

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: BALLABS TEST NO. 11794.0

Luminaire Tested: **S244R/3T5**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: BALLABS TEST NO. 11794.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S244R/3T5
Description: 3/28W T5 2x4'RECESSED GRID MNT LUMINAIRE w/WHITE REFL
Light Source: -
FP28WT5/835
Ballast/Driver: -

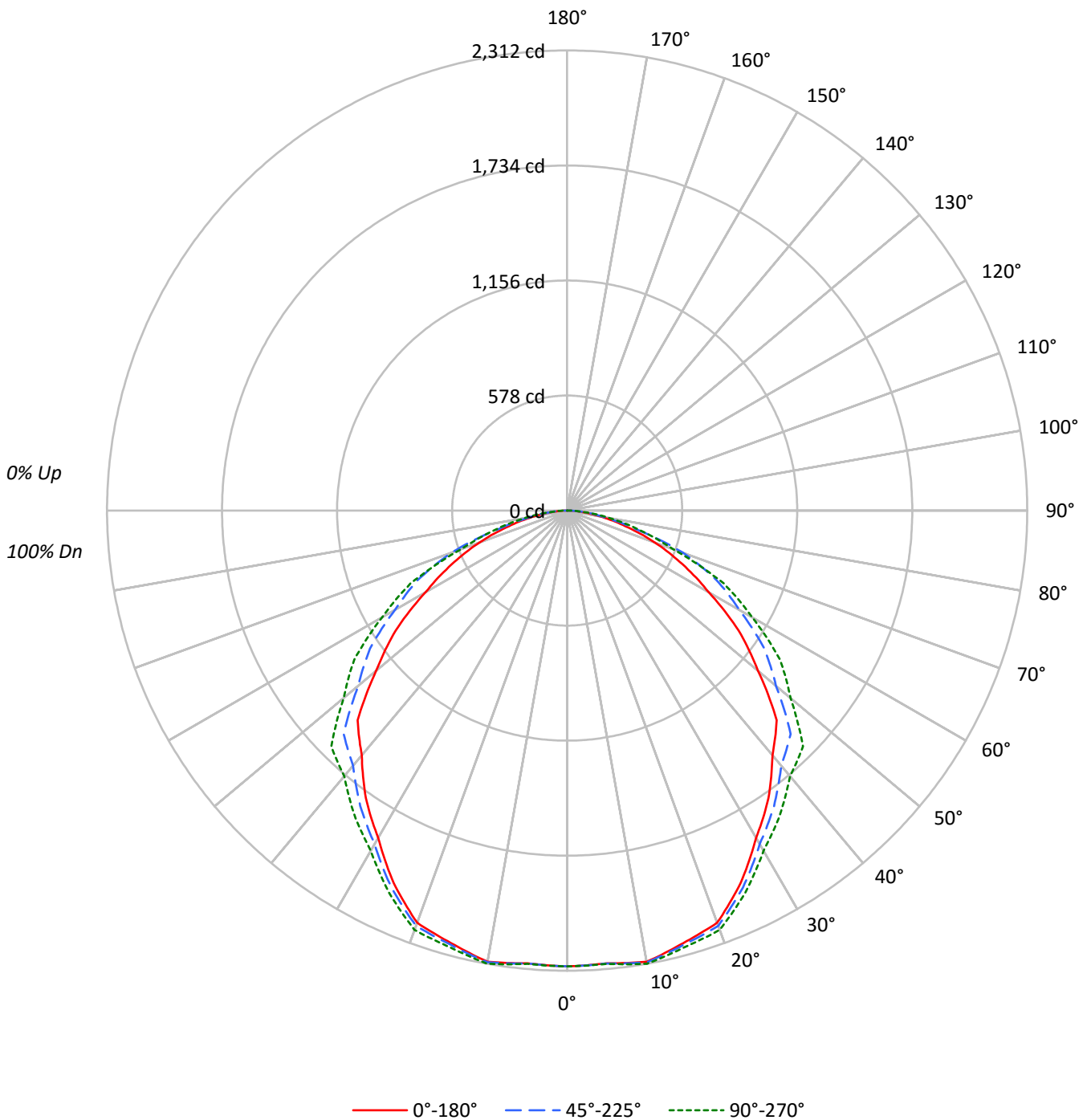
Summary

Lumens per Lamp: 2900 (3 lamps)
Luminaire Lumens: 6468.4 lumens
Efficiency: 74.3%
Efficacy: 66.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 97
Input Voltage (V): NR
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





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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 | 89 | 89 | 89 | 89 | 86 | 86 | 86 | 86 | 83 | 83 | 83 | 79 | 79 | 79 | 76 | 76 | 76 | 74 |
| 1 | 81 | 78 | 75 | 72 | 79 | 76 | 73 | 71 | 73 | 70 | 68 | 70 | 68 | 66 | 67 | 66 | 64 | 63 |
| 2 | 74 | 68 | 63 | 59 | 72 | 66 | 62 | 58 | 64 | 60 | 57 | 61 | 58 | 55 | 59 | 56 | 54 | 52 |
| 3 | 67 | 60 | 54 | 49 | 66 | 58 | 53 | 48 | 56 | 51 | 48 | 54 | 50 | 47 | 52 | 49 | 46 | 44 |
| 4 | 62 | 53 | 46 | 41 | 60 | 52 | 46 | 41 | 50 | 45 | 41 | 48 | 44 | 40 | 47 | 43 | 39 | 38 |
| 5 | 57 | 47 | 41 | 36 | 55 | 46 | 40 | 35 | 45 | 39 | 35 | 43 | 39 | 35 | 42 | 38 | 34 | 33 |
| 6 | 52 | 43 | 36 | 31 | 51 | 42 | 36 | 31 | 40 | 35 | 31 | 39 | 34 | 30 | 38 | 34 | 30 | 29 |
| 7 | 49 | 39 | 32 | 28 | 47 | 38 | 32 | 27 | 37 | 31 | 27 | 36 | 31 | 27 | 35 | 30 | 27 | 25 |
| 8 | 45 | 35 | 29 | 25 | 44 | 35 | 29 | 24 | 34 | 28 | 24 | 33 | 28 | 24 | 32 | 27 | 24 | 23 |
| 9 | 42 | 32 | 26 | 22 | 41 | 32 | 26 | 22 | 31 | 26 | 22 | 30 | 25 | 22 | 29 | 25 | 22 | 20 |
| 10 | 40 | 30 | 24 | 20 | 39 | 29 | 24 | 20 | 29 | 23 | 20 | 28 | 23 | 20 | 27 | 23 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3283 | 3283 | 3283 |
| 5° | 3285 | 3287 | 3289 |
| 10° | 3351 | 3355 | 3365 |
| 15° | 3339 | 3352 | 3372 |
| 20° | 3362 | 3387 | 3420 |
| 25° | 3265 | 3306 | 3350 |
| 30° | 3143 | 3203 | 3267 |
| 35° | 3087 | 3171 | 3264 |
| 40° | 3003 | 3131 | 3260 |
| 45° | 3019 | 3219 | 3398 |
| 50° | 2792 | 3055 | 3267 |
| 55° | 2629 | 3022 | 3264 |
| 60° | 2357 | 2864 | 3079 |
| 65° | 2171 | 2812 | 2948 |
| 70° | 1962 | 2586 | 2364 |
| 75° | 1678 | 1955 | 2077 |
| 80° | 1379 | 1544 | 1783 |
| 85° | 1102 | 1283 | 1382 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 218.9 | 3.4 | 2.5 |
| 10°-20° | 640.1 | 9.9 | 7.4 |
| 20°-30° | 961.4 | 14.9 | 11.1 |
| 30°-40° | 1133.7 | 17.5 | 13.0 |
| 40°-50° | 1199.1 | 18.5 | 13.8 |
| 50°-60° | 1057.6 | 16.3 | 12.2 |
| 60°-70° | 773.5 | 12.0 | 8.9 |
| 70°-80° | 388.8 | 6.0 | 4.5 |
| 80°-90° | 95.4 | 1.5 | 1.1 |
| 90°-100° | 0.0 | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 | 0.0 |
| 0°-30° | 1820.5 | 28.1 | 20.9 |
| 0°-40° | 2954.1 | 45.7 | 34.0 |
| 0°-60° | 5210.8 | 80.6 | 59.9 |
| 0°-90° | 6468.4 | 100.0 | 74.3 |
| 90°-120° | 0.0 | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 | 0.0 |
| 0°-180° | 6468.4 | 100.0 | 74.3 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2290 | 2290 | 2290 | 2290 | 2290 | |
| 5° | 2283 | 2284 | 2284 | 2286 | 2286 | 219 |
| 15° | 2250 | 2253 | 2259 | 2267 | 2272 | 637 |
| 25° | 2064 | 2070 | 2090 | 2108 | 2118 | 949 |
| 35° | 1764 | 1779 | 1812 | 1848 | 1865 | 1101 |
| 45° | 1489 | 1518 | 1588 | 1650 | 1676 | 1127 |
| 55° | 1052 | 1108 | 1209 | 1280 | 1306 | 934 |
| 65° | 640 | 720 | 829 | 866 | 869 | 636 |
| 75° | 303 | 366 | 353 | 365 | 375 | 327 |
| 85° | 67 | 70 | 78 | 83 | 84 | 82 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-----|------|-------|------|-------|------|
| 0° | 2290 | 2290 | 2290 | 2290 | 2290 |
| 5° | 2283 | 2284 | 2284 | 2286 | 2286 |
| 10° | 2302 | 2302 | 2305 | 2309 | 2312 |
| 15° | 2250 | 2253 | 2259 | 2267 | 2272 |
| 20° | 2204 | 2207 | 2220 | 2234 | 2242 |
| 25° | 2064 | 2070 | 2090 | 2108 | 2118 |
| 30° | 1899 | 1909 | 1935 | 1959 | 1974 |
| 35° | 1764 | 1779 | 1812 | 1848 | 1865 |
| 40° | 1605 | 1626 | 1673 | 1720 | 1742 |
| 45° | 1489 | 1518 | 1588 | 1650 | 1676 |
| 50° | 1252 | 1290 | 1370 | 1439 | 1465 |
| 55° | 1052 | 1108 | 1209 | 1280 | 1306 |
| 60° | 822 | 892 | 999 | 1060 | 1074 |
| 65° | 640 | 720 | 829 | 866 | 869 |
| 70° | 468 | 542 | 617 | 588 | 564 |
| 75° | 303 | 366 | 353 | 365 | 375 |
| 80° | 167 | 203 | 187 | 207 | 216 |
| 85° | 67 | 70 | 78 | 83 | 84 |
| 90° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)