

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: G3-1802-639-48

Luminaire Tested: **S122DR-H675D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: G3-1802-639-48
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-H675D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2760.9 lumens
Efficiency: N/A
Efficacy: 107.8 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

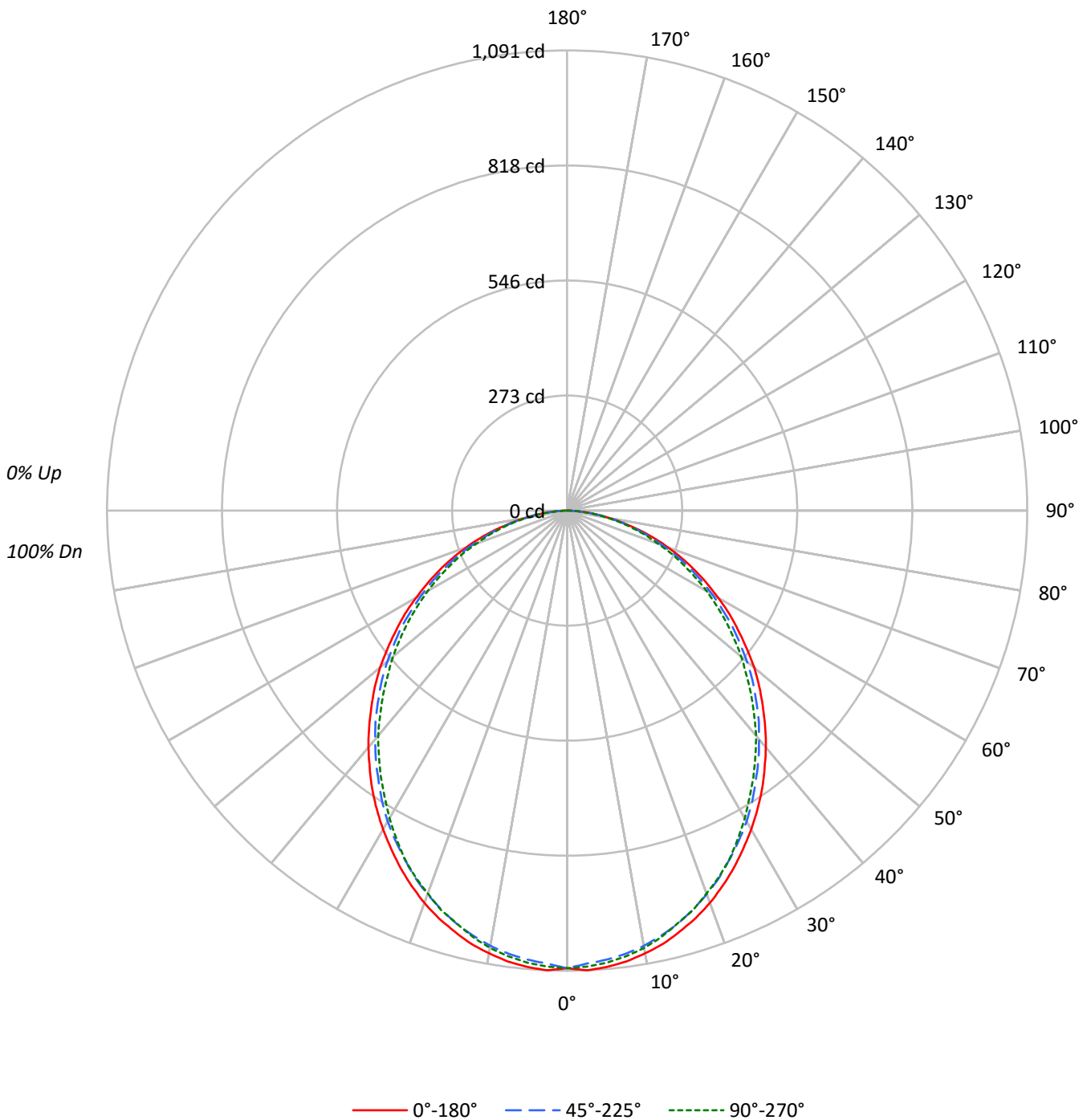
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 20667 | 20667 | 20667 |
| 5° | 20765 | 20440 | 20574 |
| 10° | 20618 | 20270 | 20367 |
| 15° | 20370 | 19996 | 19976 |
| 20° | 20067 | 19622 | 19581 |
| 25° | 19651 | 19167 | 19146 |
| 30° | 19201 | 18717 | 18519 |
| 35° | 18742 | 18137 | 17905 |
| 40° | 18226 | 17604 | 17331 |
| 45° | 17671 | 17051 | 16620 |
| 50° | 17157 | 16476 | 15972 |
| 55° | 16438 | 15874 | 15276 |
| 60° | 15733 | 15124 | 14552 |
| 65° | 15054 | 14332 | 13701 |
| 70° | 14146 | 13422 | 12753 |
| 75° | 12879 | 12364 | 11775 |
| 80° | 11189 | 10859 | 10421 |
| 85° | 9616 | 8523 | 7868 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 102.2 | 3.7 |
| 10°-20° | 287.6 | 10.4 |
| 20°-30° | 422.8 | 15.3 |
| 30°-40° | 490.9 | 17.8 |
| 40°-50° | 490.3 | 17.8 |
| 50°-60° | 427.0 | 15.5 |
| 60°-70° | 315.8 | 11.4 |
| 70°-80° | 178.0 | 6.4 |
| 80°-90° | 46.4 | 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° | 812.5 | 29.4 |
| 0°-40° | 1303.4 | 47.2 |
| 0°-60° | 2220.7 | 80.4 |
| 0°-90° | 2760.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2760.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1085 | 1085 | 1085 | 1085 | 1085 | |
| 5° | 1086 | 1081 | 1069 | 1078 | 1076 | 103 |
| 15° | 1033 | 1028 | 1014 | 1018 | 1013 | 291 |
| 25° | 935 | 927 | 912 | 911 | 911 | 430 |
| 35° | 806 | 797 | 780 | 773 | 770 | 504 |
| 45° | 656 | 649 | 633 | 623 | 617 | 507 |
| 55° | 495 | 491 | 478 | 465 | 460 | 443 |
| 65° | 334 | 329 | 318 | 308 | 304 | 330 |
| 75° | 175 | 174 | 168 | 162 | 160 | 186 |
| 85° | 44 | 42 | 39 | 37 | 36 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 0° | 1085 | 1085 | 1085 | 1085 | 1085 |
| 2.5° | 1091 | 1086 | 1075 | 1084 | 1082 |
| 5° | 1086 | 1081 | 1069 | 1078 | 1076 |
| 7.5° | 1078 | 1073 | 1060 | 1069 | 1066 |
| 10° | 1066 | 1060 | 1048 | 1054 | 1053 |
| 12.5° | 1052 | 1046 | 1032 | 1037 | 1035 |
| 15° | 1033 | 1028 | 1014 | 1018 | 1013 |
| 17.5° | 1013 | 1005 | 992 | 996 | 993 |
| 20° | 990 | 982 | 968 | 970 | 966 |
| 22.5° | 963 | 955 | 942 | 942 | 940 |
| 25° | 935 | 927 | 912 | 911 | 911 |
| 27.5° | 904 | 897 | 882 | 879 | 877 |
| 30° | 873 | 867 | 851 | 845 | 842 |
| 32.5° | 840 | 832 | 817 | 810 | 805 |
| 35° | 806 | 797 | 780 | 773 | 770 |
| 37.5° | 769 | 760 | 745 | 739 | 733 |
| 40° | 733 | 725 | 708 | 699 | 697 |
| 42.5° | 695 | 687 | 672 | 662 | 656 |
| 45° | 656 | 649 | 633 | 623 | 617 |
| 47.5° | 618 | 610 | 596 | 584 | 576 |
| 50° | 579 | 571 | 556 | 542 | 539 |
| 52.5° | 536 | 531 | 516 | 503 | 499 |
| 55° | 495 | 491 | 478 | 465 | 460 |
| 57.5° | 456 | 451 | 436 | 426 | 420 |
| 60° | 413 | 410 | 397 | 386 | 382 |
| 62.5° | 373 | 369 | 358 | 347 | 342 |
| 65° | 334 | 329 | 318 | 308 | 304 |
| 67.5° | 294 | 289 | 280 | 272 | 268 |
| 70° | 254 | 250 | 241 | 234 | 229 |
| 72.5° | 215 | 211 | 203 | 196 | 195 |
| 75° | 175 | 174 | 168 | 162 | 160 |
| 77.5° | 138 | 137 | 133 | 130 | 128 |
| 80° | 102 | 102 | 99 | 96 | 95 |
| 82.5° | 70 | 71 | 68 | 66 | 66 |
| 85° | 44 | 42 | 39 | 37 | 36 |
| 87.5° | 18 | 15 | 14 | 11 | 10 |
| 90° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)