

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: P191212

Luminaire Tested: **GLEON-AF-04-LED-E1-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P191212
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLEON-AF-04-LED-E1-SL4-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19935.3 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

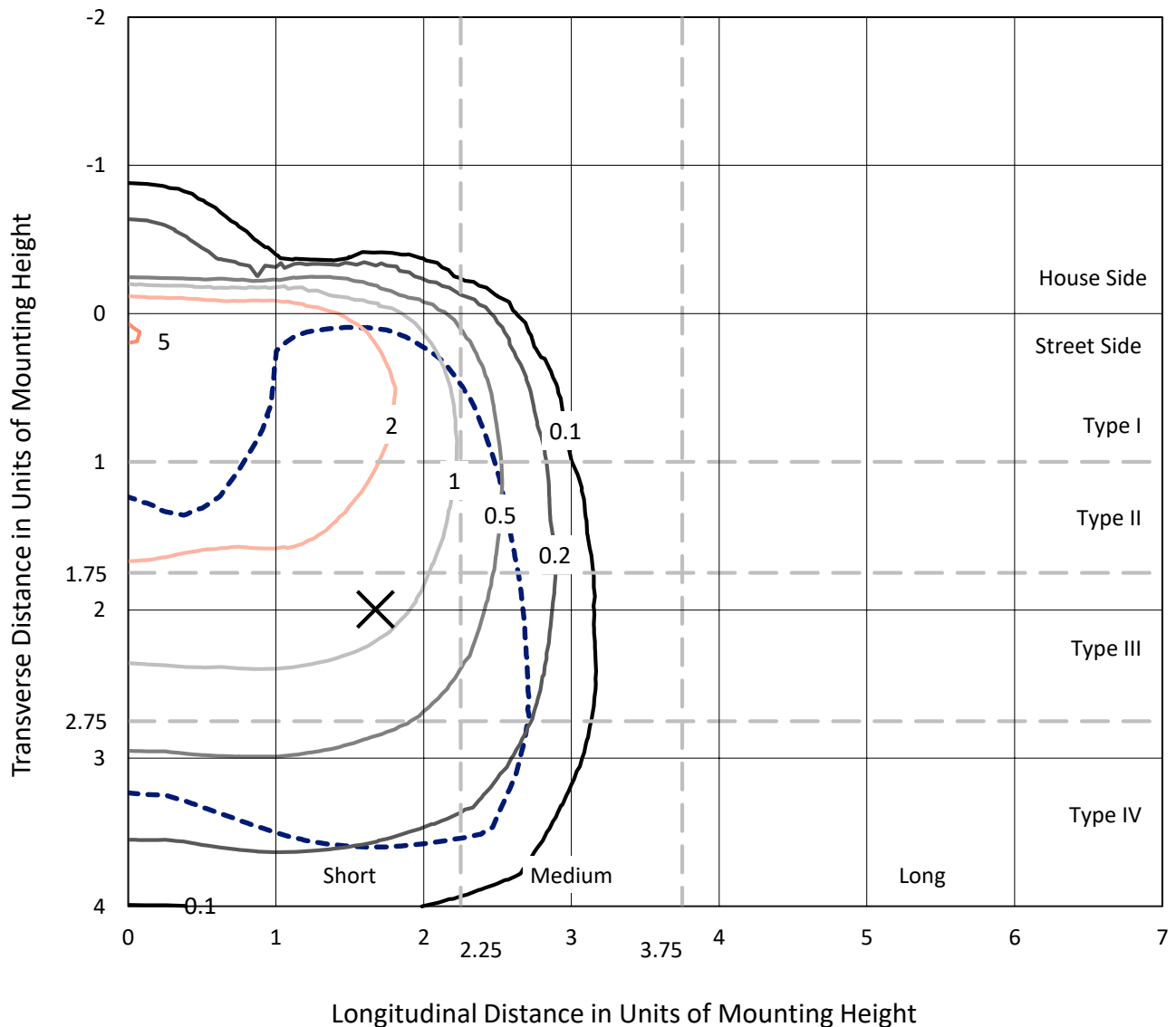
Input Watts (W): 225
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P191212
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

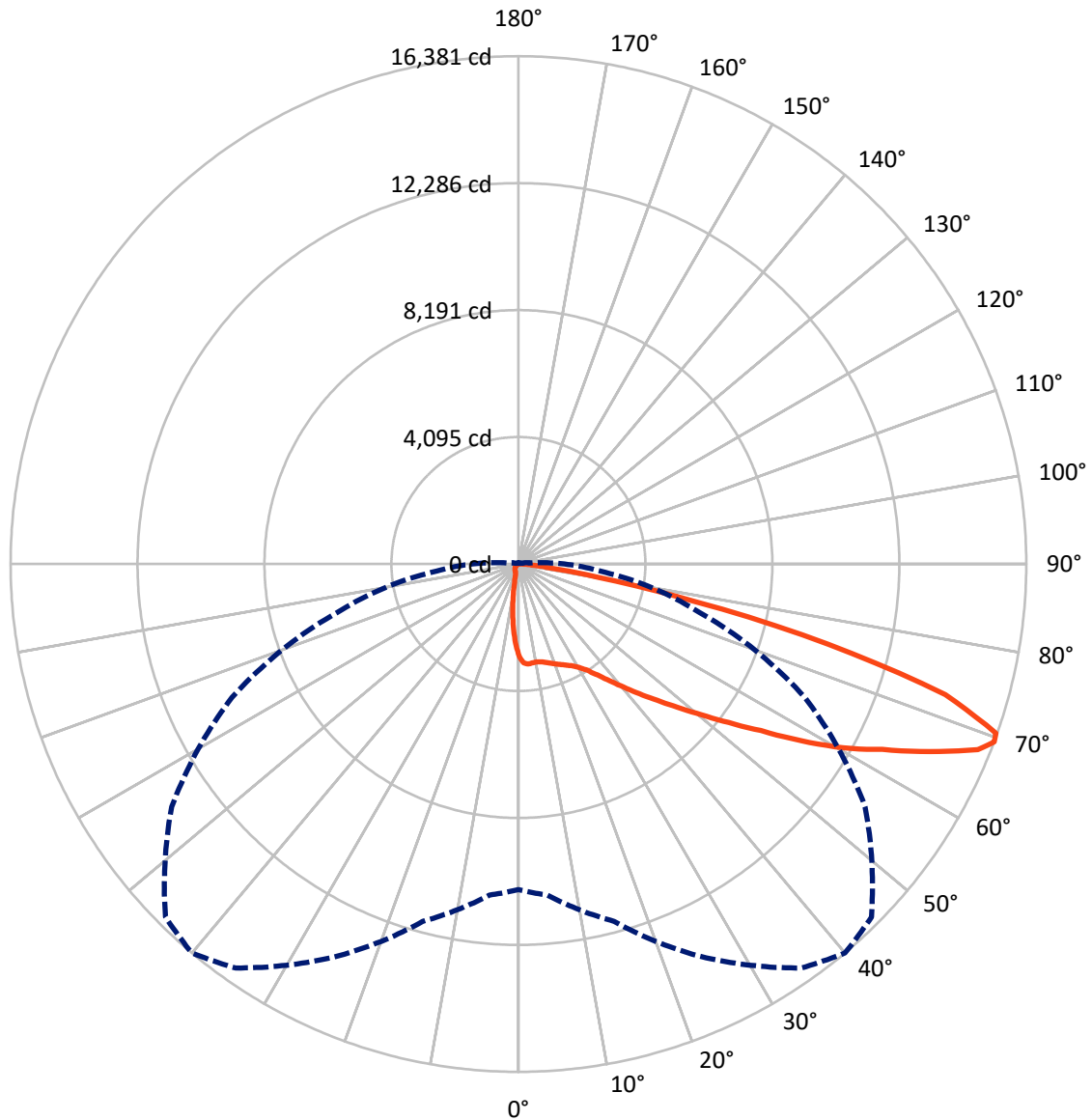


Based on 25 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P191212

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: GLEON-AF-04-LED-E1-SL4-HSS

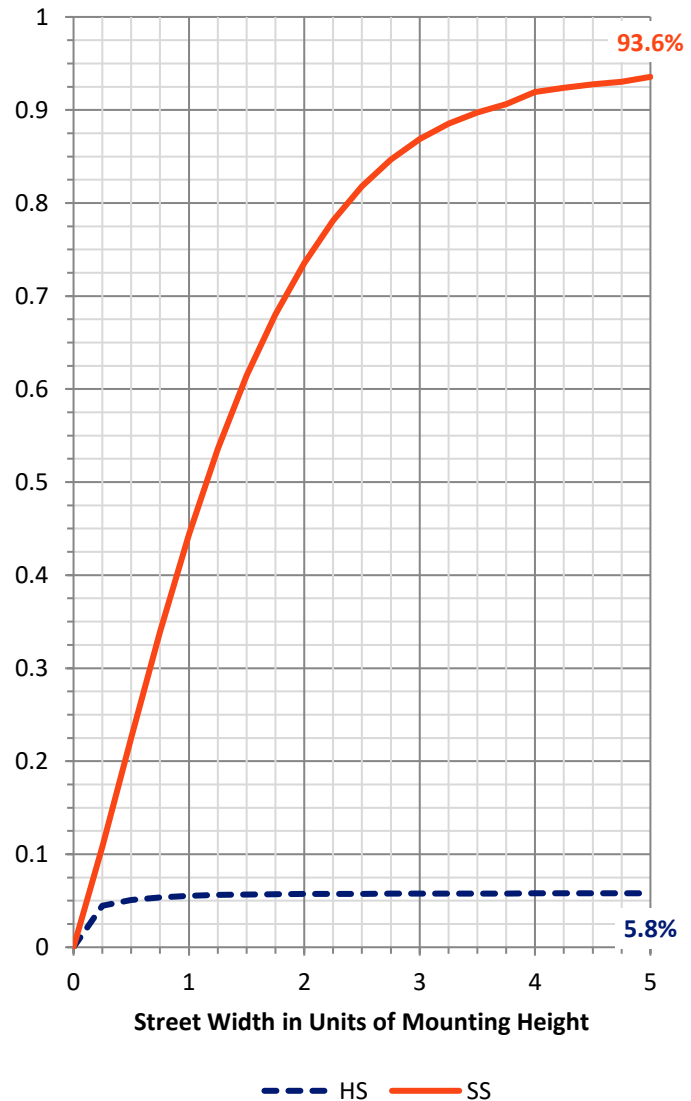
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1166.3 | 0.0 | 1166.3 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 18768.9 | 0.0 | 18768.9 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 19935.3 | 0.0 | 19935.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 241.5 | 1.2 |
| 10°-20° | 593.9 | 3.0 |
| 20°-30° | 1000.3 | 5.0 |
| 30°-40° | 1637.5 | 8.2 |
| 40°-50° | 2835.3 | 14.2 |
| 50°-60° | 4465.8 | 22.4 |
| 60°-70° | 5832.2 | 29.3 |
| 70°-80° | 3003.9 | 15.1 |
| 80°-90° | 324.9 | 1.6 |
| 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° | 19935.3 | 100.0 |
| 0°-180° | 19935.3 | 100.0 |



REPORT NUMBER: P191212

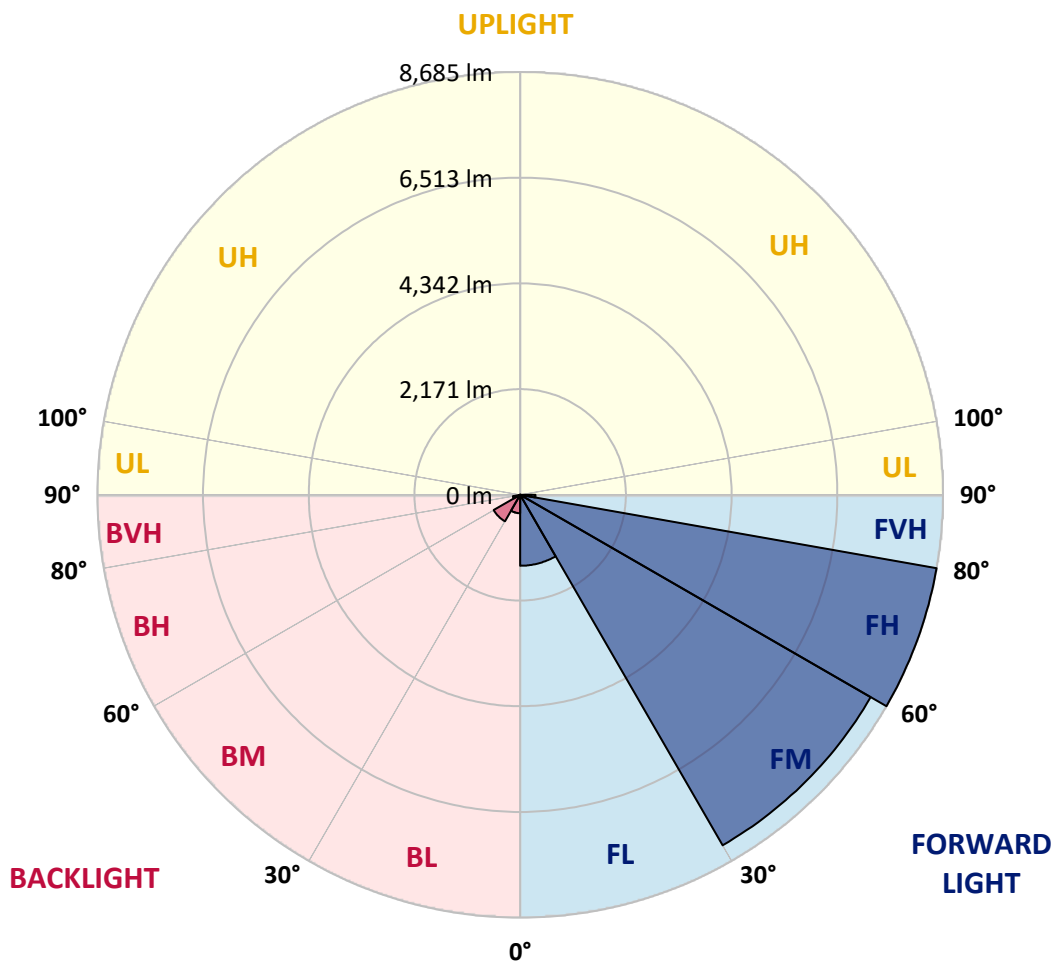
CATALOG NUMBER: GLEON-AF-04-LED-E1-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1457.8 | 7.3 | | | |
| FM | (30°-60°) | 8311.8 | 41.7 | | | |
| FH | (60°-80°) | 8684.6 | 43.6 | | | G4/12000 |
| FVH | (80°-90°) | 314.7 | 1.6 | | | G3/500 |
| BL | (0°-30°) | 377.8 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 626.9 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 151.4 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 10.2 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G4

Type IV Short





REPORT NUMBER: P191212

CATALOG NUMBER: GLEON-AF-04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0° | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 |
| 2.5° | 3270.4 | 3252.6 | 3241.8 | 3227.6 | 3209.8 | 3194.4 | 3188.4 | 3144.6 | 3103.0 | 3046.0 | 2980.8 |
| 5° | 3330.8 | 3324.9 | 3306.0 | 3286.9 | 3265.6 | 3241.8 | 3228.8 | 3176.6 | 3117.2 | 3034.2 | 2920.3 |
| 7.5° | 3336.8 | 3329.7 | 3306.0 | 3279.8 | 3250.1 | 3221.7 | 3199.2 | 3146.9 | 3092.4 | 3008.1 | 2869.3 |
| 10° | 3327.2 | 3319.0 | 3301.2 | 3272.7 | 3235.9 | 3208.6 | 3186.1 | 3136.3 | 3089.9 | 3014.0 | 2859.8 |
| 12.5° | 3316.6 | 3308.3 | 3300.0 | 3285.7 | 3253.7 | 3234.8 | 3215.7 | 3168.3 | 3126.8 | 3062.7 | 2894.1 |
| 15° | 3327.2 | 3322.5 | 3332.1 | 3326.1 | 3308.3 | 3291.7 | 3272.7 | 3230.0 | 3192.0 | 3138.6 | 2957.0 |
| 17.5° | 3372.4 | 3372.4 | 3402.0 | 3405.6 | 3389.0 | 3365.3 | 3338.0 | 3295.2 | 3263.2 | 3218.1 | 3031.8 |
| 20° | 3478.0 | 3474.5 | 3512.4 | 3519.6 | 3479.2 | 3442.4 | 3402.0 | 3349.9 | 3324.9 | 3296.5 | 3105.4 |
| 22.5° | 3659.5 | 3642.9 | 3665.4 | 3658.4 | 3578.9 | 3521.9 | 3472.1 | 3408.0 | 3395.0 | 3381.9 | 3187.3 |
| 25° | 3895.7 | 3886.2 | 3901.6 | 3831.6 | 3691.6 | 3614.5 | 3555.2 | 3482.7 | 3482.7 | 3495.8 | 3279.8 |
| 27.5° | 4238.6 | 4203.0 | 4150.8 | 4027.5 | 3817.3 | 3718.8 | 3654.8 | 3577.7 | 3597.8 | 3646.5 | 3402.0 |
| 30° | 4589.9 | 4550.7 | 4430.9 | 4241.1 | 3970.5 | 3867.2 | 3792.5 | 3711.8 | 3759.2 | 3848.2 | 3565.8 |
| 32.5° | 4936.4 | 4892.5 | 4722.8 | 4483.1 | 4190.0 | 4086.8 | 4014.4 | 3925.4 | 4004.9 | 4154.4 | 3805.5 |
| 35° | 5272.2 | 5233.0 | 5037.2 | 4754.8 | 4481.9 | 4396.4 | 4330.0 | 4252.9 | 4354.9 | 4563.8 | 4143.7 |
| 37.5° | 5649.6 | 5606.8 | 5368.3 | 5062.2 | 4836.7 | 4775.0 | 4726.3 | 4649.2 | 4827.2 | 5133.4 | 4614.8 |
| 40° | 6113.5 | 6041.1 | 5719.5 | 5414.6 | 5247.2 | 5217.6 | 5184.4 | 5173.7 | 5450.2 | 5873.8 | 5242.5 |
| 42.5° | 6645.1 | 6526.4 | 6087.4 | 5786.0 | 5698.1 | 5719.5 | 5711.2 | 5758.7 | 6229.8 | 6794.6 | 6006.7 |
| 45° | 7176.7 | 7023.7 | 6496.8 | 6182.3 | 6194.2 | 6268.9 | 6315.2 | 6505.0 | 7206.4 | 7850.7 | 6829.0 |
| 47.5° | 7627.6 | 7477.0 | 6889.6 | 6610.7 | 6753.1 | 6900.2 | 7026.0 | 7385.6 | 8210.3 | 8890.2 | 7468.7 |
| 50° | 8013.3 | 7870.9 | 7306.0 | 7081.8 | 7402.2 | 7639.5 | 7843.6 | 8376.4 | 9290.1 | 9681.7 | 7917.1 |
| 52.5° | 8329.0 | 8234.0 | 7738.0 | 7621.7 | 8143.8 | 8491.5 | 8790.5 | 9428.9 | 10246.5 | 10324.8 | 8266.1 |
| 55° | 8636.3 | 8568.6 | 8201.9 | 8263.7 | 9014.8 | 9488.3 | 9866.8 | 10545.5 | 11070.1 | 10861.2 | 8600.7 |
| 57.5° | 8989.9 | 8928.2 | 8731.2 | 9077.7 | 10159.8 | 10755.6 | 11168.5 | 11535.2 | 11795.0 | 11409.4 | 8916.3 |
| 60° | 9350.6 | 9315.0 | 9319.8 | 9981.9 | 11474.6 | 12046.6 | 12274.5 | 12369.4 | 12507.0 | 11925.6 | 8934.1 |
| 62.5° | 9694.7 | 9762.3 | 9992.6 | 10988.1 | 12733.7 | 13172.7 | 13287.8 | 13381.6 | 13220.2 | 12007.5 | 8254.2 |
| 65° | 10277.4 | 10387.8 | 10937.1 | 12334.9 | 14118.5 | 14588.4 | 14707.1 | 14385.5 | 13332.9 | 10948.9 | 6713.9 |
| 67.5° | 10562.2 | 10763.9 | 11744.0 | 13590.4 | 15461.7 | 15983.8 | 15939.9 | 14450.7 | 11964.7 | 8349.1 | 4308.7 |
| 69° | 10502.8 | 10717.6 | 11930.4 | 13974.9 | 15907.9 | 16381.3 | 16102.5 | 13652.1 | 10193.1 | 6048.2 | 2644.9 |
| 70° | 10267.9 | 10485.0 | 11834.2 | 13960.6 | 15964.9 | 16339.8 | 15801.1 | 12666.1 | 8618.5 | 4422.5 | 1654.1 |
| 72.5° | 8574.6 | 8762.1 | 10506.4 | 12618.6 | 14707.1 | 14402.1 | 13219.0 | 8775.1 | 4199.5 | 1204.4 | 372.6 |
| 75° | 5278.1 | 5382.6 | 7538.6 | 9506.1 | 11108.0 | 10324.8 | 8807.1 | 4365.6 | 1251.9 | 340.5 | 206.4 |
| 77.5° | 2788.6 | 2836.0 | 4127.1 | 5603.2 | 7041.5 | 5826.3 | 4514.0 | 1702.8 | 576.7 | 213.6 | 149.6 |
| 80° | 1648.2 | 1683.8 | 2222.6 | 2561.9 | 3047.3 | 2545.3 | 1804.9 | 1045.5 | 413.0 | 134.1 | 132.9 |
| 82.5° | 943.4 | 965.9 | 1611.5 | 1423.9 | 1200.8 | 1025.2 | 898.3 | 990.8 | 248.0 | 90.2 | 137.7 |
| 85° | 346.5 | 351.3 | 906.5 | 1083.4 | 714.3 | 424.8 | 446.2 | 821.1 | 66.5 | 57.0 | 108.0 |
| 87.5° | 161.4 | 157.8 | 466.4 | 663.3 | 417.7 | 269.3 | 347.7 | 180.3 | 26.1 | 36.8 | 29.7 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 | 2978.4 |
| 2.5° | 2942.8 | 2898.9 | 2819.5 | 2737.5 | 2654.5 | 2590.4 | 2527.5 | 2477.7 | 2461.0 | 2430.2 | 2432.6 |
| 5° | 2852.6 | 2772.0 | 2605.9 | 2437.3 | 2261.7 | 2116.9 | 1980.4 | 1870.2 | 1816.8 | 1762.1 | 1762.1 |
| 7.5° | 2774.3 | 2656.8 | 2397.0 | 2122.8 | 1839.3 | 1600.7 | 1386.0 | 1224.6 | 1135.6 | 1064.4 | 1063.3 |
| 10° | 2744.7 | 2585.6 | 2222.6 | 1829.8 | 1434.6 | 1109.5 | 854.4 | 690.6 | 606.4 | 551.8 | 549.4 |
| 12.5° | 2757.7 | 2560.8 | 2088.5 | 1559.2 | 1063.3 | 713.2 | 494.8 | 389.2 | 353.6 | 337.0 | 337.0 |
| 15° | 2795.7 | 2553.6 | 1954.3 | 1294.6 | 751.2 | 446.2 | 328.7 | 300.2 | 297.9 | 297.9 | 297.9 |
| 17.5° | 2842.0 | 2555.9 | 1816.8 | 1037.1 | 511.5 | 319.2 | 283.6 | 280.1 | 282.4 | 282.4 | 282.4 |
| 20° | 2889.4 | 2557.2 | 1668.4 | 798.6 | 360.7 | 277.6 | 267.0 | 265.8 | 268.2 | 268.2 | 269.3 |
| 22.5° | 2947.5 | 2563.1 | 1520.1 | 596.9 | 297.9 | 262.3 | 253.9 | 253.9 | 255.1 | 255.1 | 253.9 |
| 25° | 3014.0 | 2575.0 | 1365.8 | 442.6 | 271.7 | 251.5 | 244.5 | 243.3 | 244.5 | 243.3 | 242.0 |
| 27.5° | 3097.1 | 2591.5 | 1193.8 | 346.5 | 259.8 | 240.9 | 235.0 | 235.0 | 233.7 | 232.6 | 231.4 |
| 30° | 3201.5 | 2610.6 | 1000.3 | 294.3 | 248.0 | 231.4 | 225.5 | 224.2 | 223.1 | 220.8 | 220.8 |
| 32.5° | 3360.5 | 2652.1 | 809.3 | 267.0 | 235.0 | 218.3 | 213.6 | 213.6 | 211.2 | 208.9 | 207.7 |
| 35° | 3605.0 | 2733.9 | 638.4 | 250.4 | 220.8 | 204.1 | 198.1 | 198.1 | 195.8 | 194.6 | 193.4 |
| 37.5° | 3943.2 | 2858.5 | 496.0 | 235.0 | 206.4 | 188.6 | 182.7 | 181.6 | 179.2 | 176.8 | 175.6 |
| 40° | 4392.9 | 3012.8 | 390.4 | 220.8 | 192.2 | 173.3 | 168.5 | 166.1 | 161.4 | 157.8 | 157.8 |
| 42.5° | 4957.7 | 3188.4 | 316.8 | 205.3 | 175.6 | 159.0 | 155.5 | 151.9 | 143.6 | 140.0 | 138.8 |
| 45° | 5548.7 | 3346.3 | 268.2 | 187.5 | 159.0 | 144.7 | 142.4 | 136.5 | 125.8 | 122.2 | 122.2 |
| 47.5° | 5974.6 | 3383.1 | 236.1 | 170.8 | 143.6 | 129.3 | 128.2 | 117.4 | 108.0 | 105.6 | 104.4 |
| 50° | 6240.5 | 3310.7 | 210.0 | 154.3 | 129.3 | 115.1 | 111.5 | 98.5 | 92.6 | 90.2 | 89.0 |
| 52.5° | 6419.6 | 3181.4 | 188.6 | 140.0 | 116.3 | 102.1 | 93.7 | 84.3 | 79.5 | 77.1 | 77.1 |
| 55° | 6563.3 | 2998.6 | 167.4 | 126.9 | 105.6 | 91.3 | 79.5 | 72.4 | 67.6 | 65.3 | 65.3 |
| 57.5° | 6603.6 | 2750.6 | 146.0 | 116.3 | 94.9 | 80.7 | 67.6 | 62.9 | 57.0 | 55.8 | 55.8 |
| 60° | 6310.5 | 2303.3 | 129.3 | 103.2 | 85.4 | 70.0 | 59.3 | 53.4 | 47.5 | 46.2 | 45.1 |
| 62.5° | 5537.9 | 1782.3 | 114.0 | 91.3 | 74.8 | 60.6 | 51.0 | 43.9 | 39.2 | 39.2 | 39.2 |
| 65° | 4224.4 | 1194.9 | 99.6 | 79.5 | 65.3 | 51.0 | 43.9 | 35.6 | 33.2 | 33.2 | 34.4 |
| 67.5° | 2528.7 | 650.3 | 85.4 | 67.6 | 55.8 | 42.8 | 36.8 | 30.9 | 29.7 | 30.9 | 30.9 |
| 69° | 1482.1 | 382.1 | 77.1 | 60.6 | 48.7 | 38.0 | 32.0 | 27.3 | 29.7 | 30.9 | 30.9 |
| 70° | 914.9 | 257.5 | 71.2 | 54.6 | 43.9 | 34.4 | 29.7 | 26.1 | 28.4 | 29.7 | 29.7 |
| 72.5° | 255.1 | 132.9 | 57.0 | 42.8 | 35.6 | 28.4 | 23.7 | 23.7 | 27.3 | 28.4 | 28.4 |
| 75° | 166.1 | 98.5 | 43.9 | 32.0 | 27.3 | 22.5 | 20.2 | 22.5 | 26.1 | 27.3 | 27.3 |
| 77.5° | 137.7 | 80.7 | 35.6 | 26.1 | 22.5 | 21.4 | 19.0 | 20.2 | 23.7 | 25.0 | 25.0 |
| 80° | 125.8 | 57.0 | 28.4 | 23.7 | 20.2 | 19.0 | 17.8 | 16.6 | 21.4 | 22.5 | 22.5 |
| 82.5° | 119.9 | 45.1 | 25.0 | 21.4 | 19.0 | 16.6 | 15.4 | 16.6 | 19.0 | 20.2 | 21.4 |
| 85° | 74.8 | 29.7 | 22.5 | 20.2 | 16.6 | 15.4 | 15.4 | 15.4 | 17.8 | 19.0 | 19.0 |
| 87.5° | 27.3 | 23.7 | 20.2 | 16.6 | 14.2 | 14.2 | 14.2 | 14.2 | 15.4 | 17.8 | 17.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)