

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: P300439

Luminaire Tested: **GLNA-AF-05-LED-E1-AFL-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300439
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24165)
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-AFL-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17409.6 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 162
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

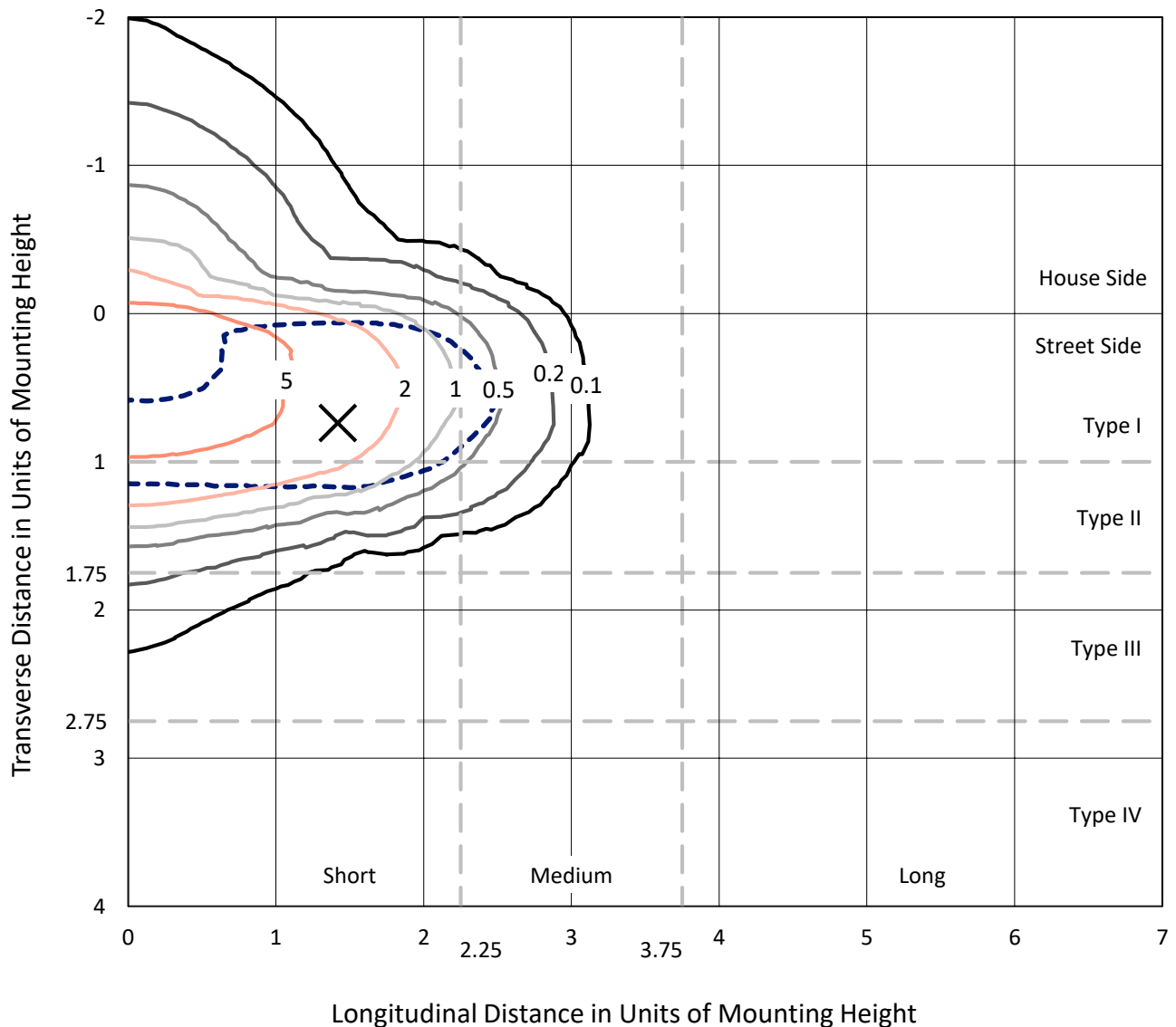


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Iso-Footcandle Lines of Horizontal Illumination

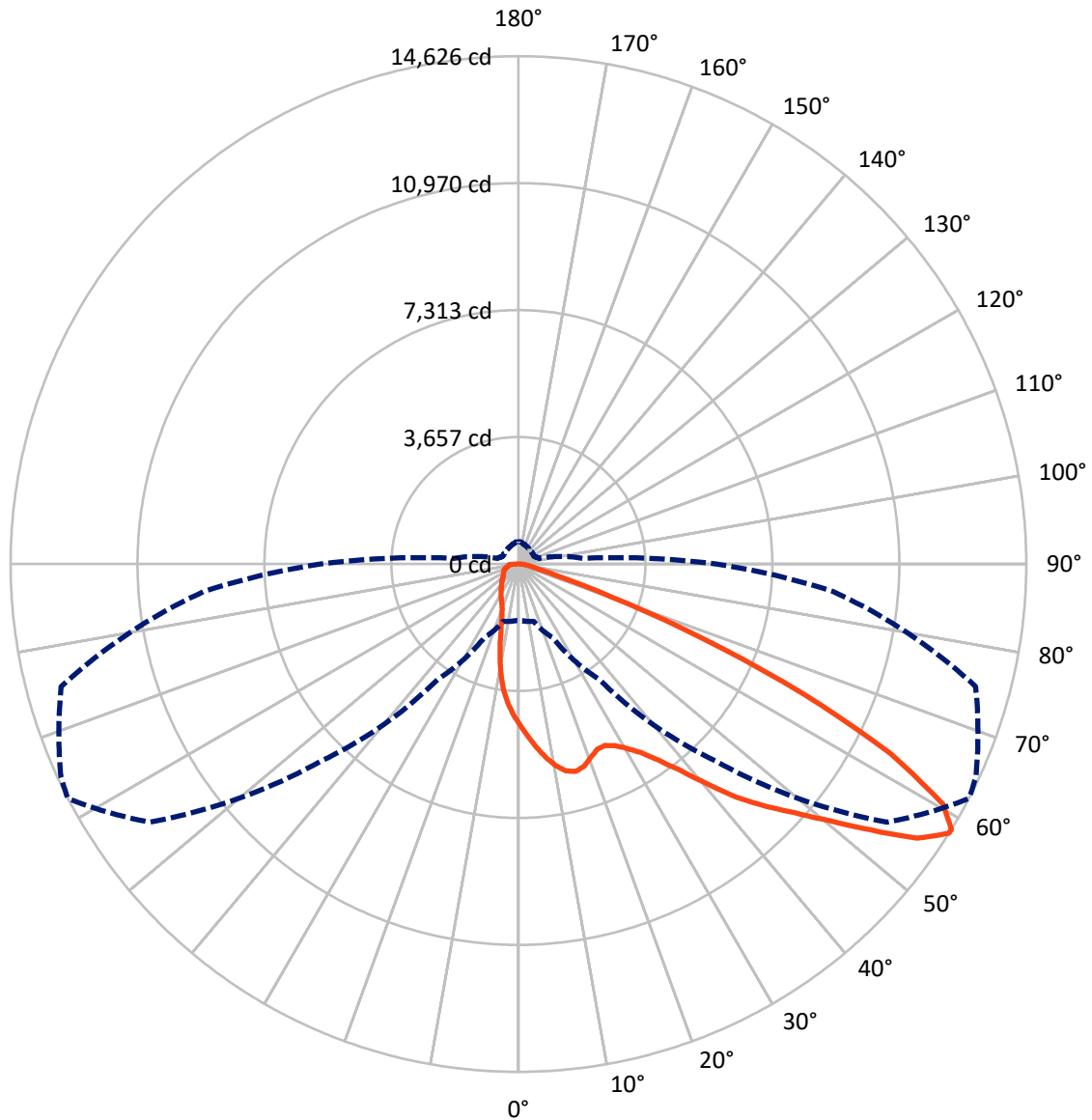
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2655.0 | 0.0 | 2655.0 |
| | % Fixture | 15.3 | 0.0 | 15.3 |
| Street Side | Lumens | 14754.6 | 0.0 | 14754.6 |
| | % Fixture | 84.7 | 0.0 | 84.7 |
| Total | Lumens | 17409.6 | 0.0 | 17409.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 413.6 | 2.4 |
| 10°-20° | 1057.2 | 6.1 |
| 20°-30° | 1709.0 | 9.8 |
| 30°-40° | 2713.1 | 15.6 |
| 40°-50° | 3969.8 | 22.8 |
| 50°-60° | 4152.0 | 23.8 |
| 60°-70° | 2453.0 | 14.1 |
| 70°-80° | 691.0 | 4.0 |
| 80°-90° | 250.9 | 1.4 |
| 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° | 17409.6 | 100.0 |
| 0°-180° | 17409.6 | 100.0 |



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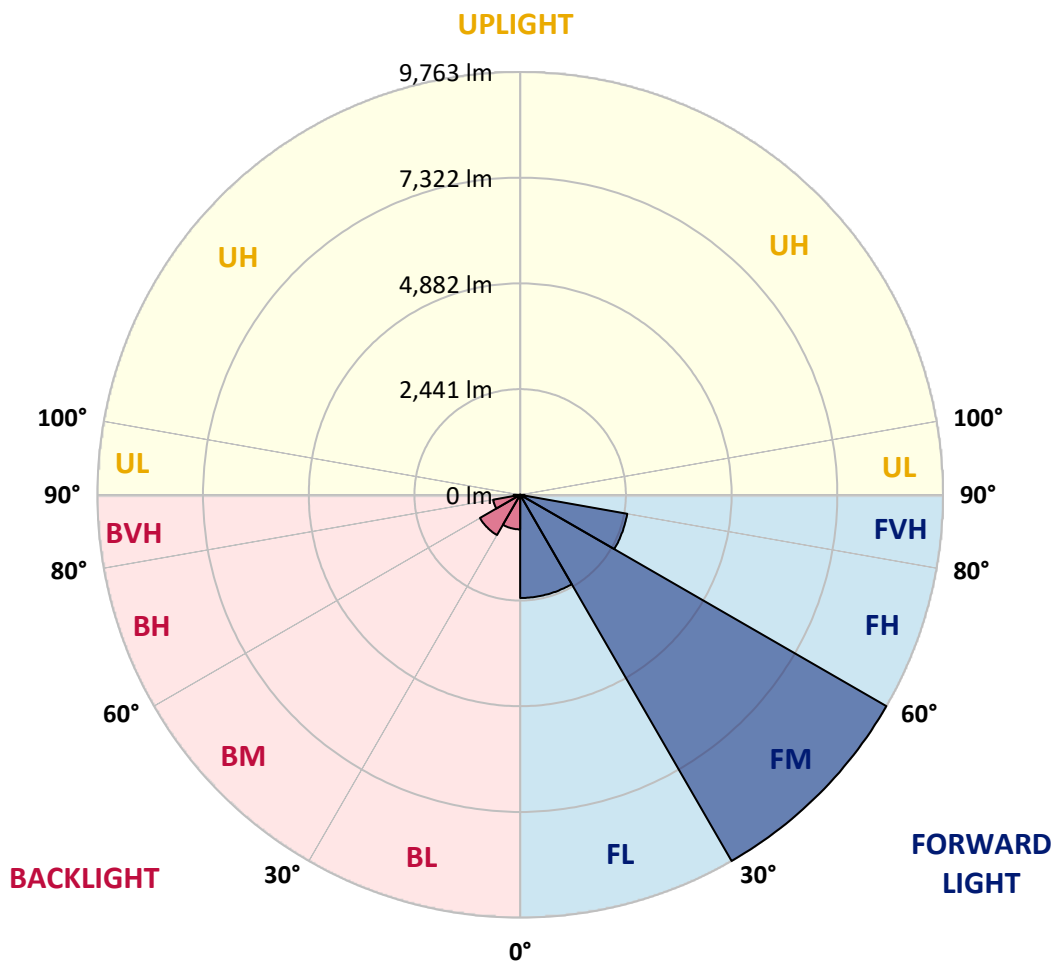
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2381.9 | 13.7 | | | |
| FM (30°-60°) | 9763.2 | 56.1 | | | |
| FH (60°-80°) | 2510.5 | 14.4 | | | G2/5000 |
| FVH (80°-90°) | 99.0 | 0.6 | | | G1/100 |
| BL (0°-30°) | 798.0 | 4.6 | B2/1000 | | |
| BM (30°-60°) | 1071.6 | 6.2 | B2/2500 | | |
| BH (60°-80°) | 633.5 | 3.6 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 151.9 | 0.9 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 62.5° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|--------|
| 0° | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 |
| 2.5° | 5284.5 | 5241.8 | 5214.8 | 5191.0 | 5159.8 | 5093.4 | 5004.1 | 4947.5 | 4918.8 | 4821.3 | 4705.7 |
| 5° | 5802.6 | 5764.9 | 5737.0 | 5705.0 | 5649.3 | 5545.2 | 5400.9 | 5286.1 | 5229.5 | 5034.4 | 4803.2 |
| 7.5° | 5681.2 | 5696.8 | 5745.2 | 5829.6 | 5901.8 | 5887.8 | 5759.1 | 5613.2 | 5538.6 | 5267.2 | 4916.4 |
| 10° | 4950.0 | 4977.0 | 5060.7 | 5258.2 | 5577.9 | 5905.9 | 6005.9 | 5905.0 | 5829.6 | 5497.6 | 5032.8 |
| 12.5° | 4803.2 | 4802.4 | 4809.0 | 4861.4 | 5051.6 | 5513.2 | 6014.1 | 6115.7 | 6070.6 | 5717.3 | 5151.6 |
| 15° | 4863.1 | 4864.7 | 4859.8 | 4881.9 | 4941.0 | 5123.8 | 5763.2 | 6196.9 | 6228.9 | 5938.7 | 5274.6 |
| 17.5° | 5020.5 | 5016.4 | 4997.5 | 4997.5 | 5018.8 | 5090.2 | 5468.1 | 6121.5 | 6269.0 | 6134.6 | 5382.8 |
| 20° | 5284.5 | 5265.6 | 5215.6 | 5169.7 | 5146.7 | 5185.3 | 5346.8 | 5947.7 | 6199.4 | 6305.9 | 5472.2 |
| 22.5° | 5604.2 | 5589.4 | 5508.3 | 5409.9 | 5330.4 | 5329.5 | 5409.1 | 5796.0 | 6078.8 | 6467.4 | 5547.6 |
| 25° | 6017.4 | 5993.6 | 5873.1 | 5715.7 | 5576.3 | 5523.0 | 5545.2 | 5788.6 | 6013.3 | 6642.9 | 5614.8 |
| 27.5° | 6502.7 | 6459.2 | 6316.6 | 6089.5 | 5884.6 | 5777.2 | 5745.2 | 5922.3 | 6073.1 | 6860.1 | 5708.3 |
| 30° | 7091.3 | 7041.3 | 6858.5 | 6562.5 | 6273.1 | 6096.9 | 6028.8 | 6159.2 | 6271.5 | 7124.9 | 5858.3 |
| 32.5° | 7761.1 | 7688.9 | 7477.4 | 7151.2 | 6770.8 | 6501.9 | 6391.2 | 6472.4 | 6561.7 | 7443.8 | 6046.1 |
| 35° | 8686.6 | 8600.6 | 8294.8 | 7844.7 | 7415.1 | 7045.4 | 6868.3 | 6927.3 | 7014.2 | 7919.3 | 6317.4 |
| 37.5° | 9317.9 | 9279.4 | 9076.1 | 8653.0 | 8185.7 | 7760.3 | 7486.5 | 7520.9 | 7570.1 | 8513.7 | 6665.0 |
| 40° | 9312.2 | 9327.7 | 9331.8 | 9335.9 | 9017.8 | 8610.4 | 8316.1 | 8280.0 | 8270.2 | 9166.2 | 7060.2 |
| 42.5° | 8845.7 | 8909.6 | 9116.2 | 9535.1 | 9728.6 | 9541.7 | 9272.0 | 9167.9 | 9116.2 | 9935.2 | 7479.1 |
| 45° | 8131.6 | 8166.1 | 8553.0 | 9371.2 | 10092.6 | 10464.0 | 10259.8 | 9931.9 | 9838.5 | 10641.9 | 7826.7 |
| 47.5° | 7763.5 | 7801.3 | 8044.7 | 8936.7 | 10088.5 | 11209.2 | 11327.2 | 10702.5 | 10535.3 | 11256.7 | 8126.7 |
| 50° | 6887.2 | 6965.9 | 7272.5 | 8180.8 | 9720.4 | 11551.9 | 12443.0 | 11620.7 | 11274.8 | 11855.2 | 8427.6 |
| 52.5° | 5277.9 | 5399.2 | 5742.7 | 6938.0 | 8786.7 | 11382.2 | 13335.8 | 12734.0 | 12245.4 | 12475.0 | 8685.8 |
| 55° | 3329.2 | 3419.4 | 3708.0 | 4900.0 | 7029.0 | 10499.2 | 13674.3 | 13938.3 | 13503.8 | 13061.9 | 8909.6 |
| 57.5° | 1810.1 | 1850.3 | 1958.5 | 2705.4 | 4572.0 | 8547.3 | 13180.8 | 14623.7 | 14443.3 | 13560.4 | 9078.5 |
| 58° | 1619.9 | 1647.0 | 1714.2 | 2344.6 | 4054.8 | 8013.6 | 12961.9 | 14626.1 | 14535.9 | 13633.3 | 9091.6 |
| 60° | 1201.8 | 1187.9 | 1128.1 | 1337.9 | 2256.9 | 5536.1 | 11638.8 | 14040.8 | 14305.6 | 13722.7 | 9027.7 |
| 62.5° | 1055.9 | 1022.3 | 900.1 | 886.2 | 1097.7 | 2550.4 | 8905.5 | 12027.3 | 12652.9 | 13212.8 | 8639.1 |
| 65° | 992.0 | 955.9 | 798.5 | 747.7 | 791.9 | 1078.9 | 5245.9 | 9020.3 | 9804.9 | 11666.6 | 7645.5 |
| 67.5° | 944.4 | 897.7 | 733.7 | 664.0 | 667.3 | 713.2 | 2102.8 | 5681.2 | 6564.2 | 8858.0 | 5946.9 |
| 70° | 898.5 | 847.7 | 678.8 | 598.5 | 579.6 | 564.0 | 836.2 | 2843.9 | 3644.8 | 5595.2 | 3791.6 |
| 72.5° | 849.3 | 799.3 | 630.4 | 546.8 | 509.9 | 458.3 | 546.0 | 1163.3 | 1624.9 | 2647.1 | 1719.9 |
| 75° | 778.0 | 732.9 | 582.1 | 500.9 | 448.4 | 379.6 | 412.4 | 607.5 | 728.8 | 1054.3 | 828.8 |
| 77.5° | 690.3 | 653.4 | 528.0 | 463.2 | 397.6 | 308.2 | 317.3 | 421.4 | 467.3 | 603.4 | 492.7 |
| 80° | 496.0 | 509.1 | 469.7 | 416.5 | 354.2 | 250.0 | 243.5 | 307.4 | 332.0 | 387.8 | 320.5 |
| 82.5° | 348.4 | 355.8 | 388.6 | 340.2 | 292.7 | 196.8 | 179.5 | 216.4 | 231.2 | 255.0 | 173.0 |
| 85° | 240.2 | 232.0 | 266.4 | 236.9 | 211.5 | 131.2 | 123.0 | 146.7 | 155.8 | 158.2 | 89.4 |
| 87.5° | 144.3 | 144.3 | 154.1 | 127.1 | 114.0 | 68.0 | 66.4 | 83.6 | 89.4 | 85.3 | 49.2 |
| 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° | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 | 4624.5 |
| 2.5° | 4636.8 | 4578.6 | 4454.8 | 4355.6 | 4230.2 | 4099.8 | 4026.9 | 3949.0 | 3895.7 | 3857.2 | 3918.7 |
| 5° | 4672.1 | 4553.2 | 4297.4 | 4054.8 | 3786.7 | 3507.9 | 3296.4 | 3099.7 | 2962.8 | 2877.5 | 2957.9 |
| 7.5° | 4727.8 | 4545.0 | 4137.6 | 3722.7 | 3241.5 | 2777.5 | 2362.7 | 2102.8 | 1951.1 | 1876.5 | 1923.3 |
| 10° | 4791.8 | 4531.9 | 3949.8 | 3272.7 | 2584.0 | 1999.5 | 1689.6 | 1584.7 | 1550.2 | 1536.3 | 1542.9 |
| 12.5° | 4845.0 | 4504.0 | 3719.5 | 2728.3 | 1940.5 | 1578.9 | 1489.6 | 1487.1 | 1494.5 | 1496.1 | 1498.6 |
| 15° | 4882.8 | 4463.0 | 3377.6 | 2161.0 | 1551.9 | 1438.8 | 1433.8 | 1448.6 | 1462.5 | 1468.3 | 1471.5 |
| 17.5° | 4908.2 | 4378.6 | 2991.5 | 1708.5 | 1390.4 | 1370.7 | 1382.2 | 1401.0 | 1415.8 | 1419.9 | 1423.2 |
| 20° | 4905.7 | 4254.8 | 2531.6 | 1424.8 | 1302.7 | 1302.7 | 1322.3 | 1337.1 | 1337.9 | 1333.0 | 1335.5 |
| 22.5° | 4880.3 | 4085.1 | 2085.6 | 1274.0 | 1224.8 | 1238.7 | 1258.4 | 1244.5 | 1187.1 | 1149.4 | 1151.8 |
| 25° | 4837.7 | 3882.6 | 1703.6 | 1178.1 | 1152.6 | 1177.2 | 1171.5 | 1066.6 | 984.6 | 947.7 | 947.7 |
| 27.5° | 4800.0 | 3643.2 | 1410.1 | 1094.4 | 1080.5 | 1110.8 | 1009.2 | 914.1 | 879.6 | 862.4 | 856.7 |
| 30° | 4772.9 | 3385.0 | 1214.1 | 1014.1 | 1012.5 | 990.3 | 875.6 | 849.3 | 843.6 | 829.6 | 824.7 |
| 32.5° | 4779.5 | 3123.5 | 1088.7 | 943.6 | 949.3 | 847.7 | 811.6 | 817.3 | 812.4 | 797.7 | 791.1 |
| 35° | 4833.6 | 2875.1 | 1006.7 | 879.6 | 862.4 | 765.7 | 773.9 | 784.6 | 782.9 | 762.4 | 755.9 |
| 37.5° | 4930.3 | 2639.8 | 952.6 | 826.4 | 752.6 | 724.7 | 737.8 | 754.2 | 750.1 | 736.2 | 731.3 |
| 40° | 5032.0 | 2418.4 | 908.3 | 784.6 | 687.8 | 696.8 | 708.3 | 717.3 | 721.4 | 725.5 | 722.2 |
| 42.5° | 5131.2 | 2187.2 | 854.2 | 741.9 | 660.8 | 670.6 | 675.5 | 684.5 | 706.7 | 722.2 | 721.4 |
| 45° | 5190.2 | 1970.0 | 798.5 | 681.3 | 639.4 | 645.2 | 641.9 | 659.9 | 687.0 | 712.4 | 713.2 |
| 47.5° | 5255.8 | 1801.1 | 754.2 | 625.5 | 619.0 | 623.1 | 613.2 | 631.2 | 655.8 | 687.0 | 690.3 |
| 50° | 5335.3 | 1700.3 | 719.0 | 581.2 | 591.1 | 591.1 | 588.6 | 605.0 | 639.4 | 675.5 | 682.1 |
| 52.5° | 5425.5 | 1680.6 | 689.5 | 549.3 | 563.2 | 562.4 | 564.8 | 589.4 | 627.2 | 662.4 | 668.1 |
| 55° | 5535.3 | 1733.9 | 657.5 | 525.5 | 536.2 | 539.4 | 547.6 | 575.5 | 607.5 | 647.6 | 650.1 |
| 57.5° | 5663.2 | 1842.1 | 632.1 | 506.6 | 511.6 | 522.2 | 535.3 | 560.7 | 595.2 | 639.4 | 641.9 |
| 58° | 5684.5 | 1865.1 | 628.0 | 505.0 | 506.6 | 518.9 | 533.7 | 558.3 | 592.7 | 641.1 | 643.5 |
| 60° | 5685.3 | 1941.3 | 619.0 | 497.6 | 487.8 | 508.3 | 524.7 | 549.3 | 588.6 | 646.8 | 652.6 |
| 62.5° | 5483.7 | 1940.5 | 612.4 | 487.0 | 468.1 | 493.5 | 512.4 | 541.1 | 584.5 | 660.8 | 672.2 |
| 65° | 4828.6 | 1763.4 | 581.2 | 470.6 | 452.5 | 480.4 | 501.7 | 535.3 | 596.0 | 721.4 | 728.8 |
| 67.5° | 3776.8 | 1445.3 | 523.0 | 447.6 | 432.0 | 467.3 | 495.2 | 534.5 | 608.3 | 735.4 | 740.3 |
| 70° | 2497.1 | 1081.3 | 459.1 | 421.4 | 410.7 | 451.7 | 498.4 | 562.4 | 594.4 | 705.9 | 692.7 |
| 72.5° | 1296.1 | 759.1 | 407.4 | 388.6 | 386.1 | 437.8 | 546.0 | 559.1 | 580.4 | 664.0 | 647.6 |
| 75° | 680.4 | 527.1 | 362.4 | 352.5 | 356.6 | 434.5 | 644.4 | 544.3 | 562.4 | 635.3 | 666.5 |
| 77.5° | 416.5 | 425.5 | 323.8 | 319.7 | 327.9 | 424.7 | 643.5 | 525.5 | 536.2 | 584.5 | 619.0 |
| 80° | 278.7 | 345.1 | 294.3 | 295.1 | 300.9 | 388.6 | 578.0 | 496.0 | 504.2 | 552.5 | 587.8 |
| 82.5° | 176.3 | 204.1 | 267.3 | 281.2 | 273.8 | 320.5 | 491.1 | 451.7 | 463.2 | 632.1 | 668.1 |
| 85° | 89.4 | 127.9 | 232.0 | 270.5 | 246.8 | 224.6 | 398.4 | 396.0 | 401.7 | 455.8 | 476.3 |
| 87.5° | 41.0 | 70.5 | 181.2 | 236.1 | 186.1 | 140.2 | 289.4 | 293.5 | 316.4 | 323.8 | 323.8 |
| 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)