

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: P243074

Luminaire Tested: **S121RDR-H1025D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243074
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-62)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121RDR-H1025D940-X4F0-XX-UDD-F-W
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2752.5 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')
CIE Type: Direct

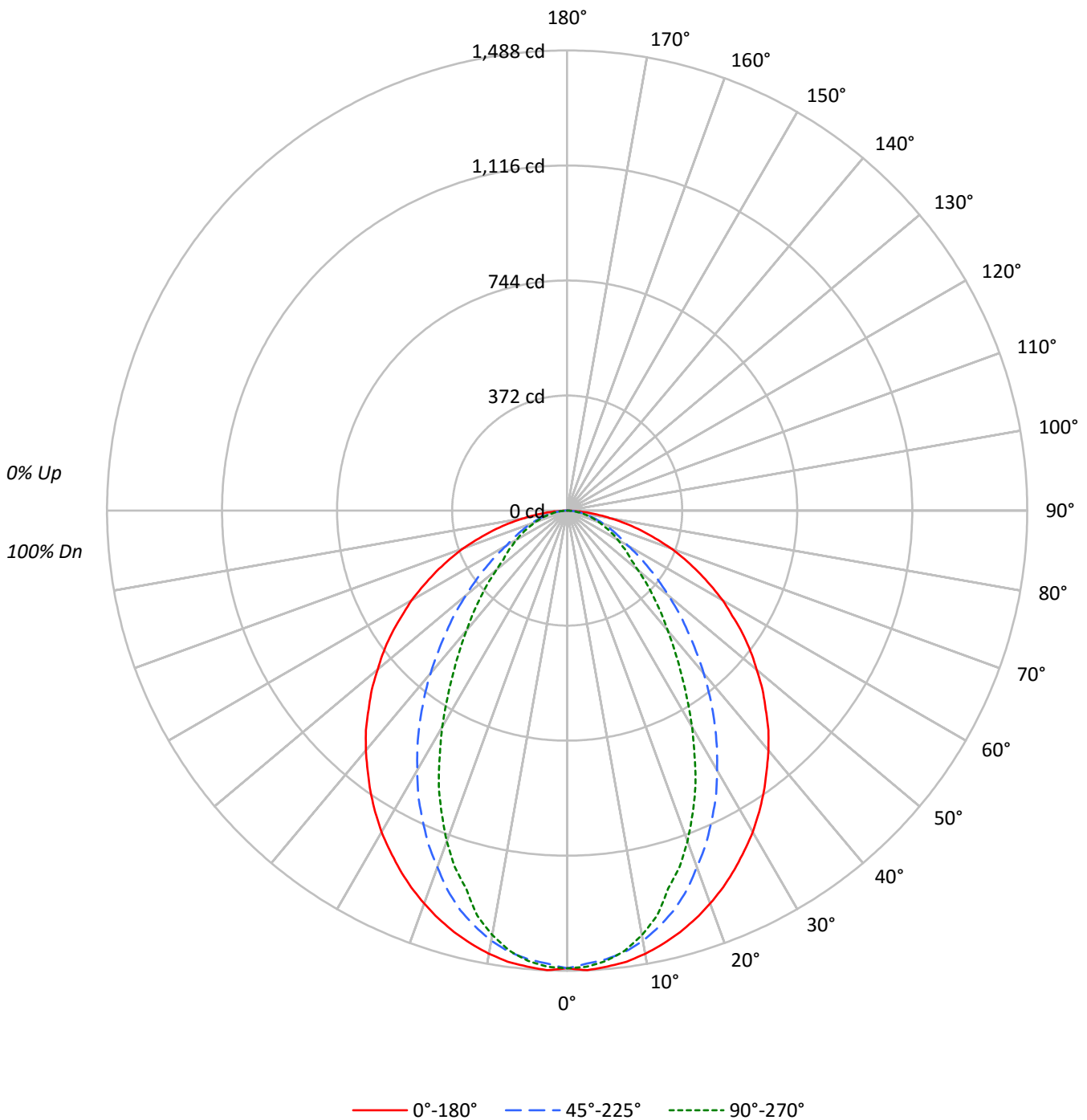
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 94 | 91 | 92 | 90 | 89 | | | | | 87 | | | | |
| 2 | 102 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 77 | | | | | 75 | | | | |
| 3 | 94 | 84 | 77 | 71 | 91 | 83 | 76 | 71 | 80 | 74 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | | | | | 65 | | | | |
| 4 | 87 | 76 | 68 | 62 | 84 | 74 | 67 | 61 | 72 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 59 | | | | | 57 | | | | |
| 5 | 80 | 69 | 60 | 54 | 78 | 67 | 60 | 54 | 65 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | | | | | 50 | | | | |
| 6 | 75 | 62 | 54 | 48 | 73 | 62 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 47 | 57 | 51 | 47 | | | | | 45 | | | | |
| 7 | 70 | 57 | 49 | 43 | 68 | 56 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 43 | 52 | 47 | 42 | | | | | 41 | | | | |
| 8 | 65 | 53 | 45 | 39 | 64 | 52 | 44 | 39 | 51 | 44 | 39 | 50 | 43 | 39 | 48 | 43 | 39 | | | | | 37 | | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | | | | | 34 | | | | |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 42 | 36 | 32 | | | | | 31 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 43855 | 43855 | 43855 |
| 5° | 44022 | 43312 | 43463 |
| 10° | 43776 | 42492 | 41926 |
| 15° | 43285 | 41015 | 38782 |
| 20° | 42633 | 38679 | 35870 |
| 25° | 41866 | 36125 | 32108 |
| 30° | 41070 | 33173 | 27638 |
| 35° | 40107 | 29990 | 23229 |
| 40° | 39151 | 26588 | 19552 |
| 45° | 38052 | 23072 | 16556 |
| 50° | 36886 | 19660 | 13760 |
| 55° | 35768 | 16587 | 12248 |
| 60° | 34412 | 13452 | 11224 |
| 65° | 32713 | 12045 | 10292 |
| 70° | 30971 | 10864 | 9451 |
| 75° | 28288 | 9765 | 8620 |
| 80° | 24178 | 8566 | 7713 |
| 85° | 18766 | 7241 | 6391 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 138.6 | 5.0 |
| 10°-20° | 376.6 | 13.7 |
| 20°-30° | 513.9 | 18.7 |
| 30°-40° | 532.7 | 19.4 |
| 40°-50° | 464.8 | 16.9 |
| 50°-60° | 349.8 | 12.7 |
| 60°-70° | 229.4 | 8.3 |
| 70°-80° | 116.9 | 4.2 |
| 80°-90° | 29.7 | 1.1 |
| 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° | 1029.1 | 37.4 |
| 0°-40° | 1561.8 | 56.7 |
| 0°-60° | 2376.5 | 86.3 |
| 0°-90° | 2752.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2752.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1480 | 1480 | 1480 | 1480 | 1480 | |
| 5° | 1480 | 1472 | 1456 | 1465 | 1461 | 141 |
| 15° | 1411 | 1391 | 1337 | 1300 | 1264 | 398 |
| 25° | 1281 | 1228 | 1105 | 1012 | 982 | 590 |
| 35° | 1109 | 1014 | 829 | 690 | 642 | 693 |
| 45° | 908 | 776 | 551 | 428 | 395 | 701 |
| 55° | 692 | 527 | 321 | 243 | 237 | 618 |
| 65° | 467 | 291 | 172 | 152 | 147 | 462 |
| 75° | 247 | 113 | 85 | 78 | 75 | 261 |
| 85° | 55 | 23 | 21 | 19 | 19 | 66 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P243074

CATALOG NUMBER: S121RDR-H1025D940-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1480.1 | 1480.1 | 1480.1 | 1480.1 | 1480.1 |
| 2.5° | 1487.6 | 1481.3 | 1466.3 | 1478.8 | 1476.3 |
| 5° | 1480.1 | 1472.5 | 1456.2 | 1465.0 | 1461.3 |
| 7.5° | 1471.3 | 1461.3 | 1438.7 | 1442.4 | 1434.9 |
| 10° | 1455.0 | 1442.4 | 1412.3 | 1404.8 | 1393.5 |
| 12.5° | 1434.9 | 1421.1 | 1377.2 | 1359.7 | 1342.1 |
| 15° | 1411.1 | 1391.0 | 1337.1 | 1299.5 | 1264.3 |
| 17.5° | 1383.5 | 1358.4 | 1286.9 | 1234.2 | 1207.9 |
| 20° | 1352.1 | 1319.5 | 1226.7 | 1165.2 | 1137.6 |
| 22.5° | 1318.3 | 1276.9 | 1170.3 | 1092.5 | 1059.9 |
| 25° | 1280.6 | 1228.0 | 1105.0 | 1012.2 | 982.1 |
| 27.5° | 1240.5 | 1180.3 | 1042.3 | 935.7 | 891.8 |
| 30° | 1200.4 | 1125.1 | 969.6 | 850.4 | 807.8 |
| 32.5° | 1155.2 | 1069.9 | 900.6 | 768.9 | 721.2 |
| 35° | 1108.8 | 1013.5 | 829.1 | 689.9 | 642.2 |
| 37.5° | 1059.9 | 957.0 | 757.6 | 617.1 | 570.7 |
| 40° | 1012.2 | 895.6 | 687.4 | 546.9 | 505.5 |
| 42.5° | 963.3 | 834.1 | 617.1 | 485.4 | 450.3 |
| 45° | 908.1 | 776.4 | 550.6 | 427.7 | 395.1 |
| 47.5° | 856.7 | 713.7 | 490.4 | 376.3 | 346.2 |
| 50° | 800.2 | 652.2 | 426.5 | 328.6 | 298.5 |
| 52.5° | 747.6 | 589.5 | 373.8 | 278.5 | 259.6 |
| 55° | 692.4 | 526.8 | 321.1 | 243.3 | 237.1 |
| 57.5° | 633.4 | 465.3 | 274.7 | 218.2 | 210.7 |
| 60° | 580.7 | 406.4 | 227.0 | 195.7 | 189.4 |
| 62.5° | 521.8 | 347.4 | 196.9 | 174.3 | 168.1 |
| 65° | 466.6 | 291.0 | 171.8 | 151.8 | 146.8 |
| 67.5° | 411.4 | 239.6 | 148.0 | 131.7 | 126.7 |
| 70° | 357.5 | 190.7 | 125.4 | 112.9 | 109.1 |
| 72.5° | 298.5 | 144.2 | 105.4 | 95.3 | 92.8 |
| 75° | 247.1 | 112.9 | 85.3 | 77.8 | 75.3 |
| 77.5° | 193.2 | 85.3 | 66.5 | 61.5 | 60.2 |
| 80° | 141.7 | 61.5 | 50.2 | 46.4 | 45.2 |
| 82.5° | 96.6 | 41.4 | 35.1 | 32.6 | 31.4 |
| 85° | 55.2 | 22.6 | 21.3 | 18.8 | 18.8 |
| 87.5° | 21.3 | 8.8 | 7.5 | 7.5 | 7.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)