

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: McGRAW-EDISON

Report Number: P300317

Luminaire Tested: **GLNA-AF-04-LED-E1-T4FT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300317
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24295)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-T4FT
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV Forward Throw OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24073.9 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 225
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

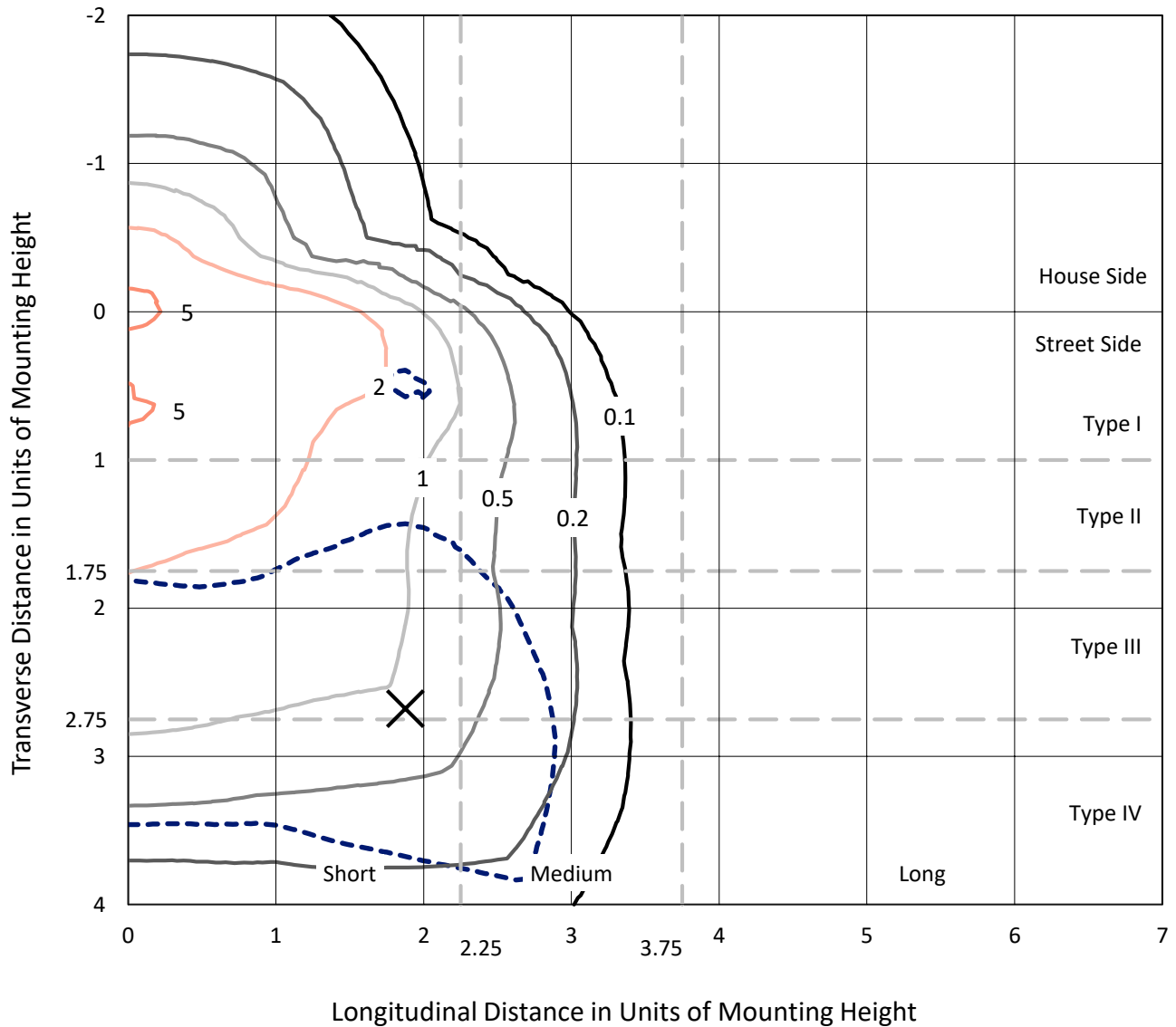


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Iso-Footcandle Lines of Horizontal Illumination

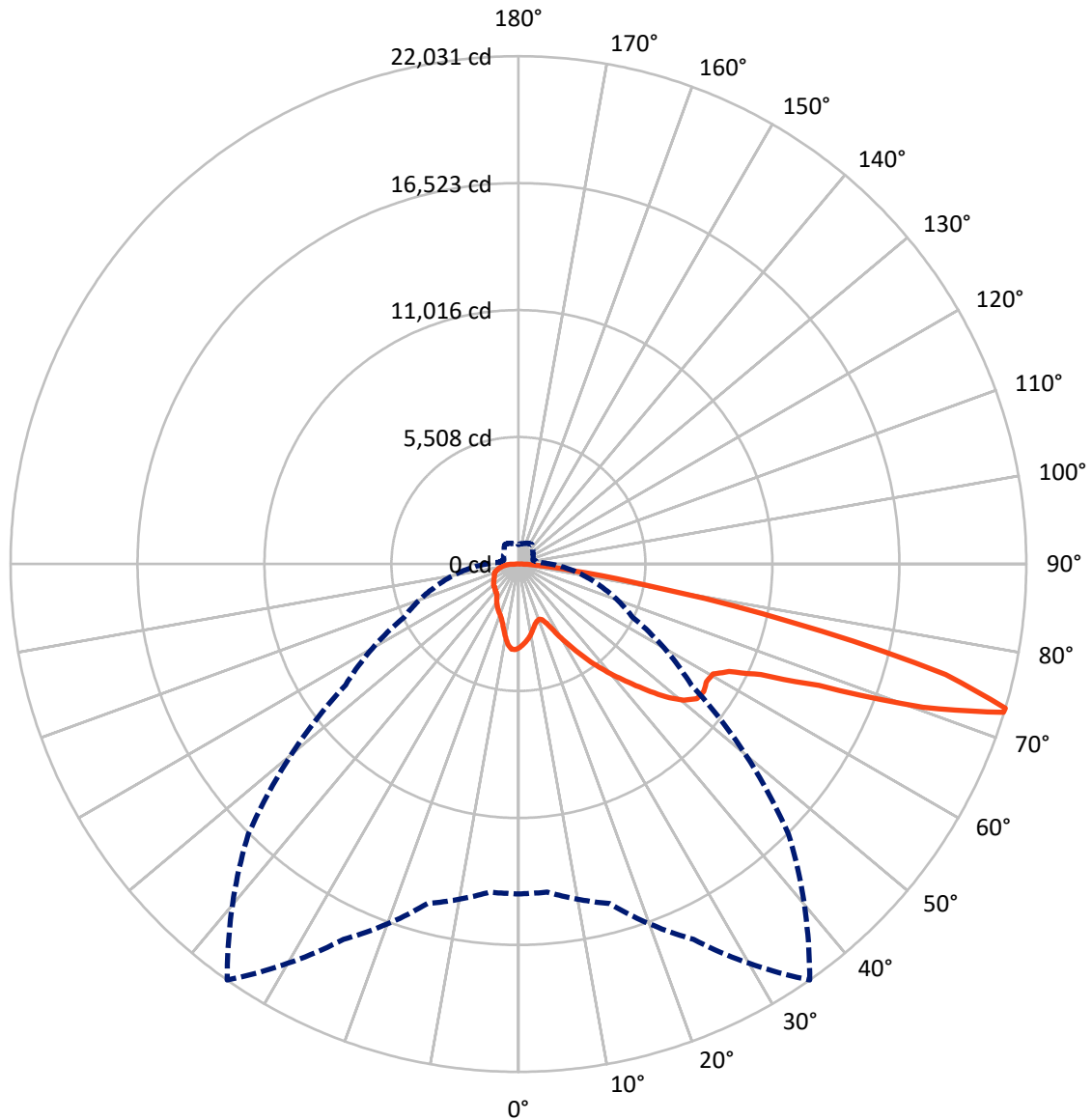
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4591.6 | 0.0 | 4591.6 |
| | % Fixture | 19.1 | 0.0 | 19.1 |
| Street Side | Lumens | 19482.4 | 0.0 | 19482.4 |
| | % Fixture | 80.9 | 0.0 | 80.9 |
| Total | Lumens | 24073.9 | 0.0 | 24073.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 328.9 | 1.4 |
| 10°-20° | 821.0 | 3.4 |
| 20°-30° | 1327.2 | 5.5 |
| 30°-40° | 2225.6 | 9.2 |
| 40°-50° | 3430.6 | 14.3 |
| 50°-60° | 4602.5 | 19.1 |
| 60°-70° | 6131.5 | 25.5 |
| 70°-80° | 4676.5 | 19.4 |
| 80°-90° | 530.1 | 2.2 |
| 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° | 24073.9 | 100.0 |
| 0°-180° | 24073.9 | 100.0 |



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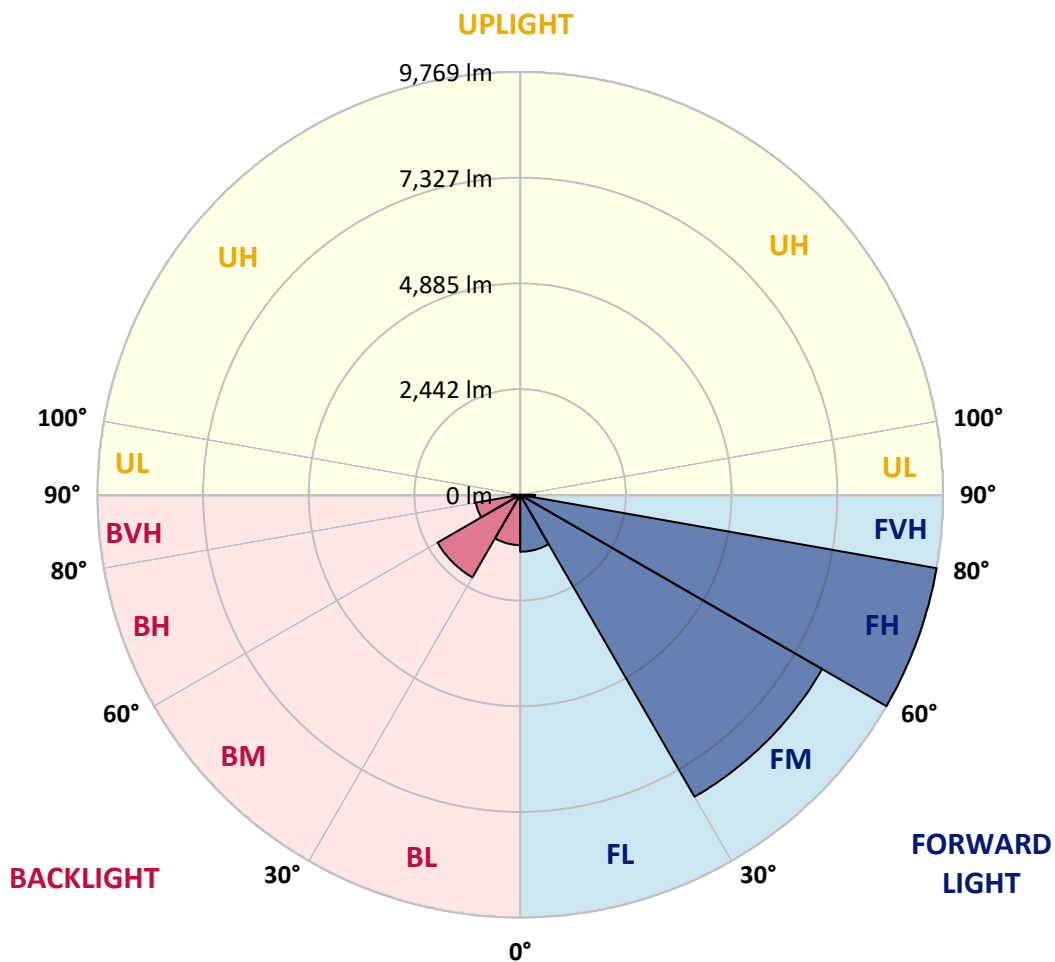
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1315.2 | 5.5 | | | |
| FM | (30°-60°) | 8055.3 | 33.5 | | | |
| FH | (60°-80°) | 9769.2 | 40.6 | | | G4/12000 |
| FVH | (80°-90°) | 342.6 | 1.4 | | | G3/500 |
| BL | (0°-30°) | 1161.9 | 4.8 | B3/2500 | | |
| BM | (30°-60°) | 2203.4 | 9.2 | B2/2500 | | |
| BH | (60°-80°) | 1038.8 | 4.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 187.4 | 0.8 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|--------|
| 0° | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 |
| 2.5° | 3490.2 | 3497.1 | 3489.0 | 3499.4 | 3516.7 | 3535.2 | 3548.0 | 3566.5 | 3587.3 | 3616.2 | 3623.1 |
| 5° | 3326.0 | 3336.4 | 3336.4 | 3354.9 | 3388.4 | 3418.5 | 3446.2 | 3476.3 | 3520.2 | 3569.9 | 3589.6 |
| 7.5° | 3145.6 | 3151.4 | 3161.8 | 3189.6 | 3238.1 | 3280.9 | 3320.2 | 3368.8 | 3428.9 | 3494.8 | 3529.5 |
| 10° | 2928.3 | 2936.4 | 2952.6 | 2991.9 | 3057.8 | 3116.7 | 3173.4 | 3240.4 | 3316.7 | 3398.8 | 3442.8 |
| 12.5° | 2774.5 | 2772.2 | 2779.2 | 2808.1 | 2865.9 | 2937.6 | 3019.6 | 3105.2 | 3198.8 | 3294.8 | 3348.0 |
| 15° | 2722.5 | 2709.8 | 2683.2 | 2676.3 | 2707.5 | 2779.2 | 2874.0 | 2979.2 | 3091.3 | 3206.9 | 3272.8 |
| 17.5° | 2754.9 | 2732.9 | 2660.1 | 2606.9 | 2602.3 | 2656.6 | 2757.2 | 2875.1 | 3004.6 | 3145.6 | 3227.7 |
| 20° | 2958.4 | 2906.3 | 2727.1 | 2603.5 | 2560.7 | 2587.3 | 2675.1 | 2800.0 | 2952.6 | 3139.9 | 3245.1 |
| 22.5° | 3445.1 | 3368.8 | 2988.4 | 2758.4 | 2613.9 | 2581.5 | 2647.4 | 2780.3 | 2958.4 | 3211.5 | 3345.6 |
| 25° | 4153.7 | 4045.1 | 3437.0 | 3144.5 | 2846.2 | 2674.0 | 2689.0 | 2825.4 | 3040.4 | 3378.0 | 3539.9 |
| 27.5° | 4713.3 | 4642.7 | 4023.1 | 3689.0 | 3269.3 | 2923.7 | 2824.3 | 2938.7 | 3208.1 | 3650.8 | 3816.2 |
| 30° | 5046.2 | 5003.4 | 4649.7 | 4306.3 | 3809.2 | 3321.4 | 3083.2 | 3151.4 | 3470.5 | 4028.9 | 4165.3 |
| 32.5° | 5432.3 | 5406.9 | 5233.5 | 4917.9 | 4391.9 | 3843.9 | 3493.6 | 3469.3 | 3821.9 | 4483.2 | 4545.6 |
| 35° | 5832.3 | 5824.2 | 5722.5 | 5495.9 | 5017.3 | 4532.9 | 4038.1 | 3874.0 | 4204.6 | 4954.9 | 4915.6 |
| 37.5° | 6204.6 | 6190.7 | 6131.8 | 6000.0 | 5671.6 | 5272.8 | 4593.0 | 4289.0 | 4617.3 | 5405.7 | 5231.2 |
| 40° | 6890.1 | 6781.5 | 6579.1 | 6479.7 | 6332.9 | 5895.9 | 5033.5 | 4676.3 | 5045.1 | 5835.8 | 5504.0 |
| 42.5° | 7726.0 | 7549.1 | 7172.2 | 7035.8 | 7015.0 | 6387.2 | 5334.1 | 5052.0 | 5476.3 | 6262.4 | 5772.2 |
| 45° | 8383.8 | 8217.3 | 7892.4 | 7720.2 | 7796.5 | 6832.3 | 5635.8 | 5453.1 | 5920.2 | 6709.8 | 6048.5 |
| 47.5° | 9085.5 | 8824.2 | 8394.2 | 8446.2 | 8612.7 | 7253.1 | 5943.3 | 5884.4 | 6406.9 | 7210.4 | 6391.9 |
| 50° | 9110.9 | 8910.9 | 8722.5 | 9033.5 | 9292.4 | 7640.4 | 6328.3 | 6336.4 | 7002.3 | 7840.4 | 6848.5 |
| 52.5° | 8582.6 | 8539.8 | 8839.2 | 9328.3 | 9701.7 | 7946.8 | 6766.4 | 6803.4 | 7764.1 | 8564.1 | 7350.2 |
| 55° | 8397.6 | 8349.1 | 8694.7 | 9225.4 | 9757.2 | 8199.9 | 7241.6 | 7308.6 | 8685.5 | 9327.1 | 7839.3 |
| 57.5° | 8848.5 | 8741.0 | 8764.1 | 9176.8 | 9621.9 | 8477.4 | 7759.5 | 7894.7 | 9686.6 | 9994.2 | 8153.7 |
| 60° | 10108.6 | 9878.5 | 9441.6 | 9431.2 | 9694.7 | 8893.6 | 8358.3 | 8523.6 | 10727.1 | 10313.2 | 8031.2 |
| 62.5° | 11876.2 | 11646.2 | 10827.7 | 10294.7 | 10255.4 | 9580.3 | 9093.6 | 9137.5 | 11328.2 | 9880.9 | 7283.2 |
| 65° | 13789.5 | 13583.7 | 12669.3 | 11916.7 | 11553.7 | 10717.8 | 9947.9 | 9411.5 | 11131.7 | 8691.3 | 5974.5 |
| 67.5° | 16112.0 | 15891.2 | 15105.1 | 14410.3 | 14061.2 | 12553.7 | 10547.9 | 9149.1 | 9884.3 | 6732.9 | 4294.8 |
| 70° | 17736.3 | 17510.9 | 17201.0 | 17764.0 | 18618.4 | 15202.2 | 10625.4 | 8082.0 | 7382.6 | 4475.1 | 2585.0 |
| 72.5° | 15617.2 | 15512.0 | 16077.3 | 18448.4 | 22006.8 | 16809.1 | 9604.6 | 5884.4 | 4287.8 | 2375.7 | 1495.9 |
| 73° | 14308.6 | 14285.5 | 15249.6 | 17968.7 | 22031.1 | 16561.7 | 9157.2 | 5469.3 | 3677.4 | 2101.7 | 1367.6 |
| 75° | 6461.2 | 6647.4 | 8760.6 | 13724.8 | 19140.9 | 13647.3 | 6445.0 | 3137.6 | 2077.4 | 1452.0 | 1032.4 |
| 77.5° | 1552.6 | 1617.3 | 2741.0 | 6517.9 | 12087.8 | 8132.9 | 2920.2 | 1551.4 | 1328.3 | 1025.4 | 753.8 |
| 80° | 661.3 | 683.2 | 1055.5 | 2408.1 | 5691.3 | 3275.1 | 1345.7 | 1039.3 | 919.1 | 715.6 | 528.3 |
| 82.5° | 367.6 | 390.7 | 598.8 | 1092.5 | 2297.1 | 1116.8 | 820.8 | 723.7 | 604.6 | 431.2 | 343.4 |
| 85° | 208.1 | 220.8 | 350.3 | 610.4 | 973.4 | 448.6 | 491.3 | 480.9 | 341.0 | 222.0 | 168.8 |
| 87.5° | 98.3 | 106.4 | 168.8 | 283.2 | 381.5 | 175.7 | 249.7 | 275.1 | 213.9 | 135.3 | 87.9 |
| 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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CANDELA DISTRIBUTION (continued):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 | 3633.5 |
| 2.5° | 3631.2 | 3652.0 | 3676.3 | 3689.0 | 3700.6 | 3714.4 | 3728.3 | 3728.3 | 3730.6 | 3731.8 |
| 5° | 3605.8 | 3648.5 | 3686.7 | 3702.9 | 3706.3 | 3706.3 | 3702.9 | 3684.4 | 3668.2 | 3675.1 |
| 7.5° | 3552.6 | 3615.0 | 3647.4 | 3641.6 | 3597.7 | 3546.8 | 3504.0 | 3452.0 | 3425.4 | 3420.8 |
| 10° | 3476.3 | 3548.0 | 3553.7 | 3495.9 | 3387.3 | 3278.6 | 3188.4 | 3100.6 | 3058.9 | 3048.5 |
| 12.5° | 3391.9 | 3457.8 | 3420.8 | 3301.7 | 3127.1 | 2968.8 | 2854.3 | 2765.3 | 2726.0 | 2715.6 |
| 15° | 3323.7 | 3368.8 | 3275.1 | 3087.8 | 2868.2 | 2700.6 | 2605.8 | 2539.9 | 2512.1 | 2504.0 |
| 17.5° | 3287.8 | 3297.1 | 3126.0 | 2872.8 | 2639.3 | 2499.4 | 2440.4 | 2409.2 | 2398.8 | 2393.0 |
| 20° | 3305.2 | 3240.4 | 2983.8 | 2672.8 | 2452.0 | 2353.7 | 2339.9 | 2331.8 | 2329.5 | 2326.0 |
| 22.5° | 3391.9 | 3223.1 | 2853.2 | 2483.2 | 2287.8 | 2245.1 | 2256.6 | 2255.5 | 2253.2 | 2250.9 |
| 25° | 3546.8 | 3238.1 | 2726.0 | 2302.9 | 2150.3 | 2141.0 | 2161.8 | 2161.8 | 2152.6 | 2152.6 |
| 27.5° | 3751.4 | 3269.3 | 2583.8 | 2131.8 | 2025.4 | 2026.6 | 2042.8 | 2038.1 | 2027.7 | 2020.8 |
| 30° | 4001.1 | 3289.0 | 2417.3 | 1978.0 | 1908.7 | 1904.0 | 1908.7 | 1889.0 | 1857.8 | 1855.5 |
| 32.5° | 4256.6 | 3264.7 | 2224.3 | 1841.6 | 1785.0 | 1774.6 | 1771.1 | 1743.3 | 1707.5 | 1697.1 |
| 35° | 4487.8 | 3175.7 | 2027.7 | 1732.9 | 1667.0 | 1643.9 | 1660.1 | 1650.9 | 1618.5 | 1610.4 |
| 37.5° | 4656.6 | 3010.4 | 1850.9 | 1637.0 | 1582.6 | 1576.9 | 1587.3 | 1590.7 | 1552.6 | 1544.5 |
| 40° | 4769.9 | 2786.1 | 1699.4 | 1556.1 | 1566.5 | 1544.5 | 1509.8 | 1485.5 | 1474.0 | 1470.5 |
| 42.5° | 4861.2 | 2552.6 | 1572.2 | 1517.9 | 1569.9 | 1506.3 | 1431.2 | 1391.9 | 1412.7 | 1422.0 |
| 45° | 4966.4 | 2324.8 | 1465.9 | 1470.5 | 1552.6 | 1462.4 | 1376.9 | 1338.7 | 1346.8 | 1349.1 |
| 47.5° | 5110.9 | 2047.4 | 1351.4 | 1394.2 | 1494.8 | 1432.4 | 1343.3 | 1289.0 | 1250.9 | 1233.5 |
| 50° | 5310.9 | 1719.1 | 1232.4 | 1308.7 | 1438.1 | 1410.4 | 1291.3 | 1233.5 | 1163.0 | 1146.8 |
| 52.5° | 5449.7 | 1412.7 | 1134.1 | 1237.0 | 1387.3 | 1366.5 | 1249.7 | 1174.6 | 1100.6 | 1086.7 |
| 55° | 5374.5 | 1173.4 | 1048.5 | 1157.2 | 1320.2 | 1312.1 | 1215.0 | 1114.4 | 1056.6 | 1045.1 |
| 57.5° | 4998.8 | 1022.0 | 982.7 | 1082.1 | 1238.1 | 1265.9 | 1168.8 | 1063.6 | 1022.0 | 1013.9 |
| 60° | 4282.1 | 927.2 | 941.0 | 1031.2 | 1171.1 | 1219.6 | 1122.5 | 1035.8 | 1008.1 | 1002.3 |
| 62.5° | 3322.5 | 863.6 | 909.8 | 994.2 | 1119.1 | 1187.3 | 1097.1 | 1032.4 | 1022.0 | 1015.0 |
| 65° | 2380.3 | 812.7 | 876.3 | 957.2 | 1071.7 | 1157.2 | 1087.9 | 1027.7 | 1030.1 | 1024.3 |
| 67.5° | 1617.3 | 767.6 | 835.8 | 915.6 | 1025.4 | 1130.6 | 1075.1 | 1011.6 | 1040.5 | 1033.5 |
| 70° | 1131.8 | 723.7 | 788.4 | 862.4 | 967.6 | 1093.6 | 1052.0 | 987.3 | 985.0 | 957.2 |
| 72.5° | 883.2 | 665.9 | 723.7 | 788.4 | 893.6 | 1041.6 | 1005.8 | 932.9 | 894.8 | 865.9 |
| 73° | 842.8 | 652.0 | 707.5 | 772.2 | 877.5 | 1028.9 | 993.1 | 917.9 | 875.1 | 848.5 |
| 75° | 697.1 | 591.9 | 642.8 | 700.6 | 808.1 | 968.8 | 930.6 | 849.7 | 795.4 | 779.2 |
| 77.5° | 548.0 | 506.4 | 554.9 | 606.9 | 712.1 | 880.9 | 838.1 | 760.7 | 730.6 | 716.8 |
| 80° | 405.8 | 419.7 | 462.4 | 508.7 | 617.3 | 787.3 | 749.1 | 671.7 | 805.8 | 772.2 |
| 82.5° | 285.5 | 317.9 | 357.2 | 398.8 | 517.9 | 695.9 | 649.7 | 569.9 | 589.6 | 490.2 |
| 85° | 168.8 | 208.1 | 245.1 | 280.9 | 373.4 | 576.9 | 536.4 | 454.3 | 372.3 | 354.9 |
| 87.5° | 98.3 | 115.6 | 126.0 | 163.0 | 256.6 | 434.7 | 378.0 | 336.4 | 193.1 | 130.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)