

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: P333804

Luminaire Tested: **S122DS-S1005D935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333804  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DS-S1005D935-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 1005 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

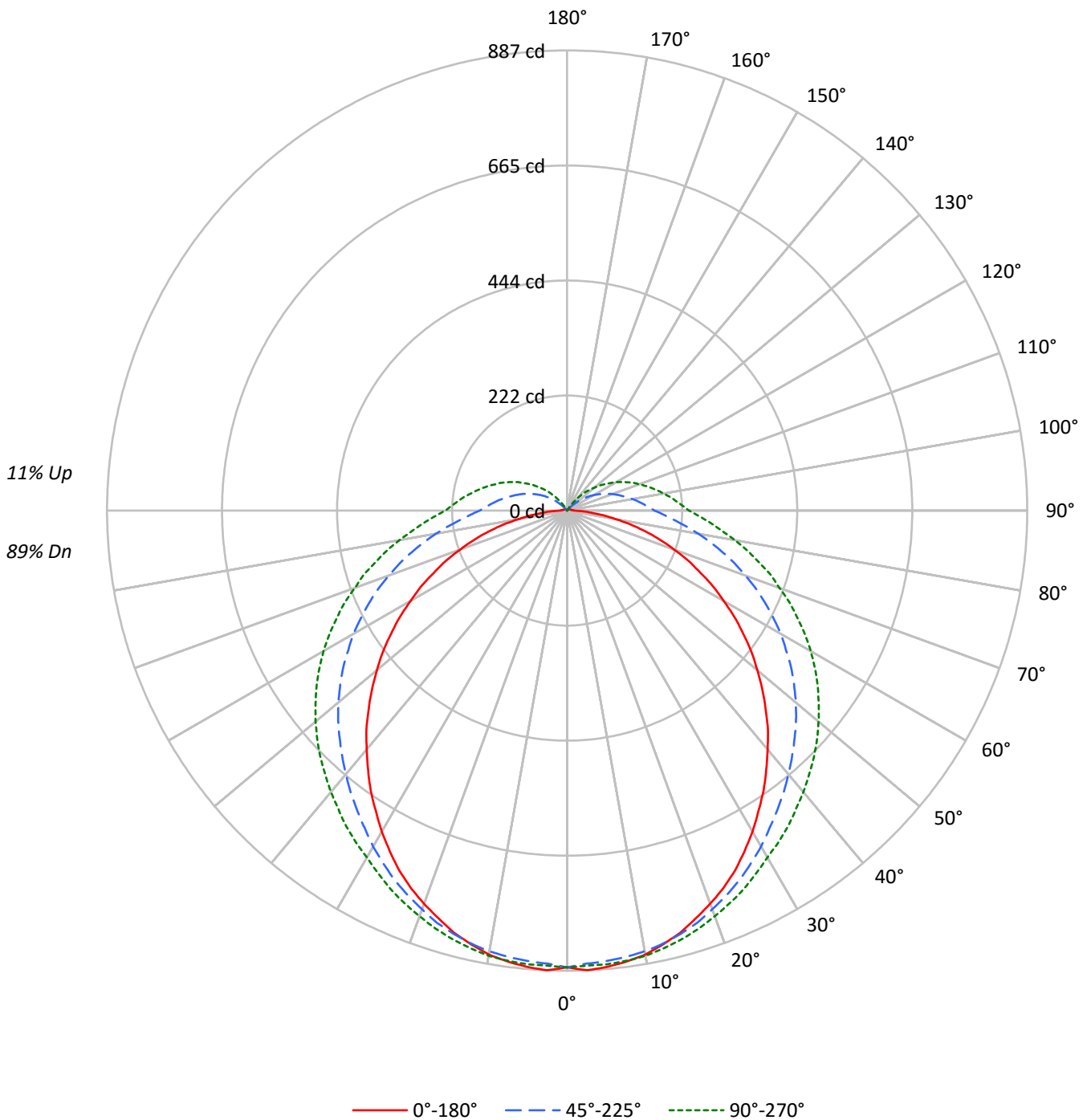
Lumens per Lamp: N/A  
Luminaire Lumens: 3359.6 lumens  
Efficiency: N/A  
Efficacy: 81.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 41.1  
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: P333804  
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### Luminous Intensity Polar Plot





TEST NUMBER: P333804

CATALOG NUMBER: S122DS-S1005D935-4F0-1E-UDD-D

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

|     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |    |    |    |    |    |    |    | 20 |    |    |    |    |   |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 70  |     |    |    |    |    |    |    |    | 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   | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 104 | 98  | 93  | 88  | 100 | 95  | 90  | 86  | 88  | 85  | 81  | 82 | 79 | 77 | 77 | 75 | 72 | 69 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 94  | 84  | 77  | 70  | 90  | 81  | 74  | 68  | 76  | 70  | 65  | 71 | 66 | 62 | 66 | 62 | 59 | 56 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 85  | 73  | 64  | 57  | 81  | 71  | 63  | 56  | 66  | 59  | 54  | 62 | 56 | 51 | 58 | 53 | 49 | 46 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 77  | 64  | 55  | 48  | 74  | 62  | 54  | 47  | 58  | 51  | 45  | 55 | 48 | 43 | 51 | 46 | 42 | 39 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 71  | 57  | 48  | 41  | 68  | 56  | 47  | 40  | 52  | 44  | 39  | 49 | 42 | 37 | 46 | 40 | 36 | 33 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 65  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 47  | 39  | 34  | 44 | 37 | 32 | 42 | 36 | 31 | 29 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 43  | 35  | 30  | 40 | 34 | 29 | 38 | 32 | 28 | 25 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 27  | 39  | 32  | 26  | 37 | 30 | 25 | 35 | 29 | 25 | 23 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 52  | 39  | 30  | 25  | 50  | 38  | 30  | 24  | 36  | 29  | 24  | 34 | 27 | 23 | 32 | 26 | 22 | 20 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 49  | 36  | 28  | 22  | 47  | 35  | 27  | 22  | 33  | 26  | 21  | 31 | 25 | 21 | 30 | 24 | 20 | 18 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 14216 | 14216 | 14216 |
| 5°  | 14311 | 14126 | 14229 |
| 10° | 14247 | 14142 | 14290 |
| 15° | 14078 | 14121 | 14292 |
| 20° | 13857 | 14055 | 14295 |
| 25° | 13639 | 14004 | 14345 |
| 30° | 13323 | 13942 | 14393 |
| 35° | 13003 | 13910 | 14639 |
| 40° | 12667 | 13987 | 14927 |
| 45° | 12355 | 14161 | 15356 |
| 50° | 12019 | 14456 | 15897 |
| 55° | 11674 | 14835 | 16594 |
| 60° | 11250 | 15371 | 17512 |
| 65° | 10823 | 16088 | 18720 |
| 70° | 10362 | 17231 | 20540 |
| 75° | 9794  | 19345 | 23799 |
| 80° | 8898  | 23849 | 30488 |
| 85° | 8503  | 38292 | 51537 |



TEST NUMBER: P333804

CATALOG NUMBER: S122DS-S1005D935-4F0-1E-UDD-D

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.5   | 2.5       |
| 10°-20°   | 239.4  | 7.1       |
| 20°-30°   | 362.7  | 10.8      |
| 30°-40°   | 441.7  | 13.1      |
| 40°-50°   | 475.2  | 14.1      |
| 50°-60°   | 461.5  | 13.7      |
| 60°-70°   | 403.0  | 12.0      |
| 70°-80°   | 310.2  | 9.2       |
| 80°-90°   | 207.8  | 6.2       |
| 90°-100°  | 143.3  | 4.3       |
| 100°-110° | 104.7  | 3.1       |
| 110°-120° | 69.1   | 2.1       |
| 120°-130° | 38.5   | 1.1       |
| 130°-140° | 16.2   | 0.5       |
| 140°-150° | 2.7    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 685.6  | 20.4      |
| 0°-40°    | 1127.3 | 33.6      |
| 0°-60°    | 2064.1 | 61.4      |
| 0°-90°    | 2985.1 | 88.9      |
| 90°-120°  | 317.1  | 9.4       |
| 90°-150°  | 374.5  | 11.1      |
| 90°-180°  | 375.0  | 11.2      |
| 0°-180°   | 3359.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 880 | 880   | 880 | 880   | 880 |      |
| 5°   | 883 | 879   | 872 | 879   | 878 | 84   |
| 15°  | 842 | 845   | 845 | 856   | 855 | 237  |
| 25°  | 766 | 775   | 786 | 801   | 805 | 352  |
| 35°  | 660 | 681   | 706 | 734   | 743 | 412  |
| 45°  | 541 | 576   | 620 | 660   | 672 | 418  |
| 55°  | 415 | 461   | 527 | 573   | 590 | 371  |
| 65°  | 283 | 346   | 421 | 473   | 490 | 281  |
| 75°  | 157 | 228   | 310 | 365   | 382 | 166  |
| 85°  | 46  | 125   | 207 | 260   | 278 | 48   |
| 90°  | 13  | 87    | 168 | 220   | 235 | 9    |
| 95°  | 10  | 70    | 147 | 195   | 211 | 8    |
| 105° | 6   | 43    | 110 | 154   | 168 | 7    |
| 115° | 5   | 19    | 77  | 115   | 129 | 5    |
| 125° | 3   | 3     | 43  | 78    | 89  | 3    |
| 135° | 1   | 1     | 14  | 41    | 51  | 1    |
| 145° | 0   | 0     | 0   | 8     | 14  | 0    |
| 155° | 0   | 0     | 0   | 0     | 0   | 0    |
| 165° | 0   | 0     | 0   | 0     | 0   | 0    |
| 175° | 0   | 0     | 0   | 0     | 0   | 0    |
| 180° | 0   | 0     | 0   | 0     | 0   | 0    |



TEST NUMBER: P333804

CATALOG NUMBER: S122DS-S1005D935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 880.5 | 880.5 | 880.5 | 880.5 | 880.5 |
| 2.5°   | 886.9 | 883.0 | 874.1 | 880.5 | 877.9 |
| 5°     | 883.0 | 879.2 | 871.6 | 879.2 | 877.9 |
| 7.5°   | 876.7 | 874.1 | 867.7 | 876.7 | 875.4 |
| 10°    | 869.0 | 866.5 | 862.6 | 872.8 | 871.6 |
| 12.5°  | 856.2 | 857.5 | 855.0 | 865.2 | 863.9 |
| 15°    | 842.2 | 844.8 | 844.8 | 856.2 | 855.0 |
| 17.5°  | 824.3 | 829.4 | 833.3 | 844.8 | 844.8 |
| 20°    | 806.5 | 812.9 | 818.0 | 832.0 | 832.0 |
| 22.5°  | 787.3 | 795.0 | 802.6 | 816.7 | 819.2 |
| 25°    | 765.6 | 774.6 | 786.1 | 801.4 | 805.2 |
| 27.5°  | 740.1 | 754.2 | 766.9 | 786.1 | 788.6 |
| 30°    | 714.6 | 731.2 | 747.8 | 768.2 | 772.0 |
| 32.5°  | 686.5 | 705.7 | 726.1 | 750.3 | 758.0 |
| 35°    | 659.7 | 681.4 | 705.7 | 733.7 | 742.7 |
| 37.5°  | 630.4 | 654.6 | 685.2 | 715.9 | 724.8 |
| 40°    | 601.0 | 629.1 | 663.6 | 696.7 | 708.2 |
| 42.5°  | 573.0 | 601.0 | 641.9 | 678.9 | 690.4 |
| 45°    | 541.1 | 575.5 | 620.2 | 659.7 | 672.5 |
| 47.5°  | 510.4 | 547.4 | 598.5 | 639.3 | 653.3 |
| 50°    | 478.5 | 518.1 | 575.5 | 618.9 | 632.9 |
| 52.5°  | 447.9 | 490.0 | 551.3 | 595.9 | 611.2 |
| 55°    | 414.7 | 460.7 | 527.0 | 573.0 | 589.5 |
| 57.5°  | 382.8 | 433.9 | 500.2 | 550.0 | 566.6 |
| 60°    | 348.4 | 403.2 | 476.0 | 524.5 | 542.3 |
| 62.5°  | 317.7 | 375.2 | 447.9 | 500.2 | 516.8 |
| 65°    | 283.3 | 345.8 | 421.1 | 473.4 | 490.0 |
| 67.5°  | 252.7 | 317.7 | 394.3 | 446.6 | 464.5 |
| 70°    | 219.5 | 285.8 | 365.0 | 419.8 | 435.1 |
| 72.5°  | 188.9 | 257.8 | 338.2 | 391.8 | 410.9 |
| 75°    | 157.0 | 228.4 | 310.1 | 365.0 | 381.5 |
| 77.5°  | 126.3 | 200.3 | 283.3 | 338.2 | 356.0 |
| 80°    | 95.7  | 173.5 | 256.5 | 310.1 | 327.9 |
| 82.5°  | 70.2  | 146.7 | 231.0 | 284.6 | 301.2 |
| 85°    | 45.9  | 125.1 | 206.7 | 260.3 | 278.2 |
| 87.5°  | 28.1  | 104.6 | 186.3 | 238.6 | 255.2 |
| 90°    | 12.8  | 86.8  | 168.4 | 219.5 | 234.8 |
| 92.5°  | 11.5  | 79.1  | 157.0 | 206.7 | 222.0 |
| 95°    | 10.2  | 70.2  | 146.7 | 195.2 | 210.6 |
| 97.5°  | 8.9   | 63.8  | 137.8 | 185.0 | 200.3 |
| 100°   | 8.9   | 56.1  | 127.6 | 174.8 | 188.9 |
| 102.5° | 7.7   | 49.8  | 118.7 | 164.6 | 178.6 |
| 105°   | 6.4   | 43.4  | 109.7 | 154.4 | 168.4 |
| 107.5° | 6.4   | 37.0  | 100.8 | 144.2 | 158.2 |
| 110°   | 5.1   | 30.6  | 93.2  | 134.0 | 148.0 |



TEST NUMBER: P333804

CATALOG NUMBER: S122DS-S1005D935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 5.1 | 25.5  | 84.2 | 125.1 | 139.1 |
| 115°   | 5.1 | 19.1  | 76.6 | 114.8 | 128.9 |
| 117.5° | 3.8 | 14.0  | 67.6 | 105.9 | 118.7 |
| 120°   | 3.8 | 8.9   | 60.0 | 95.7  | 109.7 |
| 122.5° | 3.8 | 5.1   | 52.3 | 86.8  | 98.3  |
| 125°   | 2.6 | 2.6   | 43.4 | 77.8  | 89.3  |
| 127.5° | 2.6 | 1.3   | 35.7 | 67.6  | 79.1  |
| 130°   | 2.6 | 1.3   | 28.1 | 58.7  | 68.9  |
| 132.5° | 2.6 | 1.3   | 20.4 | 49.8  | 60.0  |
| 135°   | 1.3 | 1.3   | 14.0 | 40.8  | 51.0  |
| 137.5° | 1.3 | 1.3   | 7.7  | 31.9  | 40.8  |
| 140°   | 1.3 | 0.0   | 2.6  | 23.0  | 30.6  |
| 142.5° | 1.3 | 0.0   | 0.0  | 15.3  | 21.7  |
| 145°   | 0.0 | 0.0   | 0.0  | 7.7   | 14.0  |
| 147.5° | 0.0 | 0.0   | 0.0  | 1.3   | 5.1   |
| 150°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 152.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 155°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 157.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 160°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 162.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 165°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 167.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 170°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 172.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 175°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 177.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 180°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |

(END OF REPORT)