

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: P160182

Luminaire Tested: **ENV-F02-LED-E1-BL2-ULG**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P160182  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P20107) AND DOWNLIGHT  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-F02-LED-E1-BL2-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2  
Light Source: (14) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4836.3 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B1 - U3 - G1

Input Watts (W): 57.3  
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



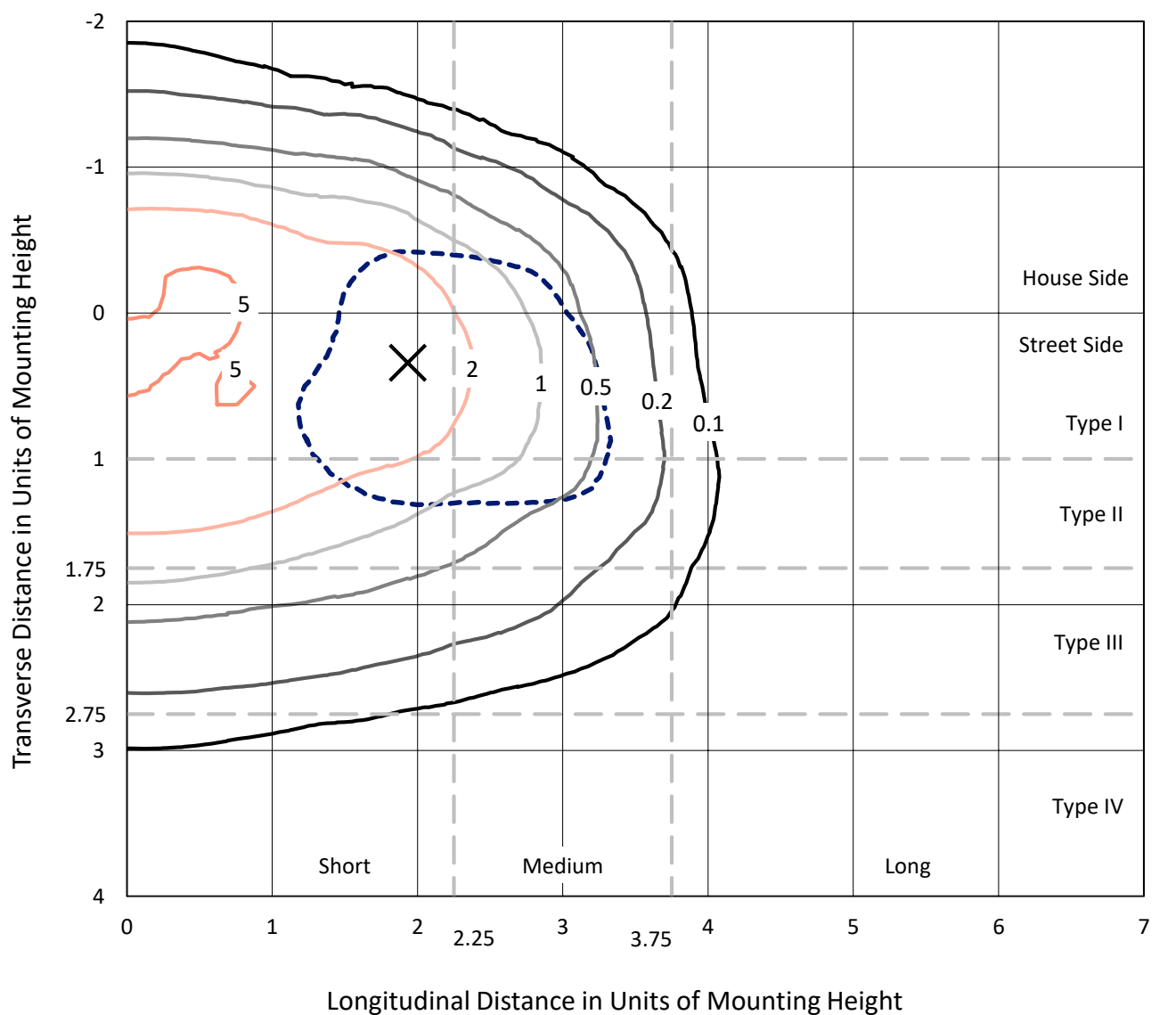
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

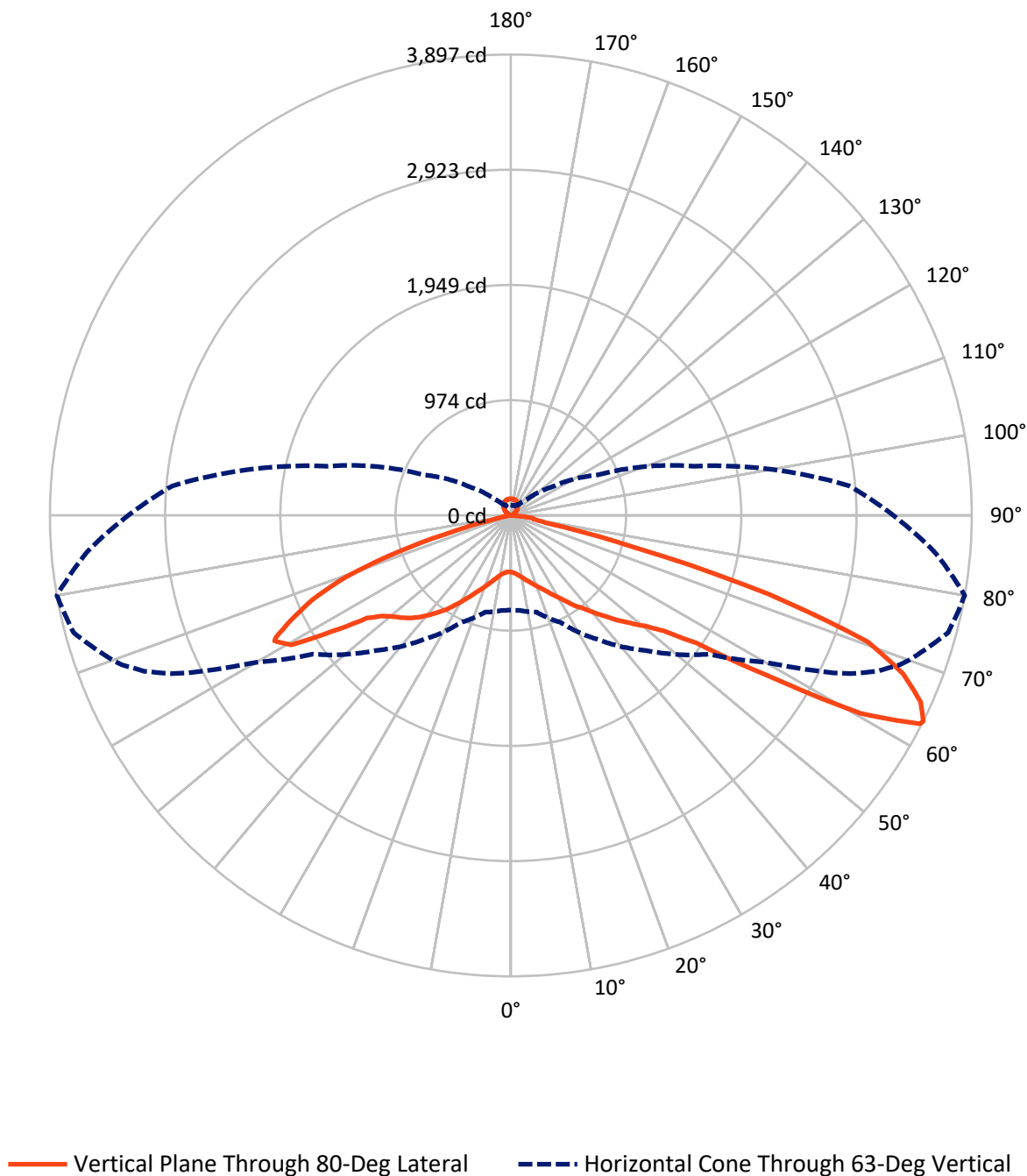


Based on 10 foot mounting height. Maximum calculated value = 5.9 fc  
Type II - Short - Semi-Cutoff

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## Luminous Intensity Polar Plot



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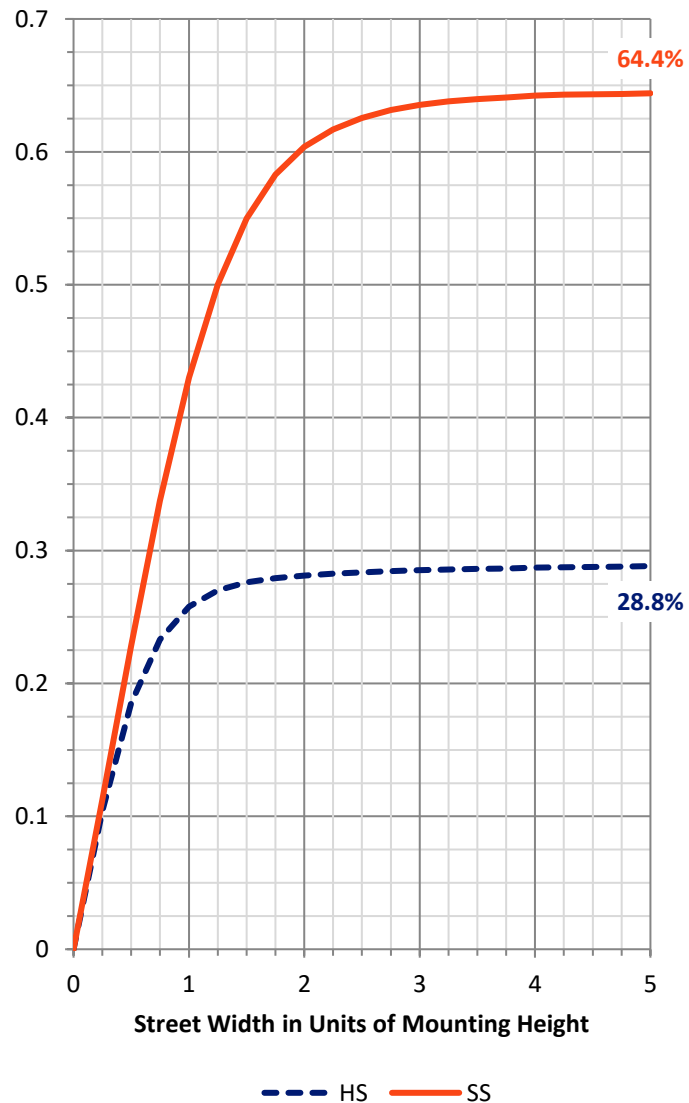
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1407.9   | 157.7  | 1565.7 |
|                    | % Fixture | 29.1     | 3.3    | 32.4   |
| <b>Street Side</b> | Lumens    | 3112.9   | 157.7  | 3270.6 |
|                    | % Fixture | 64.4     | 3.3    | 67.6   |
| <b>Total</b>       | Lumens    | 4520.8   | 315.5  | 4836.3 |
|                    | % Fixture | 93.5     | 6.5    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 48.0   | 1.0       |
| 10°-20°   | 164.6  | 3.4       |
| 20°-30°   | 309.3  | 6.4       |
| 30°-40°   | 490.9  | 10.1      |
| 40°-50°   | 740.9  | 15.3      |
| 50°-60°   | 1041.4 | 21.5      |
| 60°-70°   | 1215.1 | 25.1      |
| 70°-80°   | 469.7  | 9.7       |
| 80°-90°   | 40.9   | 0.8       |
| 90°-100°  | 1.3    | 0.0       |
| 100°-110° | 12.3   | 0.3       |
| 110°-120° | 25.2   | 0.5       |
| 120°-130° | 43.0   | 0.9       |
| 130°-140° | 60.0   | 1.2       |
| 140°-150° | 65.4   | 1.4       |
| 150°-160° | 56.9   | 1.2       |
| 160°-170° | 38.2   | 0.8       |
| 170°-180° | 13.3   | 0.3       |
| 0°-90°    | 4520.8 | 93.5      |
| 0°-180°   | 4836.3 | 100.0     |

**Coefficient of Utilization**



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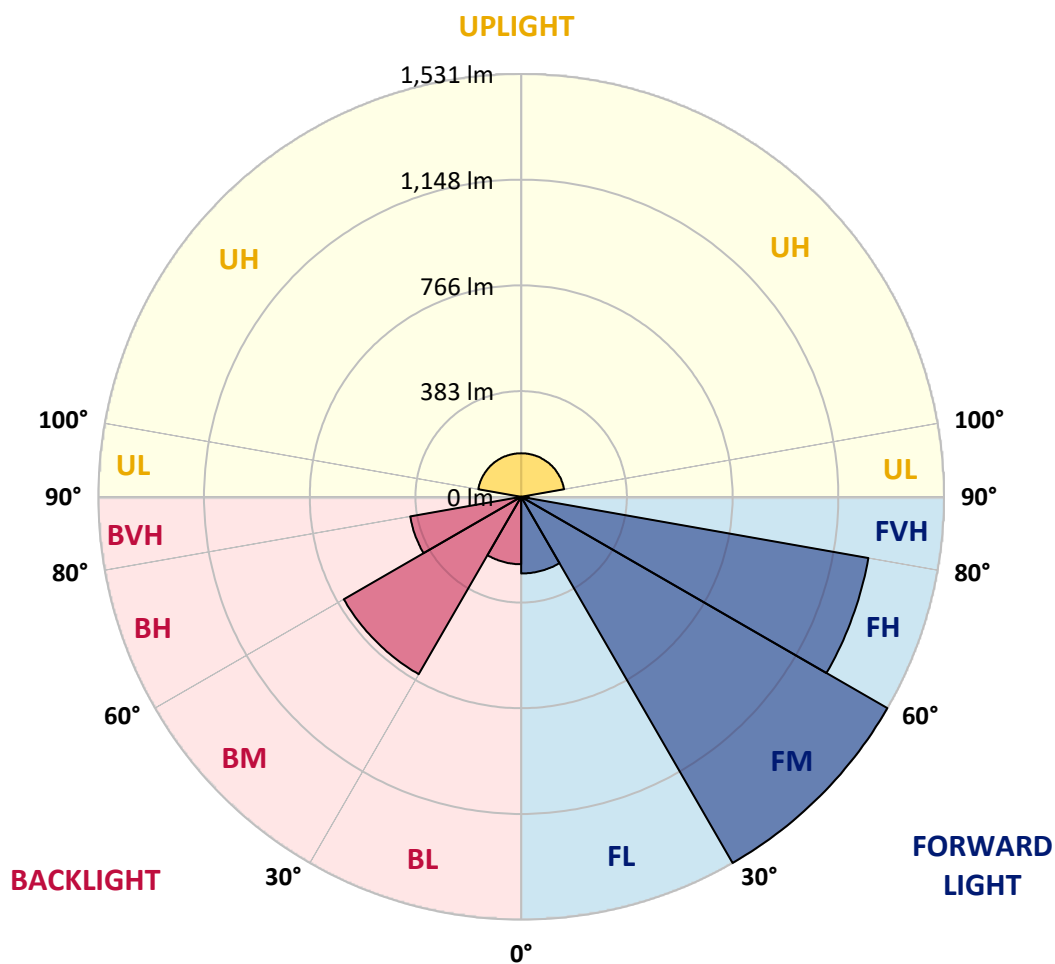
CATALOG NUMBER: ENV-F02-LED-E1-BL2-ULG

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |        |         |
|------|-------------|--------|-----------|-------------------------|--------|---------|
|      |             |        |           | B                       | U      | G       |
| FL   | (0°-30°)    | 277.7  | 5.7       |                         |        |         |
| FM   | (30°-60°)   | 1531.3 | 31.7      |                         |        |         |
| FH   | (60°-80°)   | 1276.6 | 26.4      |                         |        | G1/1800 |
| FVH  | (80°-90°)   | 27.2   | 0.6       |                         |        | G1/100  |
| BL   | (0°-30°)    | 244.2  | 5.0       | B1/500                  |        |         |
| BM   | (30°-60°)   | 741.9  | 15.3      | B1/1000                 |        |         |
| BH   | (60°-80°)   | 408.2  | 8.4       | B1/500                  |        | G1/500  |
| BVH  | (80°-90°)   | 13.7   | 0.3       |                         |        | G1/100  |
| UL   | (90°-100°)  | 1.3    | 0.0       |                         | U1/10  |         |
| UH   | (100°-180°) | 157.7  | 3.3       |                         | U3/500 |         |

**BUG Rating: B1-U3-G1**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 60°    | 61°    | 62°    | 64°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  |
| 2.5°   | 502.7  | 501.1  | 501.9  | 501.1  | 501.1  | 499.4  | 494.5  | 494.5  | 493.7  | 494.5  | 492.8  |
| 5°     | 530.0  | 529.2  | 528.3  | 526.7  | 526.7  | 523.4  | 515.1  | 513.5  | 514.3  | 512.7  | 509.3  |
| 7.5°   | 560.5  | 559.7  | 558.1  | 554.8  | 553.1  | 548.1  | 536.6  | 534.9  | 534.1  | 532.5  | 530.0  |
| 10°    | 591.1  | 590.3  | 587.8  | 583.6  | 579.5  | 572.1  | 560.5  | 556.4  | 555.6  | 554.8  | 552.3  |
| 12.5°  | 622.4  | 620.0  | 620.8  | 613.4  | 606.8  | 597.7  | 584.5  | 580.3  | 579.5  | 578.7  | 577.9  |
| 15°    | 657.1  | 656.3  | 654.6  | 644.7  | 632.4  | 620.0  | 606.8  | 601.8  | 598.5  | 599.3  | 598.5  |
| 17.5°  | 690.1  | 689.3  | 683.5  | 669.5  | 653.0  | 639.0  | 622.4  | 619.1  | 619.1  | 618.3  | 618.3  |
| 20°    | 714.1  | 713.3  | 707.5  | 690.1  | 668.7  | 653.0  | 639.8  | 639.8  | 639.0  | 639.8  | 640.6  |
| 22.5°  | 724.8  | 724.8  | 717.4  | 698.4  | 675.3  | 663.7  | 659.6  | 662.1  | 662.9  | 663.7  | 665.4  |
| 25°    | 728.9  | 728.9  | 721.5  | 699.2  | 677.8  | 679.4  | 684.4  | 688.5  | 690.1  | 690.1  | 695.9  |
| 27.5°  | 736.4  | 737.2  | 727.3  | 703.3  | 686.0  | 701.7  | 714.1  | 719.9  | 722.3  | 724.0  | 731.4  |
| 30°    | 758.7  | 757.8  | 749.6  | 724.0  | 710.8  | 733.1  | 755.4  | 761.1  | 766.9  | 766.9  | 775.2  |
| 32.5°  | 791.7  | 790.9  | 785.9  | 766.1  | 760.3  | 788.4  | 808.2  | 820.6  | 819.7  | 821.4  | 827.2  |
| 35°    | 835.4  | 836.3  | 839.6  | 834.6  | 839.6  | 867.6  | 889.9  | 894.9  | 895.7  | 896.5  | 897.3  |
| 37.5°  | 885.0  | 885.8  | 903.9  | 919.6  | 941.9  | 983.2  | 996.4  | 998.9  | 993.1  | 993.1  | 991.5  |
| 40°    | 922.1  | 926.2  | 966.7  | 1008.0 | 1055.0 | 1111.2 | 1131.0 | 1126.0 | 1121.9 | 1118.6 | 1108.7 |
| 42.5°  | 998.1  | 1000.5 | 1043.5 | 1102.9 | 1168.9 | 1246.5 | 1281.2 | 1264.7 | 1263.9 | 1249.0 | 1241.6 |
| 45°    | 1074.0 | 1080.6 | 1126.8 | 1193.7 | 1273.0 | 1380.3 | 1431.5 | 1417.4 | 1414.9 | 1408.3 | 1387.7 |
| 47.5°  | 1134.3 | 1143.4 | 1194.5 | 1273.8 | 1364.6 | 1488.4 | 1580.1 | 1590.0 | 1584.2 | 1576.8 | 1560.2 |
| 50°    | 1185.5 | 1192.9 | 1244.9 | 1331.6 | 1435.6 | 1571.0 | 1702.2 | 1737.7 | 1742.7 | 1739.4 | 1735.3 |
| 52.5°  | 1218.5 | 1225.9 | 1277.1 | 1369.5 | 1476.9 | 1632.1 | 1793.0 | 1863.2 | 1878.1 | 1877.2 | 1894.6 |
| 55°    | 1219.3 | 1227.6 | 1280.4 | 1381.9 | 1500.0 | 1674.2 | 1877.2 | 1987.9 | 2006.0 | 2028.3 | 2065.5 |
| 57.5°  | 1173.9 | 1182.2 | 1248.2 | 1365.4 | 1506.6 | 1707.2 | 1959.0 | 2153.8 | 2203.3 | 2247.1 | 2349.4 |
| 60°    | 1047.6 | 1050.9 | 1123.5 | 1280.4 | 1475.2 | 1699.8 | 2020.9 | 2296.6 | 2366.8 | 2461.7 | 2626.8 |
| 62.5°  | 853.6  | 860.2  | 904.8  | 1057.5 | 1329.1 | 1634.5 | 2045.7 | 2455.9 | 2571.5 | 2710.2 | 2974.4 |
| 63°    | 799.9  | 805.7  | 847.0  | 998.1  | 1279.6 | 1613.9 | 2044.8 | 2481.5 | 2608.7 | 2751.5 | 3036.3 |
| 65°    | 617.5  | 619.1  | 649.7  | 763.6  | 1050.1 | 1463.7 | 2000.2 | 2445.2 | 2606.2 | 2772.9 | 3071.8 |
| 67.5°  | 497.8  | 503.6  | 534.1  | 614.2  | 829.7  | 1229.2 | 1800.5 | 2118.3 | 2228.1 | 2392.4 | 2748.2 |
| 70°    | 389.6  | 399.6  | 428.4  | 519.3  | 707.5  | 989.8  | 1514.8 | 1768.3 | 1836.0 | 1914.4 | 2216.5 |
| 72.5°  | 257.6  | 260.0  | 265.0  | 315.4  | 493.7  | 770.2  | 1260.6 | 1433.1 | 1459.5 | 1515.7 | 1663.4 |
| 75°    | 121.4  | 130.4  | 137.9  | 163.5  | 238.6  | 504.4  | 913.9  | 1017.9 | 1049.2 | 1107.9 | 1161.5 |
| 77.5°  | 52.8   | 52.0   | 55.3   | 75.1   | 125.5  | 224.5  | 568.8  | 752.1  | 762.8  | 749.6  | 726.5  |
| 80°    | 16.5   | 17.3   | 18.2   | 19.8   | 39.6   | 107.3  | 246.0  | 505.2  | 558.1  | 593.6  | 583.6  |
| 82.5°  | 1.7    | 0.8    | 2.5    | 5.0    | 8.3    | 15.7   | 92.5   | 236.9  | 298.0  | 365.7  | 452.4  |
| 85°    | 0.0    | 0.0    | 0.8    | 0.8    | 1.7    | 3.3    | 5.8    | 24.8   | 41.3   | 47.9   | 94.9   |
| 87.5°  | 0.0    | 0.0    | 0.8    | 0.8    | 1.7    | 2.5    | 2.5    | 3.3    | 3.3    | 3.3    | 3.3    |
| 90°    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| 92.5°  | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| 95°    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    |
| 97.5°  | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    |
| 100°   | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    |
| 102.5° | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    |
| 105°   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   |
| 107.5° | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 15°   | 25°   | 35°   | 45°   | 55°   | 60°   | 61°   | 62°   | 64°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110°   | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  |
| 112.5° | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  |
| 115°   | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| 117.5° | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  |
| 120°   | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  |
| 122.5° | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  |
| 125°   | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  |
| 127.5° | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  |
| 130°   | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |
| 132.5° | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  |
| 135°   | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  |
| 137.5° | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  |
| 140°   | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  |
| 142.5° | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  |
| 145°   | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 |
| 147.5° | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 |
| 150°   | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 |
| 152.5° | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 |
| 155°   | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 |
| 157.5° | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 |
| 160°   | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 |
| 162.5° | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 |
| 165°   | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 |
| 167.5° | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 |
| 170°   | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 |
| 172.5° | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 |
| 175°   | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 |
| 177.5° | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 |
| 180°   | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 |

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**CANDELA DISTRIBUTION (continued):**

|        | 65°    | 66°    | 67°    | 68°    | 69°    | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  | 478.8  |
| 2.5°   | 492.0  | 492.0  | 490.4  | 491.2  | 490.4  | 490.4  | 488.7  | 487.1  | 486.2  | 482.1  | 479.6  |
| 5°     | 509.3  | 509.3  | 508.5  | 506.9  | 506.9  | 506.0  | 501.9  | 497.8  | 495.3  | 490.4  | 485.4  |
| 7.5°   | 529.2  | 528.3  | 526.7  | 525.0  | 525.0  | 524.2  | 518.4  | 514.3  | 509.3  | 501.9  | 496.1  |
| 10°    | 552.3  | 551.5  | 549.8  | 547.3  | 547.3  | 546.5  | 540.7  | 534.1  | 530.0  | 520.9  | 513.5  |
| 12.5°  | 577.0  | 574.6  | 573.7  | 572.1  | 570.4  | 570.4  | 565.5  | 558.9  | 555.6  | 545.7  | 538.2  |
| 15°    | 597.7  | 596.0  | 595.2  | 594.4  | 593.6  | 591.9  | 587.8  | 582.0  | 579.5  | 571.3  | 565.5  |
| 17.5°  | 617.5  | 617.5  | 618.3  | 616.7  | 615.8  | 614.2  | 611.7  | 610.1  | 607.6  | 600.2  | 596.9  |
| 20°    | 640.6  | 640.6  | 642.3  | 641.4  | 640.6  | 643.1  | 642.3  | 641.4  | 641.4  | 634.8  | 632.4  |
| 22.5°  | 667.8  | 667.0  | 669.5  | 668.7  | 669.5  | 672.0  | 675.3  | 673.6  | 676.9  | 672.8  | 671.2  |
| 25°    | 699.2  | 698.4  | 700.9  | 702.5  | 704.2  | 705.8  | 712.4  | 714.1  | 718.2  | 717.4  | 714.1  |
| 27.5°  | 734.7  | 735.5  | 736.4  | 740.5  | 743.0  | 744.6  | 753.7  | 758.7  | 766.9  | 763.6  | 766.9  |
| 30°    | 776.0  | 780.1  | 783.4  | 787.6  | 788.4  | 790.0  | 804.9  | 809.8  | 814.0  | 816.4  | 821.4  |
| 32.5°  | 833.0  | 835.4  | 836.3  | 841.2  | 842.9  | 845.3  | 861.0  | 867.6  | 873.4  | 874.2  | 883.3  |
| 35°    | 902.3  | 903.9  | 906.4  | 908.9  | 912.2  | 910.6  | 928.7  | 938.6  | 946.1  | 946.9  | 956.8  |
| 37.5°  | 993.9  | 988.2  | 990.6  | 987.3  | 982.4  | 982.4  | 988.2  | 998.1  | 1006.3 | 1012.9 | 1022.8 |
| 40°    | 1103.7 | 1099.6 | 1098.8 | 1091.3 | 1083.1 | 1075.7 | 1072.4 | 1078.1 | 1084.7 | 1090.5 | 1102.9 |
| 42.5°  | 1229.2 | 1225.1 | 1211.0 | 1206.1 | 1192.1 | 1183.8 | 1161.5 | 1164.0 | 1175.5 | 1178.8 | 1186.3 |
| 45°    | 1376.2 | 1361.3 | 1356.3 | 1325.8 | 1320.0 | 1308.5 | 1266.4 | 1263.1 | 1273.0 | 1273.8 | 1268.8 |
| 47.5°  | 1543.7 | 1533.0 | 1521.4 | 1500.0 | 1477.7 | 1458.7 | 1394.3 | 1360.5 | 1371.2 | 1370.4 | 1346.4 |
| 50°    | 1726.2 | 1724.5 | 1707.2 | 1693.2 | 1673.3 | 1646.1 | 1531.3 | 1469.4 | 1477.7 | 1470.3 | 1426.5 |
| 52.5°  | 1900.4 | 1895.4 | 1894.6 | 1883.8 | 1876.4 | 1867.3 | 1727.8 | 1621.3 | 1602.3 | 1586.7 | 1530.5 |
| 55°    | 2083.6 | 2096.0 | 2087.8 | 2105.1 | 2118.3 | 2116.6 | 2058.9 | 1902.8 | 1806.2 | 1793.9 | 1708.0 |
| 57.5°  | 2389.1 | 2418.8 | 2458.4 | 2460.1 | 2495.6 | 2546.7 | 2650.8 | 2538.5 | 2296.6 | 2248.7 | 2134.0 |
| 60°    | 2739.1 | 2815.9 | 2914.9 | 2963.6 | 3039.6 | 3118.8 | 3379.7 | 3397.0 | 3058.6 | 2873.7 | 2663.1 |
| 62.5°  | 3090.8 | 3191.5 | 3308.7 | 3384.7 | 3478.8 | 3540.7 | 3816.4 | 3882.4 | 3573.7 | 3232.8 | 2886.0 |
| 63°    | 3165.1 | 3268.3 | 3369.8 | 3444.1 | 3523.3 | 3580.3 | 3828.0 | 3897.3 | 3601.8 | 3233.6 | 2872.0 |
| 65°    | 3203.9 | 3300.4 | 3379.7 | 3445.7 | 3498.6 | 3537.4 | 3733.0 | 3808.1 | 3564.6 | 3113.9 | 2714.3 |
| 67.5°  | 2909.1 | 3064.3 | 3164.2 | 3244.3 | 3298.0 | 3351.6 | 3531.6 | 3578.7 | 3406.1 | 2881.1 | 2474.9 |
| 70°    | 2408.1 | 2587.2 | 2744.9 | 2869.5 | 2962.0 | 3043.7 | 3232.8 | 3200.6 | 3052.0 | 2503.8 | 2099.3 |
| 72.5°  | 1771.6 | 1927.6 | 2081.1 | 2222.3 | 2342.8 | 2446.9 | 2571.5 | 2280.1 | 2053.9 | 1665.1 | 1452.9 |
| 75°    | 1191.2 | 1225.1 | 1295.2 | 1365.4 | 1409.2 | 1438.9 | 1362.1 | 1085.6 | 881.7  | 790.9  | 691.8  |
| 77.5°  | 703.3  | 680.2  | 682.7  | 665.4  | 653.8  | 651.3  | 546.5  | 303.8  | 160.2  | 163.5  | 171.7  |
| 80°    | 561.4  | 535.8  | 508.5  | 478.0  | 458.2  | 436.7  | 355.8  | 194.8  | 69.3   | 56.1   | 58.6   |
| 82.5°  | 454.0  | 447.4  | 432.6  | 401.2  | 369.8  | 332.7  | 254.3  | 187.4  | 39.6   | 31.4   | 33.8   |
| 85°    | 88.3   | 99.1   | 89.2   | 97.4   | 72.6   | 68.5   | 40.5   | 43.8   | 15.7   | 14.0   | 17.3   |
| 87.5°  | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 6.6    |
| 90°    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| 92.5°  | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| 95°    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    |
| 97.5°  | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    |
| 100°   | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    |
| 102.5° | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    | 8.8    |
| 105°   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   | 11.8   |
| 107.5° | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   | 14.7   |

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CATALOG NUMBER: ENV-F02-LED-E1-BL2-ULG

**CANDELA DISTRIBUTION (continued):**

|        | 65°   | 66°   | 67°   | 68°   | 69°   | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110°   | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  |
| 112.5° | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  |
| 115°   | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| 117.5° | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  |
| 120°   | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  |
| 122.5° | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  |
| 125°   | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  |
| 127.5° | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  |
| 130°   | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |
| 132.5° | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  |
| 135°   | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  |
| 137.5° | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  |
| 140°   | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  |
| 142.5° | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  |
| 145°   | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 |
| 147.5° | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 |
| 150°   | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 |
| 152.5° | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 |
| 155°   | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 |
| 157.5° | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 |
| 160°   | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 |
| 162.5° | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 |
| 165°   | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 |
| 167.5° | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 |
| 170°   | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 |
| 172.5° | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 |
| 175°   | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 |
| 177.5° | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 |
| 180°   | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 |

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CATALOG NUMBER: ENV-F02-LED-E1-BL2-ULG

**CANDELA DISTRIBUTION (continued):**

|        | 105°   | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 478.8  | 478.8 | 478.8 | 478.8 | 478.8 | 478.8 | 478.8 | 478.8 | 478.8 |
| 2.5°   | 475.5  | 472.2 | 469.7 | 466.4 | 464.8 | 462.3 | 461.5 | 459.0 | 459.8 |
| 5°     | 477.2  | 471.4 | 466.4 | 461.5 | 458.2 | 456.5 | 454.9 | 453.2 | 453.2 |
| 7.5°   | 485.4  | 478.0 | 472.2 | 466.4 | 463.9 | 460.6 | 459.8 | 457.3 | 457.3 |
| 10°    | 502.7  | 494.5 | 487.1 | 480.5 | 477.2 | 473.0 | 471.4 | 468.9 | 468.9 |
| 12.5°  | 528.3  | 520.9 | 512.7 | 502.7 | 496.1 | 491.2 | 487.1 | 485.4 | 485.4 |
| 15°    | 557.2  | 551.5 | 544.8 | 531.6 | 520.9 | 511.8 | 503.6 | 500.3 | 499.4 |
| 17.5°  | 591.9  | 586.9 | 580.3 | 565.5 | 548.1 | 529.2 | 515.1 | 508.5 | 507.7 |
| 20°    | 634.0  | 629.0 | 619.1 | 598.5 | 571.3 | 541.5 | 519.3 | 509.3 | 508.5 |
| 22.5°  | 676.9  | 676.9 | 660.4 | 626.6 | 586.1 | 546.5 | 516.8 | 503.6 | 501.1 |
| 25°    | 724.0  | 726.5 | 701.7 | 648.9 | 594.4 | 544.0 | 506.0 | 489.5 | 486.2 |
| 27.5°  | 780.9  | 778.5 | 737.2 | 666.2 | 595.2 | 534.1 | 488.7 | 468.9 | 465.6 |
| 30°    | 843.7  | 827.2 | 766.1 | 676.1 | 589.4 | 516.0 | 465.6 | 443.3 | 440.8 |
| 32.5°  | 906.4  | 870.9 | 787.6 | 677.8 | 572.9 | 489.5 | 435.1 | 411.9 | 408.6 |
| 35°    | 973.3  | 909.7 | 800.8 | 668.7 | 545.7 | 454.0 | 397.1 | 374.8 | 371.5 |
| 37.5°  | 1029.4 | 939.4 | 804.9 | 644.7 | 504.4 | 412.8 | 362.4 | 339.3 | 333.5 |
| 40°    | 1080.6 | 960.9 | 797.5 | 605.9 | 458.2 | 372.3 | 326.1 | 306.3 | 304.6 |
| 42.5°  | 1127.7 | 970.8 | 771.0 | 555.6 | 411.9 | 337.6 | 295.5 | 276.6 | 274.9 |
| 45°    | 1164.0 | 964.2 | 726.5 | 500.3 | 374.0 | 307.9 | 268.3 | 251.0 | 247.7 |
| 47.5°  | 1187.1 | 940.3 | 665.4 | 454.0 | 342.6 | 277.4 | 238.6 | 220.4 | 217.1 |
| 50°    | 1205.3 | 904.8 | 603.5 | 418.5 | 312.0 | 246.0 | 208.0 | 191.5 | 189.0 |
| 52.5°  | 1229.2 | 859.4 | 549.8 | 386.3 | 276.6 | 210.5 | 176.7 | 161.0 | 158.5 |
| 55°    | 1282.0 | 820.6 | 511.8 | 350.8 | 238.6 | 173.4 | 145.3 | 135.4 | 132.1 |
| 57.5°  | 1461.2 | 833.8 | 487.9 | 307.9 | 194.8 | 139.5 | 120.5 | 114.7 | 113.9 |
| 60°    | 1649.4 | 889.9 | 476.3 | 258.4 | 151.1 | 113.1 | 102.4 | 100.7 | 99.9  |
| 62.5°  | 1639.5 | 839.6 | 428.4 | 203.1 | 116.4 | 93.3  | 88.3  | 89.2  | 89.2  |
| 63°    | 1606.5 | 809.0 | 412.8 | 190.7 | 110.6 | 90.8  | 85.9  | 85.9  | 85.9  |
| 65°    | 1406.7 | 686.0 | 335.2 | 144.5 | 92.5  | 80.9  | 76.8  | 77.6  | 78.4  |
| 67.5°  | 1161.5 | 495.3 | 220.4 | 100.7 | 83.4  | 73.5  | 68.5  | 66.9  | 66.9  |
| 70°    | 888.3  | 333.5 | 130.4 | 87.5  | 82.6  | 68.5  | 60.3  | 58.6  | 58.6  |
| 72.5°  | 582.8  | 203.9 | 88.3  | 87.5  | 81.7  | 65.2  | 56.1  | 52.8  | 52.8  |
| 75°    | 267.5  | 100.7 | 73.5  | 84.2  | 77.6  | 60.3  | 49.5  | 45.4  | 44.6  |
| 77.5°  | 104.0  | 63.6  | 66.0  | 71.0  | 60.3  | 49.5  | 44.6  | 41.3  | 40.5  |
| 80°    | 60.3   | 51.2  | 57.8  | 51.2  | 43.8  | 38.0  | 38.0  | 35.5  | 34.7  |
| 82.5°  | 43.8   | 43.8  | 44.6  | 37.1  | 33.0  | 31.4  | 31.4  | 28.9  | 28.1  |
| 85°    | 31.4   | 32.2  | 37.1  | 29.7  | 25.6  | 22.3  | 20.6  | 20.6  | 19.8  |
| 87.5°  | 15.7   | 25.6  | 20.6  | 12.4  | 11.6  | 10.7  | 10.7  | 10.7  | 9.9   |
| 90°    | 0.1    | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   |
| 92.5°  | 0.1    | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   |
| 95°    | 0.5    | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| 97.5°  | 1.5    | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |
| 100°   | 5.0    | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| 102.5° | 8.8    | 8.8   | 8.8   | 8.8   | 8.8   | 8.8   | 8.8   | 8.8   | 8.8   |
| 105°   | 11.8   | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  |
| 107.5° | 14.7   | 14.7  | 14.7  | 14.7  | 14.7  | 14.7  | 14.7  | 14.7  | 14.7  |

REPORT NUMBER: P160182

CATALOG NUMBER: ENV-F02-LED-E1-BL2-ULG

**CANDELA DISTRIBUTION (continued):**

|        | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 110°   | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  |
| 112.5° | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  |
| 115°   | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| 117.5° | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  |
| 120°   | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  | 34.8  |
| 122.5° | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  | 40.9  |
| 125°   | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  | 47.8  |
| 127.5° | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  | 55.3  |
| 130°   | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  | 63.0  |
| 132.5° | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  | 70.5  |
| 135°   | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  | 77.9  |
| 137.5° | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  | 85.3  |
| 140°   | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  | 92.5  |
| 142.5° | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  | 99.2  |
| 145°   | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 | 104.9 |
| 147.5° | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 |
| 150°   | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 | 115.1 |
| 152.5° | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 | 119.7 |
| 155°   | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 | 123.7 |
| 157.5° | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 | 127.0 |
| 160°   | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 | 130.3 |
| 162.5° | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 | 133.5 |
| 165°   | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 | 136.0 |
| 167.5° | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 | 137.1 |
| 170°   | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 | 137.4 |
| 172.5° | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 | 138.6 |
| 175°   | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 | 140.5 |
| 177.5° | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 | 141.1 |
| 180°   | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 | 140.8 |

(END OF REPORT)