

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P333975

Luminaire Tested: S123DP-S340D935-4F0-1E-UDD-D

Issue Date: 3/3/2020

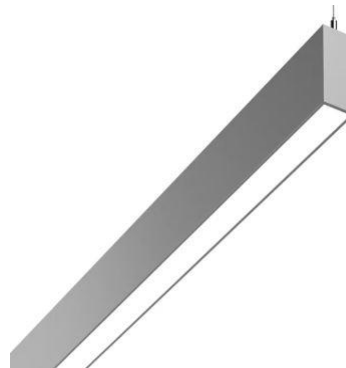
Test Information

Test Method: LM-79-2019
Report Number: P333975
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DP-S340D935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 340 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1159.8 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Direct

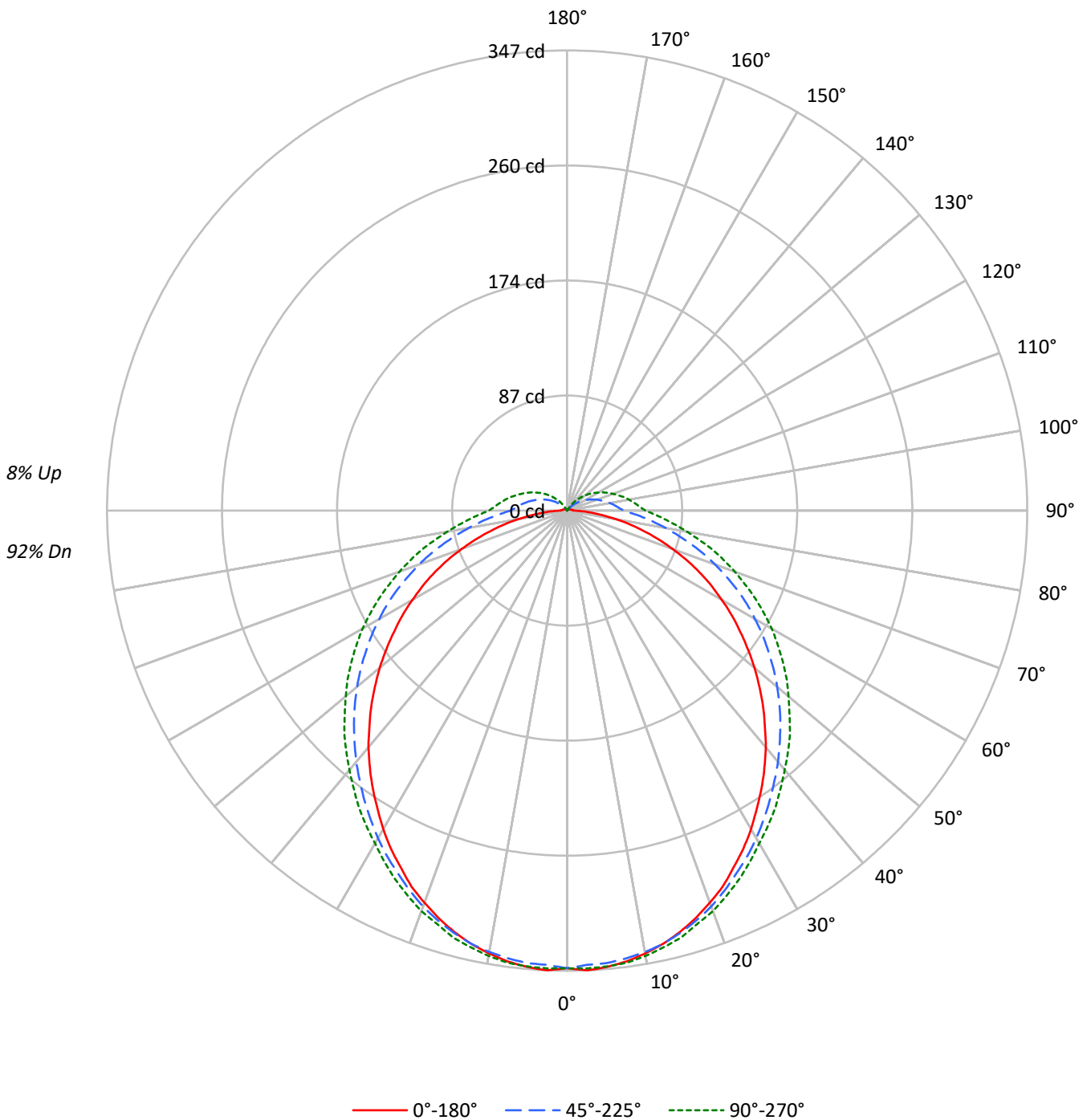
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P333975

CATALOG NUMBER: S123DP-S340D935-4F0-1E-UDD-D

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 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 | | 100 | 100 | 100 | | 94 | 94 | 94 | 92 |
| 1 | 105 | 100 | 95 | 90 | 102 | 97 | 92 | 88 | 91 | 87 | 84 | | 85 | 82 | 80 | | 80 | 78 | 76 | 73 |
| 2 | 95 | 86 | 79 | 72 | 92 | 83 | 77 | 71 | 79 | 73 | 68 | | 74 | 69 | 65 | | 70 | 66 | 63 | 60 |
| 3 | 86 | 75 | 67 | 60 | 83 | 73 | 65 | 59 | 69 | 62 | 56 | | 65 | 59 | 54 | | 61 | 56 | 52 | 50 |
| 4 | 79 | 66 | 57 | 50 | 76 | 64 | 56 | 49 | 61 | 54 | 48 | | 57 | 51 | 46 | | 54 | 49 | 45 | 42 |
| 5 | 72 | 59 | 50 | 43 | 70 | 58 | 49 | 42 | 54 | 47 | 41 | | 52 | 45 | 40 | | 49 | 43 | 39 | 36 |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 42 | 36 | | 47 | 40 | 35 | | 44 | 38 | 34 | 32 |
| 7 | 62 | 48 | 39 | 33 | 60 | 47 | 38 | 32 | 45 | 37 | 32 | | 42 | 36 | 31 | | 40 | 35 | 30 | 28 |
| 8 | 58 | 44 | 35 | 29 | 56 | 43 | 35 | 29 | 41 | 33 | 28 | | 39 | 32 | 28 | | 37 | 31 | 27 | 25 |
| 9 | 54 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 37 | 30 | 25 | | 36 | 29 | 25 | | 34 | 28 | 24 | 22 |
| 10 | 50 | 37 | 29 | 24 | 49 | 36 | 29 | 24 | 35 | 28 | 23 | | 33 | 27 | 23 | | 32 | 26 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3715 | 3715 | 3715 |
| 5° | 3726 | 3621 | 3623 |
| 10° | 3693 | 3538 | 3520 |
| 15° | 3645 | 3443 | 3408 |
| 20° | 3578 | 3335 | 3283 |
| 25° | 3493 | 3211 | 3154 |
| 30° | 3407 | 3098 | 3021 |
| 35° | 3310 | 2980 | 2916 |
| 40° | 3219 | 2873 | 2803 |
| 45° | 3117 | 2769 | 2713 |
| 50° | 3016 | 2667 | 2613 |
| 55° | 2905 | 2562 | 2524 |
| 60° | 2797 | 2455 | 2432 |
| 65° | 2684 | 2343 | 2323 |
| 70° | 2518 | 2215 | 2212 |
| 75° | 2308 | 2068 | 2098 |
| 80° | 2062 | 1926 | 1967 |
| 85° | 1836 | 1826 | 1893 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3117 cd/sqm



TEST NUMBER: P333975

CATALOG NUMBER: S123DP-S340D935-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 32.7 | 2.8 |
| 10°-20° | 93.3 | 8.0 |
| 20°-30° | 139.6 | 12.0 |
| 30°-40° | 166.6 | 14.4 |
| 40°-50° | 174.3 | 15.0 |
| 50°-60° | 163.6 | 14.1 |
| 60°-70° | 136.7 | 11.8 |
| 70°-80° | 97.7 | 8.4 |
| 80°-90° | 58.1 | 5.0 |
| 90°-100° | 36.5 | 3.2 |
| 100°-110° | 26.8 | 2.3 |
| 110°-120° | 17.9 | 1.5 |
| 120°-130° | 10.2 | 0.9 |
| 130°-140° | 4.6 | 0.4 |
| 140°-150° | 1.0 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 265.6 | 22.9 |
| 0°-40° | 432.3 | 37.3 |
| 0°-60° | 770.2 | 66.4 |
| 0°-90° | 1062.7 | 91.6 |
| 90°-120° | 81.3 | 7.0 |
| 90°-150° | 97.1 | 8.4 |
| 90°-180° | 97.0 | 8.4 |
| 0°-180° | 1159.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 345 | 345 | 345 | 345 | 345 | |
| 5° | 346 | 345 | 342 | 346 | 345 | 33 |
| 15° | 329 | 330 | 330 | 334 | 333 | 93 |
| 25° | 297 | 301 | 302 | 307 | 307 | 137 |
| 35° | 256 | 262 | 266 | 272 | 274 | 160 |
| 45° | 209 | 218 | 227 | 235 | 238 | 161 |
| 55° | 159 | 172 | 185 | 196 | 198 | 143 |
| 65° | 110 | 125 | 141 | 153 | 156 | 109 |
| 75° | 60 | 77 | 96 | 109 | 113 | 64 |
| 85° | 18 | 37 | 57 | 70 | 74 | 19 |
| 90° | 5 | 23 | 42 | 55 | 59 | 4 |
| 95° | 4 | 19 | 37 | 49 | 53 | 3 |
| 105° | 3 | 12 | 28 | 39 | 42 | 3 |
| 115° | 2 | 6 | 20 | 29 | 32 | 2 |
| 125° | 1 | 1 | 12 | 20 | 23 | 1 |
| 135° | 1 | 0 | 4 | 11 | 13 | 1 |
| 145° | 0 | 0 | 0 | 3 | 4 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P333975

CATALOG NUMBER: S123DP-S340D935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 345.1 | 345.1 | 345.1 | 345.1 | 345.1 |
| 2.5° | 347.0 | 345.9 | 342.9 | 345.9 | 345.5 |
| 5° | 345.5 | 344.7 | 342.5 | 345.5 | 345.1 |
| 7.5° | 342.9 | 342.9 | 340.6 | 344.4 | 344.0 |
| 10° | 339.1 | 339.8 | 338.0 | 341.7 | 341.0 |
| 12.5° | 334.6 | 335.7 | 334.6 | 338.0 | 337.2 |
| 15° | 328.9 | 330.1 | 329.7 | 333.5 | 333.1 |
| 17.5° | 322.2 | 324.4 | 324.1 | 327.4 | 326.7 |
| 20° | 314.7 | 316.9 | 317.7 | 321.0 | 321.4 |
| 22.5° | 306.8 | 309.0 | 310.1 | 314.7 | 314.3 |
| 25° | 297.0 | 300.7 | 301.9 | 306.8 | 306.8 |
| 27.5° | 287.6 | 291.7 | 294.0 | 298.1 | 298.5 |
| 30° | 277.4 | 282.3 | 285.3 | 289.8 | 289.8 |
| 32.5° | 266.2 | 271.8 | 275.9 | 280.8 | 281.9 |
| 35° | 255.6 | 261.6 | 266.5 | 272.2 | 273.7 |
| 37.5° | 244.4 | 251.1 | 256.8 | 263.2 | 264.3 |
| 40° | 233.1 | 239.8 | 247.4 | 253.8 | 255.3 |
| 42.5° | 220.7 | 229.3 | 237.2 | 244.4 | 246.6 |
| 45° | 209.0 | 218.0 | 227.4 | 234.6 | 237.6 |
| 47.5° | 196.6 | 206.8 | 217.3 | 225.2 | 227.4 |
| 50° | 184.6 | 195.1 | 206.8 | 215.4 | 218.0 |
| 52.5° | 171.8 | 183.1 | 196.2 | 205.3 | 208.6 |
| 55° | 159.4 | 171.8 | 185.3 | 195.5 | 198.5 |
| 57.5° | 147.4 | 160.1 | 174.8 | 185.0 | 188.3 |
| 60° | 134.6 | 148.1 | 163.5 | 174.1 | 178.2 |
| 62.5° | 122.6 | 136.5 | 153.0 | 163.5 | 167.3 |
| 65° | 110.1 | 124.8 | 141.4 | 152.6 | 156.4 |
| 67.5° | 97.7 | 113.2 | 129.7 | 142.1 | 145.1 |
| 70° | 84.6 | 100.8 | 118.8 | 130.8 | 134.6 |
| 72.5° | 72.6 | 88.7 | 107.5 | 119.9 | 123.7 |
| 75° | 59.8 | 77.4 | 96.2 | 108.6 | 113.2 |
| 77.5° | 48.9 | 66.5 | 85.3 | 98.5 | 101.9 |
| 80° | 37.2 | 55.6 | 75.2 | 88.0 | 91.7 |
| 82.5° | 27.1 | 45.9 | 65.8 | 78.6 | 82.3 |
| 85° | 18.4 | 37.2 | 57.1 | 69.9 | 73.7 |
| 87.5° | 11.3 | 30.1 | 49.2 | 62.0 | 65.8 |
| 90° | 4.9 | 23.3 | 42.5 | 55.3 | 59.0 |
| 92.5° | 4.5 | 20.7 | 39.5 | 51.9 | 55.3 |
| 95° | 4.1 | 18.8 | 37.2 | 48.9 | 52.6 |
| 97.5° | 3.8 | 17.3 | 35.0 | 46.2 | 50.0 |
| 100° | 3.4 | 15.4 | 32.7 | 43.6 | 47.4 |
| 102.5° | 3.0 | 13.5 | 30.5 | 41.0 | 44.7 |
| 105° | 3.0 | 12.0 | 28.2 | 38.7 | 42.1 |
| 107.5° | 2.6 | 10.5 | 25.9 | 36.1 | 39.5 |
| 110° | 2.3 | 9.0 | 24.1 | 33.8 | 36.8 |



TEST NUMBER: P333975

CATALOG NUMBER: S123DP-S340D935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 2.3 | 7.5 | 21.8 | 31.2 | 34.6 |
| 115° | 1.9 | 6.4 | 19.9 | 28.9 | 32.0 |
| 117.5° | 1.9 | 4.9 | 17.7 | 26.7 | 29.7 |
| 120° | 1.5 | 3.4 | 15.8 | 24.4 | 27.1 |
| 122.5° | 1.5 | 2.3 | 13.9 | 22.2 | 24.8 |
| 125° | 1.1 | 1.1 | 12.0 | 19.9 | 22.6 |
| 127.5° | 1.1 | 0.8 | 10.2 | 17.7 | 20.3 |
| 130° | 1.1 | 0.8 | 8.3 | 15.4 | 17.7 |
| 132.5° | 0.8 | 0.8 | 6.4 | 13.2 | 15.8 |
| 135° | 0.8 | 0.4 | 4.5 | 11.3 | 13.2 |
| 137.5° | 0.8 | 0.4 | 3.0 | 9.0 | 10.9 |
| 140° | 0.4 | 0.4 | 1.5 | 7.1 | 9.0 |
| 142.5° | 0.4 | 0.0 | 0.0 | 4.9 | 6.8 |
| 145° | 0.4 | 0.0 | 0.0 | 3.0 | 4.5 |
| 147.5° | 0.0 | 0.0 | 0.0 | 1.1 | 2.6 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)