

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: P333807

Luminaire Tested: **S122DW-S675D940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DW-S675D940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 675 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2347.7 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

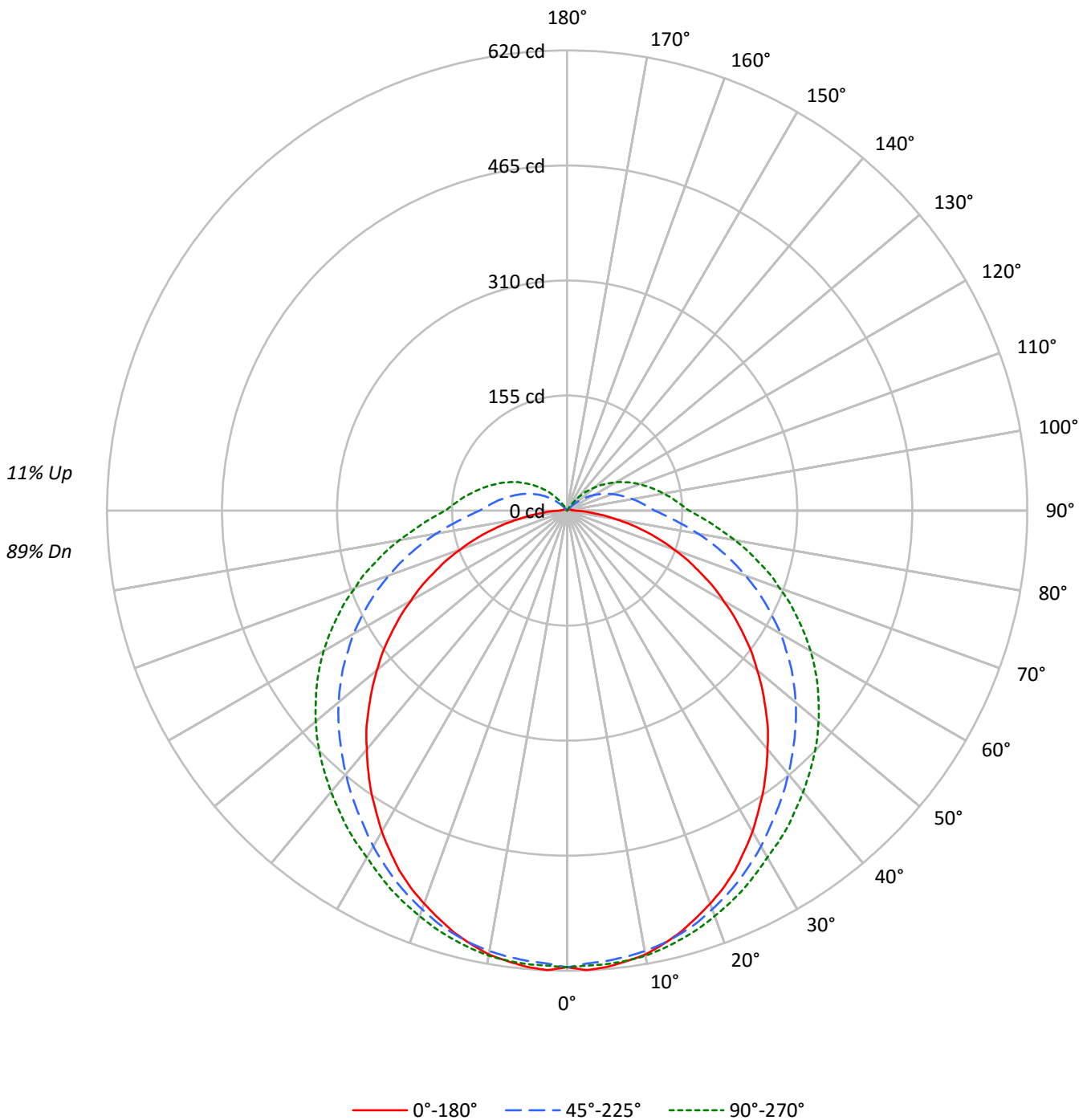
Input Watts (W): 26.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P333807

CATALOG NUMBER: S122DW-S675D940-4F0-1E-UDD-D

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 | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 |
| 1 | 104 | 98 | 93 | 88 | 100 | 95 | 90 | 86 | 88 | 85 | 81 | 82 | 79 | 77 | 77 | 75 | 72 | 69 |
| 2 | 94 | 84 | 77 | 70 | 90 | 81 | 74 | 68 | 76 | 70 | 65 | 71 | 66 | 62 | 66 | 62 | 59 | 56 |
| 3 | 85 | 73 | 64 | 57 | 81 | 71 | 63 | 56 | 66 | 59 | 54 | 62 | 56 | 51 | 58 | 53 | 49 | 46 |
| 4 | 77 | 64 | 55 | 48 | 74 | 62 | 54 | 47 | 58 | 51 | 45 | 55 | 48 | 43 | 51 | 46 | 42 | 39 |
| 5 | 71 | 57 | 48 | 41 | 68 | 56 | 47 | 40 | 52 | 44 | 39 | 49 | 42 | 37 | 46 | 40 | 36 | 33 |
| 6 | 65 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 47 | 39 | 34 | 44 | 37 | 32 | 42 | 36 | 31 | 29 |
| 7 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 43 | 35 | 30 | 40 | 34 | 29 | 38 | 32 | 28 | 25 |
| 8 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 27 | 39 | 32 | 26 | 37 | 30 | 25 | 35 | 29 | 25 | 23 |
| 9 | 52 | 39 | 30 | 25 | 50 | 38 | 30 | 24 | 36 | 29 | 24 | 34 | 27 | 23 | 32 | 26 | 22 | 20 |
| 10 | 49 | 36 | 28 | 22 | 47 | 35 | 27 | 22 | 33 | 26 | 21 | 31 | 25 | 21 | 30 | 24 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 9935 | 9935 | 9935 |
| 5° | 10002 | 9870 | 9943 |
| 10° | 9957 | 9883 | 9985 |
| 15° | 9837 | 9867 | 9986 |
| 20° | 9684 | 9821 | 9990 |
| 25° | 9531 | 9786 | 10024 |
| 30° | 9311 | 9741 | 10058 |
| 35° | 9087 | 9719 | 10230 |
| 40° | 8852 | 9773 | 10431 |
| 45° | 8633 | 9896 | 10730 |
| 50° | 8400 | 10103 | 11110 |
| 55° | 8158 | 10367 | 11598 |
| 60° | 7860 | 10740 | 12239 |
| 65° | 7564 | 11244 | 13081 |
| 70° | 7242 | 12038 | 14356 |
| 75° | 6843 | 13518 | 16631 |
| 80° | 6220 | 16662 | 21311 |
| 85° | 5947 | 26769 | 36013 |



TEST NUMBER: P333807

CATALOG NUMBER: S122DW-S675D940-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.3 | 2.5 |
| 10°-20° | 167.3 | 7.1 |
| 20°-30° | 253.5 | 10.8 |
| 30°-40° | 308.7 | 13.1 |
| 40°-50° | 332.1 | 14.1 |
| 50°-60° | 322.5 | 13.7 |
| 60°-70° | 281.7 | 12.0 |
| 70°-80° | 216.8 | 9.2 |
| 80°-90° | 145.2 | 6.2 |
| 90°-100° | 100.2 | 4.3 |
| 100°-110° | 73.2 | 3.1 |
| 110°-120° | 48.3 | 2.1 |
| 120°-130° | 26.9 | 1.1 |
| 130°-140° | 11.3 | 0.5 |
| 140°-150° | 1.9 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 479.1 | 20.4 |
| 0°-40° | 787.7 | 33.6 |
| 0°-60° | 1442.4 | 61.4 |
| 0°-90° | 2086.0 | 88.9 |
| 90°-120° | 221.6 | 9.4 |
| 90°-150° | 261.8 | 11.1 |
| 90°-180° | 262.0 | 11.2 |
| 0°-180° | 2347.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 615 | 615 | 615 | 615 | 615 | |
| 5° | 617 | 614 | 609 | 614 | 614 | 59 |
| 15° | 588 | 590 | 590 | 598 | 597 | 166 |
| 25° | 535 | 541 | 549 | 560 | 563 | 246 |
| 35° | 461 | 476 | 493 | 513 | 519 | 288 |
| 45° | 378 | 402 | 433 | 461 | 470 | 292 |
| 55° | 290 | 322 | 368 | 400 | 412 | 259 |
| 65° | 198 | 242 | 294 | 331 | 342 | 197 |
| 75° | 110 | 160 | 217 | 255 | 267 | 116 |
| 85° | 32 | 87 | 144 | 182 | 194 | 34 |
| 90° | 9 | 61 | 118 | 153 | 164 | 6 |
| 95° | 7 | 49 | 102 | 136 | 147 | 6 |
| 105° | 4 | 30 | 77 | 108 | 118 | 5 |
| 115° | 4 | 13 | 54 | 80 | 90 | 3 |
| 125° | 2 | 2 | 30 | 54 | 62 | 2 |
| 135° | 1 | 1 | 10 | 28 | 36 | 1 |
| 145° | 0 | 0 | 0 | 5 | 10 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P333807

CATALOG NUMBER: S122DW-S675D940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 615.3 | 615.3 | 615.3 | 615.3 | 615.3 |
| 2.5° | 619.7 | 617.1 | 610.8 | 615.3 | 613.5 |
| 5° | 617.1 | 614.4 | 609.0 | 614.4 | 613.5 |
| 7.5° | 612.6 | 610.8 | 606.4 | 612.6 | 611.7 |
| 10° | 607.3 | 605.5 | 602.8 | 609.9 | 609.0 |
| 12.5° | 598.3 | 599.2 | 597.4 | 604.6 | 603.7 |
| 15° | 588.5 | 590.3 | 590.3 | 598.3 | 597.4 |
| 17.5° | 576.0 | 579.6 | 582.3 | 590.3 | 590.3 |
| 20° | 563.6 | 568.0 | 571.6 | 581.4 | 581.4 |
| 22.5° | 550.2 | 555.5 | 560.9 | 570.7 | 572.5 |
| 25° | 535.0 | 541.3 | 549.3 | 560.0 | 562.7 |
| 27.5° | 517.2 | 527.0 | 535.9 | 549.3 | 551.1 |
| 30° | 499.4 | 511.0 | 522.5 | 536.8 | 539.5 |
| 32.5° | 479.7 | 493.1 | 507.4 | 524.3 | 529.7 |
| 35° | 461.0 | 476.2 | 493.1 | 512.7 | 519.0 |
| 37.5° | 440.5 | 457.4 | 478.8 | 500.3 | 506.5 |
| 40° | 420.0 | 439.6 | 463.7 | 486.9 | 494.9 |
| 42.5° | 400.4 | 420.0 | 448.5 | 474.4 | 482.4 |
| 45° | 378.1 | 402.2 | 433.4 | 461.0 | 469.9 |
| 47.5° | 356.7 | 382.5 | 418.2 | 446.7 | 456.6 |
| 50° | 334.4 | 362.0 | 402.2 | 432.5 | 442.3 |
| 52.5° | 313.0 | 342.4 | 385.2 | 416.4 | 427.1 |
| 55° | 289.8 | 321.9 | 368.3 | 400.4 | 412.0 |
| 57.5° | 267.5 | 303.2 | 349.6 | 384.3 | 395.9 |
| 60° | 243.4 | 281.8 | 332.6 | 366.5 | 379.0 |
| 62.5° | 222.0 | 262.2 | 313.0 | 349.6 | 361.1 |
| 65° | 198.0 | 241.7 | 294.3 | 330.8 | 342.4 |
| 67.5° | 176.6 | 222.0 | 275.5 | 312.1 | 324.6 |
| 70° | 153.4 | 199.7 | 255.0 | 293.4 | 304.1 |
| 72.5° | 132.0 | 180.1 | 236.3 | 273.8 | 287.1 |
| 75° | 109.7 | 159.6 | 216.7 | 255.0 | 266.6 |
| 77.5° | 88.3 | 140.0 | 198.0 | 236.3 | 248.8 |
| 80° | 66.9 | 121.3 | 179.2 | 216.7 | 229.2 |
| 82.5° | 49.0 | 102.5 | 161.4 | 198.9 | 210.4 |
| 85° | 32.1 | 87.4 | 144.5 | 181.9 | 194.4 |
| 87.5° | 19.6 | 73.1 | 130.2 | 166.8 | 178.3 |
| 90° | 8.9 | 60.6 | 117.7 | 153.4 | 164.1 |
| 92.5° | 8.0 | 55.3 | 109.7 | 144.5 | 155.2 |
| 95° | 7.1 | 49.0 | 102.5 | 136.4 | 147.1 |
| 97.5° | 6.2 | 44.6 | 96.3 | 129.3 | 140.0 |
| 100° | 6.2 | 39.2 | 89.2 | 122.2 | 132.0 |
| 102.5° | 5.4 | 34.8 | 82.9 | 115.0 | 124.8 |
| 105° | 4.5 | 30.3 | 76.7 | 107.9 | 117.7 |
| 107.5° | 4.5 | 25.9 | 70.4 | 100.8 | 110.6 |
| 110° | 3.6 | 21.4 | 65.1 | 93.6 | 103.4 |



TEST NUMBER: P333807

CATALOG NUMBER: S122DW-S675D940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 3.6 | 17.8 | 58.9 | 87.4 | 97.2 |
| 115° | 3.6 | 13.4 | 53.5 | 80.3 | 90.1 |
| 117.5° | 2.7 | 9.8 | 47.3 | 74.0 | 82.9 |
| 120° | 2.7 | 6.2 | 41.9 | 66.9 | 76.7 |
| 122.5° | 2.7 | 3.6 | 36.6 | 60.6 | 68.7 |
| 125° | 1.8 | 1.8 | 30.3 | 54.4 | 62.4 |
| 127.5° | 1.8 | 0.9 | 25.0 | 47.3 | 55.3 |
| 130° | 1.8 | 0.9 | 19.6 | 41.0 | 48.2 |
| 132.5° | 1.8 | 0.9 | 14.3 | 34.8 | 41.9 |
| 135° | 0.9 | 0.9 | 9.8 | 28.5 | 35.7 |
| 137.5° | 0.9 | 0.9 | 5.4 | 22.3 | 28.5 |
| 140° | 0.9 | 0.0 | 1.8 | 16.1 | 21.4 |
| 142.5° | 0.9 | 0.0 | 0.0 | 10.7 | 15.2 |
| 145° | 0.0 | 0.0 | 0.0 | 5.4 | 9.8 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.9 | 3.6 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)