

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: P242359

Luminaire Tested: **S122RDR-S485D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242359
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-S485D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1538.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

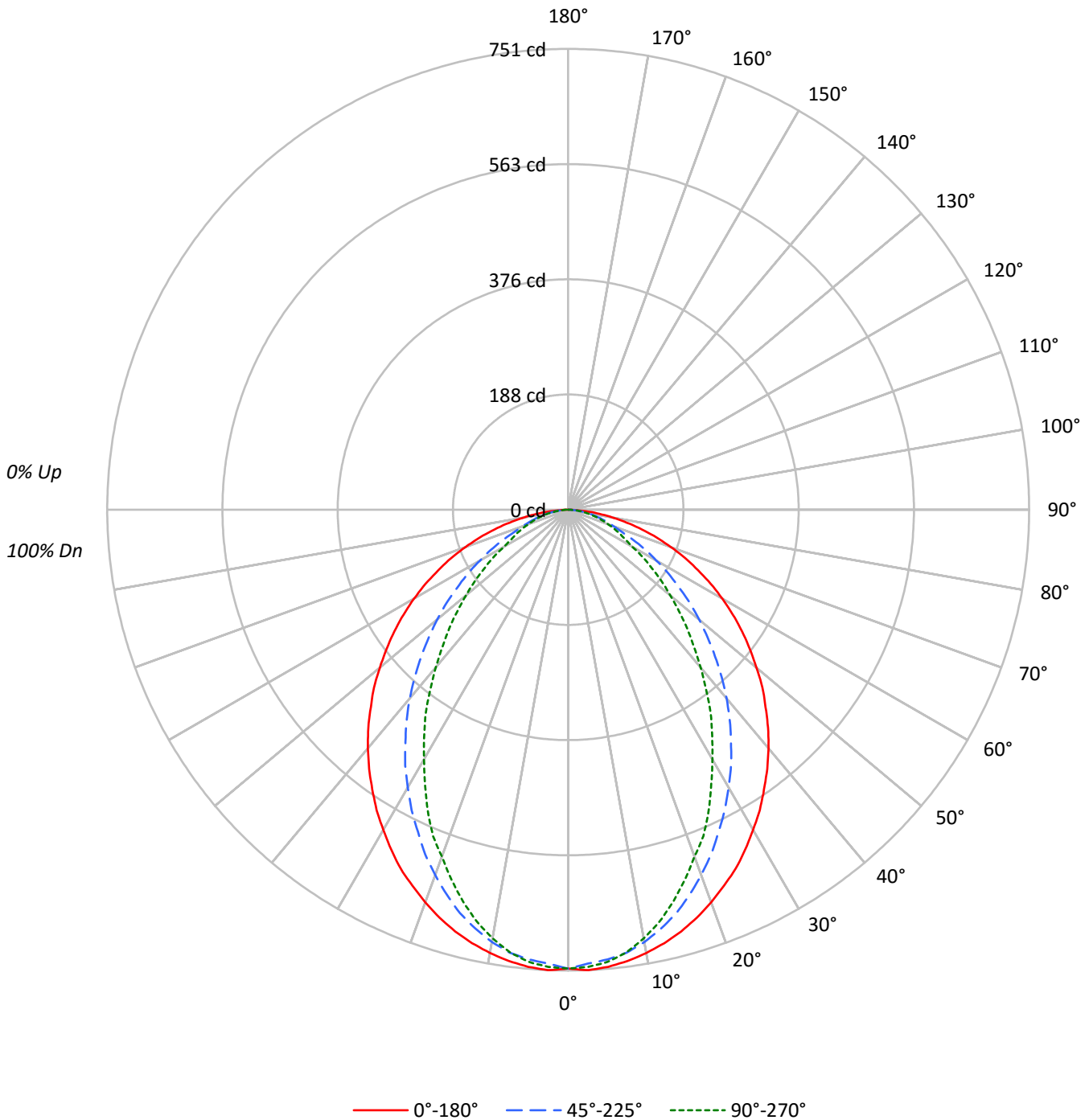
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 14244 | 14244 | 14244 |
| 5° | 14298 | 14065 | 14143 |
| 10° | 14189 | 13835 | 13719 |
| 15° | 14027 | 13425 | 13039 |
| 20° | 13800 | 12841 | 12195 |
| 25° | 13568 | 12175 | 11379 |
| 30° | 13247 | 11492 | 10331 |
| 35° | 12936 | 10748 | 9410 |
| 40° | 12621 | 9978 | 8347 |
| 45° | 12251 | 9116 | 7384 |
| 50° | 11871 | 8244 | 6436 |
| 55° | 11484 | 7303 | 5529 |
| 60° | 11036 | 6316 | 4590 |
| 65° | 10524 | 5309 | 4178 |
| 70° | 9913 | 4372 | 3843 |
| 75° | 9163 | 3981 | 3584 |
| 80° | 8095 | 3565 | 3269 |
| 85° | 6360 | 2819 | 2819 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 70.1 | 4.6 |
| 10°-20° | 192.4 | 12.5 |
| 20°-30° | 270.1 | 17.6 |
| 30°-40° | 294.5 | 19.1 |
| 40°-50° | 270.6 | 17.6 |
| 50°-60° | 212.5 | 13.8 |
| 60°-70° | 138.3 | 9.0 |
| 70°-80° | 71.2 | 4.6 |
| 80°-90° | 18.2 | 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° | 532.6 | 34.6 |
| 0°-40° | 827.1 | 53.8 |
| 0°-60° | 1310.2 | 85.2 |
| 0°-90° | 1538.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1538.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 748 | 748 | 748 | 748 | 748 | |
| 5° | 748 | 744 | 736 | 742 | 740 | 71 |
| 15° | 711 | 704 | 681 | 668 | 661 | 200 |
| 25° | 646 | 624 | 579 | 552 | 541 | 297 |
| 35° | 556 | 522 | 462 | 420 | 405 | 348 |
| 45° | 455 | 409 | 338 | 290 | 274 | 351 |
| 55° | 346 | 293 | 220 | 179 | 166 | 309 |
| 65° | 234 | 179 | 118 | 95 | 93 | 231 |
| 75° | 124 | 77 | 54 | 49 | 49 | 132 |
| 85° | 29 | 15 | 13 | 13 | 13 | 35 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 747.8 | 747.8 | 747.8 | 747.8 | 747.8 |
| 2.5° | 751.2 | 747.8 | 740.4 | 747.2 | 745.8 |
| 5° | 747.8 | 744.4 | 735.6 | 741.7 | 739.7 |
| 7.5° | 741.7 | 737.7 | 728.2 | 730.9 | 727.5 |
| 10° | 733.6 | 728.9 | 715.3 | 713.3 | 709.3 |
| 12.5° | 723.5 | 717.4 | 699.1 | 695.0 | 687.6 |
| 15° | 711.3 | 703.8 | 680.8 | 668.0 | 661.2 |
| 17.5° | 697.1 | 686.2 | 657.8 | 642.9 | 632.1 |
| 20° | 680.8 | 667.3 | 633.5 | 616.5 | 601.6 |
| 22.5° | 663.2 | 647.7 | 608.4 | 585.4 | 575.3 |
| 25° | 645.6 | 624.0 | 579.3 | 551.6 | 541.4 |
| 27.5° | 624.7 | 601.6 | 552.2 | 520.4 | 504.9 |
| 30° | 602.3 | 576.6 | 522.5 | 488.0 | 469.7 |
| 32.5° | 580.7 | 549.5 | 494.0 | 453.4 | 436.5 |
| 35° | 556.3 | 521.8 | 462.2 | 419.6 | 404.7 |
| 37.5° | 532.6 | 495.4 | 432.5 | 385.8 | 368.8 |
| 40° | 507.6 | 467.0 | 401.3 | 353.3 | 335.7 |
| 42.5° | 481.9 | 438.5 | 370.2 | 320.1 | 303.2 |
| 45° | 454.8 | 409.4 | 338.4 | 290.3 | 274.1 |
| 47.5° | 429.1 | 381.0 | 307.9 | 259.9 | 245.0 |
| 50° | 400.6 | 352.6 | 278.2 | 231.5 | 217.2 |
| 52.5° | 372.9 | 322.1 | 249.7 | 205.1 | 192.2 |
| 55° | 345.8 | 293.0 | 219.9 | 179.3 | 166.5 |
| 57.5° | 318.1 | 263.9 | 193.6 | 155.7 | 144.8 |
| 60° | 289.7 | 235.5 | 165.8 | 131.3 | 120.5 |
| 62.5° | 261.9 | 207.8 | 142.1 | 109.6 | 104.2 |
| 65° | 233.5 | 178.7 | 117.8 | 94.7 | 92.7 |
| 67.5° | 206.4 | 151.6 | 94.7 | 83.2 | 81.2 |
| 70° | 178.0 | 125.2 | 78.5 | 71.7 | 69.0 |
| 72.5° | 150.9 | 100.8 | 65.6 | 60.2 | 58.9 |
| 75° | 124.5 | 77.2 | 54.1 | 49.4 | 48.7 |
| 77.5° | 98.1 | 54.8 | 42.6 | 39.9 | 38.6 |
| 80° | 73.8 | 39.3 | 32.5 | 29.8 | 29.8 |
| 82.5° | 51.4 | 26.4 | 22.3 | 21.0 | 21.0 |
| 85° | 29.1 | 14.9 | 12.9 | 12.9 | 12.9 |
| 87.5° | 10.8 | 5.4 | 5.4 | 4.7 | 4.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)