

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: P301169

Luminaire Tested: **GLNA-AF-05-LED-E1-T3R-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301169
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
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-T3R-7060-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 5700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24488 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

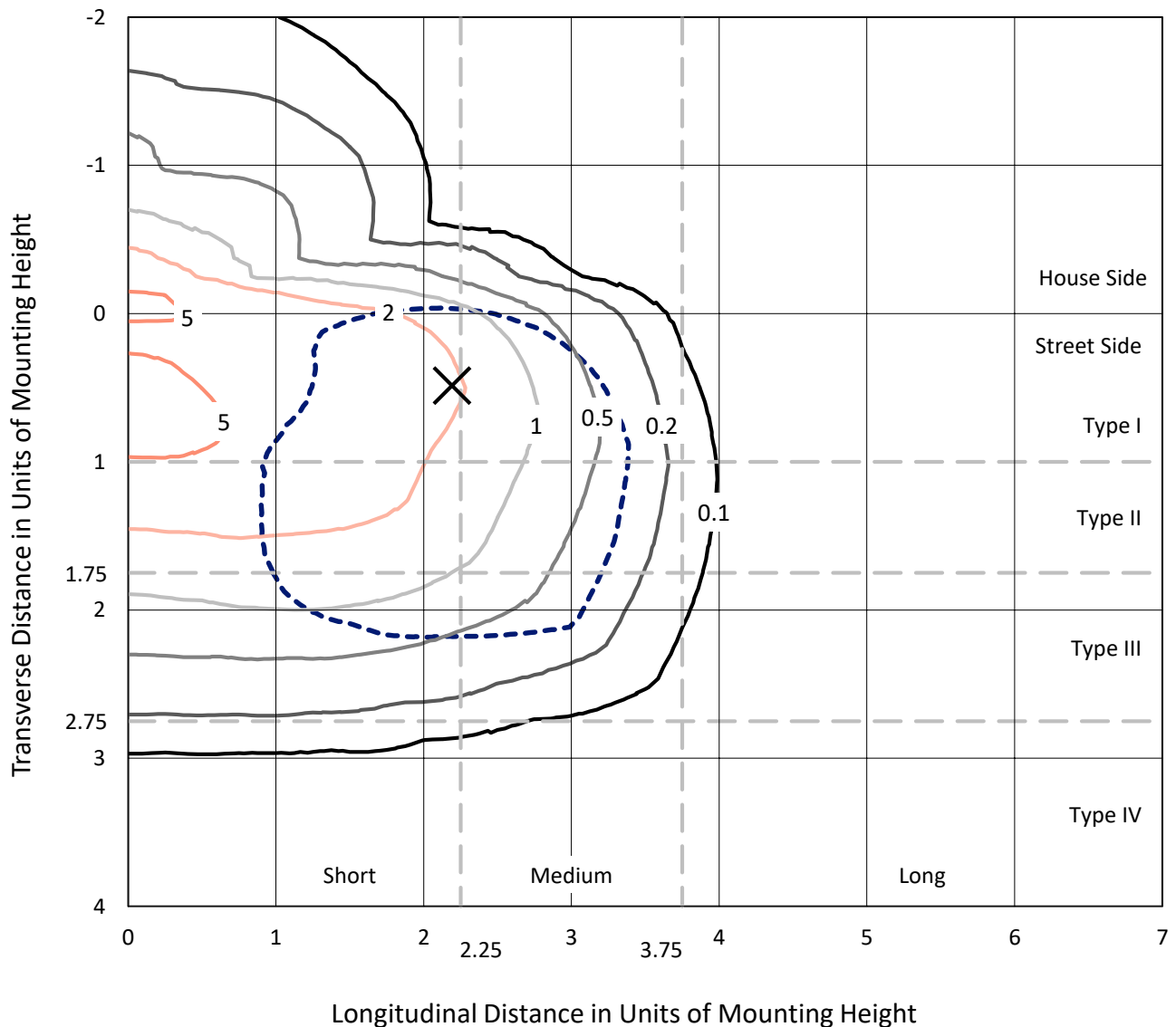
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

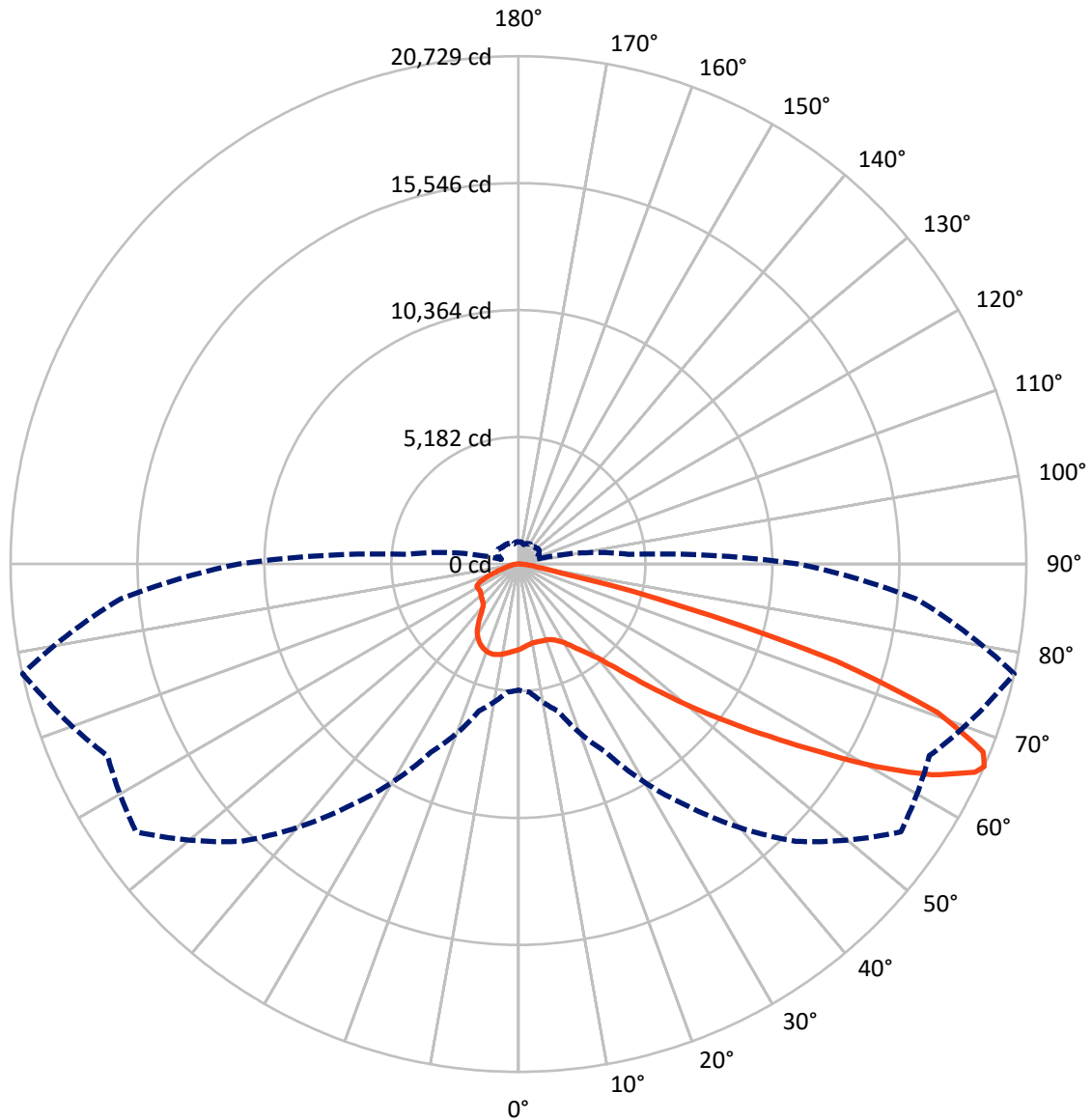


Based on 25 foot mounting height. Maximum calculated value = 6.9 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4183.6 | 0.0 | 4183.6 |
| | % Fixture | 17.1 | 0.0 | 17.1 |
| Street Side | Lumens | 20304.3 | 0.0 | 20304.3 |
| | % Fixture | 82.9 | 0.0 | 82.9 |
| Total | Lumens | 24488.0 | 0.0 | 24488.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 311.8 | 1.3 |
| 10°-20° | 879.6 | 3.6 |
| 20°-30° | 1501.1 | 6.1 |
| 30°-40° | 2403.0 | 9.8 |
| 40°-50° | 3712.4 | 15.2 |
| 50°-60° | 5265.5 | 21.5 |
| 60°-70° | 7043.8 | 28.8 |
| 70°-80° | 3059.0 | 12.5 |
| 80°-90° | 311.9 | 1.3 |
| 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° | 24488.0 | 100.0 |
| 0°-180° | 24488.0 | 100.0 |



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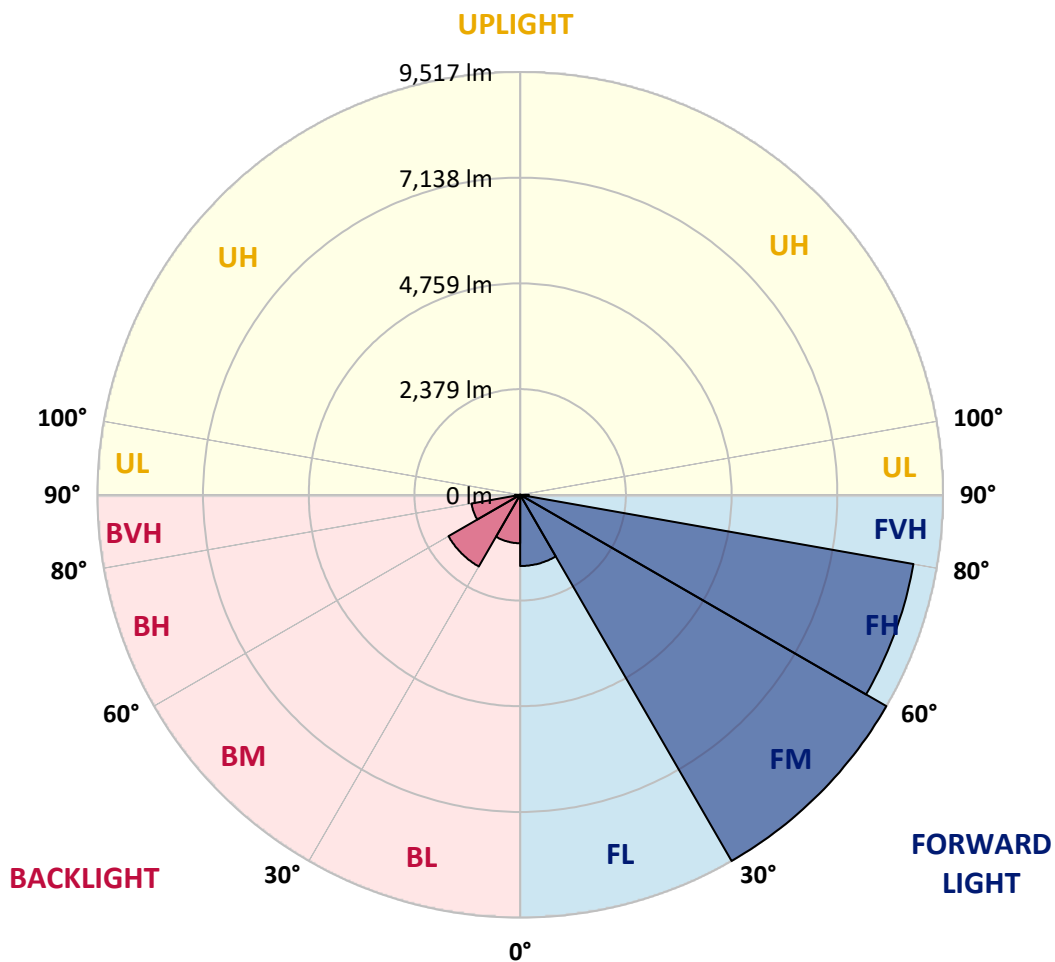
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1602.8 | 6.5 | | | |
| FM | (30°-60°) | 9517.3 | 38.9 | | | |
| FH | (60°-80°) | 8988.6 | 36.7 | | | G4/12000 |
| FVH | (80°-90°) | 195.6 | 0.8 | | | G2/225 |
| BL | (0°-30°) | 1089.6 | 4.4 | B3/2500 | | |
| BM | (30°-60°) | 1863.6 | 7.6 | B2/2500 | | |
| BH | (60°-80°) | 1114.2 | 4.5 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 116.3 | 0.5 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77.5° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 |
| 2.5° | 3087.1 | 3107.8 | 3125.3 | 3141.4 | 3173.6 | 3226.9 | 3288.2 | 3337.9 | 3409.7 | 3423.8 | 3461.9 |
| 5° | 2803.7 | 2803.7 | 2817.3 | 2841.9 | 2885.6 | 2965.5 | 3048.9 | 3160.0 | 3316.2 | 3353.0 | 3454.9 |
| 7.5° | 2666.0 | 2667.0 | 2675.1 | 2695.8 | 2734.0 | 2806.8 | 2898.3 | 3029.3 | 3240.9 | 3302.2 | 3475.6 |
| 10° | 2716.8 | 2705.2 | 2687.7 | 2677.6 | 2683.2 | 2725.9 | 2812.8 | 2958.5 | 3194.6 | 3273.1 | 3522.2 |
| 12.5° | 3001.3 | 2979.5 | 2919.3 | 2839.4 | 2763.0 | 2731.9 | 2782.7 | 2924.9 | 3175.0 | 3266.5 | 3583.5 |
| 15° | 3466.5 | 3457.4 | 3344.9 | 3179.6 | 2994.6 | 2839.4 | 2804.7 | 2912.3 | 3177.1 | 3274.5 | 3656.4 |
| 17.5° | 4049.8 | 4036.8 | 3889.0 | 3648.3 | 3346.3 | 3044.3 | 2882.1 | 2922.8 | 3185.2 | 3288.2 | 3726.8 |
| 20° | 4638.7 | 4599.1 | 4439.7 | 4152.8 | 3765.0 | 3322.9 | 3010.7 | 2949.4 | 3195.7 | 3303.2 | 3801.1 |
| 22.5° | 5078.3 | 5045.8 | 4902.5 | 4623.6 | 4177.0 | 3645.9 | 3183.1 | 2995.7 | 3229.3 | 3347.4 | 3892.1 |
| 25° | 5464.8 | 5466.9 | 5324.6 | 5055.2 | 4593.5 | 3988.5 | 3405.2 | 3119.3 | 3314.8 | 3437.4 | 4017.2 |
| 27.5° | 5942.6 | 5914.9 | 5781.8 | 5514.5 | 5005.5 | 4334.3 | 3673.5 | 3289.6 | 3442.3 | 3566.0 | 4181.5 |
| 30° | 6514.0 | 6494.4 | 6340.6 | 6037.5 | 5462.3 | 4705.6 | 3980.1 | 3487.2 | 3606.6 | 3734.8 | 4396.6 |
| 32.5° | 7186.3 | 7177.2 | 7017.4 | 6627.5 | 5989.9 | 5143.2 | 4340.2 | 3748.9 | 3851.9 | 3985.0 | 4705.6 |
| 35° | 7975.6 | 7976.6 | 7788.1 | 7319.4 | 6567.2 | 5652.2 | 4748.3 | 4085.5 | 4150.3 | 4289.1 | 5073.8 |
| 37.5° | 8461.5 | 8520.3 | 8449.9 | 7972.1 | 7221.0 | 6221.5 | 5278.4 | 4532.2 | 4490.5 | 4630.6 | 5468.3 |
| 40° | 8565.5 | 8637.3 | 8860.5 | 8617.7 | 7952.4 | 6848.6 | 5748.2 | 4961.3 | 4909.5 | 5080.4 | 5976.2 |
| 42.5° | 8419.8 | 8519.3 | 8991.5 | 9162.5 | 8728.8 | 7621.4 | 6379.8 | 5598.9 | 5533.1 | 5763.2 | 6607.9 |
| 45° | 8332.9 | 8407.2 | 8953.3 | 9446.2 | 9402.1 | 8495.1 | 7184.2 | 6399.4 | 6375.3 | 6677.2 | 7336.9 |
| 47.5° | 8182.6 | 8249.9 | 8775.0 | 9512.1 | 9798.0 | 9295.6 | 8150.4 | 7378.6 | 7425.9 | 7821.8 | 8159.5 |
| 50° | 8263.5 | 8291.2 | 8576.0 | 9344.3 | 9912.5 | 9882.4 | 9229.7 | 8512.3 | 8674.5 | 9168.4 | 9091.0 |
| 52.5° | 8252.0 | 8323.8 | 8552.9 | 9068.9 | 9927.6 | 10244.6 | 10293.0 | 9776.9 | 10118.5 | 10685.3 | 10124.1 |
| 55° | 6671.6 | 6803.4 | 8281.0 | 8999.6 | 9980.5 | 10599.5 | 11239.6 | 11109.9 | 11746.1 | 12406.8 | 11290.4 |
| 57.5° | 6370.7 | 6454.1 | 7273.1 | 9145.3 | 10262.8 | 11277.7 | 12292.3 | 12577.1 | 13641.4 | 14408.6 | 12711.3 |
| 60° | 6311.5 | 6414.5 | 7262.6 | 9323.6 | 10835.6 | 12382.7 | 13853.4 | 14353.3 | 15947.6 | 16787.7 | 14358.9 |
| 62.5° | 6127.6 | 6238.6 | 7194.3 | 9300.1 | 11649.1 | 13911.2 | 15851.6 | 16241.5 | 18134.4 | 18951.3 | 15737.1 |
| 65° | 5544.6 | 5648.7 | 6638.0 | 8926.7 | 12197.7 | 15542.6 | 18216.3 | 17972.5 | 19860.8 | 20474.9 | 16424.1 |
| 66° | 5145.3 | 5247.2 | 6199.4 | 8487.0 | 12070.2 | 16005.4 | 19054.3 | 18508.2 | 20247.2 | 20728.5 | 16289.9 |
| 67.5° | 4415.2 | 4495.1 | 5347.7 | 7502.3 | 11393.4 | 16135.0 | 19758.8 | 18910.7 | 20287.5 | 20457.7 | 15523.0 |
| 70° | 2789.7 | 2812.8 | 3475.6 | 5178.9 | 8624.7 | 13993.1 | 18686.1 | 17911.2 | 18614.7 | 18154.0 | 13013.3 |
| 72.5° | 1210.4 | 1202.3 | 1668.6 | 2634.5 | 4882.9 | 9389.5 | 15115.6 | 14778.9 | 14602.0 | 13551.4 | 9109.6 |
| 75° | 673.3 | 682.8 | 866.7 | 1223.0 | 1984.3 | 4612.1 | 9888.0 | 9462.3 | 7989.2 | 6817.4 | 4130.7 |
| 77.5° | 540.2 | 553.2 | 718.5 | 867.8 | 890.9 | 1608.4 | 4627.1 | 3765.0 | 2266.6 | 1818.9 | 1147.7 |
| 80° | 427.0 | 450.2 | 627.1 | 675.8 | 600.5 | 662.8 | 1494.8 | 1195.3 | 896.8 | 822.6 | 594.9 |
| 82.5° | 337.7 | 354.2 | 538.1 | 511.5 | 420.0 | 446.7 | 716.1 | 697.9 | 583.3 | 531.1 | 343.7 |
| 85° | 243.1 | 272.9 | 442.1 | 385.4 | 275.4 | 300.9 | 475.4 | 455.8 | 334.2 | 272.9 | 151.7 |
| 87.5° | 99.5 | 129.6 | 312.5 | 255.7 | 153.8 | 140.1 | 237.2 | 223.2 | 158.3 | 115.6 | 75.3 |
| 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° | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 | 3489.6 |
| 2.5° | 3486.1 | 3513.8 | 3549.9 | 3571.9 | 3583.5 | 3591.6 | 3604.2 | 3603.1 | 3606.6 | 3607.7 | 3612.2 |
| 5° | 3509.2 | 3555.5 | 3607.7 | 3621.7 | 3621.7 | 3608.7 | 3596.1 | 3575.1 | 3567.0 | 3564.9 | 3567.0 |
| 7.5° | 3569.5 | 3620.3 | 3665.5 | 3649.4 | 3614.7 | 3563.5 | 3497.7 | 3439.9 | 3408.7 | 3398.2 | 3396.1 |
| 10° | 3645.9 | 3707.2 | 3725.7 | 3664.4 | 3562.5 | 3439.9 | 3309.2 | 3214.3 | 3160.0 | 3144.9 | 3140.3 |
| 12.5° | 3738.3 | 3796.1 | 3770.9 | 3641.3 | 3452.5 | 3254.9 | 3074.1 | 2922.8 | 2809.3 | 2773.5 | 2771.1 |
| 15° | 3840.3 | 3885.5 | 3796.1 | 3569.5 | 3288.2 | 2996.7 | 2675.1 | 2413.8 | 2272.6 | 2227.4 | 2223.9 |
| 17.5° | 3935.2 | 3958.4 | 3781.1 | 3444.4 | 3046.4 | 2574.6 | 2147.5 | 1946.1 | 1897.7 | 1909.3 | 1911.4 |
| 20° | 4016.2 | 4016.2 | 3730.3 | 3265.1 | 2666.0 | 2017.9 | 1748.1 | 1745.0 | 1779.7 | 1814.3 | 1821.4 |
| 22.5° | 4105.1 | 4051.9 | 3641.3 | 3011.8 | 2126.5 | 1651.1 | 1611.9 | 1644.1 | 1683.3 | 1721.5 | 1727.5 |
| 25° | 4215.1 | 4081.0 | 3517.3 | 2627.8 | 1671.8 | 1499.4 | 1514.5 | 1541.1 | 1560.7 | 1585.2 | 1588.7 |
| 27.5° | 4337.8 | 4117.7 | 3354.4 | 2098.8 | 1451.1 | 1404.8 | 1416.4 | 1425.5 | 1423.0 | 1432.5 | 1434.6 |
| 30° | 4484.5 | 4160.8 | 3130.9 | 1640.6 | 1359.6 | 1323.5 | 1302.9 | 1294.8 | 1294.8 | 1309.9 | 1315.5 |
| 32.5° | 4681.4 | 4224.2 | 2810.3 | 1405.9 | 1315.5 | 1265.7 | 1198.8 | 1168.7 | 1180.3 | 1231.1 | 1242.6 |
| 35° | 4897.9 | 4292.6 | 2376.6 | 1326.0 | 1306.4 | 1239.1 | 1135.1 | 1079.4 | 1080.8 | 1128.1 | 1143.1 |
| 37.5° | 5133.7 | 4379.4 | 1900.9 | 1310.9 | 1327.0 | 1240.5 | 1101.4 | 1025.1 | 993.9 | 993.9 | 999.8 |
| 40° | 5435.7 | 4468.4 | 1539.0 | 1321.4 | 1371.2 | 1254.2 | 1084.3 | 982.3 | 894.4 | 896.8 | 901.4 |
| 42.5° | 5829.1 | 4544.8 | 1344.6 | 1343.2 | 1424.4 | 1272.7 | 1082.9 | 925.6 | 849.2 | 901.4 | 948.7 |
| 45° | 6266.7 | 4583.0 | 1258.7 | 1363.1 | 1467.2 | 1284.3 | 1064.6 | 916.5 | 855.1 | 1010.0 | 1100.4 |
| 47.5° | 6769.7 | 4560.9 | 1211.4 | 1369.8 | 1477.7 | 1284.3 | 1043.6 | 938.5 | 895.4 | 1169.7 | 1275.2 |
| 50° | 7321.8 | 4497.5 | 1165.2 | 1356.1 | 1474.2 | 1281.8 | 1063.2 | 960.2 | 910.5 | 1197.4 | 1270.3 |
| 52.5° | 7971.0 | 4444.3 | 1116.5 | 1326.0 | 1449.7 | 1269.2 | 1086.4 | 951.1 | 863.2 | 1088.8 | 1139.6 |
| 55° | 8711.2 | 4459.3 | 1062.2 | 1283.2 | 1411.5 | 1245.1 | 1078.3 | 914.0 | 813.5 | 959.2 | 990.4 |
| 57.5° | 9657.8 | 4638.7 | 997.4 | 1228.9 | 1359.6 | 1204.4 | 1049.6 | 896.8 | 798.4 | 870.2 | 888.8 |
| 60° | 10714.1 | 4950.8 | 916.5 | 1174.3 | 1294.8 | 1139.6 | 1027.5 | 904.9 | 805.4 | 863.2 | 872.3 |
| 62.5° | 11489.3 | 5132.6 | 847.1 | 1094.4 | 1206.9 | 1067.8 | 999.8 | 915.1 | 824.0 | 887.4 | 885.3 |
| 65° | 11699.9 | 4834.2 | 760.2 | 977.8 | 1087.8 | 992.8 | 964.8 | 926.6 | 832.0 | 907.0 | 896.8 |
| 66° | 11404.9 | 4512.6 | 722.0 | 923.5 | 1027.5 | 955.7 | 947.6 | 925.6 | 828.5 | 909.5 | 891.9 |
| 67.5° | 10688.8 | 3852.9 | 656.2 | 843.6 | 931.5 | 900.3 | 920.0 | 915.1 | 819.1 | 907.0 | 882.8 |
| 70° | 8717.2 | 2628.9 | 561.2 | 702.4 | 775.3 | 792.4 | 866.7 | 878.3 | 788.9 | 866.7 | 813.5 |
| 72.5° | 6090.8 | 1601.3 | 496.4 | 545.1 | 627.1 | 675.8 | 793.8 | 827.1 | 748.6 | 756.7 | 705.9 |
| 75° | 2943.5 | 850.6 | 450.2 | 422.5 | 487.0 | 564.7 | 705.9 | 757.8 | 684.9 | 633.0 | 614.5 |
| 77.5° | 917.5 | 519.5 | 381.9 | 340.2 | 381.9 | 455.8 | 590.0 | 664.2 | 609.9 | 530.0 | 523.0 |
| 80° | 492.9 | 381.9 | 293.9 | 272.9 | 302.0 | 357.7 | 463.8 | 554.2 | 524.1 | 475.4 | 424.6 |
| 82.5° | 325.1 | 247.7 | 217.6 | 211.6 | 230.2 | 272.9 | 344.7 | 459.3 | 459.3 | 407.4 | 296.4 |
| 85° | 167.8 | 151.7 | 149.2 | 149.2 | 160.8 | 181.8 | 234.7 | 354.2 | 377.3 | 215.1 | 178.3 |
| 87.5° | 83.4 | 86.9 | 80.9 | 84.4 | 90.4 | 89.0 | 112.1 | 178.3 | 213.0 | 130.7 | 108.6 |
| 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)