

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: P475625

Luminaire Tested: **24GR-LD5-180-F125-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475625
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-180-F125-UNV-L840-CD1-U
Description: GR 2'X4' LED TROFFER w/ F125 LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18408.7 lumens
Efficiency: N/A
Efficacy: 145.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

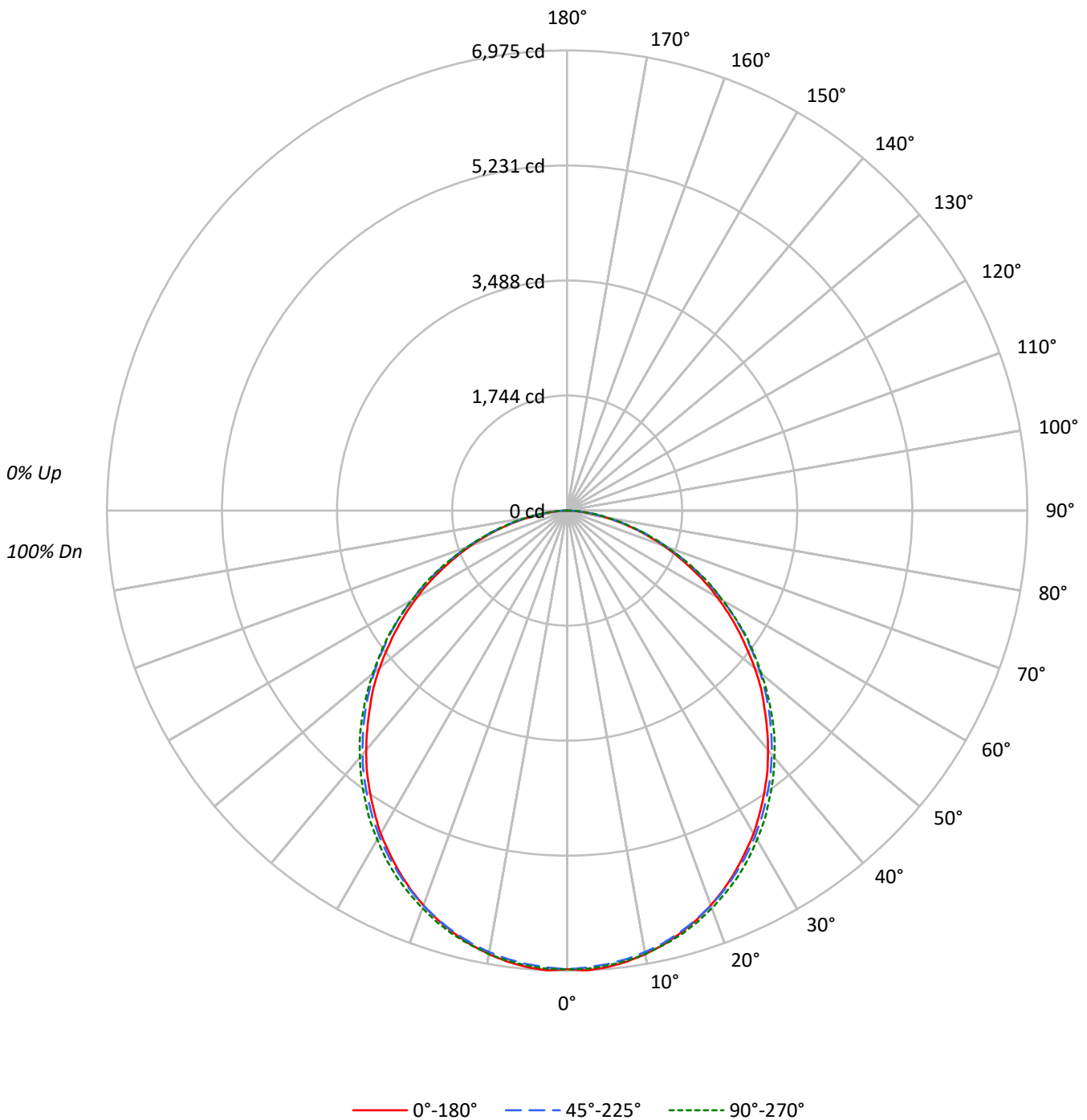
Input Watts (W): 126.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 68 | 61 | 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 | 45 |
| 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 | 51 | 43 | 37 | 50 | 43 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9354 | 9354 | 9354 |
| 5° | 9383 | 9324 | 9350 |
| 10° | 9329 | 9284 | 9323 |
| 15° | 9236 | 9216 | 9273 |
| 20° | 9118 | 9121 | 9182 |
| 25° | 8959 | 8995 | 9089 |
| 30° | 8784 | 8851 | 8943 |
| 35° | 8558 | 8675 | 8776 |
| 40° | 8323 | 8473 | 8585 |
| 45° | 8048 | 8244 | 8350 |
| 50° | 7768 | 7995 | 8049 |
| 55° | 7432 | 7699 | 7755 |
| 60° | 7076 | 7318 | 7326 |
| 65° | 6612 | 6867 | 6904 |
| 70° | 6125 | 6297 | 6277 |
| 75° | 5441 | 5636 | 5653 |
| 80° | 4552 | 4714 | 4892 |
| 85° | 3415 | 3673 | 3802 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 656.8 | 3.6 |
| 10°-20° | 1868.9 | 10.2 |
| 20°-30° | 2793.6 | 15.2 |
| 30°-40° | 3300.5 | 17.9 |
| 40°-50° | 3331.9 | 18.1 |
| 50°-60° | 2907.7 | 15.8 |
| 60°-70° | 2119.8 | 11.5 |
| 70°-80° | 1143.2 | 6.2 |
| 80°-90° | 286.2 | 1.6 |
| 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° | 5319.3 | 28.9 |
| 0°-40° | 8619.9 | 46.8 |
| 0°-60° | 14859.5 | 80.7 |
| 0°-90° | 18408.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 18408.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 6952 | 6952 | 6952 | 6952 | 6952 | |
| 5° | 6947 | 6922 | 6903 | 6909 | 6923 | 659 |
| 15° | 6631 | 6617 | 6616 | 6632 | 6657 | 1870 |
| 25° | 6035 | 6036 | 6059 | 6098 | 6122 | 2779 |
| 35° | 5210 | 5225 | 5281 | 5332 | 5343 | 3260 |
| 45° | 4230 | 4260 | 4333 | 4387 | 4388 | 3266 |
| 55° | 3168 | 3207 | 3282 | 3294 | 3306 | 2832 |
| 65° | 2077 | 2122 | 2157 | 2161 | 2168 | 2064 |
| 75° | 1047 | 1057 | 1084 | 1088 | 1087 | 1112 |
| 85° | 221 | 226 | 238 | 249 | 246 | 269 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P475625

CATALOG NUMBER: 24GR-LD5-180-F125-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 6952.1 | 6952.1 | 6952.1 | 6952.1 | 6952.1 |
| 2.5° | 6975.1 | 6950.0 | 6930.2 | 6934.4 | 6951.1 |
| 5° | 6946.9 | 6921.9 | 6903.1 | 6909.3 | 6922.9 |
| 7.5° | 6896.8 | 6873.9 | 6859.2 | 6865.5 | 6883.3 |
| 10° | 6827.9 | 6809.2 | 6795.6 | 6805.0 | 6823.8 |
| 12.5° | 6740.3 | 6721.5 | 6716.3 | 6729.8 | 6746.5 |
| 15° | 6630.7 | 6617.1 | 6616.1 | 6631.8 | 6656.8 |
| 17.5° | 6507.6 | 6494.0 | 6501.3 | 6522.2 | 6544.1 |
| 20° | 6367.7 | 6355.2 | 6369.8 | 6398.0 | 6412.6 |
| 22.5° | 6208.1 | 6197.6 | 6223.7 | 6252.9 | 6271.7 |
| 25° | 6034.8 | 6035.9 | 6058.8 | 6097.5 | 6122.5 |
| 27.5° | 5842.8 | 5850.1 | 5884.6 | 5922.1 | 5947.2 |
| 30° | 5654.0 | 5647.7 | 5696.7 | 5737.4 | 5756.2 |
| 32.5° | 5434.8 | 5437.9 | 5495.3 | 5537.1 | 5565.2 |
| 35° | 5210.4 | 5225.1 | 5281.4 | 5332.5 | 5343.0 |
| 37.5° | 4984.0 | 4994.4 | 5062.3 | 5112.3 | 5125.9 |
| 40° | 4738.8 | 4757.5 | 4824.3 | 4871.3 | 4888.0 |
| 42.5° | 4483.1 | 4507.1 | 4579.1 | 4628.1 | 4650.1 |
| 45° | 4229.5 | 4259.8 | 4332.8 | 4387.1 | 4388.1 |
| 47.5° | 3984.3 | 4006.2 | 4077.1 | 4125.2 | 4119.9 |
| 50° | 3710.9 | 3743.2 | 3819.4 | 3848.6 | 3845.5 |
| 52.5° | 3431.2 | 3480.2 | 3550.2 | 3573.1 | 3570.0 |
| 55° | 3168.2 | 3206.8 | 3282.0 | 3294.5 | 3306.0 |
| 57.5° | 2895.8 | 2929.2 | 3010.6 | 3015.9 | 3013.8 |
| 60° | 2629.7 | 2660.0 | 2719.5 | 2734.1 | 2722.6 |
| 62.5° | 2361.6 | 2391.8 | 2445.0 | 2459.6 | 2457.6 |
| 65° | 2076.7 | 2121.5 | 2157.0 | 2161.2 | 2168.5 |
| 67.5° | 1811.6 | 1839.8 | 1874.2 | 1880.5 | 1875.3 |
| 70° | 1557.0 | 1581.0 | 1600.8 | 1605.0 | 1595.6 |
| 72.5° | 1294.0 | 1315.9 | 1344.1 | 1349.3 | 1338.9 |
| 75° | 1046.7 | 1057.1 | 1084.2 | 1088.4 | 1087.4 |
| 77.5° | 806.7 | 815.0 | 834.8 | 850.5 | 852.6 |
| 80° | 587.5 | 590.6 | 608.4 | 619.9 | 631.3 |
| 82.5° | 389.2 | 397.6 | 411.2 | 422.6 | 433.1 |
| 85° | 221.2 | 226.5 | 237.9 | 249.4 | 246.3 |
| 87.5° | 85.6 | 97.1 | 98.1 | 109.6 | 113.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)