



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: P212937

Luminaire Tested: **FPS-4-LD4-2LO-30-OPL**

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: P212937  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35490-R3)  
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-30-OPL  
Description: FPS 4' LED FIXTURE WITH OPAL LENS  
Light Source: (168) EATON 3000K 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**

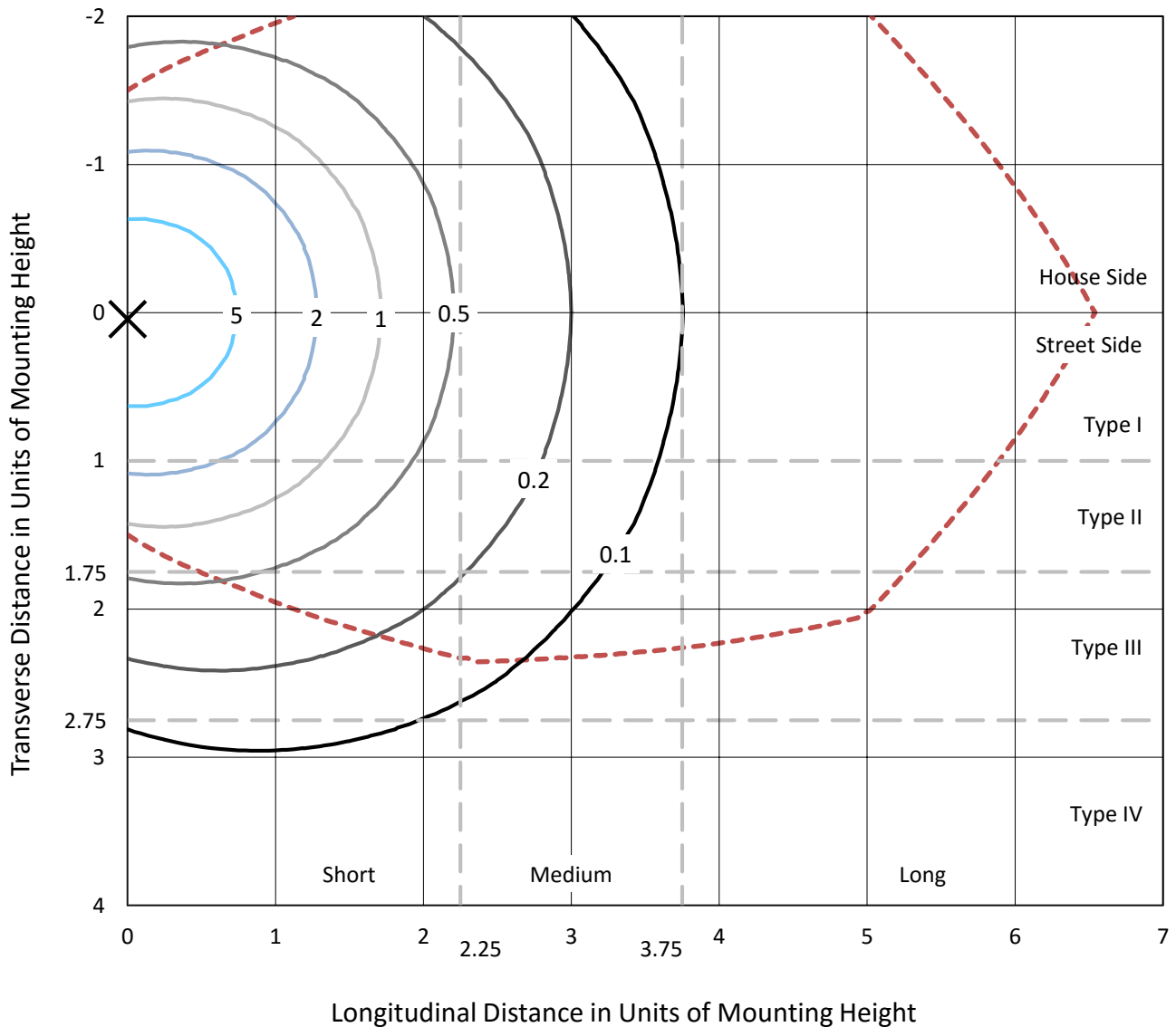
Lumens per Lamp: N/A  
Luminaire Lumens: 4902.8 lumens  
Efficiency: N/A  
Efficacy: 104.0 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.58' x L: 4.1' x H: 0.33')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B2 - U4 - G2  
  
Input Watts (W): 47.16  
Input Voltage (V): 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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 CATALOG NUMBER: FPS-4-LD4-2LO-30-OPL

### Iso-Footcandle Lines of Horizontal Illumination

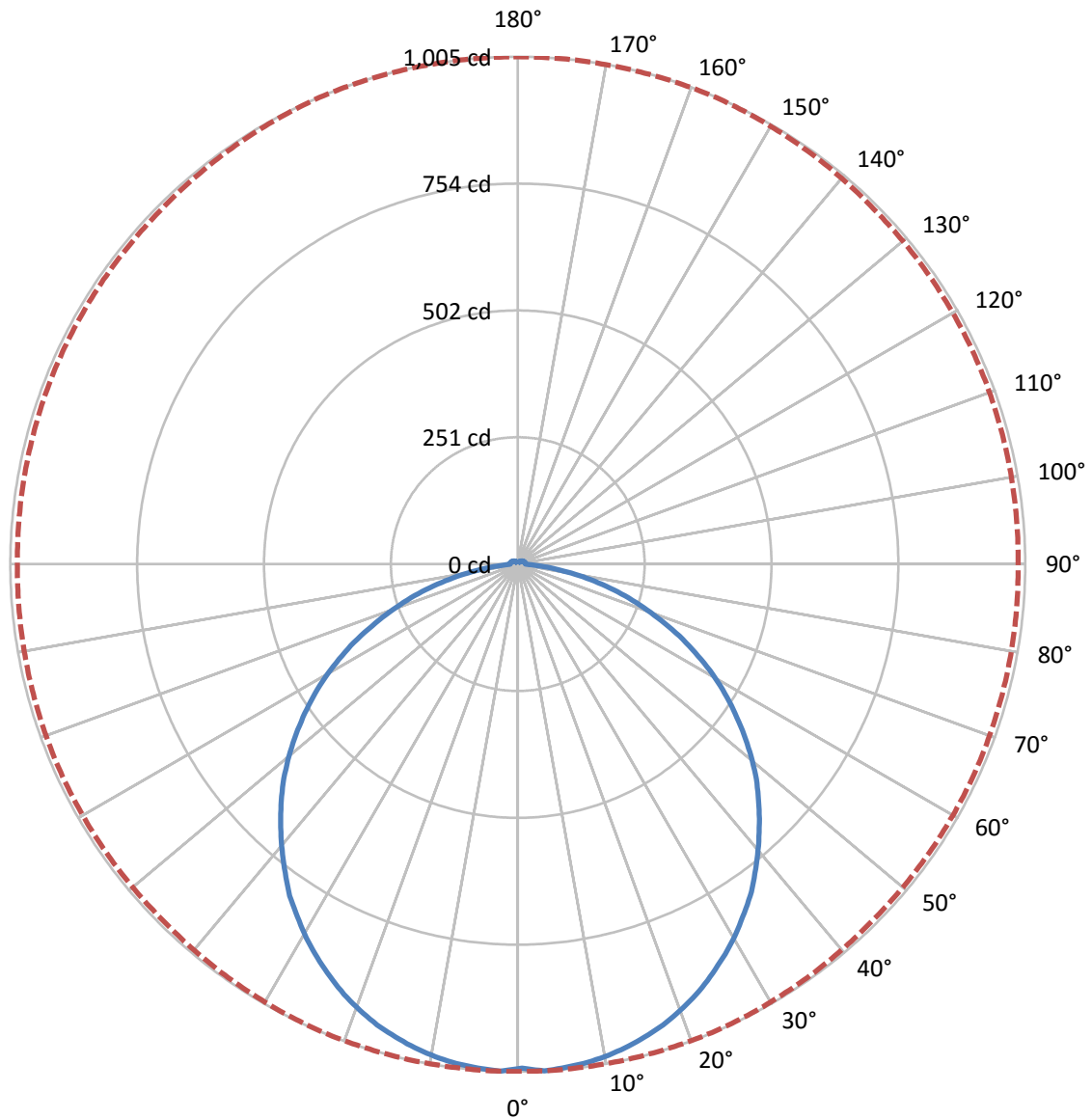
✕ Max cd  
 - - - 1/2 Max cd



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

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CATALOG NUMBER: FPS-4-LD4-2LO-30-OPL

### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 2.5-Deg Vertical



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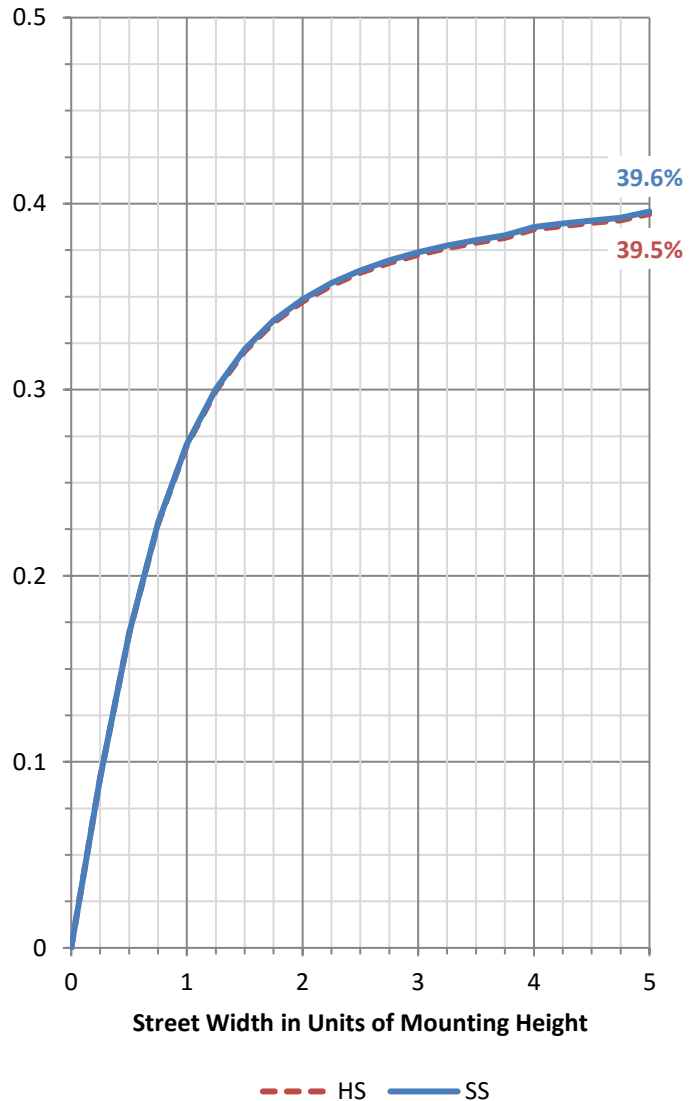
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2012.7   | 438.7  | 2451.4 |
|                    | % Fixture | 41.1     | 8.9    | 50.0   |
| <b>Street Side</b> | Lumens    | 2012.7   | 438.7  | 2451.4 |
|                    | % Fixture | 41.1     | 8.9    | 50.0   |
| <b>Total</b>       | Lumens    | 4025.4   | 877.4  | 4902.8 |
|                    | % Fixture | 82.1     | 17.9   | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 95.2   | 1.9       |
| 10°-20°   | 279.4  | 5.7       |
| 20°-30°   | 441.4  | 9.0       |
| 30°-40°   | 561.9  | 11.5      |
| 40°-50°   | 629.8  | 12.8      |
| 50°-60°   | 638.2  | 13.0      |
| 60°-70°   | 578.2  | 11.8      |
| 70°-80°   | 465.8  | 9.5       |
| 80°-90°   | 335.4  | 6.8       |
| 90°-100°  | 259.3  | 5.3       |
| 100°-110° | 218.1  | 4.4       |
| 110°-120° | 170.5  | 3.5       |
| 120°-130° | 120.1  | 2.5       |
| 130°-140° | 71.0   | 1.4       |
| 140°-150° | 31.6   | 0.6       |
| 150°-160° | 6.8    | 0.1       |
| 160°-170° | 0.1    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 4025.4 | 82.1      |
| 0°-180°   | 4902.8 | 100.0     |





REPORT NUMBER: P212937

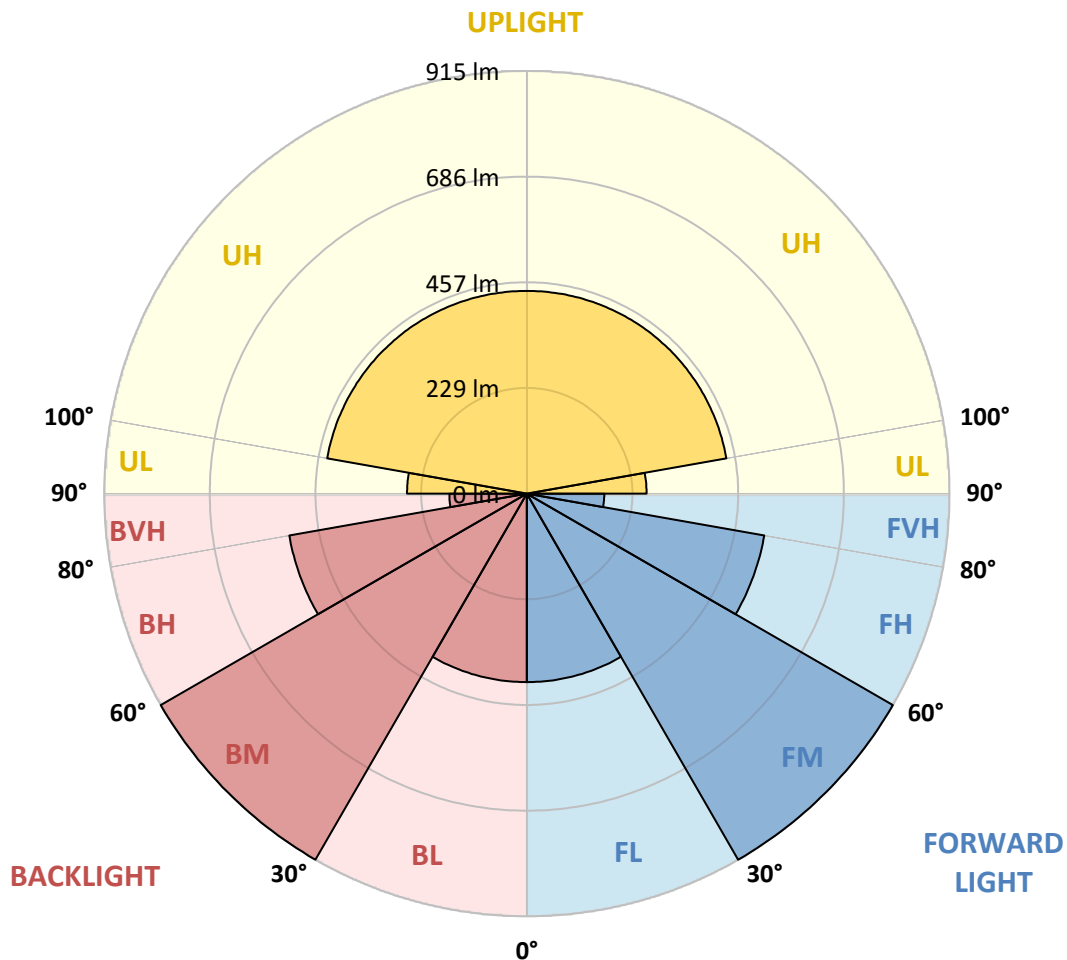
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |        |        |
|------|-------------|--------|-----------|-------------------------|--------|--------|
|      |             |        |           | B                       | U      | G      |
| FL   | (0°-30°)    | 408.0  | 8.3       |                         |        |        |
| FM   | (30°-60°)   | 915.0  | 18.7      |                         |        |        |
| FH   | (60°-80°)   | 522.0  | 10.6      |                         |        | G0/660 |
| FVH  | (80°-90°)   | 167.7  | 3.4       |                         |        | G2/225 |
| BL   | (0°-30°)    | 408.0  | 8.3       | B1/500                  |        |        |
| BM   | (30°-60°)   | 915.0  | 18.7      | B1/1000                 |        |        |
| BH   | (60°-80°)   | 522.0  | 10.6      | B2/1000                 |        | G0/660 |
| BVH  | (80°-90°)   | 167.7  | 3.4       |                         |        | G2/225 |
| UL   | (90°-100°)  | 259.3  | 5.3       |                         | U3/500 |        |
| UH   | (100°-180°) | 438.7  | 8.9       |                         | U3/500 |        |

**BUG Rating: B2-U4-G2**

Type V Short





REPORT NUMBER: P212937

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°   | 67.5°  | 90°    |
|--------|--------|--------|-------|--------|--------|
| 0°     | 998.2  | 998.2  | 998.2 | 998.2  | 998.2  |
| 2.5°   | 1004.9 | 1004.3 | 995.8 | 994.6  | 990.9  |
| 5°     | 1001.2 | 1001.8 | 995.8 | 996.4  | 993.4  |
| 7.5°   | 996.4  | 998.2  | 995.8 | 998.8  | 996.4  |
| 10°    | 989.1  | 992.8  | 994.6 | 1000.6 | 998.8  |
| 12.5°  | 979.4  | 986.1  | 991.5 | 1000.0 | 1000.6 |
| 15°    | 967.3  | 977.0  | 987.3 | 1000.0 | 1001.8 |
| 17.5°  | 954.0  | 966.7  | 981.9 | 1000.6 | 1004.3 |
| 20°    | 937.1  | 953.4  | 975.8 | 1000.0 | 1004.9 |
| 22.5°  | 918.9  | 938.9  | 969.2 | 997.6  | 1003.7 |
| 25°    | 897.1  | 923.7  | 960.1 | 993.4  | 1001.2 |
| 27.5°  | 874.7  | 904.4  | 949.8 | 986.7  | 996.4  |
| 30°    | 850.5  | 885.0  | 938.3 | 978.2  | 988.5  |
| 32.5°  | 823.3  | 863.8  | 924.4 | 967.9  | 978.8  |
| 35°    | 797.2  | 839.6  | 908.0 | 956.4  | 970.4  |
| 37.5°  | 765.2  | 817.8  | 891.1 | 943.7  | 956.4  |
| 40°    | 733.7  | 791.2  | 872.9 | 928.0  | 942.5  |
| 42.5°  | 701.6  | 766.4  | 854.7 | 912.2  | 925.6  |
| 45°    | 668.9  | 739.7  | 834.8 | 895.3  | 909.8  |
| 47.5°  | 635.6  | 711.9  | 816.6 | 879.6  | 893.5  |
| 50°    | 598.7  | 682.8  | 795.4 | 860.8  | 872.9  |
| 52.5°  | 561.2  | 654.4  | 771.2 | 838.4  | 852.9  |
| 55°    | 522.4  | 622.3  | 742.8 | 813.6  | 828.1  |
| 57.5°  | 483.7  | 589.0  | 715.5 | 787.5  | 802.1  |
| 60°    | 443.7  | 553.9  | 681.6 | 758.5  | 776.7  |
| 62.5°  | 400.7  | 518.2  | 650.7 | 730.0  | 747.6  |
| 65°    | 359.6  | 481.9  | 618.7 | 700.4  | 717.3  |
| 67.5°  | 313.6  | 444.3  | 584.8 | 665.9  | 685.9  |
| 70°    | 271.8  | 406.8  | 548.4 | 632.6  | 653.8  |
| 72.5°  | 230.0  | 369.9  | 513.9 | 599.3  | 620.5  |
| 75°    | 188.9  | 332.3  | 477.6 | 564.8  | 588.4  |
| 77.5°  | 147.1  | 294.8  | 443.1 | 530.9  | 553.3  |
| 80°    | 107.1  | 257.9  | 408.0 | 494.6  | 519.4  |
| 82.5°  | 70.2   | 222.2  | 372.3 | 462.5  | 486.7  |
| 85°    | 41.8   | 190.7  | 339.0 | 431.6  | 457.0  |
| 87.5°  | 22.4   | 162.8  | 315.4 | 410.4  | 435.2  |
| 90°    | 15.7   | 144.1  | 294.2 | 388.6  | 414.1  |
| 92.5°  | 15.1   | 134.4  | 274.2 | 366.8  | 392.3  |
| 95°    | 15.1   | 130.1  | 265.7 | 350.5  | 374.1  |
| 97.5°  | 15.1   | 124.7  | 258.5 | 342.6  | 366.2  |
| 100°   | 14.5   | 118.6  | 251.2 | 332.9  | 357.2  |
| 102.5° | 14.5   | 112.6  | 242.1 | 322.6  | 346.3  |
| 105°   | 13.9   | 105.9  | 233.1 | 311.8  | 334.8  |
| 107.5° | 13.9   | 99.9   | 222.8 | 299.6  | 323.3  |
| 110°   | 13.3   | 93.8   | 212.5 | 287.5  | 311.1  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°   | 22.5° | 45°   | 67.5° | 90°   |
|--------|------|-------|-------|-------|-------|
| 112.5° | 12.7 | 86.6  | 203.4 | 276.0 | 299.0 |
| 115°   | 12.7 | 79.9  | 193.1 | 263.9 | 286.3 |
| 117.5° | 12.1 | 73.2  | 182.8 | 251.8 | 273.6 |
| 120°   | 11.5 | 66.0  | 172.5 | 239.7 | 260.9 |
| 122.5° | 10.9 | 57.5  | 161.6 | 226.4 | 247.6 |
| 125°   | 10.9 | 49.0  | 150.1 | 213.1 | 234.3 |
| 127.5° | 10.3 | 41.2  | 138.6 | 199.2 | 219.1 |
| 130°   | 9.7  | 33.9  | 125.3 | 185.2 | 204.6 |
| 132.5° | 9.1  | 26.6  | 111.4 | 170.7 | 188.9 |
| 135°   | 8.5  | 20.0  | 97.5  | 155.6 | 174.3 |
| 137.5° | 7.9  | 13.9  | 83.5  | 141.0 | 156.8 |
| 140°   | 7.3  | 9.1   | 70.2  | 125.3 | 141.0 |
| 142.5° | 6.7  | 5.4   | 56.9  | 109.0 | 123.5 |
| 145°   | 6.1  | 4.2   | 44.8  | 92.0  | 105.9 |
| 147.5° | 5.4  | 3.6   | 32.7  | 75.1  | 88.4  |
| 150°   | 4.8  | 3.0   | 21.8  | 58.1  | 71.4  |
| 152.5° | 4.2  | 3.0   | 11.5  | 41.2  | 53.3  |
| 155°   | 3.6  | 1.8   | 3.0   | 25.4  | 36.3  |
| 157.5° | 3.6  | 1.2   | 0.0   | 11.5  | 20.6  |
| 160°   | 3.0  | 1.2   | 0.0   | 1.2   | 4.2   |
| 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)