66° | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 67.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 68° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 68.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 69° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 69.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 70° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 70.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 71° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 71.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 72° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 72.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 73° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 73.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 74° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 74.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 75° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 75.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 76° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 76.5° | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 |
| 77° | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 |
| 77.5° | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| 78° | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87° | 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 |
| 88° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 0° | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 | 495.8 |
| 0.5° | 495.9 | 495.9 | 495.9 | 495.8 | 495.7 | 495.6 |
| 1° | 495.8 | 495.8 | 495.8 | 495.7 | 495.6 | 495.5 |
| 1.5° | 495.7 | 495.7 | 495.7 | 495.6 | 495.5 | 495.4 |
| 2° | 495.6 | 495.5 | 495.6 | 495.5 | 495.3 | 495.3 |
| 2.5° | 495.4 | 495.4 | 495.4 | 495.3 | 495.2 | 495.1 |
| 3° | 495.2 | 495.1 | 495.2 | 495.1 | 494.9 | 494.9 |
| 3.5° | 494.9 | 494.9 | 494.9 | 494.8 | 494.7 | 494.6 |
| 4° | 494.6 | 494.5 | 494.6 | 494.5 | 494.4 | 494.3 |
| 4.5° | 494.1 | 494.1 | 494.1 | 494.0 | 493.9 | 493.8 |
| 5° | 493.7 | 493.7 | 493.7 | 493.7 | 493.5 | 493.4 |
| 5.5° | 493.3 | 493.2 | 493.3 | 493.2 | 493.1 | 493.0 |
| 6° | 492.8 | 492.8 | 492.8 | 492.7 | 492.6 | 492.5 |
| 6.5° | 492.3 | 492.2 | 492.3 | 492.2 | 492.0 | 491.9 |
| 7° | 491.6 | 491.6 | 491.6 | 491.6 | 491.4 | 491.3 |
| 7.5° | 491.0 | 490.9 | 491.0 | 490.9 | 490.8 | 490.7 |
| 8° | 490.3 | 490.3 | 490.3 | 490.3 | 490.1 | 489.9 |
| 8.5° | 489.5 | 489.4 | 489.5 | 489.5 | 489.3 | 489.2 |
| 9° | 488.8 | 488.7 | 488.8 | 488.7 | 488.5 | 488.4 |
| 9.5° | 488.0 | 487.7 | 488.0 | 487.8 | 487.6 | 487.5 |
| 10° | 487.0 | 486.9 | 487.0 | 487.0 | 486.8 | 486.6 |
| 10.5° | 486.1 | 486.0 | 486.1 | 486.1 | 485.9 | 485.6 |
| 11° | 485.0 | 484.9 | 485.0 | 485.1 | 484.8 | 484.6 |
| 11.5° | 484.0 | 483.9 | 484.0 | 484.1 | 483.8 | 483.5 |
| 12° | 482.9 | 482.7 | 482.9 | 482.9 | 482.6 | 482.4 |
| 12.5° | 481.8 | 481.5 | 481.8 | 481.8 | 481.4 | 481.2 |
| 13° | 480.6 | 480.4 | 480.6 | 480.6 | 480.3 | 480.0 |
| 13.5° | 479.3 | 479.1 | 479.3 | 479.3 | 479.0 | 478.7 |
| 14° | 478.0 | 477.8 | 478.0 | 478.0 | 477.7 | 477.3 |
| 14.5° | 476.6 | 476.4 | 476.6 | 476.6 | 476.3 | 476.0 |
| 15° | 475.1 | 474.9 | 475.1 | 475.2 | 474.8 | 474.5 |
| 15.5° | 473.7 | 473.5 | 473.7 | 473.8 | 473.4 | 473.0 |
| 16° | 472.2 | 471.9 | 472.2 | 472.2 | 471.8 | 471.5 |
| 16.5° | 470.6 | 470.3 | 470.6 | 470.6 | 470.2 | 469.9 |
| 17° | 468.9 | 468.6 | 468.9 | 469.0 | 468.5 | 468.1 |
| 17.5° | 467.3 | 466.9 | 467.3 | 467.3 | 466.8 | 466.4 |
| 18° | 465.5 | 465.1 | 465.5 | 465.6 | 465.1 | 464.6 |
| 18.5° | 463.6 | 463.2 | 463.6 | 463.7 | 463.3 | 462.7 |
| 19° | 461.7 | 461.3 | 461.7 | 461.8 | 461.4 | 460.9 |
| 19.5° | 459.8 | 459.4 | 459.8 | 459.9 | 459.4 | 458.9 |
| 20° | 457.8 | 457.3 | 457.8 | 457.9 | 457.4 | 456.9 |
| 20.5° | 455.7 | 455.2 | 455.7 | 455.9 | 455.3 | 454.7 |
| 21° | 453.6 | 453.0 | 453.6 | 453.8 | 453.2 | 452.5 |

TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 446.8 | 446.0 | 446.8 | 447.1 | 446.4 | 445.5 |
| 23° | 444.4 | 443.5 | 444.4 | 444.8 | 443.9 | 443.0 |
| 23.5° | 441.8 | 441.0 | 441.8 | 442.4 | 441.5 | 440.5 |
| 24° | 439.3 | 438.4 | 439.3 | 439.9 | 438.9 | 438.0 |
| 24.5° | 436.7 | 435.8 | 436.7 | 437.3 | 436.3 | 435.2 |
| 25° | 434.0 | 432.9 | 434.0 | 434.7 | 433.7 | 432.4 |
| 25.5° | 431.2 | 430.1 | 431.2 | 432.1 | 430.9 | 429.5 |
| 26° | 428.4 | 427.2 | 428.4 | 429.3 | 428.1 | 426.6 |
| 26.5° | 425.5 | 424.2 | 425.5 | 426.5 | 425.1 | 423.5 |
| 27° | 422.4 | 421.1 | 422.4 | 423.7 | 422.1 | 420.4 |
| 27.5° | 419.4 | 417.9 | 419.4 | 420.7 | 419.1 | 417.3 |
| 28° | 416.2 | 414.6 | 416.2 | 417.7 | 415.9 | 413.9 |
| 28.5° | 413.1 | 411.3 | 413.1 | 414.6 | 412.6 | 410.5 |
| 29° | 409.7 | 407.9 | 409.7 | 411.5 | 409.3 | 407.1 |
| 29.5° | 406.3 | 404.4 | 406.3 | 408.2 | 405.9 | 403.6 |
| 30° | 403.0 | 400.8 | 403.0 | 405.0 | 402.5 | 399.9 |
| 30.5° | 399.4 | 397.2 | 399.4 | 401.6 | 399.0 | 396.3 |
| 31° | 395.8 | 393.5 | 395.8 | 398.2 | 395.3 | 392.6 |
| 31.5° | 392.3 | 389.6 | 392.3 | 394.7 | 391.7 | 388.8 |
| 32° | 388.6 | 385.9 | 388.6 | 391.1 | 388.1 | 385.0 |
| 32.5° | 384.8 | 382.0 | 384.8 | 387.4 | 384.3 | 381.1 |
| 33° | 381.0 | 378.1 | 381.0 | 383.8 | 380.5 | 377.1 |
| 33.5° | 377.3 | 374.1 | 377.3 | 379.9 | 376.6 | 373.1 |
| 34° | 373.4 | 370.0 | 373.4 | 376.0 | 372.8 | 368.9 |
| 34.5° | 369.4 | 365.8 | 369.4 | 372.1 | 368.9 | 364.7 |
| 35° | 365.4 | 361.5 | 365.4 | 368.0 | 364.9 | 360.5 |
| 35.5° | 361.4 | 357.1 | 361.4 | 364.0 | 360.9 | 356.0 |
| 36° | 357.3 | 350.1 | 357.3 | 359.9 | 356.8 | 351.6 |
| 36.5° | 353.1 | 342.3 | 353.1 | 355.7 | 352.5 | 346.4 |
| 37° | 348.9 | 333.1 | 348.9 | 351.5 | 348.2 | 339.1 |
| 37.5° | 344.5 | 324.3 | 344.5 | 347.2 | 343.9 | 328.1 |
| 38° | 339.6 | 314.2 | 339.6 | 342.9 | 339.6 | 316.1 |
| 38.5° | 332.5 | 302.7 | 332.5 | 338.6 | 334.9 | 302.0 |
| 39° | 324.3 | 289.8 | 324.3 | 334.4 | 328.8 | 287.6 |
| 39.5° | 315.8 | 275.4 | 315.8 | 330.0 | 320.5 | 273.0 |
| 40° | 306.6 | 260.6 | 306.6 | 325.6 | 309.8 | 258.4 |
| 40.5° | 296.2 | 245.4 | 296.2 | 321.4 | 297.3 | 243.7 |
| 41° | 284.6 | 231.0 | 284.6 | 317.1 | 283.8 | 228.7 |
| 41.5° | 271.9 | 216.7 | 271.9 | 312.9 | 270.1 | 214.4 |
| 42° | 258.2 | 202.7 | 258.2 | 308.7 | 256.4 | 199.8 |
| 42.5° | 244.2 | 188.8 | 244.2 | 304.5 | 242.7 | 185.7 |
| 43° | 230.0 | 174.8 | 230.0 | 300.3 | 228.7 | 171.6 |
| 43.5° | 216.4 | 160.8 | 216.4 | 296.0 | 214.8 | 157.9 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 45° | 176.4 | 121.3 | 176.4 | 283.3 | 173.8 | 118.3 |
| 45.5° | 163.1 | 109.1 | 163.1 | 278.9 | 160.7 | 105.8 |
| 46° | 150.2 | 97.5 | 150.2 | 273.4 | 147.8 | 94.0 |
| 46.5° | 137.5 | 86.1 | 137.5 | 266.9 | 135.0 | 82.6 |
| 47° | 125.0 | 76.1 | 125.0 | 257.7 | 122.4 | 71.2 |
| 47.5° | 112.9 | 67.6 | 112.9 | 247.5 | 110.1 | 60.4 |
| 48° | 101.2 | 59.2 | 101.2 | 235.3 | 98.5 | 50.9 |
| 48.5° | 90.1 | 50.8 | 90.1 | 221.8 | 87.4 | 42.3 |
| 49° | 79.5 | 42.4 | 79.5 | 206.6 | 76.4 | 35.7 |
| 49.5° | 69.6 | 35.0 | 69.6 | 191.1 | 65.6 | 29.5 |
| 50° | 61.0 | 28.8 | 61.0 | 175.2 | 55.6 | 23.6 |
| 50.5° | 52.9 | 22.7 | 52.9 | 159.5 | 46.5 | 18.8 |
| 51° | 45.2 | 17.2 | 45.2 | 144.3 | 38.9 | 14.1 |
| 51.5° | 37.9 | 13.5 | 37.9 | 130.1 | 32.5 | 10.1 |
| 52° | 31.3 | 10.8 | 31.3 | 116.3 | 26.4 | 6.1 |
| 52.5° | 25.3 | 8.1 | 25.3 | 102.9 | 21.2 | 2.2 |
| 53° | 20.2 | 5.5 | 20.2 | 90.2 | 16.5 | 1.3 |
| 53.5° | 15.3 | 3.2 | 15.3 | 79.0 | 12.2 | 0.9 |
| 54° | 11.2 | 0.8 | 11.2 | 68.4 | 8.4 | 0.6 |
| 54.5° | 8.4 | 0.4 | 8.4 | 58.5 | 4.6 | 0.3 |
| 55° | 5.7 | 0.4 | 5.7 | 49.6 | 1.6 | 0.3 |
| 55.5° | 3.5 | 0.4 | 3.5 | 41.1 | 0.9 | 0.3 |
| 56° | 2.1 | 0.3 | 2.1 | 33.6 | 0.7 | 0.3 |
| 56.5° | 0.8 | 0.3 | 0.8 | 27.7 | 0.4 | 0.3 |
| 57° | 0.5 | 0.3 | 0.5 | 22.2 | 0.3 | 0.3 |
| 57.5° | 0.3 | 0.3 | 0.3 | 17.2 | 0.3 | 0.3 |
| 58° | 0.3 | 0.3 | 0.3 | 12.8 | 0.3 | 0.3 |
| 58.5° | 0.3 | 0.3 | 0.3 | 9.2 | 0.2 | 0.2 |
| 59° | 0.2 | 0.3 | 0.2 | 7.0 | 0.2 | 0.2 |
| 59.5° | 0.2 | 0.3 | 0.2 | 5.1 | 0.2 | 0.2 |
| 60° | 0.2 | 0.3 | 0.2 | 3.4 | 0.2 | 0.2 |
| 60.5° | 0.2 | 0.2 | 0.2 | 2.0 | 0.2 | 0.2 |
| 61° | 0.2 | 0.2 | 0.2 | 1.3 | 0.2 | 0.2 |
| 61.5° | 0.2 | 0.2 | 0.2 | 0.7 | 0.2 | 0.2 |
| 62° | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 |
| 62.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 63° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 63.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 64° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 64.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 65° | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 |
| 65.5° | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| 66° | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|------|--------|------|--------|------|
| 67.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 68° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 68.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 69° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 69.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 70° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 70.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 71° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 71.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 72° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 72.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 73° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 73.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 74° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 74.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 75° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 75.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 76° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 76.5° | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| 77° | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| 77.5° | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 |
| 78° | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 78.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 79.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 81.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 84.5° | 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 |
| 85.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 86.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87° | 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 |
| 88° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P775908

CATALOG NUMBER: HCDJBL510CSD-HCD8TSQMB-1000lm-4000K

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 |



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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 21.5° | 450.2 | 451.0 | 451.6 | 451.4 | 450.8 | 451.4 | 451.6 | 451.0 | 450.2 | 451.0 | 451.6 |
| 22° | 447.9 | 448.7 | 449.4 | 449.1 | 448.5 | 449.1 | 449.4 | 448.7 | 447.9 | 448.7 | 449.4 |



| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44° | 144.2 | 201.0 | 291.8 | 202.9 | 147.2 | 202.9 | 291.8 | 201.0 | 144.2 | 201.0 | 291.8 |
| 44.5° | 131.1 | 187.4 | 287.6 | 189.6 | 134.1 | 189.6 | 287.6 | 187.4 | 131.1 | 187.4 | 287.6 |



| | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 66.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 67° | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |



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

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| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 21.5° | 451.4 | 450.8 | 451.4 | 451.6 | 451.0 | 450.2 |
| 22° | 449.1 | 448.5 | 449.1 | 449.4 | 448.7 | 447.9 |



| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 44° | 202.9 | 147.2 | 202.9 | 291.8 | 201.0 | 144.2 |
| 44.5° | 189.6 | 134.1 | 189.6 | 287.6 | 187.4 | 131.1 |

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| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 66.5° | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| 67° | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |

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| | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|
| 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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(END OF REPORT)