

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: P243134

Luminaire Tested: **S122DR-H290D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243134
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-H290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 995.1 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

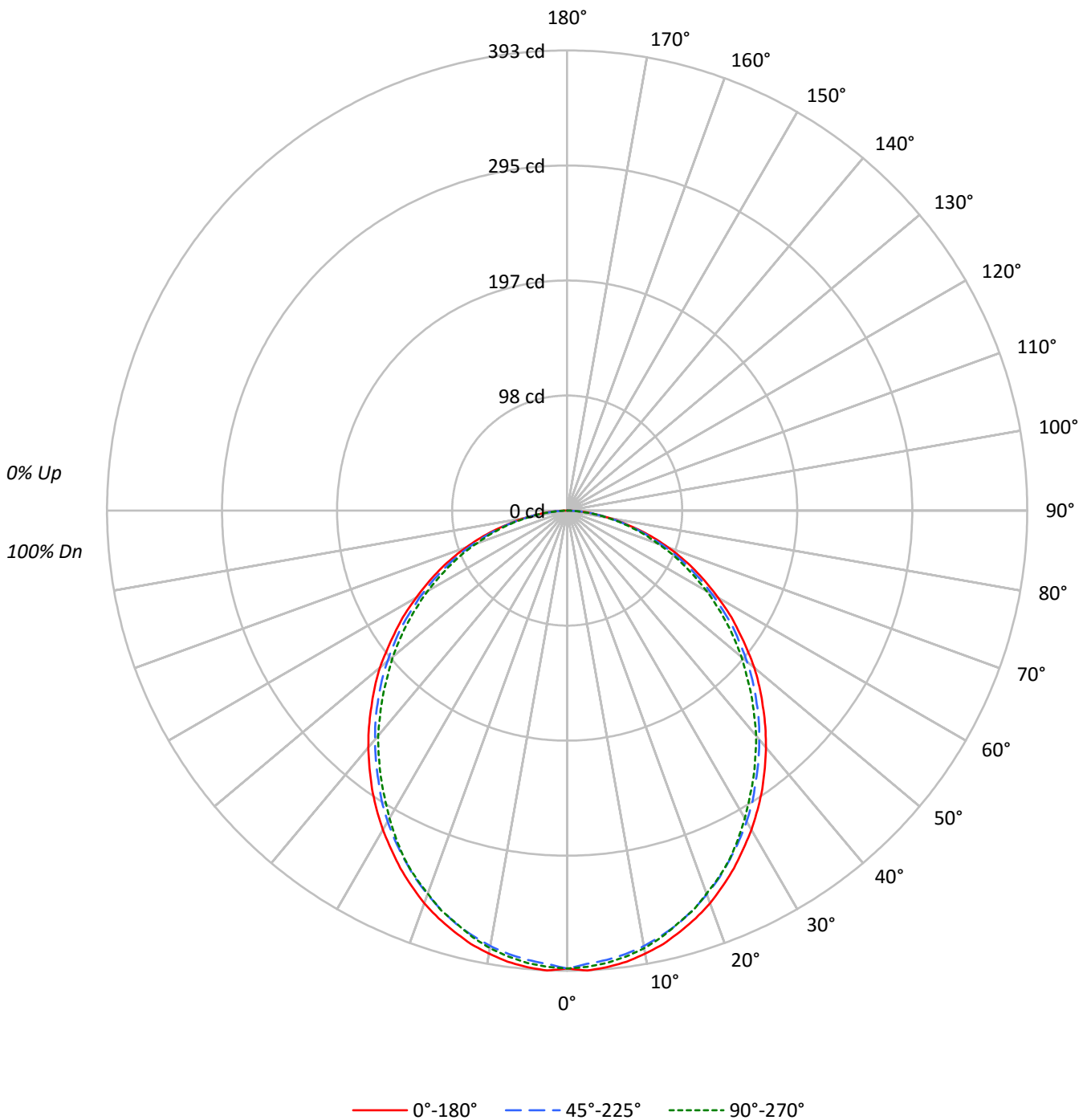
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 74 | 80 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 51 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 48 | 42 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 27 | 37 | 32 | 27 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7450 | 7450 | 7450 |
| 5° | 7484 | 7367 | 7415 |
| 10° | 7431 | 7305 | 7340 |
| 15° | 7342 | 7208 | 7200 |
| 20° | 7232 | 7072 | 7058 |
| 25° | 7083 | 6908 | 6902 |
| 30° | 6922 | 6746 | 6675 |
| 35° | 6755 | 6536 | 6453 |
| 40° | 6569 | 6346 | 6246 |
| 45° | 6368 | 6147 | 5991 |
| 50° | 6184 | 5938 | 5758 |
| 55° | 5924 | 5722 | 5506 |
| 60° | 5672 | 5451 | 5246 |
| 65° | 5427 | 5165 | 4940 |
| 70° | 5101 | 4840 | 4595 |
| 75° | 4644 | 4460 | 4246 |
| 80° | 4037 | 3916 | 3751 |
| 85° | 3475 | 3082 | 2841 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 36.8 | 3.7 |
| 10°-20° | 103.6 | 10.4 |
| 20°-30° | 152.4 | 15.3 |
| 30°-40° | 176.9 | 17.8 |
| 40°-50° | 176.7 | 17.8 |
| 50°-60° | 153.9 | 15.5 |
| 60°-70° | 113.8 | 11.4 |
| 70°-80° | 64.2 | 6.4 |
| 80°-90° | 16.7 | 1.7 |
| 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° | 292.9 | 29.4 |
| 0°-40° | 469.8 | 47.2 |
| 0°-60° | 800.4 | 80.4 |
| 0°-90° | 995.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 995.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 391 | 391 | 391 | 391 | 391 | |
| 5° | 391 | 390 | 385 | 389 | 388 | 37 |
| 15° | 372 | 370 | 366 | 367 | 365 | 105 |
| 25° | 337 | 334 | 329 | 328 | 328 | 155 |
| 35° | 290 | 287 | 281 | 279 | 278 | 182 |
| 45° | 236 | 234 | 228 | 225 | 222 | 183 |
| 55° | 178 | 177 | 172 | 168 | 166 | 160 |
| 65° | 120 | 119 | 115 | 111 | 110 | 119 |
| 75° | 63 | 63 | 61 | 58 | 58 | 67 |
| 85° | 16 | 15 | 14 | 13 | 13 | 18 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P243134

CATALOG NUMBER: S122DR-H290D935-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 391.1 | 391.1 | 391.1 | 391.1 | 391.1 |
| 2.5° | 393.2 | 391.4 | 387.5 | 390.7 | 390.0 |
| 5° | 391.4 | 389.6 | 385.3 | 388.6 | 387.8 |
| 7.5° | 388.6 | 386.8 | 382.1 | 385.3 | 384.2 |
| 10° | 384.2 | 382.1 | 377.7 | 379.9 | 379.5 |
| 12.5° | 379.2 | 377.0 | 372.0 | 373.8 | 373.1 |
| 15° | 372.3 | 370.5 | 365.5 | 366.9 | 365.1 |
| 17.5° | 365.1 | 362.2 | 357.6 | 359.0 | 357.9 |
| 20° | 356.8 | 354.0 | 348.9 | 349.6 | 348.2 |
| 22.5° | 347.1 | 344.2 | 339.5 | 339.5 | 338.8 |
| 25° | 337.0 | 334.1 | 328.7 | 328.4 | 328.4 |
| 27.5° | 325.8 | 323.3 | 317.9 | 316.8 | 316.1 |
| 30° | 314.7 | 312.5 | 306.7 | 304.6 | 303.5 |
| 32.5° | 302.8 | 299.9 | 294.5 | 292.0 | 290.2 |
| 35° | 290.5 | 287.3 | 281.1 | 278.6 | 277.5 |
| 37.5° | 277.2 | 273.9 | 268.5 | 266.4 | 264.2 |
| 40° | 264.2 | 261.3 | 255.2 | 251.9 | 251.2 |
| 42.5° | 250.5 | 247.6 | 242.2 | 238.6 | 236.4 |
| 45° | 236.4 | 233.9 | 228.2 | 224.6 | 222.4 |
| 47.5° | 222.8 | 219.9 | 214.8 | 210.5 | 207.6 |
| 50° | 208.7 | 205.8 | 200.4 | 195.4 | 194.3 |
| 52.5° | 193.2 | 191.4 | 186.0 | 181.3 | 179.9 |
| 55° | 178.4 | 177.0 | 172.3 | 167.6 | 165.8 |
| 57.5° | 164.4 | 162.6 | 157.2 | 153.5 | 151.4 |
| 60° | 148.9 | 147.8 | 143.1 | 139.1 | 137.7 |
| 62.5° | 134.4 | 133.0 | 129.0 | 125.1 | 123.3 |
| 65° | 120.4 | 118.6 | 114.6 | 111.0 | 109.6 |
| 67.5° | 106.0 | 104.2 | 100.9 | 98.0 | 96.6 |
| 70° | 91.6 | 90.1 | 86.9 | 84.3 | 82.5 |
| 72.5° | 77.5 | 76.1 | 73.2 | 70.6 | 70.3 |
| 75° | 63.1 | 62.7 | 60.6 | 58.4 | 57.7 |
| 77.5° | 49.7 | 49.4 | 47.9 | 46.9 | 46.1 |
| 80° | 36.8 | 36.8 | 35.7 | 34.6 | 34.2 |
| 82.5° | 25.2 | 25.6 | 24.5 | 23.8 | 23.8 |
| 85° | 15.9 | 15.1 | 14.1 | 13.3 | 13.0 |
| 87.5° | 6.5 | 5.4 | 5.0 | 4.0 | 3.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)