

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: P333806

Luminaire Tested: **S122DP-S485D940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333806  
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: S122DP-S485D940-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 485 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1685.7 lumens  
Efficiency: N/A  
Efficacy: 89.7 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

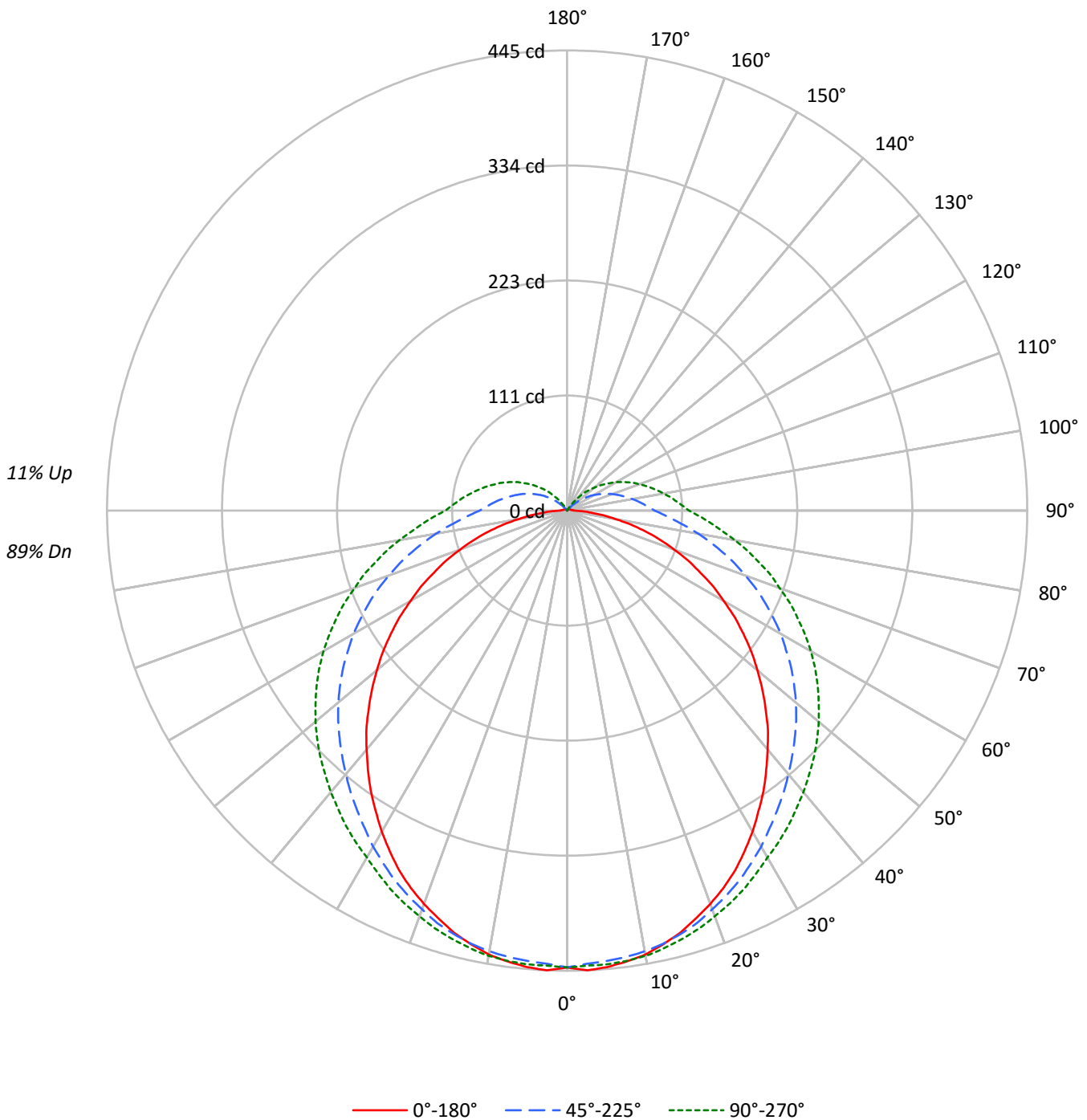
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 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°  | 7133 | 7133  | 7133  |
| 5°  | 7182 | 7088  | 7139  |
| 10° | 7148 | 7096  | 7169  |
| 15° | 7064 | 7086  | 7171  |
| 20° | 6954 | 7052  | 7174  |
| 25° | 6845 | 7026  | 7197  |
| 30° | 6686 | 6995  | 7223  |
| 35° | 6524 | 6979  | 7344  |
| 40° | 6357 | 7016  | 7491  |
| 45° | 6199 | 7106  | 7704  |
| 50° | 6031 | 7254  | 7978  |
| 55° | 5858 | 7443  | 8327  |
| 60° | 5645 | 7711  | 8787  |
| 65° | 5429 | 8073  | 9394  |
| 70° | 5198 | 8644  | 10305 |
| 75° | 4916 | 9707  | 11940 |
| 80° | 4463 | 11967 | 15295 |
| 85° | 4261 | 19211 | 25861 |



TEST NUMBER: P333806

CATALOG NUMBER: S122DP-S485D940-4F0-1E-UDD-D

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 41.9   | 2.5       |
| 10°-20°   | 120.1  | 7.1       |
| 20°-30°   | 182.0  | 10.8      |
| 30°-40°   | 221.6  | 13.1      |
| 40°-50°   | 238.5  | 14.1      |
| 50°-60°   | 231.6  | 13.7      |
| 60°-70°   | 202.2  | 12.0      |
| 70°-80°   | 155.6  | 9.2       |
| 80°-90°   | 104.2  | 6.2       |
| 90°-100°  | 71.9   | 4.3       |
| 100°-110° | 52.5   | 3.1       |
| 110°-120° | 34.7   | 2.1       |
| 120°-130° | 19.3   | 1.1       |
| 130°-140° | 8.1    | 0.5       |
| 140°-150° | 1.4    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 344.0  | 20.4      |
| 0°-40°    | 565.6  | 33.6      |
| 0°-60°    | 1035.7 | 61.4      |
| 0°-90°    | 1497.8 | 88.9      |
| 90°-120°  | 159.1  | 9.4       |
| 90°-150°  | 187.9  | 11.1      |
| 90°-180°  | 188.0  | 11.2      |
| 0°-180°   | 1685.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 442 | 442   | 442 | 442   | 442 |      |
| 5°   | 443 | 441   | 437 | 441   | 440 | 42   |
| 15°  | 423 | 424   | 424 | 430   | 429 | 119  |
| 25°  | 384 | 389   | 394 | 402   | 404 | 177  |
| 35°  | 331 | 342   | 354 | 368   | 373 | 207  |
| 45°  | 272 | 289   | 311 | 331   | 337 | 210  |
| 55°  | 208 | 231   | 264 | 288   | 296 | 186  |
| 65°  | 142 | 174   | 211 | 238   | 246 | 141  |
| 75°  | 79  | 115   | 156 | 183   | 191 | 83   |
| 85°  | 23  | 63    | 104 | 131   | 140 | 24   |
| 90°  | 6   | 44    | 84  | 110   | 118 | 4    |
| 95°  | 5   | 35    | 74  | 98    | 106 | 4    |
| 105° | 3   | 22    | 55  | 78    | 84  | 4    |
| 115° | 3   | 10    | 38  | 58    | 65  | 2    |
| 125° | 1   | 1     | 22  | 39    | 45  | 1    |
| 135° | 1   | 1     | 7   | 20    | 26  | 1    |
| 145° | 0   | 0     | 0   | 4     | 7   | 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: P333806

CATALOG NUMBER: S122DP-S485D940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 441.8 | 441.8 | 441.8 | 441.8 | 441.8 |
| 2.5°   | 445.0 | 443.1 | 438.6 | 441.8 | 440.5 |
| 5°     | 443.1 | 441.1 | 437.3 | 441.1 | 440.5 |
| 7.5°   | 439.9 | 438.6 | 435.4 | 439.9 | 439.2 |
| 10°    | 436.0 | 434.7 | 432.8 | 437.9 | 437.3 |
| 12.5°  | 429.6 | 430.3 | 429.0 | 434.1 | 433.5 |
| 15°    | 422.6 | 423.9 | 423.9 | 429.6 | 429.0 |
| 17.5°  | 413.6 | 416.2 | 418.1 | 423.9 | 423.9 |
| 20°    | 404.7 | 407.9 | 410.4 | 417.5 | 417.5 |
| 22.5°  | 395.0 | 398.9 | 402.7 | 409.8 | 411.1 |
| 25°    | 384.2 | 388.6 | 394.4 | 402.1 | 404.0 |
| 27.5°  | 371.4 | 378.4 | 384.8 | 394.4 | 395.7 |
| 30°    | 358.6 | 366.9 | 375.2 | 385.4 | 387.4 |
| 32.5°  | 344.5 | 354.1 | 364.3 | 376.5 | 380.3 |
| 35°    | 331.0 | 341.9 | 354.1 | 368.2 | 372.6 |
| 37.5°  | 316.3 | 328.5 | 343.8 | 359.2 | 363.7 |
| 40°    | 301.6 | 315.7 | 332.9 | 349.6 | 355.4 |
| 42.5°  | 287.5 | 301.6 | 322.1 | 340.6 | 346.4 |
| 45°    | 271.5 | 288.8 | 311.2 | 331.0 | 337.4 |
| 47.5°  | 256.1 | 274.7 | 300.3 | 320.8 | 327.8 |
| 50°    | 240.1 | 260.0 | 288.8 | 310.5 | 317.6 |
| 52.5°  | 224.7 | 245.9 | 276.6 | 299.0 | 306.7 |
| 55°    | 208.1 | 231.1 | 264.4 | 287.5 | 295.8 |
| 57.5°  | 192.1 | 217.7 | 251.0 | 276.0 | 284.3 |
| 60°    | 174.8 | 202.3 | 238.8 | 263.2 | 272.1 |
| 62.5°  | 159.4 | 188.2 | 224.7 | 251.0 | 259.3 |
| 65°    | 142.1 | 173.5 | 211.3 | 237.5 | 245.9 |
| 67.5°  | 126.8 | 159.4 | 197.8 | 224.1 | 233.1 |
| 70°    | 110.1 | 143.4 | 183.1 | 210.6 | 218.3 |
| 72.5°  | 94.8  | 129.3 | 169.7 | 196.6 | 206.2 |
| 75°    | 78.8  | 114.6 | 155.6 | 183.1 | 191.4 |
| 77.5°  | 63.4  | 100.5 | 142.1 | 169.7 | 178.6 |
| 80°    | 48.0  | 87.1  | 128.7 | 155.6 | 164.5 |
| 82.5°  | 35.2  | 73.6  | 115.9 | 142.8 | 151.1 |
| 85°    | 23.0  | 62.7  | 103.7 | 130.6 | 139.6 |
| 87.5°  | 14.1  | 52.5  | 93.5  | 119.7 | 128.1 |
| 90°    | 6.4   | 43.5  | 84.5  | 110.1 | 117.8 |
| 92.5°  | 5.8   | 39.7  | 78.8  | 103.7 | 111.4 |
| 95°    | 5.1   | 35.2  | 73.6  | 98.0  | 105.6 |
| 97.5°  | 4.5   | 32.0  | 69.1  | 92.8  | 100.5 |
| 100°   | 4.5   | 28.2  | 64.0  | 87.7  | 94.8  |
| 102.5° | 3.8   | 25.0  | 59.5  | 82.6  | 89.6  |
| 105°   | 3.2   | 21.8  | 55.1  | 77.5  | 84.5  |
| 107.5° | 3.2   | 18.6  | 50.6  | 72.4  | 79.4  |
| 110°   | 2.6   | 15.4  | 46.7  | 67.2  | 74.3  |



TEST NUMBER: P333806

CATALOG NUMBER: S122DP-S485D940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°  |
|--------|-----|-------|------|-------|------|
| 112.5° | 2.6 | 12.8  | 42.3 | 62.7  | 69.8 |
| 115°   | 2.6 | 9.6   | 38.4 | 57.6  | 64.7 |
| 117.5° | 1.9 | 7.0   | 33.9 | 53.1  | 59.5 |
| 120°   | 1.9 | 4.5   | 30.1 | 48.0  | 55.1 |
| 122.5° | 1.9 | 2.6   | 26.3 | 43.5  | 49.3 |
| 125°   | 1.3 | 1.3   | 21.8 | 39.1  | 44.8 |
| 127.5° | 1.3 | 0.6   | 17.9 | 33.9  | 39.7 |
| 130°   | 1.3 | 0.6   | 14.1 | 29.5  | 34.6 |
| 132.5° | 1.3 | 0.6   | 10.2 | 25.0  | 30.1 |
| 135°   | 0.6 | 0.6   | 7.0  | 20.5  | 25.6 |
| 137.5° | 0.6 | 0.6   | 3.8  | 16.0  | 20.5 |
| 140°   | 0.6 | 0.0   | 1.3  | 11.5  | 15.4 |
| 142.5° | 0.6 | 0.0   | 0.0  | 7.7   | 10.9 |
| 145°   | 0.0 | 0.0   | 0.0  | 3.8   | 7.0  |
| 147.5° | 0.0 | 0.0   | 0.0  | 0.6   | 2.6  |
| 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)