

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: P333781

Luminaire Tested: **SA2XXDP-C485D835-4F0-1E-UDD-D**

Issue Date: 10/11/2019

Test Information

Test Method: LM-79-08
Report Number: P333781
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 10/11/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDP-C485D835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 485 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

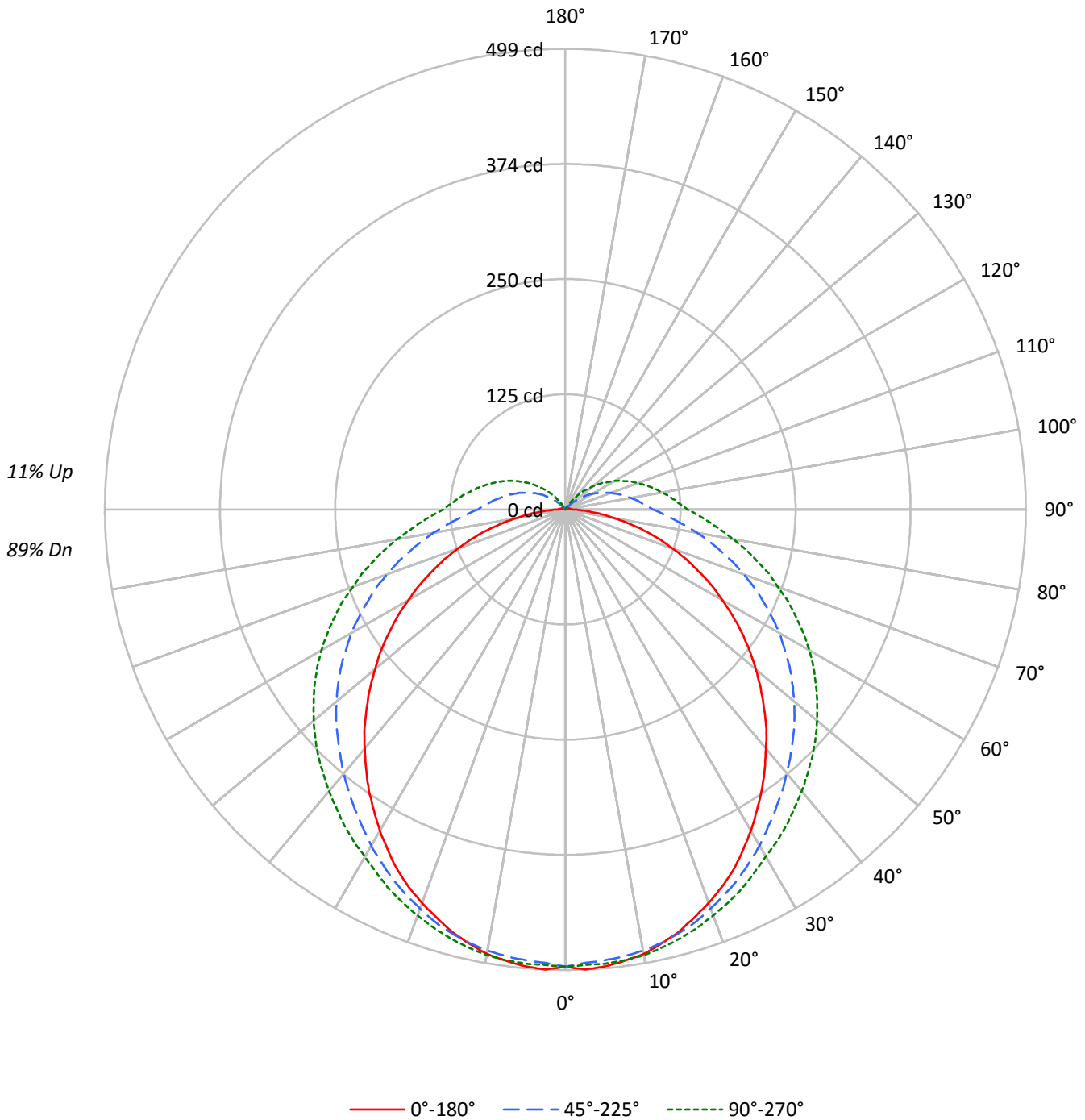
Lumens per Lamp: N/A
Luminaire Lumens: 1890.4 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 18.8
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: P333781

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 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° | 7999 | 7999 | 7999 |
| 5° | 8054 | 7948 | 8007 |
| 10° | 8017 | 7958 | 8040 |
| 15° | 7921 | 7945 | 8042 |
| 20° | 7797 | 7909 | 8045 |
| 25° | 7675 | 7880 | 8072 |
| 30° | 7497 | 7845 | 8099 |
| 35° | 7317 | 7827 | 8237 |
| 40° | 7128 | 7870 | 8399 |
| 45° | 6951 | 7969 | 8640 |
| 50° | 6764 | 8133 | 8945 |
| 55° | 6570 | 8346 | 9337 |
| 60° | 6329 | 8648 | 9855 |
| 65° | 6090 | 9051 | 10533 |
| 70° | 5830 | 9696 | 11556 |
| 75° | 5508 | 10886 | 13394 |
| 80° | 5012 | 13417 | 17155 |
| 85° | 4780 | 21545 | 28992 |



TEST NUMBER: P333781

CATALOG NUMBER: SA2XXDP-C485D835-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 47.0 | 2.5 |
| 10°-20° | 134.7 | 7.1 |
| 20°-30° | 204.1 | 10.8 |
| 30°-40° | 248.5 | 13.1 |
| 40°-50° | 267.4 | 14.1 |
| 50°-60° | 259.7 | 13.7 |
| 60°-70° | 226.8 | 12.0 |
| 70°-80° | 174.5 | 9.2 |
| 80°-90° | 116.9 | 6.2 |
| 90°-100° | 80.7 | 4.3 |
| 100°-110° | 58.9 | 3.1 |
| 110°-120° | 38.9 | 2.1 |
| 120°-130° | 21.7 | 1.1 |
| 130°-140° | 9.1 | 0.5 |
| 140°-150° | 1.5 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 385.8 | 20.4 |
| 0°-40° | 634.3 | 33.6 |
| 0°-60° | 1161.4 | 61.4 |
| 0°-90° | 1679.7 | 88.9 |
| 90°-120° | 178.5 | 9.4 |
| 90°-150° | 210.7 | 11.1 |
| 90°-180° | 211.0 | 11.2 |
| 0°-180° | 1890.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 495 | 495 | 495 | 495 | 495 | |
| 5° | 497 | 495 | 490 | 495 | 494 | 47 |
| 15° | 474 | 475 | 475 | 482 | 481 | 133 |
| 25° | 431 | 436 | 442 | 451 | 453 | 198 |
| 35° | 371 | 383 | 397 | 413 | 418 | 232 |
| 45° | 304 | 324 | 349 | 371 | 378 | 235 |
| 55° | 233 | 259 | 296 | 322 | 332 | 209 |
| 65° | 159 | 195 | 237 | 266 | 276 | 158 |
| 75° | 88 | 128 | 174 | 205 | 215 | 93 |
| 85° | 26 | 70 | 116 | 146 | 156 | 27 |
| 90° | 7 | 49 | 95 | 124 | 132 | 5 |
| 95° | 6 | 40 | 83 | 110 | 118 | 4 |
| 105° | 4 | 24 | 62 | 87 | 95 | 4 |
| 115° | 3 | 11 | 43 | 65 | 72 | 3 |
| 125° | 1 | 1 | 24 | 44 | 50 | 2 |
| 135° | 1 | 1 | 8 | 23 | 29 | 1 |
| 145° | 0 | 0 | 0 | 4 | 8 | 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: P333781

CATALOG NUMBER: SA2XXDP-C485D835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 495.4 | 495.4 | 495.4 | 495.4 | 495.4 |
| 2.5° | 499.0 | 496.9 | 491.8 | 495.4 | 494.0 |
| 5° | 496.9 | 494.7 | 490.4 | 494.7 | 494.0 |
| 7.5° | 493.3 | 491.8 | 488.3 | 493.3 | 492.6 |
| 10° | 489.0 | 487.5 | 485.4 | 491.1 | 490.4 |
| 12.5° | 481.8 | 482.5 | 481.1 | 486.8 | 486.1 |
| 15° | 473.9 | 475.3 | 475.3 | 481.8 | 481.1 |
| 17.5° | 463.8 | 466.7 | 468.9 | 475.3 | 475.3 |
| 20° | 453.8 | 457.4 | 460.3 | 468.2 | 468.2 |
| 22.5° | 443.0 | 447.3 | 451.6 | 459.5 | 461.0 |
| 25° | 430.8 | 435.8 | 442.3 | 450.9 | 453.1 |
| 27.5° | 416.5 | 424.4 | 431.5 | 442.3 | 443.7 |
| 30° | 402.1 | 411.4 | 420.8 | 432.3 | 434.4 |
| 32.5° | 386.3 | 397.1 | 408.6 | 422.2 | 426.5 |
| 35° | 371.2 | 383.4 | 397.1 | 412.9 | 417.9 |
| 37.5° | 354.7 | 368.3 | 385.6 | 402.8 | 407.8 |
| 40° | 338.2 | 354.0 | 373.4 | 392.0 | 398.5 |
| 42.5° | 322.4 | 338.2 | 361.2 | 382.0 | 388.5 |
| 45° | 304.4 | 323.8 | 349.0 | 371.2 | 378.4 |
| 47.5° | 287.2 | 308.0 | 336.8 | 359.7 | 367.6 |
| 50° | 269.3 | 291.5 | 323.8 | 348.2 | 356.1 |
| 52.5° | 252.0 | 275.7 | 310.2 | 335.3 | 343.9 |
| 55° | 233.4 | 259.2 | 296.5 | 322.4 | 331.7 |
| 57.5° | 215.4 | 244.1 | 281.5 | 309.5 | 318.8 |
| 60° | 196.0 | 226.9 | 267.8 | 295.1 | 305.2 |
| 62.5° | 178.8 | 211.1 | 252.0 | 281.5 | 290.8 |
| 65° | 159.4 | 194.6 | 236.9 | 266.4 | 275.7 |
| 67.5° | 142.2 | 178.8 | 221.9 | 251.3 | 261.4 |
| 70° | 123.5 | 160.8 | 205.4 | 236.2 | 244.8 |
| 72.5° | 106.3 | 145.0 | 190.3 | 220.4 | 231.2 |
| 75° | 88.3 | 128.5 | 174.5 | 205.4 | 214.7 |
| 77.5° | 71.1 | 112.7 | 159.4 | 190.3 | 200.3 |
| 80° | 53.9 | 97.7 | 144.3 | 174.5 | 184.5 |
| 82.5° | 39.5 | 82.6 | 130.0 | 160.1 | 169.5 |
| 85° | 25.8 | 70.4 | 116.3 | 146.5 | 156.5 |
| 87.5° | 15.8 | 58.9 | 104.8 | 134.3 | 143.6 |
| 90° | 7.2 | 48.8 | 94.8 | 123.5 | 132.1 |
| 92.5° | 6.5 | 44.5 | 88.3 | 116.3 | 124.9 |
| 95° | 5.7 | 39.5 | 82.6 | 109.9 | 118.5 |
| 97.5° | 5.0 | 35.9 | 77.5 | 104.1 | 112.7 |
| 100° | 5.0 | 31.6 | 71.8 | 98.4 | 106.3 |
| 102.5° | 4.3 | 28.0 | 66.8 | 92.6 | 100.5 |
| 105° | 3.6 | 24.4 | 61.8 | 86.9 | 94.8 |
| 107.5° | 3.6 | 20.8 | 56.7 | 81.1 | 89.0 |
| 110° | 2.9 | 17.2 | 52.4 | 75.4 | 83.3 |



TEST NUMBER: P333781

CATALOG NUMBER: SA2XXDP-C485D835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 2.9 | 14.4 | 47.4 | 70.4 | 78.3 |
| 115° | 2.9 | 10.8 | 43.1 | 64.6 | 72.5 |
| 117.5° | 2.2 | 7.9 | 38.1 | 59.6 | 66.8 |
| 120° | 2.2 | 5.0 | 33.7 | 53.9 | 61.8 |
| 122.5° | 2.2 | 2.9 | 29.4 | 48.8 | 55.3 |
| 125° | 1.4 | 1.4 | 24.4 | 43.8 | 50.3 |
| 127.5° | 1.4 | 0.7 | 20.1 | 38.1 | 44.5 |
| 130° | 1.4 | 0.7 | 15.8 | 33.0 | 38.8 |
| 132.5° | 1.4 | 0.7 | 11.5 | 28.0 | 33.7 |
| 135° | 0.7 | 0.7 | 7.9 | 23.0 | 28.7 |
| 137.5° | 0.7 | 0.7 | 4.3 | 18.0 | 23.0 |
| 140° | 0.7 | 0.0 | 1.4 | 12.9 | 17.2 |
| 142.5° | 0.7 | 0.0 | 0.0 | 8.6 | 12.2 |
| 145° | 0.0 | 0.0 | 0.0 | 4.3 | 7.9 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.7 | 2.9 |
| 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)