

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055587

Luminaire Tested: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

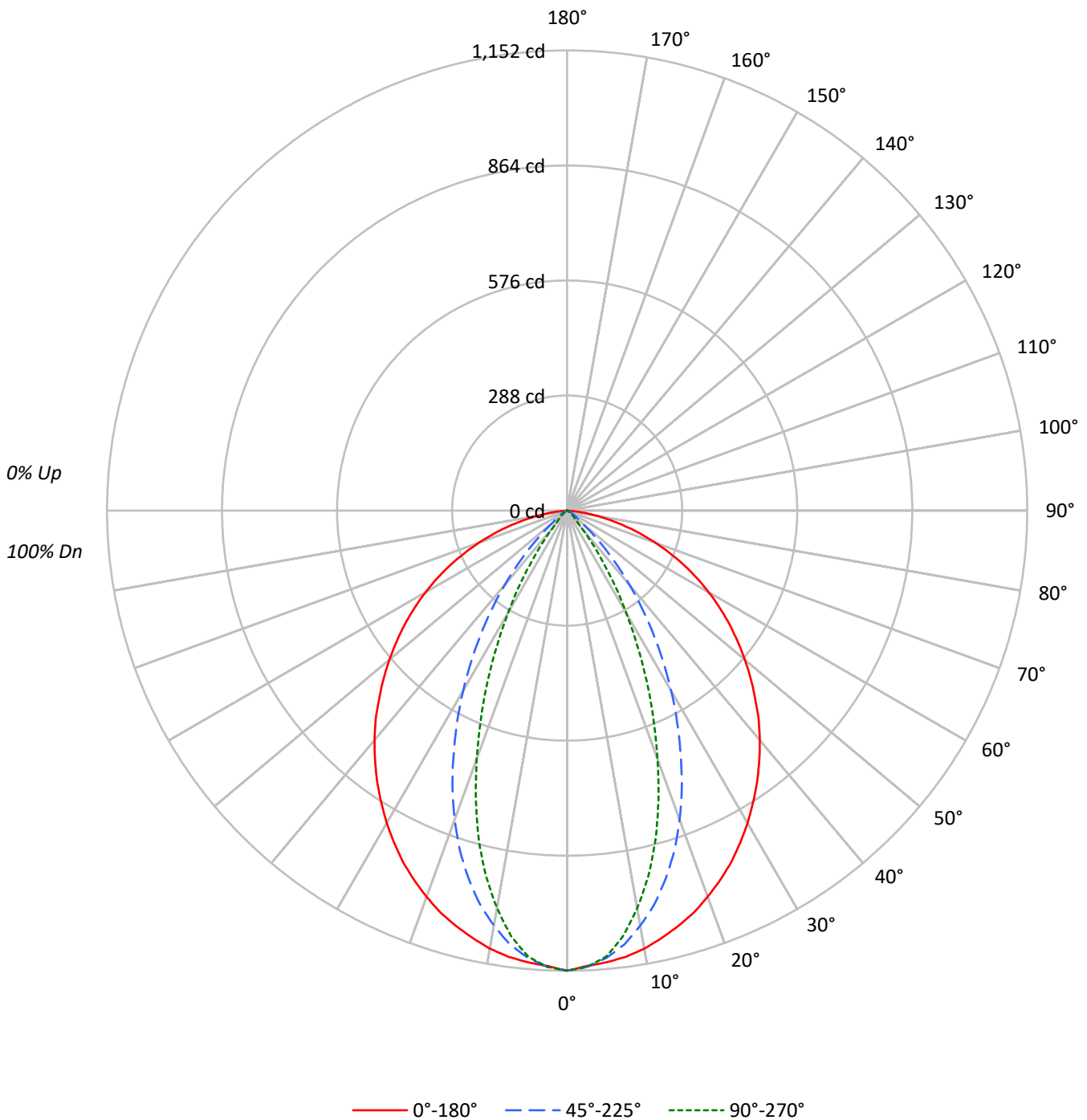
Lumens per Lamp: N/A
Luminaire Lumens: 1348.0 lumens
Efficiency: N/A
Efficacy: 32.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1055587

CATALOG NUMBER: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055587

CATALOG NUMBER: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B

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 | 112 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98 | 98 | 97 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 93 | 90 | 86 | 90 | 87 | 84 | 87 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 77 | 74 | 73 |
| 4 | 92 | 82 | 75 | 70 | 90 | 81 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 65 |
| 5 | 86 | 76 | 69 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 |
| 6 | 81 | 70 | 63 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 61 | 56 | 64 | 60 | 56 | 54 |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 |
| 9 | 68 | 56 | 49 | 45 | 66 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 53 | 48 | 44 | 43 |
| 10 | 64 | 53 | 46 | 42 | 63 | 52 | 46 | 42 | 51 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 40 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13885 | 13885 | 13885 |
| 5° | 13736 | 13606 | 13563 |
| 10° | 13632 | 12915 | 12373 |
| 15° | 13435 | 11900 | 10662 |
| 20° | 13198 | 10562 | 8492 |
| 25° | 12921 | 8947 | 6262 |
| 30° | 12574 | 7252 | 4108 |
| 35° | 12203 | 5521 | 2250 |
| 40° | 11809 | 3817 | 771 |
| 45° | 11347 | 2220 | 448 |
| 50° | 10890 | 874 | 268 |
| 55° | 10422 | 553 | 126 |
| 60° | 9881 | 345 | 58 |
| 65° | 9203 | 171 | 34 |
| 70° | 8256 | 85 | 42 |
| 75° | 7011 | 56 | 56 |
| 80° | 5228 | 83 | 0 |
| 85° | 1978 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11347 cd/sqm



TEST NUMBER: P1055587

CATALOG NUMBER: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 105.6 | 7.8 |
| 10°-20° | 268.0 | 19.9 |
| 20°-30° | 319.7 | 23.7 |
| 30°-40° | 271.1 | 20.1 |
| 40°-50° | 184.3 | 13.7 |
| 50°-60° | 114.2 | 8.5 |
| 60°-70° | 57.9 | 4.3 |
| 70°-80° | 23.6 | 1.8 |
| 80°-90° | 3.6 | 0.3 |
| 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° | 693.2 | 51.4 |
| 0°-40° | 964.4 | 71.5 |
| 0°-60° | 1262.9 | 93.7 |
| 0°-90° | 1348.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1348.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1152 | 1152 | 1152 | 1152 | 1152 | |
| 5° | 1135 | 1146 | 1124 | 1116 | 1121 | 108 |
| 15° | 1076 | 1049 | 953 | 878 | 854 | 303 |
| 25° | 971 | 880 | 673 | 520 | 471 | 447 |
| 35° | 829 | 666 | 375 | 202 | 153 | 518 |
| 45° | 666 | 436 | 130 | 32 | 26 | 514 |
| 55° | 496 | 220 | 26 | 10 | 6 | 443 |
| 65° | 323 | 54 | 6 | 1 | 1 | 319 |
| 75° | 150 | 10 | 1 | 1 | 1 | 160 |
| 85° | 14 | 0 | 0 | 1 | 0 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055587

CATALOG NUMBER: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1151.7 | 1151.7 | 1151.7 | 1151.7 | 1151.7 |
| 2.5° | 1141.0 | 1156.5 | 1143.4 | 1142.2 | 1143.4 |
| 5° | 1135.0 | 1145.7 | 1124.2 | 1115.9 | 1120.7 |
| 7.5° | 1126.6 | 1131.4 | 1095.6 | 1074.1 | 1074.1 |
| 10° | 1113.5 | 1109.9 | 1054.9 | 1019.1 | 1010.7 |
| 12.5° | 1095.6 | 1081.2 | 1009.5 | 953.4 | 937.9 |
| 15° | 1076.4 | 1049.0 | 953.4 | 878.1 | 854.2 |
| 17.5° | 1054.9 | 1013.1 | 892.5 | 794.5 | 759.8 |
| 20° | 1028.7 | 972.5 | 823.2 | 703.7 | 661.9 |
| 22.5° | 1001.2 | 928.3 | 750.3 | 610.5 | 563.9 |
| 25° | 971.3 | 880.5 | 672.6 | 519.7 | 470.7 |
| 27.5° | 937.9 | 830.3 | 596.2 | 432.5 | 378.7 |
| 30° | 903.2 | 777.8 | 520.9 | 348.9 | 295.1 |
| 32.5° | 866.2 | 722.8 | 445.6 | 272.4 | 222.2 |
| 35° | 829.1 | 665.5 | 375.1 | 201.9 | 152.9 |
| 37.5° | 789.7 | 608.1 | 307.0 | 139.8 | 96.8 |
| 40° | 750.3 | 552.0 | 242.5 | 88.4 | 49.0 |
| 42.5° | 709.7 | 493.4 | 184.0 | 44.2 | 33.5 |
| 45° | 665.5 | 436.1 | 130.2 | 32.3 | 26.3 |
| 47.5° | 623.6 | 381.1 | 86.0 | 26.3 | 20.3 |
| 50° | 580.6 | 326.2 | 46.6 | 19.1 | 14.3 |
| 52.5° | 537.6 | 273.6 | 33.5 | 14.3 | 9.6 |
| 55° | 495.8 | 219.8 | 26.3 | 9.6 | 6.0 |
| 57.5° | 452.8 | 173.2 | 20.3 | 6.0 | 3.6 |
| 60° | 409.8 | 127.8 | 14.3 | 3.6 | 2.4 |
| 62.5° | 366.8 | 88.4 | 9.6 | 2.4 | 1.2 |
| 65° | 322.6 | 53.8 | 6.0 | 1.2 | 1.2 |
| 67.5° | 277.2 | 37.0 | 3.6 | 1.2 | 1.2 |
| 70° | 234.2 | 26.3 | 2.4 | 1.2 | 1.2 |
| 72.5° | 191.2 | 16.7 | 1.2 | 1.2 | 0.0 |
| 75° | 150.5 | 9.6 | 1.2 | 1.2 | 1.2 |
| 77.5° | 111.1 | 3.6 | 1.2 | 1.2 | 0.0 |
| 80° | 75.3 | 1.2 | 1.2 | 1.2 | 0.0 |
| 82.5° | 41.8 | 0.0 | 1.2 | 1.2 | 0.0 |
| 85° | 14.3 | 0.0 | 0.0 | 1.2 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1055587

CATALOG NUMBER: S123R3DRP-S1165D927-X4F0-XX-UDD-F-B

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 | 18.19 | 19.47 | 18.55 | 19.78 | 20.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 20.13 | 21.27 | 20.51 | 21.60 | 21.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 20.96 | 22.02 | 21.36 | 22.37 | 22.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.51 | 22.48 | 21.93 | 22.85 | 23.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.64 | 22.56 | 22.07 | 22.95 | 23.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.66 | 22.54 | 22.10 | 22.92 | 23.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 17.95 | 19.01 | 18.35 | 19.36 | 19.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 19.90 | 20.77 | 20.32 | 21.17 | 21.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 20.72 | 21.49 | 21.15 | 21.91 | 22.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.32 | 21.98 | 21.78 | 22.43 | 22.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.47 | 22.09 | 21.94 | 22.54 | 23.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.52 | 22.06 | 22.01 | 22.55 | 23.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 20.58 | 21.19 | 21.05 | 21.64 | 22.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.16 | 21.66 | 21.66 | 22.16 | 22.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.31 | 21.76 | 21.83 | 22.27 | 22.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.36 | 21.76 | 21.88 | 22.26 | 22.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 20.53 | 21.07 | 21.01 | 21.56 | 22.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.09 | 21.54 | 21.62 | 22.06 | 22.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.26 | 21.66 | 21.78 | 22.15 | 22.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |