

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242299

Luminaire Tested: S122DRP-S290D840-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242299  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DRP-S290D840-X4F0-XX-UDD-A-W  
Description: DEFINE 2 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

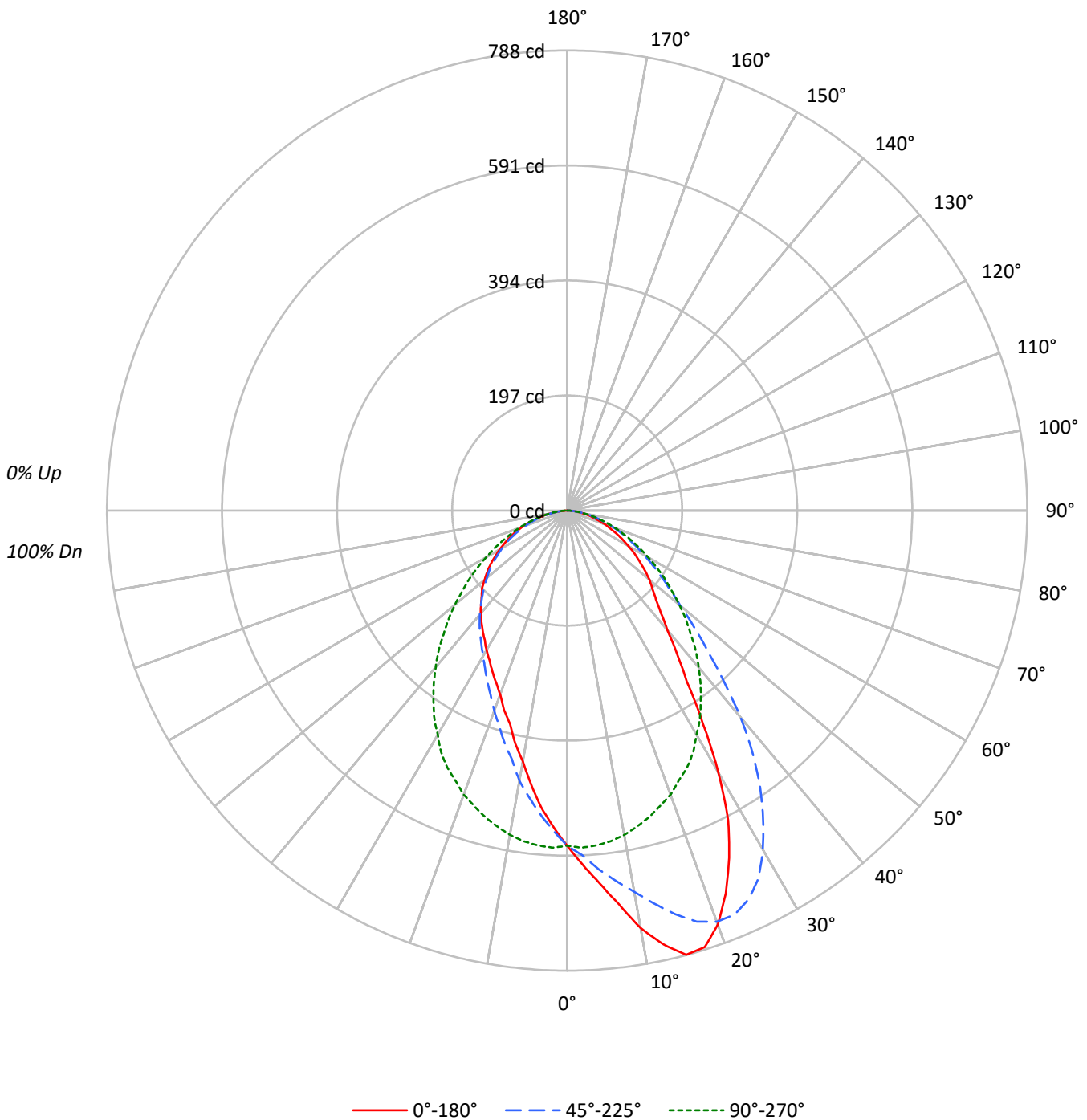
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1265.6 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.09 / 1.16 / 1.23  
Luminous Opening: Rectangular (W 3.88' x L: 0.15' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.6  
Input Voltage (V): 120  
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

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CATALOG NUMBER: S122DRP-S290D840-X4F0-XX-UDD-A-W

### Luminous Intensity Polar Plot



TEST NUMBER: P242299

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 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   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |    |    |    | 86  |
| 2   | 101 | 94  | 87  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |    |    |    | 74  |
| 3   | 93  | 83  | 76  | 70  | 90  | 82  | 75  | 69  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 69  | 66  | 64  |    |    |    | 64  |
| 4   | 86  | 75  | 66  | 60  | 83  | 73  | 66  | 60  | 71  | 64  | 59  | 69  | 63  | 58  | 66  | 62  | 58  | 55  |    |    |    | 55  |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 64  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |    | 49  |
| 6   | 74  | 61  | 53  | 47  | 72  | 60  | 52  | 46  | 58  | 51  | 46  | 57  | 51  | 46  | 55  | 50  | 45  | 43  |    |    |    | 43  |
| 7   | 69  | 56  | 48  | 42  | 67  | 55  | 47  | 42  | 54  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 39  |    |    |    | 39  |
| 8   | 64  | 51  | 43  | 38  | 63  | 51  | 43  | 38  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 35  |    |    |    | 35  |
| 9   | 60  | 47  | 39  | 34  | 59  | 47  | 39  | 34  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 32  |    |    |    | 32  |
| 10  | 56  | 44  | 36  | 31  | 55  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 41  | 35  | 31  | 29  |    |    |    | 29  |

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

|     | 0°    | 45°   | 90°   | 135°  | 180°  |
|-----|-------|-------|-------|-------|-------|
| 0°  | 10928 | 10928 | 10928 | 10928 | 10928 |
| 5°  | 12250 | 11792 | 11000 | 9992  | 9748  |
| 10° | 14040 | 12820 | 10909 | 9089  | 8435  |
| 15° | 15531 | 14109 | 10710 | 8144  | 7452  |
| 20° | 15294 | 15186 | 10494 | 7393  | 6793  |
| 25° | 13791 | 15441 | 10208 | 6788  | 6377  |
| 30° | 11397 | 14747 | 9752  | 6319  | 6073  |
| 35° | 8306  | 13382 | 9276  | 6029  | 5855  |
| 40° | 6634  | 11475 | 8713  | 5779  | 5734  |
| 45° | 5797  | 9178  | 8060  | 5525  | 5571  |
| 50° | 5450  | 7488  | 7429  | 5313  | 5461  |
| 55° | 5024  | 6509  | 6788  | 5117  | 5317  |
| 60° | 4602  | 5794  | 6107  | 4888  | 5090  |
| 65° | 4192  | 5237  | 5494  | 4593  | 4868  |
| 70° | 3809  | 4678  | 4901  | 4238  | 4544  |
| 75° | 3378  | 4136  | 4232  | 3797  | 4026  |
| 80° | 2907  | 3510  | 3510  | 3115  | 3236  |
| 85° | 2601  | 2841  | 2601  | 2164  | 1923  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 65°  
 Vertical Angle: 45°  
 Luminance: 14059 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 54.6   | 4.3       |
| 10°-20°   | 159.0  | 12.6      |
| 20°-30°   | 230.8  | 18.2      |
| 30°-40°   | 243.3  | 19.2      |
| 40°-50°   | 215.3  | 17.0      |
| 50°-60°   | 171.9  | 13.6      |
| 60°-70°   | 116.7  | 9.2       |
| 70°-80°   | 59.8   | 4.7       |
| 80°-90°   | 14.1   | 1.1       |
| 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°    | 444.5  | 35.1      |
| 0°-40°    | 687.9  | 54.3      |
| 0°-60°    | 1075.0 | 84.9      |
| 0°-90°    | 1265.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1265.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 574 | 574 | 574 | 574  | 574  |      |
| 5°  | 641 | 617 | 575 | 523  | 510  | 64   |
| 15° | 788 | 716 | 543 | 413  | 378  | 218  |
| 25° | 656 | 735 | 486 | 323  | 303  | 298  |
| 35° | 357 | 576 | 399 | 259  | 252  | 231  |
| 45° | 215 | 341 | 299 | 205  | 207  | 169  |
| 55° | 151 | 196 | 204 | 154  | 160  | 136  |
| 65° | 93  | 116 | 122 | 102  | 108  | 92   |
| 75° | 46  | 56  | 58  | 52   | 55   | 49   |
| 85° | 12  | 13  | 12  | 10   | 9    | 14   |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 |
| 2.5°  | 606.8 | 607.0 | 607.5 | 603.9 | 603.5 | 603.5 | 600.4 | 597.7 | 594.7 | 590.5 | 590.9 |
| 5°    | 640.7 | 643.2 | 644.1 | 641.4 | 637.4 | 637.0 | 633.2 | 627.1 | 621.3 | 616.7 | 613.4 |
| 7.5°  | 680.0 | 680.9 | 679.1 | 676.0 | 673.4 | 668.3 | 662.1 | 656.2 | 647.4 | 639.4 | 633.7 |
| 10°   | 725.9 | 727.2 | 723.4 | 718.4 | 714.2 | 708.0 | 697.9 | 687.5 | 674.9 | 662.8 | 653.1 |
| 12.5° | 760.7 | 764.4 | 759.4 | 759.8 | 751.9 | 742.8 | 730.3 | 726.3 | 707.3 | 689.3 | 678.7 |
| 15°   | 787.6 | 787.4 | 787.8 | 783.6 | 778.3 | 777.0 | 764.2 | 750.3 | 725.4 | 715.5 | 698.3 |
| 17.5° | 783.6 | 786.7 | 788.5 | 787.1 | 786.3 | 784.3 | 778.8 | 768.4 | 754.7 | 738.0 | 717.5 |
| 20°   | 754.5 | 758.9 | 759.6 | 764.7 | 767.5 | 771.3 | 772.8 | 770.4 | 762.7 | 749.2 | 732.0 |
| 22.5° | 709.5 | 710.0 | 712.4 | 721.0 | 728.1 | 738.9 | 744.6 | 755.4 | 753.6 | 748.8 | 735.1 |
| 25°   | 656.2 | 654.0 | 661.7 | 665.7 | 680.0 | 695.0 | 705.8 | 717.7 | 728.3 | 734.7 | 730.5 |
| 27.5° | 597.1 | 592.5 | 604.1 | 614.5 | 624.6 | 639.2 | 655.5 | 674.9 | 689.7 | 709.8 | 714.6 |
| 30°   | 518.2 | 520.1 | 531.2 | 542.4 | 560.0 | 583.0 | 601.9 | 623.8 | 647.4 | 670.5 | 686.6 |
| 32.5° | 433.0 | 442.1 | 448.0 | 466.8 | 481.8 | 508.0 | 538.0 | 566.7 | 597.5 | 624.6 | 651.8 |
| 35°   | 357.2 | 366.0 | 375.7 | 388.3 | 410.1 | 435.5 | 462.6 | 499.4 | 539.5 | 575.5 | 605.0 |
| 37.5° | 309.1 | 307.6 | 313.5 | 322.8 | 341.5 | 363.4 | 395.6 | 433.0 | 481.1 | 521.0 | 560.7 |
| 40°   | 266.8 | 265.9 | 269.9 | 278.3 | 291.7 | 306.7 | 334.0 | 366.0 | 409.9 | 461.5 | 511.1 |
| 42.5° | 237.7 | 238.6 | 240.3 | 245.6 | 253.8 | 265.5 | 284.2 | 310.2 | 349.5 | 397.3 | 451.6 |
| 45°   | 215.2 | 216.7 | 219.2 | 222.0 | 227.3 | 237.5 | 248.9 | 268.3 | 300.1 | 340.7 | 393.1 |
| 47.5° | 197.6 | 198.0 | 200.6 | 203.3 | 206.4 | 212.6 | 222.7 | 235.0 | 259.3 | 293.9 | 340.9 |
| 50°   | 183.9 | 182.3 | 184.1 | 186.1 | 189.4 | 193.4 | 199.5 | 211.0 | 226.0 | 252.7 | 290.4 |
| 52.5° | 167.1 | 167.6 | 169.1 | 169.6 | 172.4 | 176.4 | 181.9 | 189.0 | 202.2 | 221.6 | 250.9 |
| 55°   | 151.3 | 152.4 | 153.2 | 154.6 | 157.2 | 160.1 | 164.5 | 169.8 | 180.4 | 196.0 | 218.9 |
| 57.5° | 136.3 | 136.7 | 137.4 | 140.2 | 141.8 | 144.4 | 148.8 | 153.7 | 160.7 | 172.9 | 190.9 |
| 60°   | 120.8 | 120.8 | 122.6 | 123.7 | 125.9 | 128.5 | 131.9 | 136.5 | 142.7 | 152.1 | 166.0 |
| 62.5° | 106.7 | 106.5 | 106.9 | 108.9 | 110.5 | 112.9 | 116.2 | 119.9 | 125.7 | 133.8 | 144.6 |
| 65°   | 93.0  | 92.6  | 93.9  | 94.4  | 96.1  | 98.6  | 101.2 | 105.4 | 110.0 | 116.2 | 126.3 |
| 67.5° | 79.4  | 80.0  | 80.9  | 81.8  | 82.7  | 85.6  | 87.3  | 90.4  | 94.4  | 99.7  | 106.7 |
| 70°   | 68.4  | 68.4  | 68.4  | 69.0  | 70.3  | 71.7  | 73.4  | 75.8  | 79.6  | 84.0  | 90.2  |
| 72.5° | 56.0  | 56.9  | 57.8  | 57.1  | 58.9  | 59.5  | 61.7  | 62.8  | 66.4  | 68.8  | 74.1  |
| 75°   | 45.9  | 45.9  | 45.9  | 47.0  | 47.6  | 48.3  | 49.6  | 50.9  | 52.7  | 56.2  | 59.1  |
| 77.5° | 36.2  | 35.9  | 36.2  | 36.4  | 37.3  | 38.1  | 38.6  | 39.7  | 41.5  | 43.2  | 45.9  |
| 80°   | 26.5  | 26.9  | 27.1  | 27.6  | 27.6  | 28.0  | 28.2  | 29.8  | 30.9  | 32.0  | 33.5  |
| 82.5° | 19.0  | 19.0  | 19.0  | 19.0  | 19.2  | 19.4  | 20.1  | 20.3  | 20.5  | 21.4  | 22.5  |
| 85°   | 11.9  | 11.7  | 11.7  | 12.1  | 11.9  | 11.9  | 12.3  | 12.8  | 12.8  | 13.0  | 13.7  |
| 87.5° | 5.7   | 5.7   | 6.0   | 5.7   | 5.7   | 6.0   | 6.0   | 5.7   | 6.0   | 6.2   | 6.4   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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**CANDELA DISTRIBUTION (continued):**

|       | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   | 100°  | 105°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 |
| 2.5°  | 592.5 | 590.7 | 589.6 | 585.6 | 582.1 | 578.6 | 577.5 | 577.9 | 573.1 | 568.4 | 566.4 |
| 5°    | 611.6 | 607.2 | 603.0 | 597.1 | 590.0 | 582.3 | 578.3 | 575.3 | 567.5 | 559.2 | 554.3 |
| 7.5°  | 629.1 | 623.3 | 615.8 | 605.2 | 595.5 | 584.1 | 577.0 | 571.1 | 560.3 | 549.0 | 542.2 |
| 10°   | 644.7 | 636.1 | 625.8 | 612.1 | 599.5 | 584.7 | 574.4 | 564.0 | 550.8 | 536.7 | 527.9 |
| 12.5° | 658.2 | 645.8 | 635.7 | 617.2 | 601.7 | 582.3 | 569.5 | 553.9 | 539.8 | 522.3 | 513.7 |
| 15°   | 681.1 | 659.7 | 640.3 | 620.5 | 602.2 | 576.4 | 562.7 | 543.1 | 524.8 | 504.0 | 494.1 |
| 17.5° | 698.1 | 674.9 | 644.9 | 620.9 | 600.6 | 573.1 | 553.4 | 530.1 | 509.3 | 486.4 | 473.2 |
| 20°   | 712.2 | 684.6 | 651.8 | 621.8 | 596.2 | 563.6 | 541.7 | 517.7 | 492.4 | 465.7 | 451.1 |
| 22.5° | 720.6 | 691.2 | 658.8 | 618.5 | 587.4 | 555.9 | 527.0 | 500.1 | 474.3 | 444.9 | 429.5 |
| 25°   | 721.0 | 694.5 | 660.1 | 616.9 | 580.3 | 544.4 | 511.3 | 485.7 | 454.7 | 427.8 | 405.5 |
| 27.5° | 713.7 | 692.8 | 659.5 | 613.8 | 572.2 | 530.9 | 495.0 | 467.0 | 434.1 | 405.0 | 382.8 |
| 30°   | 697.6 | 686.6 | 654.4 | 608.6 | 562.0 | 516.8 | 476.3 | 443.4 | 410.8 | 381.2 | 358.3 |
| 32.5° | 672.7 | 672.5 | 645.2 | 601.1 | 551.2 | 499.0 | 456.6 | 423.3 | 386.3 | 357.4 | 335.8 |
| 35°   | 638.5 | 649.1 | 631.3 | 589.1 | 537.1 | 482.2 | 436.8 | 398.9 | 361.4 | 333.6 | 313.1 |
| 37.5° | 595.1 | 619.6 | 612.5 | 573.3 | 519.0 | 464.4 | 415.0 | 375.3 | 339.3 | 310.7 | 290.6 |
| 40°   | 549.9 | 583.4 | 588.3 | 554.5 | 499.6 | 443.0 | 389.8 | 350.4 | 315.5 | 289.9 | 269.7 |
| 42.5° | 501.4 | 542.0 | 557.4 | 532.0 | 478.5 | 420.5 | 367.3 | 326.1 | 291.7 | 267.0 | 249.6 |
| 45°   | 446.1 | 497.9 | 521.9 | 506.5 | 454.4 | 395.3 | 340.7 | 299.2 | 267.9 | 244.5 | 230.6 |
| 47.5° | 396.0 | 452.2 | 482.9 | 475.6 | 428.6 | 370.0 | 316.0 | 275.6 | 244.5 | 225.6 | 212.6 |
| 50°   | 342.2 | 400.4 | 439.4 | 441.2 | 400.4 | 342.4 | 288.2 | 250.7 | 222.7 | 205.3 | 195.1 |
| 52.5° | 295.5 | 350.4 | 393.8 | 405.0 | 368.9 | 313.8 | 263.3 | 226.0 | 202.2 | 186.5 | 177.7 |
| 55°   | 256.0 | 303.0 | 350.1 | 367.3 | 337.6 | 284.7 | 237.2 | 204.4 | 181.2 | 170.2 | 162.3 |
| 57.5° | 218.5 | 259.7 | 304.5 | 322.6 | 303.6 | 257.1 | 211.2 | 182.3 | 162.7 | 152.8 | 146.6 |
| 60°   | 190.1 | 220.9 | 259.7 | 282.4 | 266.6 | 226.2 | 187.4 | 160.3 | 144.9 | 136.3 | 130.5 |
| 62.5° | 163.6 | 190.1 | 221.4 | 241.7 | 234.8 | 197.3 | 163.6 | 140.5 | 127.7 | 119.7 | 116.0 |
| 65°   | 139.3 | 161.0 | 186.3 | 205.5 | 199.8 | 170.9 | 142.4 | 121.9 | 111.3 | 105.0 | 101.6 |
| 67.5° | 118.6 | 135.2 | 153.2 | 170.9 | 166.0 | 144.6 | 120.6 | 104.1 | 95.9  | 90.2  | 88.2  |
| 70°   | 99.2  | 111.1 | 126.8 | 140.2 | 136.5 | 119.7 | 101.6 | 88.0  | 81.1  | 76.5  | 74.5  |
| 72.5° | 80.7  | 90.0  | 101.0 | 111.3 | 109.1 | 95.9  | 81.6  | 72.1  | 67.2  | 63.1  | 61.5  |
| 75°   | 63.7  | 71.2  | 78.5  | 85.8  | 85.1  | 74.3  | 65.5  | 57.5  | 53.4  | 50.1  | 49.4  |
| 77.5° | 49.8  | 54.5  | 59.8  | 64.4  | 63.3  | 56.2  | 48.9  | 44.1  | 40.8  | 38.6  | 38.4  |
| 80°   | 35.9  | 38.4  | 41.9  | 45.0  | 43.4  | 40.8  | 35.3  | 32.0  | 29.8  | 27.6  | 26.7  |
| 82.5° | 23.6  | 26.0  | 27.8  | 29.1  | 28.0  | 25.6  | 22.7  | 20.7  | 19.6  | 18.3  | 18.1  |
| 85°   | 13.7  | 15.0  | 15.9  | 16.3  | 15.9  | 14.3  | 12.8  | 11.9  | 10.8  | 10.1  | 9.9   |
| 87.5° | 6.6   | 6.6   | 6.6   | 7.1   | 6.4   | 6.4   | 5.5   | 4.9   | 4.6   | 4.4   | 4.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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**CANDELA DISTRIBUTION (continued):**

|       | 110°  | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  | 150°  | 155°  | 160°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 | 573.7 |
| 2.5°  | 564.2 | 562.9 | 558.3 | 555.9 | 551.9 | 548.1 | 545.7 | 546.8 | 547.7 | 547.3 | 546.6 |
| 5°    | 549.9 | 545.7 | 539.3 | 533.8 | 529.8 | 522.6 | 519.5 | 517.9 | 516.6 | 515.1 | 513.5 |
| 7.5°  | 534.0 | 528.1 | 519.0 | 512.0 | 504.9 | 495.7 | 491.0 | 488.4 | 485.5 | 482.2 | 479.1 |
| 10°   | 516.8 | 507.6 | 497.9 | 486.8 | 478.0 | 469.9 | 462.6 | 457.7 | 453.3 | 449.1 | 446.1 |
| 12.5° | 498.7 | 487.7 | 475.2 | 459.1 | 449.1 | 436.6 | 437.0 | 427.5 | 420.0 | 417.8 | 414.1 |
| 15°   | 479.3 | 464.4 | 449.1 | 431.3 | 423.6 | 413.0 | 406.4 | 399.7 | 393.8 | 389.6 | 388.5 |
| 17.5° | 458.2 | 438.1 | 423.3 | 410.1 | 397.5 | 386.7 | 381.0 | 375.7 | 370.6 | 364.5 | 364.2 |
| 20°   | 433.3 | 416.5 | 400.0 | 388.7 | 375.7 | 364.7 | 357.2 | 351.9 | 347.7 | 344.4 | 341.5 |
| 22.5° | 409.7 | 390.9 | 376.2 | 363.6 | 350.8 | 342.4 | 336.9 | 331.8 | 328.5 | 324.8 | 322.1 |
| 25°   | 384.1 | 369.8 | 353.2 | 339.3 | 328.8 | 323.0 | 318.2 | 313.8 | 311.6 | 309.1 | 306.0 |
| 27.5° | 362.3 | 346.4 | 330.1 | 319.3 | 309.6 | 304.5 | 300.7 | 297.4 | 295.5 | 293.9 | 291.9 |
| 30°   | 338.9 | 322.8 | 310.7 | 300.1 | 292.4 | 287.3 | 285.1 | 283.3 | 280.9 | 280.0 | 279.1 |
| 32.5° | 316.4 | 302.3 | 292.4 | 283.6 | 276.3 | 273.4 | 271.4 | 269.9 | 268.1 | 267.2 | 265.2 |
| 35°   | 295.5 | 283.3 | 273.2 | 268.1 | 262.2 | 259.3 | 257.8 | 255.5 | 253.8 | 252.9 | 252.7 |
| 37.5° | 275.4 | 264.4 | 257.5 | 250.7 | 247.8 | 246.3 | 244.1 | 242.5 | 241.9 | 241.7 | 241.4 |
| 40°   | 256.0 | 247.4 | 241.4 | 236.1 | 235.0 | 232.4 | 230.6 | 229.3 | 229.3 | 229.5 | 229.3 |
| 42.5° | 238.3 | 230.9 | 225.8 | 221.4 | 220.0 | 218.7 | 217.0 | 217.2 | 217.6 | 218.5 | 217.6 |
| 45°   | 220.5 | 215.0 | 211.2 | 209.0 | 206.6 | 205.1 | 204.8 | 205.5 | 205.7 | 205.9 | 206.6 |
| 47.5° | 203.7 | 200.2 | 196.7 | 194.0 | 192.9 | 192.7 | 192.3 | 193.4 | 194.5 | 194.7 | 195.8 |
| 50°   | 189.2 | 185.0 | 182.1 | 180.6 | 179.7 | 179.3 | 179.7 | 181.0 | 181.9 | 183.0 | 183.7 |
| 52.5° | 172.9 | 170.2 | 168.5 | 167.4 | 167.1 | 167.6 | 167.6 | 169.1 | 170.7 | 170.9 | 171.1 |
| 55°   | 158.1 | 155.9 | 155.4 | 153.5 | 154.3 | 154.1 | 155.2 | 156.1 | 157.4 | 158.8 | 159.0 |
| 57.5° | 143.1 | 141.1 | 139.8 | 140.0 | 140.2 | 141.1 | 142.0 | 143.5 | 145.1 | 146.6 | 146.6 |
| 60°   | 128.1 | 127.2 | 126.6 | 126.6 | 127.0 | 128.3 | 129.4 | 131.0 | 131.9 | 132.7 | 133.4 |
| 62.5° | 114.4 | 113.6 | 112.9 | 113.3 | 114.7 | 115.3 | 116.6 | 117.3 | 118.2 | 119.1 | 119.3 |
| 65°   | 99.9  | 99.4  | 100.1 | 100.5 | 100.8 | 101.9 | 103.4 | 104.1 | 105.0 | 105.4 | 106.9 |
| 67.5° | 86.7  | 86.7  | 86.4  | 87.1  | 88.4  | 88.6  | 90.2  | 91.9  | 91.9  | 92.8  | 93.9  |
| 70°   | 73.2  | 73.6  | 74.1  | 74.5  | 75.6  | 76.1  | 77.2  | 77.8  | 78.7  | 79.4  | 80.0  |
| 72.5° | 60.9  | 60.9  | 61.3  | 61.1  | 62.0  | 63.1  | 63.9  | 64.6  | 65.5  | 66.4  | 67.0  |
| 75°   | 48.7  | 48.7  | 49.2  | 49.4  | 50.5  | 51.6  | 51.4  | 51.8  | 52.7  | 53.6  | 54.0  |
| 77.5° | 37.7  | 37.3  | 37.7  | 37.9  | 38.4  | 39.2  | 39.5  | 40.1  | 41.2  | 41.0  | 41.5  |
| 80°   | 27.1  | 26.5  | 27.1  | 27.3  | 27.3  | 28.4  | 28.4  | 28.9  | 29.5  | 28.9  | 29.5  |
| 82.5° | 17.4  | 17.2  | 17.6  | 17.6  | 18.1  | 17.9  | 18.3  | 18.3  | 19.0  | 18.7  | 19.0  |
| 85°   | 9.7   | 9.5   | 9.7   | 9.5   | 9.7   | 9.9   | 9.9   | 9.7   | 9.7   | 10.1  | 9.5   |
| 87.5° | 3.7   | 3.5   | 3.3   | 3.3   | 3.1   | 2.9   | 2.6   | 2.6   | 2.6   | 2.2   | 2.2   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



TEST NUMBER: P242299

CATALOG NUMBER: S122DRP-S290D840-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

|       | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|-------|-------|
| 0°    | 573.7 | 573.7 | 573.7 | 573.7 |
| 2.5°  | 544.4 | 543.9 | 543.9 | 542.0 |
| 5°    | 510.4 | 509.8 | 508.7 | 509.8 |
| 7.5°  | 478.2 | 475.4 | 474.9 | 472.7 |
| 10°   | 442.3 | 440.5 | 440.3 | 436.1 |
| 12.5° | 415.0 | 410.1 | 411.2 | 409.2 |
| 15°   | 382.6 | 382.6 | 381.7 | 377.9 |
| 17.5° | 359.4 | 359.2 | 357.2 | 358.5 |
| 20°   | 339.1 | 337.8 | 335.1 | 335.1 |
| 22.5° | 319.9 | 320.2 | 317.3 | 318.4 |
| 25°   | 305.8 | 304.1 | 302.7 | 303.4 |
| 27.5° | 291.3 | 290.6 | 290.4 | 288.4 |
| 30°   | 278.9 | 276.7 | 277.2 | 276.1 |
| 32.5° | 264.8 | 264.4 | 263.7 | 262.8 |
| 35°   | 252.2 | 252.5 | 251.4 | 251.8 |
| 37.5° | 241.0 | 241.9 | 241.2 | 241.2 |
| 40°   | 230.0 | 230.0 | 230.0 | 230.6 |
| 42.5° | 219.4 | 218.9 | 218.5 | 218.3 |
| 45°   | 207.0 | 207.7 | 207.9 | 206.8 |
| 47.5° | 196.2 | 196.5 | 196.2 | 197.6 |
| 50°   | 184.8 | 184.3 | 184.8 | 184.3 |
| 52.5° | 172.6 | 172.9 | 172.4 | 172.4 |
| 55°   | 159.9 | 160.3 | 160.1 | 160.1 |
| 57.5° | 146.8 | 147.1 | 147.5 | 146.4 |
| 60°   | 133.2 | 134.3 | 134.1 | 133.6 |
| 62.5° | 120.6 | 120.8 | 120.8 | 120.8 |
| 65°   | 107.6 | 108.0 | 107.4 | 108.0 |
| 67.5° | 93.5  | 93.7  | 94.1  | 94.4  |
| 70°   | 80.5  | 80.3  | 80.9  | 81.6  |
| 72.5° | 66.8  | 67.5  | 67.0  | 67.5  |
| 75°   | 53.6  | 54.2  | 54.0  | 54.7  |
| 77.5° | 41.0  | 41.2  | 41.2  | 41.5  |
| 80°   | 29.5  | 29.1  | 28.7  | 29.5  |
| 82.5° | 18.3  | 18.7  | 18.3  | 18.1  |
| 85°   | 9.5   | 9.3   | 8.8   | 8.8   |
| 87.5° | 2.2   | 2.0   | 2.0   | 1.8   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   |



TEST NUMBER: P242299  
 CATALOG NUMBER: S122DRP-S290D840-X4F0-XX-UDD-A-W

**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 16.60            | 18.12 | 16.97 | 18.43 | 18.75 | 19.86          | 21.37 | 20.22 | 21.69 | 22.00 |
|                 | 3H   | 18.01            | 19.37 | 18.39 | 19.70 | 20.06 | 20.87          | 22.23 | 21.24 | 22.56 | 22.92 |
|                 | 4H   | 18.52            | 19.79 | 18.92 | 20.14 | 20.52 | 21.19          | 22.46 | 21.59 | 22.81 | 23.19 |
|                 | 6H   | 18.87            | 20.05 | 19.28 | 20.42 | 20.81 | 21.38          | 22.56 | 21.79 | 22.93 | 23.32 |
|                 | 8H   | 18.98            | 20.10 | 19.41 | 20.49 | 20.90 | 21.43          | 22.55 | 21.85 | 22.94 | 23.34 |
|                 | 12H  | 19.05            | 20.13 | 19.48 | 20.51 | 20.94 | 21.44          | 22.52 | 21.87 | 22.90 | 23.33 |
| 4H              | 2H   | 17.46            | 18.74 | 17.86 | 19.09 | 19.47 | 20.07          | 21.34 | 20.47 | 21.69 | 22.07 |
|                 | 3H   | 19.02            | 20.08 | 19.43 | 20.48 | 20.88 | 21.41          | 22.47 | 21.82 | 22.87 | 23.27 |
|                 | 4H   | 19.61            | 20.56 | 20.04 | 20.98 | 21.42 | 21.92          | 22.87 | 22.35 | 23.29 | 23.72 |
|                 | 6H   | 20.06            | 20.89 | 20.51 | 21.33 | 21.79 | 22.25          | 23.08 | 22.71 | 23.52 | 23.98 |
|                 | 8H   | 20.20            | 20.97 | 20.66 | 21.42 | 21.88 | 22.32          | 23.10 | 22.79 | 23.54 | 24.01 |
|                 | 12H  | 20.30            | 20.99 | 20.78 | 21.47 | 21.94 | 22.37          | 23.06 | 22.85 | 23.54 | 24.01 |
| 8H              | 4H   | 20.04            | 20.82 | 20.51 | 21.26 | 21.73 | 22.04          | 22.82 | 22.51 | 23.26 | 23.73 |
|                 | 6H   | 20.58            | 21.22 | 21.07 | 21.71 | 22.19 | 22.48          | 23.12 | 22.98 | 23.61 | 24.09 |
|                 | 8H   | 20.77            | 21.34 | 21.28 | 21.85 | 22.34 | 22.61          | 23.19 | 23.13 | 23.70 | 24.19 |
|                 | 12H  | 20.93            | 21.44 | 21.44 | 21.93 | 22.49 | 22.71          | 23.21 | 23.22 | 23.70 | 24.27 |
| 12H             | 4H   | 20.10            | 20.79 | 20.58 | 21.27 | 21.74 | 22.04          | 22.73 | 22.52 | 23.21 | 23.68 |
|                 | 6H   | 20.65            | 21.23 | 21.17 | 21.74 | 22.23 | 22.48          | 23.06 | 23.00 | 23.57 | 24.06 |
|                 | 8H   | 20.90            | 21.40 | 21.41 | 21.90 | 22.46 | 22.66          | 23.17 | 23.17 | 23.66 | 24.22 |