



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  
Eaton Lighting Division  
(formerly Cooper Lighting)

Brand: FAIL-SAFE

Report Number: P212906

Luminaire Tested: **FPS-4-LD4-2LO-35-CLR**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Eaton or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P212906  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35662)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: EATON (FORMERLY COOPER LIGHTING)  
Product Line: FAIL-SAFE  
Catalog Number: FPS-4-LD4-2LO-35-CLR  
Description: FPS 4' LED FIXTURE WITH CLEAR LENS  
Light Source: (168) EATON 3500K CCT, 85 CRI LEDS  
Ballast/Driver: -

| Luminaire Equipment: | <u>Sample No.</u> | <u>Condition</u> | <u>Description</u> |
|----------------------|-------------------|------------------|--------------------|
|                      | a                 | good             | reflector          |
|                      | b                 | good             | lens               |
|                      | c                 | good             | housing            |
|                      | d                 | good             | cord               |

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5622.3 lumens  
Efficiency: N/A  
Efficacy: 119.2 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.58' x L: 4.1' x H: 0.33')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B2 - U3 - G3

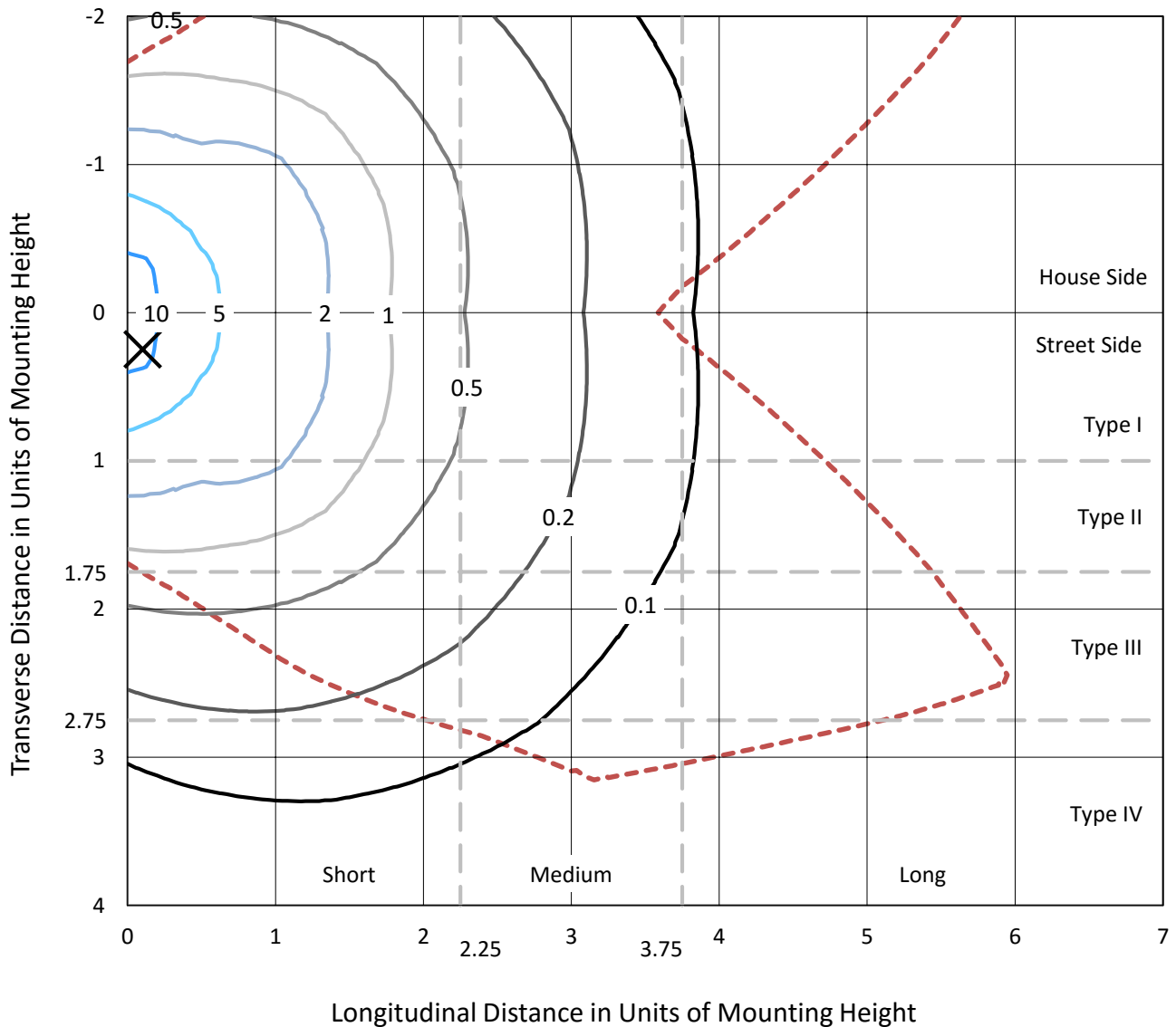
Input Watts (W): 47.16  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

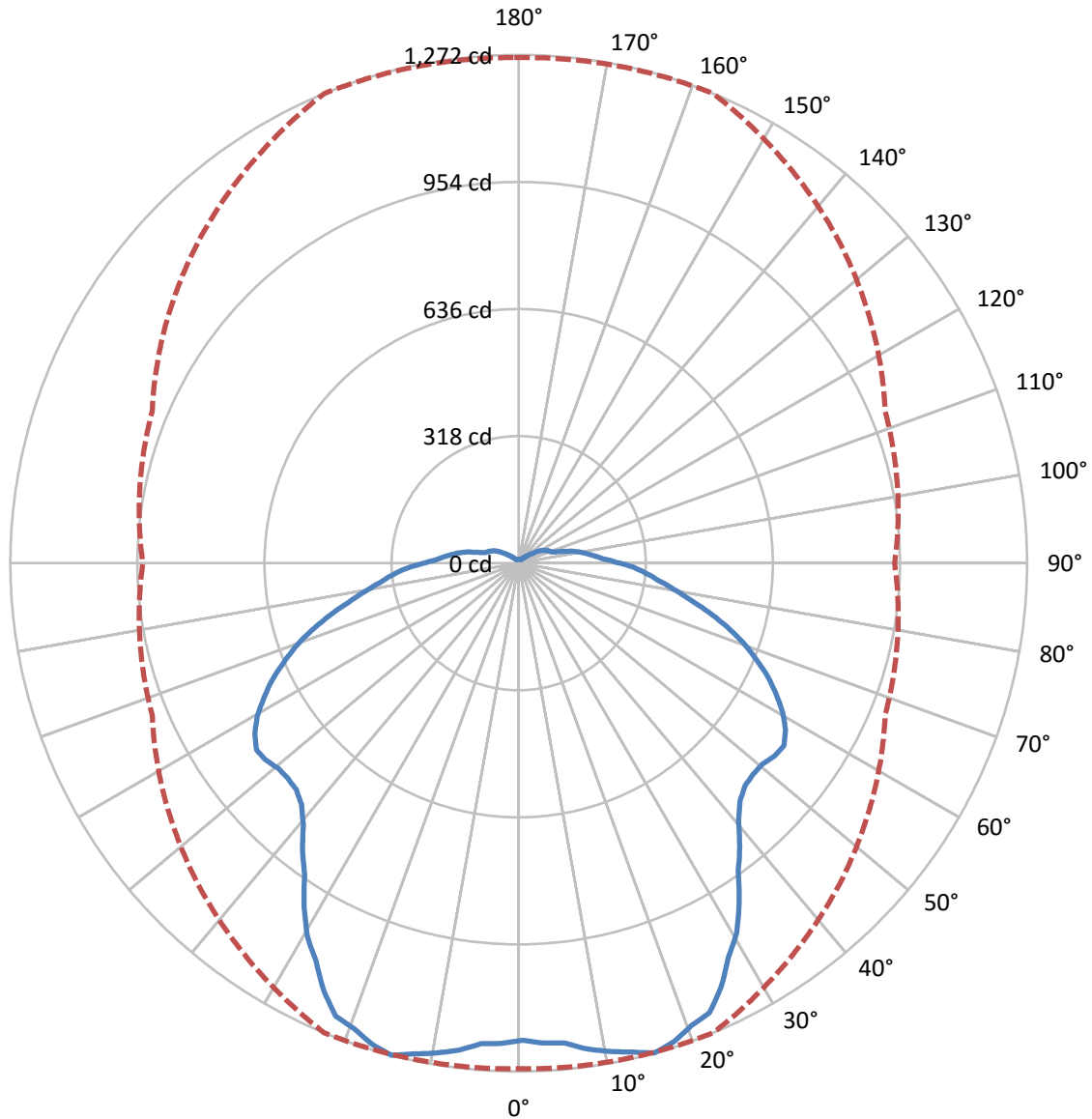
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.9 fc  
 Type V - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 22.5-Deg Lateral    - - - Horizontal Cone Through 15-Deg Vertical



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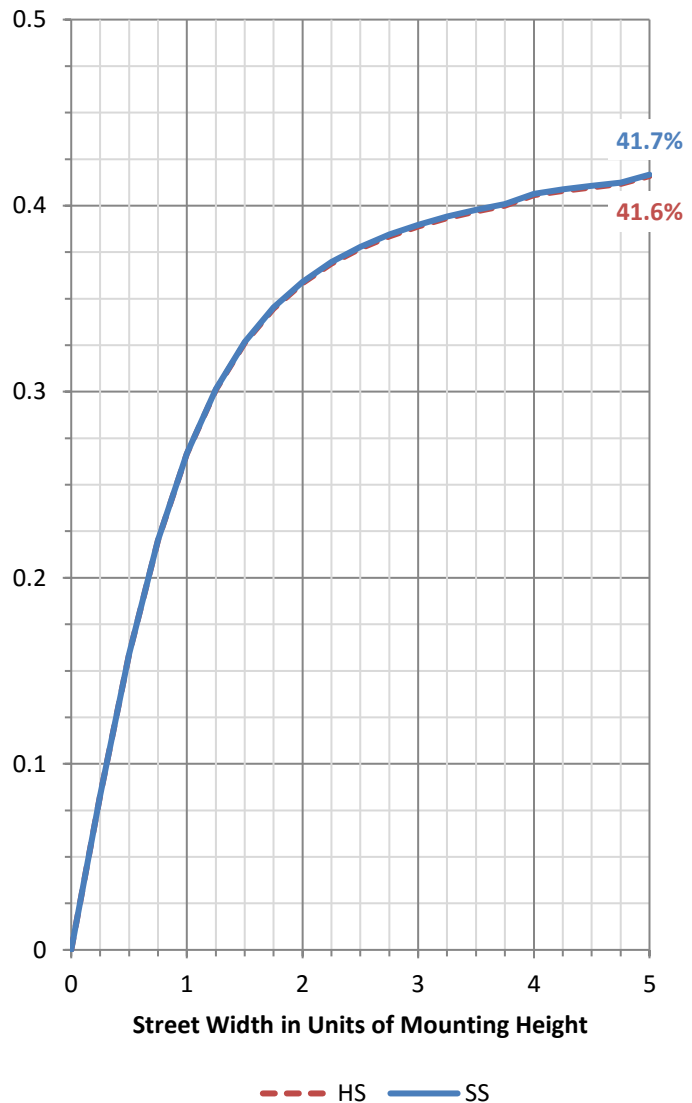
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2451.6   | 359.5  | 2811.1 |
|                    | % Fixture | 43.6     | 6.4    | 50.0   |
| <b>Street Side</b> | Lumens    | 2451.6   | 359.5  | 2811.1 |
|                    | % Fixture | 43.6     | 6.4    | 50.0   |
| <b>Total</b>       | Lumens    | 4903.2   | 719.1  | 5622.3 |
|                    | % Fixture | 87.2     | 12.8   | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 114.6  | 2.0       |
| 10°-20°   | 317.1  | 5.6       |
| 20°-30°   | 463.2  | 8.2       |
| 30°-40°   | 572.0  | 10.2      |
| 40°-50°   | 731.0  | 13.0      |
| 50°-60°   | 848.2  | 15.1      |
| 60°-70°   | 777.6  | 13.8      |
| 70°-80°   | 620.5  | 11.0      |
| 80°-90°   | 458.8  | 8.2       |
| 90°-100°  | 305.0  | 5.4       |
| 100°-110° | 191.9  | 3.4       |
| 110°-120° | 102.1  | 1.8       |
| 120°-130° | 60.4   | 1.1       |
| 130°-140° | 31.9   | 0.6       |
| 140°-150° | 18.1   | 0.3       |
| 150°-160° | 7.7    | 0.1       |
| 160°-170° | 1.6    | 0.0       |
| 170°-180° | 0.4    | 0.0       |
| 0°-90°    | 4903.2 | 87.2      |
| 0°-180°   | 5622.3 | 100.0     |





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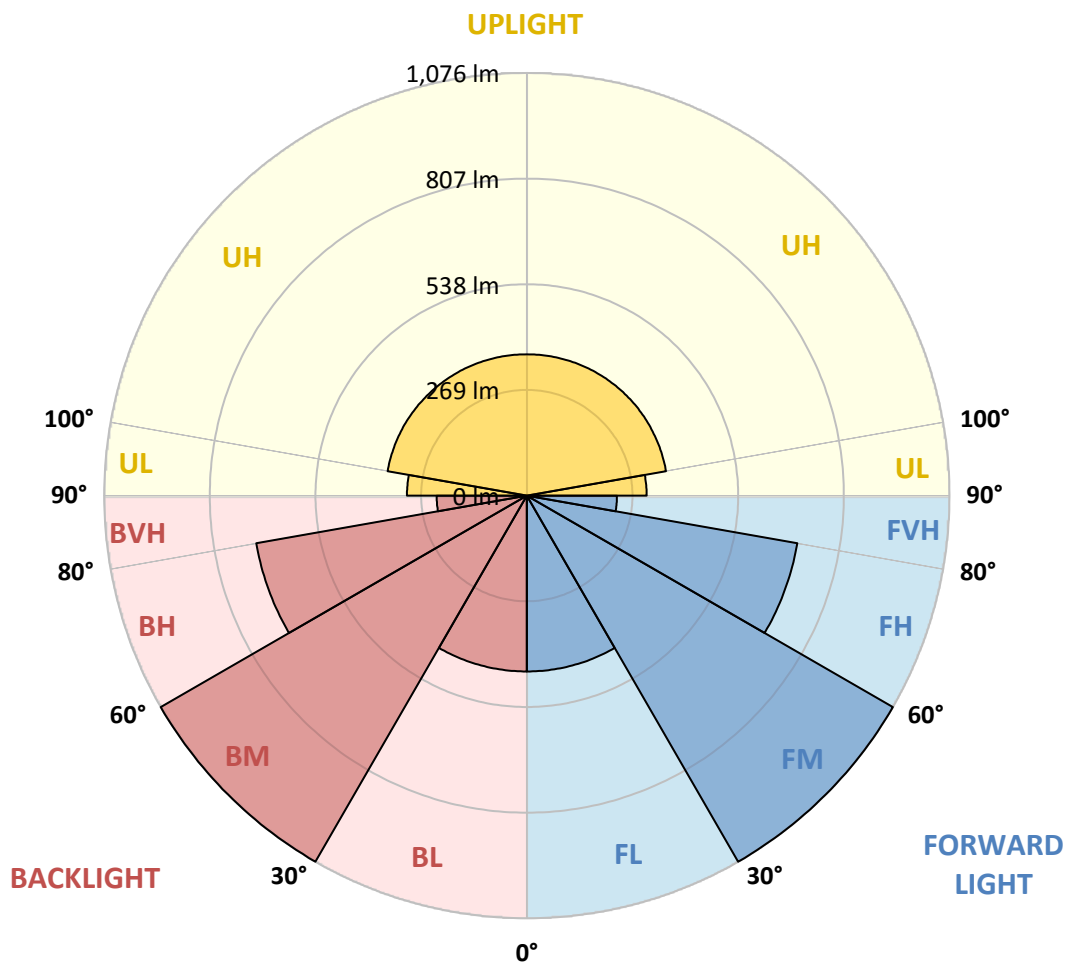
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |        |         |
|------|-------------|--------|-----------|-------------------------|--------|---------|
|      |             |        |           | B                       | U      | G       |
| FL   | (0°-30°)    | 447.4  | 8.0       |                         |        |         |
| FM   | (30°-60°)   | 1075.7 | 19.1      |                         |        |         |
| FH   | (60°-80°)   | 699.1  | 12.4      |                         |        | G1/1800 |
| FVH  | (80°-90°)   | 229.4  | 4.1       |                         |        | G3/500  |
| BL   | (0°-30°)    | 447.4  | 8.0       | B1/500                  |        |         |
| BM   | (30°-60°)   | 1075.7 | 19.1      | B2/2500                 |        |         |
| BH   | (60°-80°)   | 699.1  | 12.4      | B2/1000                 |        | G1/1800 |
| BVH  | (80°-90°)   | 229.4  | 4.1       |                         |        | G3/500  |
| UL   | (90°-100°)  | 305.0  | 5.4       |                         | U3/500 |         |
| UH   | (100°-180°) | 359.5  | 6.4       |                         | U3/500 |         |

**BUG Rating: B2-U3-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1193.4 | 1193.4 | 1193.4 | 1193.4 | 1193.4 |
| 2.5°   | 1207.0 | 1202.5 | 1187.4 | 1192.7 | 1188.9 |
| 5°     | 1212.3 | 1206.2 | 1209.3 | 1201.7 | 1186.6 |
| 7.5°   | 1222.9 | 1227.4 | 1213.0 | 1192.7 | 1164.7 |
| 10°    | 1244.0 | 1242.5 | 1197.9 | 1151.1 | 1105.1 |
| 12.5°  | 1259.1 | 1255.3 | 1184.4 | 1070.4 | 1019.0 |
| 15°    | 1265.1 | 1271.9 | 1135.3 | 992.6  | 940.5  |
| 17.5°  | 1268.9 | 1258.3 | 1065.8 | 951.9  | 893.7  |
| 20°    | 1266.6 | 1234.9 | 1018.3 | 916.4  | 861.3  |
| 22.5°  | 1260.6 | 1222.1 | 981.3  | 883.2  | 843.9  |
| 25°    | 1226.6 | 1176.1 | 943.6  | 864.3  | 825.0  |
| 27.5°  | 1204.0 | 1117.2 | 921.7  | 851.5  | 813.0  |
| 30°    | 1167.0 | 1074.1 | 894.5  | 843.9  | 808.4  |
| 32.5°  | 1136.8 | 1013.0 | 877.1  | 839.4  | 819.0  |
| 35°    | 1106.6 | 945.8  | 846.2  | 856.0  | 856.8  |
| 37.5°  | 1055.3 | 898.3  | 835.6  | 890.0  | 868.1  |
| 40°    | 1009.2 | 846.9  | 827.3  | 905.1  | 899.8  |
| 42.5°  | 965.4  | 812.2  | 865.1  | 972.2  | 1059.1 |
| 45°    | 914.9  | 794.1  | 924.7  | 1134.5 | 1017.5 |
| 47.5°  | 880.2  | 789.6  | 1010.7 | 1141.3 | 973.8  |
| 50°    | 825.0  | 790.3  | 1111.9 | 1136.0 | 955.6  |
| 52.5°  | 776.7  | 801.6  | 1168.5 | 1105.9 | 932.2  |
| 55°    | 725.4  | 805.4  | 1130.8 | 1061.3 | 909.6  |
| 57.5°  | 671.1  | 787.3  | 1086.2 | 1034.9 | 878.6  |
| 60°    | 621.2  | 759.4  | 1027.3 | 988.8  | 835.6  |
| 62.5°  | 557.8  | 723.1  | 965.4  | 954.9  | 801.6  |
| 65°    | 495.9  | 685.4  | 899.8  | 923.9  | 785.8  |
| 67.5°  | 433.3  | 640.1  | 845.4  | 876.4  | 751.8  |
| 70°    | 369.9  | 595.6  | 787.3  | 823.5  | 714.1  |
| 72.5°  | 312.5  | 545.0  | 730.7  | 779.0  | 670.3  |
| 75°    | 254.4  | 491.4  | 672.6  | 725.4  | 621.2  |
| 77.5°  | 202.3  | 437.8  | 630.3  | 689.2  | 590.3  |
| 80°    | 154.0  | 392.5  | 587.3  | 652.9  | 560.9  |
| 82.5°  | 111.7  | 351.8  | 557.1  | 611.4  | 521.6  |
| 85°    | 77.0   | 319.3  | 517.8  | 575.2  | 481.6  |
| 87.5°  | 50.6   | 286.8  | 477.1  | 519.3  | 440.1  |
| 90°    | 29.4   | 244.6  | 425.0  | 474.8  | 399.3  |
| 92.5°  | 25.7   | 210.6  | 382.0  | 431.0  | 358.6  |
| 95°    | 24.9   | 190.2  | 347.2  | 388.7  | 324.6  |
| 97.5°  | 24.2   | 171.4  | 315.5  | 360.1  | 300.4  |
| 100°   | 24.2   | 154.0  | 289.1  | 335.9  | 277.0  |
| 102.5° | 23.4   | 133.6  | 265.7  | 309.5  | 252.1  |
| 105°   | 22.6   | 107.9  | 235.5  | 269.5  | 216.6  |
| 107.5° | 21.9   | 89.8   | 194.8  | 218.9  | 175.9  |
| 110°   | 21.1   | 83.8   | 160.0  | 173.6  | 141.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°   | 22.5° | 45°   | 67.5° | 90°   |
|--------|------|-------|-------|-------|-------|
| 112.5° | 21.1 | 79.3  | 141.2 | 149.5 | 122.3 |
| 115°   | 20.4 | 74.0  | 130.6 | 135.9 | 112.5 |
| 117.5° | 19.6 | 67.9  | 120.0 | 124.5 | 102.7 |
| 120°   | 18.1 | 60.4  | 108.7 | 114.0 | 95.1  |
| 122.5° | 15.9 | 51.3  | 97.4  | 102.7 | 87.6  |
| 125°   | 14.3 | 42.3  | 85.3  | 90.6  | 79.3  |
| 127.5° | 13.6 | 36.2  | 74.0  | 80.0  | 71.0  |
| 130°   | 12.8 | 29.4  | 64.2  | 71.0  | 64.2  |
| 132.5° | 11.3 | 24.9  | 55.9  | 64.2  | 58.9  |
| 135°   | 10.6 | 21.1  | 49.1  | 58.9  | 54.3  |
| 137.5° | 10.6 | 18.1  | 43.0  | 54.3  | 50.6  |
| 140°   | 9.8  | 15.1  | 38.5  | 50.6  | 48.3  |
| 142.5° | 9.8  | 12.8  | 34.7  | 48.3  | 45.3  |
| 145°   | 9.8  | 11.3  | 30.9  | 45.3  | 43.0  |
| 147.5° | 9.1  | 11.3  | 27.9  | 41.5  | 40.8  |
| 150°   | 9.1  | 10.6  | 24.2  | 37.0  | 37.0  |
| 152.5° | 9.1  | 10.6  | 18.9  | 30.9  | 31.7  |
| 155°   | 8.3  | 9.8   | 13.6  | 24.9  | 25.7  |
| 157.5° | 8.3  | 9.8   | 9.1   | 17.4  | 18.1  |
| 160°   | 7.5  | 9.8   | 6.0   | 9.1   | 9.8   |
| 162.5° | 7.5  | 9.1   | 6.8   | 2.3   | 2.3   |
| 165°   | 7.5  | 9.1   | 6.0   | 0.0   | 0.0   |
| 167.5° | 6.8  | 9.1   | 6.0   | 0.0   | 0.0   |
| 170°   | 7.5  | 9.1   | 6.0   | 0.0   | 0.0   |
| 172.5° | 6.8  | 9.1   | 6.0   | 0.0   | 0.0   |
| 175°   | 6.8  | 9.1   | 6.0   | 0.0   | 0.0   |
| 177.5° | 6.8  | 9.1   | 5.3   | 0.0   | 0.0   |
| 180°   | 4.5  | 4.5   | 4.5   | 4.5   | 4.5   |

(END OF REPORT)