

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: P299448

Luminaire Tested: **GLNA-AF-09-LED-E1-5NQ-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299448
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-09-LED-E1-5NQ-7060-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5700K 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: 44193.6 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

Input Watts (W): 374
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

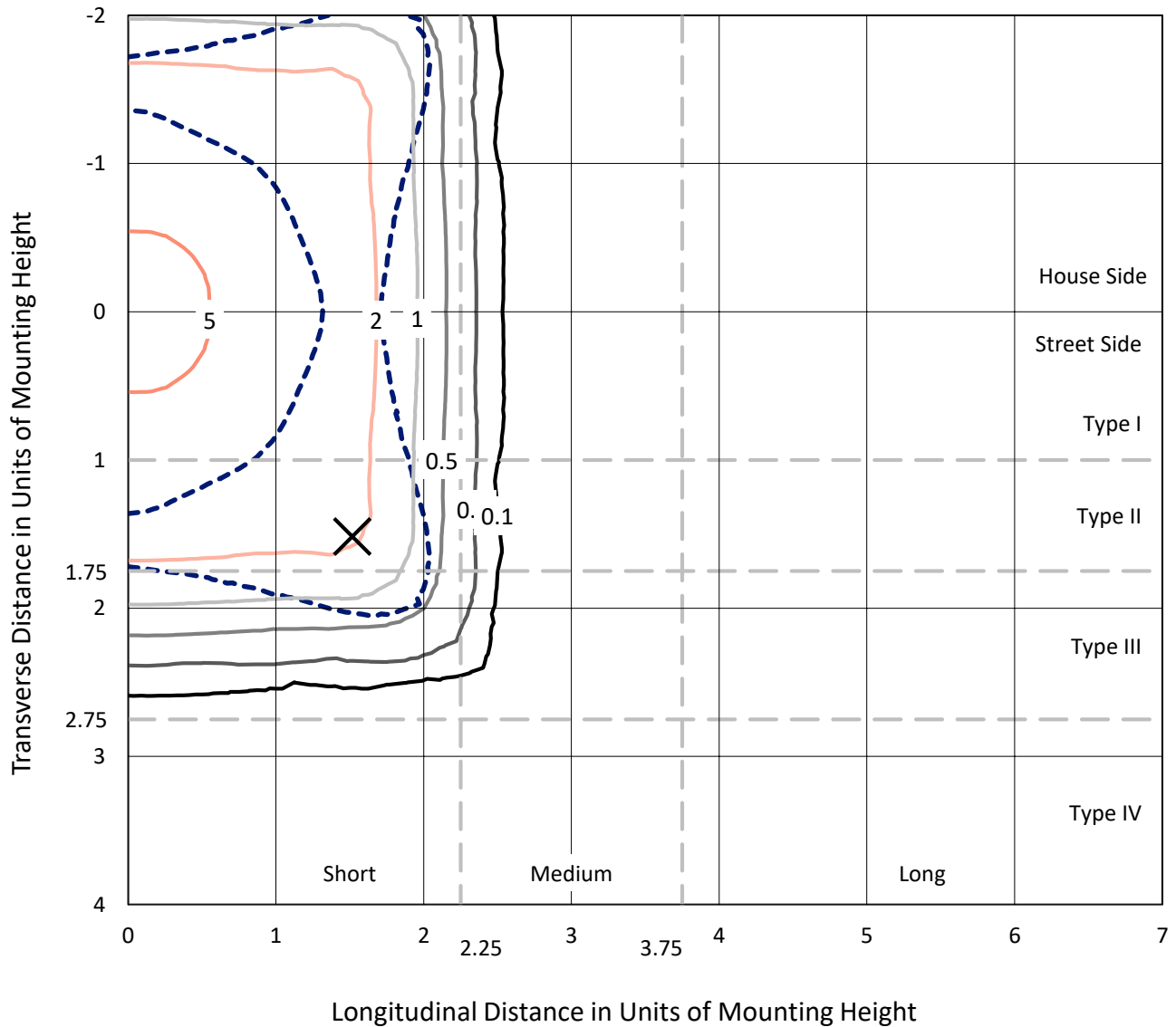


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Iso-Footcandle Lines of Horizontal Illumination

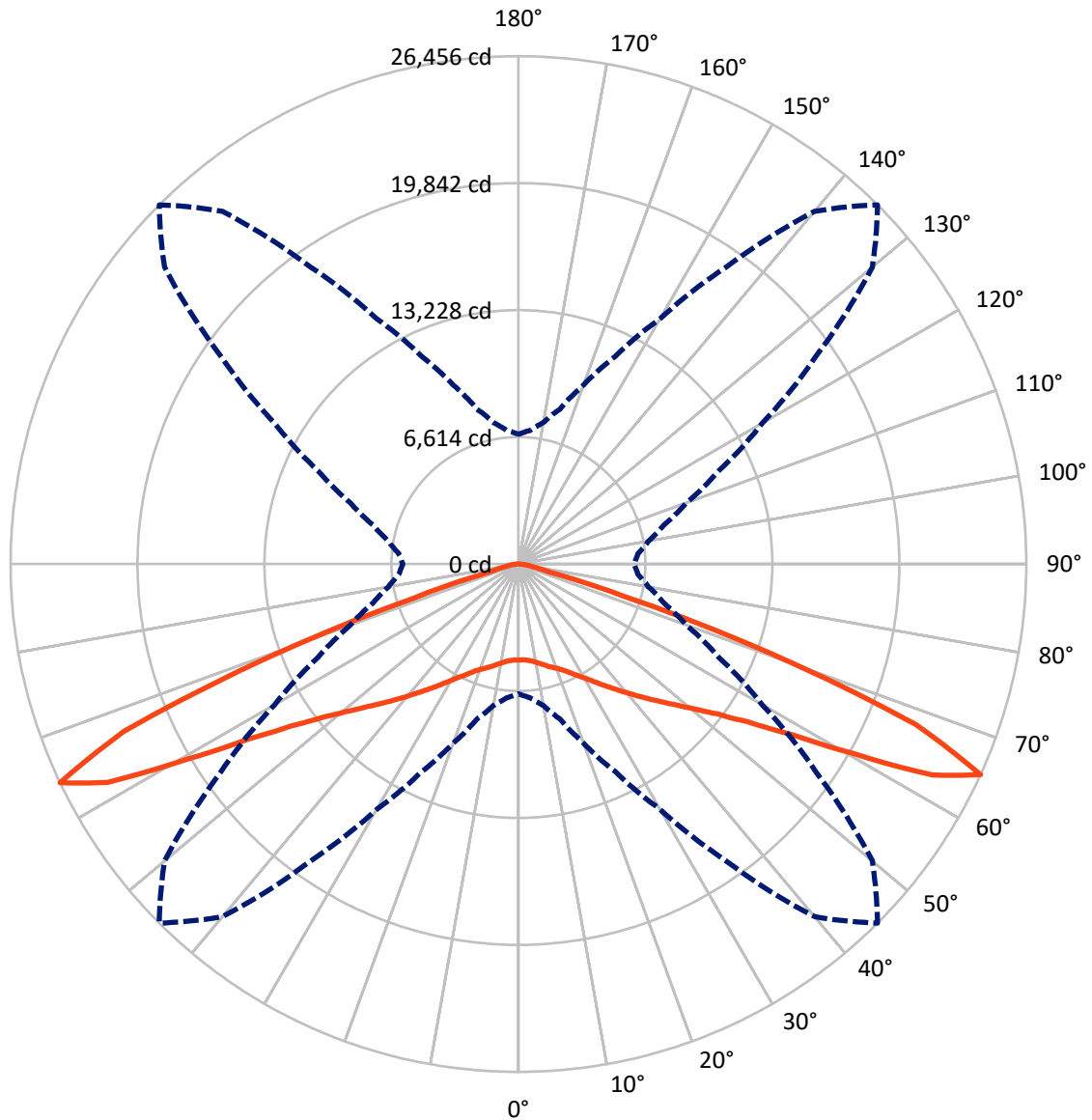
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.6 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 | 22096.8 | 0.0 | 22096.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 22096.8 | 0.0 | 22096.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 44193.6 | 0.0 | 44193.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 487.4 | 1.1 |
| 10°-20° | 1563.1 | 3.5 |
| 20°-30° | 2922.8 | 6.6 |
| 30°-40° | 4943.3 | 11.2 |
| 40°-50° | 8082.8 | 18.3 |
| 50°-60° | 12852.8 | 29.1 |
| 60°-70° | 11618.1 | 26.3 |
| 70°-80° | 1470.3 | 3.3 |
| 80°-90° | 252.9 | 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° | 44193.6 | 100.0 |
| 0°-180° | 44193.6 | 100.0 |



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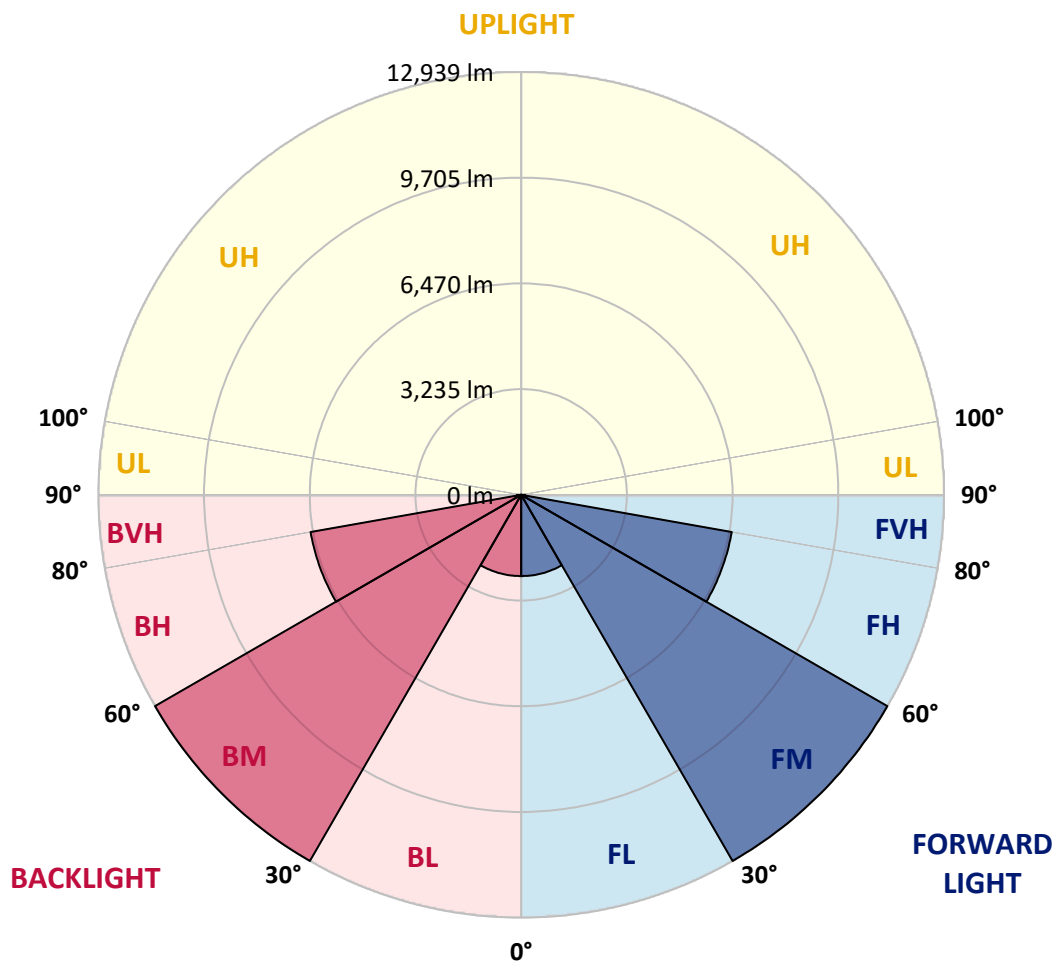
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 2486.7 | 5.6 | | | |
| FM | (30°-60°) | 12939.4 | 29.3 | | | |
| FH | (60°-80°) | 6544.2 | 14.8 | | | G3/7500 |
| FVH | (80°-90°) | 126.5 | 0.3 | | | G2/225 |
| BL | (0°-30°) | 2486.7 | 5.6 | B3/2500 | | |
| BM | (30°-60°) | 12939.4 | 29.3 | B5 | | |
| BH | (60°-80°) | 6544.2 | 14.8 | B5 | | G3/7500 |
| BVH | (80°-90°) | 126.5 | 0.3 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 |
| 2.5° | 5004.7 | 5008.8 | 5012.9 | 5008.8 | 5012.9 | 5006.7 | 5002.6 | 5008.8 | 5002.6 | 4996.4 | 5000.5 |
| 5° | 5048.1 | 5050.2 | 5050.2 | 5044.0 | 5050.2 | 5046.1 | 5039.9 | 5048.1 | 5041.9 | 5035.7 | 5039.9 |
| 7.5° | 5120.6 | 5128.9 | 5122.6 | 5116.4 | 5120.6 | 5116.4 | 5112.3 | 5114.4 | 5112.3 | 5106.1 | 5108.2 |
| 10° | 5217.8 | 5224.1 | 5219.9 | 5217.8 | 5222.0 | 5219.9 | 5215.8 | 5213.7 | 5215.8 | 5209.6 | 5209.6 |
| 12.5° | 5335.8 | 5333.8 | 5331.7 | 5333.8 | 5340.0 | 5340.0 | 5337.9 | 5340.0 | 5344.1 | 5346.2 | 5342.0 |
| 15° | 5451.7 | 5455.9 | 5455.9 | 5455.9 | 5468.3 | 5478.6 | 5484.8 | 5489.0 | 5497.3 | 5499.3 | 5491.1 |
| 17.5° | 5596.6 | 5596.6 | 5594.5 | 5596.6 | 5609.0 | 5625.6 | 5631.8 | 5640.1 | 5648.4 | 5654.6 | 5644.2 |
| 20° | 5758.1 | 5762.2 | 5762.2 | 5766.3 | 5782.9 | 5801.5 | 5801.5 | 5805.7 | 5801.5 | 5805.7 | 5799.5 |
| 22.5° | 5954.7 | 5967.1 | 5967.1 | 5969.2 | 5985.7 | 6008.5 | 6002.3 | 6008.5 | 5998.1 | 6006.4 | 5998.1 |
| 25° | 6211.3 | 6230.0 | 6225.8 | 6225.8 | 6238.2 | 6252.7 | 6254.8 | 6267.2 | 6265.1 | 6275.5 | 6269.3 |
| 27.5° | 6501.1 | 6530.1 | 6538.4 | 6536.3 | 6544.6 | 6559.1 | 6563.2 | 6577.7 | 6569.4 | 6577.7 | 6573.5 |
| 30° | 6848.8 | 6861.2 | 6877.8 | 6884.0 | 6894.4 | 6908.8 | 6908.8 | 6910.9 | 6900.6 | 6913.0 | 6919.2 |
| 32.5° | 7209.0 | 7231.7 | 7248.3 | 7285.5 | 7304.2 | 7314.5 | 7312.4 | 7316.6 | 7306.2 | 7322.8 | 7335.2 |
| 35° | 7685.0 | 7701.6 | 7728.5 | 7757.4 | 7782.3 | 7780.2 | 7774.0 | 7776.1 | 7776.1 | 7790.6 | 7803.0 |
| 37.5° | 8258.3 | 8262.5 | 8297.6 | 8339.0 | 8351.5 | 8339.0 | 8301.8 | 8293.5 | 8274.9 | 8293.5 | 8314.2 |
| 40° | 8864.8 | 8879.2 | 8949.6 | 8976.5 | 8982.7 | 8960.0 | 8906.2 | 8875.1 | 8833.7 | 8856.5 | 8885.5 |
| 42.5° | 9500.2 | 9529.1 | 9593.3 | 9640.9 | 9661.6 | 9647.1 | 9572.6 | 9525.0 | 9471.2 | 9483.6 | 9512.6 |
| 45° | 10203.9 | 10239.1 | 10330.1 | 10375.7 | 10415.0 | 10392.2 | 10319.8 | 10247.4 | 10162.5 | 10168.7 | 10214.2 |
| 47.5° | 10990.4 | 11025.6 | 11143.6 | 11220.1 | 11240.8 | 11236.7 | 11156.0 | 11056.6 | 10940.7 | 10936.6 | 10975.9 |
| 50° | 11872.1 | 11907.3 | 12054.2 | 12172.2 | 12232.2 | 12226.0 | 12130.8 | 11990.1 | 11849.3 | 11851.4 | 11901.1 |
| 52.5° | 12733.1 | 12776.6 | 12929.8 | 13132.6 | 13250.6 | 13335.4 | 13277.5 | 13145.0 | 12973.2 | 12977.4 | 13022.9 |
| 55° | 13540.3 | 13612.8 | 13788.7 | 14064.0 | 14283.4 | 14521.4 | 14589.7 | 14585.6 | 14482.1 | 14511.0 | 14556.6 |
| 57.5° | 13931.5 | 14039.1 | 14310.3 | 14744.9 | 15192.0 | 15676.3 | 16086.1 | 16392.5 | 16522.8 | 16719.5 | 16673.9 |
| 60° | 13190.5 | 13362.3 | 13761.8 | 14401.3 | 15285.1 | 16295.2 | 17377.7 | 18435.3 | 19337.7 | 20018.7 | 19627.5 |
| 62.5° | 10800.0 | 11023.5 | 11507.8 | 12327.5 | 13664.5 | 15281.0 | 17352.8 | 19853.1 | 22576.9 | 24220.3 | 23046.7 |
| 65° | 6757.7 | 6989.6 | 7482.2 | 8359.7 | 9924.5 | 11934.2 | 14744.9 | 18888.6 | 23978.1 | 26455.6 | 24067.1 |
| 67.5° | 2634.8 | 2761.1 | 3028.1 | 3589.0 | 4764.6 | 6552.8 | 9373.9 | 14076.4 | 20163.5 | 22334.7 | 19788.9 |
| 70° | 1320.5 | 1332.9 | 1382.6 | 1486.1 | 1738.6 | 2258.1 | 3435.8 | 6525.9 | 11563.7 | 13966.7 | 11147.7 |
| 72.5° | 954.2 | 956.2 | 981.1 | 1026.6 | 1107.3 | 1223.2 | 1446.8 | 1997.3 | 3760.7 | 5747.7 | 3524.8 |
| 75° | 730.6 | 738.9 | 753.4 | 778.2 | 821.7 | 879.6 | 960.4 | 1150.8 | 1426.1 | 1653.7 | 1390.9 |
| 77.5° | 563.0 | 579.5 | 589.9 | 612.6 | 639.6 | 678.9 | 701.6 | 774.1 | 900.3 | 947.9 | 933.5 |
| 80° | 428.4 | 442.9 | 465.7 | 484.3 | 503.0 | 521.6 | 513.3 | 546.4 | 612.6 | 652.0 | 631.3 |
| 82.5° | 273.2 | 289.8 | 356.0 | 372.6 | 380.8 | 393.3 | 378.8 | 380.8 | 409.8 | 434.6 | 409.8 |
| 85° | 175.9 | 186.3 | 225.6 | 246.3 | 248.4 | 256.6 | 250.4 | 236.0 | 236.0 | 215.3 | 242.2 |
| 87.5° | 80.7 | 82.8 | 101.4 | 120.0 | 124.2 | 111.8 | 109.7 | 105.6 | 84.9 | 80.7 | 86.9 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 | 5000.5 |
| 2.5° | 4998.5 | 5002.6 | 5004.7 | 5010.9 | 5012.9 | 5012.9 | 5015.0 | 5019.2 |
| 5° | 5037.8 | 5044.0 | 5046.1 | 5054.3 | 5056.4 | 5054.3 | 5058.5 | 5060.5 |
| 7.5° | 5108.2 | 5118.5 | 5122.6 | 5130.9 | 5124.7 | 5133.0 | 5135.1 | 5135.1 |
| 10° | 5211.6 | 5222.0 | 5224.1 | 5232.3 | 5228.2 | 5232.3 | 5232.3 | 5228.2 |
| 12.5° | 5348.2 | 5350.3 | 5344.1 | 5350.3 | 5342.0 | 5346.2 | 5340.0 | 5335.8 |
| 15° | 5499.3 | 5493.1 | 5478.6 | 5478.6 | 5466.2 | 5468.3 | 5466.2 | 5464.2 |
| 17.5° | 5646.3 | 5633.9 | 5623.5 | 5619.4 | 5609.0 | 5607.0 | 5600.8 | 5600.8 |
| 20° | 5807.7 | 5801.5 | 5795.3 | 5787.0 | 5776.7 | 5766.3 | 5764.3 | 5768.4 |
| 22.5° | 6002.3 | 6000.2 | 6000.2 | 5996.1 | 5981.6 | 5971.2 | 5965.0 | 5965.0 |
| 25° | 6263.1 | 6244.4 | 6244.4 | 6242.4 | 6236.2 | 6230.0 | 6217.5 | 6223.8 |
| 27.5° | 6557.0 | 6546.6 | 6554.9 | 6552.8 | 6546.6 | 6546.6 | 6538.4 | 6538.4 |
| 30° | 6919.2 | 6915.0 | 6927.5 | 6917.1 | 6896.4 | 6894.4 | 6886.1 | 6875.7 |
| 32.5° | 7337.3 | 7333.1 | 7351.8 | 7339.3 | 7306.2 | 7287.6 | 7271.0 | 7262.8 |
| 35° | 7803.0 | 7805.0 | 7827.8 | 7819.5 | 7782.3 | 7769.9 | 7740.9 | 7736.7 |
| 37.5° | 8312.1 | 8345.2 | 8384.6 | 8392.9 | 8361.8 | 8353.5 | 8322.5 | 8305.9 |
| 40° | 8910.3 | 8953.8 | 9013.8 | 9028.3 | 8995.2 | 8988.9 | 8945.5 | 8922.7 |
| 42.5° | 9547.8 | 9622.3 | 9696.8 | 9709.2 | 9676.1 | 9643.0 | 9601.6 | 9585.0 |
| 45° | 10259.8 | 10348.8 | 10446.0 | 10470.9 | 10421.2 | 10381.9 | 10328.1 | 10328.1 |
| 47.5° | 11058.7 | 11170.5 | 11280.2 | 11348.5 | 11302.9 | 11261.5 | 11197.4 | 11156.0 |
| 50° | 12002.5 | 12155.7 | 12298.5 | 12368.8 | 12296.4 | 12217.8 | 12106.0 | 12068.7 |
| 52.5° | 13186.4 | 13352.0 | 13476.2 | 13438.9 | 13327.1 | 13217.4 | 13095.3 | 13045.7 |
| 55° | 14697.3 | 14753.2 | 14753.2 | 14612.5 | 14388.9 | 14204.7 | 14012.2 | 13948.1 |
| 57.5° | 16587.0 | 16371.8 | 16040.6 | 15620.4 | 15092.6 | 14633.2 | 14322.7 | 14175.7 |
| 60° | 18807.9 | 17773.0 | 16603.6 | 15454.9 | 14511.0 | 13732.8 | 13271.3 | 13060.1 |
| 62.5° | 20287.7 | 17580.5 | 15237.5 | 13393.4 | 12035.6 | 11098.0 | 10460.5 | 10212.2 |
| 65° | 18961.0 | 14662.1 | 11524.4 | 9318.0 | 7838.2 | 6884.0 | 6252.7 | 6020.9 |
| 67.5° | 13888.0 | 9187.6 | 6136.8 | 4398.2 | 3222.6 | 2570.6 | 2311.9 | 2204.3 |
| 70° | 6234.1 | 3235.0 | 1982.8 | 1548.2 | 1335.0 | 1225.3 | 1177.7 | 1161.1 |
| 72.5° | 1879.3 | 1359.8 | 1146.6 | 1034.9 | 950.0 | 896.2 | 856.9 | 852.7 |
| 75° | 1134.2 | 943.8 | 838.3 | 772.0 | 718.2 | 674.7 | 654.0 | 647.8 |
| 77.5° | 792.7 | 693.4 | 643.7 | 596.1 | 554.7 | 521.6 | 503.0 | 488.5 |
| 80° | 556.8 | 509.2 | 486.4 | 459.5 | 432.6 | 401.5 | 374.6 | 362.2 |
| 82.5° | 372.6 | 362.2 | 362.2 | 345.6 | 322.9 | 293.9 | 240.1 | 227.7 |
| 85° | 240.1 | 238.0 | 242.2 | 236.0 | 219.4 | 188.3 | 155.2 | 147.0 |
| 87.5° | 111.8 | 113.8 | 126.3 | 124.2 | 120.0 | 99.3 | 78.7 | 74.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)