

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: P243731

Luminaire Tested: S125RDRP-H850D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243731
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-66)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-H850D927-X4F0-XX-UDD-F-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

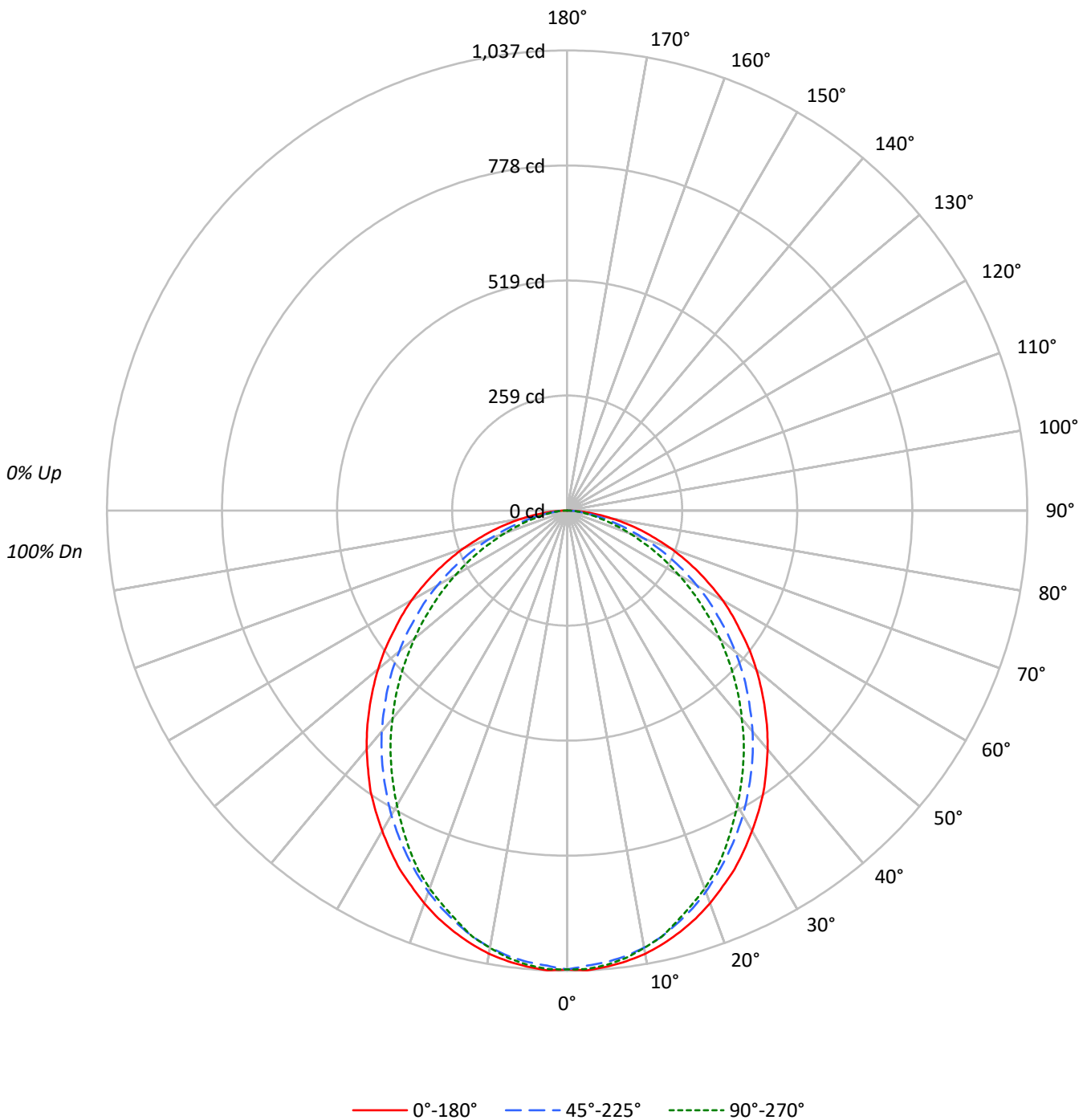
Lumens per Lamp: N/A
Luminaire Lumens: 2471.6 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.12 / 1.26
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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: 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 | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 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 | | | | | 100 | | | |
| 1 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 92 | 86 | 80 | 97 | 90 | 84 | 79 | 87 | 82 | 78 | 84 | 79 | 76 | 81 | 77 | 74 | 72 | | | | | 72 | | | |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 74 | 69 | 65 | 72 | 67 | 64 | 61 | | | | | 61 | | | |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 63 | 57 | 69 | 62 | 57 | 67 | 61 | 56 | 64 | 59 | 55 | 53 | | | | | 53 | | | |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 54 | 49 | 58 | 53 | 48 | 46 | | | | | 46 | | | |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 49 | 43 | 38 | 36 | | | | | 36 | | | |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 34 | 32 | | | | | 32 | | | |
| 9 | 58 | 45 | 37 | 32 | 57 | 45 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 | | | | | 29 | | | |
| 10 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 38 | 33 | 28 | 27 | | | | | 27 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7349 | 7349 | 7349 |
| 5° | 7361 | 7287 | 7330 |
| 10° | 7319 | 7217 | 7222 |
| 15° | 7233 | 7081 | 7048 |
| 20° | 7122 | 6915 | 6853 |
| 25° | 6995 | 6711 | 6601 |
| 30° | 6841 | 6501 | 6295 |
| 35° | 6700 | 6270 | 6007 |
| 40° | 6520 | 6032 | 5682 |
| 45° | 6334 | 5761 | 5345 |
| 50° | 6150 | 5463 | 4965 |
| 55° | 5930 | 5132 | 4564 |
| 60° | 5751 | 4795 | 4132 |
| 65° | 5472 | 4391 | 3658 |
| 70° | 5164 | 3842 | 3119 |
| 75° | 4753 | 3210 | 2540 |
| 80° | 4179 | 2484 | 2087 |
| 85° | 3555 | 2047 | 1933 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6334 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.4 | 3.9 |
| 10°-20° | 272.8 | 11.0 |
| 20°-30° | 397.0 | 16.1 |
| 30°-40° | 454.6 | 18.4 |
| 40°-50° | 444.8 | 18.0 |
| 50°-60° | 375.6 | 15.2 |
| 60°-70° | 263.0 | 10.6 |
| 70°-80° | 133.5 | 5.4 |
| 80°-90° | 32.9 | 1.3 |
| 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° | 767.2 | 31.0 |
| 0°-40° | 1221.8 | 49.4 |
| 0°-60° | 2042.2 | 82.6 |
| 0°-90° | 2471.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2471.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1034 | 1034 | 1034 | 1034 | 1034 | |
| 5° | 1032 | 1030 | 1021 | 1028 | 1027 | 98 |
| 15° | 983 | 979 | 962 | 962 | 958 | 277 |
| 25° | 892 | 882 | 856 | 847 | 842 | 410 |
| 35° | 772 | 754 | 723 | 701 | 692 | 482 |
| 45° | 630 | 610 | 573 | 543 | 532 | 486 |
| 55° | 479 | 458 | 414 | 381 | 368 | 429 |
| 65° | 325 | 300 | 261 | 229 | 218 | 322 |
| 75° | 173 | 152 | 117 | 98 | 92 | 183 |
| 85° | 44 | 28 | 25 | 24 | 24 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P243731

CATALOG NUMBER: S125RDRP-H850D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1034.0 | 1034.0 | 1034.0 | 1034.0 | 1034.0 |
| 2.5° | 1037.0 | 1034.8 | 1026.6 | 1034.0 | 1034.0 |
| 5° | 1031.8 | 1029.6 | 1021.4 | 1028.1 | 1027.4 |
| 7.5° | 1024.4 | 1022.2 | 1012.6 | 1019.2 | 1017.0 |
| 10° | 1014.1 | 1011.1 | 1000.0 | 1003.7 | 1000.7 |
| 12.5° | 1000.0 | 997.0 | 983.7 | 985.2 | 983.7 |
| 15° | 983.0 | 979.3 | 962.3 | 961.5 | 957.8 |
| 17.5° | 963.8 | 958.6 | 940.1 | 937.9 | 932.0 |
| 20° | 941.6 | 934.9 | 914.2 | 909.8 | 906.1 |
| 22.5° | 916.4 | 909.8 | 885.4 | 878.7 | 876.5 |
| 25° | 892.0 | 881.7 | 855.8 | 846.9 | 841.7 |
| 27.5° | 863.2 | 851.3 | 824.7 | 812.9 | 804.0 |
| 30° | 833.6 | 820.3 | 792.2 | 776.6 | 767.0 |
| 32.5° | 803.3 | 787.7 | 757.4 | 738.2 | 730.0 |
| 35° | 772.2 | 753.7 | 722.6 | 701.2 | 692.3 |
| 37.5° | 736.7 | 718.2 | 687.1 | 662.0 | 653.8 |
| 40° | 702.7 | 683.4 | 650.1 | 622.8 | 612.4 |
| 42.5° | 667.2 | 647.2 | 610.9 | 582.1 | 573.2 |
| 45° | 630.2 | 609.5 | 573.2 | 542.9 | 531.8 |
| 47.5° | 593.2 | 572.5 | 534.8 | 504.4 | 490.4 |
| 50° | 556.2 | 534.0 | 494.1 | 463.0 | 449.0 |
| 52.5° | 519.2 | 494.8 | 455.6 | 422.3 | 409.8 |
| 55° | 478.6 | 457.8 | 414.2 | 380.9 | 368.3 |
| 57.5° | 442.3 | 419.4 | 378.0 | 343.9 | 329.9 |
| 60° | 404.6 | 379.4 | 337.3 | 304.0 | 290.7 |
| 62.5° | 364.6 | 339.5 | 298.8 | 265.5 | 253.7 |
| 65° | 325.4 | 300.3 | 261.1 | 228.6 | 217.5 |
| 67.5° | 286.2 | 262.6 | 223.4 | 193.0 | 180.5 |
| 70° | 248.5 | 224.1 | 184.9 | 157.5 | 150.1 |
| 72.5° | 208.6 | 189.3 | 150.1 | 125.7 | 119.8 |
| 75° | 173.1 | 151.6 | 116.9 | 97.6 | 92.5 |
| 77.5° | 136.8 | 116.1 | 86.5 | 73.2 | 68.8 |
| 80° | 102.1 | 84.3 | 60.7 | 52.5 | 51.0 |
| 82.5° | 70.3 | 53.3 | 39.9 | 38.5 | 37.7 |
| 85° | 43.6 | 28.1 | 25.1 | 23.7 | 23.7 |
| 87.5° | 18.5 | 11.8 | 11.8 | 11.1 | 11.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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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 | 18.36 | 19.93 | 18.72 | 20.25 | 20.56 | 16.84 | 18.42 | 17.21 | 18.74 | 19.05 |
| | 3H | 20.12 | 21.54 | 20.49 | 21.86 | 22.23 | 18.12 | 19.55 | 18.50 | 19.87 | 20.23 |
| | 4H | 20.77 | 22.11 | 21.17 | 22.46 | 22.83 | 18.51 | 19.85 | 18.91 | 20.19 | 20.57 |
| | 6H | 21.24 | 22.48 | 21.66 | 22.85 | 23.24 | 18.75 | 19.98 | 19.16 | 20.35 | 20.74 |
| | 8H | 21.39 | 22.57 | 21.81 | 22.96 | 23.36 | 18.82 | 20.00 | 19.25 | 20.39 | 20.79 |
| | 12H | 21.48 | 22.61 | 21.91 | 22.99 | 23.42 | 18.88 | 20.00 | 19.31 | 20.39 | 20.82 |
| 4H | 2H | 18.76 | 20.09 | 19.15 | 20.44 | 20.82 | 17.53 | 18.87 | 17.93 | 19.21 | 19.59 |
| | 3H | 20.72 | 21.83 | 21.13 | 22.23 | 22.63 | 18.99 | 20.10 | 19.40 | 20.50 | 20.90 |
| | 4H | 21.50 | 22.50 | 21.93 | 22.92 | 23.35 | 19.46 | 20.46 | 19.89 | 20.88 | 21.31 |
| | 6H | 22.09 | 22.96 | 22.55 | 23.41 | 23.86 | 19.78 | 20.65 | 20.23 | 21.09 | 21.55 |
| | 8H | 22.28 | 23.09 | 22.74 | 23.54 | 24.00 | 19.88 | 20.70 | 20.35 | 21.14 | 21.61 |
| | 12H | 22.41 | 23.14 | 22.89 | 23.62 | 24.09 | 19.97 | 20.70 | 20.45 | 21.18 | 21.65 |
| 8H | 4H | 21.62 | 22.44 | 22.08 | 22.88 | 23.34 | 19.77 | 20.58 | 20.23 | 21.03 | 21.49 |
| | 6H | 22.29 | 22.97 | 22.79 | 23.46 | 23.93 | 20.16 | 20.84 | 20.66 | 21.33 | 21.80 |
| | 8H | 22.53 | 23.14 | 23.04 | 23.65 | 24.13 | 20.32 | 20.92 | 20.83 | 21.43 | 21.92 |
| | 12H | 22.72 | 23.26 | 23.23 | 23.75 | 24.31 | 20.45 | 20.99 | 20.96 | 21.48 | 22.04 |
| 12H | 4H | 21.61 | 22.34 | 22.09 | 22.82 | 23.29 | 19.80 | 20.54 | 20.29 | 21.01 | 21.48 |
| | 6H | 22.28 | 22.89 | 22.80 | 23.40 | 23.89 | 20.21 | 20.82 | 20.72 | 21.33 | 21.81 |
| | 8H | 22.56 | 23.10 | 23.07 | 23.59 | 24.15 | 20.41 | 20.95 | 20.92 | 21.44 | 22.00 |