Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P#

Luminaire Tested: **8ILED-LD5-18-W-CL-UNV-L835-CD2-U**

Issue Date: 3/3/2020

Report Generated By E9911574 / USPTCWHP6081592

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**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P# |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34177) |
| Test Lab: | INNOVATION CENTER-P3 |
| Issue Date: | 3/3/2020 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | METALUX |
| Catalog Number: | 8ILED-LD5-18-W-CL-UNV-L835-CD2-U |
| Description: | Metalux 8' ILED WITH CLEAR ACRYLIC LENS & FRAME DISTRIBUION |
| Light Source: | (1) 3500 CCT, 80 CRI LEDS |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 16227.0 lumens |
| Efficiency: | N/A |
| Efficacy: | 123.6 lumens/watt |
| Spacing Criteria (0/90/45): | 1.26 / 1.33 / 1.43 |
| Luminous Opening: | Rectangular w/ Sides (W: 0.92' x L: 8' x H: 0.1') |
| CIE Type: | Direct |
| Input Watts (W): | 131.3 |
| Input Voltage (V): | |
| 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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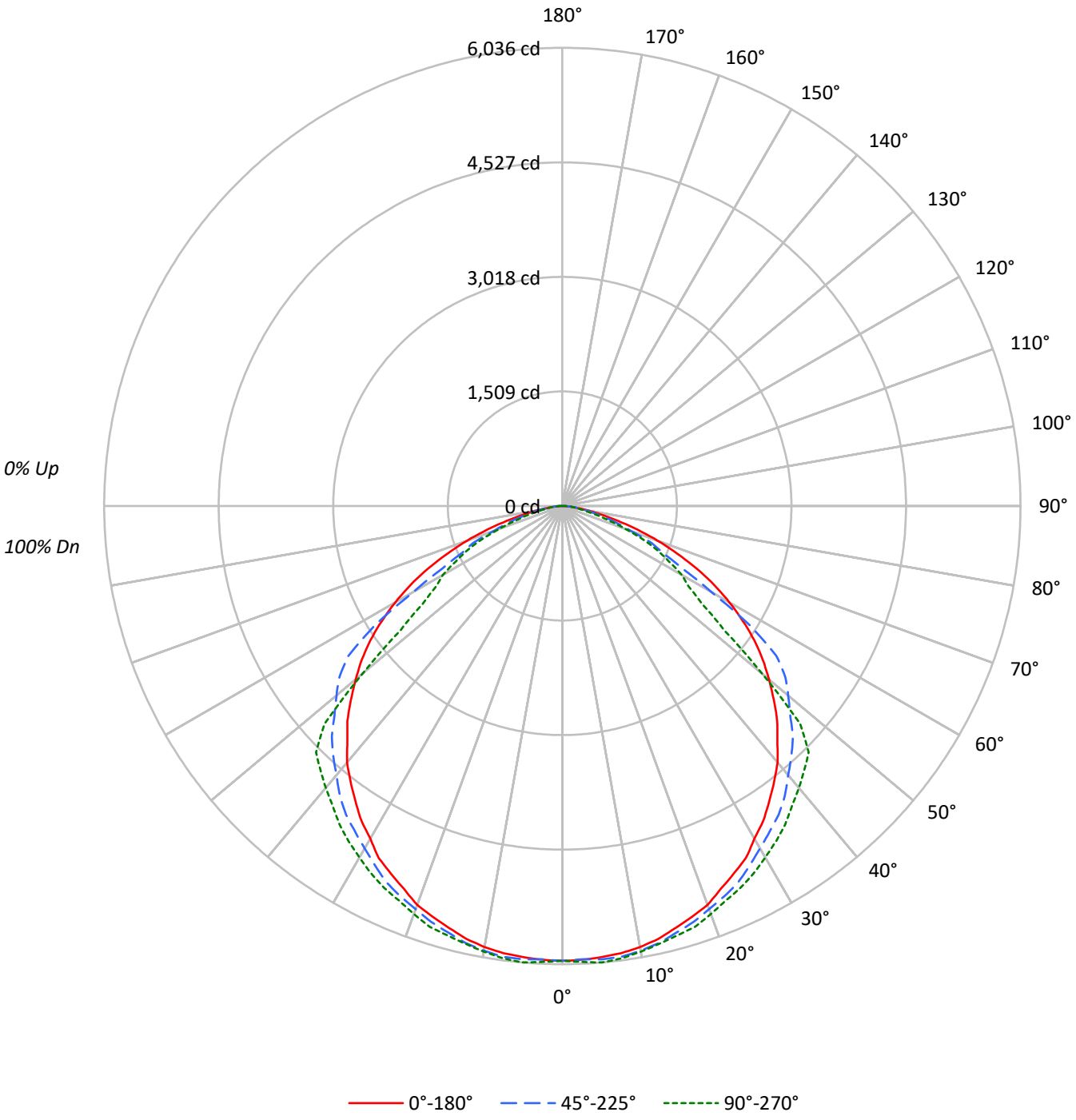
## Luminous Intensity Polar Plot



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## COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 20 | | | | 20 | | | 20 | | | 20 | | | 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 | 102 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 75 | 70 | 65 | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 64 | 58 | 82 | 72 | 64 | 58 | 69 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 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 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 53 | 45 | 39 | 65 | 53 | 44 | 39 | 51 | 44 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 49 | 40 | 35 | 60 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 33 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 8795 | 8795 | 8795 |
| 5° | 8780 | 8766 | 8809 |
| 10° | 8773 | 8733 | 8716 |
| 15° | 8717 | 8639 | 8645 |
| 20° | 8695 | 8562 | 8592 |
| 25° | 8603 | 8525 | 8554 |
| 30° | 8515 | 8411 | 8523 |
| 35° | 8438 | 8395 | 8521 |
| 40° | 8364 | 8271 | 8510 |
| 45° | 8208 | 8208 | 8589 |
| 50° | 7993 | 8045 | 6947 |
| 55° | 7759 | 7846 | 4970 |
| 60° | 7312 | 5798 | 4488 |
| 65° | 6610 | 4257 | 3901 |
| 70° | 5547 | 3346 | 2932 |
| 75° | 4111 | 2483 | 1957 |
| 80° | 2677 | 1747 | 1223 |
| 85° | 1403 | 1057 | 914 |

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**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 571.0 | 3.5 |
| 10°-20° | 1646.2 | 10.1 |
| 20°-30° | 2520.4 | 15.5 |
| 30°-40° | 3102.3 | 19.1 |
| 40°-50° | 3288.1 | 20.3 |
| 50°-60° | 2640.8 | 16.3 |
| 60°-70° | 1641.2 | 10.1 |
| 70°-80° | 675.4 | 4.2 |
| 80°-90° | 141.5 | 0.9 |
| 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° | 4737.6 | 29.2 |
| 0°-40° | 7839.9 | 48.3 |
| 0°-60° | 13768.8 | 84.9 |
| 0°-90° | 16227.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 16227.0 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 5992 | 5992 | 5992 | 5992 | 5992 | |
| 5° | 5965 | 5980 | 5994 | 6026 | 6036 | 567 |
| 15° | 5755 | 5836 | 5816 | 5855 | 5855 | 1627 |
| 25° | 5343 | 5399 | 5475 | 5536 | 5550 | 2465 |
| 35° | 4750 | 4867 | 4967 | 5092 | 5119 | 2974 |
| 45° | 4004 | 4092 | 4294 | 4499 | 4589 | 3080 |
| 55° | 3086 | 3223 | 3442 | 2457 | 2245 | 2747 |
| 65° | 1954 | 2093 | 1452 | 1378 | 1386 | 1926 |
| 75° | 759 | 698 | 578 | 517 | 486 | 832 |
| 85° | 95 | 117 | 124 | 124 | 122 | 136 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | 5992.0 | 5992.0 | 5992.0 | 5992.0 | *5992.0* |
| 2.5° | 5982.3 | 5989.6 | 5977.4 | 6004.2 | *6011.5* |
| 5° | *5965.2* | *5979.8* | *5994.5* | *6026.2* | *6035.9* |
| 7.5° | 5940.8 | 5972.5 | 5989.6 | 6009.1 | *6009.1* |
| 10° | 5899.3 | 5948.1 | 5948.1 | 5955.4 | *5960.3* |
| 12.5° | 5840.7 | 5906.6 | 5894.4 | 5899.3 | *5906.6* |
| 15° | 5755.4 | 5835.9 | 5816.4 | 5855.4 | *5855.4* |
| 17.5° | 5674.8 | 5743.2 | 5745.6 | 5794.4 | *5811.5* |
| 20° | 5591.9 | 5648.0 | 5652.9 | 5723.6 | *5718.8* |
| 22.5° | 5457.7 | 5543.1 | 5567.5 | 5606.5 | *5626.1* |
| 25° | 5343.0 | 5399.2 | 5474.8 | 5535.8 | *5550.4* |
| 27.5° | 5233.3 | 5279.6 | 5340.6 | 5445.5 | *5457.7* |
| 30° | 5060.0 | 5157.6 | 5208.9 | 5347.9 | *5345.5* |
| 32.5° | 4923.4 | 5011.2 | 5084.4 | 5218.6 | *5238.1* |
| 35° | 4750.2 | 4867.3 | 4967.3 | 5091.7 | *5118.6* |
| 37.5° | 4581.8 | 4689.2 | 4813.6 | 4935.6 | *4972.2* |
| 40° | 4411.1 | 4508.6 | 4628.2 | 4774.6 | *4847.8* |
| 42.5° | 4191.5 | 4311.0 | 4467.2 | 4635.5 | *4718.5* |
| 45° | 4003.6 | 4091.5 | 4294.0 | 4498.9 | *4589.2* |
| 47.5° | 3776.7 | 3891.4 | 4069.5 | 4330.5 | *4247.6* |
| 50° | 3552.3 | 3684.0 | 3884.1 | 3923.1 | *3437.6* |
| 52.5° | 3330.3 | 3462.0 | 3703.5 | 3103.4 | *2688.6* |
| 55° | 3086.3 | 3222.9 | 3442.5 | 2456.8 | *2244.6* |
| 57.5° | 2820.3 | 2949.7 | 2930.1 | 2039.6 | *1966.4* |
| 60° | 2544.7 | 2671.5 | 2269.0 | 1785.9 | *1817.6* |
| 62.5° | 2259.2 | 2395.8 | 1781.0 | 1632.2 | *1583.4* |
| 65° | 1954.2 | 2093.3 | 1451.6 | 1378.5 | *1385.8* |
| 67.5° | 1637.1 | 1754.2 | 1273.5 | 1176.0 | *1151.6* |
| 70° | 1337.0 | 1371.1 | 963.7 | 936.9 | *888.1* |
| 72.5° | 1036.9 | 993.0 | 766.1 | 707.5 | *656.3* |
| 75° | 758.8 | 697.8 | 578.2 | 517.2 | *485.5* |
| 77.5° | 527.0 | 483.1 | 417.2 | 439.2 | *324.5* |
| 80° | 339.1 | 314.7 | 307.4 | 244.0 | *234.2* |
| 82.5° | 200.1 | 197.6 | 190.3 | 175.7 | *170.8* |
| 85° | 95.2 | 117.1 | 124.4 | 124.4 | *122.0* |
| 87.5° | 34.2 | 58.6 | 78.1 | 83.0 | *87.8* |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* |

(END OF REPORT)