

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: P299420

Luminaire Tested: **GLNA-AF-05-LED-E1-5NQ-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299420
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
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-E1-5NQ-7030-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 3000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23898.7 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

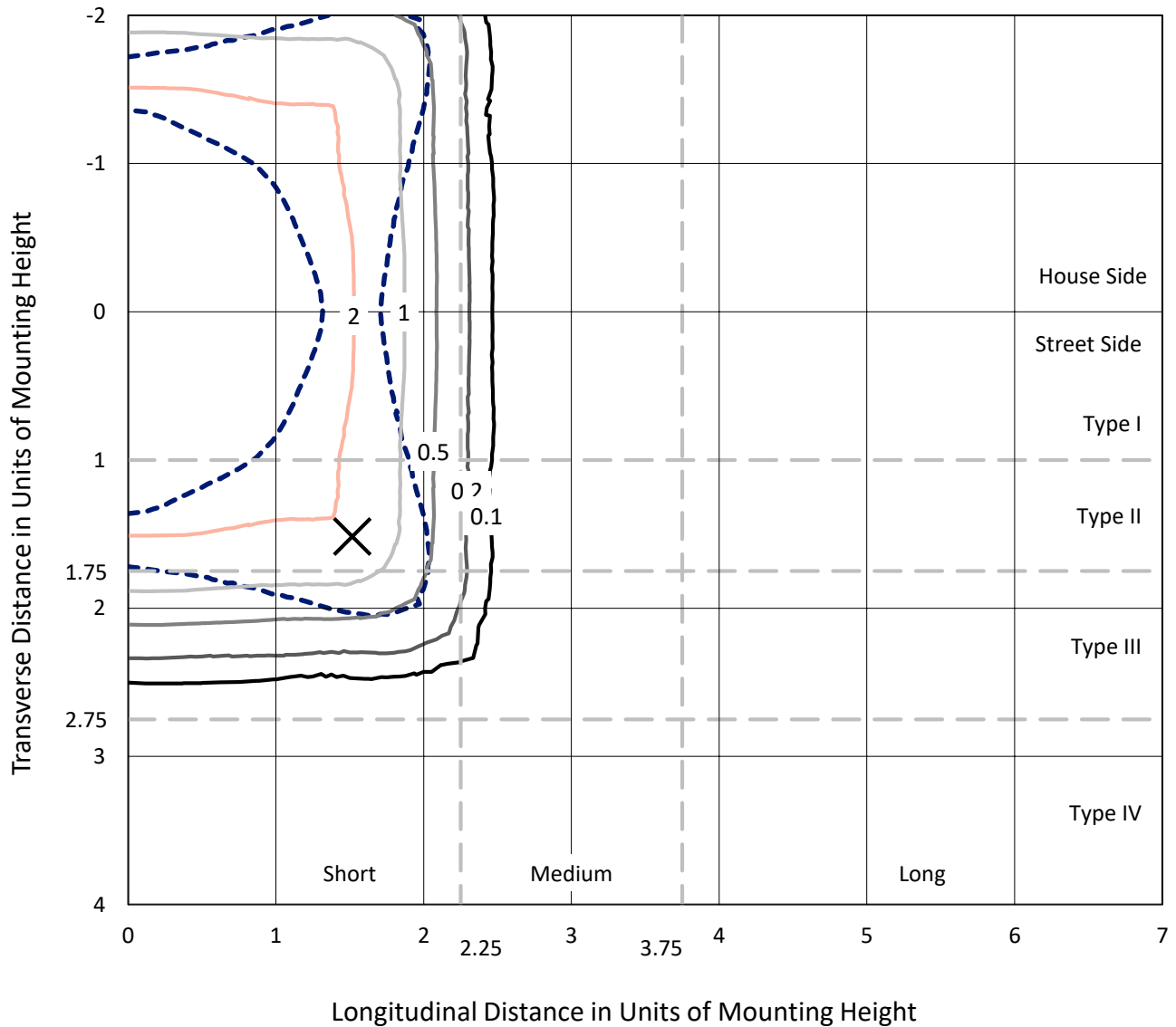
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

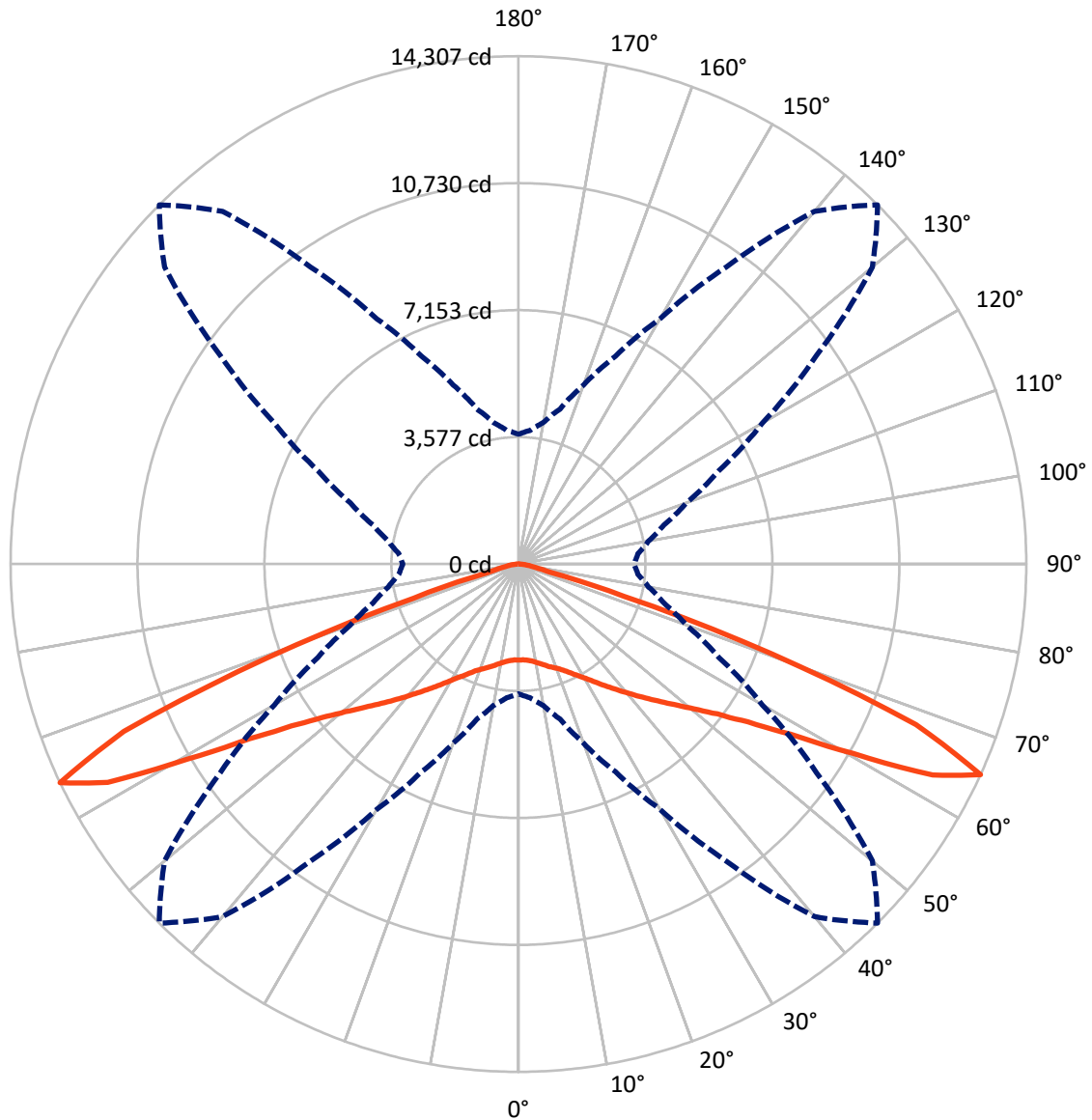
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 11949.3 | 0.0 | 11949.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 11949.3 | 0.0 | 11949.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 23898.7 | 0.0 | 23898.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 263.6 | 1.1 |
| 10°-20° | 845.3 | 3.5 |
| 20°-30° | 1580.6 | 6.6 |
| 30°-40° | 2673.2 | 11.2 |
| 40°-50° | 4370.9 | 18.3 |
| 50°-60° | 6950.5 | 29.1 |
| 60°-70° | 6282.8 | 26.3 |
| 70°-80° | 795.1 | 3.3 |
| 80°-90° | 136.8 | 0.6 |
| 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° | 23898.7 | 100.0 |
| 0°-180° | 23898.7 | 100.0 |



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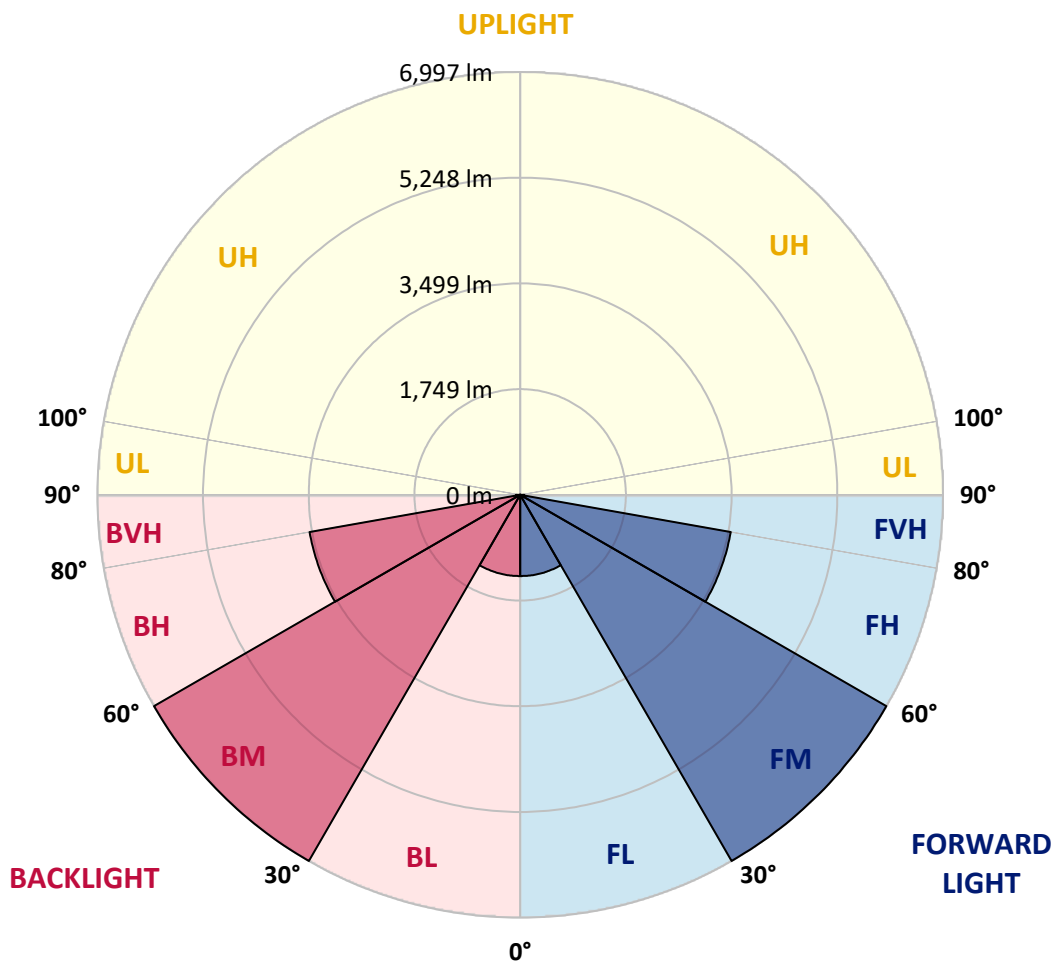
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1344.7 | 5.6 | | | |
| FM | (30°-60°) | 6997.3 | 29.3 | | | |
| FH | (60°-80°) | 3538.9 | 14.8 | | | G2/5000 |
| FVH | (80°-90°) | 68.4 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1344.7 | 5.6 | B3/2500 | | |
| BM | (30°-60°) | 6997.3 | 29.3 | B4/8500 | | |
| BH | (60°-80°) | 3538.9 | 14.8 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 68.4 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 |
| 2.5° | 2706.4 | 2708.6 | 2710.9 | 2708.6 | 2710.9 | 2707.5 | 2705.3 | 2708.6 | 2705.3 | 2701.9 | 2704.2 |
| 5° | 2729.9 | 2731.0 | 2731.0 | 2727.7 | 2731.0 | 2728.8 | 2725.4 | 2729.9 | 2726.5 | 2723.2 | 2725.4 |
| 7.5° | 2769.1 | 2773.5 | 2770.2 | 2766.8 | 2769.1 | 2766.8 | 2764.6 | 2765.7 | 2764.6 | 2761.2 | 2762.4 |
| 10° | 2821.7 | 2825.0 | 2822.8 | 2821.7 | 2823.9 | 2822.8 | 2820.6 | 2819.4 | 2820.6 | 2817.2 | 2817.2 |
| 12.5° | 2885.5 | 2884.4 | 2883.2 | 2884.4 | 2887.7 | 2887.7 | 2886.6 | 2887.7 | 2889.9 | 2891.1 | 2888.8 |
| 15° | 2948.2 | 2950.4 | 2950.4 | 2950.4 | 2957.1 | 2962.7 | 2966.1 | 2968.3 | 2972.8 | 2973.9 | 2969.4 |
| 17.5° | 3026.5 | 3026.5 | 3025.4 | 3026.5 | 3033.2 | 3042.2 | 3045.5 | 3050.0 | 3054.5 | 3057.8 | 3052.2 |
| 20° | 3113.8 | 3116.0 | 3116.0 | 3118.3 | 3127.2 | 3137.3 | 3137.3 | 3139.5 | 3137.3 | 3139.5 | 3136.2 |
| 22.5° | 3220.1 | 3226.8 | 3226.8 | 3228.0 | 3236.9 | 3249.2 | 3245.9 | 3249.2 | 3243.6 | 3248.1 | 3243.6 |
| 25° | 3358.9 | 3369.0 | 3366.8 | 3366.8 | 3373.5 | 3381.3 | 3382.4 | 3389.1 | 3388.0 | 3393.6 | 3390.3 |
| 27.5° | 3515.6 | 3531.3 | 3535.8 | 3534.6 | 3539.1 | 3547.0 | 3549.2 | 3557.0 | 3552.6 | 3557.0 | 3554.8 |
| 30° | 3703.7 | 3710.4 | 3719.3 | 3722.7 | 3728.3 | 3736.1 | 3736.1 | 3737.2 | 3731.6 | 3738.4 | 3741.7 |
| 32.5° | 3898.4 | 3910.7 | 3919.7 | 3939.8 | 3949.9 | 3955.5 | 3954.4 | 3956.6 | 3951.0 | 3960.0 | 3966.7 |
| 35° | 4155.8 | 4164.8 | 4179.3 | 4195.0 | 4208.4 | 4207.3 | 4204.0 | 4205.1 | 4205.1 | 4212.9 | 4219.6 |
| 37.5° | 4465.9 | 4468.1 | 4487.1 | 4509.5 | 4516.2 | 4509.5 | 4489.4 | 4484.9 | 4474.8 | 4484.9 | 4496.1 |
| 40° | 4793.8 | 4801.7 | 4839.7 | 4854.3 | 4857.6 | 4845.3 | 4816.2 | 4799.4 | 4777.0 | 4789.3 | 4805.0 |
| 42.5° | 5137.4 | 5153.1 | 5187.8 | 5213.5 | 5224.7 | 5216.9 | 5176.6 | 5150.9 | 5121.8 | 5128.5 | 5144.2 |
| 45° | 5518.0 | 5537.0 | 5586.3 | 5610.9 | 5632.2 | 5619.8 | 5580.7 | 5541.5 | 5495.6 | 5499.0 | 5523.6 |
| 47.5° | 5943.3 | 5962.3 | 6026.1 | 6067.5 | 6078.7 | 6076.5 | 6032.9 | 5979.1 | 5916.4 | 5914.2 | 5935.5 |
| 50° | 6420.1 | 6439.1 | 6518.6 | 6582.4 | 6614.9 | 6611.5 | 6560.0 | 6483.9 | 6407.8 | 6408.9 | 6435.8 |
| 52.5° | 6885.7 | 6909.2 | 6992.1 | 7101.8 | 7165.6 | 7211.4 | 7180.1 | 7108.5 | 7015.6 | 7017.8 | 7042.4 |
| 55° | 7322.2 | 7361.4 | 7456.6 | 7605.4 | 7724.1 | 7852.8 | 7889.7 | 7887.5 | 7831.5 | 7847.2 | 7871.8 |
| 57.5° | 7533.8 | 7592.0 | 7738.6 | 7973.7 | 8215.4 | 8477.3 | 8698.9 | 8864.6 | 8935.1 | 9041.4 | 9016.8 |
| 60° | 7133.1 | 7226.0 | 7442.0 | 7787.9 | 8265.8 | 8812.0 | 9397.4 | 9969.3 | 10457.3 | 10825.6 | 10614.0 |
| 62.5° | 5840.3 | 5961.2 | 6223.1 | 6666.4 | 7389.4 | 8263.6 | 9383.9 | 10736.0 | 12209.0 | 13097.7 | 12463.0 |
| 65° | 3654.4 | 3779.8 | 4046.2 | 4520.7 | 5366.9 | 6453.7 | 7973.7 | 10214.4 | 12966.7 | 14306.5 | 13014.8 |
| 67.5° | 1424.8 | 1493.1 | 1637.5 | 1940.8 | 2576.6 | 3543.6 | 5069.2 | 7612.1 | 10903.9 | 12078.0 | 10701.3 |
| 70° | 714.1 | 720.8 | 747.7 | 803.6 | 940.2 | 1221.1 | 1858.0 | 3529.1 | 6253.3 | 7552.8 | 6028.4 |
| 72.5° | 516.0 | 517.1 | 530.5 | 555.2 | 598.8 | 661.5 | 782.4 | 1080.1 | 2033.7 | 3108.2 | 1906.1 |
| 75° | 395.1 | 399.6 | 407.4 | 420.8 | 444.3 | 475.7 | 519.3 | 622.3 | 771.2 | 894.3 | 752.1 |
| 77.5° | 304.4 | 313.4 | 319.0 | 331.3 | 345.9 | 367.1 | 379.4 | 418.6 | 486.9 | 512.6 | 504.8 |
| 80° | 231.7 | 239.5 | 251.8 | 261.9 | 272.0 | 282.1 | 277.6 | 295.5 | 331.3 | 352.6 | 341.4 |
| 82.5° | 147.7 | 156.7 | 192.5 | 201.5 | 205.9 | 212.7 | 204.8 | 205.9 | 221.6 | 235.0 | 221.6 |
| 85° | 95.1 | 100.7 | 122.0 | 133.2 | 134.3 | 138.8 | 135.4 | 127.6 | 127.6 | 116.4 | 131.0 |
| 87.5° | 43.7 | 44.8 | 54.8 | 64.9 | 67.2 | 60.4 | 59.3 | 57.1 | 45.9 | 43.7 | 47.0 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 | 2704.2 |
| 2.5° | 2703.0 | 2705.3 | 2706.4 | 2709.7 | 2710.9 | 2710.9 | 2712.0 | 2714.2 |
| 5° | 2724.3 | 2727.7 | 2728.8 | 2733.3 | 2734.4 | 2733.3 | 2735.5 | 2736.6 |
| 7.5° | 2762.4 | 2767.9 | 2770.2 | 2774.7 | 2771.3 | 2775.8 | 2776.9 | 2776.9 |
| 10° | 2818.3 | 2823.9 | 2825.0 | 2829.5 | 2827.3 | 2829.5 | 2829.5 | 2827.3 |
| 12.5° | 2892.2 | 2893.3 | 2889.9 | 2893.3 | 2888.8 | 2891.1 | 2887.7 | 2885.5 |
| 15° | 2973.9 | 2970.5 | 2962.7 | 2962.7 | 2956.0 | 2957.1 | 2956.0 | 2954.9 |
| 17.5° | 3053.4 | 3046.6 | 3041.0 | 3038.8 | 3033.2 | 3032.1 | 3028.7 | 3028.7 |
| 20° | 3140.7 | 3137.3 | 3133.9 | 3129.5 | 3123.9 | 3118.3 | 3117.2 | 3119.4 |
| 22.5° | 3245.9 | 3244.8 | 3244.8 | 3242.5 | 3234.7 | 3229.1 | 3225.7 | 3225.7 |
| 25° | 3386.9 | 3376.8 | 3376.8 | 3375.7 | 3372.4 | 3369.0 | 3362.3 | 3365.6 |
| 27.5° | 3545.8 | 3540.2 | 3544.7 | 3543.6 | 3540.2 | 3540.2 | 3535.8 | 3535.8 |
| 30° | 3741.7 | 3739.5 | 3746.2 | 3740.6 | 3729.4 | 3728.3 | 3723.8 | 3718.2 |
| 32.5° | 3967.8 | 3965.6 | 3975.6 | 3968.9 | 3951.0 | 3940.9 | 3932.0 | 3927.5 |
| 35° | 4219.6 | 4220.8 | 4233.1 | 4228.6 | 4208.4 | 4201.7 | 4186.1 | 4183.8 |
| 37.5° | 4495.0 | 4512.9 | 4534.2 | 4538.6 | 4521.8 | 4517.4 | 4500.6 | 4491.6 |
| 40° | 4818.4 | 4842.0 | 4874.4 | 4882.2 | 4864.3 | 4861.0 | 4837.5 | 4825.2 |
| 42.5° | 5163.2 | 5203.5 | 5243.8 | 5250.5 | 5232.6 | 5214.7 | 5192.3 | 5183.3 |
| 45° | 5548.2 | 5596.3 | 5648.9 | 5662.4 | 5635.5 | 5614.2 | 5585.1 | 5585.1 |
| 47.5° | 5980.2 | 6040.7 | 6100.0 | 6136.9 | 6112.3 | 6089.9 | 6055.2 | 6032.9 |
| 50° | 6490.6 | 6573.5 | 6650.7 | 6688.7 | 6649.6 | 6607.0 | 6546.6 | 6526.4 |
| 52.5° | 7130.9 | 7220.4 | 7287.6 | 7267.4 | 7207.0 | 7147.6 | 7081.6 | 7054.7 |
| 55° | 7947.9 | 7978.1 | 7978.1 | 7902.0 | 7781.1 | 7681.5 | 7577.4 | 7542.7 |
| 57.5° | 8969.8 | 8853.4 | 8674.3 | 8447.1 | 8161.7 | 7913.2 | 7745.3 | 7665.9 |
| 60° | 10170.8 | 9611.2 | 8978.8 | 8357.6 | 7847.2 | 7426.3 | 7176.7 | 7062.6 |
| 62.5° | 10971.1 | 9507.1 | 8240.0 | 7242.8 | 6508.5 | 6001.5 | 5656.8 | 5522.5 |
| 65° | 10253.6 | 7928.9 | 6232.1 | 5038.9 | 4238.7 | 3722.7 | 3381.3 | 3255.9 |
| 67.5° | 7510.3 | 4968.4 | 3318.6 | 2378.4 | 1742.7 | 1390.1 | 1250.2 | 1192.0 |
| 70° | 3371.2 | 1749.4 | 1072.3 | 837.2 | 721.9 | 662.6 | 636.9 | 627.9 |
| 72.5° | 1016.3 | 735.4 | 620.1 | 559.6 | 513.7 | 484.6 | 463.4 | 461.1 |
| 75° | 613.4 | 510.4 | 453.3 | 417.5 | 388.4 | 364.9 | 353.7 | 350.3 |
| 77.5° | 428.7 | 375.0 | 348.1 | 322.3 | 300.0 | 282.1 | 272.0 | 264.1 |
| 80° | 301.1 | 275.3 | 263.0 | 248.5 | 233.9 | 217.1 | 202.6 | 195.9 |
| 82.5° | 201.5 | 195.9 | 195.9 | 186.9 | 174.6 | 158.9 | 129.8 | 123.1 |
| 85° | 129.8 | 128.7 | 131.0 | 127.6 | 118.6 | 101.9 | 83.9 | 79.5 |
| 87.5° | 60.4 | 61.6 | 68.3 | 67.2 | 64.9 | 53.7 | 42.5 | 40.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)