

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: NEO-RAY

Report Number: P334086

Luminaire Tested: **S123RDP-S560D940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334086  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDP-S560D940-4F0-1E-UDD-F  
Description: DEFINE 3 REGRESSED DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 560 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1783.5 lumens  
Efficiency: N/A  
Efficacy: 94.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

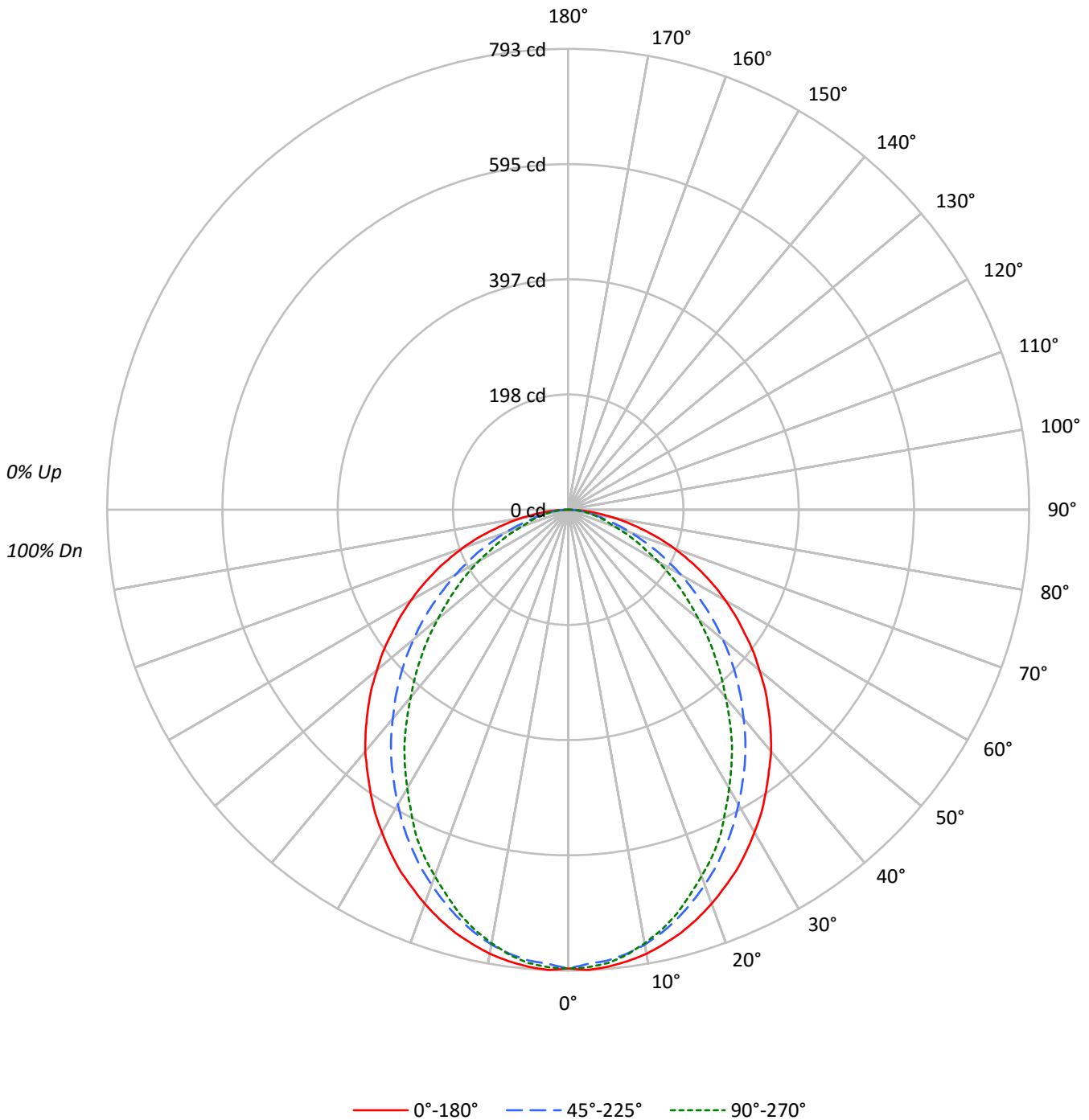
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P334086

CATALOG NUMBER: S123RDP-S560D940-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P334086

CATALOG NUMBER: S123RDP-S560D940-4F0-1E-UDD-F

**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 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 93  | 90  | 91  | 89  | 88  |     |    |    |    | 86 |     |   |  |   |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  |     |    |    |    | 73 |     |   |  |   |
| 3   | 92  | 82  | 75  | 68  | 90  | 81  | 74  | 68  | 78  | 72  | 67  | 75  | 70  | 66  | 73  | 68  | 64  |     |    |    |    | 62 |     |   |  |   |
| 4   | 85  | 73  | 65  | 59  | 83  | 72  | 64  | 58  | 70  | 63  | 58  | 67  | 62  | 57  | 65  | 60  | 56  |     |    |    |    | 54 |     |   |  |   |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 50  | 61  | 55  | 50  | 59  | 54  | 49  |     |    |    |    | 47 |     |   |  |   |
| 6   | 73  | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 44  | 54  | 48  | 44  |     |    |    |    | 42 |     |   |  |   |
| 7   | 67  | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  | 51  | 44  | 39  | 49  | 44  | 39  |     |    |    |    | 37 |     |   |  |   |
| 8   | 63  | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 35  |     |    |    |    | 34 |     |   |  |   |
| 9   | 59  | 46  | 38  | 33  | 58  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  |     |    |    |    | 30 |     |   |  |   |
| 10  | 55  | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 29  | 39  | 34  | 29  |     |    |    |    | 28 |     |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8498 | 8498 | 8498 |
| 5°  | 8531 | 8413 | 8461 |
| 10° | 8482 | 8307 | 8278 |
| 15° | 8391 | 8113 | 8027 |
| 20° | 8266 | 7869 | 7686 |
| 25° | 8137 | 7596 | 7353 |
| 30° | 7966 | 7281 | 6883 |
| 35° | 7791 | 6966 | 6453 |
| 40° | 7630 | 6594 | 5920 |
| 45° | 7416 | 6228 | 5439 |
| 50° | 7184 | 5811 | 4900 |
| 55° | 6945 | 5335 | 4397 |
| 60° | 6727 | 4824 | 3845 |
| 65° | 6441 | 4274 | 3293 |
| 70° | 6087 | 3588 | 2659 |
| 75° | 5565 | 2824 | 2504 |
| 80° | 4959 | 2498 | 2300 |
| 85° | 4187 | 2211 | 2050 |



TEST NUMBER: P334086

CATALOG NUMBER: S123RDP-S560D940-4F0-1E-UDD-F

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 74.2   | 4.2       |
| 10°-20°   | 206.4  | 11.6      |
| 20°-30°   | 297.2  | 16.7      |
| 30°-40°   | 334.7  | 18.8      |
| 40°-50°   | 320.2  | 18.0      |
| 50°-60°   | 262.1  | 14.7      |
| 60°-70°   | 176.7  | 9.9       |
| 70°-80°   | 88.6   | 5.0       |
| 80°-90°   | 23.2   | 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°    | 577.9  | 32.4      |
| 0°-40°    | 912.7  | 51.2      |
| 0°-60°    | 1495.0 | 83.8      |
| 0°-90°    | 1783.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1783.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 790 | 790   | 790 | 790   | 790 |      |
| 5°  | 790 | 786   | 779 | 784   | 783 | 75   |
| 15° | 753 | 746   | 728 | 725   | 720 | 212  |
| 25° | 685 | 669   | 640 | 626   | 619 | 315  |
| 35° | 593 | 570   | 530 | 503   | 491 | 371  |
| 45° | 487 | 458   | 409 | 373   | 357 | 376  |
| 55° | 370 | 339   | 284 | 247   | 234 | 332  |
| 65° | 253 | 218   | 168 | 136   | 129 | 250  |
| 75° | 134 | 103   | 68  | 62    | 60  | 143  |
| 85° | 34  | 20    | 18  | 17    | 17  | 39   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P334086

CATALOG NUMBER: S123RDP-S560D940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 789.5 | 789.5 | 789.5 | 789.5 | 789.5 |
| 2.5°  | 792.7 | 790.1 | 782.4 | 789.5 | 788.2 |
| 5°    | 789.5 | 786.3 | 778.6 | 784.3 | 783.1 |
| 7.5°  | 783.7 | 780.5 | 770.9 | 774.7 | 772.8 |
| 10°   | 776.0 | 771.5 | 760.0 | 760.6 | 757.4 |
| 12.5° | 765.1 | 760.0 | 745.3 | 744.6 | 740.8 |
| 15°   | 753.0 | 745.9 | 728.0 | 724.8 | 720.3 |
| 17.5° | 738.2 | 730.6 | 708.1 | 701.7 | 695.3 |
| 20°   | 721.6 | 711.3 | 687.0 | 678.7 | 671.0 |
| 22.5° | 703.0 | 690.9 | 664.6 | 653.7 | 646.7 |
| 25°   | 685.1 | 669.1 | 639.6 | 626.2 | 619.1 |
| 27.5° | 663.3 | 646.0 | 614.0 | 596.1 | 585.2 |
| 30°   | 640.9 | 621.7 | 585.8 | 564.1 | 553.8 |
| 32.5° | 618.5 | 596.1 | 557.7 | 533.3 | 522.5 |
| 35°   | 592.9 | 569.8 | 530.1 | 502.6 | 491.1 |
| 37.5° | 567.3 | 542.3 | 500.7 | 470.0 | 455.9 |
| 40°   | 543.0 | 514.8 | 469.3 | 436.0 | 421.3 |
| 42.5° | 515.4 | 487.2 | 439.9 | 402.7 | 389.9 |
| 45°   | 487.2 | 458.4 | 409.1 | 372.6 | 357.3 |
| 47.5° | 459.7 | 427.7 | 379.0 | 339.3 | 325.9 |
| 50°   | 429.0 | 398.9 | 347.0 | 307.3 | 292.6 |
| 52.5° | 401.5 | 368.2 | 316.9 | 275.3 | 262.5 |
| 55°   | 370.1 | 338.7 | 284.3 | 247.1 | 234.3 |
| 57.5° | 341.9 | 308.0 | 252.9 | 217.7 | 206.8 |
| 60°   | 312.5 | 277.2 | 224.1 | 189.5 | 178.6 |
| 62.5° | 283.0 | 247.8 | 194.6 | 162.6 | 151.1 |
| 65°   | 252.9 | 217.7 | 167.8 | 136.4 | 129.3 |
| 67.5° | 222.8 | 187.0 | 138.3 | 114.6 | 106.9 |
| 70°   | 193.4 | 158.8 | 114.0 | 91.6  | 84.5  |
| 72.5° | 163.9 | 130.0 | 90.3  | 73.0  | 71.1  |
| 75°   | 133.8 | 103.1 | 67.9  | 61.5  | 60.2  |
| 77.5° | 106.3 | 78.1  | 53.1  | 49.3  | 48.0  |
| 80°   | 80.0  | 53.8  | 40.3  | 38.4  | 37.1  |
| 82.5° | 55.1  | 33.3  | 28.8  | 26.9  | 26.9  |
| 85°   | 33.9  | 19.8  | 17.9  | 16.6  | 16.6  |
| 87.5° | 15.4  | 8.3   | 8.3   | 7.7   | 7.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)