

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P77784

Luminaire Tested: **DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W**

Issue Date: 02/20/2024



Test Information

Test Method: LM-79-08
Report Number: P77784
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2401-290-9&G3-2401-290-4)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W
Description: Define Geo Ring 2ft Diameter Direct/Indirect Fixture w/ Frosted Lens
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

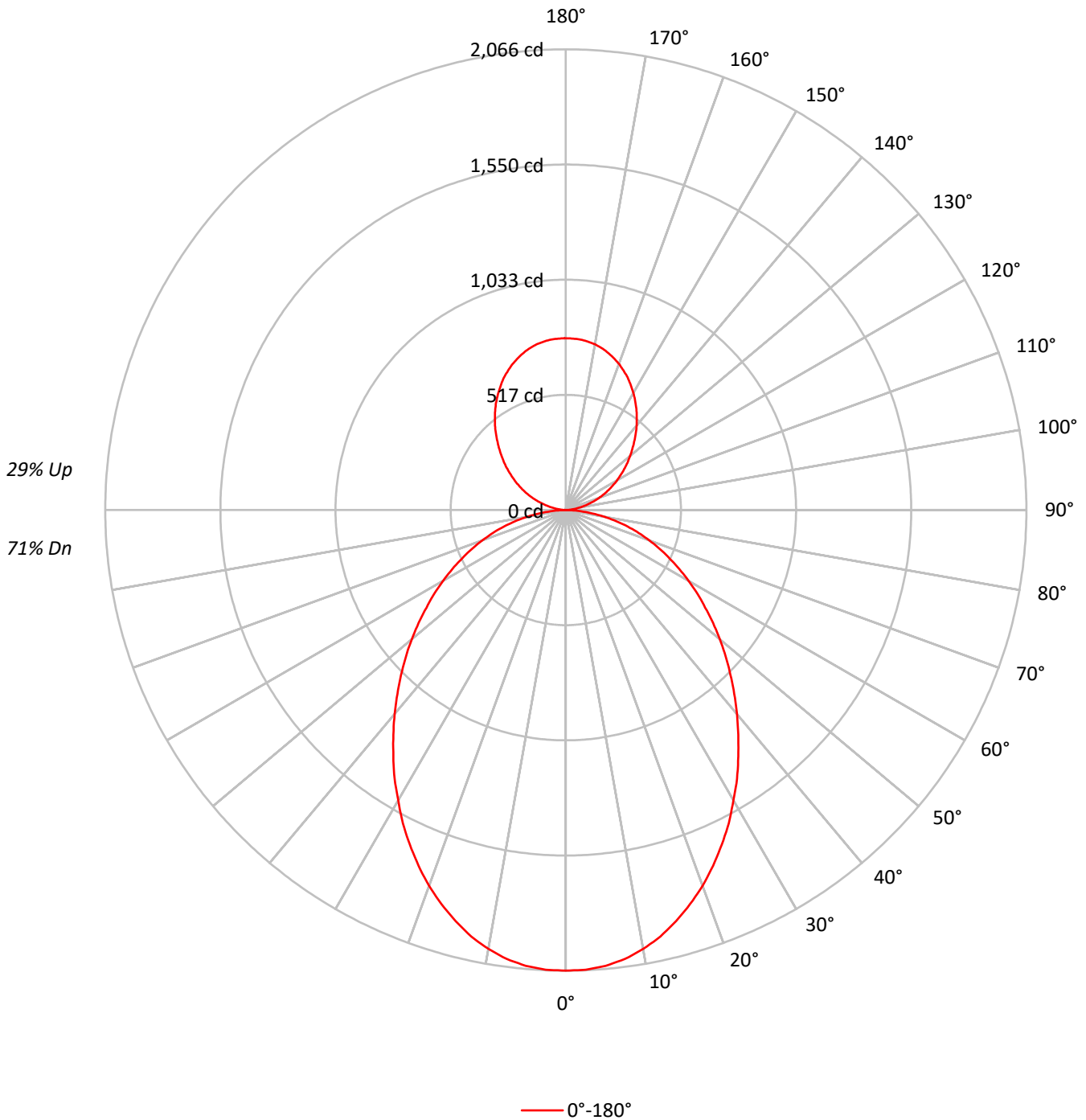
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6622.9 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.21
Luminous Opening: Circular (Dia: 2' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 93.5
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

TEST NUMBER: P77784
CATALOG NUMBER: DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W

Luminous Intensity Polar Plot





TEST NUMBER: P77784

CATALOG NUMBER: DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W

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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 95 | 95 | 95 | 85 | 85 | 85 | 76 | 76 | 76 | 76 | 76 | 76 | 71 |
| 1 | 103 | 98 | 94 | 91 | 97 | 93 | 90 | 87 | 84 | 81 | 79 | 75 | 73 | 71 | 67 | 66 | 64 | 64 | 64 | 64 | 60 |
| 2 | 94 | 86 | 80 | 74 | 88 | 82 | 76 | 71 | 74 | 69 | 65 | 66 | 63 | 60 | 59 | 57 | 54 | 54 | 54 | 54 | 51 |
| 3 | 86 | 76 | 68 | 62 | 81 | 72 | 65 | 60 | 65 | 60 | 55 | 59 | 55 | 51 | 53 | 49 | 47 | 47 | 47 | 47 | 43 |
| 4 | 79 | 67 | 59 | 53 | 74 | 64 | 57 | 51 | 58 | 52 | 48 | 53 | 48 | 44 | 47 | 44 | 40 | 40 | 40 | 40 | 37 |
| 5 | 72 | 60 | 52 | 46 | 68 | 58 | 50 | 44 | 52 | 46 | 41 | 47 | 42 | 38 | 43 | 39 | 35 | 35 | 35 | 35 | 33 |
| 6 | 67 | 54 | 46 | 40 | 63 | 52 | 44 | 39 | 47 | 41 | 36 | 43 | 38 | 34 | 39 | 35 | 31 | 31 | 31 | 31 | 29 |
| 7 | 62 | 49 | 41 | 36 | 59 | 47 | 40 | 34 | 43 | 37 | 32 | 39 | 34 | 30 | 36 | 31 | 28 | 28 | 28 | 28 | 26 |
| 8 | 58 | 45 | 37 | 32 | 55 | 43 | 36 | 31 | 40 | 33 | 29 | 36 | 31 | 27 | 33 | 29 | 25 | 25 | 25 | 25 | 23 |
| 9 | 54 | 41 | 34 | 29 | 51 | 40 | 33 | 28 | 36 | 30 | 26 | 33 | 28 | 25 | 31 | 26 | 23 | 23 | 23 | 23 | 21 |
| 10 | 51 | 38 | 31 | 26 | 48 | 37 | 30 | 25 | 34 | 28 | 24 | 31 | 26 | 22 | 28 | 24 | 21 | 21 | 21 | 21 | 19 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|------|
| | 0° |
| 0° | 7077 |
| 5° | 7057 |
| 10° | 6954 |
| 15° | 6771 |
| 20° | 6540 |
| 25° | 6258 |
| 30° | 5947 |
| 35° | 5641 |
| 40° | 5341 |
| 45° | 5060 |
| 50° | 4805 |
| 55° | 4558 |
| 60° | 4360 |
| 65° | 4168 |
| 70° | 3995 |
| 75° | 3815 |
| 80° | 3502 |
| 85° | 2720 |



TEST NUMBER: P77784
 CATALOG NUMBER: DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 194.2 | 2.9 |
| 10°-20° | 536.9 | 8.1 |
| 20°-30° | 761.5 | 11.5 |
| 30°-40° | 843.7 | 12.7 |
| 40°-50° | 806.8 | 12.2 |
| 50°-60° | 685.2 | 10.3 |
| 60°-70° | 510.2 | 7.7 |
| 70°-80° | 304.0 | 4.6 |
| 80°-90° | 83.2 | 1.3 |
| 90°-100° | 28.9 | 0.4 |
| 100°-110° | 113.6 | 1.7 |
| 110°-120° | 208.8 | 3.2 |
| 120°-130° | 285.9 | 4.3 |
| 130°-140° | 335.2 | 5.1 |
| 140°-150° | 344.8 | 5.2 |
| 150°-160° | 301.5 | 4.6 |
| 160°-170° | 205.8 | 3.1 |
| 170°-180° | 72.8 | 1.1 |
| 0°-30° | 1492.5 | 22.5 |
| 0°-40° | 2336.3 | 35.3 |
| 0°-60° | 3828.2 | 57.8 |
| 0°-90° | 4725.7 | 71.4 |
| 90°-120° | 351.3 | 5.3 |
| 90°-150° | 1317.1 | 19.9 |
| 90°-180° | 1897.0 | 28.6 |
| 0°-180° | 6622.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|------|------|------|
| 0° | 2066 | |
| 5° | 2052 | 194 |
| 15° | 1909 | 537 |
| 25° | 1655 | 761 |
| 35° | 1349 | 844 |
| 45° | 1044 | 807 |
| 55° | 763 | 685 |
| 65° | 514 | 510 |
| 75° | 288 | 304 |
| 85° | 69 | 80 |
| 90° | 1 | 5 |
| 95° | 25 | 27 |
| 105° | 107 | 114 |
| 115° | 211 | 209 |
| 125° | 320 | 286 |
| 135° | 434 | 335 |
| 145° | 552 | 345 |
| 155° | 656 | 301 |
| 165° | 731 | 206 |
| 175° | 768 | 73 |
| 180° | 770 | |



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CATALOG NUMBER: DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W

CANDELA DISTRIBUTION (FULL):

| 0° | |
|--------|--------|
| 0° | 2065.6 |
| 2.5° | 2063.3 |
| 5° | 2051.8 |
| 7.5° | 2031.0 |
| 10° | 1998.8 |
| 12.5° | 1959.6 |
| 15° | 1908.8 |
| 17.5° | 1853.5 |
| 20° | 1793.6 |
| 22.5° | 1726.7 |
| 25° | 1655.3 |
| 27.5° | 1583.8 |
| 30° | 1503.1 |
| 32.5° | 1429.3 |
| 35° | 1348.6 |
| 37.5° | 1270.3 |
| 40° | 1194.2 |
| 42.5° | 1118.1 |
| 45° | 1044.3 |
| 47.5° | 972.9 |
| 50° | 901.4 |
| 52.5° | 832.2 |
| 55° | 763.1 |
| 57.5° | 700.8 |
| 60° | 636.3 |
| 62.5° | 574.0 |
| 65° | 514.1 |
| 67.5° | 456.5 |
| 70° | 398.8 |
| 72.5° | 343.5 |
| 75° | 288.2 |
| 77.5° | 232.8 |
| 80° | 177.5 |
| 82.5° | 122.2 |
| 85° | 69.2 |
| 87.5° | 25.4 |
| 90° | 0.9 |
| 92.5° | 10.4 |
| 95° | 24.6 |
| 97.5° | 40.6 |
| 100° | 60.5 |
| 102.5° | 82.2 |
| 105° | 106.8 |
| 107.5° | 132.3 |
| 110° | 158.8 |



TEST NUMBER: P77784
CATALOG NUMBER: DFN2DIP-RG2F0-050D020US927-FLL-FLL-1DUDD-W

CANDELA DISTRIBUTION (continued):

| | 0° |
|--------|-------|
| 112.5° | 184.3 |
| 115° | 210.8 |
| 117.5° | 237.2 |
| 120° | 264.7 |
| 122.5° | 291.1 |
| 125° | 319.5 |
| 127.5° | 347.8 |
| 130° | 376.2 |
| 132.5° | 404.5 |
| 135° | 433.8 |
| 137.5° | 464.1 |
| 140° | 494.3 |
| 142.5° | 522.7 |
| 145° | 552.0 |
| 147.5° | 579.4 |
| 150° | 605.9 |
| 152.5° | 631.4 |
| 155° | 656.0 |
| 157.5° | 676.8 |
| 160° | 697.6 |
| 162.5° | 714.6 |
| 165° | 730.6 |
| 167.5° | 743.9 |
| 170° | 754.3 |
| 172.5° | 761.8 |
| 175° | 767.5 |
| 177.5° | 769.4 |
| 180° | 770.3 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

NEO-RAY

Report Number: SP1-2401-290-1

Test Date: 01/18/2024

Luminaire Tested: RNG2DIP-RG2F0-020D020US927-FLL-FLL-1-D-UDD-W

Data in this report applies to families of products including RNG2DIP-RG2F0-020D020US927-FLL-FLL-1-D-UDD-W.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2401-290-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 01/19/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: NEO-RAY
 Catalog Number: **RNG2DIP-RG2F0-020D020US927-FLL-FLL-1-D-UDD-W**
 Description: 2' RING DIRECT/INDIRECT FIXTURE WITH FROSTED LIGHT LEVEL 1

Spectral Parameters

CCT (K): 2655
 CIE u': 0.2643
 CIE v': 0.5293
 Duv: 0.0008
 CIE x: 0.4648
 CIE y: 0.4137
 CIE z: 0.1215
 Peak Wavelength (nm): 625
 Dominant Wavelength (nm): 584
 Purity: 63.9

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 93.4 | | |
| R1: | 93.4 | R9: | 59.7 |
| R2: | 96.8 | R10: | 92.1 |
| R3: | 99.2 | R11: | 95.8 |
| R4: | 94.0 | R12: | 87.6 |
| R5: | 93.5 | R13: | 94.3 |
| R6: | 97.2 | R14: | 98.8 |
| R7: | 91.9 | | |
| R8: | 81.5 | | |

Rf: 93.2
 Rg: 98.9



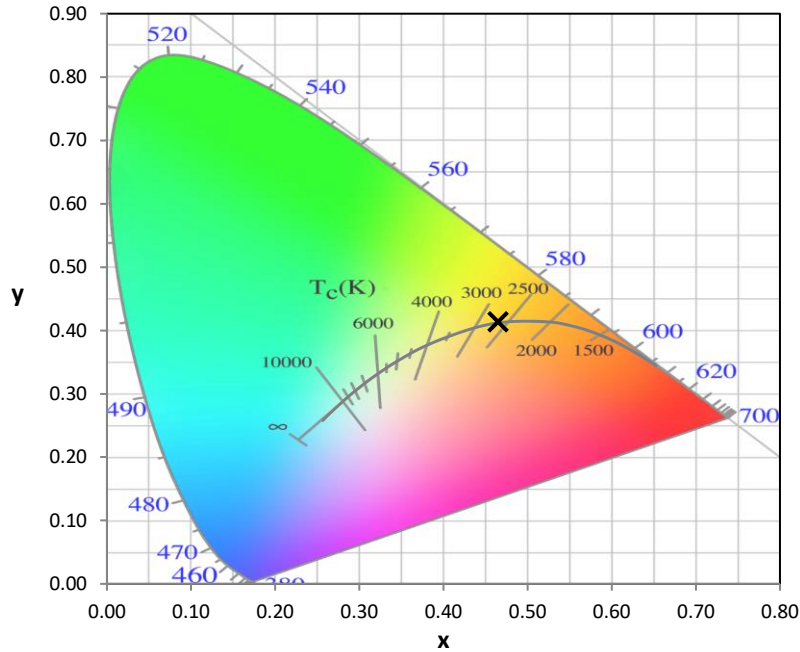
Test Conditions
 Stabilization Time: 23M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.6/15%
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2401-290-1

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 8/9/2023 | 2/9/2024 |
| Power Meter | XITRON 2801 IN0071 | 10/23/2023 | 10/23/2024 |
| AC Power Source | CHROMA 61603 IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | AGILENT E3634A IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | ONSET IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | ONSET IN0046 | 10/24/2023 | 10/24/2024 |

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2401-290-1

Photopic Flux vs. Wavelength



#####

| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360 | 1543 | NR | 490 | 19797 | NR | 620 | 85353 | NR | 750 | 8090 | NR | 880 | 1792 | NR |
| 365 | 1414 | NR | 495 | 23402 | NR | 625 | 85989 | NR | 755 | 7198 | NR | 885 | 2020 | NR |
| 370 | 1551 | NR | 500 | 26949 | NR | 630 | 85515 | NR | 760 | 6225 | NR | 890 | 1828 | NR |
| 375 | 1796 | NR | 505 | 29825 | NR | 635 | 83747 | NR | 765 | 5688 | NR | 895 | 1860 | NR |
| 380 | 1726 | NR | 510 | 32000 | NR | 640 | 81402 | NR | 770 | 5021 | NR | 900 | 1911 | NR |
| 385 | 1466 | NR | 515 | 33805 | NR | 645 | 78259 | NR | 775 | 4504 | NR | 905 | 1780 | NR |
| 390 | 1558 | NR | 520 | 35652 | NR | 650 | 74273 | NR | 780 | 3834 | NR | 910 | 1898 | NR |
| 395 | 1442 | NR | 525 | 37021 | NR | 655 | 70182 | NR | 785 | 3465 | NR | 915 | 1803 | NR |
| 400 | 1203 | NR | 530 | 38939 | NR | 660 | 65368 | NR | 790 | 3329 | NR | 920 | 1835 | NR |
| 405 | 1067 | NR | 535 | 40941 | NR | 665 | 60328 | NR | 795 | 2970 | NR | 925 | 1737 | NR |
| 410 | 1017 | NR | 540 | 42696 | NR | 670 | 55011 | NR | 800 | 2874 | NR | 930 | 1738 | NR |
| 415 | 1324 | NR | 545 | 44809 | NR | 675 | 49838 | NR | 805 | 2736 | NR | 935 | 2125 | NR |
| 420 | 1972 | NR | 550 | 46959 | NR | 680 | 44927 | NR | 810 | 2648 | NR | 940 | 1637 | NR |
| 425 | 3033 | NR | 555 | 49260 | NR | 685 | 40277 | NR | 815 | 2400 | NR | 945 | 1569 | NR |
| 430 | 4609 | NR | 560 | 51165 | NR | 690 | 35795 | NR | 820 | 2470 | NR | 950 | 1938 | NR |
| 435 | 7105 | NR | 565 | 53562 | NR | 695 | 31683 | NR | 825 | 2425 | NR | 955 | 1864 | NR |
| 440 | 11197 | NR | 570 | 56177 | NR | 700 | 27880 | NR | 830 | 2392 | NR | 960 | 2093 | NR |
| 445 | 18973 | NR | 575 | 58898 | NR | 705 | 24664 | NR | 835 | 1867 | NR | 965 | 2277 | NR |
| 450 | 27311 | NR | 580 | 62115 | NR | 710 | 21670 | NR | 840 | 1912 | NR | 970 | 2629 | NR |
| 455 | 25348 | NR | 585 | 65028 | NR | 715 | 19241 | NR | 845 | 1927 | NR | 975 | 2541 | NR |
| 460 | 18677 | NR | 590 | 68395 | NR | 720 | 16927 | NR | 850 | 2066 | NR | 980 | 2508 | NR |
| 465 | 16400 | NR | 595 | 72374 | NR | 725 | 14936 | NR | 855 | 1671 | NR | 985 | 2238 | NR |
| 470 | 15032 | NR | 600 | 75401 | NR | 730 | 13104 | NR | 860 | 1946 | NR | 990 | 2619 | NR |
| 475 | 13281 | NR | 605 | 78653 | NR | 735 | 11394 | NR | 865 | 2045 | NR | 995 | 1965 | NR |
| 480 | 14079 | NR | 610 | 81994 | NR | 740 | 10108 | NR | 870 | 2206 | NR | 1000 | 3108 | NR |
| 485 | 16672 | NR | 615 | 84326 | NR | 745 | 9008 | NR | 875 | 1893 | NR | | | |

REPORT NUMBER: SP1-2401-290-1

Scotopic Flux vs. Wavelength



Scotopic Lumens: 4864.8

S/P: 1.26

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 1543 | NR | 490 | 19797 | NR | 620 | 85353 | NR | 750 | 8090 | NR | 880 | 1792 | NR |
| 365 | 1414 | NR | 495 | 23402 | NR | 625 | 85989 | NR | 755 | 7198 | NR | 885 | 2020 | NR |
| 370 | 1551 | NR | 500 | 26949 | NR | 630 | 85515 | NR | 760 | 6225 | NR | 890 | 1828 | NR |
| 375 | 1796 | NR | 505 | 29825 | NR | 635 | 83747 | NR | 765 | 5688 | NR | 895 | 1860 | NR |
| 380 | 1726 | NR | 510 | 32000 | NR | 640 | 81402 | NR | 770 | 5021 | NR | 900 | 1911 | NR |
| 385 | 1466 | NR | 515 | 33805 | NR | 645 | 78259 | NR | 775 | 4504 | NR | 905 | 1780 | NR |
| 390 | 1558 | NR | 520 | 35652 | NR | 650 | 74273 | NR | 780 | 3834 | NR | 910 | 1898 | NR |
| 395 | 1442 | NR | 525 | 37021 | NR | 655 | 70182 | NR | 785 | 3465 | NR | 915 | 1803 | NR |
| 400 | 1203 | NR | 530 | 38939 | NR | 660 | 65368 | NR | 790 | 3329 | NR | 920 | 1835 | NR |
| 405 | 1067 | NR | 535 | 40941 | NR | 665 | 60328 | NR | 795 | 2970 | NR | 925 | 1737 | NR |
| 410 | 1017 | NR | 540 | 42696 | NR | 670 | 55011 | NR | 800 | 2874 | NR | 930 | 1738 | NR |
| 415 | 1324 | NR | 545 | 44809 | NR | 675 | 49838 | NR | 805 | 2736 | NR | 935 | 2125 | NR |
| 420 | 1972 | NR | 550 | 46959 | NR | 680 | 44927 | NR | 810 | 2648 | NR | 940 | 1637 | NR |
| 425 | 3033 | NR | 555 | 49260 | NR | 685 | 40277 | NR | 815 | 2400 | NR | 945 | 1569 | NR |
| 430 | 4609 | NR | 560 | 51165 | NR | 690 | 35795 | NR | 820 | 2470 | NR | 950 | 1938 | NR |
| 435 | 7105 | NR | 565 | 53562 | NR | 695 | 31683 | NR | 825 | 2425 | NR | 955 | 1864 | NR |
| 440 | 11197 | NR | 570 | 56177 | NR | 700 | 27880 | NR | 830 | 2392 | NR | 960 | 2093 | NR |
| 445 | 18973 | NR | 575 | 58898 | NR | 705 | 24664 | NR | 835 | 1867 | NR | 965 | 2277 | NR |
| 450 | 27311 | NR | 580 | 62115 | NR | 710 | 21670 | NR | 840 | 1912 | NR | 970 | 2629 | NR |
| 455 | 25348 | NR | 585 | 65028 | NR | 715 | 19241 | NR | 845 | 1927 | NR | 975 | 2541 | NR |
| 460 | 18677 | NR | 590 | 68395 | NR | 720 | 16927 | NR | 850 | 2066 | NR | 980 | 2508 | NR |
| 465 | 16400 | NR | 595 | 72374 | NR | 725 | 14936 | NR | 855 | 1671 | NR | 985 | 2238 | NR |
| 470 | 15032 | NR | 600 | 75401 | NR | 730 | 13104 | NR | 860 | 1946 | NR | 990 | 2619 | NR |
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| 485 | 16672 | NR | 615 | 84326 | NR | 745 | 9008 | NR | 875 | 1893 | NR | | | |

REPORT NUMBER: SP1-2401-290-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: 1804.6 M/P: 0.47

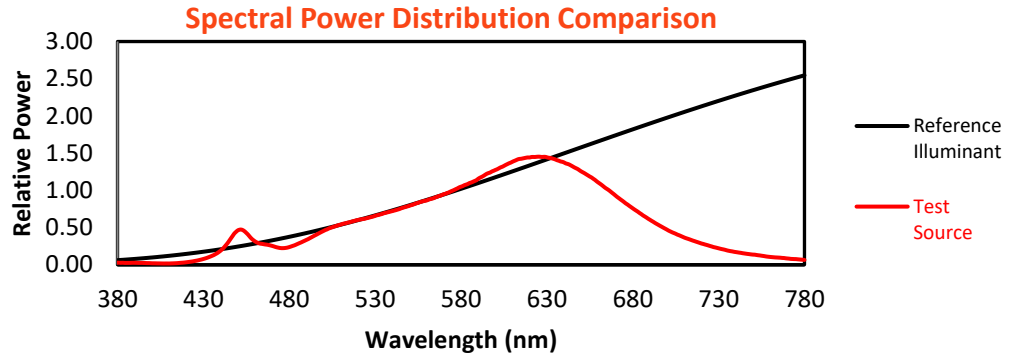
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 1543 | NR | 490 | 19797 | NR | 620 | 85353 | NR | 750 | 8090 | NR | 880 | 1792 | NR |
| 365 | 1414 | NR | 495 | 23402 | NR | 625 | 85989 | NR | 755 | 7198 | NR | 885 | 2020 | NR |
| 370 | 1551 | NR | 500 | 26949 | NR | 630 | 85515 | NR | 760 | 6225 | NR | 890 | 1828 | NR |
| 375 | 1796 | NR | 505 | 29825 | NR | 635 | 83747 | NR | 765 | 5688 | NR | 895 | 1860 | NR |
| 380 | 1726 | NR | 510 | 32000 | NR | 640 | 81402 | NR | 770 | 5021 | NR | 900 | 1911 | NR |
| 385 | 1466 | NR | 515 | 33805 | NR | 645 | 78259 | NR | 775 | 4504 | NR | 905 | 1780 | NR |
| 390 | 1558 | NR | 520 | 35652 | NR | 650 | 74273 | NR | 780 | 3834 | NR | 910 | 1898 | NR |
| 395 | 1442 | NR | 525 | 37021 | NR | 655 | 70182 | NR | 785 | 3465 | NR | 915 | 1803 | NR |
| 400 | 1203 | NR | 530 | 38939 | NR | 660 | 65368 | NR | 790 | 3329 | NR | 920 | 1835 | NR |
| 405 | 1067 | NR | 535 | 40941 | NR | 665 | 60328 | NR | 795 | 2970 | NR | 925 | 1737 | NR |
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| 425 | 3033 | NR | 555 | 49260 | NR | 685 | 40277 | NR | 815 | 2400 | NR | 945 | 1569 | NR |
| 430 | 4609 | NR | 560 | 51165 | NR | 690 | 35795 | NR | 820 | 2470 | NR | 950 | 1938 | NR |
| 435 | 7105 | NR | 565 | 53562 | NR | 695 | 31683 | NR | 825 | 2425 | NR | 955 | 1864 | NR |
| 440 | 11197 | NR | 570 | 56177 | NR | 700 | 27880 | NR | 830 | 2392 | NR | 960 | 2093 | NR |
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| 450 | 27311 | NR | 580 | 62115 | NR | 710 | 21670 | NR | 840 | 1912 | NR | 970 | 2629 | NR |
| 455 | 25348 | NR | 585 | 65028 | NR | 715 | 19241 | NR | 845 | 1927 | NR | 975 | 2541 | NR |
| 460 | 18677 | NR | 590 | 68395 | NR | 720 | 16927 | NR | 850 | 2066 | NR | 980 | 2508 | NR |
| 465 | 16400 | NR | 595 | 72374 | NR | 725 | 14936 | NR | 855 | 1671 | NR | 985 | 2238 | NR |
| 470 | 15032 | NR | 600 | 75401 | NR | 730 | 13104 | NR | 860 | 1946 | NR | 990 | 2619 | NR |
| 475 | 13281 | NR | 605 | 78653 | NR | 735 | 11394 | NR | 865 | 2045 | NR | 995 | 1965 | NR |
| 480 | 14079 | NR | 610 | 81994 | NR | 740 | 10108 | NR | 870 | 2206 | NR | 1000 | 3108 | NR |
| 485 | 16672 | NR | 615 | 84326 | NR | 745 | 9008 | NR | 875 | 1893 | NR | | | |

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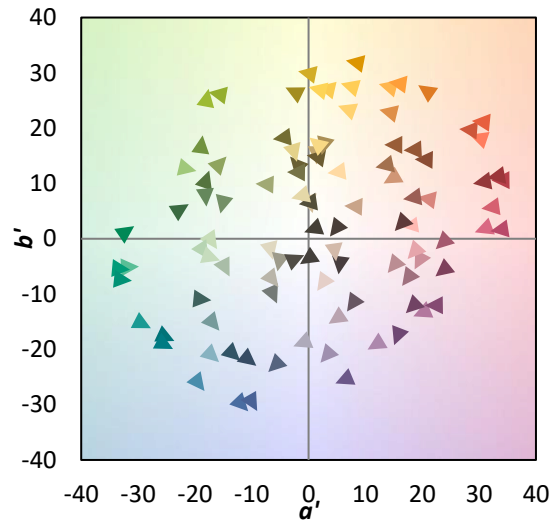
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Summary

$R_f = 93.2$
 $R_g = 98.9$
 CIE $R_a = 93.4$
 $R_9 = 59.7$



Color Vector Graphics



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Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 95 | CES51 = 98 | CES76 = 92 |
| CES02 = 64 | CES27 = 95 | CES52 = 99 | CES77 = 89 |
| CES03 = 32 | CES28 = 98 | CES53 = 97 | CES78 = 90 |
| CES04 = 71 | CES29 = 96 | CES54 = 96 | CES79 = 92 |
| CES05 = 52 | CES30 = 97 | CES55 = 95 | CES80 = 93 |
| CES06 = 52 | CES31 = 96 | CES56 = 96 | CES81 = 81 |
| CES07 = 44 | CES32 = 91 | CES57 = 95 | CES82 = 97 |
| CES08 = 43 | CES33 = 98 | CES58 = 96 | CES83 = 95 |
| CES09 = 29 | CES34 = 97 | CES59 = 97 | CES84 = 96 |
| CES10 = 77 | CES35 = 98 | CES60 = 96 | CES85 = 84 |
| CES11 = 60 | CES36 = 89 | CES61 = 95 | CES86 = 83 |
| CES12 = 66 | CES37 = 96 | CES62 = 94 | CES87 = 93 |
| CES13 = 44 | CES38 = 94 | CES63 = 95 | CES88 = 95 |
| CES14 = 74 | CES39 = 99 | CES64 = 94 | CES89 = 85 |
| CES15 = 72 | CES40 = 97 | CES65 = 91 | CES90 = 96 |
| CES16 = 49 | CES41 = 97 | CES66 = 93 | CES91 = 85 |
| CES17 = 50 | CES42 = 97 | CES67 = 92 | CES92 = 82 |
| CES18 = 57 | CES43 = 96 | CES68 = 93 | CES93 = 89 |
| CES19 = 72 | CES44 = 99 | CES69 = 94 | CES94 = 80 |
| CES20 = 68 | CES45 = 98 | CES70 = 91 | CES95 = 87 |
| CES21 = 87 | CES46 = 96 | CES71 = 90 | CES96 = 93 |
| CES22 = 79 | CES47 = 93 | CES72 = 96 | CES97 = 96 |
| CES23 = 92 | CES48 = 94 | CES73 = 88 | CES98 = 94 |
| CES24 = 91 | CES49 = 96 | CES74 = 91 | CES99 = 91 |
| CES25 = 72 | CES50 = 99 | CES75 = 91 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)