

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: METALUX

Report Number: P292951

Luminaire Tested: **24GR-LD5-85-F1-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P292951
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-12)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-85-F1-UNV-L83050-W2A1-U-4000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8703.0 lumens
Efficiency: N/A
Efficacy: 136.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.25
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

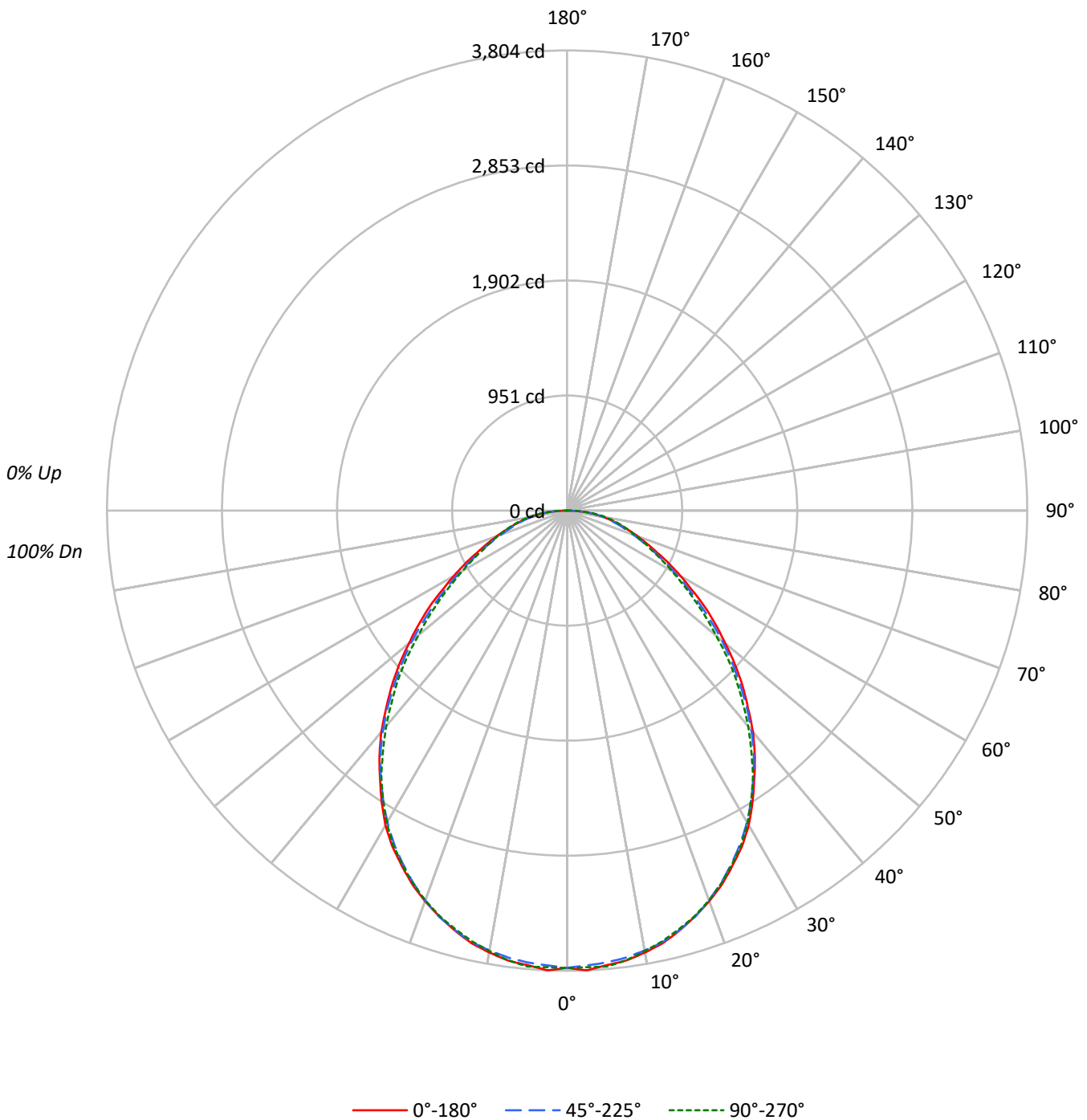
Input Watts (W): 63.798
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P292951

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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 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 72 |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5086 | 5086 | 5086 |
| 5° | 5094 | 5065 | 5108 |
| 10° | 5067 | 5045 | 5050 |
| 15° | 5003 | 4998 | 4986 |
| 20° | 4919 | 4909 | 4909 |
| 25° | 4805 | 4778 | 4789 |
| 30° | 4666 | 4618 | 4632 |
| 35° | 4432 | 4411 | 4399 |
| 40° | 4196 | 4159 | 4086 |
| 45° | 3901 | 3832 | 3757 |
| 50° | 3573 | 3494 | 3363 |
| 55° | 3263 | 3116 | 3011 |
| 60° | 2908 | 2768 | 2695 |
| 65° | 2617 | 2480 | 2446 |
| 70° | 2429 | 2281 | 2373 |
| 75° | 2324 | 2221 | 2407 |
| 80° | 2323 | 2323 | 2573 |
| 85° | 2411 | 2439 | 2716 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 357.0 | 4.1 |
| 10°-20° | 1010.3 | 11.6 |
| 20°-30° | 1482.8 | 17.0 |
| 30°-40° | 1676.4 | 19.3 |
| 40°-50° | 1549.3 | 17.8 |
| 50°-60° | 1193.7 | 13.7 |
| 60°-70° | 790.5 | 9.1 |
| 70°-80° | 470.6 | 5.4 |
| 80°-90° | 172.4 | 2.0 |
| 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° | 2850.1 | 32.7 |
| 0°-40° | 4526.6 | 52.0 |
| 0°-60° | 7269.6 | 83.5 |
| 0°-90° | 8703.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 8703.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3780 | 3780 | 3780 | 3780 | 3780 | |
| 5° | 3771 | 3771 | 3750 | 3752 | 3782 | 358 |
| 15° | 3592 | 3585 | 3588 | 3586 | 3579 | 1012 |
| 25° | 3236 | 3228 | 3218 | 3215 | 3226 | 1490 |
| 35° | 2698 | 2694 | 2685 | 2673 | 2678 | 1688 |
| 45° | 2050 | 2036 | 2014 | 1978 | 1975 | 1579 |
| 55° | 1391 | 1362 | 1328 | 1292 | 1284 | 1241 |
| 65° | 822 | 810 | 779 | 772 | 768 | 824 |
| 75° | 447 | 436 | 427 | 447 | 463 | 477 |
| 85° | 156 | 147 | 158 | 174 | 176 | 166 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P292951

CATALOG NUMBER: 24GR-LD5-85-F1-UNV-L83050-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3780.4 | 3780.4 | 3780.4 | 3780.4 | 3780.4 |
| 2.5° | 3803.7 | 3784.0 | 3762.4 | 3762.4 | 3778.6 |
| 5° | 3771.4 | 3771.4 | 3749.9 | 3751.7 | 3782.2 |
| 7.5° | 3751.7 | 3740.9 | 3726.5 | 3726.5 | 3749.9 |
| 10° | 3708.6 | 3699.6 | 3692.4 | 3688.8 | 3696.0 |
| 12.5° | 3661.9 | 3647.5 | 3652.9 | 3647.5 | 3645.7 |
| 15° | 3591.9 | 3584.7 | 3588.3 | 3586.5 | 3579.3 |
| 17.5° | 3516.5 | 3512.9 | 3520.1 | 3507.5 | 3512.9 |
| 20° | 3435.7 | 3425.0 | 3428.5 | 3421.4 | 3428.5 |
| 22.5° | 3344.2 | 3337.0 | 3328.0 | 3319.0 | 3333.4 |
| 25° | 3236.5 | 3227.5 | 3218.5 | 3214.9 | 3225.7 |
| 27.5° | 3128.8 | 3114.4 | 3101.8 | 3098.3 | 3114.4 |
| 30° | 3003.1 | 2987.0 | 2972.6 | 2969.0 | 2981.6 |
| 32.5° | 2854.1 | 2850.5 | 2832.6 | 2825.4 | 2830.8 |
| 35° | 2698.0 | 2694.4 | 2685.4 | 2672.8 | 2678.2 |
| 37.5° | 2549.0 | 2547.2 | 2534.6 | 2513.1 | 2498.7 |
| 40° | 2389.2 | 2376.6 | 2367.7 | 2337.2 | 2326.4 |
| 42.5° | 2213.3 | 2209.7 | 2193.6 | 2159.4 | 2146.9 |
| 45° | 2049.9 | 2035.6 | 2014.0 | 1978.1 | 1974.6 |
| 47.5° | 1881.2 | 1861.5 | 1841.7 | 1796.8 | 1795.1 |
| 50° | 1707.1 | 1692.7 | 1669.4 | 1624.5 | 1606.6 |
| 52.5° | 1545.5 | 1525.8 | 1493.5 | 1450.4 | 1441.4 |
| 55° | 1391.2 | 1362.4 | 1328.3 | 1292.4 | 1283.5 |
| 57.5° | 1226.0 | 1213.5 | 1172.2 | 1143.4 | 1132.7 |
| 60° | 1080.6 | 1069.9 | 1028.6 | 1001.6 | 1001.6 |
| 62.5° | 949.6 | 933.4 | 897.5 | 879.6 | 879.6 |
| 65° | 822.1 | 809.6 | 779.1 | 771.9 | 768.3 |
| 67.5° | 712.6 | 696.5 | 674.9 | 673.1 | 682.1 |
| 70° | 617.5 | 597.8 | 579.8 | 597.8 | 603.1 |
| 72.5° | 527.7 | 515.2 | 499.0 | 522.4 | 533.1 |
| 75° | 447.0 | 436.2 | 427.2 | 447.0 | 463.1 |
| 77.5° | 373.4 | 362.6 | 362.6 | 384.1 | 398.5 |
| 80° | 299.8 | 292.6 | 299.8 | 317.7 | 332.1 |
| 82.5° | 229.8 | 224.4 | 233.4 | 251.3 | 260.3 |
| 85° | 156.2 | 147.2 | 158.0 | 174.1 | 175.9 |
| 87.5° | 73.6 | 71.8 | 79.0 | 89.8 | 88.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)