



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: P212908

Luminaire Tested: **FPS-4-LD4-2LO-50-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: P212908
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-50-CLR
Description: FPS 4' LED FIXTURE WITH CLEAR LENS
Light Source: (168) EATON 5000K 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: 6203.3 lumens
Efficiency: N/A
Efficacy: 131.5 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

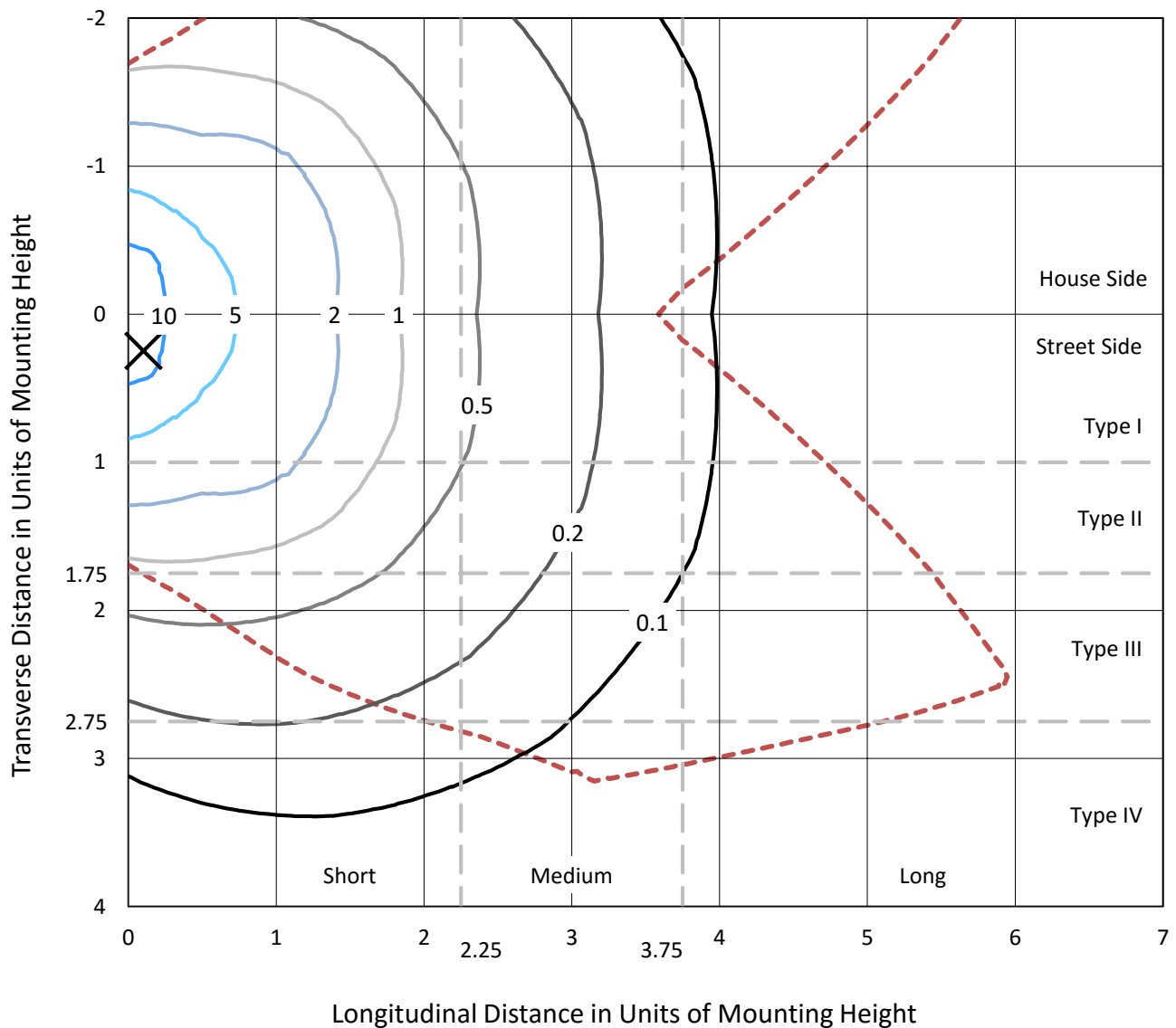
Input Watts (W): 47.16
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P212908
 CATALOG NUMBER: FPS-4-LD4-2LO-50-CLR

Iso-Footcandle Lines of Horizontal Illumination

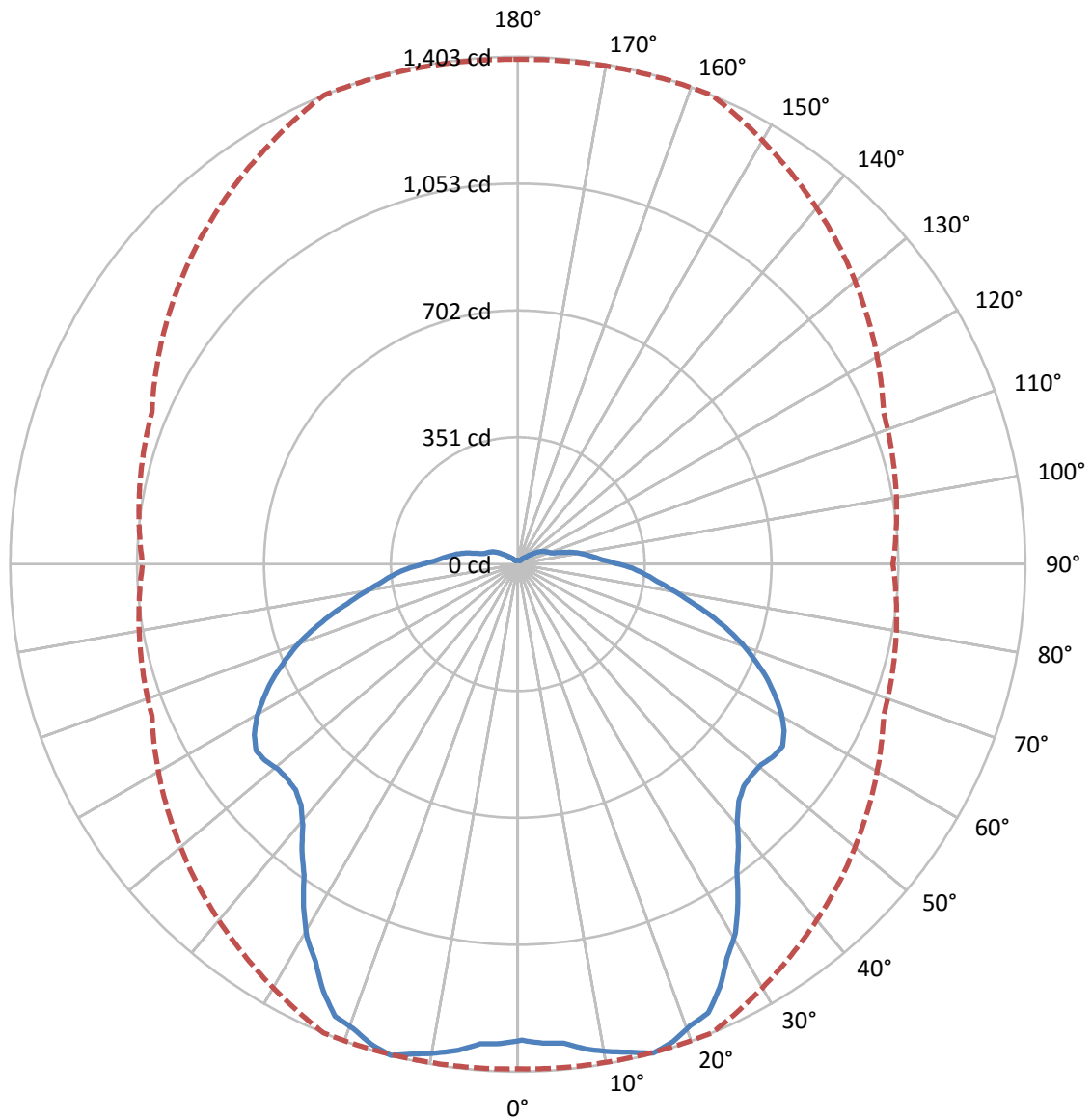
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.2 fc
 Type V - Short - Non-Cutoff

REPORT NUMBER: P212908
CATALOG NUMBER: FPS-4-LD4-2LO-50-CLR

Luminous Intensity Polar Plot



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



REPORT NUMBER: P212908

CATALOG NUMBER: FPS-4-LD4-2LO-50-CLR

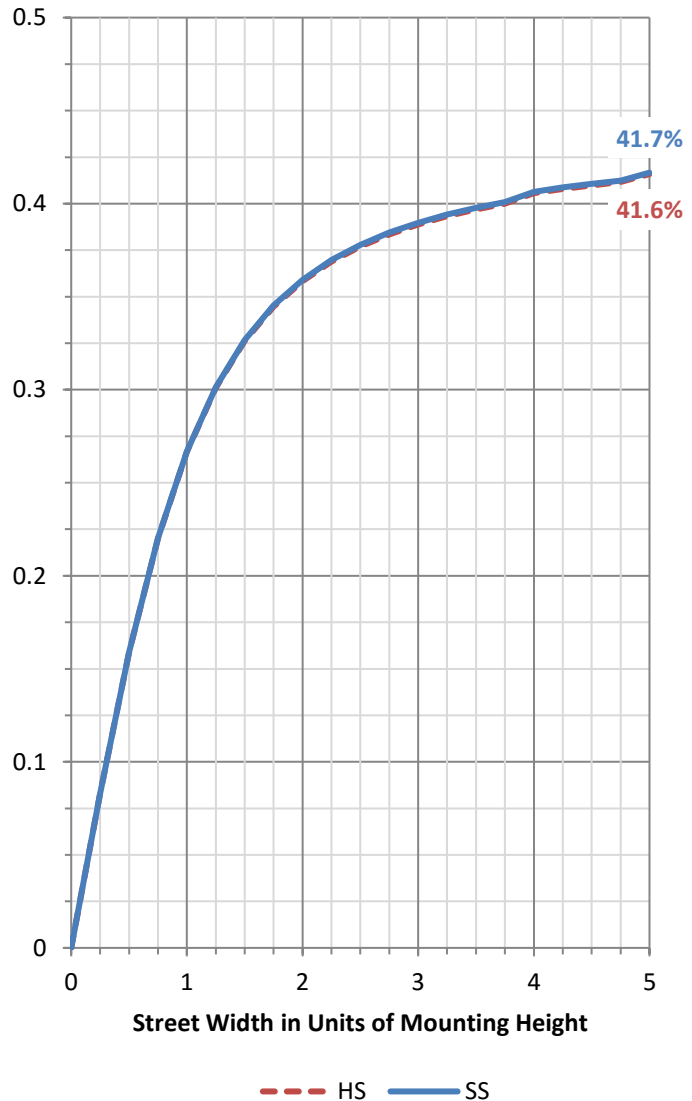
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2705.0 | 396.7 | 3101.7 |
| | % Fixture | 43.6 | 6.4 | 50.0 |
| Street Side | Lumens | 2705.0 | 396.7 | 3101.7 |
| | % Fixture | 43.6 | 6.4 | 50.0 |
| Total | Lumens | 5409.9 | 793.4 | 6203.3 |
| | % Fixture | 87.2 | 12.8 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 126.5 | 2.0 |
| 10°-20° | 349.8 | 5.6 |
| 20°-30° | 511.1 | 8.2 |
| 30°-40° | 631.2 | 10.2 |
| 40°-50° | 806.6 | 13.0 |
| 50°-60° | 935.9 | 15.1 |
| 60°-70° | 858.0 | 13.8 |
| 70°-80° | 684.7 | 11.0 |
| 80°-90° | 506.2 | 8.2 |
| 90°-100° | 336.5 | 5.4 |
| 100°-110° | 211.7 | 3.4 |
| 110°-120° | 112.6 | 1.8 |
| 120°-130° | 66.6 | 1.1 |
| 130°-140° | 35.2 | 0.6 |
| 140°-150° | 19.9 | 0.3 |
| 150°-160° | 8.5 | 0.1 |
| 160°-170° | 1.7 | 0.0 |
| 170°-180° | 0.5 | 0.0 |
| 0°-90° | 5409.9 | 87.2 |
| 0°-180° | 6203.3 | 100.0 |





REPORT NUMBER: P212908

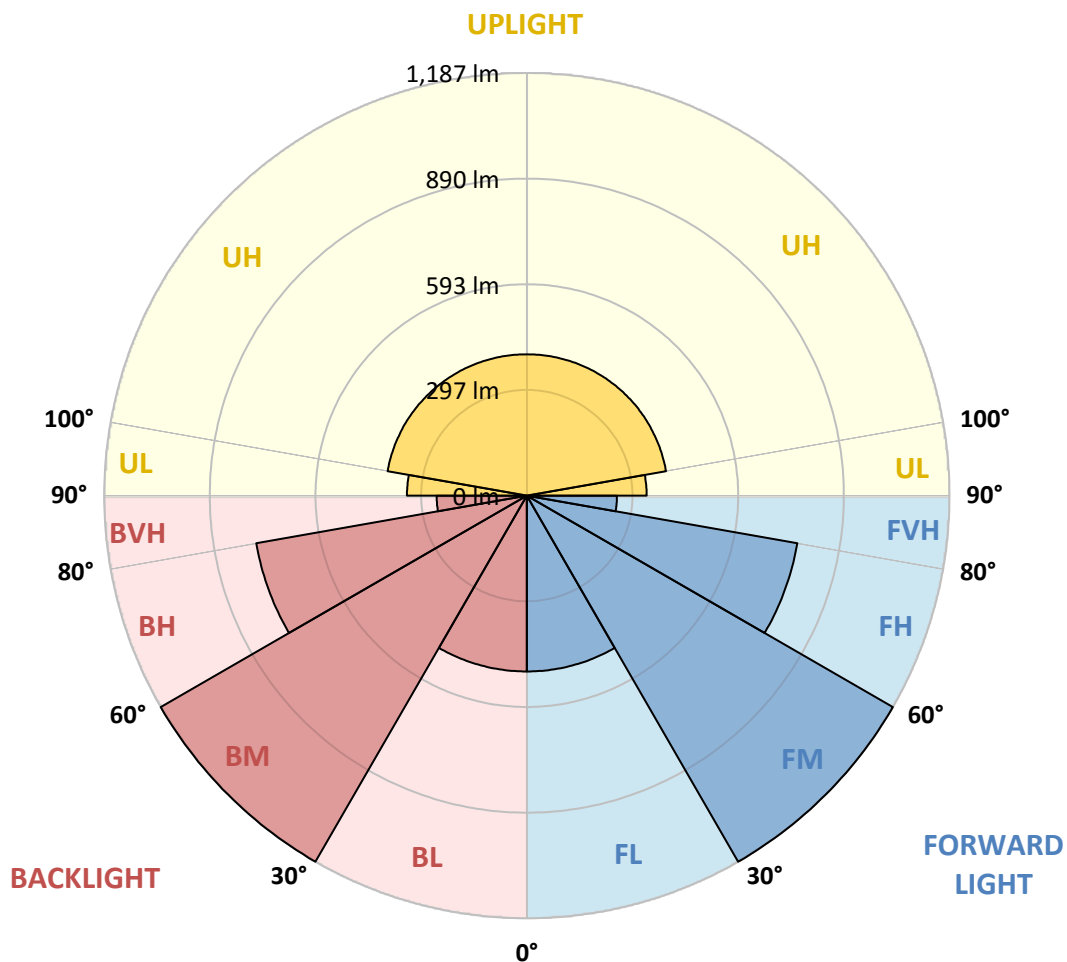
CATALOG NUMBER: FPS-4-LD4-2LO-50-CLR

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|--------|---------|
| | | | B | U | G |
| FL (0°-30°) | 493.7 | 8.0 | | | |
| FM (30°-60°) | 1186.8 | 19.1 | | | |
| FH (60°-80°) | 771.3 | 12.4 | | | G1/1800 |
| FVH (80°-90°) | 253.1 | 4.1 | | | G3/500 |
| BL (0°-30°) | 493.7 | 8.0 | B1/500 | | |
| BM (30°-60°) | 1186.8 | 19.1 | B2/2500 | | |
| BH (60°-80°) | 771.3 | 12.4 | B2/1000 | | G1/1800 |
| BVH (80°-90°) | 253.1 | 4.1 | | | G3/500 |
| UL (90°-100°) | 336.5 | 5.4 | | U3/500 | |
| UH (100°-180°) | 396.7 | 6.4 | | U3/500 | |

BUG Rating: B2-U3-G3

Type V Short





REPORT NUMBER: P212908

CATALOG NUMBER: FPS-4-LD4-2LO-50-CLR

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1316.7 | 1316.7 | 1316.7 | 1316.7 | 1316.7 |
| 2.5° | 1331.7 | 1326.7 | 1310.1 | 1315.9 | 1311.7 |
| 5° | 1337.6 | 1330.9 | 1334.2 | 1325.9 | 1309.2 |
| 7.5° | 1349.2 | 1354.2 | 1338.4 | 1315.9 | 1285.1 |
| 10° | 1372.5 | 1370.9 | 1321.7 | 1270.1 | 1219.3 |
| 12.5° | 1389.2 | 1385.0 | 1306.8 | 1181.0 | 1124.4 |
| 15° | 1395.9 | 1403.4 | 1252.6 | 1095.2 | 1037.7 |
| 17.5° | 1400.0 | 1388.4 | 1176.0 | 1050.2 | 986.1 |
| 20° | 1397.5 | 1362.6 | 1123.5 | 1011.1 | 950.3 |
| 22.5° | 1390.9 | 1348.4 | 1082.7 | 974.4 | 931.1 |
| 25° | 1353.4 | 1297.6 | 1041.1 | 953.6 | 910.3 |
| 27.5° | 1328.4 | 1232.6 | 1016.9 | 939.5 | 897.0 |
| 30° | 1287.6 | 1185.2 | 986.9 | 931.1 | 892.0 |
| 32.5° | 1254.3 | 1117.7 | 967.8 | 926.1 | 903.6 |
| 35° | 1221.0 | 1043.6 | 933.6 | 944.5 | 945.3 |
| 37.5° | 1164.3 | 991.1 | 922.0 | 981.9 | 957.8 |
| 40° | 1113.5 | 934.5 | 912.8 | 998.6 | 992.8 |
| 42.5° | 1065.2 | 896.2 | 954.5 | 1072.7 | 1168.5 |
| 45° | 1009.4 | 876.2 | 1020.2 | 1251.8 | 1122.7 |
| 47.5° | 971.1 | 871.2 | 1115.2 | 1259.3 | 1074.4 |
| 50° | 910.3 | 872.0 | 1226.8 | 1253.4 | 1054.4 |
| 52.5° | 857.0 | 884.5 | 1289.3 | 1220.1 | 1028.6 |
| 55° | 800.4 | 888.7 | 1247.6 | 1171.0 | 1003.6 |
| 57.5° | 740.4 | 868.7 | 1198.5 | 1141.8 | 969.4 |
| 60° | 685.4 | 837.9 | 1133.5 | 1091.0 | 922.0 |
| 62.5° | 615.5 | 797.9 | 1065.2 | 1053.6 | 884.5 |
| 65° | 547.2 | 756.2 | 992.8 | 1019.4 | 867.0 |
| 67.5° | 478.1 | 706.3 | 932.8 | 966.9 | 829.5 |
| 70° | 408.1 | 657.1 | 868.7 | 908.6 | 787.9 |
| 72.5° | 344.8 | 601.3 | 806.2 | 859.5 | 739.6 |
| 75° | 280.7 | 542.2 | 742.1 | 800.4 | 685.4 |
| 77.5° | 223.2 | 483.1 | 695.4 | 760.4 | 651.3 |
| 80° | 169.9 | 433.1 | 648.0 | 720.4 | 618.8 |
| 82.5° | 123.3 | 388.1 | 614.6 | 674.6 | 575.5 |
| 85° | 85.0 | 352.3 | 571.3 | 634.6 | 531.4 |
| 87.5° | 55.8 | 316.5 | 526.4 | 573.0 | 485.6 |
| 90° | 32.5 | 269.8 | 468.9 | 523.9 | 440.6 |
| 92.5° | 28.3 | 232.4 | 421.4 | 475.6 | 395.6 |
| 95° | 27.5 | 209.9 | 383.1 | 428.9 | 358.1 |
| 97.5° | 26.7 | 189.1 | 348.1 | 397.3 | 331.5 |
| 100° | 26.7 | 169.9 | 319.0 | 370.6 | 305.7 |
| 102.5° | 25.8 | 147.4 | 293.2 | 341.5 | 278.2 |
| 105° | 25.0 | 119.1 | 259.9 | 297.3 | 239.0 |
| 107.5° | 24.2 | 99.1 | 214.9 | 241.5 | 194.1 |
| 110° | 23.3 | 92.4 | 176.6 | 191.6 | 156.6 |



REPORT NUMBER: P212908

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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|------|-------|-------|-------|-------|
| 112.5° | 23.3 | 87.4 | 155.7 | 164.9 | 134.9 |
| 115° | 22.5 | 81.6 | 144.1 | 149.9 | 124.1 |
| 117.5° | 21.7 | 75.0 | 132.4 | 137.4 | 113.3 |
| 120° | 20.0 | 66.6 | 119.9 | 125.8 | 104.9 |
| 122.5° | 17.5 | 56.6 | 107.4 | 113.3 | 96.6 |
| 125° | 15.8 | 46.6 | 94.1 | 99.9 | 87.4 |
| 127.5° | 15.0 | 40.0 | 81.6 | 88.3 | 78.3 |
| 130° | 14.2 | 32.5 | 70.8 | 78.3 | 70.8 |
| 132.5° | 12.5 | 27.5 | 61.6 | 70.8 | 65.0 |
| 135° | 11.7 | 23.3 | 54.1 | 65.0 | 60.0 |
| 137.5° | 11.7 | 20.0 | 47.5 | 60.0 | 55.8 |
| 140° | 10.8 | 16.7 | 42.5 | 55.8 | 53.3 |
| 142.5° | 10.8 | 14.2 | 38.3 | 53.3 | 50.0 |
| 145° | 10.8 | 12.5 | 34.1 | 50.0 | 47.5 |
| 147.5° | 10.0 | 12.5 | 30.8 | 45.8 | 45.0 |
| 150° | 10.0 | 11.7 | 26.7 | 40.8 | 40.8 |
| 152.5° | 10.0 | 11.7 | 20.8 | 34.1 | 35.0 |
| 155° | 9.2 | 10.8 | 15.0 | 27.5 | 28.3 |
| 157.5° | 9.2 | 10.8 | 10.0 | 19.2 | 20.0 |
| 160° | 8.3 | 10.8 | 6.7 | 10.0 | 10.8 |
| 162.5° | 8.3 | 10.0 | 7.5 | 2.5 | 2.5 |
| 165° | 8.3 | 10.0 | 6.7 | 0.0 | 0.0 |
| 167.5° | 7.5 | 10.0 | 6.7 | 0.0 | 0.0 |
| 170° | 8.3 | 10.0 | 6.7 | 0.0 | 0.0 |
| 172.5° | 7.5 | 10.0 | 6.7 | 0.0 | 0.0 |
| 175° | 7.5 | 10.0 | 6.7 | 0.0 | 0.0 |
| 177.5° | 7.5 | 10.0 | 5.8 | 0.0 | 0.0 |
| 180° | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |

(END OF REPORT)