

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: P534560

Luminaire Tested: **S921DIP-W540-XX4XX-UDD-W**

Issue Date: 6/9/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P534560  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35510-R2)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S921DIP-W540-XX4XX-UDD-W  
Description: NEO-RAY CONVERGE SUSPENDED LED WaveStream LUMINAIRE  
WHITE CURVILINEAR HOUSING  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

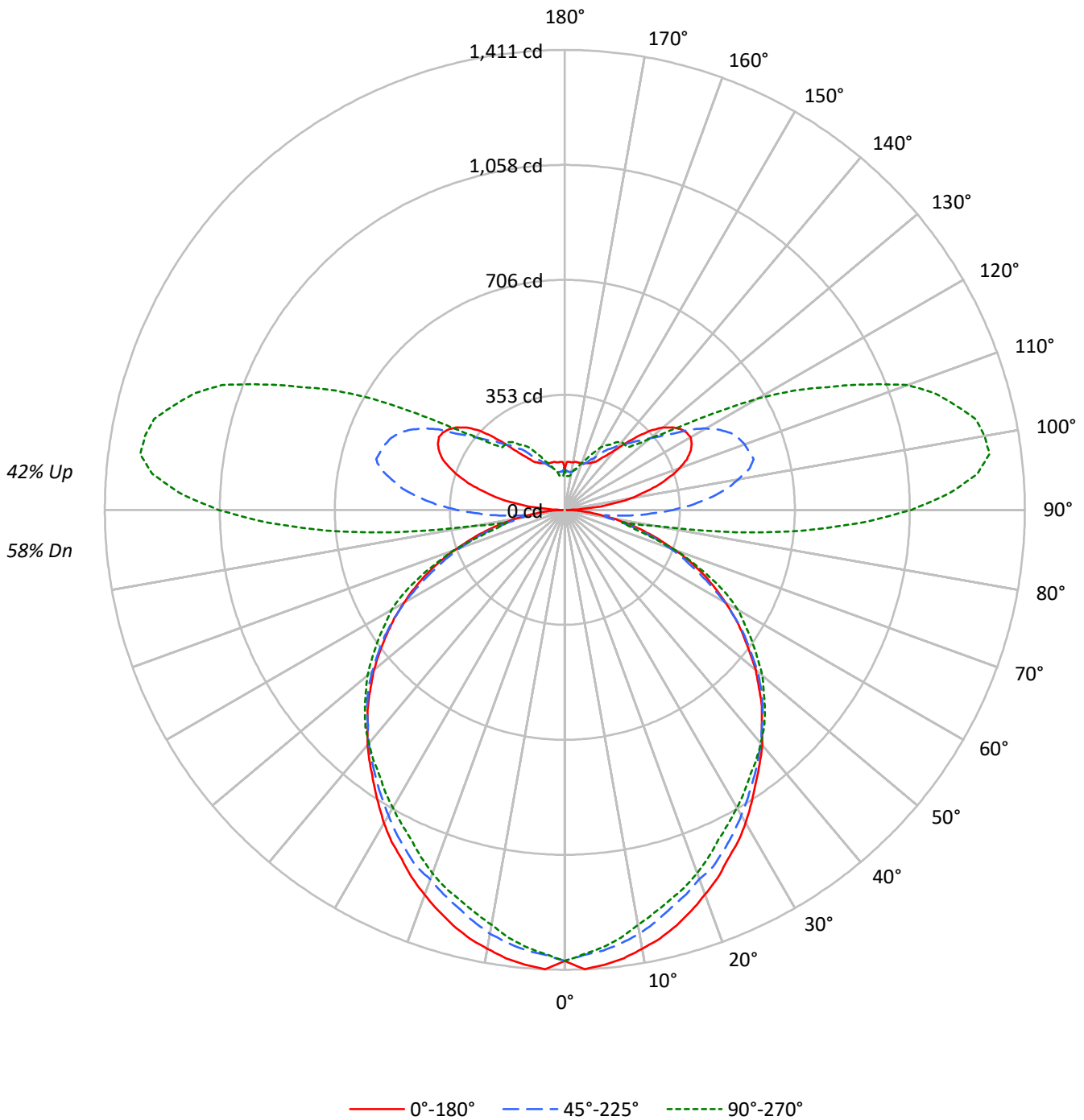
Lumens per Lamp: N/A  
Luminaire Lumens: 6812.1 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.14 / 1.32  
Luminous Opening: Rectangular w/ Sides (W: 0.68' x L: 4' x H: 0.31')  
CIE Type: General Diffuse

Input Watts (W): 68  
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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### 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 | 0  |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |
| 0   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 64 | 64 | 64 | 58 |
| 1   | 98  | 93  | 89  | 85  | 91  | 87  | 83  | 79  | 75 | 72 | 69 | 64 | 62 | 60 | 54 | 52 | 51 | 46 |
| 2   | 89  | 81  | 74  | 69  | 83  | 76  | 70  | 65  | 65 | 61 | 57 | 56 | 52 | 49 | 47 | 45 | 42 | 38 |
| 3   | 81  | 71  | 63  | 57  | 75  | 66  | 59  | 54  | 57 | 52 | 47 | 49 | 45 | 42 | 42 | 39 | 36 | 32 |
| 4   | 74  | 63  | 54  | 48  | 69  | 59  | 51  | 45  | 51 | 45 | 40 | 44 | 39 | 35 | 37 | 34 | 31 | 27 |
| 5   | 68  | 56  | 47  | 41  | 63  | 52  | 45  | 39  | 46 | 39 | 35 | 39 | 34 | 31 | 33 | 30 | 27 | 24 |
| 6   | 63  | 50  | 42  | 35  | 58  | 47  | 39  | 34  | 41 | 35 | 30 | 35 | 31 | 27 | 30 | 26 | 23 | 21 |
| 7   | 58  | 45  | 37  | 31  | 54  | 42  | 35  | 30  | 37 | 31 | 27 | 32 | 27 | 24 | 28 | 24 | 21 | 18 |
| 8   | 54  | 41  | 33  | 27  | 50  | 39  | 31  | 26  | 34 | 28 | 24 | 30 | 25 | 21 | 25 | 21 | 19 | 16 |
| 9   | 50  | 37  | 30  | 24  | 47  | 35  | 28  | 23  | 31 | 25 | 21 | 27 | 22 | 19 | 23 | 20 | 17 | 15 |
| 10  | 47  | 34  | 27  | 22  | 44  | 32  | 26  | 21  | 29 | 23 | 19 | 25 | 20 | 17 | 22 | 18 | 15 | 13 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5497 | 5497 | 5497 |
| 5°  | 5547 | 5239 | 5165 |
| 10° | 5440 | 4994 | 4829 |
| 15° | 5319 | 4719 | 4544 |
| 20° | 5166 | 4485 | 4302 |
| 25° | 5004 | 4298 | 4034 |
| 30° | 4870 | 4078 | 3834 |
| 35° | 4702 | 3871 | 3647 |
| 40° | 4586 | 3684 | 3508 |
| 45° | 4456 | 3501 | 3350 |
| 50° | 4324 | 3288 | 3168 |
| 55° | 4160 | 3034 | 2940 |
| 60° | 3993 | 2723 | 2724 |
| 65° | 3783 | 2335 | 2343 |
| 70° | 3437 | 1952 | 1868 |
| 75° | 2995 | 1476 | 1220 |
| 80° | 2346 | 929  | 1798 |
| 85° | 1299 | 1729 | 5393 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 129.4  | 1.9       |
| 10°-20°   | 359.8  | 5.3       |
| 20°-30°   | 531.9  | 7.8       |
| 30°-40°   | 634.2  | 9.3       |
| 40°-50°   | 664.9  | 9.8       |
| 50°-60°   | 608.4  | 8.9       |
| 60°-70°   | 464.0  | 6.8       |
| 70°-80°   | 253.6  | 3.7       |
| 80°-90°   | 332.1  | 4.9       |
| 90°-100°  | 625.7  | 9.2       |
| 100°-110° | 714.9  | 10.5      |
| 110°-120° | 599.4  | 8.8       |
| 120°-130° | 394.2  | 5.8       |
| 130°-140° | 230.7  | 3.4       |
| 140°-150° | 140.1  | 2.1       |
| 150°-160° | 78.1   | 1.1       |
| 160°-170° | 38.8   | 0.6       |
| 170°-180° | 11.8   | 0.2       |
| 0°-30°    | 1021.1 | 15.0      |
| 0°-40°    | 1655.3 | 24.3      |
| 0°-60°    | 2928.6 | 43.0      |
| 0°-90°    | 3978.4 | 58.4      |
| 90°-120°  | 1940.0 | 28.5      |
| 90°-150°  | 2705.0 | 39.7      |
| 90°-180°  | 2834.0 | 41.6      |
| 0°-180°   | 6812.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1384 | 1384  | 1384 | 1384  | 1384 |      |
| 5°   | 1401 | 1391  | 1357 | 1354  | 1347 | 133  |
| 15°  | 1320 | 1307  | 1263 | 1247  | 1240 | 372  |
| 25°  | 1183 | 1180  | 1153 | 1133  | 1116 | 546  |
| 35°  | 1022 | 1032  | 1009 | 999   | 992  | 641  |
| 45°  | 854  | 865   | 858  | 868   | 868  | 658  |
| 55°  | 667  | 677   | 674  | 690   | 700  | 597  |
| 65°  | 469  | 466   | 449  | 486   | 493  | 462  |
| 75°  | 251  | 238   | 231  | 221   | 214  | 265  |
| 85°  | 54   | 70    | 201  | 543   | 734  | 64   |
| 90°  | 7    | 121   | 332  | 818   | 1062 | 11   |
| 95°  | 100  | 208   | 452  | 988   | 1270 | 104  |
| 105° | 298  | 352   | 600  | 1019  | 1240 | 311  |
| 115° | 426  | 436   | 560  | 774   | 891  | 417  |
| 125° | 432  | 432   | 409  | 439   | 462  | 384  |
| 135° | 322  | 302   | 295  | 278   | 271  | 249  |
| 145° | 191  | 198   | 224  | 245   | 245  | 123  |
| 155° | 158  | 154   | 161  | 178   | 184  | 73   |
| 165° | 151  | 141   | 127  | 131   | 131  | 43   |
| 175° | 147  | 141   | 117  | 107   | 104  | 14   |
| 180° | 124  | 124   | 124  | 124   | 124  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 |
| 2.5°   | 1410.8 | 1400.7 | 1367.2 | 1367.2 | 1363.9 |
| 5°     | 1400.7 | 1390.7 | 1357.2 | 1353.8 | 1347.1 |
| 7.5°   | 1387.3 | 1373.9 | 1340.4 | 1333.7 | 1323.6 |
| 10°    | 1367.2 | 1357.2 | 1320.3 | 1306.9 | 1293.5 |
| 12.5°  | 1347.1 | 1333.7 | 1293.5 | 1280.1 | 1266.7 |
| 15°    | 1320.3 | 1306.9 | 1263.3 | 1246.6 | 1239.9 |
| 17.5°  | 1290.1 | 1276.7 | 1236.5 | 1229.8 | 1216.4 |
| 20°    | 1256.6 | 1243.2 | 1206.4 | 1199.7 | 1186.3 |
| 22.5°  | 1223.1 | 1213.1 | 1186.3 | 1166.1 | 1152.7 |
| 25°    | 1182.9 | 1179.6 | 1152.7 | 1132.6 | 1115.9 |
| 27.5°  | 1149.4 | 1142.7 | 1119.2 | 1099.1 | 1085.7 |
| 30°    | 1109.2 | 1105.8 | 1082.4 | 1065.6 | 1055.6 |
| 32.5°  | 1065.6 | 1069.0 | 1045.5 | 1035.5 | 1025.4 |
| 35°    | 1022.1 | 1032.1 | 1008.7 | 998.6  | 991.9  |
| 37.5°  | 981.8  | 995.2  | 971.8  | 968.4  | 965.1  |
| 40°    | 941.6  | 951.7  | 934.9  | 934.9  | 934.9  |
| 42.5°  | 894.7  | 908.1  | 894.7  | 904.8  | 904.8  |
| 45°    | 854.5  | 864.6  | 857.9  | 867.9  | 867.9  |
| 47.5°  | 807.6  | 817.6  | 817.6  | 827.7  | 827.7  |
| 50°    | 764.0  | 774.1  | 770.7  | 784.1  | 790.8  |
| 52.5°  | 713.8  | 723.8  | 720.5  | 740.6  | 743.9  |
| 55°    | 666.8  | 676.9  | 673.6  | 690.3  | 700.4  |
| 57.5°  | 619.9  | 630.0  | 619.9  | 640.0  | 653.4  |
| 60°    | 569.7  | 579.7  | 566.3  | 586.4  | 613.2  |
| 62.5°  | 519.4  | 522.8  | 506.0  | 539.5  | 559.6  |
| 65°    | 469.1  | 465.8  | 449.0  | 485.9  | 492.6  |
| 67.5°  | 415.5  | 408.8  | 395.4  | 422.2  | 425.6  |
| 70°    | 358.6  | 351.9  | 341.8  | 355.2  | 361.9  |
| 72.5°  | 301.6  | 294.9  | 288.2  | 291.5  | 278.1  |
| 75°    | 251.3  | 237.9  | 231.2  | 221.2  | 214.5  |
| 77.5°  | 197.7  | 187.7  | 174.3  | 170.9  | 181.0  |
| 80°    | 147.4  | 147.4  | 127.3  | 177.6  | 281.5  |
| 82.5°  | 97.2   | 103.9  | 124.0  | 385.4  | 529.5  |
| 85°    | 53.6   | 70.4   | 201.1  | 542.9  | 733.9  |
| 87.5°  | 23.5   | 83.8   | 264.7  | 680.3  | 908.1  |
| 90°    | 6.7    | 120.6  | 331.7  | 817.6  | 1062.3 |
| 92.5°  | 46.9   | 167.6  | 395.4  | 918.2  | 1182.9 |
| 95°    | 100.5  | 207.8  | 452.4  | 988.5  | 1270.0 |
| 97.5°  | 154.1  | 258.0  | 502.7  | 1035.5 | 1313.6 |
| 100°   | 207.8  | 291.5  | 539.5  | 1045.5 | 1306.9 |
| 102.5° | 251.3  | 325.0  | 579.7  | 1038.8 | 1290.1 |
| 105°   | 298.2  | 351.9  | 599.8  | 1018.7 | 1239.9 |
| 107.5° | 338.5  | 375.3  | 593.1  | 988.5  | 1189.6 |
| 110°   | 375.3  | 388.7  | 586.4  | 918.2  | 1119.2 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°    |
|--------|-------|-------|-------|-------|--------|
| 112.5° | 405.5 | 412.2 | 576.4 | 844.5 | 1005.3 |
| 115°   | 425.6 | 435.6 | 559.6 | 774.1 | 891.4  |
| 117.5° | 439.0 | 449.0 | 532.8 | 697.0 | 790.8  |
| 120°   | 445.7 | 452.4 | 499.3 | 623.3 | 680.3  |
| 122.5° | 442.3 | 449.0 | 459.1 | 532.8 | 563.0  |
| 125°   | 432.3 | 432.3 | 408.8 | 439.0 | 462.4  |
| 127.5° | 415.5 | 412.2 | 372.0 | 372.0 | 388.7  |
| 130°   | 392.1 | 378.7 | 341.8 | 321.7 | 338.5  |
| 132.5° | 361.9 | 338.5 | 315.0 | 284.8 | 294.9  |
| 135°   | 321.7 | 301.6 | 294.9 | 278.1 | 271.4  |
| 137.5° | 278.1 | 268.1 | 271.4 | 278.1 | 271.4  |
| 140°   | 237.9 | 241.3 | 258.0 | 271.4 | 271.4  |
| 142.5° | 211.1 | 221.2 | 237.9 | 254.7 | 261.4  |
| 145°   | 191.0 | 197.7 | 224.5 | 244.6 | 244.6  |
| 147.5° | 174.3 | 181.0 | 204.4 | 227.9 | 234.6  |
| 150°   | 167.6 | 174.3 | 184.3 | 211.1 | 221.2  |
| 152.5° | 160.8 | 160.8 | 174.3 | 197.7 | 201.1  |
| 155°   | 157.5 | 154.1 | 160.8 | 177.6 | 184.3  |
| 157.5° | 154.1 | 150.8 | 154.1 | 160.8 | 164.2  |
| 160°   | 150.8 | 144.1 | 144.1 | 150.8 | 154.1  |
| 162.5° | 150.8 | 140.7 | 137.4 | 144.1 | 140.7  |
| 165°   | 150.8 | 140.7 | 127.3 | 130.7 | 130.7  |
| 167.5° | 150.8 | 137.4 | 124.0 | 120.6 | 124.0  |
| 170°   | 147.4 | 137.4 | 117.3 | 117.3 | 110.6  |
| 172.5° | 147.4 | 137.4 | 117.3 | 110.6 | 103.9  |
| 175°   | 147.4 | 140.7 | 117.3 | 107.2 | 103.9  |
| 177.5° | 147.4 | 140.7 | 120.6 | 110.6 | 103.9  |
| 180°   | 124.0 | 124.0 | 124.0 | 124.0 | 124.0  |

(END OF REPORT)