

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: P333820

Luminaire Tested: **SA2XXDP-C290D840-4F0-1E-UDD-F**

Issue Date: 10/11/2019

Test Information

Test Method: LM-79-08
Report Number: P333820
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 10/11/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDP-C290D840-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 290 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

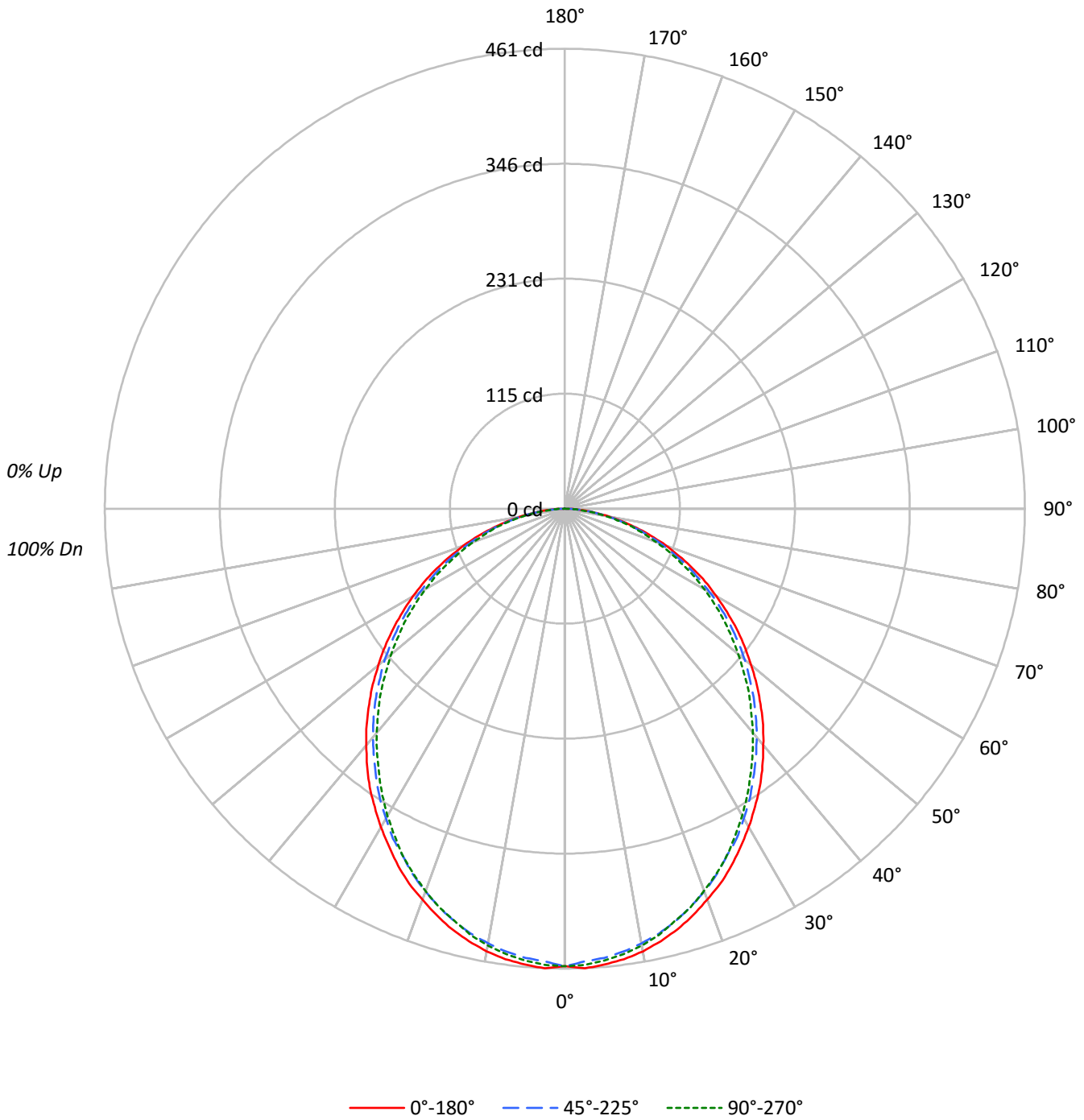
Lumens per Lamp: N/A
Luminaire Lumens: 1166.7 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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 | 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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 | | | | 84 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 74 | 80 | 76 | 73 | 71 | | | | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 62 | 60 | | | | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 51 | | | | 51 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 45 | | | | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 48 | 42 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 | | | | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 | | | | 35 |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 31 | | | | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | | | | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 32 | 27 | 26 | | | | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7404 | 7404 | 7404 |
| 5° | 7433 | 7326 | 7368 |
| 10° | 7388 | 7251 | 7288 |
| 15° | 7296 | 7156 | 7149 |
| 20° | 7167 | 7015 | 7009 |
| 25° | 7039 | 6843 | 6843 |
| 30° | 6872 | 6684 | 6626 |
| 35° | 6717 | 6493 | 6396 |
| 40° | 6523 | 6302 | 6180 |
| 45° | 6332 | 6110 | 5960 |
| 50° | 6124 | 5915 | 5704 |
| 55° | 5909 | 5683 | 5475 |
| 60° | 5667 | 5412 | 5212 |
| 65° | 5406 | 5138 | 4902 |
| 70° | 5080 | 4810 | 4579 |
| 75° | 4623 | 4429 | 4317 |
| 80° | 4100 | 3980 | 3775 |
| 85° | 3353 | 3186 | 2853 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.2 | 3.7 |
| 10°-20° | 121.4 | 10.4 |
| 20°-30° | 178.5 | 15.3 |
| 30°-40° | 207.3 | 17.8 |
| 40°-50° | 207.0 | 17.7 |
| 50°-60° | 180.5 | 15.5 |
| 60°-70° | 133.4 | 11.4 |
| 70°-80° | 75.5 | 6.5 |
| 80°-90° | 19.9 | 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° | 343.1 | 29.4 |
| 0°-40° | 550.3 | 47.2 |
| 0°-60° | 937.8 | 80.4 |
| 0°-90° | 1166.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1166.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 459 | 459 | 459 | 459 | 459 | |
| 5° | 459 | 457 | 452 | 456 | 455 | 44 |
| 15° | 436 | 434 | 428 | 430 | 428 | 123 |
| 25° | 395 | 392 | 384 | 385 | 384 | 182 |
| 35° | 341 | 336 | 329 | 327 | 324 | 213 |
| 45° | 277 | 274 | 268 | 263 | 261 | 214 |
| 55° | 210 | 207 | 202 | 197 | 194 | 188 |
| 65° | 142 | 139 | 134 | 130 | 128 | 140 |
| 75° | 74 | 73 | 71 | 68 | 69 | 79 |
| 85° | 18 | 18 | 17 | 16 | 15 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 458.6 | 458.6 | 458.6 | 458.6 | 458.6 |
| 2.5° | 461.2 | 459.0 | 454.2 | 458.6 | 457.7 |
| 5° | 458.6 | 456.8 | 452.0 | 455.5 | 454.6 |
| 7.5° | 455.5 | 452.8 | 448.0 | 451.5 | 450.6 |
| 10° | 450.6 | 447.5 | 442.3 | 445.8 | 444.5 |
| 12.5° | 444.0 | 441.4 | 436.1 | 438.3 | 437.4 |
| 15° | 436.5 | 433.9 | 428.1 | 429.9 | 427.7 |
| 17.5° | 427.3 | 424.6 | 418.9 | 421.1 | 418.9 |
| 20° | 417.1 | 414.5 | 408.3 | 409.6 | 407.9 |
| 22.5° | 407.0 | 403.0 | 397.3 | 397.3 | 396.4 |
| 25° | 395.1 | 391.5 | 384.1 | 384.9 | 384.1 |
| 27.5° | 381.8 | 378.8 | 373.0 | 371.7 | 369.5 |
| 30° | 368.6 | 365.1 | 358.5 | 357.2 | 355.4 |
| 32.5° | 354.5 | 351.9 | 344.8 | 342.2 | 340.4 |
| 35° | 340.8 | 336.4 | 329.4 | 326.7 | 324.5 |
| 37.5° | 325.4 | 321.4 | 314.4 | 311.3 | 309.1 |
| 40° | 309.5 | 306.0 | 299.0 | 295.0 | 293.2 |
| 42.5° | 294.1 | 290.6 | 283.5 | 279.1 | 276.5 |
| 45° | 277.3 | 274.3 | 267.6 | 262.8 | 261.0 |
| 47.5° | 261.0 | 257.9 | 250.9 | 246.0 | 243.4 |
| 50° | 243.8 | 241.6 | 235.5 | 229.3 | 227.1 |
| 52.5° | 227.1 | 224.0 | 218.3 | 213.4 | 210.3 |
| 55° | 209.9 | 207.2 | 201.9 | 196.7 | 194.5 |
| 57.5° | 192.7 | 190.5 | 184.8 | 179.5 | 177.7 |
| 60° | 175.5 | 173.7 | 167.6 | 162.7 | 161.4 |
| 62.5° | 158.7 | 155.6 | 151.2 | 146.8 | 145.1 |
| 65° | 141.5 | 138.9 | 134.5 | 130.5 | 128.3 |
| 67.5° | 123.9 | 121.7 | 117.7 | 114.6 | 112.9 |
| 70° | 107.6 | 105.8 | 101.9 | 98.8 | 97.0 |
| 72.5° | 90.8 | 89.1 | 86.9 | 83.8 | 82.5 |
| 75° | 74.1 | 73.2 | 71.0 | 68.3 | 69.2 |
| 77.5° | 59.1 | 57.3 | 56.4 | 55.1 | 53.8 |
| 80° | 44.1 | 43.7 | 42.8 | 41.4 | 40.6 |
| 82.5° | 30.0 | 30.0 | 29.5 | 27.8 | 27.8 |
| 85° | 18.1 | 17.6 | 17.2 | 15.9 | 15.4 |
| 87.5° | 7.9 | 7.1 | 6.2 | 4.9 | 4.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)