

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: P1059758

Luminaire Tested: S123RDRP-H775D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059758  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-H775D840-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

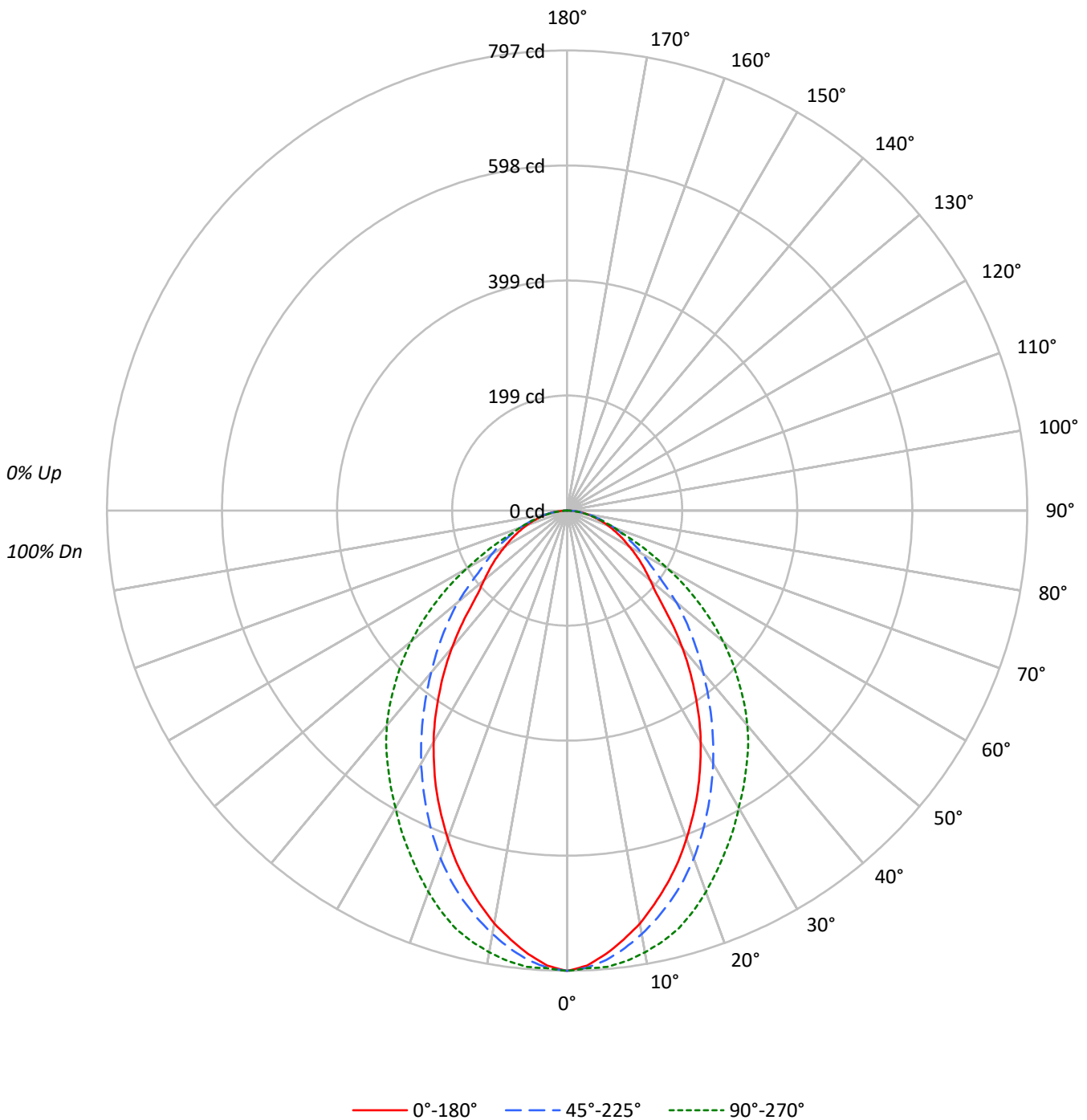
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1440.0 lumens  
Efficiency: N/A  
Efficacy: 61.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |     |   |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF  | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |    |    | 20 |    |     |   |  |   |
| RC  | 80  |     |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |    |    | 10 |    |     |   |  | 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   | 110 | 106 | 102 | 99  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  |     |    |    |    | 87 |     |   |  |   |
| 2   | 102 | 94  | 88  | 83  | 99  | 92  | 87  | 82  | 89  | 84  | 80  | 86  | 82  | 78  | 83  | 80  | 77  |     |    |    |    | 75 |     |   |  |   |
| 3   | 94  | 84  | 77  | 71  | 91  | 83  | 76  | 71  | 80  | 74  | 69  | 77  | 72  | 68  | 75  | 71  | 67  |     |    |    |    | 65 |     |   |  |   |
| 4   | 87  | 76  | 68  | 62  | 84  | 74  | 67  | 61  | 72  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 59  |     |    |    |    | 57 |     |   |  |   |
| 5   | 80  | 69  | 60  | 54  | 78  | 68  | 60  | 54  | 66  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 53  |     |    |    |    | 51 |     |   |  |   |
| 6   | 75  | 63  | 54  | 48  | 73  | 62  | 54  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 57  | 51  | 47  |     |    |    |    | 45 |     |   |  |   |
| 7   | 70  | 57  | 49  | 44  | 68  | 56  | 49  | 43  | 55  | 48  | 43  | 54  | 47  | 43  | 52  | 47  | 43  |     |    |    |    | 41 |     |   |  |   |
| 8   | 65  | 53  | 45  | 39  | 64  | 52  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 39  | 48  | 43  | 39  |     |    |    |    | 37 |     |   |  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 36  | 45  | 39  | 35  |     |    |    |    | 34 |     |   |  |   |
| 10  | 58  | 45  | 38  | 33  | 56  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 42  | 37  | 33  |     |    |    |    | 31 |     |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9361 | 9361 | 9361 |
| 5°  | 9088 | 9209 | 9352 |
| 10° | 8658 | 8881 | 9260 |
| 15° | 8134 | 8487 | 9100 |
| 20° | 7556 | 8011 | 8782 |
| 25° | 6938 | 7446 | 8415 |
| 30° | 6272 | 6855 | 8059 |
| 35° | 5533 | 6230 | 7757 |
| 40° | 4756 | 5615 | 7450 |
| 45° | 3911 | 5060 | 6983 |
| 50° | 3431 | 4507 | 6436 |
| 55° | 3175 | 3845 | 5702 |
| 60° | 2919 | 3534 | 4718 |
| 65° | 2726 | 3245 | 3712 |
| 70° | 2568 | 2953 | 2953 |
| 75° | 2418 | 2713 | 2545 |
| 80° | 2272 | 2461 | 2150 |
| 85° | 2142 | 2398 | 1630 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6983 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 73.7   | 5.1       |
| 10°-20°   | 197.6  | 13.7      |
| 20°-30°   | 267.9  | 18.6      |
| 30°-40°   | 280.1  | 19.5      |
| 40°-50°   | 243.0  | 16.9      |
| 50°-60°   | 180.7  | 12.6      |
| 60°-70°   | 116.0  | 8.1       |
| 70°-80°   | 62.2   | 4.3       |
| 80°-90°   | 18.8   | 1.3       |
| 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°    | 539.2  | 37.4      |
| 0°-40°    | 819.4  | 56.9      |
| 0°-60°    | 1243.0 | 86.3      |
| 0°-90°    | 1440.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1440.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 797 | 797   | 797 | 797   | 797 |      |
| 5°  | 771 | 784   | 781 | 787   | 793 | 72   |
| 15° | 669 | 685   | 698 | 726   | 749 | 188  |
| 25° | 536 | 552   | 575 | 613   | 650 | 246  |
| 35° | 386 | 405   | 435 | 490   | 541 | 241  |
| 45° | 236 | 253   | 305 | 370   | 420 | 185  |
| 55° | 155 | 159   | 188 | 241   | 278 | 139  |
| 65° | 98  | 106   | 117 | 124   | 134 | 98   |
| 75° | 53  | 62    | 60  | 57    | 56  | 56   |
| 85° | 16  | 20    | 18  | 15    | 12  | 18   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 797.2 | 797.2 | 797.2 | 797.2 | 797.2 |
| 2.5°  | 788.8 | 800.0 | 792.5 | 792.5 | 793.4 |
| 5°    | 771.0 | 784.1 | 781.3 | 786.9 | 793.4 |
| 7.5°  | 749.5 | 763.5 | 764.5 | 777.5 | 786.9 |
| 10°   | 726.1 | 740.2 | 744.8 | 763.5 | 776.6 |
| 12.5° | 698.1 | 714.0 | 722.4 | 745.8 | 764.5 |
| 15°   | 669.1 | 685.0 | 698.1 | 726.1 | 748.6 |
| 17.5° | 638.3 | 654.2 | 671.0 | 702.8 | 727.1 |
| 20°   | 604.7 | 621.5 | 641.1 | 672.9 | 702.8 |
| 22.5° | 570.1 | 587.8 | 608.4 | 643.0 | 676.6 |
| 25°   | 535.5 | 552.3 | 574.7 | 613.1 | 649.5 |
| 27.5° | 499.0 | 516.8 | 540.2 | 582.2 | 623.3 |
| 30°   | 462.6 | 480.4 | 505.6 | 550.4 | 594.4 |
| 32.5° | 425.2 | 443.0 | 470.1 | 520.5 | 568.2 |
| 35°   | 386.0 | 404.7 | 434.6 | 489.7 | 541.1 |
| 37.5° | 348.6 | 366.3 | 400.0 | 460.7 | 514.9 |
| 40°   | 310.3 | 329.0 | 366.3 | 431.8 | 486.0 |
| 42.5° | 272.9 | 291.6 | 335.5 | 400.9 | 454.2 |
| 45°   | 235.5 | 253.3 | 304.7 | 370.1 | 420.5 |
| 47.5° | 206.5 | 219.6 | 275.7 | 337.4 | 387.8 |
| 50°   | 187.8 | 192.5 | 246.7 | 305.6 | 352.3 |
| 52.5° | 171.0 | 174.8 | 214.9 | 273.8 | 315.9 |
| 55°   | 155.1 | 158.9 | 187.8 | 241.1 | 278.5 |
| 57.5° | 139.2 | 143.9 | 167.3 | 207.5 | 241.1 |
| 60°   | 124.3 | 129.9 | 150.5 | 177.6 | 200.9 |
| 62.5° | 111.2 | 117.8 | 133.6 | 150.5 | 166.3 |
| 65°   | 98.1  | 106.5 | 116.8 | 124.3 | 133.6 |
| 67.5° | 86.0  | 95.3  | 100.9 | 102.8 | 103.7 |
| 70°   | 74.8  | 84.1  | 86.0  | 86.0  | 86.0  |
| 72.5° | 63.5  | 73.8  | 72.0  | 71.0  | 70.1  |
| 75°   | 53.3  | 61.7  | 59.8  | 57.0  | 56.1  |
| 77.5° | 43.0  | 50.5  | 47.7  | 45.8  | 43.0  |
| 80°   | 33.6  | 39.3  | 36.4  | 34.6  | 31.8  |
| 82.5° | 25.2  | 29.0  | 26.2  | 24.3  | 21.5  |
| 85°   | 15.9  | 19.6  | 17.8  | 15.0  | 12.1  |
| 87.5° | 8.4   | 11.2  | 9.3   | 8.4   | 4.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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**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 | 14.56            | 16.04 | 14.92 | 16.35 | 16.67 | 17.31          | 18.80 | 17.68 | 19.11 | 19.42 |
|                 | 3H   | 16.27            | 17.59 | 16.64 | 17.92 | 18.29 | 18.33          | 19.66 | 18.71 | 19.99 | 20.35 |
|                 | 4H   | 16.93            | 18.17 | 17.33 | 18.52 | 18.90 | 18.70          | 19.94 | 19.10 | 20.29 | 20.67 |
|                 | 6H   | 17.43            | 18.58 | 17.84 | 18.94 | 19.34 | 18.95          | 20.10 | 19.37 | 20.47 | 20.86 |
|                 | 8H   | 17.61            | 18.70 | 18.03 | 19.09 | 19.49 | 19.02          | 20.12 | 19.45 | 20.51 | 20.91 |
|                 | 12H  | 17.73            | 18.78 | 18.16 | 19.16 | 19.59 | 19.06          | 20.11 | 19.49 | 20.49 | 20.92 |
| 4H              | 2H   | 15.33            | 16.58 | 15.73 | 16.93 | 17.30 | 17.58          | 18.83 | 17.98 | 19.18 | 19.56 |
|                 | 3H   | 17.26            | 18.29 | 17.67 | 18.69 | 19.09 | 18.84          | 19.87 | 19.25 | 20.27 | 20.67 |
|                 | 4H   | 18.07            | 19.00 | 18.50 | 19.41 | 19.85 | 19.33          | 20.25 | 19.76 | 20.67 | 21.11 |
|                 | 6H   | 18.71            | 19.52 | 19.17 | 19.96 | 20.42 | 19.71          | 20.51 | 20.16 | 20.96 | 21.42 |
|                 | 8H   | 18.94            | 19.69 | 19.40 | 20.14 | 20.60 | 19.82          | 20.57 | 20.28 | 21.02 | 21.49 |
|                 | 12H  | 19.11            | 19.78 | 19.59 | 20.26 | 20.73 | 19.89          | 20.56 | 20.37 | 21.04 | 21.51 |
| 8H              | 4H   | 18.39            | 19.14 | 18.85 | 19.59 | 20.05 | 19.52          | 20.27 | 19.98 | 20.72 | 21.18 |
|                 | 6H   | 19.18            | 19.80 | 19.68 | 20.30 | 20.77 | 20.01          | 20.63 | 20.50 | 21.12 | 21.60 |
|                 | 8H   | 19.51            | 20.07 | 20.02 | 20.58 | 21.07 | 20.18          | 20.74 | 20.70 | 21.25 | 21.74 |
|                 | 12H  | 19.79            | 20.28 | 20.30 | 20.77 | 21.34 | 20.31          | 20.81 | 20.82 | 21.30 | 21.87 |
| 12H             | 4H   | 18.41            | 19.09 | 18.89 | 19.56 | 20.04 | 19.53          | 20.21 | 20.01 | 20.68 | 21.16 |
|                 | 6H   | 19.23            | 19.80 | 19.75 | 20.31 | 20.80 | 20.04          | 20.60 | 20.56 | 21.11 | 21.60 |
|                 | 8H   | 19.63            | 20.12 | 20.14 | 20.62 | 21.18 | 20.27          | 20.77 | 20.78 | 21.26 | 21.83 |