

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: P1012016

Luminaire Tested: S123DIP-B775D365UB40-4F0-XX-W2A-D1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012016  
REPORT IS A COMBINATION OF REPORTS P990385 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B775D365UB40-4F0-XX-W2A-D1  
Description: Define 3 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

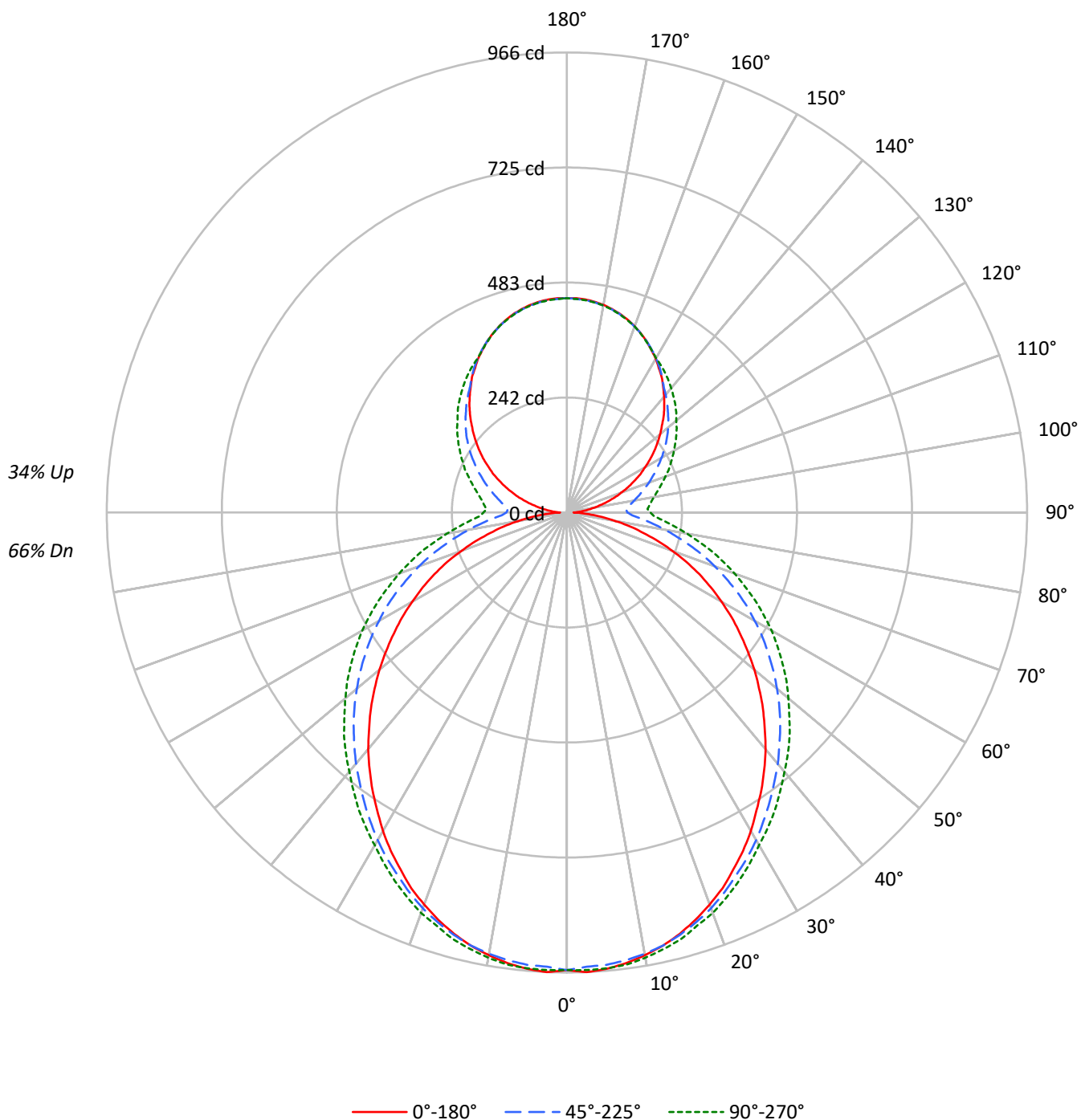
Lumens per Lamp: N/A  
Luminaire Lumens: 4477.0 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

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 | 81 | 81 | 81 | 71 | 71 | 71 |
| 1   | 100 | 95  | 90  | 86  | 94  | 89  | 85  | 82  | 79 | 76 | 73 | 69 | 67 | 65 | 61 | 59 | 57 |
| 2   | 91  | 82  | 75  | 69  | 85  | 77  | 71  | 66  | 68 | 64 | 59 | 60 | 56 | 53 | 52 | 50 | 47 |
| 3   | 82  | 72  | 64  | 57  | 77  | 68  | 60  | 55  | 60 | 54 | 49 | 53 | 48 | 44 | 46 | 43 | 39 |
| 4   | 75  | 63  | 55  | 48  | 70  | 60  | 52  | 46  | 53 | 47 | 42 | 47 | 42 | 38 | 41 | 37 | 34 |
| 5   | 69  | 56  | 48  | 41  | 64  | 53  | 45  | 39  | 47 | 41 | 36 | 42 | 37 | 32 | 37 | 33 | 29 |
| 6   | 63  | 51  | 42  | 36  | 59  | 48  | 40  | 34  | 43 | 36 | 31 | 38 | 32 | 28 | 33 | 29 | 26 |
| 7   | 59  | 46  | 37  | 31  | 55  | 43  | 35  | 30  | 39 | 32 | 27 | 34 | 29 | 25 | 30 | 26 | 23 |
| 8   | 55  | 41  | 33  | 28  | 51  | 39  | 32  | 27  | 35 | 29 | 24 | 31 | 26 | 22 | 28 | 23 | 20 |
| 9   | 51  | 38  | 30  | 25  | 48  | 36  | 29  | 24  | 32 | 26 | 22 | 29 | 24 | 20 | 26 | 21 | 18 |
| 10  | 47  | 35  | 27  | 22  | 45  | 33  | 26  | 21  | 30 | 24 | 20 | 27 | 22 | 18 | 24 | 20 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10342 | 10342 | 10342 |
| 5°  | 10370 | 10039 | 10030 |
| 10° | 10273 | 9766  | 9692  |
| 15° | 10137 | 9466  | 9333  |
| 20° | 9944  | 9132  | 8948  |
| 25° | 9706  | 8754  | 8548  |
| 30° | 9464  | 8414  | 8147  |
| 35° | 9191  | 8055  | 7821  |
| 40° | 8931  | 7728  | 7476  |
| 45° | 8642  | 7412  | 7193  |
| 50° | 8357  | 7097  | 6883  |
| 55° | 8041  | 6775  | 6600  |
| 60° | 7732  | 6446  | 6309  |
| 65° | 7414  | 6095  | 5969  |
| 70° | 6935  | 5701  | 5618  |
| 75° | 6330  | 5252  | 5255  |
| 80° | 5624  | 4797  | 4844  |
| 85° | 4928  | 4431  | 4546  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8642 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 91.1   | 2.0       |
| 10°-20°   | 259.8  | 5.8       |
| 20°-30°   | 388.5  | 8.7       |
| 30°-40°   | 463.9  | 10.4      |
| 40°-50°   | 485.4  | 10.8      |
| 50°-60°   | 455.5  | 10.2      |
| 60°-70°   | 380.5  | 8.5       |
| 70°-80°   | 272.0  | 6.1       |
| 80°-90°   | 162.8  | 3.6       |
| 90°-100°  | 130.7  | 2.9       |
| 100°-110° | 162.5  | 3.6       |
| 110°-120° | 199.2  | 4.4       |
| 120°-130° | 224.9  | 5.0       |
| 130°-140° | 233.5  | 5.2       |
| 140°-150° | 219.7  | 4.9       |
| 150°-160° | 182.7  | 4.1       |
| 160°-170° | 121.6  | 2.7       |
| 170°-180° | 42.6   | 1.0       |
| 0°-30°    | 739.5  | 16.5      |
| 0°-40°    | 1203.4 | 26.9      |
| 0°-60°    | 2144.3 | 47.9      |
| 0°-90°    | 2959.6 | 66.1      |
| 90°-120°  | 492.4  | 11.0      |
| 90°-150°  | 1170.4 | 26.1      |
| 90°-180°  | 1517.0 | 33.9      |
| 0°-180°   | 4477.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 961 | 961   | 961 | 961   | 961 |      |
| 5°   | 962 | 960   | 954 | 962   | 961 | 91   |
| 15°  | 916 | 919   | 918 | 928   | 927 | 258  |
| 25°  | 827 | 837   | 840 | 854   | 854 | 381  |
| 35°  | 712 | 728   | 742 | 758   | 762 | 445  |
| 45°  | 582 | 607   | 633 | 653   | 662 | 449  |
| 55°  | 444 | 478   | 516 | 544   | 553 | 397  |
| 65°  | 307 | 348   | 394 | 425   | 435 | 303  |
| 75°  | 166 | 216   | 268 | 302   | 315 | 178  |
| 85°  | 51  | 104   | 159 | 195   | 205 | 53   |
| 90°  | 14  | 69    | 127 | 164   | 175 | 11   |
| 95°  | 32  | 76    | 130 | 164   | 174 | 32   |
| 105° | 88  | 114   | 162 | 191   | 201 | 94   |
| 115° | 156 | 169   | 206 | 232   | 240 | 154  |
| 125° | 223 | 224   | 254 | 274   | 280 | 199  |
| 135° | 287 | 288   | 300 | 317   | 322 | 221  |
| 145° | 347 | 347   | 348 | 356   | 359 | 217  |
| 155° | 396 | 396   | 397 | 398   | 396 | 182  |
| 165° | 432 | 431   | 431 | 433   | 430 | 122  |
| 175° | 449 | 448   | 448 | 450   | 447 | 43   |
| 180° | 450 | 450   | 450 | 450   | 450 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 960.8 | 960.8 | 960.8 | 960.8 | 960.8 |
| 2.5°   | 966.0 | 962.9 | 954.5 | 962.9 | 961.8 |
| 5°     | 961.8 | 959.7 | 953.5 | 961.8 | 960.8 |
| 7.5°   | 954.5 | 954.5 | 948.2 | 958.7 | 957.6 |
| 10°    | 944.0 | 946.1 | 940.9 | 951.4 | 949.3 |
| 12.5°  | 931.5 | 934.6 | 931.5 | 940.9 | 938.8 |
| 15°    | 915.8 | 918.9 | 917.9 | 928.3 | 927.3 |
| 17.5°  | 896.9 | 903.2 | 902.2 | 911.6 | 909.5 |
| 20°    | 876.0 | 882.3 | 884.4 | 893.8 | 894.9 |
| 22.5°  | 854.0 | 860.3 | 863.5 | 876.0 | 875.0 |
| 25°    | 826.8 | 837.3 | 840.4 | 854.0 | 854.0 |
| 27.5°  | 800.7 | 812.2 | 818.4 | 830.0 | 831.0 |
| 30°    | 772.4 | 786.0 | 794.4 | 806.9 | 806.9 |
| 32.5°  | 741.0 | 756.7 | 768.2 | 781.8 | 785.0 |
| 35°    | 711.7 | 728.4 | 742.0 | 757.7 | 761.9 |
| 37.5°  | 680.3 | 699.1 | 714.8 | 732.6 | 735.8 |
| 40°    | 648.9 | 667.7 | 688.7 | 706.5 | 710.6 |
| 42.5°  | 614.4 | 638.4 | 660.4 | 680.3 | 686.6 |
| 45°    | 581.9 | 607.0 | 633.2 | 653.1 | 661.5 |
| 47.5°  | 547.4 | 575.6 | 604.9 | 626.9 | 633.2 |
| 50°    | 513.9 | 543.2 | 575.6 | 599.7 | 607.0 |
| 52.5°  | 478.3 | 509.7 | 546.3 | 571.4 | 580.9 |
| 55°    | 443.8 | 478.3 | 516.0 | 544.2 | 552.6 |
| 57.5°  | 410.3 | 445.9 | 486.7 | 514.9 | 524.4 |
| 60°    | 374.7 | 412.4 | 455.3 | 484.6 | 496.1 |
| 62.5°  | 341.2 | 379.9 | 426.0 | 455.3 | 465.7 |
| 65°    | 306.7 | 347.5 | 393.5 | 424.9 | 435.4 |
| 67.5°  | 272.1 | 315.0 | 361.1 | 395.6 | 404.0 |
| 70°    | 235.5 | 280.5 | 330.7 | 364.2 | 374.7 |
| 72.5°  | 202.0 | 247.0 | 299.3 | 333.9 | 344.3 |
| 75°    | 166.4 | 215.6 | 267.9 | 302.5 | 315.0 |
| 77.5°  | 136.1 | 185.2 | 237.6 | 274.2 | 283.6 |
| 80°    | 103.6 | 154.9 | 209.3 | 244.9 | 255.4 |
| 82.5°  | 75.4  | 127.7 | 183.2 | 218.7 | 229.2 |
| 85°    | 51.3  | 103.6 | 159.1 | 194.7 | 205.1 |
| 87.5°  | 31.4  | 83.7  | 137.1 | 172.7 | 183.2 |
| 90°    | 14.0  | 68.8  | 126.8 | 163.8 | 174.9 |
| 92.5°  | 23.2  | 70.3  | 124.7 | 160.3 | 169.1 |
| 95°    | 32.4  | 75.6  | 129.8 | 163.7 | 174.1 |
| 97.5°  | 44.8  | 84.2  | 135.5 | 168.7 | 178.8 |
| 100°   | 57.5  | 93.1  | 143.1 | 174.4 | 185.6 |
| 102.5° | 72.4  | 102.8 | 152.3 | 182.7 | 192.7 |
| 105°   | 87.9  | 113.8 | 161.9 | 191.2 | 201.3 |
| 107.5° | 105.2 | 127.6 | 171.9 | 201.3 | 210.3 |
| 110°   | 121.2 | 140.7 | 183.3 | 211.9 | 219.6 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 138.9 | 153.8 | 193.6 | 221.6 | 231.0 |
| 115°   | 155.5 | 169.1 | 206.1 | 231.6 | 239.6 |
| 117.5° | 173.5 | 182.2 | 217.1 | 242.2 | 249.6 |
| 120°   | 189.1 | 196.4 | 229.3 | 252.9 | 259.6 |
| 122.5° | 206.4 | 209.9 | 241.6 | 263.6 | 269.9 |
| 125°   | 223.0 | 224.1 | 253.8 | 274.3 | 280.2 |
| 127.5° | 239.3 | 240.4 | 265.9 | 284.7 | 290.5 |
| 130°   | 255.5 | 257.4 | 277.2 | 295.7 | 299.5 |
| 132.5° | 270.8 | 273.6 | 288.6 | 305.6 | 311.3 |
| 135°   | 287.4 | 288.4 | 299.7 | 317.1 | 321.6 |
| 137.5° | 302.6 | 303.3 | 311.7 | 326.7 | 330.9 |
| 140°   | 317.4 | 319.2 | 322.7 | 338.1 | 340.8 |
| 142.5° | 331.9 | 332.7 | 333.4 | 346.6 | 350.1 |
| 145°   | 347.1 | 346.8 | 347.9 | 355.9 | 358.7 |
| 147.5° | 359.2 | 360.6 | 361.7 | 364.8 | 366.9 |
| 150°   | 373.0 | 373.7 | 374.4 | 374.4 | 374.4 |
| 152.5° | 384.3 | 385.4 | 385.7 | 386.4 | 384.7 |
| 155°   | 396.3 | 396.3 | 396.7 | 398.1 | 395.6 |
| 157.5° | 406.6 | 406.2 | 406.6 | 408.0 | 405.9 |
| 160°   | 416.1 | 415.4 | 415.4 | 417.2 | 415.8 |
| 162.5° | 424.6 | 423.5 | 423.9 | 425.7 | 423.2 |
| 165°   | 431.7 | 430.6 | 430.6 | 432.7 | 430.3 |
| 167.5° | 437.7 | 436.3 | 436.6 | 438.8 | 436.6 |
| 170°   | 442.6 | 441.2 | 441.2 | 443.7 | 441.2 |
| 172.5° | 446.5 | 445.1 | 445.1 | 447.2 | 444.8 |
| 175°   | 449.0 | 447.6 | 447.6 | 449.7 | 447.2 |
| 177.5° | 450.4 | 449.0 | 449.0 | 451.1 | 448.7 |
| 180°   | 450.1 | 450.1 | 450.1 | 450.1 | 450.1 |

(END OF REPORT)