

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: P1029359

Luminaire Tested: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1029359  
REPORT IS A COMBINATION OF REPORTS P985610 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K  
Description: Define 2 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

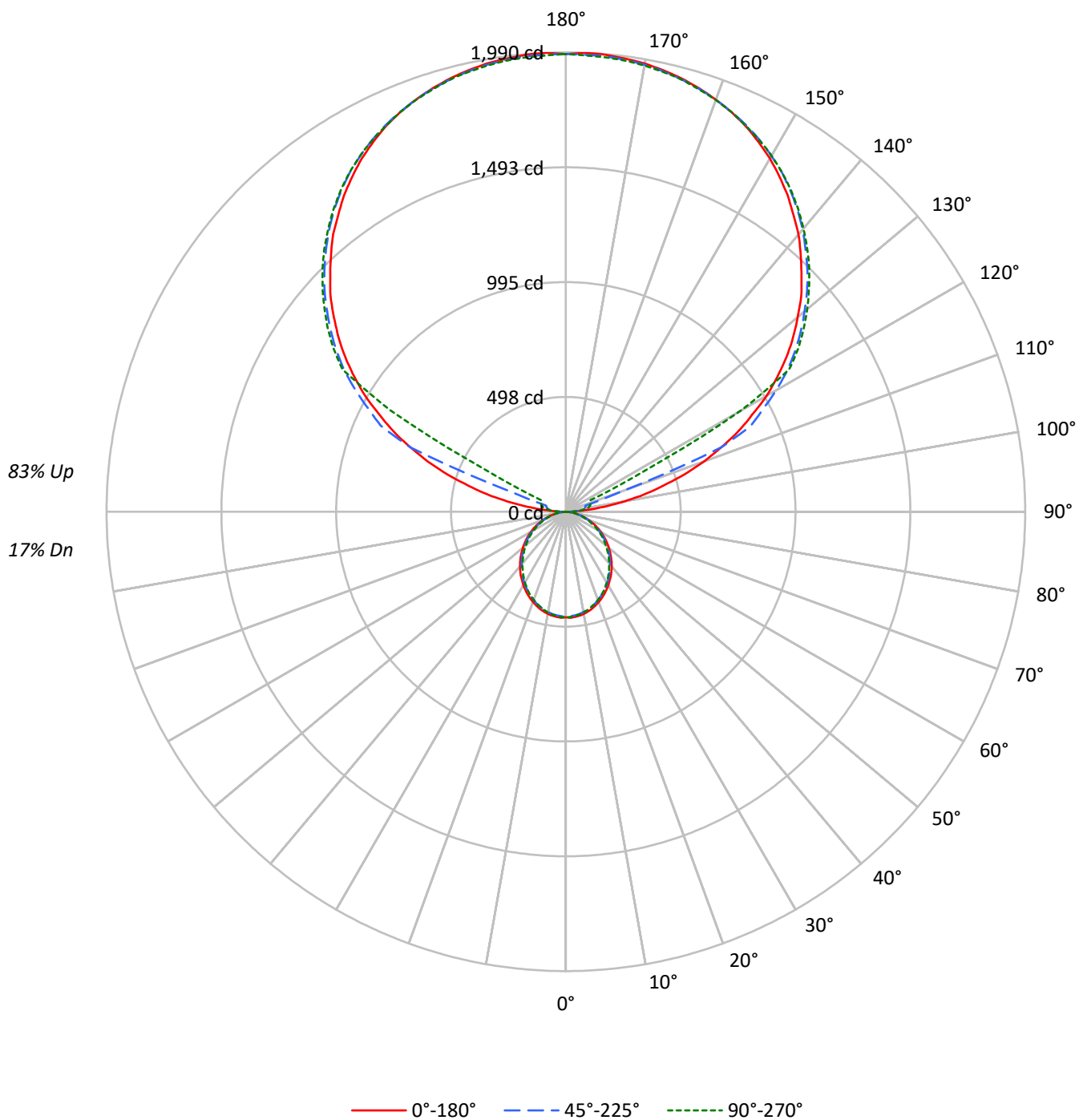
Lumens per Lamp: N/A  
Luminaire Lumens: 6980.0 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 65.2  
Input Voltage (V):  
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

TEST NUMBER: P1029359

CATALOG NUMBER: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K

### Luminous Intensity Polar Plot



TEST NUMBER: P1029359

CATALOG NUMBER: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K

**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 | 30 | 10 | 50 | 30 | 10 |
| RCR |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 99 | 99 | 99 | 99 | 87 | 87 | 87 | 87 | 65 | 65 | 65 | 44 | 44 | 44 | 26 | 26 | 26 | 17 |    |    |
| 1   | 90 | 86 | 83 | 79 | 79 | 76 | 73 | 70 | 57 | 55 | 53 | 39 | 38 | 37 | 22 | 22 | 21 | 14 |    |    |
| 2   | 82 | 75 | 69 | 65 | 72 | 66 | 62 | 57 | 50 | 46 | 44 | 34 | 32 | 31 | 20 | 19 | 18 | 12 |    |    |
| 3   | 75 | 66 | 59 | 54 | 66 | 58 | 52 | 48 | 44 | 40 | 37 | 30 | 28 | 26 | 18 | 16 | 15 | 10 |    |    |
| 4   | 68 | 58 | 51 | 45 | 60 | 51 | 45 | 40 | 39 | 34 | 31 | 27 | 24 | 22 | 16 | 14 | 13 | 9  |    |    |
| 5   | 63 | 52 | 44 | 38 | 55 | 46 | 39 | 34 | 34 | 30 | 27 | 24 | 21 | 19 | 14 | 13 | 11 | 7  |    |    |
| 6   | 57 | 46 | 38 | 33 | 50 | 41 | 34 | 30 | 31 | 26 | 23 | 21 | 19 | 16 | 13 | 11 | 10 | 7  |    |    |
| 7   | 53 | 41 | 34 | 29 | 46 | 37 | 30 | 26 | 28 | 23 | 20 | 19 | 17 | 14 | 12 | 10 | 9  | 6  |    |    |
| 8   | 49 | 37 | 30 | 25 | 43 | 33 | 27 | 23 | 25 | 21 | 18 | 18 | 15 | 13 | 11 | 9  | 8  | 5  |    |    |
| 9   | 45 | 34 | 27 | 22 | 40 | 30 | 24 | 20 | 23 | 19 | 16 | 16 | 13 | 11 | 10 | 8  | 7  | 5  |    |    |
| 10  | 42 | 31 | 24 | 20 | 37 | 28 | 22 | 18 | 21 | 17 | 14 | 15 | 12 | 10 | 9  | 7  | 6  | 4  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7236 | 7236 | 7236 |
| 5°  | 7247 | 6897 | 6849 |
| 10° | 7189 | 6583 | 6453 |
| 15° | 7083 | 6266 | 6036 |
| 20° | 6941 | 5921 | 5641 |
| 25° | 6799 | 5561 | 5247 |
| 30° | 6622 | 5223 | 4834 |
| 35° | 6453 | 4866 | 4428 |
| 40° | 6246 | 4515 | 4044 |
| 45° | 6039 | 4166 | 3667 |
| 50° | 5813 | 3811 | 3278 |
| 55° | 5574 | 3431 | 2907 |
| 60° | 5307 | 3019 | 2523 |
| 65° | 5016 | 2603 | 2118 |
| 70° | 4643 | 2144 | 1711 |
| 75° | 4128 | 1654 | 1321 |
| 80° | 3513 | 1123 | 849  |
| 85° | 2543 | 521  | 362  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6039 cd/sqm

TEST NUMBER: P1029359

CATALOG NUMBER: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.0   | 0.6       |
| 10°-20°   | 121.1  | 1.7       |
| 20°-30°   | 177.9  | 2.5       |
| 30°-40°   | 206.6  | 3.0       |
| 40°-50°   | 206.4  | 3.0       |
| 50°-60°   | 179.9  | 2.6       |
| 60°-70°   | 133.0  | 1.9       |
| 70°-80°   | 75.3   | 1.1       |
| 80°-90°   | 23.3   | 0.3       |
| 90°-100°  | 65.4   | 0.9       |
| 100°-110° | 243.8  | 3.5       |
| 110°-120° | 646.5  | 9.3       |
| 120°-130° | 1072.2 | 15.4      |
| 130°-140° | 1138.9 | 16.3      |
| 140°-150° | 1058.5 | 15.2      |
| 150°-160° | 851.0  | 12.2      |
| 160°-170° | 548.4  | 7.9       |
| 170°-180° | 188.7  | 2.7       |
| 0°-30°    | 342.0  | 4.9       |
| 0°-40°    | 548.6  | 7.9       |
| 0°-60°    | 934.9  | 13.4      |
| 0°-90°    | 1166.5 | 16.7      |
| 90°-120°  | 955.6  | 13.7      |
| 90°-150°  | 4225.4 | 60.5      |
| 90°-180°  | 5814.0 | 83.3      |
| 0°-180°   | 6980.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 457  | 457   | 457  | 457   | 457  |      |
| 5°   | 457  | 455   | 450  | 454   | 453  | 43   |
| 15°  | 435  | 432   | 427  | 429   | 426  | 123  |
| 25°  | 394  | 390   | 383  | 384   | 383  | 181  |
| 35°  | 340  | 335   | 328  | 326   | 324  | 212  |
| 45°  | 276  | 273   | 267  | 262   | 260  | 213  |
| 55°  | 209  | 207   | 201  | 196   | 194  | 187  |
| 65°  | 141  | 138   | 134  | 130   | 128  | 139  |
| 75°  | 74   | 73    | 71   | 68    | 69   | 79   |
| 85°  | 18   | 18    | 17   | 16    | 15   | 20   |
| 90°  | 1    | 17    | 29   | 36    | 39   | 6    |
| 95°  | 93   | 46    | 56   | 63    | 62   | 110  |
| 105° | 436  | 479   | 88   | 103   | 109  | 466  |
| 115° | 825  | 850   | 885  | 221   | 118  | 812  |
| 125° | 1167 | 1185  | 1212 | 1222  | 1227 | 1040 |
| 135° | 1444 | 1466  | 1479 | 1494  | 1491 | 1115 |
| 145° | 1674 | 1673  | 1698 | 1708  | 1700 | 1047 |
| 155° | 1844 | 1831  | 1848 | 1857  | 1845 | 850  |
| 165° | 1943 | 1934  | 1938 | 1949  | 1938 | 549  |
| 175° | 1987 | 1977  | 1980 | 1990  | 1976 | 189  |
| 180° | 1983 | 1983  | 1983 | 1983  | 1983 |      |

TEST NUMBER: P1029359

CATALOG NUMBER: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 457.1 | 457.1 | 457.1 | 457.1 | 457.1 |
| 2.5°   | 459.8 | 457.6 | 452.7 | 457.1 | 456.2 |
| 5°     | 457.1 | 455.4 | 450.5 | 454.0 | 453.2 |
| 7.5°   | 454.0 | 451.4 | 446.6 | 450.1 | 449.2 |
| 10°    | 449.2 | 446.1 | 440.9 | 444.4 | 443.1 |
| 12.5°  | 442.6 | 440.0 | 434.7 | 436.9 | 436.0 |
| 15°    | 435.1 | 432.5 | 426.8 | 428.6 | 426.4 |
| 17.5°  | 425.9 | 423.3 | 417.6 | 419.8 | 417.6 |
| 20°    | 415.8 | 413.2 | 407.0 | 408.3 | 406.6 |
| 22.5°  | 405.7 | 401.7 | 396.0 | 396.0 | 395.1 |
| 25°    | 393.8 | 390.3 | 382.8 | 383.7 | 382.8 |
| 27.5°  | 380.6 | 377.6 | 371.9 | 370.5 | 368.3 |
| 30°    | 367.5 | 363.9 | 357.3 | 356.0 | 354.3 |
| 32.5°  | 353.4 | 350.8 | 343.7 | 341.1 | 339.3 |
| 35°    | 339.8 | 335.4 | 328.3 | 325.7 | 323.5 |
| 37.5°  | 324.4 | 320.4 | 313.4 | 310.3 | 308.1 |
| 40°    | 308.6 | 305.0 | 298.0 | 294.1 | 292.3 |
| 42.5°  | 293.2 | 289.7 | 282.6 | 278.2 | 275.6 |
| 45°    | 276.5 | 273.4 | 266.8 | 262.0 | 260.2 |
| 47.5°  | 260.2 | 257.1 | 250.1 | 245.3 | 242.6 |
| 50°    | 243.1 | 240.9 | 234.7 | 228.6 | 226.4 |
| 52.5°  | 226.4 | 223.3 | 217.6 | 212.7 | 209.7 |
| 55°    | 209.2 | 206.6 | 201.3 | 196.0 | 193.8 |
| 57.5°  | 192.1 | 189.9 | 184.2 | 178.9 | 177.1 |
| 60°    | 174.9 | 173.2 | 167.0 | 162.2 | 160.9 |
| 62.5°  | 158.2 | 155.2 | 150.8 | 146.4 | 144.6 |
| 65°    | 141.1 | 138.5 | 134.1 | 130.1 | 127.9 |
| 67.5°  | 123.5 | 121.3 | 117.4 | 114.3 | 112.5 |
| 70°    | 107.2 | 105.5 | 101.5 | 98.5  | 96.7  |
| 72.5°  | 90.5  | 88.8  | 86.6  | 83.5  | 82.2  |
| 75°    | 73.8  | 73.0  | 70.8  | 68.1  | 69.0  |
| 77.5°  | 58.9  | 57.1  | 56.3  | 54.9  | 53.6  |
| 80°    | 44.0  | 43.5  | 42.6  | 41.3  | 40.4  |
| 82.5°  | 29.9  | 29.9  | 29.4  | 27.7  | 27.7  |
| 85°    | 18.0  | 17.6  | 17.1  | 15.8  | 15.4  |
| 87.5°  | 7.9   | 7.0   | 6.2   | 4.8   | 4.4   |
| 90°    | 1.4   | 17.2  | 28.7  | 35.9  | 38.7  |
| 92.5°  | 35.9  | 30.1  | 34.4  | 37.3  | 38.7  |
| 95°    | 93.3  | 45.9  | 56.0  | 63.1  | 61.7  |
| 97.5°  | 167.9 | 50.2  | 73.2  | 77.5  | 78.9  |
| 100°   | 254.0 | 57.4  | 81.8  | 93.3  | 96.1  |
| 102.5° | 348.7 | 345.8 | 84.7  | 100.4 | 104.7 |
| 105°   | 436.2 | 479.3 | 87.5  | 103.3 | 109.1 |
| 107.5° | 538.1 | 574.0 | 90.4  | 106.2 | 111.9 |
| 110°   | 635.7 | 665.8 | 251.1 | 107.6 | 113.4 |

TEST NUMBER: P1029359

CATALOG NUMBER: S122DIW-B290D1440UB2750-4F0-XX-W2A-F\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 727.5  | 753.3  | 728.9  | 110.5  | 114.8  |
| 115°   | 825.1  | 849.5  | 885.3  | 221.0  | 117.7  |
| 117.5° | 909.7  | 938.4  | 962.8  | 757.6  | 381.7  |
| 120°   | 1004.4 | 1025.9 | 1051.8 | 1069.0 | 875.3  |
| 122.5° | 1084.8 | 1107.7 | 1136.4 | 1145.0 | 1146.5 |
| 125°   | 1166.6 | 1185.2 | 1212.5 | 1222.5 | 1226.8 |
| 127.5° | 1241.2 | 1261.3 | 1282.8 | 1297.1 | 1298.6 |
| 130°   | 1311.5 | 1334.4 | 1350.2 | 1366.0 | 1364.6 |
| 132.5° | 1383.2 | 1401.9 | 1417.7 | 1430.6 | 1429.1 |
| 135°   | 1443.5 | 1466.5 | 1479.4 | 1493.7 | 1490.8 |
| 137.5° | 1506.6 | 1523.9 | 1538.2 | 1552.6 | 1548.2 |
| 140°   | 1568.3 | 1579.8 | 1595.6 | 1608.5 | 1601.3 |
| 142.5° | 1620.0 | 1630.0 | 1648.7 | 1660.2 | 1653.0 |
| 145°   | 1674.5 | 1673.1 | 1697.5 | 1707.5 | 1700.3 |
| 147.5° | 1721.9 | 1717.6 | 1742.0 | 1749.1 | 1743.4 |
| 150°   | 1767.8 | 1757.7 | 1780.7 | 1789.3 | 1782.1 |
| 152.5° | 1806.5 | 1795.0 | 1816.6 | 1825.2 | 1815.1 |
| 155°   | 1843.8 | 1830.9 | 1848.1 | 1856.7 | 1845.3 |
| 157.5° | 1874.0 | 1862.5 | 1875.4 | 1885.4 | 1874.0 |
| 160°   | 1899.8 | 1891.2 | 1899.8 | 1908.4 | 1898.4 |
| 162.5° | 1922.8 | 1914.1 | 1921.3 | 1931.4 | 1918.4 |
| 165°   | 1942.8 | 1934.2 | 1938.5 | 1948.6 | 1938.5 |
| 167.5° | 1958.6 | 1950.0 | 1954.3 | 1964.4 | 1951.4 |
| 170°   | 1971.5 | 1962.9 | 1965.8 | 1975.8 | 1962.9 |
| 172.5° | 1980.1 | 1971.5 | 1974.4 | 1984.5 | 1971.5 |
| 175°   | 1987.3 | 1977.3 | 1980.1 | 1990.2 | 1975.8 |
| 177.5° | 1990.2 | 1980.1 | 1981.6 | 1991.6 | 1978.7 |
| 180°   | 1983.0 | 1983.0 | 1983.0 | 1983.0 | 1983.0 |

(END OF REPORT)