

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



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: PrentaLux

Report Number: P879070

Luminaire Tested: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X

Issue Date: 9/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P879070
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2405-094-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: PentaLux
Catalog Number: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X
Description: PentaLux 200 SERIES 3D PRINTED LUMINAIRE, 206 SHADE, CLEAR LENS.
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

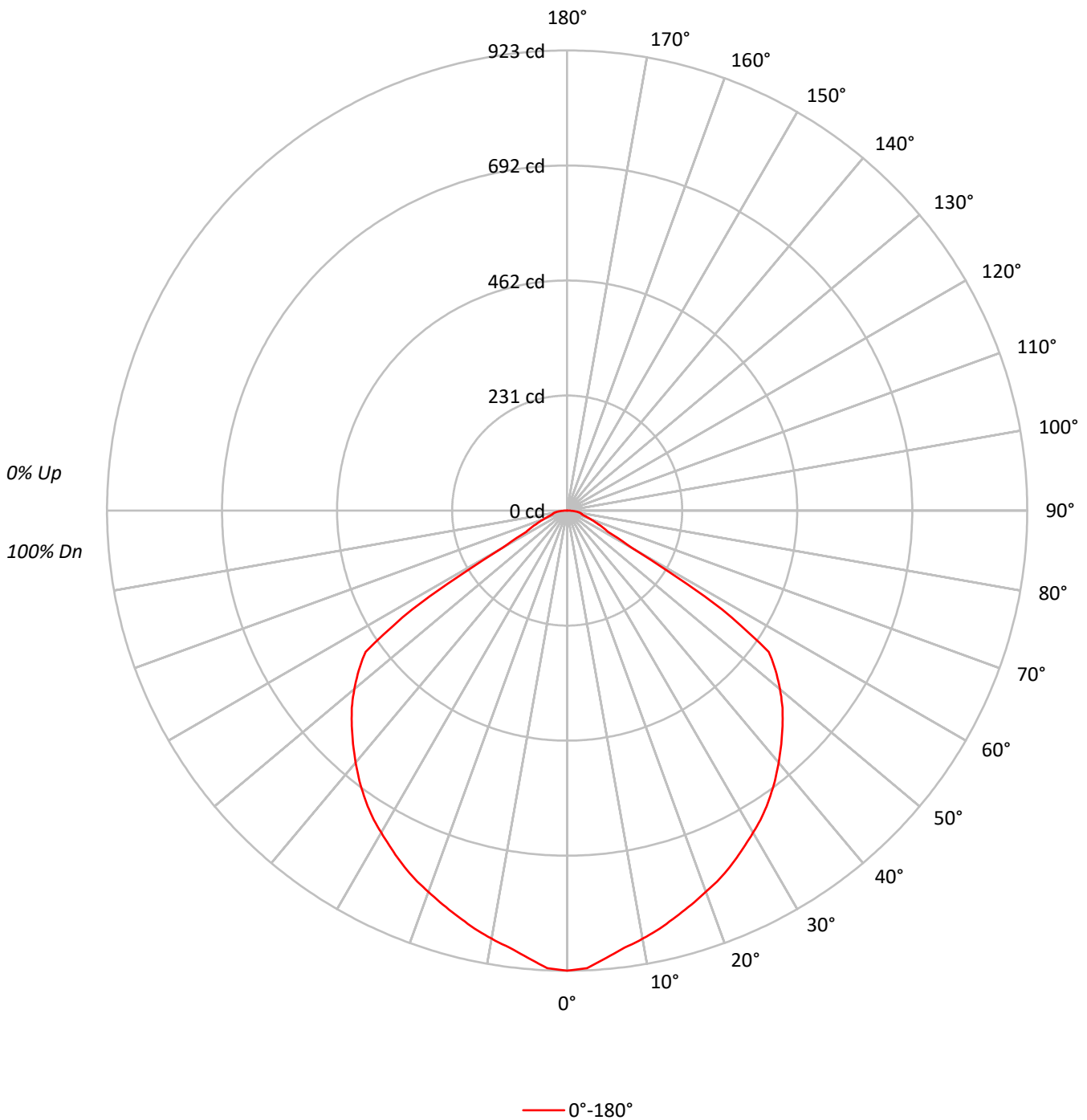
Lumens per Lamp: N/A
Luminaire Lumens: 2119.8 lumens
Efficiency: N/A
Efficacy: 164.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.37
Luminous Opening: Circular (Dia: 0.88' x H: 0')
CIE Type: Direct

Input Watts (W): 12.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 3 HR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P879070

CATALOG NUMBER: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X

Luminous Intensity Polar Plot





TEST NUMBER: P879070

CATALOG NUMBER: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X

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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 107 | 103 | 100 | 108 | 105 | 101 | 99 | 100 | 98 | 95 | 97 | 95 | 93 | 93 | 91 | 90 | 88 |
| 2 | 102 | 95 | 89 | 85 | 100 | 93 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 72 | 81 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 59 | 57 |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 60 | 54 | 65 | 59 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 50 |
| 6 | 74 | 62 | 54 | 48 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 58 | 51 | 47 | 56 | 51 | 46 | 44 |
| 7 | 69 | 56 | 48 | 42 | 67 | 55 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 |
| 8 | 64 | 51 | 43 | 38 | 63 | 51 | 43 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 |
| 9 | 60 | 47 | 39 | 34 | 59 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 33 | 32 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 40 | 34 | 30 | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 16519 |
| 5° | 16183 |
| 10° | 15850 |
| 15° | 15630 |
| 20° | 15498 |
| 25° | 15459 |
| 30° | 15418 |
| 35° | 15445 |
| 40° | 15425 |
| 45° | 15470 |
| 50° | 15523 |
| 55° | 15411 |
| 60° | 5392 |
| 65° | 3261 |
| 70° | 2565 |
| 75° | 2179 |
| 80° | 2711 |
| 85° | 3245 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 47.5°
 Luminance: 15527 cd/sqm

TEST NUMBER: P879070

CATALOG NUMBER: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 85.1 | 4.0 |
| 10°-20° | 238.2 | 11.2 |
| 20°-30° | 360.8 | 17.0 |
| 30°-40° | 442.1 | 20.9 |
| 40°-50° | 471.6 | 22.2 |
| 50°-60° | 388.0 | 18.3 |
| 60°-70° | 81.7 | 3.9 |
| 70°-80° | 36.1 | 1.7 |
| 80°-90° | 16.2 | 0.8 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 684.1 | 32.3 |
| 0°-40° | 1126.2 | 53.1 |
| 0°-60° | 1985.8 | 93.7 |
| 0°-90° | 2119.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2119.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 923 | |
| 5° | 901 | 85 |
| 15° | 843 | 238 |
| 25° | 783 | 361 |
| 35° | 707 | 442 |
| 45° | 611 | 472 |
| 55° | 494 | 388 |
| 65° | 77 | 82 |
| 75° | 32 | 36 |
| 85° | 16 | 16 |
| 90° | 0 | |

TEST NUMBER: P879070

CATALOG NUMBER: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X

CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 922.8 |
| 2.5° | 918.7 |
| 5° | 900.6 |
| 7.5° | 884.3 |
| 10° | 872.0 |
| 12.5° | 858.6 |
| 15° | 843.4 |
| 17.5° | 828.8 |
| 20° | 813.6 |
| 22.5° | 799.6 |
| 25° | 782.7 |
| 27.5° | 764.0 |
| 30° | 745.9 |
| 32.5° | 727.8 |
| 35° | 706.8 |
| 37.5° | 684.1 |
| 40° | 660.1 |
| 42.5° | 635.6 |
| 45° | 611.1 |
| 47.5° | 586.0 |
| 50° | 557.4 |
| 52.5° | 527.1 |
| 55° | 493.8 |
| 57.5° | 368.9 |
| 60° | 150.6 |
| 62.5° | 92.8 |
| 65° | 77.0 |
| 67.5° | 61.9 |
| 70° | 49.0 |
| 72.5° | 38.5 |
| 75° | 31.5 |
| 77.5° | 29.2 |
| 80° | 26.3 |
| 82.5° | 22.2 |
| 85° | 15.8 |
| 87.5° | 8.2 |
| 90° | 0.0 |



TEST NUMBER: P879070
 CATALOG NUMBER: PRLX-206-940-LL2-C-U-S-X-X-WHHR-FL-X

CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 20.97 | 22.47 | 21.33 | 22.78 | 23.10 | 20.97 | 22.47 | 21.33 | 22.78 | 23.10 |
| | 3H | 21.02 | 22.35 | 21.40 | 22.68 | 23.04 | 21.02 | 22.35 | 21.40 | 22.68 | 23.04 |
| | 4H | 21.02 | 22.26 | 21.42 | 22.61 | 22.99 | 21.02 | 22.26 | 21.42 | 22.61 | 22.99 |
| | 6H | 21.05 | 22.19 | 21.46 | 22.56 | 22.95 | 21.05 | 22.19 | 21.46 | 22.56 | 22.95 |
| | 8H | 21.07 | 22.15 | 21.49 | 22.54 | 22.94 | 21.07 | 22.15 | 21.49 | 22.54 | 22.94 |
| | 12H | 21.08 | 22.12 | 21.51 | 22.50 | 22.93 | 21.08 | 22.12 | 21.51 | 22.50 | 22.93 |
| 4H | 2H | 20.87 | 22.11 | 21.27 | 22.46 | 22.84 | 20.87 | 22.11 | 21.27 | 22.46 | 22.84 |
| | 3H | 20.98 | 21.99 | 21.40 | 22.39 | 22.79 | 20.98 | 21.99 | 21.40 | 22.39 | 22.79 |
| | 4H | 21.01 | 21.91 | 21.45 | 22.33 | 22.77 | 21.01 | 21.91 | 21.45 | 22.33 | 22.77 |
| | 6H | 21.10 | 21.88 | 21.56 | 22.32 | 22.78 | 21.10 | 21.88 | 21.56 | 22.32 | 22.78 |
| | 8H | 21.14 | 21.87 | 21.61 | 22.32 | 22.79 | 21.14 | 21.87 | 21.61 | 22.32 | 22.79 |
| | 12H | 21.20 | 21.85 | 21.68 | 22.33 | 22.80 | 21.20 | 21.85 | 21.68 | 22.33 | 22.80 |
| 8H | 4H | 20.96 | 21.69 | 21.43 | 22.14 | 22.60 | 20.96 | 21.69 | 21.43 | 22.14 | 22.60 |
| | 6H | 21.08 | 21.69 | 21.58 | 22.18 | 22.66 | 21.08 | 21.69 | 21.58 | 22.18 | 22.66 |
| | 8H | 21.17 | 21.72 | 21.68 | 22.23 | 22.72 | 21.17 | 21.72 | 21.68 | 22.23 | 22.72 |
| | 12H | 21.28 | 21.77 | 21.79 | 22.27 | 22.83 | 21.28 | 21.77 | 21.79 | 22.27 | 22.83 |
| 12H | 4H | 20.94 | 21.59 | 21.42 | 22.07 | 22.54 | 20.94 | 21.59 | 21.42 | 22.07 | 22.54 |
| | 6H | 21.06 | 21.61 | 21.58 | 22.12 | 22.61 | 21.06 | 21.61 | 21.58 | 22.12 | 22.61 |
| | 8H | 21.19 | 21.68 | 21.70 | 22.18 | 22.74 | 21.19 | 21.68 | 21.70 | 22.18 | 22.74 |

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



Test Information

Test Method: LM-79-2019
 Report Number: SP1-2203-582-4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 05/26/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: SHAPER
 Catalog Number: **225-90-40K-27L-UNV-STD-X-X-WHHR-SR-X**
 Description: Shaper 3D PRINTED 200 Series Pendants

Spectral Parameters

| | | | | | |
|---------------------------|---------|-----------|------|------|------|
| CCT (K): | 3882 | CRI (Ra): | 90.9 | R9: | 62.0 |
| CIE u': | 0.2279 | R1: | 91.6 | R10: | 82.3 |
| CIE v': | 0.5024 | R2: | 92.7 | R11: | 91.9 |
| Duv: | -0.0011 | R3: | 92.5 | R12: | 75.2 |
| CIE x: | 0.3849 | R4: | 91.7 | R13: | 91.6 |
| CIE y: | 0.3772 | R5: | 91.1 | R14: | 95.5 |
| CIE z: | 0.2379 | R6: | 89.5 | | |
| Peak Wavelength (nm): | 448 | R7: | 92.8 | | |
| Dominant Wavelength (nm): | 580 | R8: | 85.5 | | |
| Purity: | 28.8 | | | | |
| Rf: | 89.9 | | | | |
| Rg: | 101.4 | | | | |

Test Conditions

Stabilization Time: 63M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.7/42%
 Sphere Temperature (°C): 24.9



REPORT NUMBER: SP1-2203-582-4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 2/7/2022 | 8/7/2022 |
| Power Meter | XITRON 2801 IN0071 | 11/29/2021 | 11/29/2022 |
| AC Power Source | CHROMA 61603 IN0063 | 11/29/2021 | 11/29/2022 |
| DC Power Source | AGILENT E3634A IN0208 | 11/29/2021 | 11/29/2022 |
| Sphere Thermometer | ONSET IN0085 | 11/29/2021 | 11/29/2022 |
| Room Thermometer | ONSET IN0046 | 11/29/2021 | 11/29/2022 |

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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 4000K 4-step quadrangle

REPORT NUMBER: SP1-2203-582-4

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 | 1253 | NR | 490 | 20634 | NR | 620 | 48151 | NR | 750 | 4452 | NR | 880 | 1536 | NR |
| 365 | 1099 | NR | 495 | 24539 | NR | 625 | 47538 | NR | 755 | 3931 | NR | 885 | 1648 | NR |
| 370 | 1097 | NR | 500 | 28068 | NR | 630 | 46833 | NR | 760 | 3534 | NR | 890 | 1444 | NR |
| 375 | 1255 | NR | 505 | 30716 | NR | 635 | 45186 | NR | 765 | 3183 | NR | 895 | 1689 | NR |
| 380 | 1225 | NR | 510 | 32426 | NR | 640 | 43606 | NR | 770 | 2768 | NR | 900 | 1457 | NR |
| 385 | 1163 | NR | 515 | 34008 | NR | 645 | 41852 | NR | 775 | 2598 | NR | 905 | 1381 | NR |
| 390 | 1078 | NR | 520 | 35441 | NR | 650 | 39544 | NR | 780 | 2363 | NR | 910 | 1536 | NR |
| 395 | 965 | NR | 525 | 36312 | NR | 655 | 37429 | NR | 785 | 2048 | NR | 915 | 1672 | NR |
| 400 | 895 | NR | 530 | 37399 | NR | 660 | 34686 | NR | 790 | 1873 | NR | 920 | 1329 | NR |
| 405 | 904 | NR | 535 | 38667 | NR | 665 | 31761 | NR | 795 | 1938 | NR | 925 | 1260 | NR |
| 410 | 1207 | NR | 540 | 39805 | NR | 670 | 29259 | NR | 800 | 1613 | NR | 930 | 1839 | NR |
| 415 | 2092 | NR | 545 | 40639 | NR | 675 | 26459 | NR | 805 | 1586 | NR | 935 | 1503 | NR |
| 420 | 4020 | NR | 550 | 41923 | NR | 680 | 23768 | NR | 810 | 1448 | NR | 940 | 1777 | NR |
| 425 | 7356 | NR | 555 | 42736 | NR | 685 | 21181 | NR | 815 | 1432 | NR | 945 | 1847 | NR |
| 430 | 12370 | NR | 560 | 43056 | NR | 690 | 18864 | NR | 820 | 1616 | NR | 950 | 1817 | NR |
| 435 | 19911 | NR | 565 | 43662 | NR | 695 | 16795 | NR | 825 | 1327 | NR | 955 | 1795 | NR |
| 440 | 32902 | NR | 570 | 44212 | NR | 700 | 14887 | NR | 830 | 1431 | NR | 960 | 1671 | NR |
| 445 | 50207 | NR | 575 | 44462 | NR | 705 | 13192 | NR | 835 | 1404 | NR | 965 | 1118 | NR |
| 450 | 51979 | NR | 580 | 44777 | NR | 710 | 11574 | NR | 840 | 1324 | NR | 970 | 1937 | NR |
| 455 | 36175 | NR | 585 | 45311 | NR | 715 | 10423 | NR | 845 | 1523 | NR | 975 | 1568 | NR |
| 460 | 26157 | NR | 590 | 45989 | NR | 720 | 9166 | NR | 850 | 1538 | NR | 980 | 2595 | NR |
| 465 | 20687 | NR | 595 | 46710 | NR | 725 | 7985 | NR | 855 | 1763 | NR | 985 | 1892 | NR |
| 470 | 15600 | NR | 600 | 47363 | NR | 730 | 7063 | NR | 860 | 1682 | NR | 990 | 2249 | NR |
| 475 | 13920 | NR | 605 | 47873 | NR | 735 | 6214 | NR | 865 | 1563 | NR | 995 | 2939 | NR |
| 480 | 14825 | NR | 610 | 48310 | NR | 740 | 5551 | NR | 870 | 1403 | NR | 1000 | 2611 | NR |
| 485 | 17185 | NR | 615 | 48452 | NR | 745 | 4959 | NR | 875 | 1570 | NR | | | |

REPORT NUMBER: SP1-2203-582-4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 5055.1

S/P: 1.71

| 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 | 1253 | NR | 490 | 20634 | NR | 620 | 48151 | NR | 750 | 4452 | NR | 880 | 1536 | NR |
| 365 | 1099 | NR | 495 | 24539 | NR | 625 | 47538 | NR | 755 | 3931 | NR | 885 | 1648 | NR |
| 370 | 1097 | NR | 500 | 28068 | NR | 630 | 46833 | NR | 760 | 3534 | NR | 890 | 1444 | NR |
| 375 | 1255 | NR | 505 | 30716 | NR | 635 | 45186 | NR | 765 | 3183 | NR | 895 | 1689 | NR |
| 380 | 1225 | NR | 510 | 32426 | NR | 640 | 43606 | NR | 770 | 2768 | NR | 900 | 1457 | NR |
| 385 | 1163 | NR | 515 | 34008 | NR | 645 | 41852 | NR | 775 | 2598 | NR | 905 | 1381 | NR |
| 390 | 1078 | NR | 520 | 35441 | NR | 650 | 39544 | NR | 780 | 2363 | NR | 910 | 1536 | NR |
| 395 | 965 | NR | 525 | 36312 | NR | 655 | 37429 | NR | 785 | 2048 | NR | 915 | 1672 | NR |
| 400 | 895 | NR | 530 | 37399 | NR | 660 | 34686 | NR | 790 | 1873 | NR | 920 | 1329 | NR |
| 405 | 904 | NR | 535 | 38667 | NR | 665 | 31761 | NR | 795 | 1938 | NR | 925 | 1260 | NR |
| 410 | 1207 | NR | 540 | 39805 | NR | 670 | 29259 | NR | 800 | 1613 | NR | 930 | 1839 | NR |
| 415 | 2092 | NR | 545 | 40639 | NR | 675 | 26459 | NR | 805 | 1586 | NR | 935 | 1503 | NR |
| 420 | 4020 | NR | 550 | 41923 | NR | 680 | 23768 | NR | 810 | 1448 | NR | 940 | 1777 | NR |
| 425 | 7356 | NR | 555 | 42736 | NR | 685 | 21181 | NR | 815 | 1432 | NR | 945 | 1847 | NR |
| 430 | 12370 | NR | 560 | 43056 | NR | 690 | 18864 | NR | 820 | 1616 | NR | 950 | 1817 | NR |
| 435 | 19911 | NR | 565 | 43662 | NR | 695 | 16795 | NR | 825 | 1327 | NR | 955 | 1795 | NR |
| 440 | 32902 | NR | 570 | 44212 | NR | 700 | 14887 | NR | 830 | 1431 | NR | 960 | 1671 | NR |
| 445 | 50207 | NR | 575 | 44462 | NR | 705 | 13192 | NR | 835 | 1404 | NR | 965 | 1118 | NR |
| 450 | 51979 | NR | 580 | 44777 | NR | 710 | 11574 | NR | 840 | 1324 | NR | 970 | 1937 | NR |
| 455 | 36175 | NR | 585 | 45311 | NR | 715 | 10423 | NR | 845 | 1523 | NR | 975 | 1568 | NR |
| 460 | 26157 | NR | 590 | 45989 | NR | 720 | 9166 | NR | 850 | 1538 | NR | 980 | 2595 | NR |
| 465 | 20687 | NR | 595 | 46710 | NR | 725 | 7985 | NR | 855 | 1763 | NR | 985 | 1892 | NR |
| 470 | 15600 | NR | 600 | 47363 | NR | 730 | 7063 | NR | 860 | 1682 | NR | 990 | 2249 | NR |
| 475 | 13920 | NR | 605 | 47873 | NR | 735 | 6214 | NR | 865 | 1563 | NR | 995 | 2939 | NR |
| 480 | 14825 | NR | 610 | 48310 | NR | 740 | 5551 | NR | 870 | 1403 | NR | 1000 | 2611 | NR |
| 485 | 17185 | NR | 615 | 48452 | NR | 745 | 4959 | NR | 875 | 1570 | NR | | | |

REPORT NUMBER: SP1-2203-582-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 2034.1 S/P: 0.69

| 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 | 1253 | NR | 490 | 20634 | NR | 620 | 48151 | NR | 750 | 4452 | NR | 880 | 1536 | NR |
| 365 | 1099 | NR | 495 | 24539 | NR | 625 | 47538 | NR | 755 | 3931 | NR | 885 | 1648 | NR |
| 370 | 1097 | NR | 500 | 28068 | NR | 630 | 46833 | NR | 760 | 3534 | NR | 890 | 1444 | NR |
| 375 | 1255 | NR | 505 | 30716 | NR | 635 | 45186 | NR | 765 | 3183 | NR | 895 | 1689 | NR |
| 380 | 1225 | NR | 510 | 32426 | NR | 640 | 43606 | NR | 770 | 2768 | NR | 900 | 1457 | NR |
| 385 | 1163 | NR | 515 | 34008 | NR | 645 | 41852 | NR | 775 | 2598 | NR | 905 | 1381 | NR |
| 390 | 1078 | NR | 520 | 35441 | NR | 650 | 39544 | NR | 780 | 2363 | NR | 910 | 1536 | NR |
| 395 | 965 | NR | 525 | 36312 | NR | 655 | 37429 | NR | 785 | 2048 | NR | 915 | 1672 | NR |
| 400 | 895 | NR | 530 | 37399 | NR | 660 | 34686 | NR | 790 | 1873 | NR | 920 | 1329 | NR |
| 405 | 904 | NR | 535 | 38667 | NR | 665 | 31761 | NR | 795 | 1938 | NR | 925 | 1260 | NR |
| 410 | 1207 | NR | 540 | 39805 | NR | 670 | 29259 | NR | 800 | 1613 | NR | 930 | 1839 | NR |
| 415 | 2092 | NR | 545 | 40639 | NR | 675 | 26459 | NR | 805 | 1586 | NR | 935 | 1503 | NR |
| 420 | 4020 | NR | 550 | 41923 | NR | 680 | 23768 | NR | 810 | 1448 | NR | 940 | 1777 | NR |
| 425 | 7356 | NR | 555 | 42736 | NR | 685 | 21181 | NR | 815 | 1432 | NR | 945 | 1847 | NR |
| 430 | 12370 | NR | 560 | 43056 | NR | 690 | 18864 | NR | 820 | 1616 | NR | 950 | 1817 | NR |
| 435 | 19911 | NR | 565 | 43662 | NR | 695 | 16795 | NR | 825 | 1327 | NR | 955 | 1795 | NR |
| 440 | 32902 | NR | 570 | 44212 | NR | 700 | 14887 | NR | 830 | 1431 | NR | 960 | 1671 | NR |
| 445 | 50207 | NR | 575 | 44462 | NR | 705 | 13192 | NR | 835 | 1404 | NR | 965 | 1118 | NR |
| 450 | 51979 | NR | 580 | 44777 | NR | 710 | 11574 | NR | 840 | 1324 | NR | 970 | 1937 | NR |
| 455 | 36175 | NR | 585 | 45311 | NR | 715 | 10423 | NR | 845 | 1523 | NR | 975 | 1568 | NR |
| 460 | 26157 | NR | 590 | 45989 | NR | 720 | 9166 | NR | 850 | 1538 | NR | 980 | 2595 | NR |
| 465 | 20687 | NR | 595 | 46710 | NR | 725 | 7985 | NR | 855 | 1763 | NR | 985 | 1892 | NR |
| 470 | 15600 | NR | 600 | 47363 | NR | 730 | 7063 | NR | 860 | 1682 | NR | 990 | 2249 | NR |
| 475 | 13920 | NR | 605 | 47873 | NR | 735 | 6214 | NR | 865 | 1563 | NR | 995 | 2939 | NR |
| 480 | 14825 | NR | 610 | 48310 | NR | 740 | 5551 | NR | 870 | 1403 | NR | 1000 | 2611 | NR |
| 485 | 17185 | NR | 615 | 48452 | NR | 745 | 4959 | NR | 875 | 1570 | NR | | | |

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Summary

$R_f = 89.9$
 $R_g = 101.4$
 CIE $R_a = 90.9$
 $R_9 = 62.0$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 86 | CES51 = 97 | CES76 = 78 |
| CES02 = 62 | CES27 = 95 | CES52 = 96 | CES77 = 85 |
| CES03 = 31 | CES28 = 93 | CES53 = 92 | CES78 = 77 |
| CES04 = 69 | CES29 = 86 | CES54 = 96 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 96 | CES80 = 89 |
| CES06 = 51 | CES31 = 87 | CES56 = 92 | CES81 = 90 |
| CES07 = 42 | CES32 = 82 | CES57 = 91 | CES82 = 95 |
| CES08 = 41 | CES33 = 89 | CES58 = 92 | CES83 = 95 |
| CES09 = 29 | CES34 = 87 | CES59 = 96 | CES84 = 93 |
| CES10 = 74 | CES35 = 92 | CES60 = 95 | CES85 = 86 |
| CES11 = 57 | CES36 = 89 | CES61 = 93 | CES86 = 89 |
| CES12 = 63 | CES37 = 90 | CES62 = 94 | CES87 = 89 |
| CES13 = 43 | CES38 = 99 | CES63 = 91 | CES88 = 94 |
| CES14 = 74 | CES39 = 98 | CES64 = 90 | CES89 = 86 |
| CES15 = 71 | CES40 = 95 | CES65 = 88 | CES90 = 95 |
| CES16 = 47 | CES41 = 96 | CES66 = 87 | CES91 = 79 |
| CES17 = 49 | CES42 = 89 | CES67 = 86 | CES92 = 82 |
| CES18 = 56 | CES43 = 87 | CES68 = 86 | CES93 = 89 |
| CES19 = 71 | CES44 = 99 | CES69 = 88 | CES94 = 81 |
| CES20 = 66 | CES45 = 92 | CES70 = 82 | CES95 = 84 |
| CES21 = 85 | CES46 = 92 | CES71 = 79 | CES96 = 91 |
| CES22 = 78 | CES47 = 92 | CES72 = 93 | CES97 = 92 |
| CES23 = 91 | CES48 = 93 | CES73 = 76 | CES98 = 91 |
| CES24 = 90 | CES49 = 91 | CES74 = 96 | CES99 = 91 |
| CES25 = 71 | CES50 = 97 | CES75 = 79 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)