

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: G3-1802-639-26

Luminaire Tested: **S124RDR-S795D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: G3-1802-639-26  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDR-S795D835-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3017.7 lumens  
Efficiency: N/A  
Efficacy: 114.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.31' x L: 3.92' x H: 0')  
CIE Type: Direct

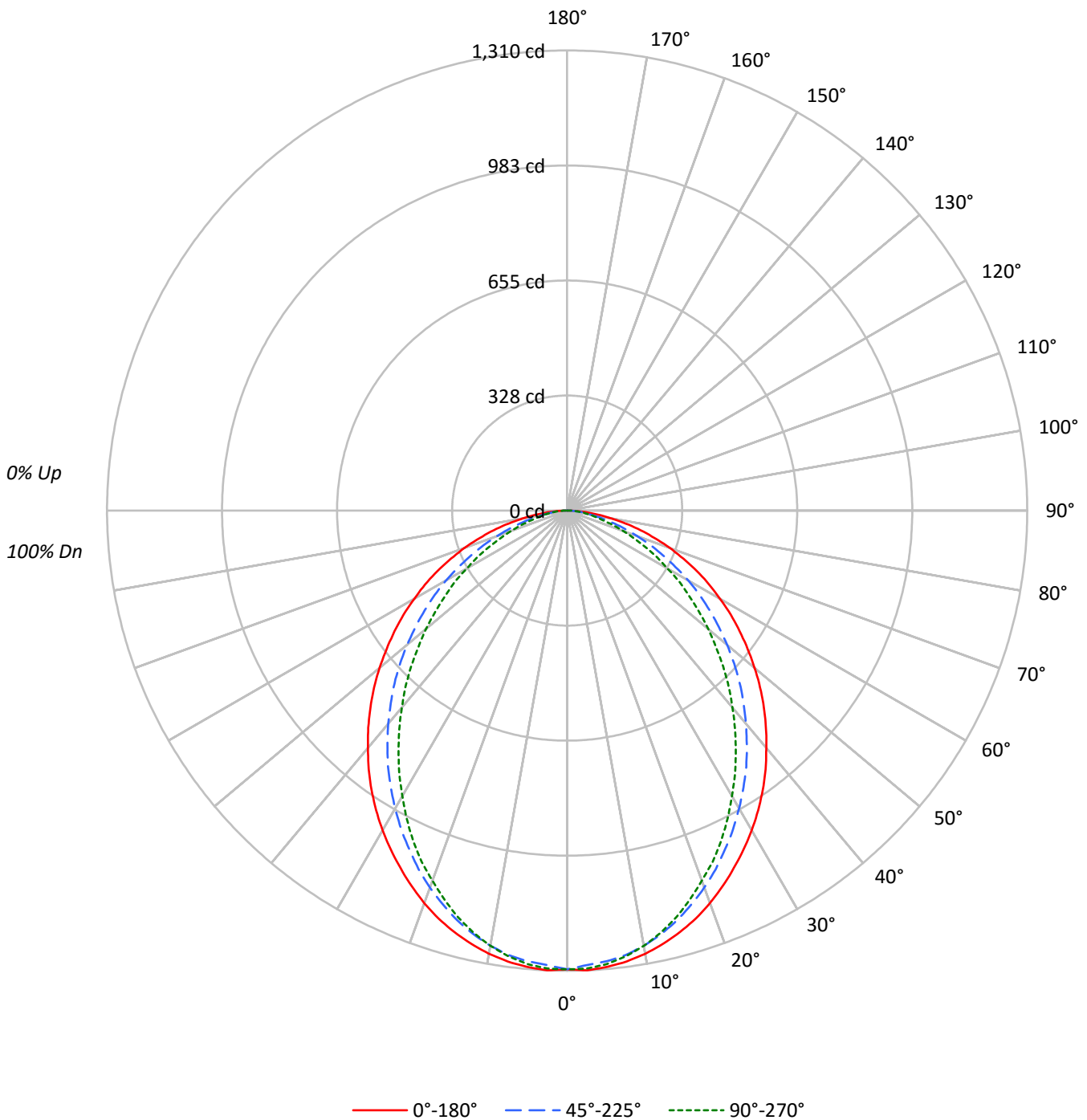
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 74  | 72  |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 75  | 69  | 65  | 72  | 68  | 64  | 62  |
| 4   | 84  | 73  | 65  | 58  | 82  | 72  | 64  | 58  | 69  | 62  | 57  | 67  | 61  | 56  | 65  | 60  | 56  | 54  |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 56  | 50  | 62  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 47  |
| 6   | 72  | 59  | 51  | 45  | 70  | 58  | 50  | 44  | 57  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 43  | 41  |
| 7   | 67  | 54  | 46  | 40  | 65  | 53  | 45  | 40  | 52  | 45  | 39  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |
| 8   | 63  | 50  | 41  | 36  | 61  | 49  | 41  | 36  | 48  | 40  | 35  | 46  | 40  | 35  | 45  | 39  | 35  | 33  |
| 9   | 59  | 46  | 38  | 32  | 57  | 45  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 32  | 42  | 36  | 32  | 30  |
| 10  | 55  | 42  | 35  | 29  | 54  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  | 27  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11485 | 11485 | 11485 |
| 5°  | 11512 | 11370 | 11441 |
| 10° | 11439 | 11234 | 11234 |
| 15° | 11308 | 10998 | 10916 |
| 20° | 11128 | 10688 | 10491 |
| 25° | 10897 | 10325 | 10063 |
| 30° | 10673 | 9942  | 9525  |
| 35° | 10425 | 9544  | 8986  |
| 40° | 10126 | 9092  | 8404  |
| 45° | 9850  | 8644  | 7810  |
| 50° | 9536  | 8127  | 7183  |
| 55° | 9199  | 7590  | 6501  |
| 60° | 8830  | 7000  | 5804  |
| 65° | 8490  | 6264  | 5119  |
| 70° | 7997  | 5451  | 4345  |
| 75° | 7373  | 4519  | 3534  |
| 80° | 6432  | 3444  | 3241  |
| 85° | 5449  | 3128  | 2926  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 122.8  | 4.1       |
| 10°-20°   | 342.4  | 11.3      |
| 20°-30°   | 494.4  | 16.4      |
| 30°-40°   | 560.3  | 18.6      |
| 40°-50°   | 541.0  | 17.9      |
| 50°-60°   | 449.7  | 14.9      |
| 60°-70°   | 310.4  | 10.3      |
| 70°-80°   | 156.9  | 5.2       |
| 80°-90°   | 39.8   | 1.3       |
| 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°    | 959.6  | 31.8      |
| 0°-40°    | 1519.9 | 50.4      |
| 0°-60°    | 2510.5 | 83.2      |
| 0°-90°    | 3017.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3017.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1306 | 1306  | 1306 | 1306  | 1306 |      |
| 5°  | 1304 | 1300  | 1288 | 1298  | 1296 | 124  |
| 15° | 1242 | 1233  | 1208 | 1206  | 1199 | 350  |
| 25° | 1123 | 1105  | 1064 | 1047  | 1037 | 517  |
| 35° | 971  | 939   | 889  | 855   | 837  | 607  |
| 45° | 792  | 755   | 695  | 646   | 628  | 611  |
| 55° | 600  | 560   | 495  | 443   | 424  | 537  |
| 65° | 408  | 365   | 301  | 258   | 246  | 403  |
| 75° | 217  | 180   | 133  | 110   | 104  | 229  |
| 85° | 54   | 34    | 31   | 29    | 29   | 62   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°   | 22.5° | 45°  | 67.5° | 90°  |
|-------|------|-------|------|-------|------|
| 0°    | 1306 | 1306  | 1306 | 1306  | 1306 |
| 2.5°  | 1310 | 1306  | 1295 | 1306  | 1305 |
| 5°    | 1304 | 1300  | 1288 | 1298  | 1296 |
| 7.5°  | 1295 | 1291  | 1276 | 1283  | 1280 |
| 10°   | 1281 | 1276  | 1258 | 1262  | 1258 |
| 12.5° | 1263 | 1257  | 1235 | 1237  | 1231 |
| 15°   | 1242 | 1233  | 1208 | 1206  | 1199 |
| 17.5° | 1218 | 1205  | 1176 | 1171  | 1161 |
| 20°   | 1189 | 1176  | 1142 | 1134  | 1121 |
| 22.5° | 1157 | 1142  | 1105 | 1092  | 1082 |
| 25°   | 1123 | 1105  | 1064 | 1047  | 1037 |
| 27.5° | 1088 | 1066  | 1023 | 1003  | 989  |
| 30°   | 1051 | 1026  | 979  | 954   | 938  |
| 32.5° | 1012 | 983   | 934  | 904   | 889  |
| 35°   | 971  | 939   | 889  | 855   | 837  |
| 37.5° | 928  | 895   | 840  | 803   | 785  |
| 40°   | 882  | 849   | 792  | 750   | 732  |
| 42.5° | 838  | 803   | 743  | 700   | 681  |
| 45°   | 792  | 755   | 695  | 646   | 628  |
| 47.5° | 745  | 707   | 645  | 594   | 574  |
| 50°   | 697  | 658   | 594  | 544   | 525  |
| 52.5° | 648  | 610   | 544  | 493   | 473  |
| 55°   | 600  | 560   | 495  | 443   | 424  |
| 57.5° | 553  | 511   | 447  | 394   | 380  |
| 60°   | 502  | 462   | 398  | 346   | 330  |
| 62.5° | 456  | 414   | 348  | 301   | 289  |
| 65°   | 408  | 365   | 301  | 258   | 246  |
| 67.5° | 358  | 317   | 257  | 219   | 205  |
| 70°   | 311  | 269   | 212  | 179   | 169  |
| 72.5° | 261  | 224   | 171  | 144   | 135  |
| 75°   | 217  | 180   | 133  | 110   | 104  |
| 77.5° | 171  | 139   | 99   | 83    | 81   |
| 80°   | 127  | 98    | 68   | 65    | 64   |
| 82.5° | 89   | 63    | 49   | 47    | 46   |
| 85°   | 54   | 34    | 31   | 29    | 29   |
| 87.5° | 23   | 15    | 14   | 13    | 14   |
| 90°   | 0    | 0     | 0    | 0     | 0    |

(END OF REPORT)