

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: P242712

Luminaire Tested: **S124RDR-S575D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDR-S575D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2188.2 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

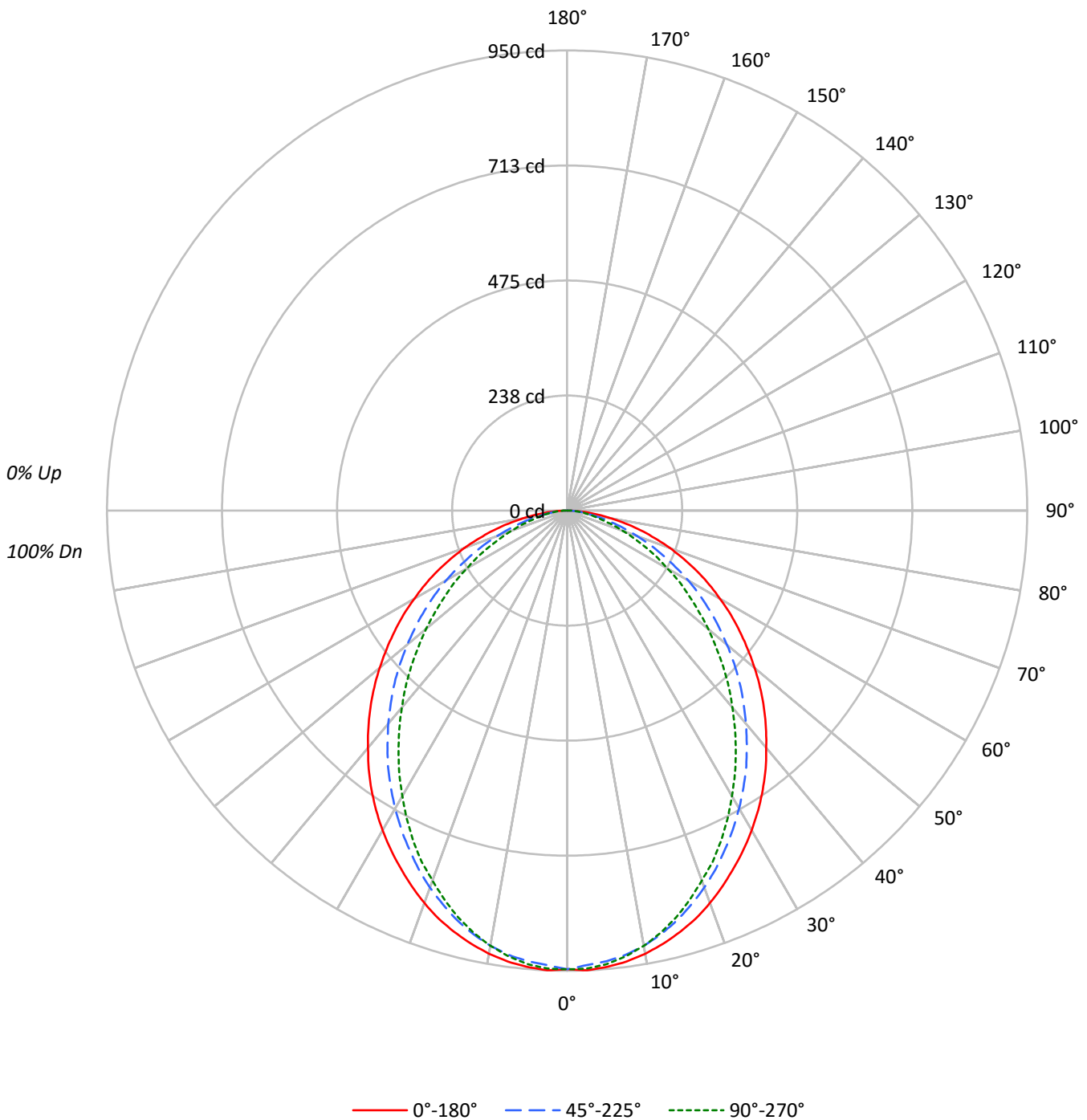
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 74 | 72 | | | | | 72 | | | |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 75 | 69 | 65 | 72 | 68 | 64 | 62 | | | | | 62 | | | |
| 4 | 84 | 73 | 65 | 58 | 82 | 72 | 64 | 58 | 69 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 56 | 50 | 62 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 47 | | | | | 47 | | | |
| 6 | 72 | 59 | 51 | 45 | 70 | 58 | 50 | 44 | 57 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 43 | 41 | | | | | 41 | | | |
| 7 | 67 | 54 | 46 | 40 | 65 | 53 | 45 | 40 | 52 | 45 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 8 | 63 | 50 | 41 | 36 | 61 | 49 | 41 | 36 | 48 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 33 | | | | | 33 | | | |
| 9 | 59 | 46 | 38 | 32 | 57 | 45 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 32 | 30 | | | | | 30 | | | |
| 10 | 55 | 42 | 35 | 29 | 54 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 | | | | | 27 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8418 | 8418 | 8418 |
| 5° | 8437 | 8333 | 8385 |
| 10° | 8384 | 8234 | 8234 |
| 15° | 8288 | 8060 | 8001 |
| 20° | 8156 | 7833 | 7689 |
| 25° | 7987 | 7567 | 7375 |
| 30° | 7822 | 7286 | 6982 |
| 35° | 7640 | 6995 | 6586 |
| 40° | 7421 | 6664 | 6159 |
| 45° | 7219 | 6336 | 5725 |
| 50° | 6989 | 5956 | 5265 |
| 55° | 6743 | 5562 | 4764 |
| 60° | 6471 | 5131 | 4254 |
| 65° | 6222 | 4591 | 3752 |
| 70° | 5861 | 3995 | 3184 |
| 75° | 5402 | 3311 | 2590 |
| 80° | 4715 | 2524 | 2375 |
| 85° | 3998 | 2295 | 2142 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 89.0 | 4.1 |
| 10°-20° | 248.3 | 11.3 |
| 20°-30° | 358.5 | 16.4 |
| 30°-40° | 406.3 | 18.6 |
| 40°-50° | 392.3 | 17.9 |
| 50°-60° | 326.1 | 14.9 |
| 60°-70° | 225.1 | 10.3 |
| 70°-80° | 113.7 | 5.2 |
| 80°-90° | 28.9 | 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° | 695.8 | 31.8 |
| 0°-40° | 1102.1 | 50.4 |
| 0°-60° | 1820.4 | 83.2 |
| 0°-90° | 2188.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2188.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 947 | 947 | 947 | 947 | 947 | |
| 5° | 946 | 943 | 934 | 941 | 940 | 90 |
| 15° | 901 | 894 | 876 | 874 | 869 | 254 |
| 25° | 814 | 801 | 772 | 759 | 752 | 375 |
| 35° | 704 | 681 | 645 | 620 | 607 | 440 |
| 45° | 574 | 548 | 504 | 468 | 455 | 443 |
| 55° | 435 | 406 | 359 | 321 | 307 | 389 |
| 65° | 296 | 265 | 218 | 187 | 178 | 292 |
| 75° | 157 | 130 | 96 | 80 | 75 | 166 |
| 85° | 39 | 25 | 22 | 21 | 21 | 45 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P242712

CATALOG NUMBER: S124RDR-S575D840-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 947.0 | 947.0 | 947.0 | 947.0 | 947.0 |
| 2.5° | 949.9 | 947.0 | 939.0 | 947.0 | 946.3 |
| 5° | 945.5 | 942.6 | 933.9 | 941.2 | 939.7 |
| 7.5° | 939.0 | 936.1 | 925.2 | 930.3 | 928.1 |
| 10° | 928.9 | 925.2 | 912.2 | 915.1 | 912.2 |
| 12.5° | 915.8 | 911.5 | 895.5 | 897.0 | 892.6 |
| 15° | 900.6 | 894.1 | 875.9 | 874.5 | 869.4 |
| 17.5° | 883.2 | 873.8 | 852.7 | 849.1 | 841.9 |
| 20° | 862.2 | 852.7 | 828.1 | 822.3 | 812.8 |
| 22.5° | 839.0 | 828.1 | 801.2 | 791.8 | 784.6 |
| 25° | 814.3 | 801.2 | 771.5 | 759.2 | 751.9 |
| 27.5° | 788.9 | 773.0 | 741.8 | 727.3 | 717.1 |
| 30° | 762.1 | 744.0 | 709.9 | 691.8 | 680.2 |
| 32.5° | 733.8 | 712.8 | 677.3 | 655.5 | 644.6 |
| 35° | 704.1 | 680.9 | 644.6 | 620.0 | 606.9 |
| 37.5° | 672.9 | 649.0 | 609.1 | 582.3 | 569.2 |
| 40° | 639.5 | 615.6 | 574.3 | 543.8 | 530.8 |
| 42.5° | 607.6 | 582.3 | 538.8 | 507.6 | 493.8 |
| 45° | 574.3 | 547.5 | 504.0 | 468.4 | 455.4 |
| 47.5° | 540.2 | 512.7 | 467.7 | 430.7 | 416.2 |
| 50° | 505.4 | 477.1 | 430.7 | 394.5 | 380.7 |
| 52.5° | 469.9 | 442.3 | 394.5 | 357.5 | 343.0 |
| 55° | 435.1 | 406.1 | 358.9 | 321.2 | 307.4 |
| 57.5° | 401.0 | 370.5 | 324.1 | 285.7 | 275.5 |
| 60° | 364.0 | 335.0 | 288.6 | 250.9 | 239.3 |
| 62.5° | 330.6 | 300.2 | 252.3 | 218.3 | 209.6 |
| 65° | 295.8 | 264.7 | 218.3 | 187.1 | 178.4 |
| 67.5° | 259.6 | 229.9 | 186.4 | 158.8 | 148.6 |
| 70° | 225.5 | 195.1 | 153.7 | 129.8 | 122.5 |
| 72.5° | 189.3 | 162.4 | 124.0 | 104.4 | 97.9 |
| 75° | 157.3 | 130.5 | 96.4 | 79.8 | 75.4 |
| 77.5° | 124.0 | 100.8 | 71.8 | 60.2 | 58.7 |
| 80° | 92.1 | 71.1 | 49.3 | 47.1 | 46.4 |
| 82.5° | 64.5 | 45.7 | 35.5 | 34.1 | 33.4 |
| 85° | 39.2 | 24.7 | 22.5 | 21.0 | 21.0 |
| 87.5° | 16.7 | 10.9 | 10.2 | 9.4 | 10.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)