

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



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: NEO-RAY

Report Number: P995718

Luminaire Tested: DTR3-DS-4F0-065D-930-FLL-D

Issue Date: 1/22/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P995718  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2501-325-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/22/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: DTR3-DS-4F0-065D-930-FLL-D  
Description: Define Torrent LED Luminaire  
Light Source: -  
Ballast/Driver: -

**Summary**

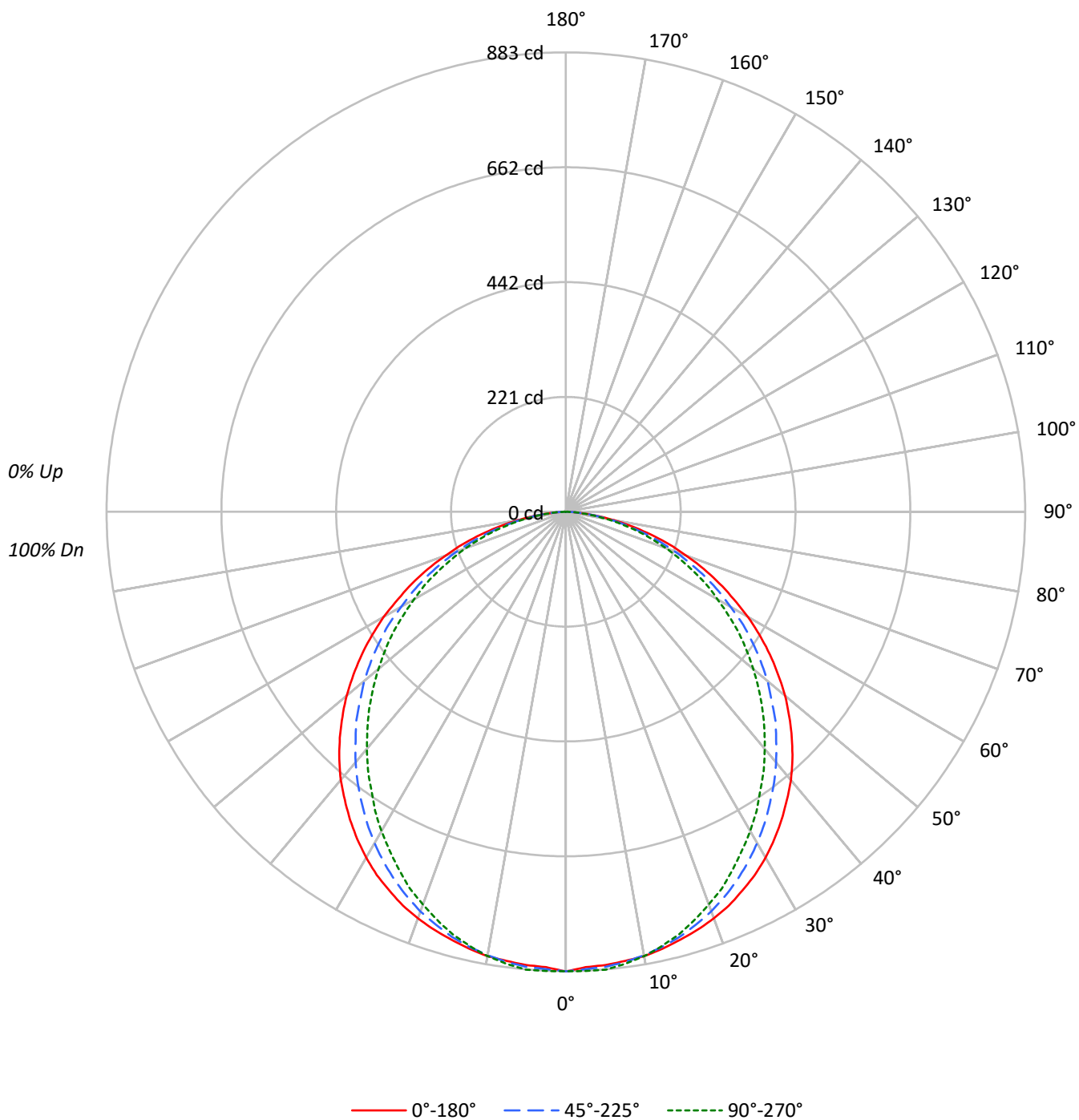
Lumens per Lamp: N/A  
Luminaire Lumens: 2440.3 lumens  
Efficiency: N/A  
Efficacy: 61.6 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.2 / 1.35  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 39.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9909  
Total Harmonic Distortion (THDi): 8.21  
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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 76  |  | 82  | 78  | 74  |  | 79  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  |  | 73  | 67  | 62  |  | 70  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  |  | 65  | 58  | 53  |  | 62  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  |  | 58  | 52  | 46  |  | 56  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 41  | 54  | 47  | 41  |  | 53  | 46  | 41  |  | 51  |
| 7   | 65  | 52  | 43  | 37  | 63  | 51  | 43  | 37  | 49  | 42  | 36  |  | 48  | 41  | 36  |  | 47  |
| 8   | 61  | 47  | 39  | 33  | 59  | 46  | 38  | 33  | 45  | 38  | 33  |  | 44  | 37  | 32  |  | 43  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 29  | 42  | 34  | 29  |  | 40  | 34  | 29  |  | 39  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  |  | 37  | 31  | 26  |  | 37  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9509 | 9509 | 9509 |
| 5°  | 9448 | 9487 | 9545 |
| 10° | 9481 | 9461 | 9481 |
| 15° | 9487 | 9428 | 9367 |
| 20° | 9527 | 9364 | 9200 |
| 25° | 9539 | 9265 | 9011 |
| 30° | 9541 | 9142 | 8810 |
| 35° | 9500 | 8987 | 8566 |
| 40° | 9459 | 8834 | 8358 |
| 45° | 9353 | 8675 | 8133 |
| 50° | 9215 | 8468 | 7874 |
| 55° | 8991 | 8222 | 7619 |
| 60° | 8704 | 7860 | 7246 |
| 65° | 8301 | 7529 | 6895 |
| 70° | 7736 | 7009 | 6445 |
| 75° | 7037 | 6297 | 5852 |
| 80° | 5852 | 5300 | 4854 |
| 85° | 3964 | 3964 | 3520 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 9353 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.6   | 3.4       |
| 10°-20°   | 239.0  | 9.8       |
| 20°-30°   | 360.1  | 14.8      |
| 30°-40°   | 429.6  | 17.6      |
| 40°-50°   | 440.9  | 18.1      |
| 50°-60°   | 393.1  | 16.1      |
| 60°-70°   | 293.4  | 12.0      |
| 70°-80°   | 162.1  | 6.6       |
| 80°-90°   | 38.5   | 1.6       |
| 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°    | 682.6  | 28.0      |
| 0°-40°    | 1112.2 | 45.6      |
| 0°-60°    | 1946.3 | 79.8      |
| 0°-90°    | 2440.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2440.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 883 | 883   | 883 | 883   | 883 |      |
| 5°  | 874 | 885   | 878 | 878   | 883 | 83   |
| 15° | 851 | 858   | 846 | 839   | 841 | 241  |
| 25° | 803 | 803   | 780 | 760   | 759 | 370  |
| 35° | 723 | 714   | 684 | 661   | 652 | 452  |
| 45° | 614 | 602   | 570 | 543   | 534 | 474  |
| 55° | 479 | 467   | 438 | 415   | 406 | 428  |
| 65° | 326 | 315   | 296 | 278   | 271 | 322  |
| 75° | 169 | 162   | 151 | 144   | 141 | 179  |
| 85° | 32  | 32    | 32  | 30    | 28  | 41   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 883.4 | 883.4 | 883.4 | 883.4 | 883.4 |
| 2.5°  | 876.2 | 886.9 | 879.8 | 881.6 | 883.4 |
| 5°    | 874.4 | 885.1 | 878.0 | 878.0 | 883.4 |
| 7.5°  | 870.8 | 881.6 | 872.6 | 870.8 | 876.2 |
| 10°   | 867.4 | 876.2 | 865.6 | 862.0 | 867.4 |
| 12.5° | 860.2 | 867.4 | 856.6 | 851.3 | 854.8 |
| 15°   | 851.3 | 858.4 | 846.0 | 838.8 | 840.6 |
| 17.5° | 842.4 | 847.8 | 831.7 | 822.8 | 822.8 |
| 20°   | 831.7 | 833.5 | 817.5 | 805.0 | 803.2 |
| 22.5° | 819.2 | 821.0 | 799.7 | 783.7 | 783.7 |
| 25°   | 803.2 | 803.2 | 780.1 | 760.5 | 758.7 |
| 27.5° | 787.1 | 783.7 | 758.7 | 739.1 | 733.8 |
| 30°   | 767.6 | 762.3 | 735.5 | 714.2 | 708.8 |
| 32.5° | 746.2 | 739.1 | 710.6 | 687.4 | 682.1 |
| 35°   | 723.0 | 714.2 | 683.9 | 660.7 | 651.9 |
| 37.5° | 698.1 | 687.4 | 657.1 | 632.3 | 625.1 |
| 40°   | 673.2 | 660.7 | 628.7 | 603.7 | 594.8 |
| 42.5° | 644.7 | 632.3 | 598.4 | 573.4 | 564.6 |
| 45°   | 614.4 | 602.0 | 569.9 | 543.2 | 534.3 |
| 47.5° | 582.4 | 569.9 | 536.1 | 511.1 | 502.3 |
| 50°   | 550.3 | 536.1 | 505.7 | 479.1 | 470.2 |
| 52.5° | 514.7 | 502.3 | 471.9 | 447.0 | 438.1 |
| 55°   | 479.1 | 466.6 | 438.1 | 415.0 | 406.0 |
| 57.5° | 441.6 | 431.0 | 404.3 | 379.3 | 370.5 |
| 60°   | 404.3 | 391.8 | 365.1 | 345.5 | 336.6 |
| 62.5° | 363.3 | 352.7 | 331.3 | 311.6 | 306.3 |
| 65°   | 325.9 | 315.2 | 295.6 | 277.8 | 270.7 |
| 67.5° | 286.8 | 277.8 | 258.2 | 244.0 | 236.9 |
| 70°   | 245.8 | 238.7 | 222.7 | 210.1 | 204.8 |
| 72.5° | 208.3 | 199.5 | 187.0 | 176.3 | 172.8 |
| 75°   | 169.2 | 162.0 | 151.4 | 144.2 | 140.7 |
| 77.5° | 130.0 | 124.6 | 117.6 | 112.2 | 108.6 |
| 80°   | 94.4  | 89.1  | 85.5  | 81.9  | 78.3  |
| 82.5° | 60.5  | 57.0  | 57.0  | 53.5  | 51.7  |
| 85°   | 32.1  | 32.1  | 32.1  | 30.3  | 28.5  |
| 87.5° | 10.7  | 12.4  | 12.4  | 10.7  | 10.7  |
| 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 | 19.93            | 21.56 | 20.29 | 21.87 | 22.19 | 18.98          | 20.61 | 19.35 | 20.93 | 21.24 |
|                 | 3H   | 21.71            | 23.18 | 22.08 | 23.51 | 23.87 | 20.70          | 22.17 | 21.07 | 22.50 | 22.86 |
|                 | 4H   | 22.35            | 23.74 | 22.75 | 24.08 | 24.46 | 21.32          | 22.70 | 21.72 | 23.05 | 23.43 |
|                 | 6H   | 22.77            | 24.06 | 23.19 | 24.42 | 24.81 | 21.73          | 23.02 | 22.14 | 23.38 | 23.77 |
|                 | 8H   | 22.89            | 24.11 | 23.31 | 24.50 | 24.90 | 21.84          | 23.07 | 22.27 | 23.46 | 23.86 |
|                 | 12H  | 22.94            | 24.12 | 23.37 | 24.50 | 24.93 | 21.91          | 23.08 | 22.33 | 23.46 | 23.89 |
| 4H              | 2H   | 20.45            | 21.84 | 20.85 | 22.19 | 22.56 | 19.70          | 21.09 | 20.10 | 21.44 | 21.81 |
|                 | 3H   | 22.45            | 23.61 | 22.86 | 24.01 | 24.41 | 21.62          | 22.78 | 22.03 | 23.18 | 23.58 |
|                 | 4H   | 23.22            | 24.27 | 23.65 | 24.68 | 25.11 | 22.35          | 23.40 | 22.78 | 23.81 | 24.25 |
|                 | 6H   | 23.76            | 24.68 | 24.21 | 25.12 | 25.57 | 22.88          | 23.79 | 23.33 | 24.23 | 24.69 |
|                 | 8H   | 23.91            | 24.77 | 24.37 | 25.21 | 25.67 | 23.02          | 23.88 | 23.48 | 24.32 | 24.79 |
|                 | 12H  | 24.00            | 24.77 | 24.48 | 25.24 | 25.71 | 23.11          | 23.88 | 23.59 | 24.36 | 24.83 |
| 8H              | 4H   | 23.45            | 24.31 | 23.91 | 24.75 | 25.22 | 22.68          | 23.54 | 23.14 | 23.98 | 24.45 |
|                 | 6H   | 24.09            | 24.80 | 24.59 | 25.29 | 25.77 | 23.31          | 24.02 | 23.80 | 24.51 | 24.99 |
|                 | 8H   | 24.30            | 24.93 | 24.80 | 25.44 | 25.93 | 23.52          | 24.15 | 24.02 | 24.66 | 25.15 |
|                 | 12H  | 24.44            | 25.00 | 24.94 | 25.49 | 26.05 | 23.66          | 24.22 | 24.17 | 24.71 | 25.27 |
| 12H             | 4H   | 23.47            | 24.24 | 23.95 | 24.71 | 25.18 | 22.72          | 23.49 | 23.20 | 23.96 | 24.43 |
|                 | 6H   | 24.12            | 24.76 | 24.63 | 25.27 | 25.75 | 23.36          | 24.00 | 23.87 | 24.51 | 24.99 |
|                 | 8H   | 24.37            | 24.93 | 24.88 | 25.42 | 25.99 | 23.62          | 24.18 | 24.12 | 24.67 | 25.23 |