

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: P299270

Luminaire Tested: **GLNA-AF-10-LED-E1-T3-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299270
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-10-LED-E1-T3-7030-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37421 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 323
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

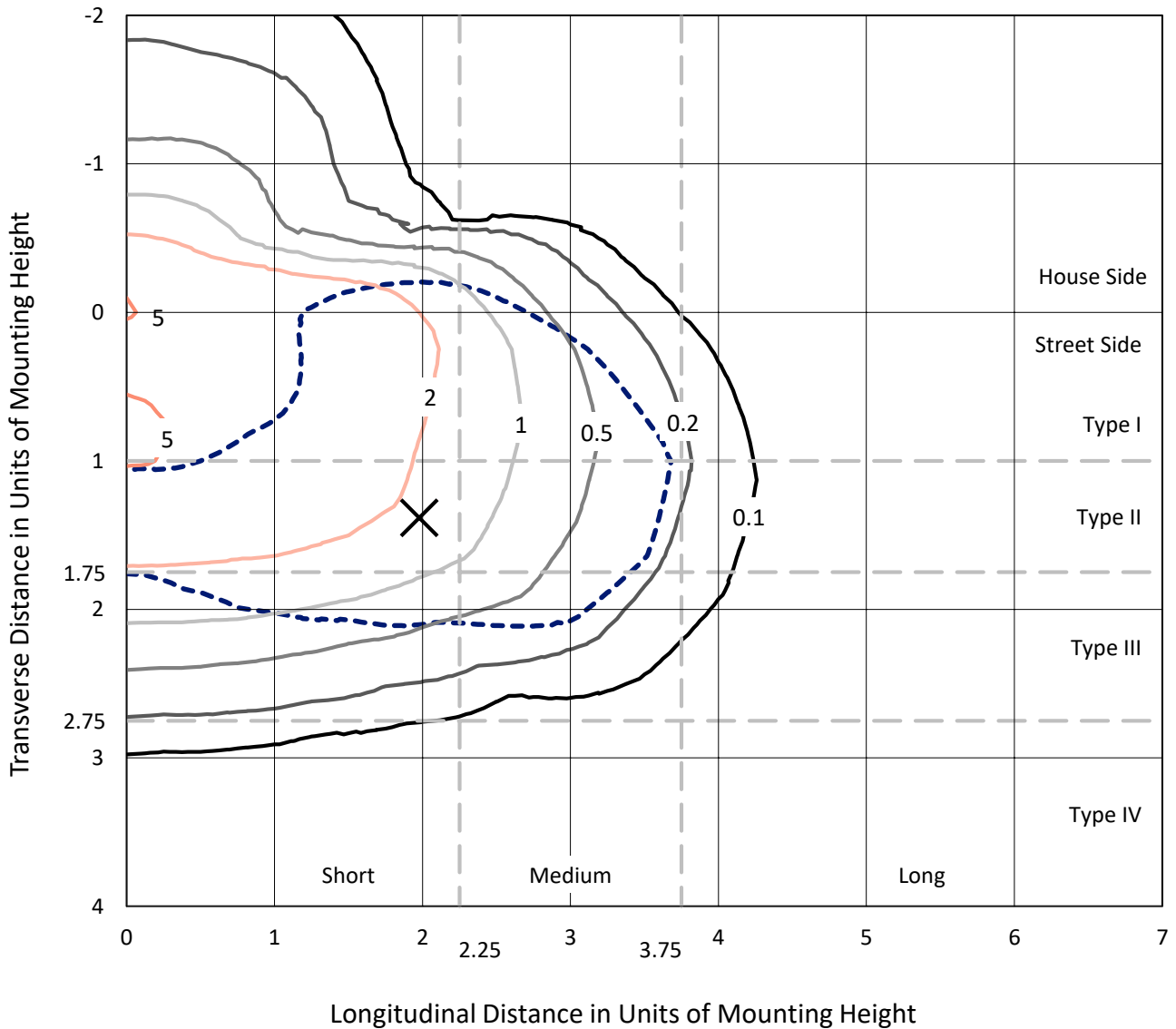


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Iso-Footcandle Lines of Horizontal Illumination

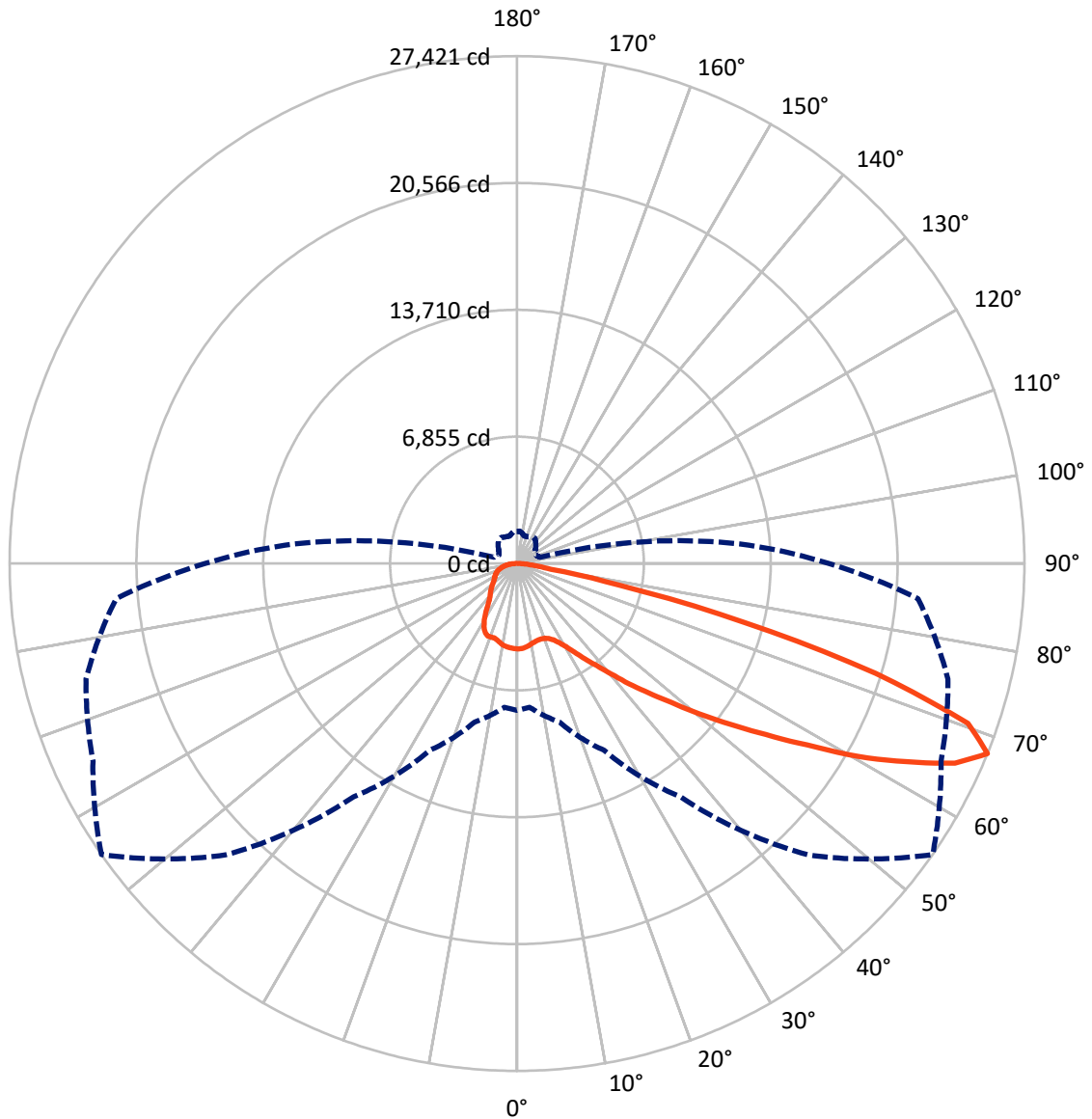
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.3 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8083.7 | 0.0 | 8083.7 |
| | % Fixture | 21.6 | 0.0 | 21.6 |
| Street Side | Lumens | 29337.3 | 0.0 | 29337.3 |
| | % Fixture | 78.4 | 0.0 | 78.4 |
| Total | Lumens | 37421.0 | 0.0 | 37421.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 430.7 | 1.2 |
| 10°-20° | 1219.8 | 3.3 |
| 20°-30° | 2043.4 | 5.5 |
| 30°-40° | 3360.2 | 9.0 |
| 40°-50° | 5656.2 | 15.1 |
| 50°-60° | 8902.4 | 23.8 |
| 60°-70° | 10624.1 | 28.4 |
| 70°-80° | 4562.2 | 12.2 |
| 80°-90° | 622.0 | 1.7 |
| 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° | 37421.0 | 100.0 |
| 0°-180° | 37421.0 | 100.0 |



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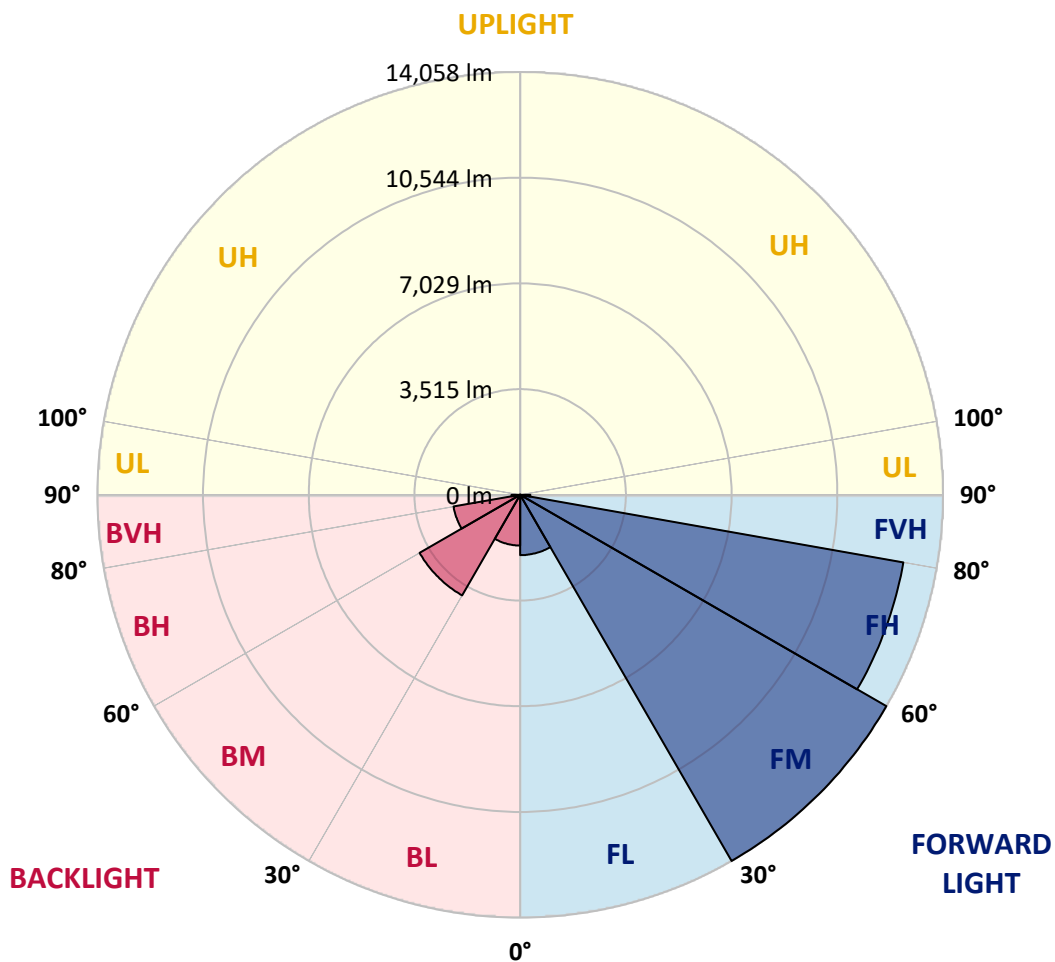
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 2005.9 | 5.4 | | | |
| FM | (30°-60°) | 14058.1 | 37.6 | | | |
| FH | (60°-80°) | 12936.6 | 34.6 | | | G5 |
| FVH | (80°-90°) | 336.7 | 0.9 | | | G3/500 |
| BL | (0°-30°) | 1688.0 | 4.5 | B3/2500 | | |
| BM | (30°-60°) | 3860.7 | 10.3 | B3/5000 | | |
| BH | (60°-80°) | 2249.7 | 6.0 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 285.3 | 0.8 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 |
| 2.5° | 4574.7 | 4576.5 | 4580.1 | 4594.5 | 4607.2 | 4603.6 | 4605.4 | 4598.2 | 4596.3 | 4585.5 | 4596.3 |
| 5° | 4516.8 | 4522.2 | 4524.0 | 4547.5 | 4562.0 | 4565.6 | 4560.2 | 4551.2 | 4540.3 | 4529.5 | 4534.9 |
| 7.5° | 4384.9 | 4399.3 | 4401.1 | 4433.7 | 4457.2 | 4487.9 | 4489.7 | 4491.5 | 4486.1 | 4478.9 | 4489.7 |
| 10° | 4301.7 | 4305.3 | 4303.5 | 4327.0 | 4345.1 | 4379.4 | 4399.3 | 4433.7 | 4448.1 | 4451.7 | 4459.0 |
| 12.5° | 4296.3 | 4292.7 | 4287.3 | 4287.3 | 4281.8 | 4296.3 | 4332.5 | 4381.3 | 4415.6 | 4426.4 | 4435.5 |
| 15° | 4354.1 | 4352.3 | 4334.3 | 4307.2 | 4272.8 | 4262.0 | 4292.7 | 4346.9 | 4392.1 | 4415.6 | 4424.6 |
| 17.5° | 4484.3 | 4473.4 | 4444.5 | 4383.1 | 4309.0 | 4280.0 | 4283.7 | 4328.8 | 4381.3 | 4412.0 | 4421.0 |
| 20° | 4722.9 | 4722.9 | 4661.4 | 4545.7 | 4413.8 | 4345.1 | 4312.6 | 4339.7 | 4390.3 | 4431.9 | 4444.5 |
| 22.5° | 5135.0 | 5138.6 | 5035.6 | 4845.8 | 4623.5 | 4477.1 | 4395.7 | 4390.3 | 4449.9 | 4496.9 | 4511.4 |
| 25° | 5718.8 | 5704.3 | 5559.7 | 5288.6 | 4950.6 | 4708.4 | 4567.4 | 4534.9 | 4585.5 | 4637.9 | 4656.0 |
| 27.5° | 6398.4 | 6346.0 | 6174.2 | 5847.1 | 5409.7 | 5055.4 | 4838.5 | 4786.1 | 4834.9 | 4894.6 | 4912.6 |
| 30° | 7070.7 | 7016.5 | 6812.3 | 6454.4 | 5968.2 | 5519.9 | 5209.1 | 5124.1 | 5192.8 | 5277.8 | 5288.6 |
| 32.5° | 7743.1 | 7743.1 | 7515.4 | 7097.9 | 6568.3 | 6074.8 | 5702.5 | 5601.3 | 5715.2 | 5818.2 | 5841.7 |
| 35° | 8547.4 | 8551.0 | 8330.5 | 7828.1 | 7258.7 | 6736.4 | 6326.1 | 6252.0 | 6423.7 | 6496.0 | 6552.0 |
| 37.5° | 9536.1 | 9556.0 | 9272.2 | 8664.9 | 8041.3 | 7491.9 | 7003.9 | 6902.6 | 7074.4 | 7271.4 | 7452.1 |
| 40° | 10604.3 | 10629.6 | 10316.9 | 9568.6 | 8945.1 | 8370.3 | 7842.5 | 7660.0 | 7945.5 | 8321.5 | 8554.7 |
| 42.5° | 11623.7 | 11753.8 | 11452.0 | 10682.0 | 10011.5 | 9416.8 | 8881.8 | 8616.1 | 8974.0 | 9541.5 | 9744.0 |
| 45° | 13096.8 | 13190.8 | 12664.8 | 11967.1 | 11336.3 | 10671.2 | 9962.7 | 9682.5 | 10183.2 | 10898.9 | 10940.5 |
| 47.5° | 14078.2 | 14007.7 | 13740.2 | 13306.4 | 12907.0 | 12285.2 | 11218.8 | 10911.6 | 11576.7 | 12419.0 | 12185.8 |
| 50° | 14600.6 | 14622.3 | 14586.1 | 14611.4 | 14625.9 | 14235.5 | 12758.8 | 12337.6 | 13131.1 | 14148.7 | 13611.9 |
| 52.5° | 15088.6 | 14944.0 | 15063.3 | 15656.1 | 16371.9 | 16227.3 | 14434.3 | 13995.1 | 14797.6 | 16068.2 | 15119.3 |
| 55° | 15077.7 | 14857.2 | 15245.8 | 16292.3 | 17844.9 | 18011.2 | 16315.8 | 15809.8 | 16559.8 | 18126.9 | 16717.1 |
| 57.5° | 14544.5 | 14555.4 | 15153.7 | 16523.7 | 18871.6 | 19688.5 | 18499.2 | 17740.1 | 18428.7 | 20212.7 | 18175.7 |
| 60° | 13810.7 | 13910.1 | 14772.3 | 16485.7 | 19694.0 | 21064.0 | 21177.9 | 19820.5 | 20259.7 | 22108.7 | 19383.1 |
| 62.5° | 12626.8 | 12731.7 | 13921.0 | 16091.7 | 19569.2 | 22388.9 | 23599.9 | 22181.0 | 22173.8 | 23258.3 | 19737.3 |
| 65° | 10759.7 | 10729.0 | 11978.0 | 14618.6 | 18522.7 | 23368.5 | 26005.6 | 24221.6 | 23616.1 | 23276.3 | 19025.2 |
| 67.5° | 7934.7 | 7797.3 | 8869.2 | 11133.9 | 15395.8 | 22271.4 | 27420.8 | 25284.4 | 24107.8 | 21745.4 | 16849.0 |
| 70° | 4117.4 | 3980.0 | 4847.6 | 6501.4 | 10125.3 | 17382.2 | 25853.7 | 24734.9 | 23021.5 | 18228.1 | 13199.8 |
| 72.5° | 1760.5 | 1737.0 | 2089.4 | 2852.2 | 4898.2 | 10025.9 | 20272.3 | 21409.2 | 19753.6 | 13581.2 | 9075.2 |
| 75° | 1183.9 | 1176.6 | 1308.6 | 1554.4 | 2203.3 | 4068.6 | 12686.5 | 15197.0 | 14452.4 | 8420.9 | 5104.2 |
| 77.5° | 929.0 | 920.0 | 997.7 | 1117.0 | 1427.9 | 1605.0 | 5630.2 | 8158.8 | 7551.5 | 3665.5 | 2234.0 |
| 80° | 726.6 | 719.4 | 768.2 | 833.2 | 1026.6 | 1012.2 | 1852.6 | 3246.2 | 2512.4 | 1404.4 | 1086.3 |
| 82.5° | 573.0 | 573.0 | 612.7 | 614.5 | 728.4 | 690.4 | 967.0 | 1429.7 | 1254.4 | 818.8 | 665.1 |
| 85° | 524.2 | 524.2 | 565.7 | 459.1 | 475.4 | 435.6 | 600.1 | 847.7 | 795.3 | 336.2 | 289.2 |
| 87.5° | 263.9 | 256.7 | 475.4 | 406.7 | 258.5 | 231.4 | 292.8 | 410.3 | 441.0 | 186.2 | 144.6 |
| 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 | 4614.4 |
| 2.5° | 4592.7 | 4590.9 | 4594.5 | 4596.3 | 4610.8 | 4630.7 | 4639.7 | 4652.4 | 4659.6 | 4656.0 |
| 5° | 4538.5 | 4542.1 | 4556.6 | 4567.4 | 4592.7 | 4625.3 | 4643.3 | 4657.8 | 4670.4 | 4665.0 |
| 7.5° | 4493.3 | 4502.4 | 4524.0 | 4533.1 | 4547.5 | 4556.6 | 4554.8 | 4560.2 | 4571.0 | 4558.4 |
| 10° | 4468.0 | 4478.9 | 4495.1 | 4482.5 | 4448.1 | 4399.3 | 4354.1 | 4330.6 | 4337.9 | 4328.8 |
| 12.5° | 4442.7 | 4457.2 | 4444.5 | 4384.9 | 4289.1 | 4225.8 | 4191.5 | 4195.1 | 4211.4 | 4215.0 |
| 15° | 4428.2 | 4433.7 | 4379.4 | 4267.4 | 4169.8 | 4160.7 | 4178.8 | 4175.2 | 4177.0 | 4177.0 |
| 17.5° | 4428.2 | 4413.8 | 4312.6 | 4200.5 | 4158.9 | 4142.7 | 4086.6 | 4016.2 | 3985.4 | 3974.6 |
| 20° | 4451.7 | 4413.8 | 4290.9 | 4216.8 | 4126.4 | 3987.2 | 3839.0 | 3708.9 | 3651.0 | 3634.8 |
| 22.5° | 4522.2 | 4457.2 | 4352.3 | 4224.0 | 3967.4 | 3734.2 | 3499.2 | 3343.8 | 3238.9 | 3220.9 |
| 25° | 4665.0 | 4592.7 | 4473.4 | 4128.2 | 3714.3 | 3381.7 | 3114.2 | 2940.7 | 2835.9 | 2821.4 |
| 27.5° | 4914.5 | 4867.5 | 4538.5 | 3916.7 | 3378.1 | 3022.1 | 2774.4 | 2640.7 | 2563.0 | 2557.5 |
| 30° | 5290.4 | 5266.9 | 4506.0 | 3604.1 | 2964.2 | 2673.2 | 2553.9 | 2476.2 | 2418.4 | 2416.6 |
| 32.5° | 5890.5 | 5700.7 | 4399.3 | 3222.7 | 2586.5 | 2425.6 | 2376.8 | 2329.8 | 2284.6 | 2284.6 |
| 35° | 6662.3 | 6051.3 | 4196.9 | 2814.2 | 2356.9 | 2288.2 | 2226.8 | 2152.7 | 2093.0 | 2089.4 |
| 37.5° | 7569.6 | 6268.2 | 3833.6 | 2485.2 | 2248.5 | 2196.1 | 2105.7 | 1995.4 | 1890.6 | 1872.5 |
| 40° | 8486.0 | 6333.3 | 3322.1 | 2282.8 | 2179.8 | 2103.9 | 1993.6 | 1863.5 | 1762.3 | 1756.8 |
| 42.5° | 9326.4 | 6208.6 | 2779.9 | 2143.6 | 2111.1 | 2009.9 | 1894.2 | 1778.5 | 1699.0 | 1697.2 |
| 45° | 10031.3 | 5885.1 | 2324.4 | 2011.7 | 2038.8 | 1924.9 | 1821.9 | 1727.9 | 1666.5 | 1653.8 |
| 47.5° | 10694.7 | 5427.8 | 2004.5 | 1872.5 | 1966.5 | 1877.9 | 1791.2 | 1702.6 | 1643.0 | 1633.9 |
| 50° | 11464.6 | 4934.3 | 1780.3 | 1737.0 | 1903.2 | 1861.7 | 1816.5 | 1724.3 | 1624.9 | 1614.1 |
| 52.5° | 12397.3 | 4507.8 | 1605.0 | 1617.7 | 1854.4 | 1883.4 | 1881.6 | 1785.8 | 1612.2 | 1597.8 |
| 55° | 13438.4 | 4034.2 | 1473.1 | 1520.1 | 1834.6 | 1923.1 | 1897.8 | 1843.6 | 1623.1 | 1601.4 |
| 57.5° | 14463.2 | 3481.1 | 1380.9 | 1446.0 | 1805.6 | 1919.5 | 1820.1 | 1742.4 | 1648.4 | 1617.7 |
| 60° | 15231.4 | 2738.3 | 1310.4 | 1380.9 | 1742.4 | 1859.9 | 1735.2 | 1632.1 | 1643.0 | 1619.5 |
| 62.5° | 15282.0 | 2116.5 | 1225.5 | 1324.9 | 1646.6 | 1800.2 | 1679.1 | 1583.3 | 1666.5 | 1644.8 |
| 65° | 14383.7 | 1599.6 | 1144.1 | 1258.0 | 1543.6 | 1762.3 | 1624.9 | 1556.2 | 1715.3 | 1691.8 |
| 67.5° | 12109.9 | 1286.9 | 1075.4 | 1189.3 | 1440.5 | 1682.7 | 1576.1 | 1530.9 | 1758.6 | 1717.1 |
| 70° | 8742.6 | 1097.1 | 1008.6 | 1106.2 | 1348.4 | 1592.4 | 1532.7 | 1485.7 | 1641.2 | 1576.1 |
| 72.5° | 5382.6 | 950.7 | 932.6 | 995.9 | 1277.9 | 1498.4 | 1467.6 | 1400.8 | 1478.5 | 1426.1 |
| 75° | 2687.7 | 824.2 | 847.7 | 887.5 | 1178.5 | 1391.7 | 1359.2 | 1292.3 | 1303.2 | 1292.3 |
| 77.5° | 1286.9 | 704.9 | 748.3 | 779.0 | 1050.1 | 1270.6 | 1236.3 | 1167.6 | 1155.0 | 1156.8 |
| 80° | 815.2 | 589.2 | 630.8 | 652.5 | 938.1 | 1129.7 | 1095.3 | 1026.6 | 1171.2 | 1086.3 |
| 82.5° | 509.7 | 479.0 | 489.8 | 529.6 | 817.0 | 983.3 | 938.1 | 876.6 | 1055.6 | 835.0 |
| 85° | 282.0 | 334.4 | 348.8 | 383.2 | 629.0 | 822.4 | 777.2 | 699.5 | 627.2 | 616.3 |
| 87.5° | 168.1 | 198.8 | 204.2 | 229.5 | 422.9 | 594.7 | 526.0 | 498.9 | 413.9 | 412.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)