

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: P334143

Luminaire Tested: **SA4XXDP-C1020D927-4F0-1E-UDD-D**

Issue Date: 10/11/2019

Test Information

Test Method: LM-79-08
Report Number: P334143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 10/11/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDP-C1020D927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1020 LUMENS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

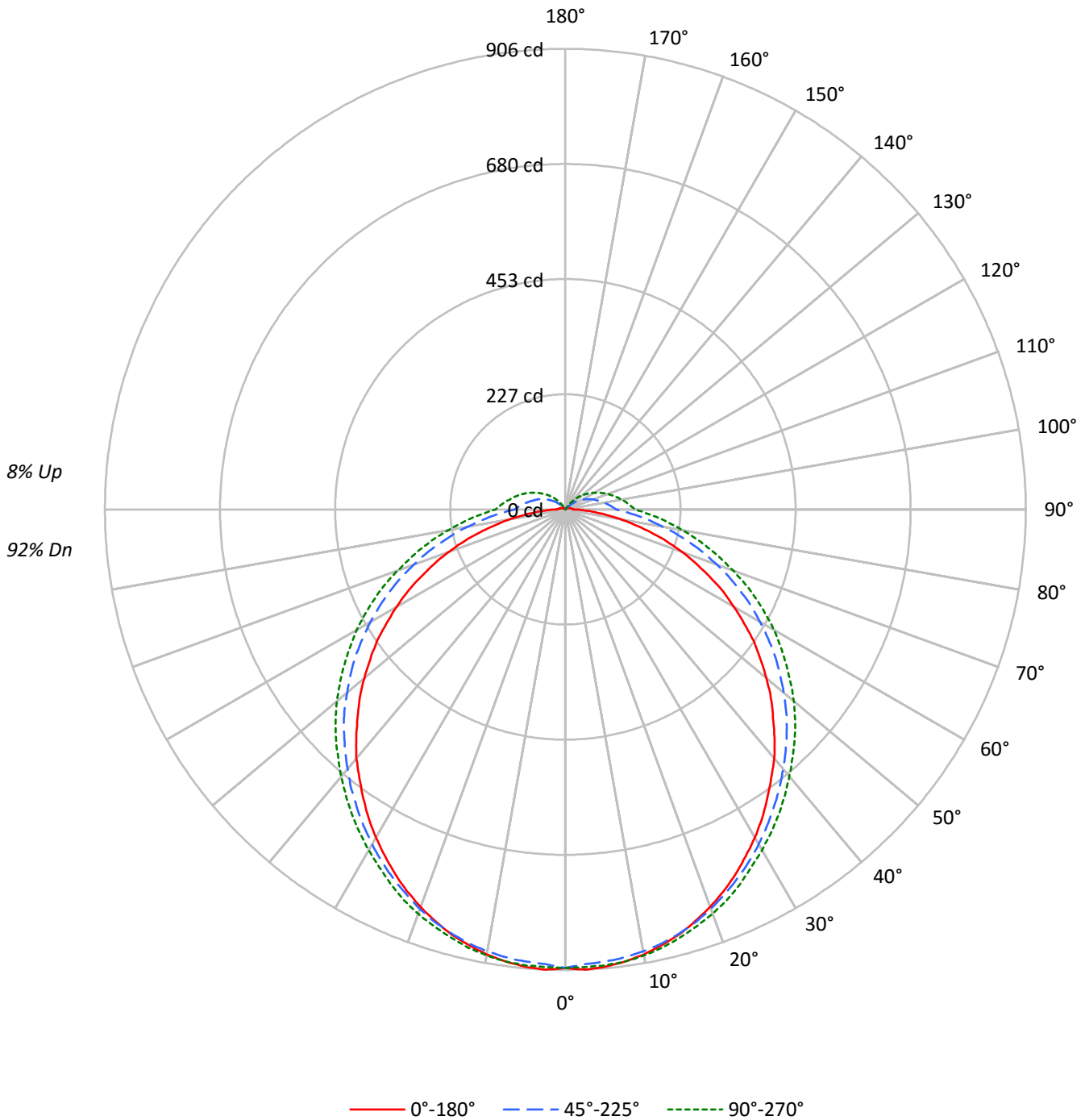
Lumens per Lamp: N/A
Luminaire Lumens: 3075.7 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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: P334143

CATALOG NUMBER: SA4XXDP-C1020D927-4F0-1E-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 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 95 | 95 | 95 | 92 | | | | | | | | | | | | | |
| 1 | 105 | 100 | 95 | 91 | 102 | 97 | 93 | 89 | 91 | 88 | 84 | 86 | 83 | 80 | 81 | 79 | 77 | 74 | | | | | | | | | | | | | |
| 2 | 95 | 86 | 79 | 73 | 92 | 84 | 77 | 71 | 79 | 73 | 68 | 74 | 70 | 66 | 70 | 67 | 63 | 60 | | | | | | | | | | | | | |
| 3 | 87 | 75 | 67 | 60 | 83 | 73 | 65 | 59 | 69 | 62 | 57 | 65 | 60 | 55 | 62 | 57 | 53 | 50 | | | | | | | | | | | | | |
| 4 | 79 | 66 | 57 | 50 | 76 | 65 | 56 | 49 | 61 | 54 | 48 | 58 | 52 | 47 | 55 | 49 | 45 | 43 | | | | | | | | | | | | | |
| 5 | 73 | 59 | 50 | 43 | 70 | 58 | 49 | 42 | 55 | 47 | 41 | 52 | 45 | 40 | 49 | 44 | 39 | 37 | | | | | | | | | | | | | |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 42 | 36 | 47 | 40 | 35 | 45 | 39 | 34 | 32 | | | | | | | | | | | | | |
| 7 | 62 | 48 | 39 | 33 | 60 | 47 | 38 | 32 | 45 | 37 | 32 | 43 | 36 | 31 | 41 | 35 | 30 | 28 | | | | | | | | | | | | | |
| 8 | 58 | 44 | 35 | 29 | 56 | 43 | 35 | 29 | 41 | 33 | 28 | 39 | 32 | 28 | 37 | 31 | 27 | 25 | | | | | | | | | | | | | |
| 9 | 54 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 30 | 25 | 36 | 29 | 25 | 34 | 29 | 24 | 22 | | | | | | | | | | | | | |
| 10 | 50 | 37 | 29 | 24 | 49 | 36 | 29 | 23 | 35 | 28 | 23 | 33 | 27 | 23 | 32 | 26 | 22 | 20 | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 7283 | 7283 | 7283 |
| 5° | 7319 | 7237 | 7294 |
| 10° | 7288 | 7238 | 7304 |
| 15° | 7236 | 7219 | 7286 |
| 20° | 7151 | 7186 | 7273 |
| 25° | 7055 | 7136 | 7244 |
| 30° | 6949 | 7091 | 7213 |
| 35° | 6830 | 7048 | 7218 |
| 40° | 6739 | 7026 | 7228 |
| 45° | 6597 | 7035 | 7290 |
| 50° | 6483 | 7042 | 7371 |
| 55° | 6370 | 7095 | 7465 |
| 60° | 6182 | 7145 | 7650 |
| 65° | 5983 | 7255 | 7893 |
| 70° | 5748 | 7463 | 8273 |
| 75° | 5421 | 7910 | 9074 |
| 80° | 5119 | 9066 | 10851 |
| 85° | 4956 | 13097 | 16840 |



TEST NUMBER: P334143

CATALOG NUMBER: SA4XXDP-C1020D927-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 85.5 | 2.8 |
| 10°-20° | 244.9 | 8.0 |
| 20°-30° | 370.3 | 12.0 |
| 30°-40° | 448.0 | 14.6 |
| 40°-50° | 473.6 | 15.4 |
| 50°-60° | 445.7 | 14.5 |
| 60°-70° | 369.9 | 12.0 |
| 70°-80° | 259.6 | 8.4 |
| 80°-90° | 146.3 | 4.8 |
| 90°-100° | 87.1 | 2.8 |
| 100°-110° | 64.5 | 2.1 |
| 110°-120° | 43.3 | 1.4 |
| 120°-130° | 24.4 | 0.8 |
| 130°-140° | 10.5 | 0.3 |
| 140°-150° | 2.1 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 700.7 | 22.8 |
| 0°-40° | 1148.7 | 37.3 |
| 0°-60° | 2068.0 | 67.2 |
| 0°-90° | 2843.8 | 92.5 |
| 90°-120° | 194.9 | 6.3 |
| 90°-150° | 231.9 | 7.5 |
| 90°-180° | 232.0 | 7.5 |
| 0°-180° | 3075.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 902 | 902 | 902 | 902 | 902 | |
| 5° | 903 | 900 | 893 | 901 | 900 | 86 |
| 15° | 866 | 867 | 864 | 873 | 872 | 244 |
| 25° | 792 | 798 | 801 | 812 | 813 | 365 |
| 35° | 693 | 705 | 715 | 729 | 732 | 434 |
| 45° | 578 | 597 | 616 | 633 | 638 | 447 |
| 55° | 453 | 474 | 504 | 524 | 530 | 403 |
| 65° | 313 | 346 | 380 | 405 | 413 | 310 |
| 75° | 174 | 211 | 254 | 282 | 291 | 185 |
| 85° | 54 | 96 | 141 | 172 | 182 | 56 |
| 90° | 16 | 57 | 100 | 129 | 137 | 11 |
| 95° | 13 | 46 | 88 | 115 | 124 | 10 |
| 105° | 9 | 29 | 67 | 92 | 100 | 10 |
| 115° | 6 | 15 | 48 | 70 | 77 | 6 |
| 125° | 4 | 3 | 28 | 48 | 54 | 4 |
| 135° | 2 | 2 | 9 | 25 | 31 | 2 |
| 145° | 1 | 0 | 0 | 6 | 10 | 1 |
| 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: P334143

CATALOG NUMBER: SA4XXDP-C1020D927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 902.1 | 902.1 | 902.1 | 902.1 | 902.1 |
| 2.5° | 906.2 | 903.1 | 895.1 | 902.1 | 901.1 |
| 5° | 903.1 | 900.1 | 893.0 | 901.1 | 900.1 |
| 7.5° | 897.1 | 895.1 | 889.0 | 898.1 | 897.1 |
| 10° | 889.0 | 888.0 | 882.9 | 892.0 | 891.0 |
| 12.5° | 877.9 | 877.9 | 874.9 | 882.9 | 882.9 |
| 15° | 865.8 | 866.8 | 863.7 | 872.8 | 871.8 |
| 17.5° | 849.6 | 852.6 | 851.6 | 860.7 | 859.7 |
| 20° | 832.4 | 835.5 | 836.5 | 846.6 | 846.6 |
| 22.5° | 813.2 | 817.3 | 819.3 | 829.4 | 831.4 |
| 25° | 792.0 | 798.1 | 801.1 | 812.2 | 813.2 |
| 27.5° | 768.8 | 777.9 | 781.9 | 792.0 | 793.0 |
| 30° | 745.5 | 753.6 | 760.7 | 771.8 | 773.8 |
| 32.5° | 720.3 | 730.4 | 738.5 | 751.6 | 753.6 |
| 35° | 693.0 | 705.1 | 715.2 | 729.4 | 732.4 |
| 37.5° | 665.7 | 679.9 | 692.0 | 706.1 | 709.2 |
| 40° | 639.5 | 652.6 | 666.7 | 681.9 | 685.9 |
| 42.5° | 609.2 | 624.3 | 641.5 | 658.7 | 661.7 |
| 45° | 577.8 | 597.0 | 616.2 | 633.4 | 638.5 |
| 47.5° | 548.6 | 567.7 | 590.0 | 607.1 | 613.2 |
| 50° | 516.2 | 538.5 | 560.7 | 580.9 | 586.9 |
| 52.5° | 483.9 | 506.1 | 532.4 | 552.6 | 558.7 |
| 55° | 452.6 | 473.8 | 504.1 | 524.3 | 530.4 |
| 57.5° | 417.2 | 443.5 | 472.8 | 497.0 | 502.1 |
| 60° | 382.9 | 409.1 | 442.5 | 465.7 | 473.8 |
| 62.5° | 349.5 | 378.8 | 412.2 | 435.4 | 443.5 |
| 65° | 313.2 | 345.5 | 379.8 | 405.1 | 413.2 |
| 67.5° | 278.8 | 313.2 | 349.5 | 374.8 | 382.9 |
| 70° | 243.5 | 277.8 | 316.2 | 343.5 | 350.5 |
| 72.5° | 209.1 | 244.5 | 285.9 | 312.2 | 320.2 |
| 75° | 173.8 | 211.1 | 253.6 | 281.9 | 290.9 |
| 77.5° | 140.4 | 179.8 | 224.3 | 252.6 | 262.7 |
| 80° | 110.1 | 150.5 | 195.0 | 225.3 | 233.4 |
| 82.5° | 79.8 | 122.2 | 166.7 | 198.0 | 207.1 |
| 85° | 53.5 | 96.0 | 141.4 | 171.7 | 181.8 |
| 87.5° | 33.3 | 74.8 | 119.2 | 148.5 | 157.6 |
| 90° | 16.2 | 56.6 | 100.0 | 129.3 | 137.4 |
| 92.5° | 15.2 | 50.5 | 94.0 | 122.2 | 130.3 |
| 95° | 13.1 | 46.5 | 87.9 | 115.2 | 124.3 |
| 97.5° | 12.1 | 41.4 | 82.8 | 109.1 | 118.2 |
| 100° | 11.1 | 37.4 | 76.8 | 104.1 | 111.1 |
| 102.5° | 11.1 | 33.3 | 71.7 | 98.0 | 106.1 |
| 105° | 9.1 | 29.3 | 66.7 | 91.9 | 100.0 |
| 107.5° | 9.1 | 26.3 | 61.6 | 86.9 | 94.0 |
| 110° | 8.1 | 22.2 | 57.6 | 80.8 | 88.9 |



TEST NUMBER: P334143

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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 7.1 | 19.2 | 52.5 | 74.8 | 82.8 |
| 115° | 6.1 | 15.2 | 47.5 | 69.7 | 76.8 |
| 117.5° | 6.1 | 12.1 | 42.4 | 63.6 | 71.7 |
| 120° | 5.1 | 8.1 | 37.4 | 57.6 | 65.7 |
| 122.5° | 5.1 | 5.1 | 32.3 | 52.5 | 59.6 |
| 125° | 4.0 | 3.0 | 28.3 | 47.5 | 53.5 |
| 127.5° | 4.0 | 3.0 | 23.2 | 41.4 | 48.5 |
| 130° | 3.0 | 2.0 | 18.2 | 36.4 | 42.4 |
| 132.5° | 3.0 | 2.0 | 14.1 | 31.3 | 37.4 |
| 135° | 2.0 | 2.0 | 9.1 | 25.3 | 31.3 |
| 137.5° | 2.0 | 1.0 | 5.1 | 20.2 | 25.3 |
| 140° | 2.0 | 1.0 | 2.0 | 15.2 | 20.2 |
| 142.5° | 1.0 | 1.0 | 0.0 | 11.1 | 15.2 |
| 145° | 1.0 | 0.0 | 0.0 | 6.1 | 10.1 |
| 147.5° | 1.0 | 0.0 | 0.0 | 1.0 | 5.1 |
| 150° | 1.0 | 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)