

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: P333785

Luminaire Tested: **S122DS-S290D840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333785
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DS-S290D840-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 290 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1160.9 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

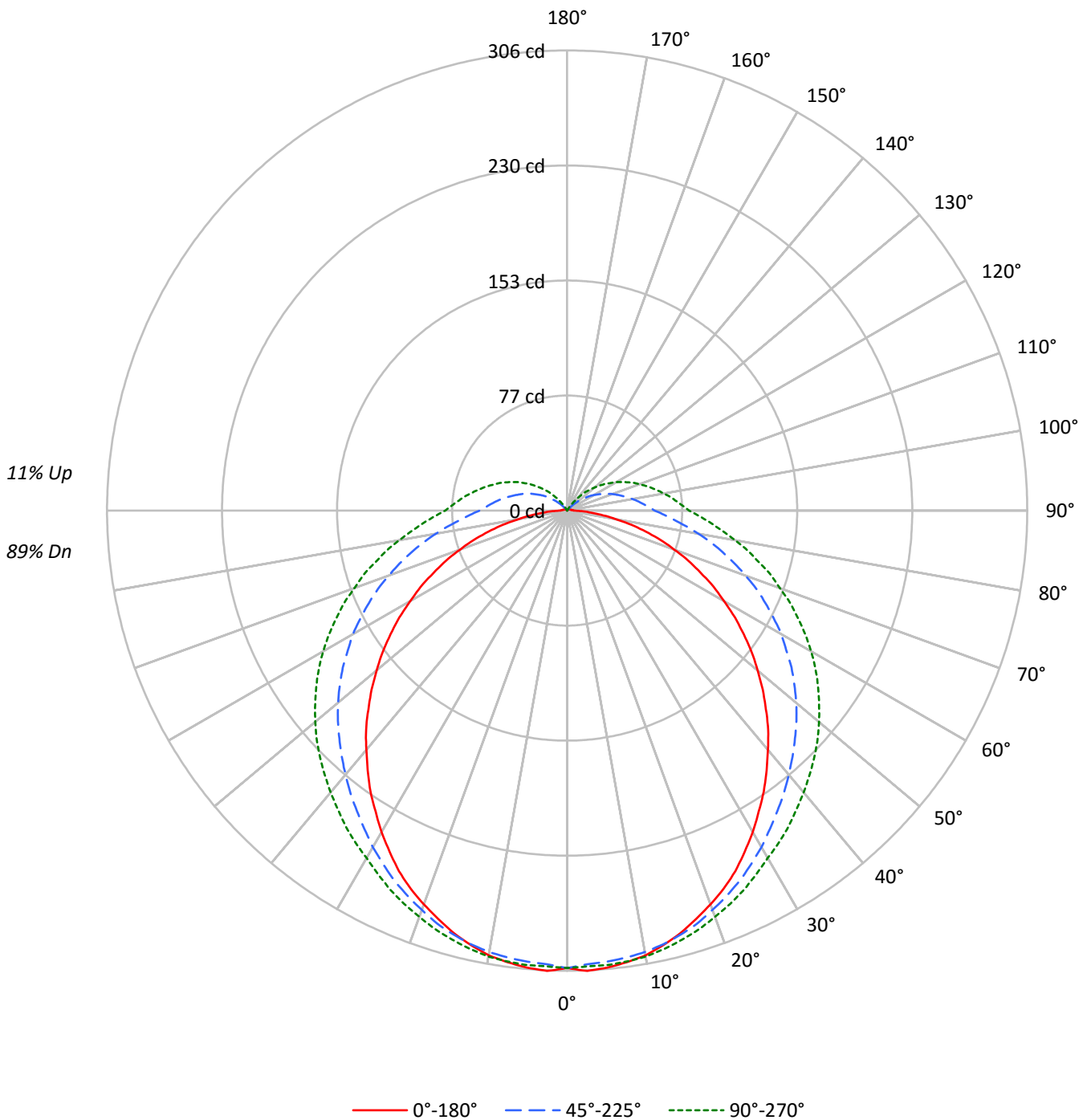
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333785

CATALOG NUMBER: S122DS-S290D840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P333785

CATALOG NUMBER: S122DS-S290D840-4F0-1E-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 | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | | 98 | 98 | 98 | | 92 | 92 | 92 | 89 |
| 1 | 104 | 98 | 93 | 88 | 100 | 95 | 90 | 86 | 88 | 85 | 81 | | 82 | 79 | 77 | | 77 | 75 | 72 | 69 |
| 2 | 94 | 84 | 77 | 70 | 90 | 81 | 74 | 68 | 76 | 70 | 65 | | 71 | 66 | 62 | | 66 | 62 | 59 | 56 |
| 3 | 85 | 73 | 64 | 57 | 81 | 71 | 63 | 56 | 66 | 59 | 54 | | 62 | 56 | 51 | | 58 | 53 | 49 | 46 |
| 4 | 77 | 64 | 55 | 48 | 74 | 62 | 54 | 47 | 58 | 51 | 45 | | 55 | 48 | 43 | | 51 | 46 | 42 | 39 |
| 5 | 71 | 57 | 48 | 41 | 68 | 56 | 47 | 40 | 52 | 44 | 39 | | 49 | 42 | 37 | | 46 | 40 | 36 | 33 |
| 6 | 65 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 47 | 39 | 34 | | 44 | 37 | 32 | | 42 | 36 | 31 | 29 |
| 7 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 43 | 35 | 30 | | 40 | 34 | 29 | | 38 | 32 | 28 | 25 |
| 8 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 27 | 39 | 32 | 26 | | 37 | 30 | 25 | | 35 | 29 | 25 | 23 |
| 9 | 52 | 39 | 30 | 25 | 50 | 38 | 30 | 24 | 36 | 29 | 24 | | 34 | 27 | 23 | | 32 | 26 | 22 | 20 |
| 10 | 49 | 36 | 28 | 22 | 47 | 35 | 27 | 22 | 33 | 26 | 21 | | 31 | 25 | 21 | | 30 | 24 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 4912 | 4912 | 4912 |
| 5° | 4945 | 4882 | 4917 |
| 10° | 4923 | 4887 | 4938 |
| 15° | 4864 | 4879 | 4938 |
| 20° | 4789 | 4856 | 4940 |
| 25° | 4714 | 4839 | 4956 |
| 30° | 4603 | 4818 | 4974 |
| 35° | 4494 | 4805 | 5058 |
| 40° | 4378 | 4833 | 5158 |
| 45° | 4270 | 4893 | 5307 |
| 50° | 4152 | 4996 | 5493 |
| 55° | 4034 | 5126 | 5734 |
| 60° | 3888 | 5312 | 6051 |
| 65° | 3740 | 5559 | 6468 |
| 70° | 3578 | 5953 | 7100 |
| 75° | 3381 | 6681 | 8222 |
| 80° | 3078 | 8238 | 10535 |
| 85° | 2946 | 13227 | 17803 |



TEST NUMBER: P333785

CATALOG NUMBER: S122DS-S290D840-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.8 | 2.5 |
| 10°-20° | 82.7 | 7.1 |
| 20°-30° | 125.3 | 10.8 |
| 30°-40° | 152.6 | 13.1 |
| 40°-50° | 164.2 | 14.1 |
| 50°-60° | 159.5 | 13.7 |
| 60°-70° | 139.3 | 12.0 |
| 70°-80° | 107.2 | 9.2 |
| 80°-90° | 71.8 | 6.2 |
| 90°-100° | 49.5 | 4.3 |
| 100°-110° | 36.2 | 3.1 |
| 110°-120° | 23.9 | 2.1 |
| 120°-130° | 13.3 | 1.1 |
| 130°-140° | 5.6 | 0.5 |
| 140°-150° | 0.9 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 236.9 | 20.4 |
| 0°-40° | 389.5 | 33.6 |
| 0°-60° | 713.2 | 61.4 |
| 0°-90° | 1031.5 | 88.9 |
| 90°-120° | 109.6 | 9.4 |
| 90°-150° | 129.4 | 11.1 |
| 90°-180° | 129.0 | 11.1 |
| 0°-180° | 1160.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 304 | 304 | 304 | 304 | 304 | |
| 5° | 305 | 304 | 301 | 304 | 303 | 29 |
| 15° | 291 | 292 | 292 | 296 | 295 | 82 |
| 25° | 265 | 268 | 272 | 277 | 278 | 122 |
| 35° | 228 | 236 | 244 | 254 | 257 | 142 |
| 45° | 187 | 199 | 214 | 228 | 232 | 144 |
| 55° | 143 | 159 | 182 | 198 | 204 | 128 |
| 65° | 98 | 120 | 146 | 164 | 169 | 97 |
| 75° | 54 | 79 | 107 | 126 | 132 | 57 |
| 85° | 16 | 43 | 71 | 90 | 96 | 17 |
| 90° | 4 | 30 | 58 | 76 | 81 | 3 |
| 95° | 4 | 24 | 51 | 68 | 73 | 3 |
| 105° | 2 | 15 | 38 | 53 | 58 | 3 |
| 115° | 2 | 7 | 26 | 40 | 44 | 2 |
| 125° | 1 | 1 | 15 | 27 | 31 | 1 |
| 135° | 0 | 0 | 5 | 14 | 18 | 0 |
| 145° | 0 | 0 | 0 | 3 | 5 | 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: P333785

CATALOG NUMBER: S122DS-S290D840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 304.2 | 304.2 | 304.2 | 304.2 | 304.2 |
| 2.5° | 306.4 | 305.1 | 302.0 | 304.2 | 303.4 |
| 5° | 305.1 | 303.8 | 301.2 | 303.8 | 303.4 |
| 7.5° | 302.9 | 302.0 | 299.8 | 302.9 | 302.5 |
| 10° | 300.3 | 299.4 | 298.1 | 301.6 | 301.2 |
| 12.5° | 295.9 | 296.3 | 295.4 | 299.0 | 298.5 |
| 15° | 291.0 | 291.9 | 291.9 | 295.9 | 295.4 |
| 17.5° | 284.8 | 286.6 | 287.9 | 291.9 | 291.9 |
| 20° | 278.7 | 280.9 | 282.6 | 287.5 | 287.5 |
| 22.5° | 272.1 | 274.7 | 277.3 | 282.2 | 283.1 |
| 25° | 264.6 | 267.6 | 271.6 | 276.9 | 278.2 |
| 27.5° | 255.7 | 260.6 | 265.0 | 271.6 | 272.5 |
| 30° | 246.9 | 252.7 | 258.4 | 265.4 | 266.8 |
| 32.5° | 237.2 | 243.8 | 250.9 | 259.3 | 261.9 |
| 35° | 228.0 | 235.5 | 243.8 | 253.5 | 256.6 |
| 37.5° | 217.8 | 226.2 | 236.8 | 247.4 | 250.4 |
| 40° | 207.7 | 217.4 | 229.3 | 240.7 | 244.7 |
| 42.5° | 198.0 | 207.7 | 221.8 | 234.6 | 238.5 |
| 45° | 187.0 | 198.9 | 214.3 | 228.0 | 232.4 |
| 47.5° | 176.4 | 189.2 | 206.8 | 220.9 | 225.8 |
| 50° | 165.3 | 179.0 | 198.9 | 213.9 | 218.7 |
| 52.5° | 154.8 | 169.3 | 190.5 | 205.9 | 211.2 |
| 55° | 143.3 | 159.2 | 182.1 | 198.0 | 203.7 |
| 57.5° | 132.3 | 149.9 | 172.8 | 190.0 | 195.8 |
| 60° | 120.4 | 139.3 | 164.5 | 181.2 | 187.4 |
| 62.5° | 109.8 | 129.6 | 154.8 | 172.8 | 178.6 |
| 65° | 97.9 | 119.5 | 145.5 | 163.6 | 169.3 |
| 67.5° | 87.3 | 109.8 | 136.2 | 154.3 | 160.5 |
| 70° | 75.8 | 98.8 | 126.1 | 145.1 | 150.4 |
| 72.5° | 65.3 | 89.1 | 116.8 | 135.4 | 142.0 |
| 75° | 54.2 | 78.9 | 107.1 | 126.1 | 131.8 |
| 77.5° | 43.7 | 69.2 | 97.9 | 116.8 | 123.0 |
| 80° | 33.1 | 60.0 | 88.6 | 107.1 | 113.3 |
| 82.5° | 24.3 | 50.7 | 79.8 | 98.3 | 104.1 |
| 85° | 15.9 | 43.2 | 71.4 | 89.9 | 96.1 |
| 87.5° | 9.7 | 36.2 | 64.4 | 82.5 | 88.2 |
| 90° | 4.4 | 30.0 | 58.2 | 75.8 | 81.1 |
| 92.5° | 4.0 | 27.3 | 54.2 | 71.4 | 76.7 |
| 95° | 3.5 | 24.3 | 50.7 | 67.5 | 72.8 |
| 97.5° | 3.1 | 22.0 | 47.6 | 63.9 | 69.2 |
| 100° | 3.1 | 19.4 | 44.1 | 60.4 | 65.3 |
| 102.5° | 2.6 | 17.2 | 41.0 | 56.9 | 61.7 |
| 105° | 2.2 | 15.0 | 37.9 | 53.4 | 58.2 |
| 107.5° | 2.2 | 12.8 | 34.8 | 49.8 | 54.7 |
| 110° | 1.8 | 10.6 | 32.2 | 46.3 | 51.1 |



TEST NUMBER: P333785

CATALOG NUMBER: S122DS-S290D840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 1.8 | 8.8 | 29.1 | 43.2 | 48.1 |
| 115° | 1.8 | 6.6 | 26.5 | 39.7 | 44.5 |
| 117.5° | 1.3 | 4.9 | 23.4 | 36.6 | 41.0 |
| 120° | 1.3 | 3.1 | 20.7 | 33.1 | 37.9 |
| 122.5° | 1.3 | 1.8 | 18.1 | 30.0 | 34.0 |
| 125° | 0.9 | 0.9 | 15.0 | 26.9 | 30.9 |
| 127.5° | 0.9 | 0.4 | 12.3 | 23.4 | 27.3 |
| 130° | 0.9 | 0.4 | 9.7 | 20.3 | 23.8 |
| 132.5° | 0.9 | 0.4 | 7.1 | 17.2 | 20.7 |
| 135° | 0.4 | 0.4 | 4.9 | 14.1 | 17.6 |
| 137.5° | 0.4 | 0.4 | 2.6 | 11.0 | 14.1 |
| 140° | 0.4 | 0.0 | 0.9 | 7.9 | 10.6 |
| 142.5° | 0.4 | 0.0 | 0.0 | 5.3 | 7.5 |
| 145° | 0.0 | 0.0 | 0.0 | 2.6 | 4.9 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.4 | 1.8 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)