

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: P301825

Luminaire Tested: **GLNA-AF-05-LED-E1-SL4-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301825
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: GLNA-AF-05-LED-E1-SL4-7030-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21220.8 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

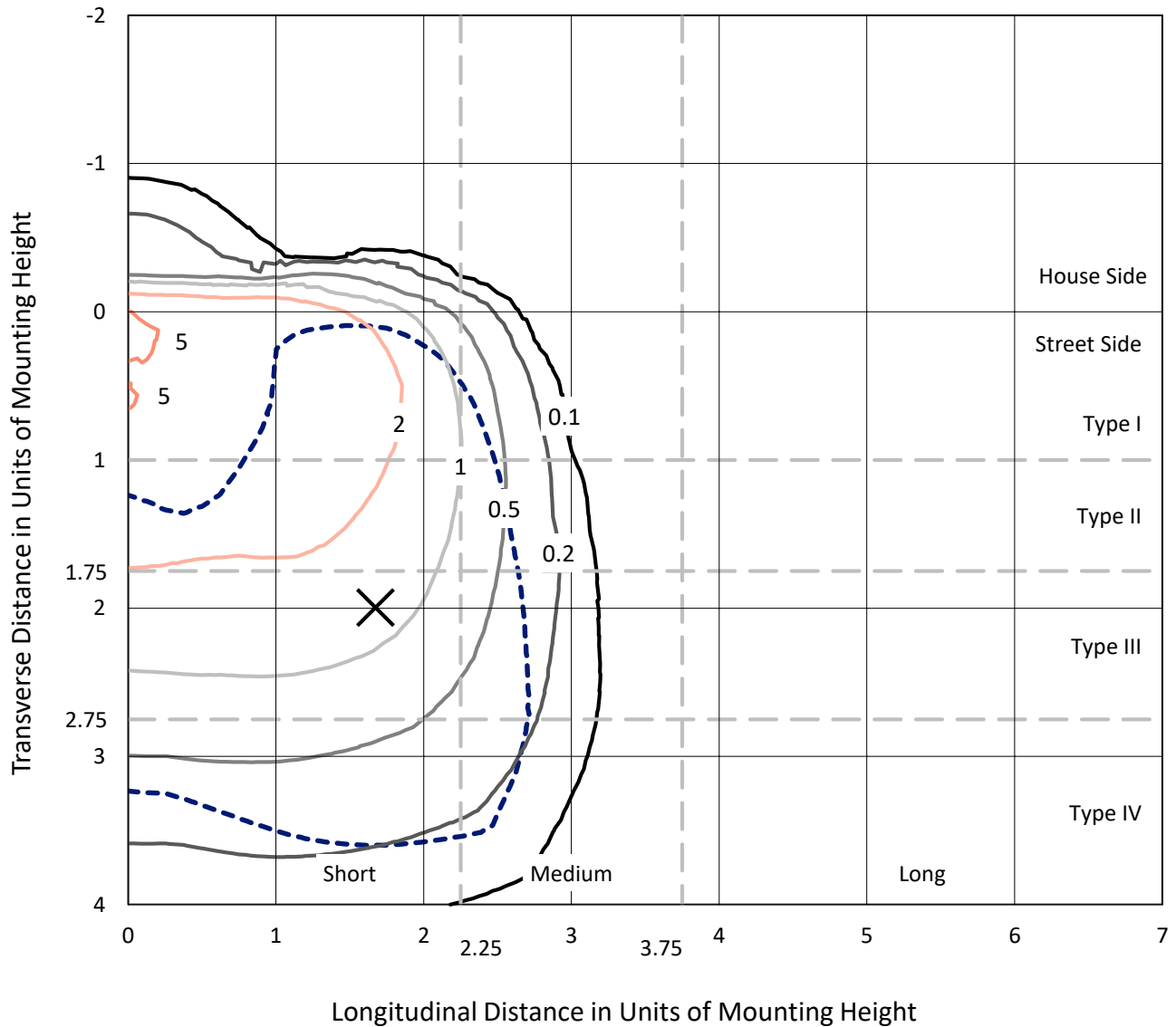
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

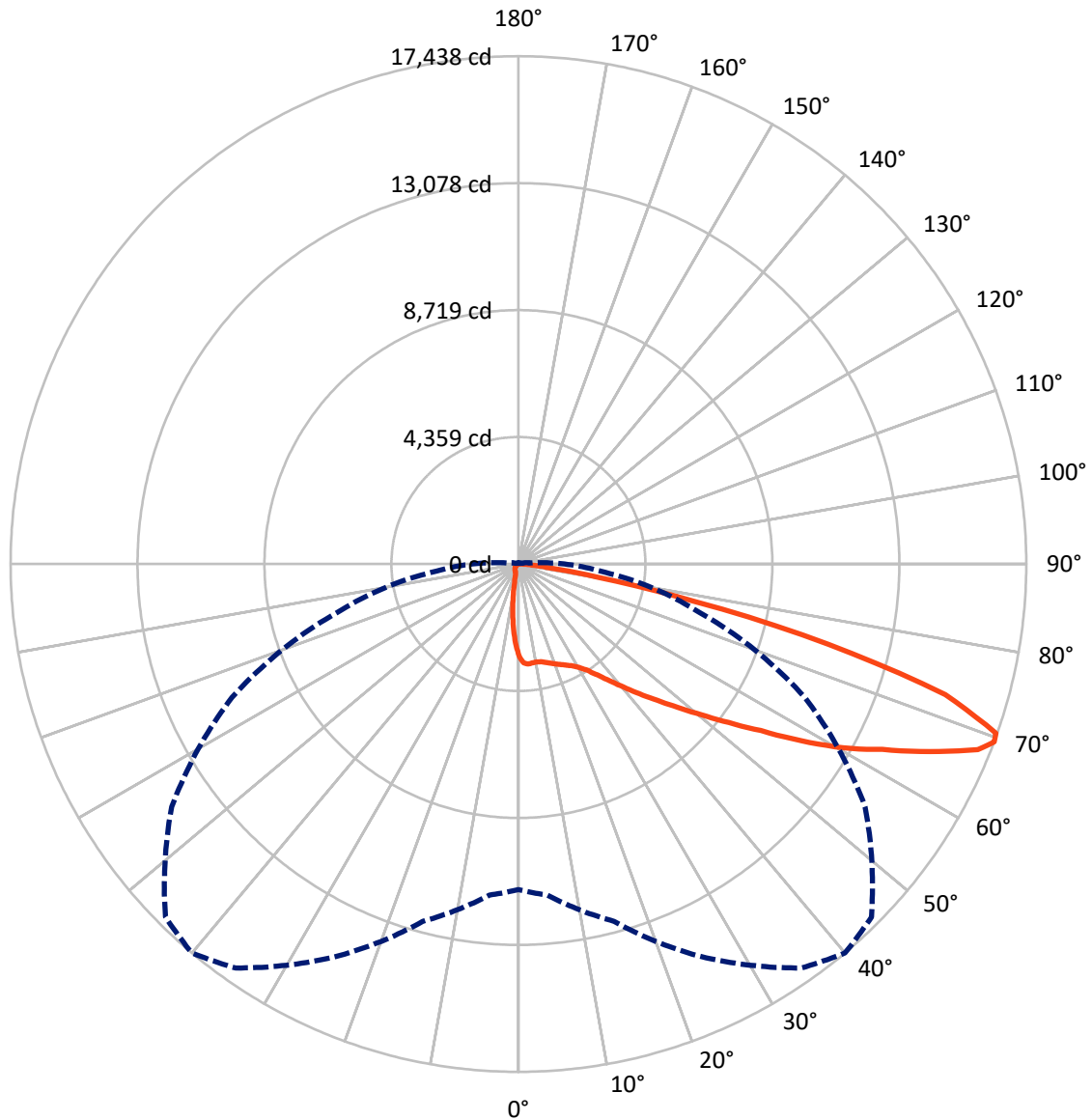
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1241.5 | 0.0 | 1241.5 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 19979.2 | 0.0 | 19979.2 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 21220.8 | 0.0 | 21220.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 257.1 | 1.2 |
| 10°-20° | 632.2 | 3.0 |
| 20°-30° | 1064.8 | 5.0 |
| 30°-40° | 1743.1 | 8.2 |
| 40°-50° | 3018.1 | 14.2 |
| 50°-60° | 4753.8 | 22.4 |
| 60°-70° | 6208.3 | 29.3 |
| 70°-80° | 3197.6 | 15.1 |
| 80°-90° | 345.9 | 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° | 21220.8 | 100.0 |
| 0°-180° | 21220.8 | 100.0 |



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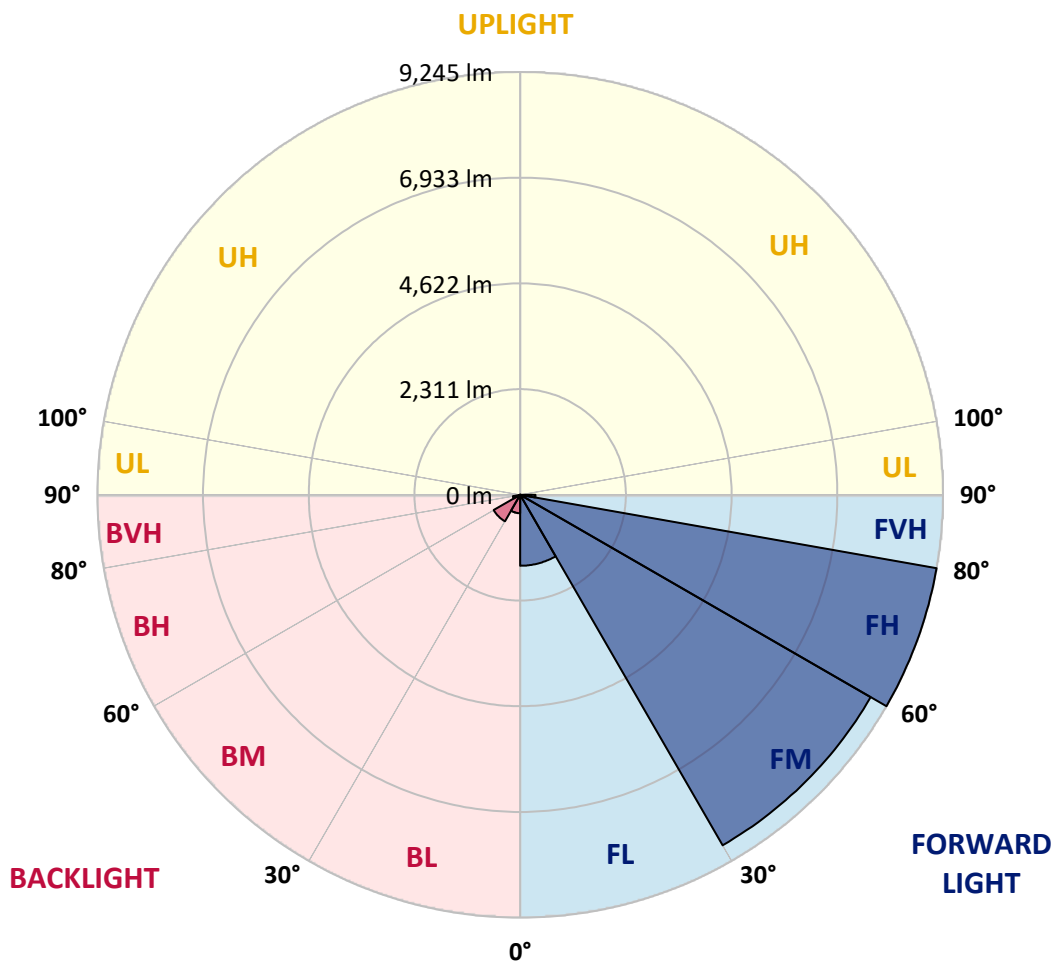
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1551.8 | 7.3 | | | |
| FM | (30°-60°) | 8847.7 | 41.7 | | | |
| FH | (60°-80°) | 9244.6 | 43.6 | | | G4/12000 |
| FVH | (80°-90°) | 335.0 | 1.6 | | | G3/500 |
| BL | (0°-30°) | 402.2 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 667.3 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 161.2 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 10.9 | 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





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0° | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 |
| 2.5° | 3481.2 | 3462.3 | 3450.9 | 3435.8 | 3416.8 | 3400.4 | 3394.1 | 3347.3 | 3303.1 | 3242.5 | 3173.0 |
| 5° | 3545.6 | 3539.3 | 3519.1 | 3498.9 | 3476.2 | 3450.9 | 3437.0 | 3381.4 | 3318.3 | 3229.9 | 3108.6 |
| 7.5° | 3552.0 | 3544.4 | 3519.1 | 3491.3 | 3459.8 | 3429.4 | 3405.4 | 3349.9 | 3291.8 | 3202.1 | 3054.3 |
| 10° | 3541.9 | 3533.0 | 3514.1 | 3483.8 | 3444.6 | 3415.5 | 3391.5 | 3338.5 | 3289.2 | 3208.4 | 3044.2 |
| 12.5° | 3530.5 | 3521.6 | 3512.8 | 3497.6 | 3463.5 | 3443.3 | 3423.1 | 3372.6 | 3328.4 | 3260.2 | 3080.8 |
| 15° | 3541.9 | 3536.8 | 3546.9 | 3540.6 | 3521.6 | 3504.0 | 3483.8 | 3438.3 | 3397.9 | 3341.0 | 3147.8 |
| 17.5° | 3589.9 | 3589.9 | 3621.4 | 3625.2 | 3607.5 | 3582.3 | 3553.2 | 3507.8 | 3473.6 | 3425.6 | 3227.3 |
| 20° | 3702.3 | 3698.5 | 3738.9 | 3746.5 | 3703.5 | 3664.4 | 3621.4 | 3565.9 | 3539.3 | 3509.0 | 3305.6 |
| 22.5° | 3895.5 | 3877.9 | 3901.9 | 3894.3 | 3809.6 | 3749.0 | 3696.0 | 3627.7 | 3613.9 | 3600.0 | 3392.8 |
| 25° | 4146.9 | 4136.8 | 4153.2 | 4078.7 | 3929.6 | 3847.5 | 3784.4 | 3707.3 | 3707.3 | 3721.2 | 3491.3 |
| 27.5° | 4512.0 | 4474.1 | 4418.5 | 4287.1 | 4063.5 | 3958.7 | 3890.5 | 3808.4 | 3829.9 | 3881.6 | 3621.4 |
| 30° | 4885.8 | 4844.2 | 4716.6 | 4514.5 | 4226.5 | 4116.6 | 4037.0 | 3951.1 | 4001.6 | 4096.4 | 3795.7 |
| 32.5° | 5254.7 | 5207.9 | 5027.3 | 4772.2 | 4460.2 | 4350.3 | 4273.2 | 4178.5 | 4263.1 | 4422.3 | 4050.9 |
| 35° | 5612.1 | 5570.5 | 5362.0 | 5061.4 | 4770.9 | 4679.9 | 4609.2 | 4527.1 | 4635.7 | 4858.1 | 4410.9 |
| 37.5° | 6013.8 | 5968.4 | 5714.5 | 5388.6 | 5148.6 | 5082.9 | 5031.1 | 4949.0 | 5138.5 | 5464.4 | 4912.4 |
| 40° | 6507.7 | 6430.7 | 6088.4 | 5763.7 | 5585.6 | 5554.0 | 5518.7 | 5507.3 | 5801.6 | 6252.6 | 5580.6 |
| 42.5° | 7073.6 | 6947.3 | 6479.9 | 6159.1 | 6065.6 | 6088.4 | 6079.5 | 6130.0 | 6631.5 | 7232.8 | 6394.0 |
| 45° | 7639.5 | 7476.5 | 6915.7 | 6581.0 | 6593.6 | 6673.2 | 6722.5 | 6924.6 | 7671.1 | 8357.0 | 7269.4 |
| 47.5° | 8119.5 | 7959.1 | 7333.8 | 7037.0 | 7188.6 | 7345.2 | 7479.1 | 7861.8 | 8739.7 | 9463.5 | 7950.2 |
| 50° | 8530.0 | 8378.4 | 7777.2 | 7538.4 | 7879.5 | 8132.1 | 8349.4 | 8916.5 | 9889.2 | 10306.0 | 8427.7 |
| 52.5° | 8866.0 | 8765.0 | 8237.0 | 8113.2 | 8669.0 | 9039.1 | 9357.4 | 10036.9 | 10907.2 | 10990.6 | 8799.1 |
| 55° | 9193.2 | 9121.2 | 8730.9 | 8796.5 | 9596.1 | 10100.1 | 10503.0 | 11225.6 | 11783.9 | 11561.6 | 9155.3 |
| 57.5° | 9569.6 | 9503.9 | 9294.2 | 9663.1 | 10815.0 | 11449.1 | 11888.7 | 12279.0 | 12555.7 | 12145.1 | 9491.3 |
| 60° | 9953.6 | 9915.7 | 9920.7 | 10625.6 | 12214.6 | 12823.4 | 13066.0 | 13167.0 | 13313.5 | 12694.6 | 9510.2 |
| 62.5° | 10319.9 | 10391.9 | 10636.9 | 11696.7 | 13554.8 | 14022.2 | 14144.7 | 14244.5 | 14072.7 | 12781.8 | 8786.4 |
| 65° | 10940.1 | 11057.6 | 11642.4 | 13130.4 | 15028.9 | 15529.1 | 15655.4 | 15313.1 | 14192.7 | 11655.0 | 7146.9 |
| 67.5° | 11243.2 | 11458.0 | 12501.3 | 14466.8 | 16458.8 | 17014.6 | 16967.8 | 15382.6 | 12736.3 | 8887.5 | 4586.5 |
| 69° | 11180.1 | 11408.7 | 12699.7 | 14876.0 | 16933.7 | 17437.7 | 17140.9 | 14532.5 | 10850.4 | 6438.2 | 2815.5 |
| 70° | 10930.0 | 11161.1 | 12597.3 | 14860.9 | 16994.3 | 17393.5 | 16820.0 | 13482.8 | 9174.2 | 4707.7 | 1760.8 |
| 72.5° | 9127.5 | 9327.1 | 11183.9 | 13432.3 | 15655.4 | 15330.8 | 14071.4 | 9341.0 | 4470.3 | 1282.1 | 396.6 |
| 75° | 5618.5 | 5729.6 | 8024.8 | 10119.0 | 11824.3 | 10990.6 | 9375.1 | 4647.1 | 1332.6 | 362.5 | 219.8 |
| 77.5° | 2968.4 | 3018.9 | 4393.2 | 5964.6 | 7495.5 | 6202.0 | 4805.0 | 1812.6 | 613.9 | 227.4 | 159.2 |
| 80° | 1754.5 | 1792.4 | 2365.9 | 2727.1 | 3243.8 | 2709.4 | 1921.2 | 1112.8 | 439.6 | 142.7 | 141.5 |
| 82.5° | 1004.2 | 1028.2 | 1715.3 | 1515.8 | 1278.3 | 1091.4 | 956.2 | 1054.7 | 264.0 | 96.0 | 146.5 |
| 85° | 368.8 | 373.9 | 965.0 | 1153.3 | 760.4 | 452.2 | 474.9 | 874.1 | 70.7 | 60.6 | 114.9 |
| 87.5° | 171.8 | 168.0 | 496.4 | 706.1 | 444.6 | 286.7 | 370.1 | 192.0 | 27.8 | 39.2 | 31.6 |
| 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° | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 | 3170.5 |
| 2.5° | 3132.6 | 3085.9 | 3001.2 | 2914.1 | 2825.7 | 2757.4 | 2690.5 | 2637.4 | 2619.8 | 2586.9 | 2589.4 |
| 5° | 3036.6 | 2950.7 | 2773.9 | 2594.5 | 2407.6 | 2253.4 | 2108.2 | 1990.7 | 1933.9 | 1875.8 | 1875.8 |
| 7.5° | 2953.2 | 2828.2 | 2551.6 | 2259.8 | 1957.9 | 1704.0 | 1475.4 | 1303.6 | 1208.8 | 1133.0 | 1131.8 |
| 10° | 2921.7 | 2752.4 | 2365.9 | 1947.8 | 1527.1 | 1181.0 | 909.5 | 735.1 | 645.5 | 587.4 | 584.8 |
| 12.5° | 2935.5 | 2725.9 | 2223.1 | 1659.8 | 1131.8 | 759.1 | 526.7 | 414.3 | 376.4 | 358.7 | 358.7 |
| 15° | 2976.0 | 2718.3 | 2080.4 | 1378.1 | 799.6 | 474.9 | 349.9 | 319.6 | 317.0 | 317.0 | 317.0 |
| 17.5° | 3025.2 | 2720.8 | 1933.9 | 1104.0 | 544.4 | 339.8 | 301.9 | 298.1 | 300.6 | 300.6 | 300.6 |
| 20° | 3075.8 | 2722.1 | 1776.0 | 850.1 | 384.0 | 295.6 | 284.2 | 282.9 | 285.5 | 285.5 | 286.7 |
| 22.5° | 3137.6 | 2728.4 | 1618.1 | 635.4 | 317.0 | 279.2 | 270.3 | 270.3 | 271.6 | 271.6 | 270.3 |
| 25° | 3208.4 | 2741.0 | 1453.9 | 471.2 | 289.3 | 267.8 | 260.2 | 258.9 | 260.2 | 258.9 | 257.7 |
| 27.5° | 3296.8 | 2758.7 | 1270.7 | 368.8 | 276.6 | 256.4 | 250.1 | 250.1 | 248.8 | 247.6 | 246.3 |
| 30° | 3408.0 | 2778.9 | 1064.8 | 313.3 | 264.0 | 246.3 | 240.0 | 238.7 | 237.5 | 234.9 | 234.9 |
| 32.5° | 3577.2 | 2823.1 | 861.5 | 284.2 | 250.1 | 232.4 | 227.4 | 227.4 | 224.8 | 222.3 | 221.1 |
| 35° | 3837.4 | 2910.3 | 679.6 | 266.5 | 234.9 | 217.3 | 210.9 | 210.9 | 208.4 | 207.2 | 205.9 |
| 37.5° | 4197.4 | 3042.9 | 528.0 | 250.1 | 219.8 | 200.8 | 194.5 | 193.3 | 190.7 | 188.2 | 186.9 |
| 40° | 4676.2 | 3207.1 | 415.6 | 234.9 | 204.6 | 184.4 | 179.4 | 176.8 | 171.8 | 168.0 | 168.0 |
| 42.5° | 5277.4 | 3394.1 | 337.3 | 218.5 | 186.9 | 169.3 | 165.5 | 161.7 | 152.8 | 149.1 | 147.8 |
| 45° | 5906.5 | 3562.1 | 285.5 | 199.6 | 169.3 | 154.1 | 151.6 | 145.3 | 133.9 | 130.1 | 130.1 |
| 47.5° | 6359.9 | 3601.2 | 251.4 | 181.9 | 152.8 | 137.7 | 136.4 | 125.1 | 114.9 | 112.4 | 111.2 |
| 50° | 6642.9 | 3524.2 | 223.6 | 164.2 | 137.7 | 122.5 | 118.7 | 104.8 | 98.5 | 96.0 | 94.7 |
| 52.5° | 6833.6 | 3386.5 | 200.8 | 149.1 | 123.8 | 108.6 | 99.8 | 89.7 | 84.6 | 82.1 | 82.1 |
| 55° | 6986.4 | 3192.0 | 178.1 | 135.2 | 112.4 | 97.3 | 84.6 | 77.1 | 72.0 | 69.5 | 69.5 |
| 57.5° | 7029.4 | 2928.0 | 155.4 | 123.8 | 101.1 | 85.9 | 72.0 | 66.9 | 60.6 | 59.4 | 59.4 |
| 60° | 6717.4 | 2451.8 | 137.7 | 109.9 | 90.9 | 74.5 | 63.2 | 56.8 | 50.5 | 49.3 | 48.0 |
| 62.5° | 5895.1 | 1897.2 | 121.3 | 97.3 | 79.6 | 64.4 | 54.3 | 46.7 | 41.7 | 41.7 | 41.7 |
| 65° | 4496.8 | 1272.0 | 106.1 | 84.6 | 69.5 | 54.3 | 46.7 | 37.9 | 35.4 | 35.4 | 36.6 |
| 67.5° | 2691.8 | 692.2 | 90.9 | 72.0 | 59.4 | 45.5 | 39.2 | 32.8 | 31.6 | 32.8 | 32.8 |
| 69° | 1577.7 | 406.7 | 82.1 | 64.4 | 51.8 | 40.4 | 34.1 | 29.1 | 31.6 | 32.8 | 32.8 |
| 70° | 973.9 | 274.1 | 75.8 | 58.1 | 46.7 | 36.6 | 31.6 | 27.8 | 30.3 | 31.6 | 31.6 |
| 72.5° | 271.6 | 141.5 | 60.6 | 45.5 | 37.9 | 30.3 | 25.3 | 25.3 | 29.1 | 30.3 | 30.3 |
| 75° | 176.8 | 104.8 | 46.7 | 34.1 | 29.1 | 24.0 | 21.5 | 24.0 | 27.8 | 29.1 | 29.1 |
| 77.5° | 146.5 | 85.9 | 37.9 | 27.8 | 24.0 | 22.7 | 20.2 | 21.5 | 25.3 | 26.5 | 26.5 |
| 80° | 133.9 | 60.6 | 30.3 | 25.3 | 21.5 | 20.2 | 18.9 | 17.7 | 22.7 | 24.0 | 24.0 |
| 82.5° | 127.6 | 48.0 | 26.5 | 22.7 | 20.2 | 17.7 | 16.4 | 17.7 | 20.2 | 21.5 | 22.7 |
| 85° | 79.6 | 31.6 | 24.0 | 21.5 | 17.7 | 16.4 | 16.4 | 16.4 | 18.9 | 20.2 | 20.2 |
| 87.5° | 29.1 | 25.3 | 21.5 | 17.7 | 15.2 | 15.2 | 15.2 | 15.2 | 16.4 | 18.9 | 18.9 |
| 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)