

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: P35239

Luminaire Tested: **14SP4240**

Test Date: 10/10/16

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P35239
Test Lab: INNOVATION CENTER-P3
Test Date: 10/10/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14SP4240
Description: 1X4 FLAT PANEL
Light Source: (434) REFOND 4000K LED
RF-35HI32DS-EF-N-Y
Ballast/Driver: (1) TCL ELECTRONIC DRIVER
045W0A92-R/1B-01
Luminaire Equipment: Sample No. Condition Description

Summary

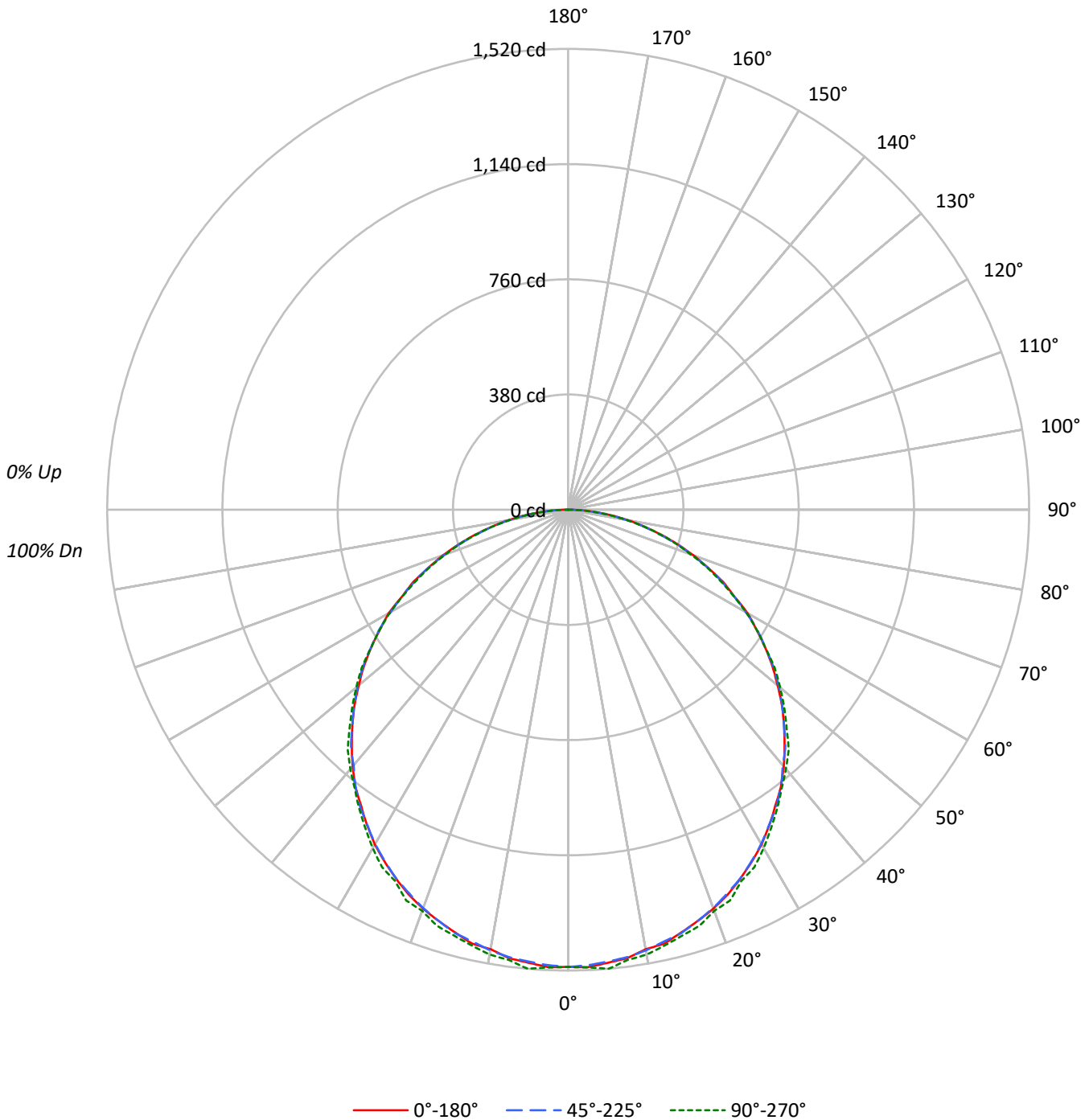
Lumens per Lamp: N/A
Luminaire Lumens: 4396.8 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.26 / 1.38
Luminous Opening: Rectangular (W 0.71' x L: 3.67' x H: 0')
CIE Type: Direct

Input Watts (W): 42
Input Voltage (V): 120.0
Input Current (Ain): 0.351
Voltage Rise (V): NR
Power Factor: 0.9976
Total Harmonic Distortion (THDi): 6.13%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 5 HR
Ambient Temperature (°C): 24.5
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 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 42 |
| 6 | 69 | 56 | 47 | 40 | 68 | 55 | 46 | 40 | 53 | 46 | 40 | 51 | 45 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 42 | 34 | 29 | 55 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 25 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6250 | 6250 | 6250 |
| 5° | 6240 | 6224 | 6324 |
| 10° | 6195 | 6211 | 6270 |
| 15° | 6191 | 6200 | 6239 |
| 20° | 6175 | 6166 | 6210 |
| 25° | 6141 | 6137 | 6178 |
| 30° | 6102 | 6092 | 6169 |
| 35° | 6026 | 6051 | 6081 |
| 40° | 5984 | 5957 | 6043 |
| 45° | 5896 | 5896 | 5972 |
| 50° | 5809 | 5848 | 5880 |
| 55° | 5730 | 5737 | 5730 |
| 60° | 5661 | 5612 | 5620 |
| 65° | 5521 | 5462 | 5413 |
| 70° | 5320 | 5235 | 5198 |
| 75° | 5060 | 4964 | 4996 |
| 80° | 4797 | 4678 | 4606 |
| 85° | 4280 | 4089 | 4089 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 142.9 | 3.3 |
| 10°-20° | 409.3 | 9.3 |
| 20°-30° | 621.5 | 14.1 |
| 30°-40° | 749.9 | 17.1 |
| 40°-50° | 781.3 | 17.8 |
| 50°-60° | 711.1 | 16.2 |
| 60°-70° | 550.9 | 12.5 |
| 70°-80° | 330.3 | 7.5 |
| 80°-90° | 99.6 | 2.3 |
| 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° | 1173.7 | 26.7 |
| 0°-40° | 1923.6 | 43.7 |
| 0°-60° | 3416.0 | 77.7 |
| 0°-90° | 4396.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4396.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1508 | 1508 | 1508 | 1508 | 1508 | |
| 5° | 1500 | 1507 | 1496 | 1505 | 1520 | 142 |
| 15° | 1443 | 1464 | 1445 | 1450 | 1454 | 408 |
| 25° | 1343 | 1344 | 1342 | 1348 | 1351 | 619 |
| 35° | 1191 | 1198 | 1196 | 1199 | 1202 | 747 |
| 45° | 1006 | 1018 | 1006 | 1010 | 1019 | 776 |
| 55° | 793 | 800 | 794 | 793 | 793 | 709 |
| 65° | 563 | 561 | 557 | 554 | 552 | 554 |
| 75° | 316 | 313 | 310 | 308 | 312 | 334 |
| 85° | 90 | 89 | 86 | 86 | 86 | 103 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 0° | 1508 | 1508 | 1508 | 1508 | 1508 |
| 2.5° | 1510 | 1517 | 1504 | 1512 | 1511 |
| 5° | 1500 | 1507 | 1496 | 1505 | 1520 |
| 7.5° | 1492 | 1509 | 1489 | 1496 | 1498 |
| 10° | 1472 | 1483 | 1476 | 1483 | 1490 |
| 12.5° | 1466 | 1469 | 1459 | 1478 | 1472 |
| 15° | 1443 | 1464 | 1445 | 1450 | 1454 |
| 17.5° | 1422 | 1429 | 1422 | 1434 | 1439 |
| 20° | 1400 | 1412 | 1398 | 1401 | 1408 |
| 22.5° | 1374 | 1383 | 1370 | 1383 | 1395 |
| 25° | 1343 | 1344 | 1342 | 1348 | 1351 |
| 27.5° | 1310 | 1325 | 1308 | 1319 | 1329 |
| 30° | 1275 | 1285 | 1273 | 1279 | 1289 |
| 32.5° | 1234 | 1244 | 1233 | 1243 | 1245 |
| 35° | 1191 | 1198 | 1196 | 1199 | 1202 |
| 37.5° | 1152 | 1156 | 1152 | 1158 | 1157 |
| 40° | 1106 | 1119 | 1101 | 1114 | 1117 |
| 42.5° | 1056 | 1066 | 1060 | 1063 | 1076 |
| 45° | 1006 | 1018 | 1006 | 1010 | 1019 |
| 47.5° | 956 | 962 | 957 | 964 | 966 |
| 50° | 901 | 912 | 907 | 909 | 912 |
| 52.5° | 849 | 856 | 853 | 850 | 858 |
| 55° | 793 | 800 | 794 | 793 | 793 |
| 57.5° | 736 | 741 | 740 | 732 | 737 |
| 60° | 683 | 682 | 677 | 676 | 678 |
| 62.5° | 616 | 623 | 615 | 616 | 613 |
| 65° | 563 | 561 | 557 | 554 | 552 |
| 67.5° | 497 | 500 | 497 | 492 | 493 |
| 70° | 439 | 436 | 432 | 429 | 429 |
| 72.5° | 376 | 377 | 374 | 370 | 372 |
| 75° | 316 | 313 | 310 | 308 | 312 |
| 77.5° | 256 | 255 | 253 | 250 | 254 |
| 80° | 201 | 197 | 196 | 193 | 193 |
| 82.5° | 144 | 141 | 138 | 140 | 141 |
| 85° | 90 | 89 | 86 | 86 | 86 |
| 87.5° | 44 | 42 | 39 | 39 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)