

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: P334731

Luminaire Tested: **S123IP-S585U840-4F0-1E-UDD**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334731  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123IP-S585U840-4F0-1E-UDD  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, NO LENS  
PENDANT MOUNT, 585 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2365.0 lumens  
Efficiency: N/A  
Efficacy: 125.8 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

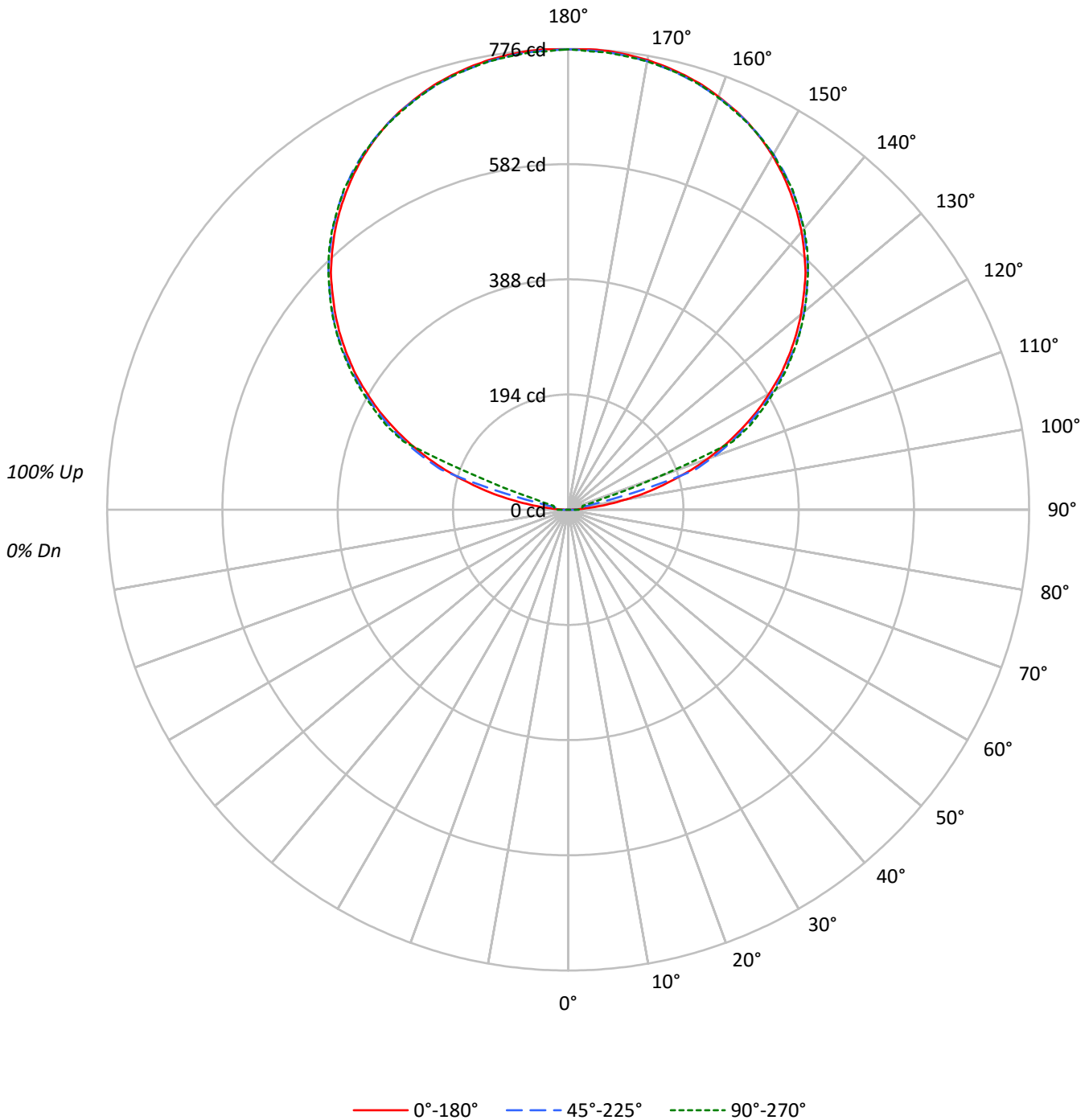
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 95 | 95 | 95 | 95 | 81 | 81 | 81 | 81 | 56 | 56 | 56 | 32 | 32 | 32 | 10 | 10 | 10 | 0 |
| 1   | 87 | 83 | 79 | 76 | 74 | 71 | 68 | 65 | 48 | 47 | 45 | 28 | 27 | 26 | 9  | 9  | 8  | 0 |
| 2   | 79 | 72 | 66 | 62 | 67 | 62 | 57 | 53 | 42 | 40 | 37 | 24 | 23 | 22 | 8  | 7  | 7  | 0 |
| 3   | 72 | 63 | 56 | 51 | 61 | 54 | 49 | 44 | 37 | 34 | 31 | 21 | 20 | 18 | 7  | 6  | 6  | 0 |
| 4   | 65 | 56 | 48 | 43 | 56 | 48 | 42 | 37 | 33 | 29 | 26 | 19 | 17 | 16 | 6  | 6  | 5  | 0 |
| 5   | 60 | 49 | 42 | 36 | 51 | 42 | 36 | 32 | 29 | 25 | 22 | 17 | 15 | 13 | 5  | 5  | 4  | 0 |
| 6   | 55 | 44 | 36 | 31 | 47 | 38 | 32 | 27 | 26 | 22 | 19 | 15 | 13 | 11 | 5  | 4  | 4  | 0 |
| 7   | 50 | 39 | 32 | 27 | 43 | 34 | 28 | 23 | 23 | 19 | 17 | 14 | 11 | 10 | 4  | 4  | 3  | 0 |
| 8   | 47 | 35 | 28 | 23 | 40 | 30 | 24 | 20 | 21 | 17 | 14 | 12 | 10 | 9  | 4  | 3  | 3  | 0 |
| 9   | 43 | 32 | 25 | 20 | 37 | 27 | 22 | 18 | 19 | 15 | 13 | 11 | 9  | 8  | 4  | 3  | 3  | 0 |
| 10  | 40 | 29 | 22 | 18 | 34 | 25 | 19 | 16 | 17 | 14 | 11 | 10 | 8  | 7  | 3  | 3  | 2  | 0 |

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

|     | 0° | 45° | 90° |
|-----|----|-----|-----|
| 0°  | 0  | 0   | 0   |
| 5°  | 0  | 0   | 0   |
| 10° | 0  | 0   | 0   |
| 15° | 0  | 0   | 0   |
| 20° | 0  | 0   | 0   |
| 25° | 0  | 0   | 0   |
| 30° | 0  | 0   | 0   |
| 35° | 0  | 0   | 0   |
| 40° | 0  | 0   | 0   |
| 45° | 0  | 0   | 0   |
| 50° | 0  | 0   | 0   |
| 55° | 0  | 0   | 0   |
| 60° | 0  | 0   | 0   |
| 65° | 0  | 0   | 0   |
| 70° | 0  | 0   | 0   |
| 75° | 0  | 0   | 0   |
| 80° | 0  | 0   | 0   |
| 85° | 0  | 0   | 0   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.0    | 0.0       |
| 10°-20°   | 0.0    | 0.0       |
| 20°-30°   | 0.0    | 0.0       |
| 30°-40°   | 0.0    | 0.0       |
| 40°-50°   | 0.0    | 0.0       |
| 50°-60°   | 0.0    | 0.0       |
| 60°-70°   | 0.0    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 1.5    | 0.1       |
| 90°-100°  | 27.3   | 1.2       |
| 100°-110° | 132.2  | 5.6       |
| 110°-120° | 323.9  | 13.7      |
| 120°-130° | 411.2  | 17.4      |
| 130°-140° | 439.3  | 18.6      |
| 140°-150° | 410.8  | 17.4      |
| 150°-160° | 331.3  | 14.0      |
| 160°-170° | 213.8  | 9.0       |
| 170°-180° | 73.7   | 3.1       |
| 0°-30°    | 0.0    | 0.0       |
| 0°-40°    | 0.0    | 0.0       |
| 0°-60°    | 0.0    | 0.0       |
| 0°-90°    | 1.5    | 0.1       |
| 90°-120°  | 483.4  | 20.4      |
| 90°-150°  | 1744.6 | 73.8      |
| 90°-180°  | 2363.0 | 99.9      |
| 0°-180°   | 2365.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 0   | 0     | 0   | 0     | 0   |      |
| 5°   | 0   | 0     | 0   | 0     | 0   | 0    |
| 15°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 25°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 35°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 45°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 55°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 65°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 75°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 85°  | 0   | 0     | 0   | 0     | 0   | 0    |
| 90°  | 1   | 6     | 14  | 16    | 17  | 2    |
| 95°  | 35  | 12    | 18  | 22    | 22  | 42   |
| 105° | 172 | 178   | 126 | 24    | 25  | 182  |
| 115° | 322 | 325   | 331 | 336   | 339 | 318  |
| 125° | 454 | 458   | 461 | 462   | 463 | 406  |
| 135° | 565 | 568   | 571 | 572   | 571 | 435  |
| 145° | 652 | 656   | 657 | 658   | 658 | 408  |
| 155° | 718 | 717   | 718 | 721   | 717 | 331  |
| 165° | 757 | 756   | 755 | 760   | 756 | 214  |
| 175° | 775 | 772   | 773 | 777   | 772 | 74   |
| 180° | 775 | 775   | 775 | 775   | 775 |      |



TEST NUMBER: P334731

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 2.5°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 5°     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 7.5°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 10°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 12.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 15°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 17.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 20°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 22.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 25°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 27.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 30°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 32.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 35°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 37.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 40°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 42.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 45°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 47.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 50°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 52.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 55°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 57.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 60°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 62.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 65°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5°  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 90°    | 0.6   | 6.3   | 13.8  | 16.1  | 17.3  |
| 92.5°  | 13.2  | 9.8   | 15.0  | 19.0  | 19.6  |
| 95°    | 35.1  | 11.5  | 17.9  | 21.9  | 21.9  |
| 97.5°  | 63.9  | 47.8  | 18.4  | 23.0  | 23.6  |
| 100°   | 97.3  | 108.9 | 19.0  | 23.6  | 24.2  |
| 102.5° | 135.4 | 142.8 | 42.6  | 23.6  | 24.8  |
| 105°   | 171.6 | 178.0 | 126.1 | 24.2  | 25.3  |
| 107.5° | 210.2 | 215.4 | 224.1 | 135.4 | 59.9  |
| 110°   | 248.8 | 253.4 | 259.8 | 240.8 | 158.4 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 285.7 | 289.7 | 296.1 | 301.2 | 300.1 |
| 115°   | 322.0 | 325.4 | 330.6 | 336.4 | 338.7 |
| 117.5° | 357.7 | 361.7 | 364.6 | 369.2 | 369.8 |
| 120°   | 390.5 | 395.7 | 397.4 | 402.0 | 402.0 |
| 122.5° | 423.9 | 428.0 | 430.3 | 433.1 | 433.7 |
| 125°   | 453.9 | 458.5 | 460.8 | 461.9 | 463.1 |
| 127.5° | 483.8 | 488.4 | 491.3 | 493.0 | 491.9 |
| 130°   | 511.5 | 516.1 | 518.4 | 520.7 | 519.5 |
| 132.5° | 538.0 | 542.6 | 544.3 | 546.6 | 544.9 |
| 135°   | 565.0 | 568.5 | 570.8 | 572.5 | 570.8 |
| 137.5° | 588.1 | 592.7 | 593.8 | 596.7 | 595.6 |
| 140°   | 611.1 | 614.6 | 616.3 | 618.6 | 617.5 |
| 142.5° | 632.4 | 635.9 | 637.6 | 639.3 | 637.6 |
| 145°   | 652.0 | 656.0 | 657.2 | 658.3 | 658.3 |
| 147.5° | 671.0 | 673.9 | 675.1 | 676.2 | 673.3 |
| 150°   | 688.3 | 690.0 | 691.2 | 692.3 | 690.6 |
| 152.5° | 703.9 | 704.4 | 705.0 | 707.3 | 704.4 |
| 155°   | 718.2 | 717.1 | 717.7 | 720.6 | 717.1 |
| 157.5° | 729.8 | 729.8 | 729.2 | 732.6 | 728.0 |
| 160°   | 740.1 | 739.6 | 739.0 | 742.4 | 738.4 |
| 162.5° | 749.9 | 748.2 | 747.6 | 751.7 | 748.2 |
| 165°   | 757.4 | 755.7 | 755.1 | 759.7 | 755.7 |
| 167.5° | 763.8 | 761.4 | 761.4 | 766.1 | 761.4 |
| 170°   | 768.9 | 766.6 | 766.6 | 771.2 | 766.6 |
| 172.5° | 772.4 | 769.5 | 770.1 | 774.7 | 769.5 |
| 175°   | 775.3 | 772.4 | 773.0 | 777.0 | 772.4 |
| 177.5° | 776.4 | 773.5 | 774.1 | 778.7 | 773.0 |
| 180°   | 775.3 | 775.3 | 775.3 | 775.3 | 775.3 |

(END OF REPORT)