

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: P242594

Luminaire Tested: **S124DR-S350D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242594
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-S350D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1108.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

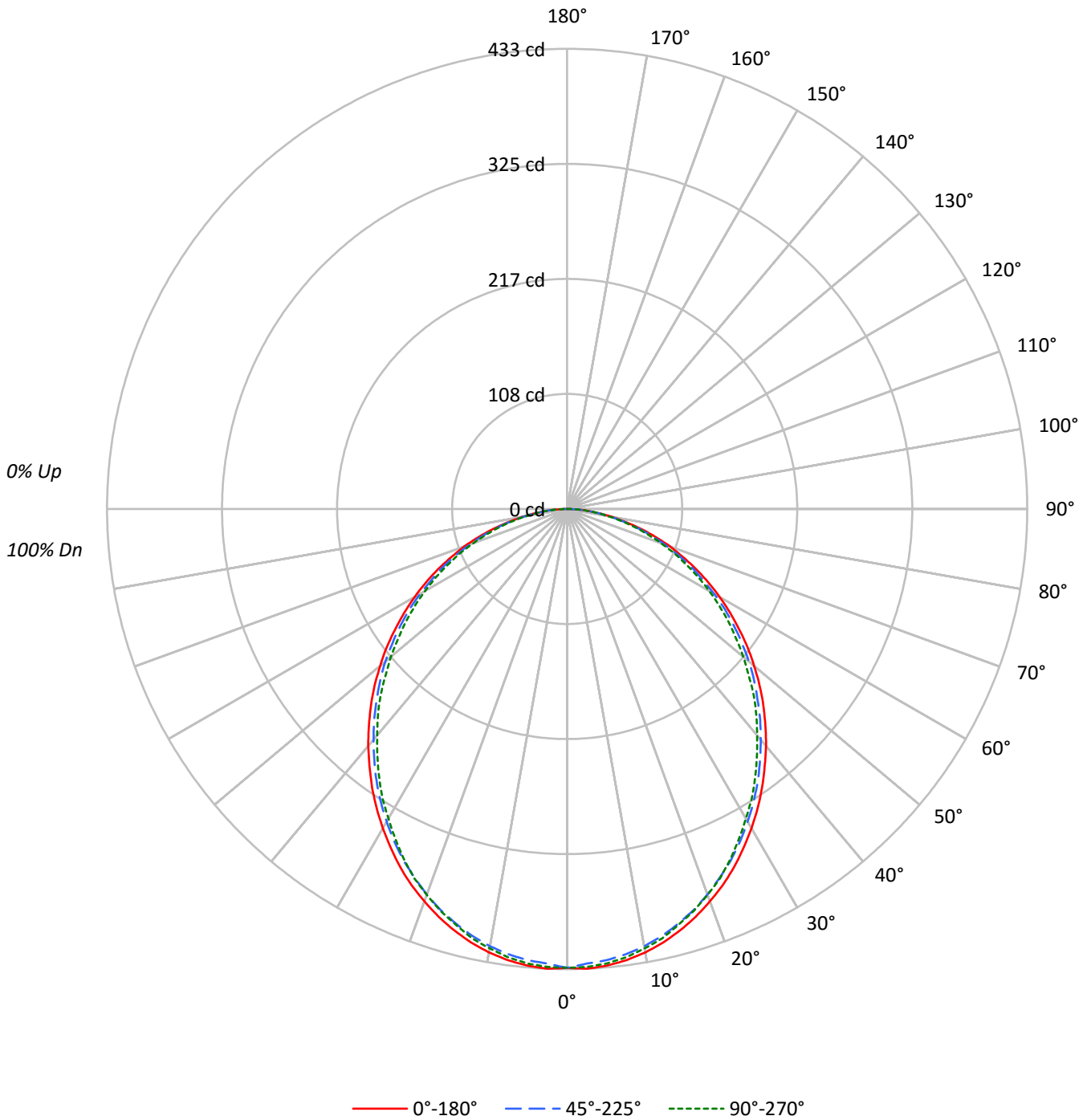
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 77 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 44 |
| 6 | 71 | 58 | 49 | 42 | 69 | 57 | 48 | 42 | 55 | 47 | 42 | 53 | 47 | 41 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 37 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3837 | 3837 | 3837 |
| 5° | 3848 | 3802 | 3830 |
| 10° | 3824 | 3771 | 3790 |
| 15° | 3779 | 3718 | 3727 |
| 20° | 3717 | 3651 | 3655 |
| 25° | 3647 | 3576 | 3565 |
| 30° | 3561 | 3487 | 3454 |
| 35° | 3471 | 3393 | 3348 |
| 40° | 3379 | 3287 | 3227 |
| 45° | 3282 | 3183 | 3121 |
| 50° | 3176 | 3089 | 2994 |
| 55° | 3061 | 2969 | 2873 |
| 60° | 2946 | 2836 | 2748 |
| 65° | 2816 | 2707 | 2598 |
| 70° | 2669 | 2534 | 2435 |
| 75° | 2449 | 2329 | 2270 |
| 80° | 2176 | 2089 | 2037 |
| 85° | 1907 | 1836 | 1795 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 40.7 | 3.7 |
| 10°-20° | 114.6 | 10.3 |
| 20°-30° | 168.7 | 15.2 |
| 30°-40° | 196.1 | 17.7 |
| 40°-50° | 196.1 | 17.7 |
| 50°-60° | 171.5 | 15.5 |
| 60°-70° | 127.3 | 11.5 |
| 70°-80° | 72.2 | 6.5 |
| 80°-90° | 20.7 | 1.9 |
| 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° | 324.0 | 29.2 |
| 0°-40° | 520.1 | 46.9 |
| 0°-60° | 887.7 | 80.1 |
| 0°-90° | 1108.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1108.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 432 | 432 | 432 | 432 | 432 | |
| 5° | 431 | 430 | 426 | 430 | 429 | 41 |
| 15° | 411 | 409 | 404 | 406 | 405 | 116 |
| 25° | 372 | 369 | 365 | 365 | 364 | 171 |
| 35° | 320 | 318 | 313 | 310 | 308 | 200 |
| 45° | 261 | 259 | 253 | 249 | 248 | 201 |
| 55° | 198 | 196 | 192 | 188 | 185 | 177 |
| 65° | 134 | 132 | 129 | 125 | 124 | 132 |
| 75° | 71 | 70 | 68 | 66 | 66 | 76 |
| 85° | 19 | 19 | 18 | 18 | 18 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P242594

CATALOG NUMBER: S124DR-S350D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 431.7 | 431.7 | 431.7 | 431.7 | 431.7 |
| 2.5° | 433.0 | 432.0 | 428.2 | 431.7 | 431.3 |
| 5° | 431.3 | 429.9 | 426.1 | 429.9 | 429.2 |
| 7.5° | 428.2 | 426.8 | 422.7 | 425.8 | 425.4 |
| 10° | 423.7 | 422.3 | 417.8 | 420.6 | 419.9 |
| 12.5° | 417.8 | 416.4 | 411.6 | 414.7 | 413.7 |
| 15° | 410.6 | 409.2 | 404.0 | 406.1 | 405.0 |
| 17.5° | 402.3 | 400.5 | 395.7 | 397.1 | 396.4 |
| 20° | 392.9 | 391.2 | 386.0 | 387.0 | 386.4 |
| 22.5° | 382.9 | 380.5 | 375.3 | 377.4 | 376.0 |
| 25° | 371.8 | 369.4 | 364.6 | 364.9 | 363.5 |
| 27.5° | 359.4 | 357.0 | 352.5 | 351.8 | 350.0 |
| 30° | 346.9 | 344.2 | 339.7 | 338.3 | 336.5 |
| 32.5° | 333.8 | 331.4 | 326.5 | 324.8 | 323.1 |
| 35° | 319.9 | 317.5 | 312.7 | 310.3 | 308.5 |
| 37.5° | 305.4 | 303.3 | 298.2 | 295.7 | 293.3 |
| 40° | 291.2 | 288.5 | 283.3 | 279.8 | 278.1 |
| 42.5° | 276.0 | 274.6 | 268.8 | 264.6 | 263.6 |
| 45° | 261.1 | 258.7 | 253.2 | 249.4 | 248.3 |
| 47.5° | 245.6 | 243.8 | 238.7 | 234.5 | 231.7 |
| 50° | 229.7 | 228.3 | 223.4 | 218.6 | 216.5 |
| 52.5° | 214.1 | 212.4 | 207.2 | 203.0 | 200.3 |
| 55° | 197.5 | 196.5 | 191.6 | 187.5 | 185.4 |
| 57.5° | 181.9 | 180.9 | 176.1 | 171.9 | 169.8 |
| 60° | 165.7 | 163.9 | 159.5 | 156.3 | 154.6 |
| 62.5° | 149.8 | 148.4 | 143.5 | 140.8 | 139.0 |
| 65° | 133.9 | 132.1 | 128.7 | 125.2 | 123.5 |
| 67.5° | 117.6 | 116.2 | 112.8 | 109.3 | 109.0 |
| 70° | 102.7 | 100.3 | 97.5 | 94.8 | 93.7 |
| 72.5° | 86.8 | 84.4 | 82.3 | 80.2 | 79.2 |
| 75° | 71.3 | 69.5 | 67.8 | 66.4 | 66.1 |
| 77.5° | 56.0 | 55.3 | 53.6 | 53.3 | 52.2 |
| 80° | 42.5 | 41.5 | 40.8 | 40.1 | 39.8 |
| 82.5° | 29.4 | 29.1 | 29.1 | 28.7 | 28.4 |
| 85° | 18.7 | 18.7 | 18.0 | 18.0 | 17.6 |
| 87.5° | 9.0 | 8.6 | 8.3 | 8.3 | 8.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)