

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: P243557

Luminaire Tested: **S124RDR-H350D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243557
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1059.6 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

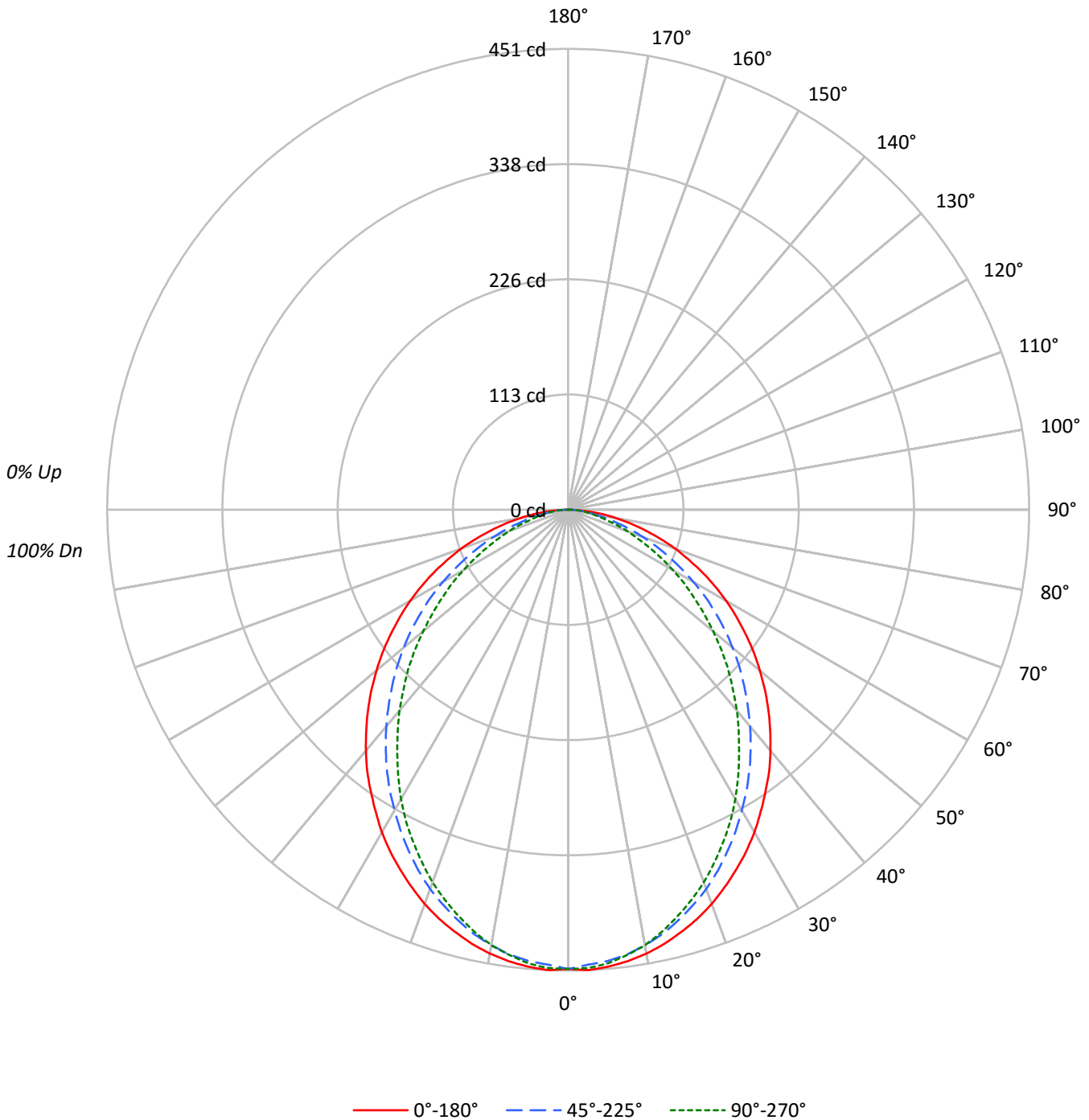
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 80 | 97 | 90 | 84 | 79 | 87 | 82 | 78 | 84 | 79 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 74 | 69 | 65 | 72 | 67 | 64 | 61 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 64 | 57 | 69 | 62 | 57 | 67 | 61 | 56 | 64 | 59 | 55 | 53 |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 54 | 49 | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 44 | 55 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 49 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 34 | 33 |
| 9 | 58 | 45 | 37 | 32 | 57 | 45 | 37 | 32 | 44 | 37 | 32 | 42 | 36 | 31 | 41 | 36 | 31 | 30 |
| 10 | 55 | 42 | 34 | 29 | 54 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 39 | 33 | 29 | 27 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3995 | 3995 | 3995 |
| 5° | 4006 | 3956 | 3977 |
| 10° | 3981 | 3906 | 3906 |
| 15° | 3937 | 3830 | 3793 |
| 20° | 3884 | 3736 | 3670 |
| 25° | 3812 | 3617 | 3519 |
| 30° | 3741 | 3486 | 3356 |
| 35° | 3653 | 3357 | 3163 |
| 40° | 3572 | 3213 | 2979 |
| 45° | 3481 | 3060 | 2784 |
| 50° | 3384 | 2903 | 2560 |
| 55° | 3279 | 2724 | 2334 |
| 60° | 3177 | 2517 | 2100 |
| 65° | 3041 | 2274 | 1834 |
| 70° | 2895 | 2009 | 1596 |
| 75° | 2675 | 1673 | 1298 |
| 80° | 2447 | 1305 | 1188 |
| 85° | 2162 | 1254 | 1183 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 42.3 | 4.0 |
| 10°-20° | 118.0 | 11.1 |
| 20°-30° | 171.1 | 16.2 |
| 30°-40° | 195.1 | 18.4 |
| 40°-50° | 189.8 | 17.9 |
| 50°-60° | 159.4 | 15.0 |
| 60°-70° | 111.1 | 10.5 |
| 70°-80° | 57.4 | 5.4 |
| 80°-90° | 15.5 | 1.5 |
| 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° | 331.4 | 31.3 |
| 0°-40° | 526.5 | 49.7 |
| 0°-60° | 875.7 | 82.6 |
| 0°-90° | 1059.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1059.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 449 | 449 | 449 | 449 | 449 | |
| 5° | 449 | 448 | 443 | 447 | 446 | 43 |
| 15° | 428 | 424 | 416 | 416 | 412 | 121 |
| 25° | 389 | 381 | 369 | 364 | 359 | 179 |
| 35° | 337 | 326 | 309 | 298 | 292 | 211 |
| 45° | 277 | 264 | 243 | 228 | 222 | 214 |
| 55° | 212 | 198 | 176 | 158 | 151 | 189 |
| 65° | 145 | 131 | 108 | 92 | 87 | 143 |
| 75° | 78 | 66 | 49 | 41 | 38 | 83 |
| 85° | 21 | 14 | 12 | 12 | 12 | 24 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P243557

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 449.4 | 449.4 | 449.4 | 449.4 | 449.4 |
| 2.5° | 451.0 | 449.7 | 445.7 | 449.4 | 449.0 |
| 5° | 449.0 | 447.7 | 443.4 | 446.7 | 445.7 |
| 7.5° | 445.7 | 444.1 | 439.1 | 441.4 | 439.7 |
| 10° | 441.1 | 439.4 | 432.8 | 434.4 | 432.8 |
| 12.5° | 435.1 | 432.8 | 425.5 | 425.8 | 423.2 |
| 15° | 427.8 | 424.5 | 416.2 | 415.5 | 412.2 |
| 17.5° | 419.8 | 415.5 | 405.9 | 404.3 | 400.6 |
| 20° | 410.6 | 405.3 | 395.0 | 391.3 | 388.0 |
| 22.5° | 399.9 | 393.6 | 382.4 | 378.1 | 373.7 |
| 25° | 388.7 | 381.4 | 368.8 | 363.5 | 358.8 |
| 27.5° | 377.1 | 368.4 | 354.8 | 348.2 | 343.6 |
| 30° | 364.5 | 354.5 | 339.6 | 332.0 | 327.0 |
| 32.5° | 350.5 | 340.6 | 325.0 | 315.7 | 309.4 |
| 35° | 336.6 | 326.3 | 309.4 | 297.8 | 291.5 |
| 37.5° | 323.0 | 311.4 | 293.2 | 281.2 | 273.9 |
| 40° | 307.8 | 295.5 | 276.9 | 263.3 | 256.7 |
| 42.5° | 292.5 | 279.9 | 260.0 | 245.7 | 238.4 |
| 45° | 276.9 | 263.6 | 243.4 | 227.8 | 221.5 |
| 47.5° | 261.0 | 247.7 | 226.8 | 210.6 | 203.3 |
| 50° | 244.7 | 231.5 | 209.9 | 192.0 | 185.1 |
| 52.5° | 228.8 | 214.9 | 193.3 | 175.1 | 167.8 |
| 55° | 211.6 | 198.0 | 175.8 | 157.9 | 150.6 |
| 57.5° | 195.0 | 180.7 | 159.2 | 140.9 | 135.0 |
| 60° | 178.7 | 164.5 | 141.6 | 124.0 | 118.1 |
| 62.5° | 161.5 | 147.2 | 124.7 | 107.8 | 102.5 |
| 65° | 144.6 | 130.7 | 108.1 | 92.5 | 87.2 |
| 67.5° | 127.3 | 114.7 | 92.9 | 77.9 | 73.6 |
| 70° | 111.4 | 97.2 | 77.3 | 64.3 | 61.4 |
| 72.5° | 94.5 | 81.9 | 62.7 | 52.1 | 49.7 |
| 75° | 77.9 | 66.0 | 48.7 | 40.8 | 37.8 |
| 77.5° | 62.7 | 51.1 | 36.8 | 30.2 | 30.2 |
| 80° | 47.8 | 37.5 | 25.5 | 23.9 | 23.2 |
| 82.5° | 33.8 | 24.2 | 18.9 | 17.6 | 17.2 |
| 85° | 21.2 | 13.6 | 12.3 | 11.6 | 11.6 |
| 87.5° | 10.3 | 6.3 | 6.3 | 6.0 | 6.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)