

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: P243128

Luminaire Tested: **S122DR-H1005D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243128
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-H1005D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3921.8 lumens
Efficiency: N/A
Efficacy: 104.0 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

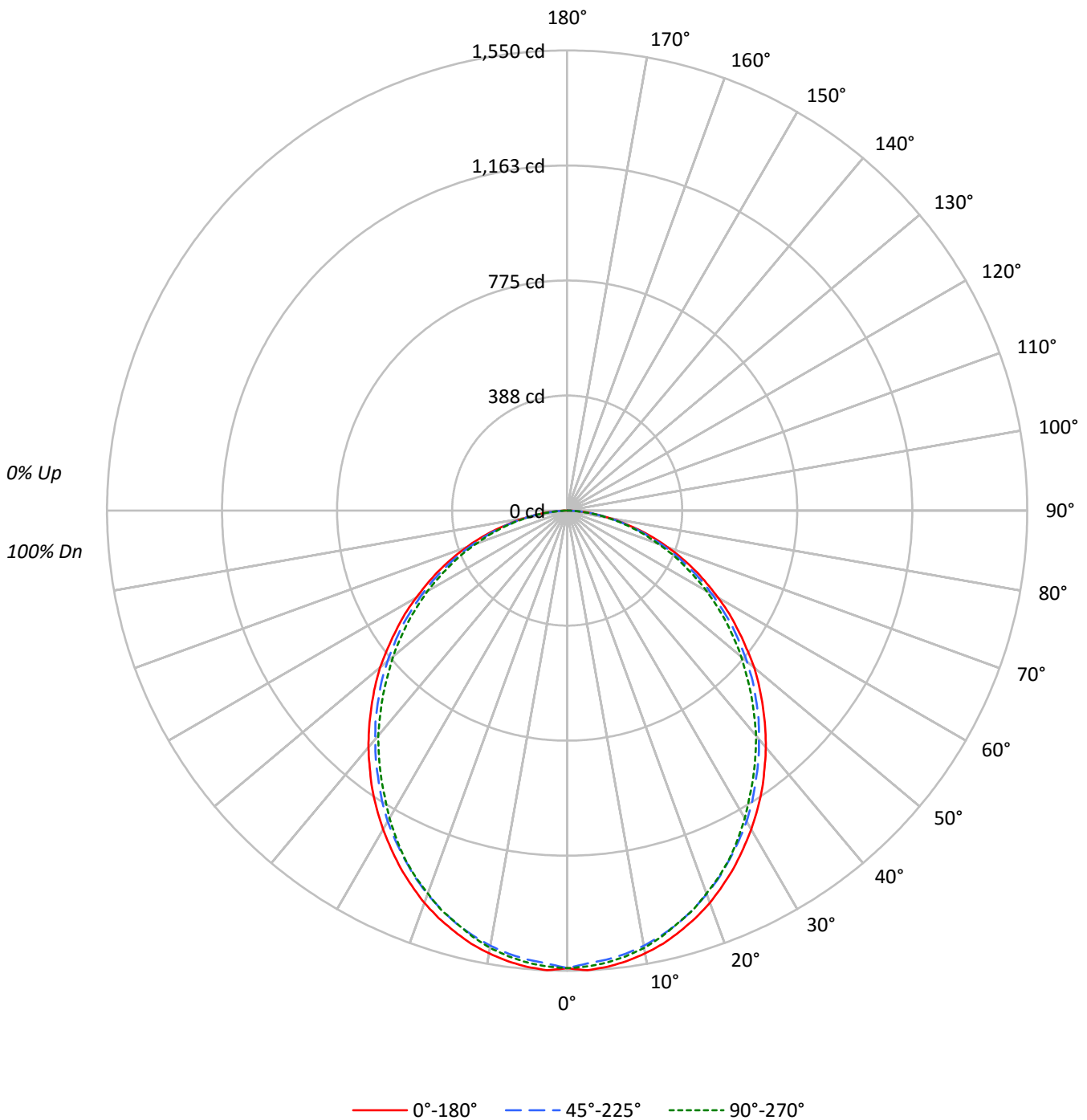
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 29356 | 29356 | 29356 |
| 5° | 29497 | 29034 | 29226 |
| 10° | 29287 | 28794 | 28931 |
| 15° | 28937 | 28404 | 28377 |
| 20° | 28506 | 27871 | 27815 |
| 25° | 27915 | 27227 | 27198 |
| 30° | 27275 | 26587 | 26308 |
| 35° | 26622 | 25764 | 25434 |
| 40° | 25889 | 25007 | 24619 |
| 45° | 25100 | 24222 | 23608 |
| 50° | 24373 | 23404 | 22687 |
| 55° | 23349 | 22549 | 21699 |
| 60° | 22351 | 21482 | 20671 |
| 65° | 21382 | 20358 | 19462 |
| 70° | 20094 | 19063 | 18117 |
| 75° | 18296 | 17560 | 16728 |
| 80° | 15894 | 15423 | 14797 |
| 85° | 13659 | 12108 | 11168 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 145.1 | 3.7 |
| 10°-20° | 408.5 | 10.4 |
| 20°-30° | 600.6 | 15.3 |
| 30°-40° | 697.3 | 17.8 |
| 40°-50° | 696.4 | 17.8 |
| 50°-60° | 606.5 | 15.5 |
| 60°-70° | 448.6 | 11.4 |
| 70°-80° | 252.9 | 6.4 |
| 80°-90° | 66.0 | 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° | 1154.2 | 29.4 |
| 0°-40° | 1851.5 | 47.2 |
| 0°-60° | 3154.5 | 80.4 |
| 0°-90° | 3921.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3921.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1541 | 1541 | 1541 | 1541 | 1541 | |
| 5° | 1543 | 1536 | 1518 | 1531 | 1528 | 146 |
| 15° | 1467 | 1460 | 1440 | 1446 | 1439 | 414 |
| 25° | 1328 | 1317 | 1296 | 1294 | 1294 | 611 |
| 35° | 1145 | 1132 | 1108 | 1098 | 1094 | 715 |
| 45° | 932 | 922 | 899 | 885 | 876 | 720 |
| 55° | 703 | 698 | 679 | 660 | 653 | 630 |
| 65° | 474 | 467 | 452 | 438 | 432 | 469 |
| 75° | 249 | 247 | 239 | 230 | 227 | 264 |
| 85° | 62 | 60 | 55 | 53 | 51 | 71 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P243128

CATALOG NUMBER: S122DR-H1005D840-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1541.2 | 1541.2 | 1541.2 | 1541.2 | 1541.2 |
| 2.5° | 1549.8 | 1542.7 | 1527.0 | 1539.8 | 1537.0 |
| 5° | 1542.7 | 1535.6 | 1518.5 | 1531.3 | 1528.5 |
| 7.5° | 1531.3 | 1524.2 | 1505.7 | 1518.5 | 1514.2 |
| 10° | 1514.2 | 1505.7 | 1488.7 | 1497.2 | 1495.8 |
| 12.5° | 1494.4 | 1485.8 | 1466.0 | 1473.1 | 1470.2 |
| 15° | 1467.4 | 1460.3 | 1440.4 | 1446.1 | 1439.0 |
| 17.5° | 1439.0 | 1427.6 | 1409.1 | 1414.8 | 1410.6 |
| 20° | 1406.3 | 1394.9 | 1375.0 | 1377.9 | 1372.2 |
| 22.5° | 1367.9 | 1356.6 | 1338.1 | 1338.1 | 1335.3 |
| 25° | 1328.2 | 1316.8 | 1295.5 | 1294.1 | 1294.1 |
| 27.5° | 1284.1 | 1274.2 | 1252.9 | 1248.6 | 1245.8 |
| 30° | 1240.1 | 1231.6 | 1208.8 | 1200.3 | 1196.1 |
| 32.5° | 1193.2 | 1181.9 | 1160.5 | 1150.6 | 1143.5 |
| 35° | 1144.9 | 1132.1 | 1108.0 | 1098.0 | 1093.8 |
| 37.5° | 1092.4 | 1079.6 | 1058.3 | 1049.7 | 1041.2 |
| 40° | 1041.2 | 1029.9 | 1005.7 | 992.9 | 990.1 |
| 42.5° | 987.2 | 975.9 | 954.6 | 940.4 | 931.8 |
| 45° | 931.8 | 921.9 | 899.2 | 885.0 | 876.4 |
| 47.5° | 877.9 | 866.5 | 846.6 | 829.6 | 818.2 |
| 50° | 822.5 | 811.1 | 789.8 | 769.9 | 765.6 |
| 52.5° | 761.4 | 754.3 | 733.0 | 714.5 | 708.8 |
| 55° | 703.1 | 697.5 | 679.0 | 660.5 | 653.4 |
| 57.5° | 647.7 | 640.6 | 619.3 | 605.1 | 596.6 |
| 60° | 586.7 | 582.4 | 563.9 | 548.3 | 542.6 |
| 62.5° | 529.8 | 524.2 | 508.5 | 492.9 | 485.8 |
| 65° | 474.4 | 467.3 | 451.7 | 437.5 | 431.8 |
| 67.5° | 417.6 | 410.5 | 397.7 | 386.4 | 380.7 |
| 70° | 360.8 | 355.1 | 342.3 | 332.4 | 325.3 |
| 72.5° | 305.4 | 299.7 | 288.4 | 278.4 | 277.0 |
| 75° | 248.6 | 247.2 | 238.6 | 230.1 | 227.3 |
| 77.5° | 196.0 | 194.6 | 188.9 | 184.7 | 181.8 |
| 80° | 144.9 | 144.9 | 140.6 | 136.4 | 134.9 |
| 82.5° | 99.4 | 100.9 | 96.6 | 93.8 | 93.8 |
| 85° | 62.5 | 59.7 | 55.4 | 52.6 | 51.1 |
| 87.5° | 25.6 | 21.3 | 19.9 | 15.6 | 14.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)