

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: P591107

Luminaire Tested: **CTN-CA10-310-722-U-T1-SSS-HM-EX120**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591107  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-310-722-U-T1-SSS-HM-EX120  
Description: CELESTEON HIGH MAST LUMINAIRE, 120D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22974 lumens  
Efficiency: N/A  
Efficacy: 73.5 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

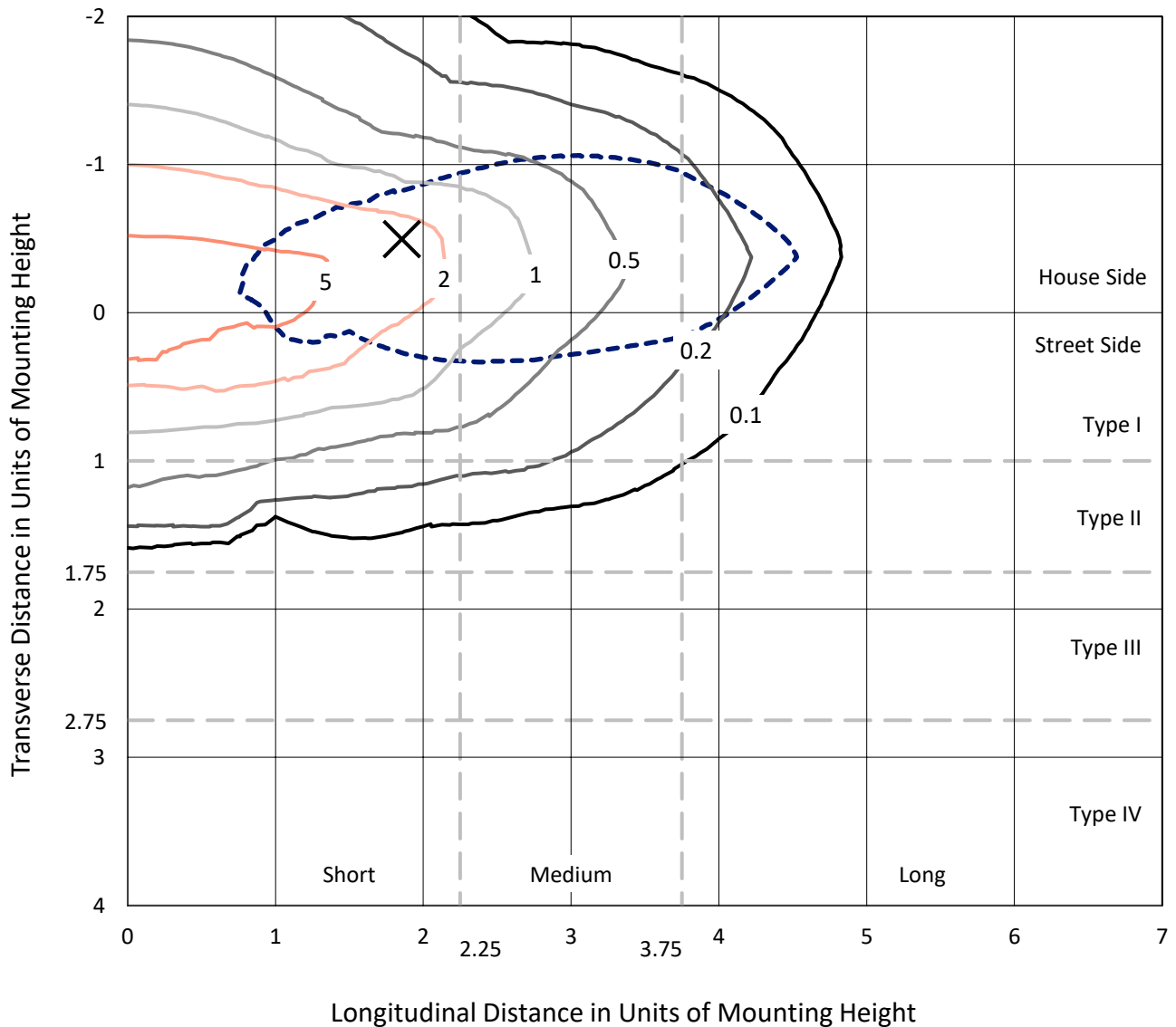
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P591107  
 CATALOG NUMBER: CTN-CA10-310-722-U-T1-SSS-HM-EX120

### Iso-Footcandle Lines of Horizontal Illumination

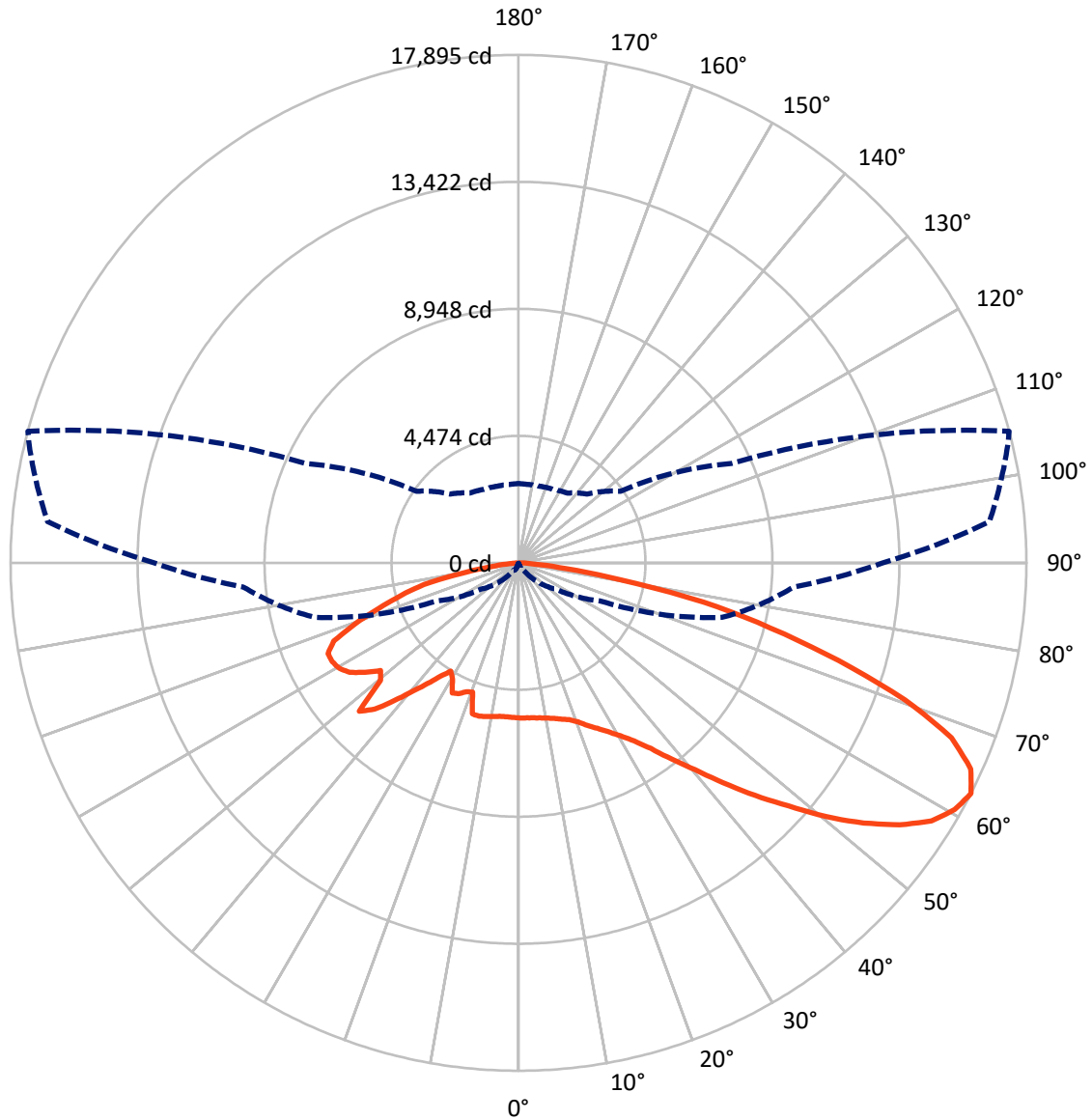
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.7 fc  
 Type I - Short - N/A

REPORT NUMBER: P591107  
CATALOG NUMBER: CTN-CA10-310-722-U-T1-SSS-HM-EX120

### Luminous Intensity Polar Plot



— Vertical Plane Through 105-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P591107  
 CATALOG NUMBER: CTN-CA10-310-722-U-T1-SSS-HM-EX120

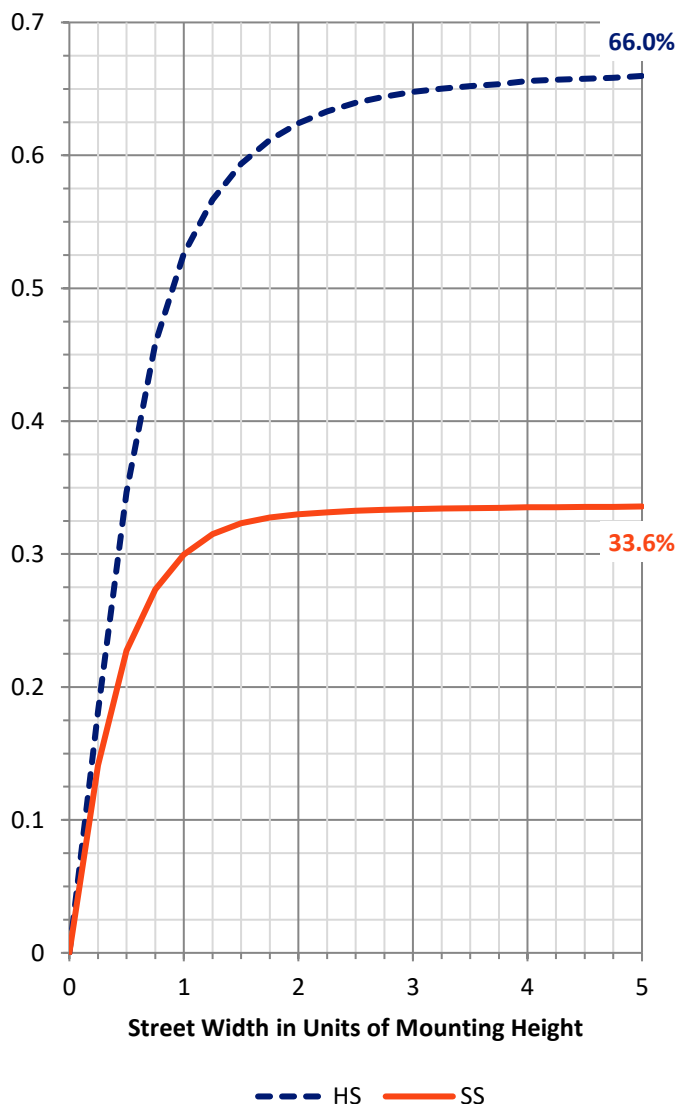
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 15286.6  | 0.0    | 15286.6 |
|                    | % Fixture | 66.5     | 0.0    | 66.5    |
| <b>Street Side</b> | Lumens    | 7687.4   | 0.0    | 7687.4  |
|                    | % Fixture | 33.5     | 0.0    | 33.5    |
| <b>Total</b>       | Lumens    | 22974.0  | 0.0    | 22974.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 521.5   | 2.3       |
| 10°-20°   | 1472.9  | 6.4       |
| 20°-30°   | 2075.8  | 9.0       |
| 30°-40°   | 2820.3  | 12.3      |
| 40°-50°   | 3836.6  | 16.7      |
| 50°-60°   | 4545.2  | 19.8      |
| 60°-70°   | 4457.1  | 19.4      |
| 70°-80°   | 2811.1  | 12.2      |
| 80°-90°   | 433.6   | 1.9       |
| 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°    | 22974.0 | 100.0     |
| 0°-180°   | 22974.0 | 100.0     |

**Coefficient of Utilization**

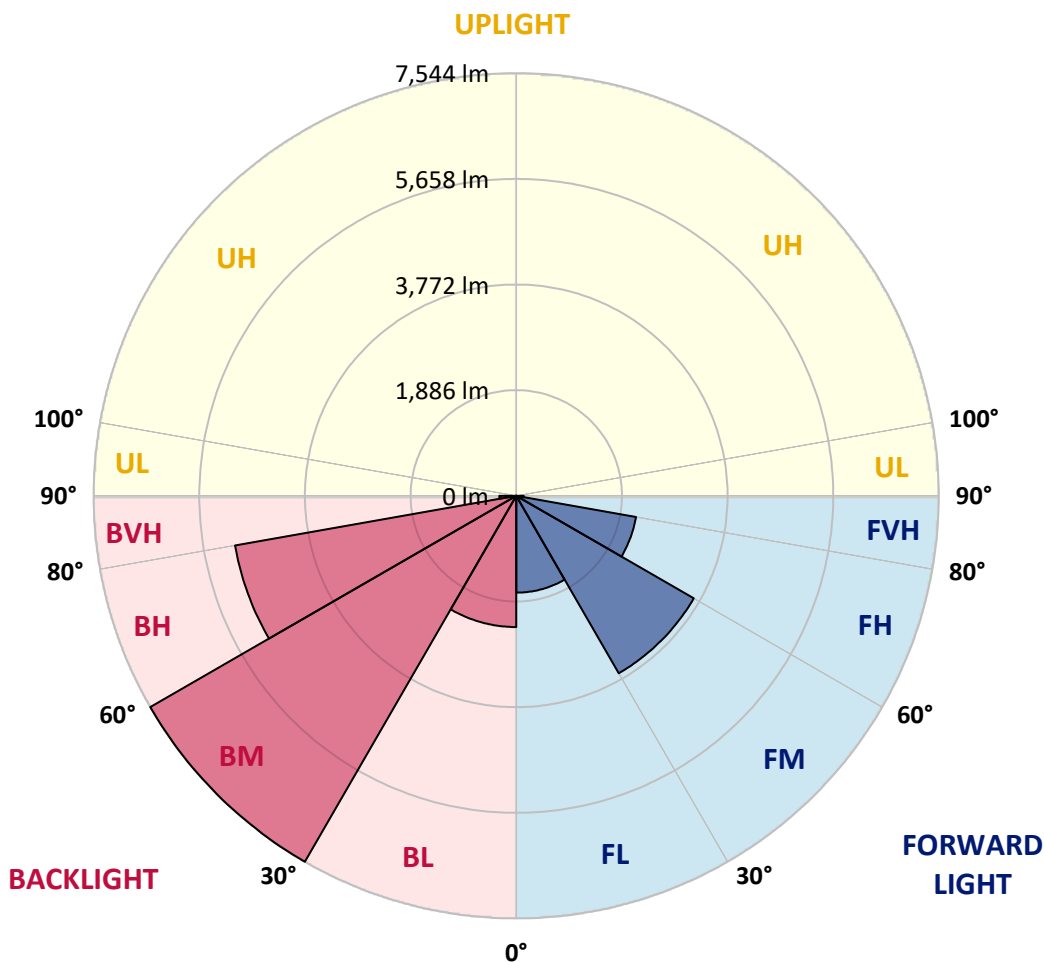


REPORT NUMBER: P591107  
 CATALOG NUMBER: CTN-CA10-310-722-U-T1-SSS-HM-EX120

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1728.0 | 7.5       |                         |      |         |
| FM (30°-60°)   | 3658.0 | 15.9      |                         |      |         |
| FH (60°-80°)   | 2170.5 | 9.4       |                         |      | G2/5000 |
| FVH (80°-90°)  | 130.8  | 0.6       |                         |      | G2/225  |
| BL (0°-30°)    | 2342.1 | 10.2      | B3/2500                 |      |         |
| BM (30°-60°)   | 7544.0 | 32.8      | B4/8500                 |      |         |
| BH (60°-80°)   | 5097.7 | 22.2      | B5                      |      | G5      |
| BVH (80°-90°)  | 302.8  | 1.3       |                         |      | G3/500  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B5-U0-G5**  
 Type I Short





REPORT NUMBER: P591107

CATALOG NUMBER: CTN-CA10-310-722-U-T1-SSS-HM-EX120

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°     | 90°     |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 0°    | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1  | 5465.1  |
| 2.5°  | 5468.8 | 5426.1 | 5456.6 | 5503.0 | 5433.4 | 5473.7 | 5406.6 | 5461.5 | 5448.1 | 5451.7  | 5477.4  |
| 5°    | 5426.1 | 5380.9 | 5417.5 | 5478.6 | 5410.2 | 5455.4 | 5400.5 | 5446.8 | 5442.0 | 5459.0  | 5479.8  |
| 7.5°  | 5385.8 | 5343.1 | 5380.9 | 5421.2 | 5385.8 | 5429.8 | 5388.3 | 5445.6 | 5449.3 | 5487.1  | 5504.2  |
| 10°   | 5343.1 | 5300.4 | 5337.0 | 5383.4 | 5354.1 | 5409.0 | 5391.9 | 5461.5 | 5488.3 | 5538.4  | 5553.0  |
| 12.5° | 5249.1 | 5211.3 | 5241.8 | 5295.5 | 5300.4 | 5380.9 | 5391.9 | 5499.3 | 5532.3 | 5598.2  | 5620.1  |
| 15°   | 4684.1 | 4725.6 | 4887.9 | 5044.1 | 5111.2 | 5260.1 | 5341.9 | 5533.5 | 5579.9 | 5673.8  | 5708.0  |
| 17.5° | 3789.5 | 3711.4 | 3458.7 | 3524.6 | 3895.7 | 4396.0 | 4585.2 | 5061.2 | 5564.0 | 5769.0  | 5813.0  |
| 20°   | 2239.5 | 2399.4 | 2893.7 | 3045.0 | 3181.7 | 3719.9 | 4355.8 | 4638.9 | 4831.7 | 5560.3  | 5957.0  |
| 22.5° | 1846.5 | 1857.5 | 2211.4 | 2909.5 | 3063.3 | 3274.5 | 3766.3 | 4698.7 | 4897.6 | 5042.9  | 5484.7  |
| 25°   | 1712.3 | 1723.3 | 1784.3 | 2323.7 | 2979.1 | 3223.2 | 3439.2 | 4294.7 | 5067.3 | 5246.7  | 5592.1  |
| 27.5° | 1604.9 | 1619.5 | 1675.7 | 1827.0 | 2777.7 | 3208.5 | 3481.9 | 3809.0 | 5142.9 | 5488.3  | 5811.8  |
| 30°   | 1524.3 | 1530.4 | 1587.8 | 1734.3 | 2100.4 | 3212.2 | 3544.2 | 3893.2 | 4710.9 | 5794.7  | 6119.3  |
| 32.5° | 1451.1 | 1454.8 | 1514.6 | 1657.4 | 1878.3 | 2975.4 | 3638.1 | 4069.0 | 4498.6 | 6046.1  | 6541.6  |
| 35°   | 1395.0 | 1392.5 | 1446.2 | 1586.6 | 1806.3 | 2278.6 | 3743.1 | 4280.1 | 4837.8 | 5808.1  | 7171.3  |
| 37.5° | 1341.3 | 1337.6 | 1384.0 | 1513.4 | 1742.8 | 2133.3 | 3621.1 | 4533.9 | 5324.8 | 5988.7  | 7120.1  |
| 40°   | 1299.8 | 1292.4 | 1331.5 | 1447.4 | 1676.9 | 2096.7 | 2852.2 | 4802.4 | 5859.3 | 6919.9  | 7550.9  |
| 42.5° | 1263.2 | 1258.3 | 1291.2 | 1384.0 | 1609.8 | 2052.8 | 2658.1 | 4947.7 | 6524.5 | 7996.3  | 8665.1  |
| 45°   | 1208.2 | 1215.6 | 1252.2 | 1341.3 | 1537.8 | 1990.5 | 2677.7 | 3973.8 | 7228.7 | 8930.0  | 9775.8  |
| 47.5° | 1185.1 | 1183.8 | 1207.0 | 1291.2 | 1475.5 | 1903.9 | 2664.2 | 3644.2 | 7671.7 | 9907.6  | 10863.2 |
| 50°   | 1148.4 | 1142.3 | 995.9  | 1232.6 | 1412.1 | 1796.5 | 2608.1 | 3739.4 | 6384.1 | 10866.8 | 11861.5 |
| 52.5° | 1080.1 | 960.5  | 871.4  | 1191.2 | 1347.4 | 1679.3 | 2482.4 | 3780.9 | 6164.5 | 10696.0 | 12719.5 |
| 55°   | 573.6  | 639.5  | 825.0  | 1132.6 | 1271.7 | 1574.4 | 2298.1 | 3751.6 | 6639.2 | 8552.9  | 11807.8 |
| 57.5° | 508.9  | 506.5  | 524.8  | 894.6  | 662.7  | 1459.7 | 2076.0 | 3617.4 | 7088.3 | 8943.4  | 12028.7 |
| 60°   | 40.3   | 41.5   | 48.8   | 297.8  | 351.5  | 1027.6 | 1836.8 | 3451.4 | 7326.3 | 9404.7  | 12564.5 |
| 62.5° | 19.5   | 22.0   | 29.3   | 266.1  | 321.0  | 934.9  | 1620.7 | 3168.3 | 7426.4 | 9737.9  | 12829.3 |
| 65°   | 4.9    | 6.1    | 13.4   | 234.3  | 279.5  | 832.3  | 1403.5 | 2836.3 | 7434.9 | 9751.3  | 13042.9 |
| 67.5° | 3.7    | 6.1    | 13.4   | 212.4  | 255.1  | 742.0  | 1213.1 | 2604.4 | 7071.3 | 9701.3  | 12935.5 |
| 70°   | 3.7    | 6.1    | 13.4   | 190.4  | 230.7  | 643.2  | 1044.7 | 2377.4 | 6142.5 | 9514.6  | 12570.6 |
| 72.5° | 3.7    | 7.3    | 13.4   | 167.2  | 202.6  | 545.5  | 887.3  | 2127.2 | 5155.2 | 8734.7  | 11757.8 |
| 75°   | 3.7    | 7.3    | 14.6   | 135.5  | 173.3  | 434.5  | 728.6  | 1822.1 | 4287.4 | 7574.1  | 10410.4 |
| 77.5° | 3.7    | 7.3    | 14.6   | 105.0  | 140.4  | 324.6  | 551.6  | 1443.8 | 3420.9 | 5586.0  | 7314.1  |
| 80°   | 3.7    | 7.3    | 14.6   | 74.4   | 114.7  | 228.2  | 401.5  | 984.9  | 2040.6 | 2936.4  | 3724.8  |
| 82.5° | 3.7    | 7.3    | 14.6   | 53.7   | 83.0   | 164.8  | 247.8  | 485.7  | 973.9  | 1409.6  | 1768.4  |
| 85°   | 2.4    | 6.1    | 13.4   | 35.4   | 43.9   | 100.1  | 147.7  | 216.0  | 291.7  | 385.7   | 521.1   |
| 87.5° | 2.4    | 3.7    | 8.5    | 13.4   | 18.3   | 35.4   | 54.9   | 48.8   | 54.9   | 114.7   | 164.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     |



REPORT NUMBER: P591107

CATALOG NUMBER: CTN-CA10-310-722-U-T1-SSS-HM-EX120

**CANDELA DISTRIBUTION (continued):**

|       | 95°     | 104°    | 105°    | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 5465.1  | 5465.1  | 5465.1  | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 | 5465.1 |
| 2.5°  | 5473.7  | 5468.8  | 5470.0  | 5496.9 | 5473.7 | 5478.6 | 5438.3 | 5518.8 | 5511.5 | 5500.5 | 5532.3 |
| 5°    | 5479.8  | 5477.4  | 5487.1  | 5510.3 | 5474.9 | 5481.0 | 5443.2 | 5537.2 | 5514.0 | 5510.3 | 5548.1 |
| 7.5°  | 5510.3  | 5506.6  | 5516.4  | 5527.4 | 5488.3 | 5488.3 | 5455.4 | 5529.8 | 5516.4 | 5492.0 | 5534.7 |
| 10°   | 5565.2  | 5551.8  | 5561.6  | 5567.7 | 5507.9 | 5505.4 | 5444.4 | 5532.3 | 5498.1 | 5485.9 | 5540.8 |
| 12.5° | 5642.1  | 5611.6  | 5626.2  | 5616.5 | 5537.2 | 5522.5 | 5440.7 | 5498.1 | 5455.4 | 5448.1 | 5498.1 |
| 15°   | 5745.8  | 5705.6  | 5716.6  | 5698.3 | 5598.2 | 5555.5 | 5423.7 | 5448.1 | 5379.7 | 5373.6 | 5410.2 |
| 17.5° | 5842.3  | 5817.9  | 5811.8  | 5811.8 | 5694.6 | 5588.4 | 5407.8 | 5373.6 | 5283.3 | 5277.2 | 5295.5 |
| 20°   | 6016.8  | 5983.8  | 5980.2  | 5950.9 | 5777.6 | 5615.3 | 5382.2 | 5277.2 | 5142.9 | 5112.4 | 5146.6 |
| 22.5° | 6072.9  | 6232.8  | 6221.8  | 6092.5 | 5847.1 | 5637.2 | 5329.7 | 5156.4 | 4972.1 | 4913.5 | 4930.6 |
| 25°   | 6240.1  | 6480.6  | 6461.0  | 6273.1 | 5917.9 | 5649.4 | 5266.2 | 5023.3 | 4769.5 | 4667.0 | 4670.6 |
| 27.5° | 6505.0  | 6750.3  | 6736.8  | 6465.9 | 6005.8 | 5653.1 | 5195.4 | 4883.0 | 4568.1 | 4433.9 | 4444.9 |
| 30°   | 6841.8  | 7089.6  | 7070.0  | 6680.7 | 6138.8 | 5660.4 | 5141.7 | 4714.6 | 4383.8 | 4238.6 | 4236.2 |
| 32.5° | 7310.5  | 7535.0  | 7477.7  | 6967.5 | 6298.7 | 5690.9 | 5070.9 | 4554.7 | 4215.4 | 4062.9 | 4050.7 |
| 35°   | 8018.3  | 8101.3  | 8030.5  | 7309.2 | 6468.4 | 5710.5 | 4957.4 | 4398.5 | 4059.2 | 3909.1 | 3898.1 |
| 37.5° | 8975.1  | 8872.6  | 8777.4  | 7693.7 | 6644.1 | 5705.6 | 4813.4 | 4247.1 | 3924.9 | 3782.2 | 3782.2 |
| 40°   | 9069.1  | 9758.7  | 9582.9  | 8098.9 | 6802.8 | 5678.7 | 4676.7 | 4099.5 | 3816.3 | 3700.4 | 3718.7 |
| 42.5° | 9509.7  | 10843.6 | 10597.1 | 8490.6 | 6917.5 | 5600.6 | 4530.3 | 3965.2 | 3715.0 | 3621.1 | 3628.4 |
| 45°   | 10592.2 | 11831.0 | 11687.0 | 8869.0 | 6979.7 | 5462.7 | 4360.6 | 3833.4 | 3601.5 | 3527.1 | 3541.7 |
| 47.5° | 11756.5 | 13005.0 | 12793.9 | 9218.0 | 6945.5 | 5258.9 | 4180.0 | 3712.6 | 3483.1 | 3435.5 | 3462.4 |
| 50°   | 12857.4 | 14240.1 | 14064.4 | 9463.3 | 6794.2 | 4973.3 | 3987.2 | 3584.4 | 3390.4 | 3352.6 | 3366.0 |
| 52.5° | 13937.5 | 15361.7 | 15229.9 | 9596.3 | 6491.5 | 4674.3 | 3809.0 | 3462.4 | 3303.7 | 3256.1 | 3274.5 |
| 55°   | 14828.4 | 16424.7 | 16296.6 | 9582.9 | 6036.3 | 4361.9 | 3632.0 | 3330.6 | 3215.9 | 3173.2 | 3187.8 |
| 57.5° | 15524.0 | 17252.2 | 17160.7 | 9379.1 | 5506.6 | 4075.1 | 3431.9 | 3201.2 | 3099.9 | 3062.1 | 3074.3 |
| 60°   | 16146.5 | 17777.0 | 17658.6 | 8928.8 | 4945.2 | 3759.0 | 3225.6 | 3047.4 | 2963.2 | 2932.7 | 2952.3 |
| 62.5° | 16656.6 | 17788.0 | 17895.4 | 8277.0 | 4394.8 | 3424.6 | 2996.2 | 2858.3 | 2797.3 | 2779.0 | 2791.2 |
| 65°   | 16787.2 | 17460.9 | 17513.4 | 7471.6 | 3837.1 | 3092.6 | 2720.4 | 2630.1 | 2604.4 | 2593.4 | 2617.9 |
| 67.5° | 16606.6 | 16771.3 | 16458.9 | 6790.5 | 3328.1 | 2716.7 | 2422.6 | 2366.4 | 2382.3 | 2384.7 | 2416.5 |
| 70°   | 16140.4 | 14926.0 | 14443.9 | 6220.6 | 2853.4 | 2300.5 | 2095.5 | 2077.2 | 2119.9 | 2155.3 | 2178.5 |
| 72.5° | 14951.7 | 12254.5 | 11795.6 | 5415.1 | 2249.3 | 1761.1 | 1650.0 | 1708.6 | 1694.0 | 1709.8 | 1751.3 |
| 75°   | 12872.0 | 9458.4  | 9174.1  | 4407.0 | 1713.5 | 1280.2 | 1131.4 | 1137.5 | 1155.8 | 1236.3 | 1280.2 |
| 77.5° | 9169.2  | 6802.8  | 6675.8  | 3380.6 | 1135.0 | 753.0  | 778.6  | 865.3  | 890.9  | 893.4  | 923.9  |
| 80°   | 4858.6  | 3791.9  | 3619.8  | 1991.8 | 750.6  | 538.2  | 585.8  | 623.6  | 657.8  | 693.2  | 701.8  |
| 82.5° | 2189.5  | 1714.7  | 1667.1  | 989.8  | 476.0  | 415.0  | 425.9  | 490.6  | 518.7  | 524.8  | 530.9  |
| 85°   | 850.6   | 591.9   | 563.8   | 411.3  | 312.4  | 280.7  | 311.2  | 377.1  | 404.0  | 391.8  | 388.1  |
| 87.5° | 227.0   | 139.1   | 126.9   | 137.9  | 146.5  | 155.0  | 177.0  | 201.4  | 230.7  | 222.1  | 214.8  |
| 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)