

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: P345081

Luminaire Tested: **24CZ-30SE-L850-HRP-UNV-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P345081
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1905-313-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-30SE-L850-HRP-UNV-CD1-U
Description: CRUZE 2X4 WITH HRP LENS INSERT
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2863.1 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

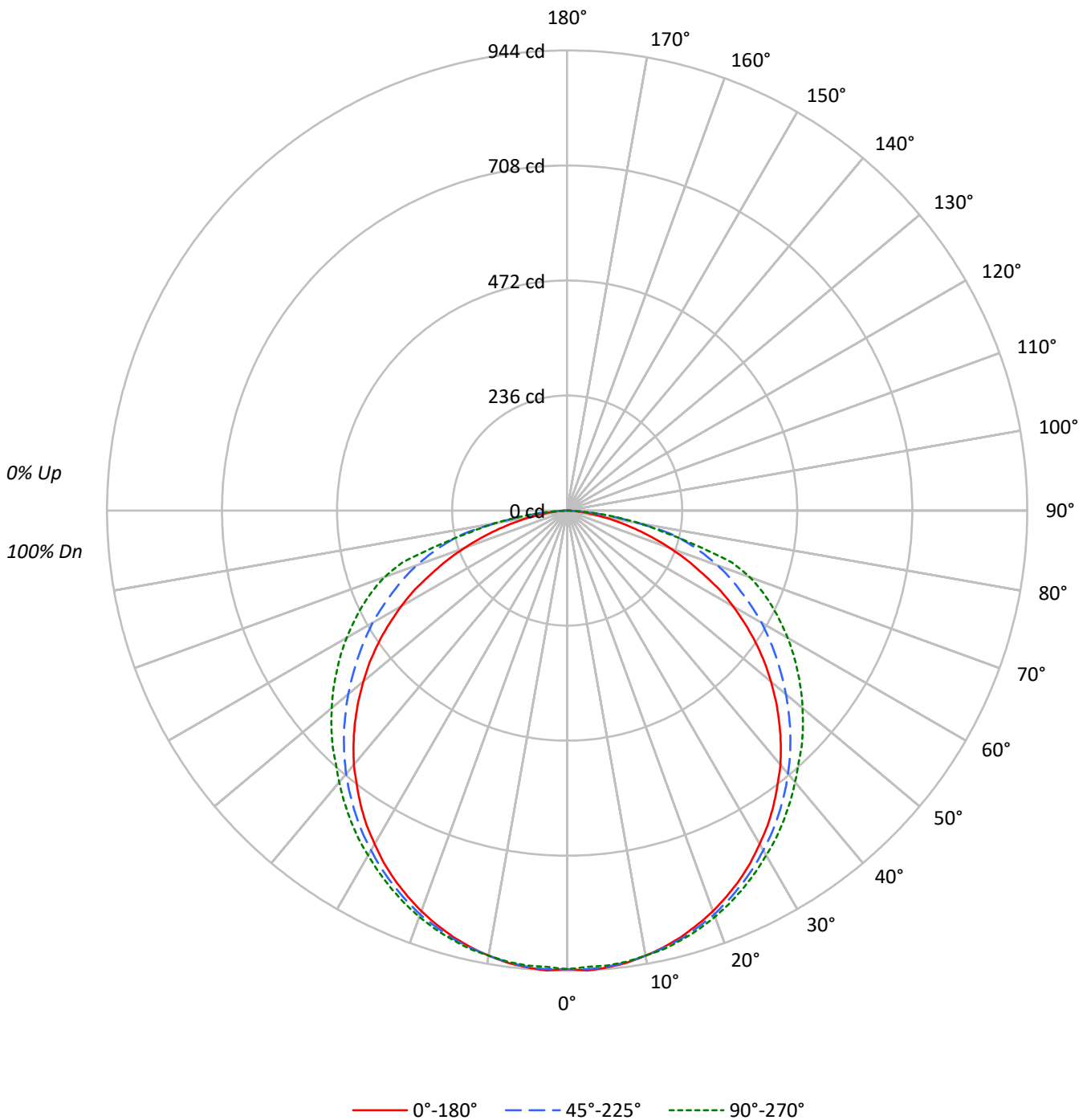
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | | 106 | 106 | 106 | | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 99 | 95 | 105 | 101 | 97 | 93 | 97 | 93 | 90 | | 93 | 90 | 87 | | 89 | 87 | 85 | 83 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 74 | | 81 | 76 | 72 | | 77 | 74 | 70 | 68 |
| 3 | 89 | 78 | 70 | 63 | 86 | 76 | 69 | 62 | 73 | 67 | 61 | | 71 | 65 | 60 | | 68 | 63 | 59 | 57 |
| 4 | 81 | 69 | 60 | 53 | 79 | 68 | 59 | 52 | 65 | 58 | 52 | | 63 | 56 | 51 | | 60 | 55 | 50 | 48 |
| 5 | 75 | 61 | 52 | 45 | 72 | 60 | 52 | 45 | 58 | 50 | 44 | | 56 | 49 | 44 | | 54 | 48 | 43 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 45 | 39 | 52 | 45 | 39 | | 51 | 44 | 38 | | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 34 | 48 | 40 | 34 | | 46 | 39 | 34 | | 45 | 38 | 34 | 32 |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 31 | | 42 | 35 | 30 | | 41 | 35 | 30 | 28 |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | | 39 | 32 | 27 | | 38 | 32 | 27 | 25 |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | | 36 | 29 | 25 | | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1266 | 1266 | 1266 |
| 5° | 1271 | 1269 | 1266 |
| 10° | 1267 | 1267 | 1267 |
| 15° | 1261 | 1266 | 1269 |
| 20° | 1252 | 1263 | 1270 |
| 25° | 1242 | 1256 | 1269 |
| 30° | 1227 | 1250 | 1269 |
| 35° | 1213 | 1245 | 1273 |
| 40° | 1196 | 1239 | 1277 |
| 45° | 1172 | 1232 | 1295 |
| 50° | 1142 | 1227 | 1320 |
| 55° | 1108 | 1228 | 1355 |
| 60° | 1059 | 1241 | 1406 |
| 65° | 980 | 1253 | 1476 |
| 70° | 883 | 1293 | 1568 |
| 75° | 746 | 1332 | 1403 |
| 80° | 580 | 1141 | 1179 |
| 85° | 417 | 777 | 682 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 89.2 | 3.1 |
| 10°-20° | 256.0 | 8.9 |
| 20°-30° | 389.4 | 13.6 |
| 30°-40° | 473.1 | 16.5 |
| 40°-50° | 499.3 | 17.4 |
| 50°-60° | 469.2 | 16.4 |
| 60°-70° | 386.2 | 13.5 |
| 70°-80° | 243.3 | 8.5 |
| 80°-90° | 57.5 | 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° | 734.6 | 25.7 |
| 0°-40° | 1207.6 | 42.2 |
| 0°-60° | 2176.1 | 76.0 |
| 0°-90° | 2863.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2863.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 941 | 941 | 941 | 941 | 941 | |
| 5° | 941 | 936 | 940 | 938 | 937 | 89 |
| 15° | 905 | 901 | 909 | 911 | 911 | 255 |
| 25° | 836 | 835 | 846 | 851 | 855 | 385 |
| 35° | 738 | 742 | 758 | 768 | 775 | 462 |
| 45° | 616 | 626 | 648 | 666 | 681 | 475 |
| 55° | 472 | 489 | 524 | 560 | 578 | 421 |
| 65° | 308 | 337 | 394 | 444 | 464 | 306 |
| 75° | 144 | 188 | 256 | 280 | 270 | 153 |
| 85° | 27 | 45 | 50 | 47 | 44 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 940.7 | 940.7 | 940.7 | 940.7 | 940.7 |
| 2.5° | 944.4 | 938.2 | 941.9 | 940.7 | 937.0 |
| 5° | 940.7 | 935.8 | 939.5 | 938.2 | 937.0 |
| 7.5° | 935.8 | 930.9 | 934.6 | 933.3 | 933.3 |
| 10° | 927.2 | 923.5 | 927.2 | 927.2 | 927.2 |
| 12.5° | 917.4 | 913.7 | 918.6 | 919.8 | 921.1 |
| 15° | 905.1 | 901.4 | 908.8 | 911.3 | 911.3 |
| 17.5° | 890.4 | 888.0 | 895.3 | 897.8 | 900.2 |
| 20° | 874.5 | 873.2 | 881.8 | 884.3 | 886.7 |
| 22.5° | 856.1 | 856.1 | 864.7 | 867.1 | 872.0 |
| 25° | 836.4 | 835.2 | 846.3 | 851.2 | 854.8 |
| 27.5° | 814.4 | 814.4 | 826.6 | 832.8 | 836.4 |
| 30° | 789.8 | 792.3 | 804.6 | 811.9 | 816.8 |
| 32.5° | 765.3 | 767.8 | 782.5 | 791.1 | 797.2 |
| 35° | 738.3 | 742.0 | 758.0 | 767.8 | 775.1 |
| 37.5° | 708.9 | 715.0 | 732.2 | 743.2 | 751.8 |
| 40° | 680.7 | 685.6 | 705.2 | 717.5 | 727.3 |
| 42.5° | 648.8 | 657.4 | 677.0 | 691.7 | 702.8 |
| 45° | 615.7 | 625.5 | 647.6 | 666.0 | 680.7 |
| 47.5° | 581.3 | 593.6 | 616.9 | 641.4 | 656.2 |
| 50° | 545.8 | 559.3 | 586.2 | 615.7 | 630.4 |
| 52.5° | 510.2 | 524.9 | 554.4 | 588.7 | 604.6 |
| 55° | 472.2 | 489.4 | 523.7 | 560.5 | 577.7 |
| 57.5° | 432.9 | 452.6 | 491.8 | 533.5 | 550.7 |
| 60° | 393.7 | 414.5 | 461.1 | 502.8 | 522.5 |
| 62.5° | 353.2 | 376.5 | 426.8 | 474.6 | 493.0 |
| 65° | 307.8 | 337.3 | 393.7 | 444.0 | 463.6 |
| 67.5° | 266.1 | 296.8 | 361.8 | 412.1 | 432.9 |
| 70° | 224.4 | 260.0 | 328.7 | 379.0 | 398.6 |
| 72.5° | 182.7 | 224.4 | 291.9 | 343.4 | 354.4 |
| 75° | 143.5 | 187.6 | 256.3 | 279.6 | 269.8 |
| 77.5° | 105.5 | 154.5 | 215.9 | 203.6 | 201.1 |
| 80° | 74.8 | 122.6 | 147.2 | 148.4 | 152.1 |
| 82.5° | 47.8 | 90.8 | 95.7 | 96.9 | 98.1 |
| 85° | 27.0 | 45.4 | 50.3 | 46.6 | 44.2 |
| 87.5° | 12.3 | 14.7 | 12.3 | 8.6 | 7.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)