

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: P299995

Luminaire Tested: **GLNA-AF-09-LED-E1-SL3-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299995
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)
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-SL3-7050-800-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33362.7 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B2 - U0 - G5

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

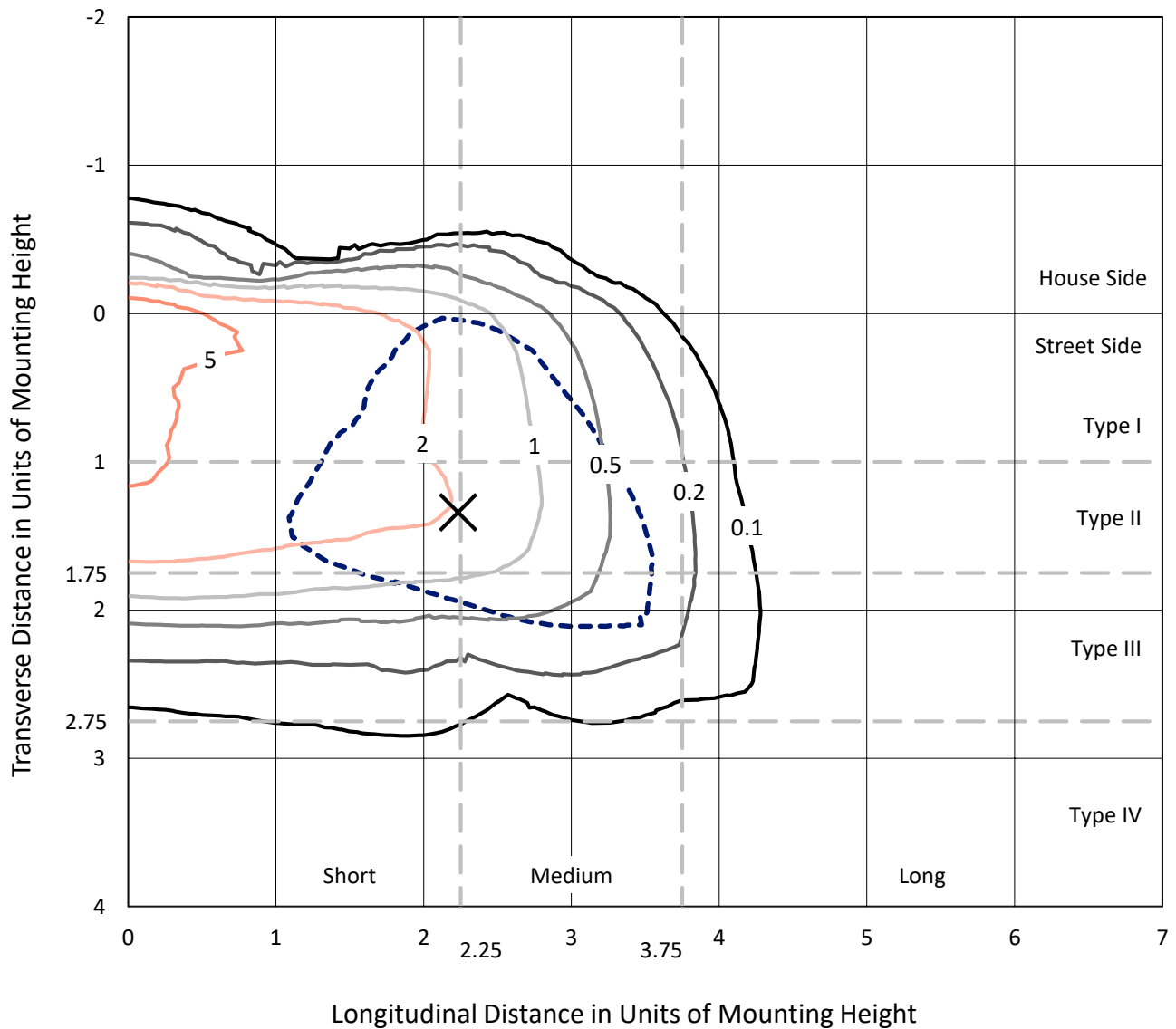


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

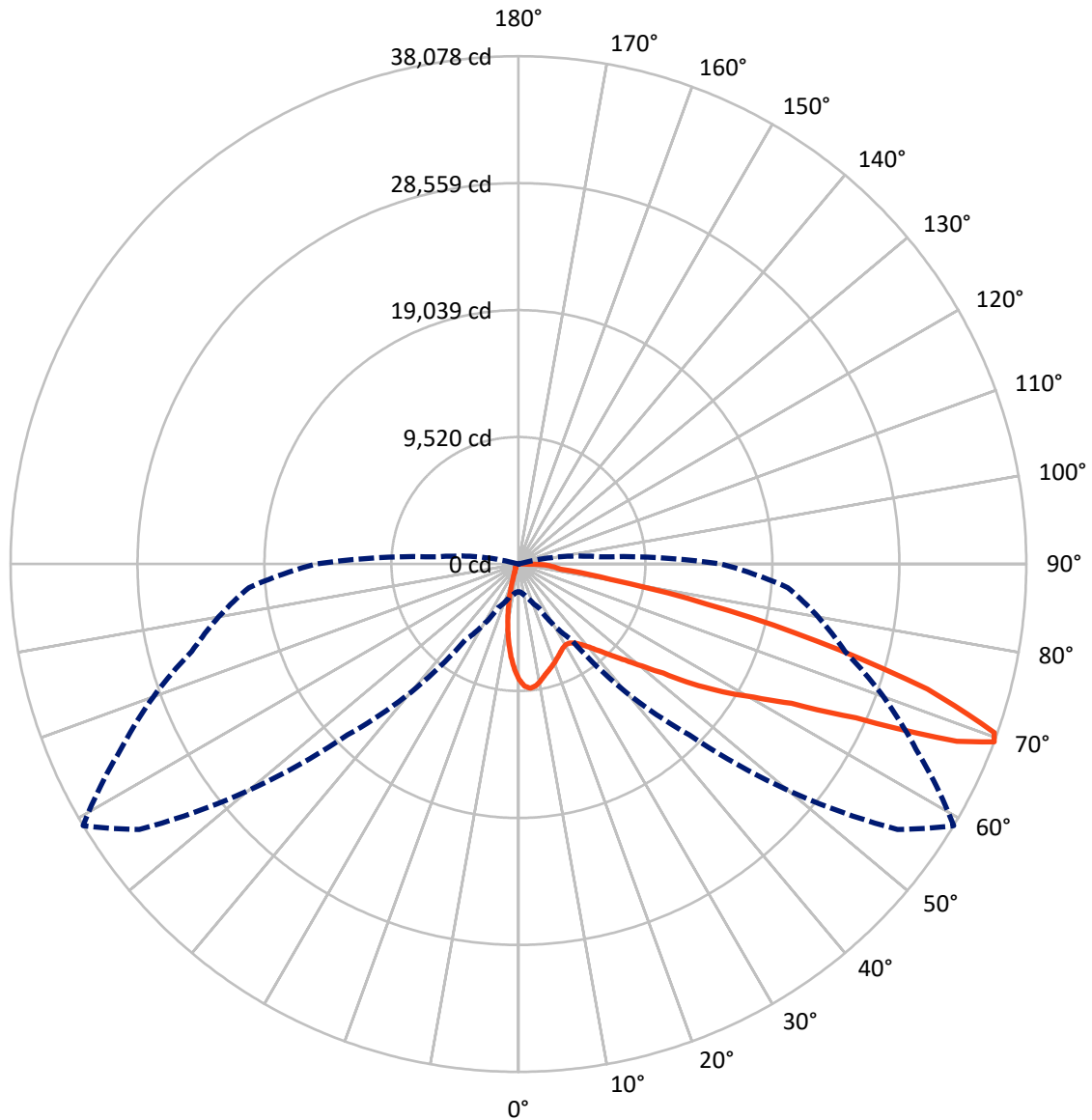


Based on 30 foot mounting height. Maximum calculated value = 9.7 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2716.9 | 0.0 | 2716.9 |
| | % Fixture | 8.1 | 0.0 | 8.1 |
| Street Side | Lumens | 30645.7 | 0.0 | 30645.7 |
| | % Fixture | 91.9 | 0.0 | 91.9 |
| Total | Lumens | 33362.7 | 0.0 | 33362.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 704.9 | 2.1 |
| 10°-20° | 1456.5 | 4.4 |
| 20°-30° | 1959.9 | 5.9 |
| 30°-40° | 2845.6 | 8.5 |
| 40°-50° | 4738.1 | 14.2 |
| 50°-60° | 7391.4 | 22.2 |
| 60°-70° | 9146.2 | 27.4 |
| 70°-80° | 4635.2 | 13.9 |
| 80°-90° | 485.0 | 1.5 |
| 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° | 33362.7 | 100.0 |
| 0°-180° | 33362.7 | 100.0 |



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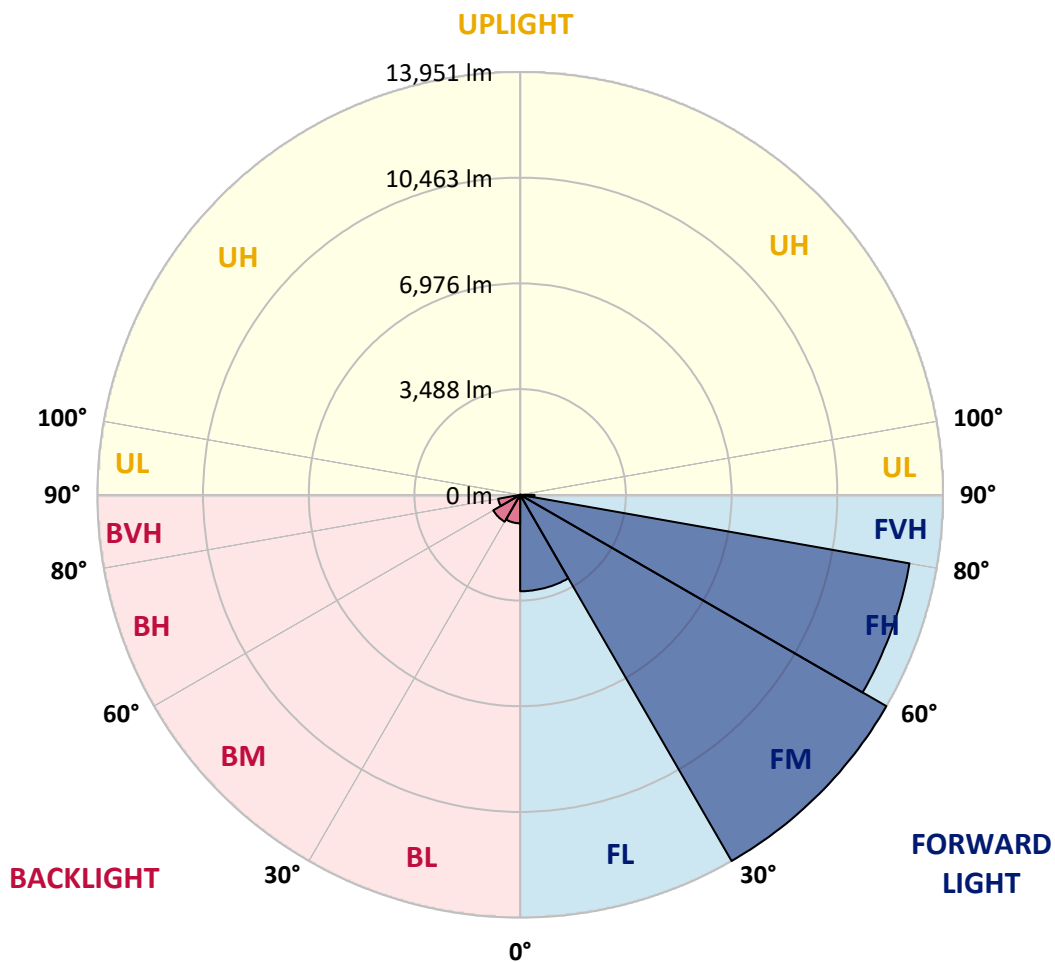
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 3180.8 | 9.5 | | | |
| FM | (30°-60°) | 13951.3 | 41.8 | | | |
| FH | (60°-80°) | 13043.6 | 39.1 | | | G5 |
| FVH | (80°-90°) | 470.1 | 1.4 | | | G3/500 |
| BL | (0°-30°) | 940.4 | 2.8 | B2/1000 | | |
| BM | (30°-60°) | 1023.7 | 3.1 | B2/2500 | | |
| BH | (60°-80°) | 737.9 | 2.2 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 14.9 | 0.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 |
| 2.5° | 9517.6 | 9514.2 | 9472.5 | 9453.6 | 9419.3 | 9347.9 | 9236.6 | 9178.3 | 9084.1 | 8919.6 | 8699.1 |
| 5° | 9430.8 | 9476.5 | 9500.4 | 9502.7 | 9527.3 | 9500.4 | 9400.5 | 9351.9 | 9221.7 | 8957.3 | 8561.4 |
| 7.5° | 8842.4 | 8859.0 | 8929.3 | 8989.2 | 9106.3 | 9217.7 | 9253.7 | 9232.6 | 9155.5 | 8872.7 | 8346.1 |
| 10° | 8212.4 | 8229.0 | 8312.4 | 8391.2 | 8550.0 | 8721.4 | 8902.4 | 8940.7 | 8972.7 | 8751.6 | 8138.8 |
| 12.5° | 7668.7 | 7685.8 | 7770.9 | 7874.3 | 8059.4 | 8270.7 | 8551.7 | 8614.0 | 8755.6 | 8636.8 | 7972.5 |
| 15° | 7200.9 | 7208.3 | 7291.7 | 7419.6 | 7640.7 | 7912.0 | 8231.3 | 8331.2 | 8548.3 | 8555.7 | 7827.5 |
| 17.5° | 6802.8 | 6821.6 | 6873.0 | 6995.2 | 7236.9 | 7572.7 | 7944.6 | 8087.9 | 8342.1 | 8487.7 | 7685.8 |
| 20° | 6559.4 | 6578.3 | 6576.6 | 6644.5 | 6861.6 | 7219.7 | 7657.8 | 7829.2 | 8138.8 | 8418.1 | 7559.6 |
| 22.5° | 6512.6 | 6512.6 | 6463.5 | 6453.8 | 6582.3 | 6882.2 | 7359.7 | 7568.7 | 7955.4 | 8387.8 | 7471.0 |
| 25° | 6680.5 | 6672.5 | 6550.3 | 6450.3 | 6456.1 | 6634.8 | 7070.6 | 7319.7 | 7801.2 | 8408.4 | 7423.6 |
| 27.5° | 7035.2 | 7025.5 | 6870.7 | 6680.5 | 6527.5 | 6525.7 | 6851.9 | 7119.8 | 7678.4 | 8506.6 | 7442.5 |
| 30° | 7525.3 | 7521.9 | 7354.0 | 7114.1 | 6837.0 | 6582.3 | 6776.5 | 7019.8 | 7599.0 | 8683.7 | 7485.9 |
| 32.5° | 8061.1 | 8055.4 | 7929.1 | 7676.7 | 7325.4 | 6837.0 | 6855.9 | 7059.8 | 7621.8 | 8919.6 | 7591.6 |
| 35° | 8629.4 | 8619.7 | 8564.9 | 8344.4 | 7957.7 | 7306.5 | 7116.3 | 7274.6 | 7765.2 | 9272.5 | 7798.9 |
| 37.5° | 9244.0 | 9253.7 | 9293.1 | 9081.8 | 8676.2 | 7965.1 | 7552.2 | 7659.5 | 8053.6 | 9751.8 | 8136.5 |
| 40° | 10151.6 | 10149.9 | 10163.0 | 9885.4 | 9495.3 | 8770.5 | 8161.0 | 8195.3 | 8536.9 | 10387.5 | 8650.0 |
| 42.5° | 11798.3 | 11683.5 | 11334.5 | 10768.5 | 10376.1 | 9691.2 | 8929.3 | 8893.3 | 9127.5 | 11174.0 | 9368.5 |
| 45° | 14011.6 | 13766.0 | 12860.7 | 11776.0 | 11274.0 | 10729.1 | 9874.0 | 9759.2 | 9908.3 | 12119.3 | 10255.5 |
| 47.5° | 15914.8 | 15660.1 | 14379.5 | 12824.7 | 12226.7 | 11713.8 | 10981.5 | 10774.2 | 10823.3 | 13177.7 | 11379.6 |
| 50° | 16562.0 | 16437.4 | 15319.1 | 13738.0 | 13149.1 | 12953.2 | 12266.7 | 12013.6 | 11944.0 | 14401.7 | 12683.1 |
| 52.5° | 16337.5 | 16328.3 | 15583.0 | 14330.4 | 13994.5 | 14236.1 | 13883.1 | 13590.7 | 13334.2 | 15692.6 | 14009.3 |
| 55° | 15977.1 | 16024.5 | 15690.3 | 14849.0 | 14837.6 | 15407.6 | 16094.2 | 15850.8 | 15107.7 | 17094.3 | 15152.9 |
| 57.5° | 14983.2 | 15184.8 | 15630.4 | 15830.3 | 16294.1 | 16877.2 | 17935.6 | 18079.0 | 17200.0 | 18167.5 | 16101.6 |
| 60° | 12157.0 | 12600.2 | 14056.8 | 15971.4 | 18171.5 | 19624.1 | 20158.1 | 20280.3 | 18916.4 | 19059.7 | 17382.7 |
| 62.5° | 8629.4 | 9081.8 | 10929.0 | 14168.1 | 18199.5 | 23232.8 | 23468.7 | 22987.7 | 20807.0 | 20382.6 | 19592.1 |
| 65° | 4580.3 | 4929.9 | 6438.9 | 10227.0 | 15779.4 | 24070.7 | 29258.7 | 27825.1 | 24142.1 | 22983.7 | 22446.3 |
| 67.5° | 2343.0 | 2448.7 | 3049.0 | 5005.3 | 10847.9 | 21380.4 | 34448.5 | 35457.8 | 29890.5 | 25564.9 | 22308.6 |
| 69° | 2073.4 | 2135.6 | 2533.8 | 3618.4 | 6946.1 | 18109.3 | 34701.5 | 38078.3 | 32900.0 | 25349.6 | 20272.9 |
| 70° | 2007.1 | 2062.0 | 2424.1 | 3275.1 | 5429.6 | 15186.6 | 33733.4 | 37848.1 | 33669.4 | 24531.1 | 18752.4 |
| 72.5° | 1703.8 | 1750.7 | 2158.5 | 2894.2 | 4412.9 | 7538.4 | 27402.4 | 32071.8 | 30213.2 | 20435.1 | 13573.5 |
| 75° | 1139.5 | 1294.3 | 2071.7 | 2713.1 | 4105.1 | 4282.7 | 18065.9 | 23176.2 | 21529.5 | 13783.2 | 7070.6 |
| 77.5° | 273.6 | 294.2 | 584.9 | 2158.5 | 3754.4 | 3769.2 | 9291.4 | 14407.5 | 11751.5 | 4912.7 | 1671.3 |
| 80° | 147.4 | 141.7 | 163.9 | 428.4 | 3495.6 | 3537.3 | 4182.8 | 6993.5 | 4195.9 | 815.1 | 550.6 |
| 82.5° | 104.0 | 98.2 | 105.7 | 179.4 | 1100.1 | 3222.0 | 3026.1 | 3165.5 | 1739.2 | 313.0 | 247.3 |
| 85° | 37.7 | 36.0 | 58.3 | 162.2 | 345.0 | 1852.3 | 3108.9 | 2610.9 | 1409.1 | 143.4 | 181.1 |
| 87.5° | 13.1 | 11.4 | 22.8 | 88.5 | 105.7 | 788.8 | 1918.6 | 1973.4 | 554.6 | 86.8 | 85.1 |
| 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° | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 | 8683.7 |
| 2.5° | 8606.5 | 8489.5 | 8274.7 | 8053.6 | 7849.7 | 7604.7 | 7481.9 | 7361.4 | 7310.5 | 7291.7 | 7203.2 |
| 5° | 8357.5 | 8159.3 | 7702.9 | 7244.3 | 6821.6 | 6372.7 | 6076.8 | 5839.2 | 5699.2 | 5631.3 | 5523.9 |
| 7.5° | 8038.8 | 7714.4 | 7021.5 | 6314.4 | 5655.8 | 5007.0 | 4526.0 | 4155.9 | 3901.2 | 3778.9 | 3667.6 |
| 10° | 7729.2 | 7297.4 | 6312.7 | 5348.5 | 4454.1 | 3593.9 | 2929.6 | 2448.7 | 2141.4 | 1999.7 | 1909.5 |
| 12.5° | 7452.2 | 6891.9 | 5627.8 | 4407.2 | 3284.3 | 2277.3 | 1601.6 | 1218.9 | 1028.1 | 961.9 | 929.9 |
| 15° | 7204.9 | 6518.3 | 4980.7 | 3512.8 | 2224.2 | 1301.7 | 875.6 | 745.4 | 715.1 | 715.1 | 711.1 |
| 17.5° | 6970.7 | 6152.2 | 4355.8 | 2673.1 | 1396.0 | 796.2 | 666.0 | 648.9 | 648.9 | 656.3 | 656.3 |
| 20° | 6746.2 | 5803.2 | 3752.1 | 1918.6 | 879.0 | 631.7 | 602.0 | 598.0 | 602.0 | 611.2 | 611.2 |
| 22.5° | 6553.7 | 5486.2 | 3188.3 | 1316.6 | 652.9 | 569.5 | 554.6 | 548.9 | 550.6 | 556.3 | 560.3 |
| 25° | 6410.4 | 5218.3 | 2656.6 | 892.2 | 562.0 | 518.6 | 502.1 | 492.4 | 484.9 | 484.9 | 488.4 |
| 27.5° | 6320.1 | 4992.1 | 2141.4 | 648.9 | 505.5 | 471.8 | 444.9 | 430.1 | 413.0 | 403.8 | 407.3 |
| 30° | 6253.9 | 4776.8 | 1658.1 | 530.1 | 452.9 | 418.7 | 385.0 | 360.4 | 335.9 | 324.4 | 328.4 |
| 32.5° | 6229.3 | 4603.1 | 1239.5 | 467.8 | 405.5 | 367.8 | 326.1 | 294.2 | 267.9 | 258.2 | 260.5 |
| 35° | 6295.6 | 4465.5 | 907.6 | 422.7 | 367.8 | 320.4 | 273.6 | 237.6 | 217.0 | 211.3 | 213.1 |
| 37.5° | 6469.2 | 4391.8 | 679.1 | 385.0 | 334.1 | 281.0 | 228.5 | 194.2 | 181.1 | 181.1 | 182.8 |
| 40° | 6797.0 | 4390.1 | 545.5 | 358.7 | 303.9 | 243.3 | 188.5 | 163.9 | 156.5 | 160.5 | 162.2 |
| 42.5° | 7276.3 | 4490.1 | 475.2 | 334.1 | 277.6 | 207.3 | 156.5 | 139.4 | 137.7 | 141.7 | 143.4 |
| 45° | 7930.8 | 4672.8 | 437.5 | 313.0 | 249.0 | 173.6 | 131.9 | 120.5 | 120.5 | 126.2 | 128.5 |
| 47.5° | 8732.8 | 4940.7 | 405.5 | 292.4 | 220.5 | 145.1 | 113.1 | 105.7 | 107.4 | 113.1 | 114.8 |
| 50° | 9698.6 | 5278.9 | 373.6 | 269.6 | 199.9 | 120.5 | 98.2 | 92.5 | 94.2 | 101.7 | 104.0 |
| 52.5° | 10798.7 | 5733.5 | 347.3 | 249.0 | 173.6 | 100.0 | 82.8 | 79.4 | 82.8 | 90.8 | 92.5 |
| 55° | 11741.8 | 6140.8 | 315.3 | 231.9 | 139.4 | 82.8 | 68.0 | 68.0 | 72.0 | 81.1 | 82.8 |
| 57.5° | 12649.4 | 6566.9 | 286.7 | 199.9 | 109.7 | 66.3 | 56.5 | 58.3 | 64.0 | 73.7 | 75.4 |
| 60° | 13981.4 | 7289.4 | 253.0 | 167.9 | 82.8 | 52.5 | 47.4 | 49.1 | 56.5 | 66.3 | 68.0 |
| 62.5° | 16243.2 | 8389.5 | 218.8 | 139.4 | 64.0 | 41.7 | 37.7 | 41.7 | 50.8 | 62.3 | 64.0 |
| 65° | 18284.6 | 8836.7 | 179.4 | 117.1 | 49.1 | 32.0 | 32.0 | 37.7 | 49.1 | 60.5 | 62.3 |
| 67.5° | 17146.8 | 7438.5 | 139.4 | 92.5 | 37.7 | 24.6 | 26.3 | 36.0 | 47.4 | 60.5 | 62.3 |
| 69° | 15164.3 | 6082.5 | 118.8 | 73.7 | 32.0 | 22.8 | 24.6 | 36.0 | 47.4 | 58.3 | 60.5 |
| 70° | 13619.2 | 5135.5 | 105.7 | 62.3 | 28.6 | 22.8 | 24.6 | 33.7 | 47.4 | 58.3 | 60.5 |
| 72.5° | 9121.8 | 2773.1 | 85.1 | 45.1 | 26.3 | 20.6 | 20.6 | 33.7 | 45.1 | 56.5 | 58.3 |
| 75° | 3920.0 | 766.0 | 68.0 | 32.0 | 22.8 | 18.8 | 18.8 | 32.0 | 43.4 | 54.8 | 58.3 |
| 77.5° | 716.8 | 194.2 | 54.8 | 28.6 | 22.8 | 18.8 | 17.1 | 30.3 | 41.7 | 52.5 | 54.8 |
| 80° | 285.0 | 96.0 | 43.4 | 24.6 | 20.6 | 17.1 | 14.9 | 28.6 | 39.4 | 50.8 | 52.5 |
| 82.5° | 171.9 | 54.8 | 36.0 | 22.8 | 20.6 | 14.9 | 13.1 | 24.6 | 37.7 | 49.1 | 50.8 |
| 85° | 139.4 | 37.7 | 28.6 | 22.8 | 18.8 | 14.9 | 11.4 | 22.8 | 33.7 | 47.4 | 49.1 |
| 87.5° | 68.0 | 26.3 | 26.3 | 20.6 | 18.8 | 14.9 | 11.4 | 20.6 | 32.0 | 45.1 | 47.4 |
| 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)