

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: P1012008

Luminaire Tested: S123DIP-B775D365UB35-4F0-XX-W2A-D4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012008  
REPORT IS A COMBINATION OF REPORTS P990377 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B775D365UB35-4F0-XX-W2A-D4  
Description: Define 3 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

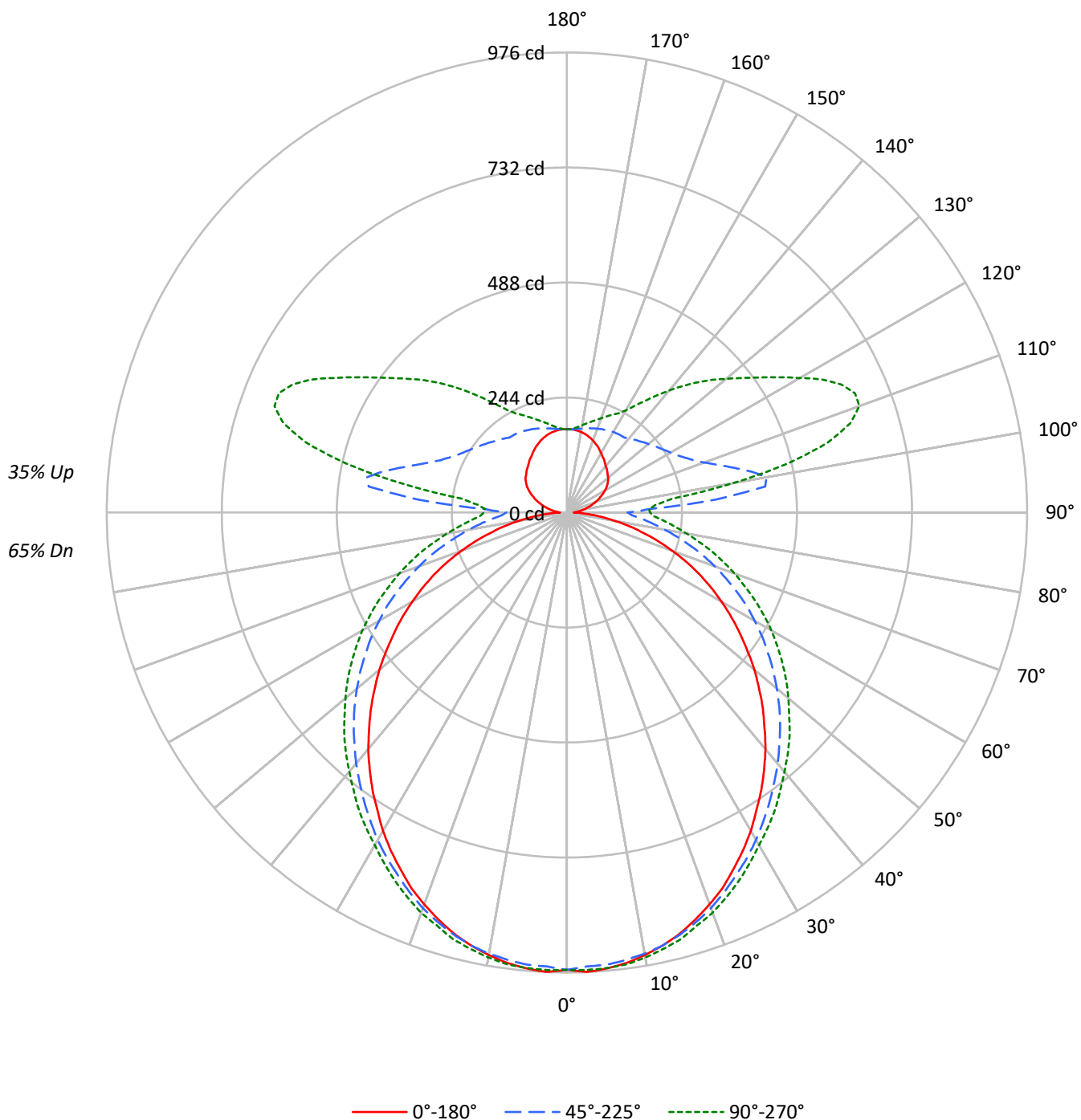
Lumens per Lamp: N/A  
Luminaire Lumens: 4592.1 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 45.2  
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

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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 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 92 | 92 | 92 | 80 | 80 | 80 | 70 | 70 | 70 |
| 1   | 100 | 95  | 90  | 86  | 93  | 89  | 85  | 82  | 78 | 75 | 73 | 69 | 66 | 64 | 60 | 58 | 56 |
| 2   | 90  | 82  | 75  | 69  | 84  | 77  | 71  | 66  | 68 | 63 | 59 | 60 | 56 | 53 | 52 | 49 | 46 |
| 3   | 82  | 72  | 64  | 57  | 77  | 67  | 60  | 54  | 60 | 54 | 49 | 52 | 48 | 44 | 45 | 42 | 39 |
| 4   | 75  | 63  | 55  | 48  | 70  | 60  | 52  | 46  | 53 | 46 | 42 | 46 | 41 | 37 | 40 | 36 | 33 |
| 5   | 69  | 56  | 48  | 41  | 64  | 53  | 45  | 39  | 47 | 41 | 36 | 41 | 36 | 32 | 36 | 32 | 29 |
| 6   | 63  | 50  | 42  | 36  | 59  | 48  | 40  | 34  | 42 | 36 | 31 | 37 | 32 | 28 | 33 | 29 | 25 |
| 7   | 59  | 46  | 37  | 31  | 55  | 43  | 35  | 30  | 38 | 32 | 27 | 34 | 29 | 25 | 30 | 26 | 22 |
| 8   | 54  | 41  | 33  | 28  | 51  | 39  | 32  | 26  | 35 | 29 | 24 | 31 | 26 | 22 | 27 | 23 | 20 |
| 9   | 51  | 38  | 30  | 25  | 47  | 36  | 29  | 24  | 32 | 26 | 22 | 29 | 24 | 20 | 25 | 21 | 18 |
| 10  | 47  | 35  | 27  | 22  | 44  | 33  | 26  | 21  | 30 | 24 | 20 | 26 | 21 | 18 | 24 | 19 | 16 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10444 | 10444 | 10444 |
| 5°  | 10473 | 10138 | 10130 |
| 10° | 10375 | 9863  | 9788  |
| 15° | 10238 | 9560  | 9426  |
| 20° | 10043 | 9222  | 9036  |
| 25° | 9803  | 8842  | 8633  |
| 30° | 9558  | 8496  | 8228  |
| 35° | 9281  | 8135  | 7899  |
| 40° | 9019  | 7805  | 7550  |
| 45° | 8728  | 7485  | 7263  |
| 50° | 8440  | 7167  | 6951  |
| 55° | 8121  | 6842  | 6666  |
| 60° | 7808  | 6510  | 6371  |
| 65° | 7487  | 6155  | 6028  |
| 70° | 7003  | 5758  | 5674  |
| 75° | 6394  | 5305  | 5309  |
| 80° | 5679  | 4846  | 4891  |
| 85° | 4976  | 4475  | 4593  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8728 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 92.0   | 2.0       |
| 10°-20°   | 262.4  | 5.7       |
| 20°-30°   | 392.4  | 8.5       |
| 30°-40°   | 468.5  | 10.2      |
| 40°-50°   | 490.2  | 10.7      |
| 50°-60°   | 460.0  | 10.0      |
| 60°-70°   | 384.2  | 8.4       |
| 70°-80°   | 274.7  | 6.0       |
| 80°-90°   | 164.5  | 3.6       |
| 90°-100°  | 203.0  | 4.4       |
| 100°-110° | 355.7  | 7.7       |
| 110°-120° | 323.6  | 7.0       |
| 120°-130° | 246.3  | 5.4       |
| 130°-140° | 184.7  | 4.0       |
| 140°-150° | 130.8  | 2.8       |
| 150°-160° | 89.4   | 1.9       |
| 160°-170° | 52.5   | 1.1       |
| 170°-180° | 17.1   | 0.4       |
| 0°-30°    | 746.8  | 16.3      |
| 0°-40°    | 1215.3 | 26.5      |
| 0°-60°    | 2165.5 | 47.2      |
| 0°-90°    | 2988.9 | 65.1      |
| 90°-120°  | 882.3  | 19.2      |
| 90°-150°  | 1444.2 | 31.4      |
| 90°-180°  | 1603.0 | 34.9      |
| 0°-180°   | 4592.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 970 | 970   | 970 | 970   | 970 |      |
| 5°   | 971 | 969   | 963 | 971   | 970 | 92   |
| 15°  | 925 | 928   | 927 | 938   | 936 | 261  |
| 25°  | 835 | 846   | 849 | 862   | 862 | 385  |
| 35°  | 719 | 736   | 749 | 765   | 770 | 449  |
| 45°  | 588 | 613   | 640 | 660   | 668 | 453  |
| 55°  | 448 | 483   | 521 | 550   | 558 | 401  |
| 65°  | 310 | 351   | 397 | 429   | 440 | 306  |
| 75°  | 168 | 218   | 271 | 306   | 318 | 180  |
| 85°  | 52  | 105   | 161 | 197   | 207 | 53   |
| 90°  | 14  | 70    | 128 | 165   | 176 | 11   |
| 95°  | 24  | 92    | 316 | 199   | 189 | 22   |
| 105° | 50  | 95    | 366 | 611   | 573 | 53   |
| 115° | 78  | 109   | 276 | 563   | 642 | 78   |
| 125° | 105 | 123   | 239 | 427   | 499 | 94   |
| 135° | 121 | 143   | 215 | 338   | 390 | 94   |
| 145° | 137 | 156   | 200 | 259   | 289 | 86   |
| 155° | 155 | 167   | 193 | 220   | 229 | 71   |
| 165° | 169 | 174   | 185 | 196   | 200 | 48   |
| 175° | 176 | 176   | 178 | 180   | 180 | 17   |
| 180° | 176 | 176   | 176 | 176   | 176 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 970.3 | 970.3 | 970.3 | 970.3 | 970.3 |
| 2.5°   | 975.6 | 972.4 | 964.0 | 972.4 | 971.4 |
| 5°     | 971.4 | 969.3 | 962.9 | 971.4 | 970.3 |
| 7.5°   | 964.0 | 964.0 | 957.6 | 968.2 | 967.1 |
| 10°    | 953.4 | 955.5 | 950.2 | 960.8 | 958.7 |
| 12.5°  | 940.7 | 943.9 | 940.7 | 950.2 | 948.1 |
| 15°    | 924.9 | 928.0 | 927.0 | 937.5 | 936.5 |
| 17.5°  | 905.8 | 912.2 | 911.1 | 920.6 | 918.5 |
| 20°    | 884.7 | 891.0 | 893.1 | 902.7 | 903.7 |
| 22.5°  | 862.5 | 868.8 | 872.0 | 884.7 | 883.6 |
| 25°    | 835.0 | 845.6 | 848.8 | 862.5 | 862.5 |
| 27.5°  | 808.6 | 820.2 | 826.6 | 838.2 | 839.2 |
| 30°    | 780.1 | 793.8 | 802.2 | 814.9 | 814.9 |
| 32.5°  | 748.3 | 764.2 | 775.8 | 789.6 | 792.7 |
| 35°    | 718.7 | 735.7 | 749.4 | 765.3 | 769.5 |
| 37.5°  | 687.0 | 706.1 | 721.9 | 739.9 | 743.1 |
| 40°    | 655.3 | 674.4 | 695.5 | 713.5 | 717.7 |
| 42.5°  | 620.4 | 644.8 | 667.0 | 687.0 | 693.4 |
| 45°    | 587.7 | 613.0 | 639.5 | 659.6 | 668.0 |
| 47.5°  | 552.8 | 581.3 | 610.9 | 633.1 | 639.5 |
| 50°    | 519.0 | 548.6 | 581.3 | 605.7 | 613.0 |
| 52.5°  | 483.0 | 514.8 | 551.7 | 577.1 | 586.6 |
| 55°    | 448.2 | 483.0 | 521.1 | 549.6 | 558.1 |
| 57.5°  | 414.3 | 450.3 | 491.5 | 520.0 | 529.5 |
| 60°    | 378.4 | 416.5 | 459.8 | 489.4 | 501.0 |
| 62.5°  | 344.6 | 383.7 | 430.2 | 459.8 | 470.4 |
| 65°    | 309.7 | 350.9 | 397.4 | 429.1 | 439.7 |
| 67.5°  | 274.8 | 318.2 | 364.7 | 399.5 | 408.0 |
| 70°    | 237.8 | 283.3 | 334.0 | 367.8 | 378.4 |
| 72.5°  | 204.0 | 249.4 | 302.3 | 337.2 | 347.7 |
| 75°    | 168.1 | 217.7 | 270.6 | 305.5 | 318.2 |
| 77.5°  | 137.4 | 187.1 | 239.9 | 276.9 | 286.4 |
| 80°    | 104.6 | 156.4 | 211.4 | 247.3 | 257.9 |
| 82.5°  | 76.1  | 129.0 | 185.0 | 220.9 | 231.5 |
| 85°    | 51.8  | 104.6 | 160.7 | 196.6 | 207.2 |
| 87.5°  | 31.7  | 84.6  | 138.5 | 174.4 | 185.0 |
| 90°    | 14.4  | 69.8  | 128.3 | 165.4 | 176.3 |
| 92.5°  | 18.1  | 79.5  | 177.4 | 168.6 | 174.3 |
| 95°    | 23.7  | 92.2  | 316.4 | 199.2 | 189.4 |
| 97.5°  | 29.9  | 93.8  | 424.0 | 285.4 | 225.6 |
| 100°   | 35.9  | 93.1  | 430.2 | 447.6 | 357.1 |
| 102.5° | 42.4  | 93.2  | 400.6 | 550.4 | 480.4 |
| 105°   | 49.9  | 95.0  | 366.4 | 611.0 | 572.7 |
| 107.5° | 56.7  | 98.0  | 335.4 | 633.0 | 630.3 |
| 110°   | 64.2  | 101.1 | 309.7 | 627.6 | 660.0 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 72.0  | 104.5 | 289.9 | 600.0 | 661.1 |
| 115°   | 78.5  | 109.2 | 275.6 | 563.0 | 642.3 |
| 117.5° | 86.0  | 112.4 | 263.3 | 523.7 | 611.0 |
| 120°   | 92.8  | 115.8 | 254.0 | 486.4 | 570.7 |
| 122.5° | 99.6  | 119.7 | 246.2 | 455.6 | 533.7 |
| 125°   | 105.0 | 123.4 | 238.8 | 427.4 | 499.1 |
| 127.5° | 110.0 | 128.7 | 232.4 | 403.2 | 468.5 |
| 130°   | 114.6 | 134.4 | 226.1 | 380.4 | 441.1 |
| 132.5° | 117.1 | 139.5 | 220.5 | 358.8 | 416.2 |
| 135°   | 121.4 | 143.4 | 214.8 | 337.6 | 390.2 |
| 137.5° | 125.3 | 147.4 | 209.9 | 316.3 | 364.2 |
| 140°   | 128.2 | 150.9 | 205.3 | 296.4 | 338.2 |
| 142.5° | 132.5 | 153.0 | 200.3 | 276.6 | 312.6 |
| 145°   | 137.2 | 155.9 | 199.6 | 259.4 | 288.8 |
| 147.5° | 140.7 | 158.9 | 198.6 | 244.8 | 268.5 |
| 150°   | 145.3 | 161.4 | 197.1 | 233.4 | 250.3 |
| 152.5° | 150.0 | 164.1 | 195.3 | 226.2 | 237.5 |
| 155°   | 154.6 | 166.8 | 193.2 | 219.6 | 228.9 |
| 157.5° | 158.2 | 169.1 | 191.4 | 213.2 | 220.7 |
| 160°   | 162.5 | 171.0 | 189.3 | 207.4 | 212.8 |
| 162.5° | 165.7 | 172.5 | 187.1 | 201.8 | 205.7 |
| 165°   | 168.9 | 173.8 | 185.0 | 196.2 | 199.6 |
| 167.5° | 171.4 | 174.8 | 182.8 | 191.4 | 193.6 |
| 170°   | 173.6 | 175.4 | 180.7 | 187.2 | 188.2 |
| 172.5° | 175.0 | 175.9 | 178.9 | 183.4 | 183.2 |
| 175°   | 176.1 | 176.2 | 177.5 | 180.0 | 179.6 |
| 177.5° | 176.8 | 176.4 | 176.4 | 177.8 | 177.1 |
| 180°   | 176.4 | 176.4 | 176.4 | 176.4 | 176.4 |

(END OF REPORT)