

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: P242363

Luminaire Tested: **S122RDR-S290D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242363
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDR-S290D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 992.3 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

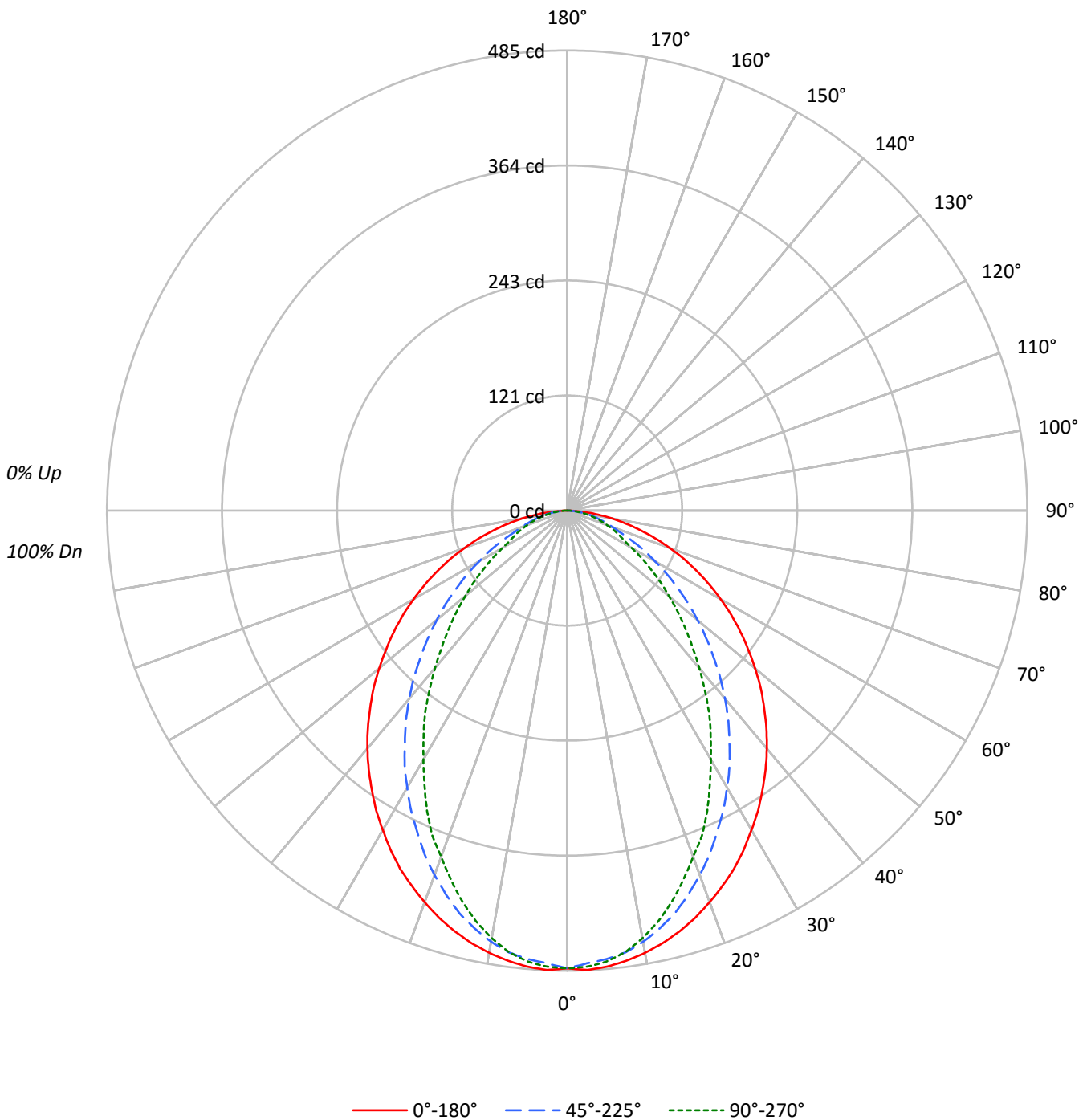
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 94 | 87 | 82 | 98 | 92 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 78 | 82 | 79 | 76 | 74 |
| 3 | 93 | 83 | 76 | 70 | 90 | 82 | 75 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 74 | 69 | 66 | 64 |
| 4 | 86 | 75 | 66 | 60 | 83 | 73 | 66 | 60 | 71 | 64 | 59 | 69 | 63 | 58 | 66 | 62 | 57 | 55 |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 |
| 6 | 74 | 61 | 53 | 47 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 46 | 55 | 50 | 45 | 43 |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 42 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 |
| 8 | 64 | 51 | 43 | 38 | 62 | 51 | 43 | 37 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 |
| 9 | 60 | 47 | 39 | 34 | 59 | 47 | 39 | 34 | 46 | 39 | 34 | 44 | 38 | 34 | 44 | 38 | 34 | 32 |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 41 | 35 | 31 | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9191 | 9191 | 9191 |
| 5° | 9226 | 9075 | 9124 |
| 10° | 9154 | 8926 | 8851 |
| 15° | 9049 | 8661 | 8412 |
| 20° | 8903 | 8284 | 7869 |
| 25° | 8754 | 7854 | 7341 |
| 30° | 8547 | 7414 | 6664 |
| 35° | 8345 | 6934 | 6071 |
| 40° | 8143 | 6438 | 5386 |
| 45° | 7903 | 5880 | 4763 |
| 50° | 7660 | 5319 | 4155 |
| 55° | 7409 | 4712 | 3567 |
| 60° | 7120 | 4076 | 2960 |
| 65° | 6788 | 3425 | 2695 |
| 70° | 6393 | 2818 | 2478 |
| 75° | 5910 | 2568 | 2311 |
| 80° | 5221 | 2304 | 2106 |
| 85° | 4109 | 1814 | 1814 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.2 | 4.6 |
| 10°-20° | 124.1 | 12.5 |
| 20°-30° | 174.3 | 17.6 |
| 30°-40° | 190.0 | 19.1 |
| 40°-50° | 174.6 | 17.6 |
| 50°-60° | 137.1 | 13.8 |
| 60°-70° | 89.2 | 9.0 |
| 70°-80° | 46.0 | 4.6 |
| 80°-90° | 11.7 | 1.2 |
| 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° | 343.6 | 34.6 |
| 0°-40° | 533.6 | 53.8 |
| 0°-60° | 845.3 | 85.2 |
| 0°-90° | 992.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 992.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 482 | 482 | 482 | 482 | 482 | |
| 5° | 482 | 480 | 475 | 478 | 477 | 46 |
| 15° | 459 | 454 | 439 | 431 | 427 | 129 |
| 25° | 416 | 403 | 374 | 356 | 349 | 192 |
| 35° | 359 | 337 | 298 | 271 | 261 | 225 |
| 45° | 293 | 264 | 218 | 187 | 177 | 227 |
| 55° | 223 | 189 | 142 | 116 | 107 | 199 |
| 65° | 151 | 115 | 76 | 61 | 60 | 149 |
| 75° | 80 | 50 | 35 | 32 | 31 | 85 |
| 85° | 19 | 10 | 8 | 8 | 8 | 23 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P242363

CATALOG NUMBER: S122RDR-S290D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 482.5 | 482.5 | 482.5 | 482.5 | 482.5 |
| 2.5° | 484.7 | 482.5 | 477.7 | 482.0 | 481.2 |
| 5° | 482.5 | 480.3 | 474.6 | 478.5 | 477.2 |
| 7.5° | 478.5 | 475.9 | 469.8 | 471.6 | 469.4 |
| 10° | 473.3 | 470.2 | 461.5 | 460.2 | 457.6 |
| 12.5° | 466.7 | 462.8 | 451.0 | 448.4 | 443.6 |
| 15° | 458.9 | 454.1 | 439.2 | 430.9 | 426.6 |
| 17.5° | 449.7 | 442.7 | 424.4 | 414.8 | 407.8 |
| 20° | 439.2 | 430.5 | 408.7 | 397.8 | 388.2 |
| 22.5° | 427.9 | 417.8 | 392.5 | 377.7 | 371.1 |
| 25° | 416.5 | 402.6 | 373.7 | 355.8 | 349.3 |
| 27.5° | 403.0 | 388.2 | 356.3 | 335.8 | 325.7 |
| 30° | 388.6 | 372.0 | 337.1 | 314.8 | 303.0 |
| 32.5° | 374.6 | 354.5 | 318.7 | 292.5 | 281.6 |
| 35° | 358.9 | 336.6 | 298.2 | 270.7 | 261.1 |
| 37.5° | 343.6 | 319.6 | 279.0 | 248.9 | 238.0 |
| 40° | 327.5 | 301.3 | 258.9 | 227.9 | 216.6 |
| 42.5° | 310.9 | 282.9 | 238.8 | 206.5 | 195.6 |
| 45° | 293.4 | 264.2 | 218.3 | 187.3 | 176.8 |
| 47.5° | 276.8 | 245.8 | 198.7 | 167.7 | 158.1 |
| 50° | 258.5 | 227.5 | 179.5 | 149.3 | 140.2 |
| 52.5° | 240.6 | 207.8 | 161.1 | 132.3 | 124.0 |
| 55° | 223.1 | 189.1 | 141.9 | 115.7 | 107.4 |
| 57.5° | 205.2 | 170.3 | 124.9 | 100.4 | 93.4 |
| 60° | 186.9 | 151.9 | 107.0 | 84.7 | 77.7 |
| 62.5° | 169.0 | 134.0 | 91.7 | 70.7 | 67.2 |
| 65° | 150.6 | 115.3 | 76.0 | 61.1 | 59.8 |
| 67.5° | 133.2 | 97.8 | 61.1 | 53.7 | 52.4 |
| 70° | 114.8 | 80.8 | 50.6 | 46.3 | 44.5 |
| 72.5° | 97.4 | 65.1 | 42.4 | 38.9 | 38.0 |
| 75° | 80.3 | 49.8 | 34.9 | 31.9 | 31.4 |
| 77.5° | 63.3 | 35.4 | 27.5 | 25.8 | 24.9 |
| 80° | 47.6 | 25.3 | 21.0 | 19.2 | 19.2 |
| 82.5° | 33.2 | 17.0 | 14.4 | 13.5 | 13.5 |
| 85° | 18.8 | 9.6 | 8.3 | 8.3 | 8.3 |
| 87.5° | 7.0 | 3.5 | 3.5 | 3.1 | 3.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)