

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: INVUE

Report Number: P401870

Luminaire Tested: **ENV-SA1F-740-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401870
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1F-740-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5982 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

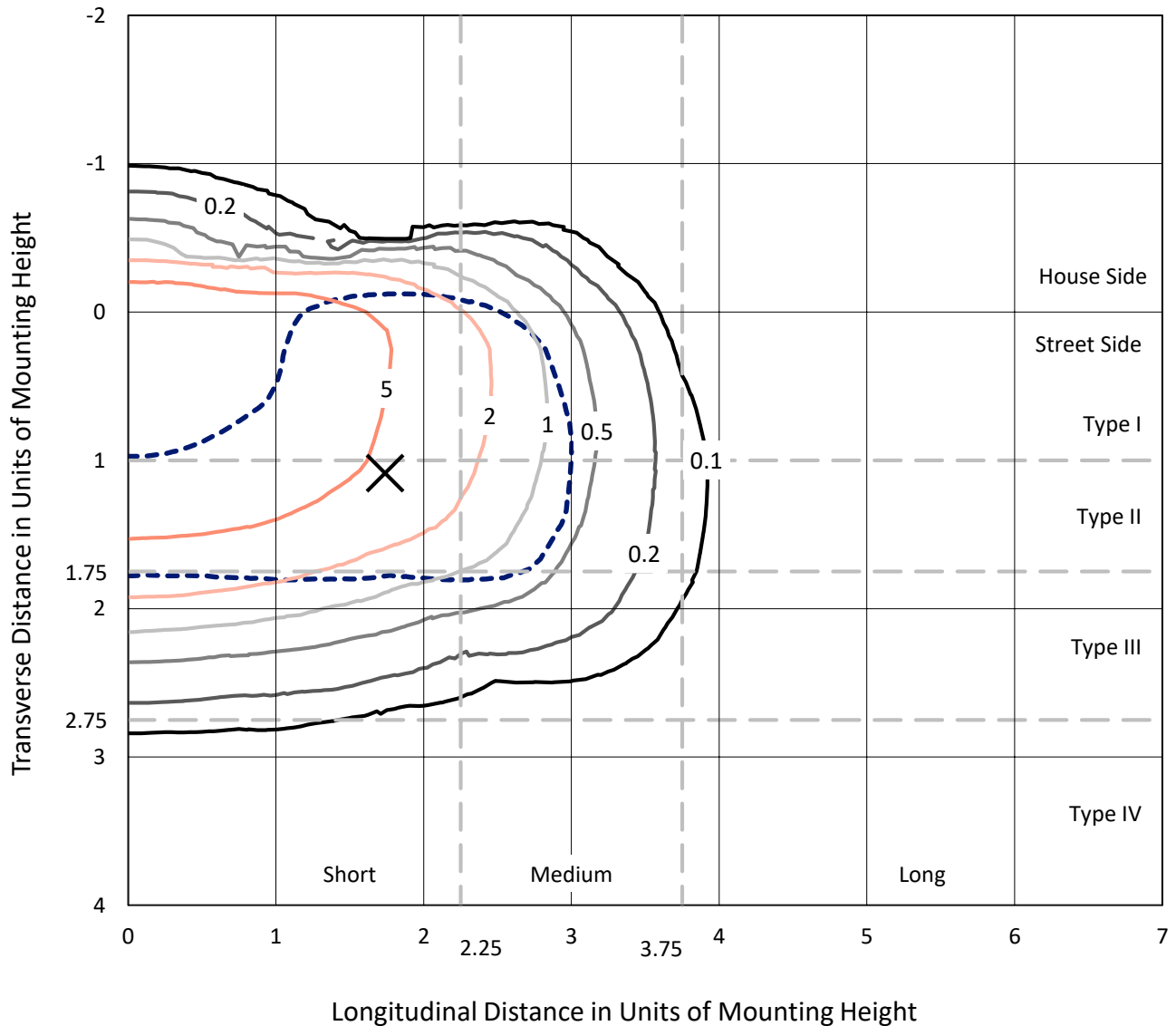
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

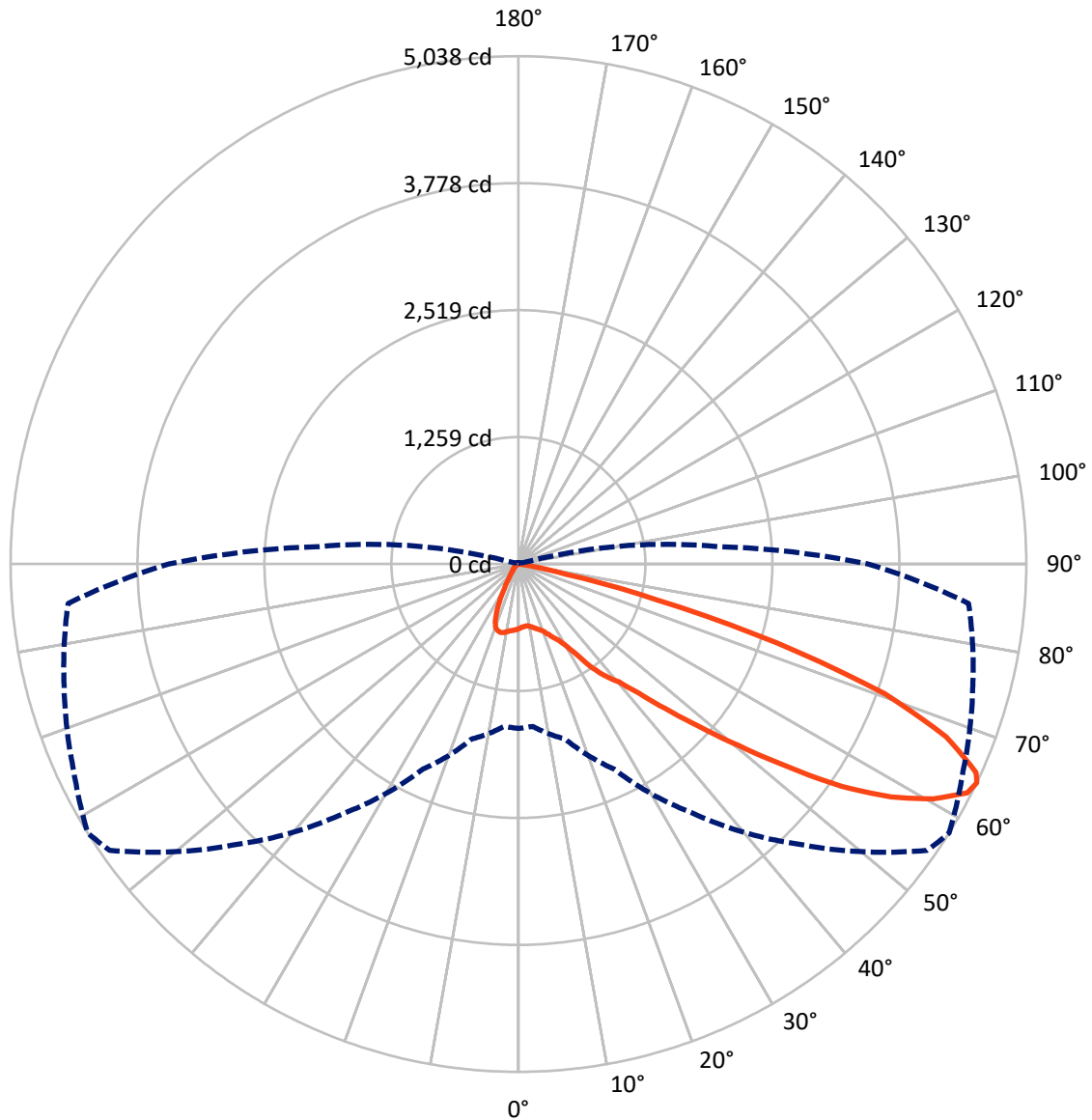


Based on 10 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 713.2 | 0.0 | 713.2 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| Street Side | Lumens | 5268.8 | 0.0 | 5268.8 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| Total | Lumens | 5982.0 | 0.0 | 5982.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 60.6 | 1.0 |
| 10°-20° | 176.5 | 3.0 |
| 20°-30° | 317.2 | 5.3 |
| 30°-40° | 555.9 | 9.3 |
| 40°-50° | 1016.5 | 17.0 |
| 50°-60° | 1738.9 | 29.1 |
| 60°-70° | 1686.8 | 28.2 |
| 70°-80° | 417.8 | 7.0 |
| 80°-90° | 11.9 | 0.2 |
| 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°-90° | 5982.0 | 100.0 |
| 0°-180° | 5982.0 | 100.0 |



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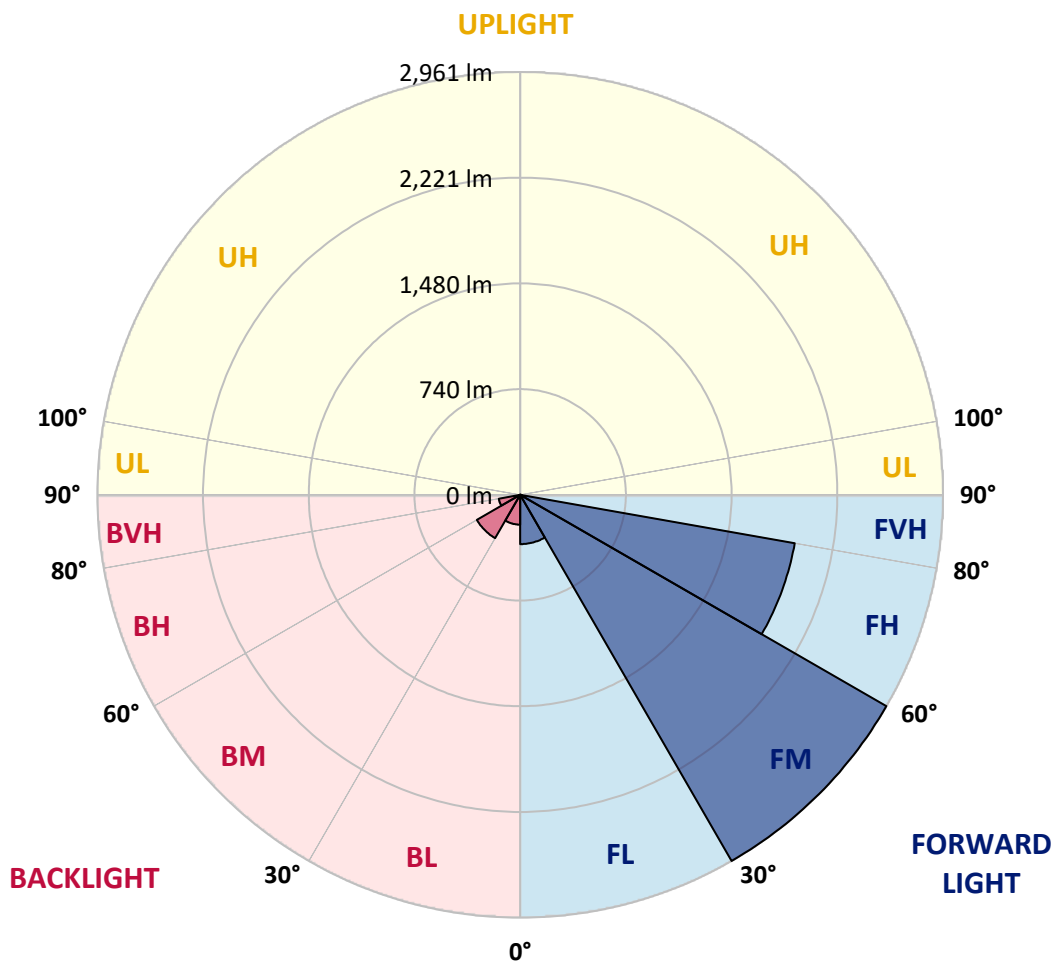
CATALOG NUMBER: ENV-SA1F-740-U-T3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 345.4 | 5.8 | | | |
| FM | (30°-60°) | 2961.0 | 49.5 | | | |
| FH | (60°-80°) | 1952.4 | 32.6 | | | G2/5000 |
| FVH | (80°-90°) | 10.1 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 208.8 | 3.5 | B1/500 | | |
| BM | (30°-60°) | 350.3 | 5.9 | B1/1000 | | |
| BH | (60°-80°) | 152.3 | 2.5 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 1.8 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 |
| 2.5° | 614.2 | 614.2 | 616.4 | 617.5 | 620.9 | 624.2 | 628.6 | 629.7 | 631.9 | 637.5 | 639.7 |
| 5° | 581.0 | 582.1 | 584.3 | 589.9 | 597.6 | 606.5 | 617.5 | 620.9 | 629.7 | 640.8 | 648.5 |
| 7.5° | 567.7 | 568.8 | 572.2 | 578.8 | 588.8 | 602.0 | 615.3 | 619.7 | 631.9 | 649.6 | 660.7 |
| 10° | 565.5 | 565.5 | 569.9 | 579.9 | 592.1 | 608.7 | 623.1 | 628.6 | 645.2 | 666.2 | 683.9 |
| 12.5° | 565.5 | 565.5 | 571.0 | 583.2 | 597.6 | 618.6 | 638.6 | 646.3 | 665.1 | 691.7 | 713.8 |
| 15° | 575.5 | 577.7 | 581.0 | 588.8 | 605.4 | 628.6 | 656.3 | 665.1 | 688.4 | 720.5 | 748.1 |
| 17.5° | 646.3 | 644.1 | 633.0 | 623.1 | 619.7 | 639.7 | 672.9 | 685.0 | 719.3 | 760.3 | 790.2 |
| 20° | 783.5 | 782.4 | 762.5 | 713.8 | 670.7 | 659.6 | 698.3 | 712.7 | 762.5 | 816.7 | 838.9 |
| 22.5° | 949.5 | 955.1 | 924.1 | 858.8 | 770.3 | 713.8 | 735.9 | 755.9 | 820.1 | 885.3 | 898.6 |
| 25° | 1114.4 | 1121.1 | 1092.3 | 1010.4 | 901.9 | 803.5 | 788.0 | 805.7 | 878.7 | 944.0 | 938.5 |
| 27.5° | 1309.2 | 1303.7 | 1274.9 | 1181.9 | 1055.8 | 924.1 | 857.7 | 861.0 | 917.4 | 990.5 | 972.8 |
| 30° | 1452.0 | 1444.2 | 1416.6 | 1353.5 | 1235.1 | 1084.6 | 957.3 | 947.3 | 963.9 | 1044.7 | 1025.9 |
| 32.5° | 1582.6 | 1588.1 | 1567.1 | 1483.0 | 1371.2 | 1249.4 | 1106.7 | 1080.1 | 1073.5 | 1142.1 | 1111.1 |
| 35° | 1712.0 | 1710.9 | 1703.2 | 1629.0 | 1519.5 | 1404.4 | 1284.9 | 1266.0 | 1263.8 | 1330.2 | 1246.1 |
| 37.5° | 1867.0 | 1859.2 | 1844.8 | 1769.6 | 1682.2 | 1572.6 | 1445.3 | 1415.5 | 1409.9 | 1423.2 | 1324.7 |
| 40° | 2033.0 | 2042.9 | 2019.7 | 1941.1 | 1846.0 | 1764.1 | 1585.9 | 1540.5 | 1502.9 | 1541.6 | 1478.5 |
| 42.5° | 2279.8 | 2287.5 | 2246.6 | 2192.3 | 2069.5 | 1993.1 | 1812.8 | 1750.8 | 1733.1 | 1791.7 | 1720.9 |
| 45° | 2589.6 | 2575.3 | 2547.6 | 2510.0 | 2408.1 | 2291.9 | 2103.8 | 2045.2 | 2026.3 | 2127.1 | 2010.8 |
| 47.5° | 2830.9 | 2828.7 | 2829.8 | 2822.0 | 2806.6 | 2667.1 | 2443.6 | 2403.7 | 2384.9 | 2529.9 | 2401.5 |
| 50° | 2983.6 | 2992.5 | 3030.1 | 3126.4 | 3197.2 | 3138.6 | 2876.3 | 2827.6 | 2813.2 | 2963.7 | 2790.0 |
| 52.5° | 3098.7 | 3119.7 | 3182.8 | 3373.2 | 3600.0 | 3620.0 | 3403.1 | 3334.4 | 3301.2 | 3343.3 | 3102.0 |
| 55° | 3157.4 | 3167.3 | 3263.6 | 3544.7 | 3900.0 | 4042.7 | 3952.0 | 3894.4 | 3760.5 | 3680.8 | 3468.4 |
| 57.5° | 3020.1 | 3004.7 | 3170.7 | 3528.1 | 4054.9 | 4383.6 | 4422.3 | 4357.0 | 4142.3 | 4080.4 | 3913.2 |
| 60° | 2660.5 | 2653.8 | 2840.9 | 3270.3 | 3919.9 | 4463.3 | 4770.9 | 4730.0 | 4533.0 | 4385.8 | 4228.6 |
| 62.5° | 2029.7 | 2040.7 | 2238.8 | 2676.0 | 3438.5 | 4234.2 | 4964.6 | 4997.8 | 4788.6 | 4569.5 | 4462.2 |
| 64° | 1630.1 | 1616.9 | 1798.4 | 2243.3 | 3016.8 | 3928.7 | 4950.2 | 5037.6 | 4866.1 | 4665.8 | 4483.2 |
| 65° | 1369.0 | 1340.2 | 1513.9 | 1916.8 | 2660.5 | 3707.4 | 4848.4 | 4988.9 | 4871.6 | 4689.0 | 4406.8 |
| 67.5° | 720.5 | 735.9 | 810.1 | 1164.2 | 1796.2 | 2803.2 | 4365.9 | 4578.4 | 4625.9 | 4371.4 | 3840.2 |
| 70° | 323.2 | 325.4 | 373.0 | 594.3 | 993.8 | 1818.3 | 3511.5 | 3855.7 | 3882.3 | 3591.2 | 2782.2 |
| 72.5° | 107.3 | 108.5 | 164.9 | 237.9 | 417.2 | 842.2 | 2371.6 | 2684.8 | 2742.4 | 2328.5 | 1509.5 |
| 75° | 66.4 | 68.6 | 87.4 | 128.4 | 193.7 | 294.4 | 1201.9 | 1414.3 | 1426.5 | 1032.5 | 548.9 |
| 77.5° | 42.1 | 44.3 | 53.1 | 76.4 | 106.2 | 111.8 | 394.0 | 477.0 | 540.1 | 371.8 | 170.4 |
| 80° | 26.6 | 26.6 | 34.3 | 46.5 | 55.3 | 47.6 | 107.3 | 141.7 | 170.4 | 125.1 | 57.5 |
| 82.5° | 10.0 | 10.0 | 17.7 | 25.5 | 23.2 | 16.6 | 28.8 | 37.6 | 65.3 | 62.0 | 27.7 |
| 85° | 0.0 | 0.0 | 1.1 | 2.2 | 1.1 | 2.2 | 5.5 | 7.7 | 12.2 | 17.7 | 8.9 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: ENV-SA1F-740-U-T3-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 | 640.8 |
| 2.5° | 643.0 | 645.2 | 649.6 | 650.7 | 651.8 | 648.5 | 651.8 | 648.5 | 650.7 | 650.7 | 650.7 |
| 5° | 652.9 | 656.3 | 659.6 | 660.7 | 659.6 | 651.8 | 654.1 | 648.5 | 647.4 | 647.4 | 647.4 |
| 7.5° | 666.2 | 669.5 | 675.1 | 671.8 | 665.1 | 654.1 | 652.9 | 645.2 | 641.9 | 641.9 | 643.0 |
| 10° | 690.6 | 693.9 | 696.1 | 689.5 | 676.2 | 659.6 | 647.4 | 630.8 | 623.1 | 619.7 | 619.7 |
| 12.5° | 721.6 | 724.9 | 723.8 | 712.7 | 688.4 | 654.1 | 619.7 | 587.7 | 564.4 | 555.6 | 546.7 |
| 15° | 754.8 | 759.2 | 757.0 | 733.7 | 687.3 | 626.4 | 560.0 | 484.7 | 438.2 | 408.4 | 402.8 |
| 17.5° | 793.5 | 797.9 | 786.9 | 744.8 | 670.7 | 567.7 | 441.6 | 339.8 | 272.2 | 246.8 | 245.7 |
| 20° | 841.1 | 838.9 | 812.3 | 745.9 | 640.8 | 459.3 | 295.5 | 212.5 | 183.7 | 177.1 | 176.0 |
| 22.5° | 895.3 | 885.3 | 836.7 | 739.3 | 558.9 | 312.1 | 190.3 | 168.2 | 164.9 | 162.7 | 162.7 |
| 25° | 926.3 | 908.6 | 845.5 | 720.5 | 430.5 | 199.2 | 161.6 | 157.1 | 152.7 | 148.3 | 147.2 |
| 27.5° | 950.6 | 924.1 | 848.8 | 658.5 | 286.6 | 152.7 | 146.1 | 141.7 | 135.0 | 128.4 | 127.3 |
| 30° | 994.9 | 955.1 | 854.4 | 550.0 | 176.0 | 130.6 | 127.3 | 119.5 | 109.6 | 102.9 | 100.7 |
| 32.5° | 1074.6 | 1017.0 | 876.5 | 411.7 | 128.4 | 115.1 | 106.2 | 96.3 | 85.2 | 78.6 | 78.6 |
| 35° | 1159.8 | 1075.7 | 887.6 | 271.1 | 111.8 | 100.7 | 87.4 | 75.3 | 65.3 | 59.8 | 58.7 |
| 37.5° | 1238.4 | 1159.8 | 884.2 | 166.0 | 99.6 | 86.3 | 71.9 | 59.8 | 50.9 | 46.5 | 46.5 |
| 40° | 1398.9 | 1307.0 | 838.9 | 114.0 | 87.4 | 73.0 | 58.7 | 46.5 | 40.9 | 37.6 | 37.6 |
| 42.5° | 1627.9 | 1468.6 | 738.2 | 97.4 | 76.4 | 60.9 | 46.5 | 38.7 | 34.3 | 31.0 | 31.0 |
| 45° | 1884.7 | 1646.7 | 588.8 | 87.4 | 66.4 | 50.9 | 38.7 | 32.1 | 27.7 | 26.6 | 26.6 |
| 47.5° | 2221.1 | 1862.6 | 432.7 | 78.6 | 57.5 | 43.2 | 32.1 | 26.6 | 24.3 | 23.2 | 23.2 |
| 50° | 2515.5 | 2037.4 | 295.5 | 68.6 | 50.9 | 36.5 | 27.7 | 24.3 | 22.1 | 21.0 | 21.0 |
| 52.5° | 2783.3 | 2159.1 | 194.8 | 59.8 | 45.4 | 29.9 | 25.5 | 22.1 | 21.0 | 19.9 | 19.9 |
| 55° | 3098.7 | 2252.1 | 131.7 | 52.0 | 39.8 | 27.7 | 24.3 | 22.1 | 19.9 | 19.9 | 18.8 |
| 57.5° | 3366.5 | 2307.4 | 94.1 | 44.3 | 35.4 | 25.5 | 23.2 | 21.0 | 18.8 | 17.7 | 17.7 |
| 60° | 3522.6 | 2242.1 | 68.6 | 38.7 | 31.0 | 23.2 | 21.0 | 18.8 | 17.7 | 16.6 | 16.6 |
| 62.5° | 3565.7 | 2116.0 | 53.1 | 33.2 | 26.6 | 21.0 | 18.8 | 16.6 | 15.5 | 14.4 | 14.4 |
| 64° | 3466.1 | 1981.0 | 45.4 | 28.8 | 23.2 | 18.8 | 17.7 | 15.5 | 13.3 | 11.1 | 11.1 |
| 65° | 3325.6 | 1855.9 | 40.9 | 26.6 | 21.0 | 17.7 | 16.6 | 14.4 | 11.1 | 8.9 | 8.9 |
| 67.5° | 2771.1 | 1479.6 | 33.2 | 22.1 | 16.6 | 15.5 | 13.3 | 11.1 | 7.7 | 5.5 | 5.5 |
| 70° | 1967.7 | 1034.8 | 25.5 | 17.7 | 14.4 | 14.4 | 12.2 | 8.9 | 4.4 | 2.2 | 2.2 |
| 72.5° | 1041.4 | 537.8 | 21.0 | 14.4 | 11.1 | 11.1 | 10.0 | 5.5 | 3.3 | 2.2 | 1.1 |
| 75° | 364.1 | 177.1 | 17.7 | 12.2 | 10.0 | 7.7 | 6.6 | 4.4 | 3.3 | 2.2 | 1.1 |
| 77.5° | 110.7 | 58.7 | 15.5 | 12.2 | 8.9 | 6.6 | 7.7 | 6.6 | 6.6 | 4.4 | 3.3 |
| 80° | 35.4 | 21.0 | 8.9 | 7.7 | 8.9 | 8.9 | 7.7 | 6.6 | 7.7 | 5.5 | 4.4 |
| 82.5° | 13.3 | 7.7 | 3.3 | 4.4 | 4.4 | 5.5 | 5.5 | 4.4 | 3.3 | 1.1 | 0.0 |
| 85° | 4.4 | 3.3 | 2.2 | 3.3 | 3.3 | 3.3 | 2.2 | 2.2 | 1.1 | 0.0 | 0.0 |
| 87.5° | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)