

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: NEO-RAY

Report Number: P334168

Luminaire Tested: **S124DS-S1020D835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334168
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DS-S1020D835-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1020 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

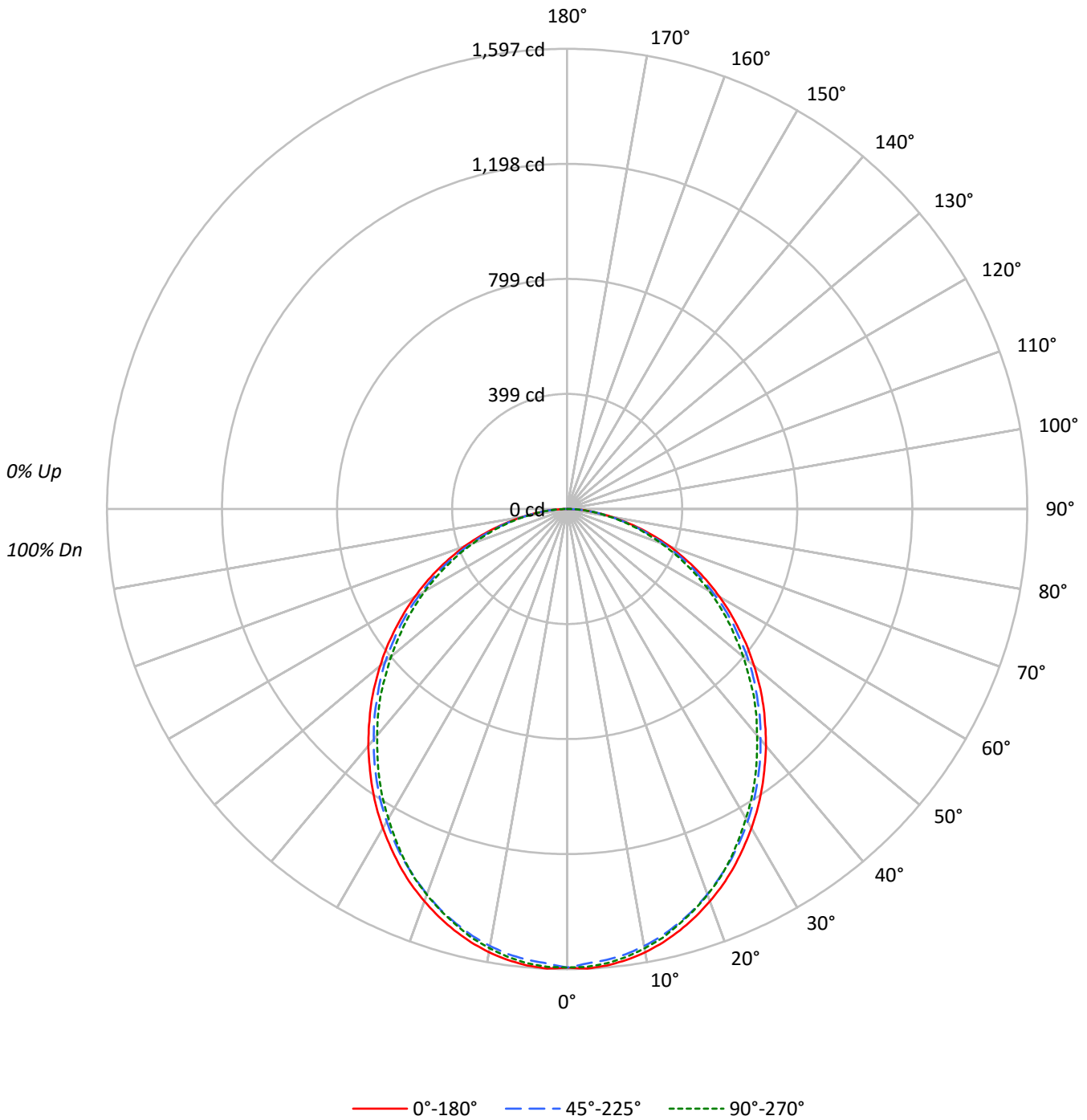
Lumens per Lamp: N/A
Luminaire Lumens: 4084.9 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): 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



TEST NUMBER: P334168
CATALOG NUMBER: S124DS-S1020D835-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P334168

CATALOG NUMBER: S124DS-S1020D835-4F0-1E-UDD-F

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 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | | 94 | 91 | 89 | | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | | 82 | 78 | 74 | | 79 | 76 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | | 73 | 67 | 63 | | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 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 | 44 |
| 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 | 52 | 43 | 37 | 50 | 43 | 37 | | 49 | 42 | 37 | | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | | 45 | 38 | 33 | | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | | 41 | 35 | 30 | | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 28 | 39 | 32 | 27 | | 38 | 32 | 27 | | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 12848 | 12848 | 12848 |
| 5° | 12887 | 12732 | 12825 |
| 10° | 12806 | 12628 | 12691 |
| 15° | 12651 | 12449 | 12481 |
| 20° | 12446 | 12227 | 12238 |
| 25° | 12211 | 11973 | 11939 |
| 30° | 11924 | 11674 | 11567 |
| 35° | 11625 | 11361 | 11210 |
| 40° | 11316 | 11006 | 10805 |
| 45° | 10992 | 10658 | 10453 |
| 50° | 10635 | 10346 | 10026 |
| 55° | 10249 | 9944 | 9620 |
| 60° | 9862 | 9492 | 9203 |
| 65° | 9427 | 9062 | 8697 |
| 70° | 8939 | 8488 | 8157 |
| 75° | 8194 | 7795 | 7598 |
| 80° | 7294 | 6997 | 6820 |
| 85° | 6382 | 6141 | 6021 |



TEST NUMBER: P334168

CATALOG NUMBER: S124DS-S1020D835-4F0-1E-UDD-F

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 150.0 | 3.7 |
| 10°-20° | 422.6 | 10.3 |
| 20°-30° | 622.0 | 15.2 |
| 30°-40° | 723.0 | 17.7 |
| 40°-50° | 722.9 | 17.7 |
| 50°-60° | 632.3 | 15.5 |
| 60°-70° | 469.4 | 11.5 |
| 70°-80° | 266.3 | 6.5 |
| 80°-90° | 76.3 | 1.9 |
| 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° | 1194.6 | 29.2 |
| 0°-40° | 1917.6 | 46.9 |
| 0°-60° | 3272.9 | 80.1 |
| 0°-90° | 4084.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4084.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1592 | 1592 | 1592 | 1592 | 1592 | |
| 5° | 1590 | 1585 | 1571 | 1585 | 1583 | 151 |
| 15° | 1514 | 1509 | 1490 | 1497 | 1493 | 427 |
| 25° | 1371 | 1362 | 1344 | 1345 | 1340 | 631 |
| 35° | 1180 | 1171 | 1153 | 1144 | 1138 | 738 |
| 45° | 963 | 954 | 934 | 920 | 916 | 742 |
| 55° | 728 | 724 | 706 | 691 | 684 | 652 |
| 65° | 494 | 487 | 474 | 462 | 455 | 488 |
| 75° | 263 | 256 | 250 | 245 | 244 | 279 |
| 85° | 69 | 69 | 66 | 66 | 65 | 79 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P334168

CATALOG NUMBER: S124DS-S1020D835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1591.5 | 1591.5 | 1591.5 | 1591.5 | 1591.5 |
| 2.5° | 1596.6 | 1592.8 | 1578.8 | 1591.5 | 1590.2 |
| 5° | 1590.2 | 1585.1 | 1571.1 | 1585.1 | 1582.6 |
| 7.5° | 1578.8 | 1573.7 | 1558.4 | 1569.8 | 1568.6 |
| 10° | 1562.2 | 1557.1 | 1540.5 | 1550.7 | 1548.2 |
| 12.5° | 1540.5 | 1535.4 | 1517.5 | 1529.0 | 1525.2 |
| 15° | 1513.7 | 1508.6 | 1489.5 | 1497.1 | 1493.3 |
| 17.5° | 1483.1 | 1476.7 | 1458.9 | 1464.0 | 1461.4 |
| 20° | 1448.7 | 1442.3 | 1423.2 | 1427.0 | 1424.5 |
| 22.5° | 1411.7 | 1402.8 | 1383.6 | 1391.3 | 1386.2 |
| 25° | 1370.9 | 1362.0 | 1344.1 | 1345.4 | 1340.3 |
| 27.5° | 1325.0 | 1316.1 | 1299.5 | 1296.9 | 1290.6 |
| 30° | 1279.1 | 1268.9 | 1252.3 | 1247.2 | 1240.8 |
| 32.5° | 1230.6 | 1221.7 | 1203.8 | 1197.5 | 1191.1 |
| 35° | 1179.6 | 1170.7 | 1152.8 | 1143.9 | 1137.5 |
| 37.5° | 1126.0 | 1118.4 | 1099.3 | 1090.3 | 1081.4 |
| 40° | 1073.8 | 1063.6 | 1044.4 | 1031.7 | 1025.3 |
| 42.5° | 1017.6 | 1012.5 | 990.9 | 975.6 | 971.7 |
| 45° | 962.8 | 953.9 | 933.5 | 919.5 | 915.6 |
| 47.5° | 905.4 | 899.1 | 879.9 | 864.6 | 854.4 |
| 50° | 846.8 | 841.7 | 823.8 | 806.0 | 798.3 |
| 52.5° | 789.4 | 783.0 | 763.9 | 748.6 | 738.4 |
| 55° | 728.2 | 724.3 | 706.5 | 691.2 | 683.5 |
| 57.5° | 670.8 | 667.0 | 649.1 | 633.8 | 626.1 |
| 60° | 610.8 | 604.5 | 587.9 | 576.4 | 570.0 |
| 62.5° | 552.2 | 547.1 | 529.2 | 519.0 | 512.6 |
| 65° | 493.5 | 487.1 | 474.4 | 461.6 | 455.3 |
| 67.5° | 433.6 | 428.5 | 415.7 | 403.0 | 401.7 |
| 70° | 378.7 | 369.8 | 359.6 | 349.4 | 345.6 |
| 72.5° | 320.1 | 311.2 | 303.5 | 295.9 | 292.0 |
| 75° | 262.7 | 256.3 | 249.9 | 244.8 | 243.6 |
| 77.5° | 206.6 | 204.0 | 197.7 | 196.4 | 192.6 |
| 80° | 156.9 | 153.0 | 150.5 | 147.9 | 146.7 |
| 82.5° | 108.4 | 107.1 | 107.1 | 105.8 | 104.6 |
| 85° | 68.9 | 68.9 | 66.3 | 66.3 | 65.0 |
| 87.5° | 33.2 | 31.9 | 30.6 | 30.6 | 30.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)