

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: P591202

Luminaire Tested: **CTN-CA10-210-727-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591202  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-10)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-210-727-U-T4-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18747 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

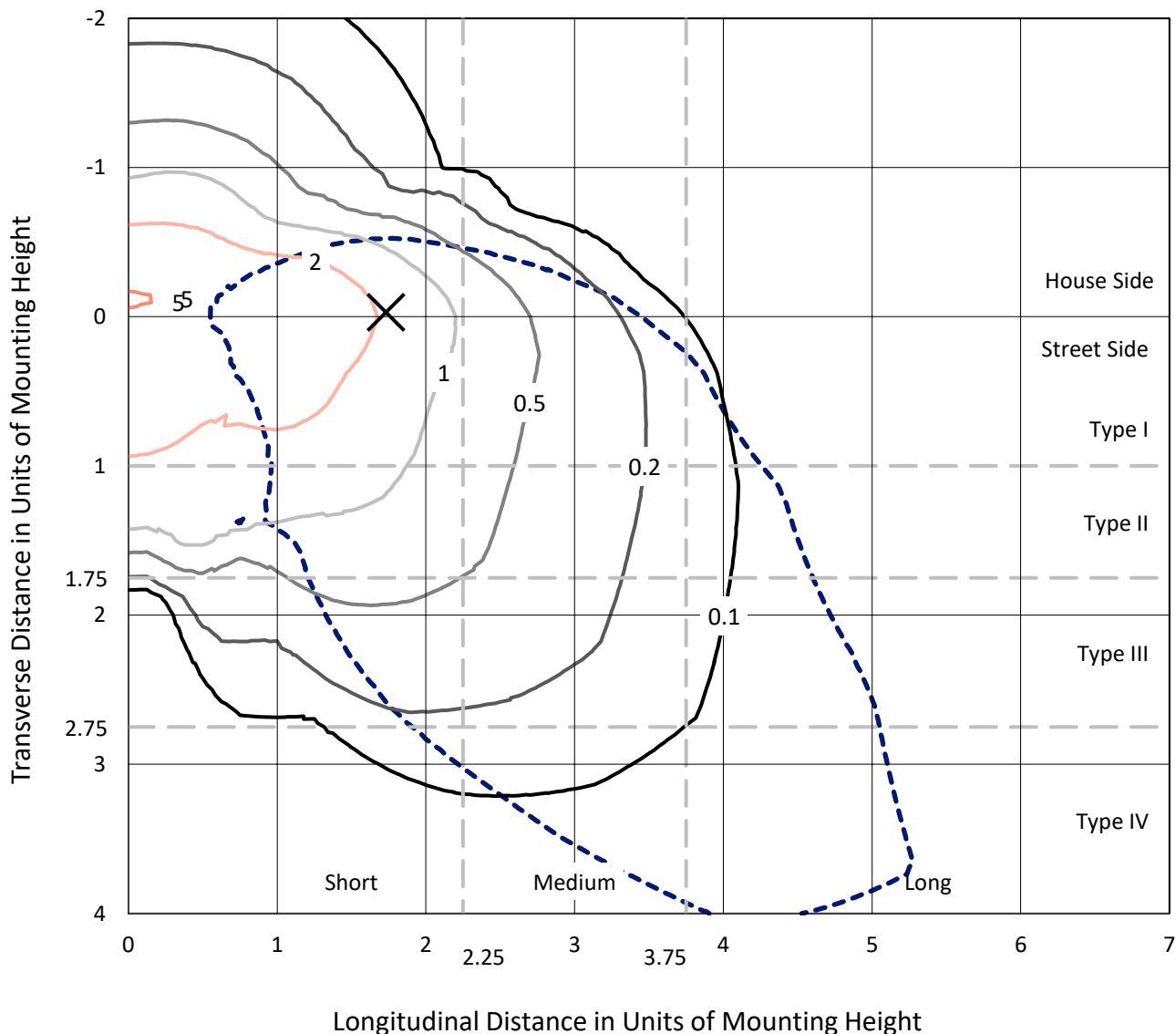
Input Watts (W): 212.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P591202  
 CATALOG NUMBER: CTN-CA10-210-727-U-T4-SSS-HM-EX90

### Iso-Footcandle Lines of Horizontal Illumination

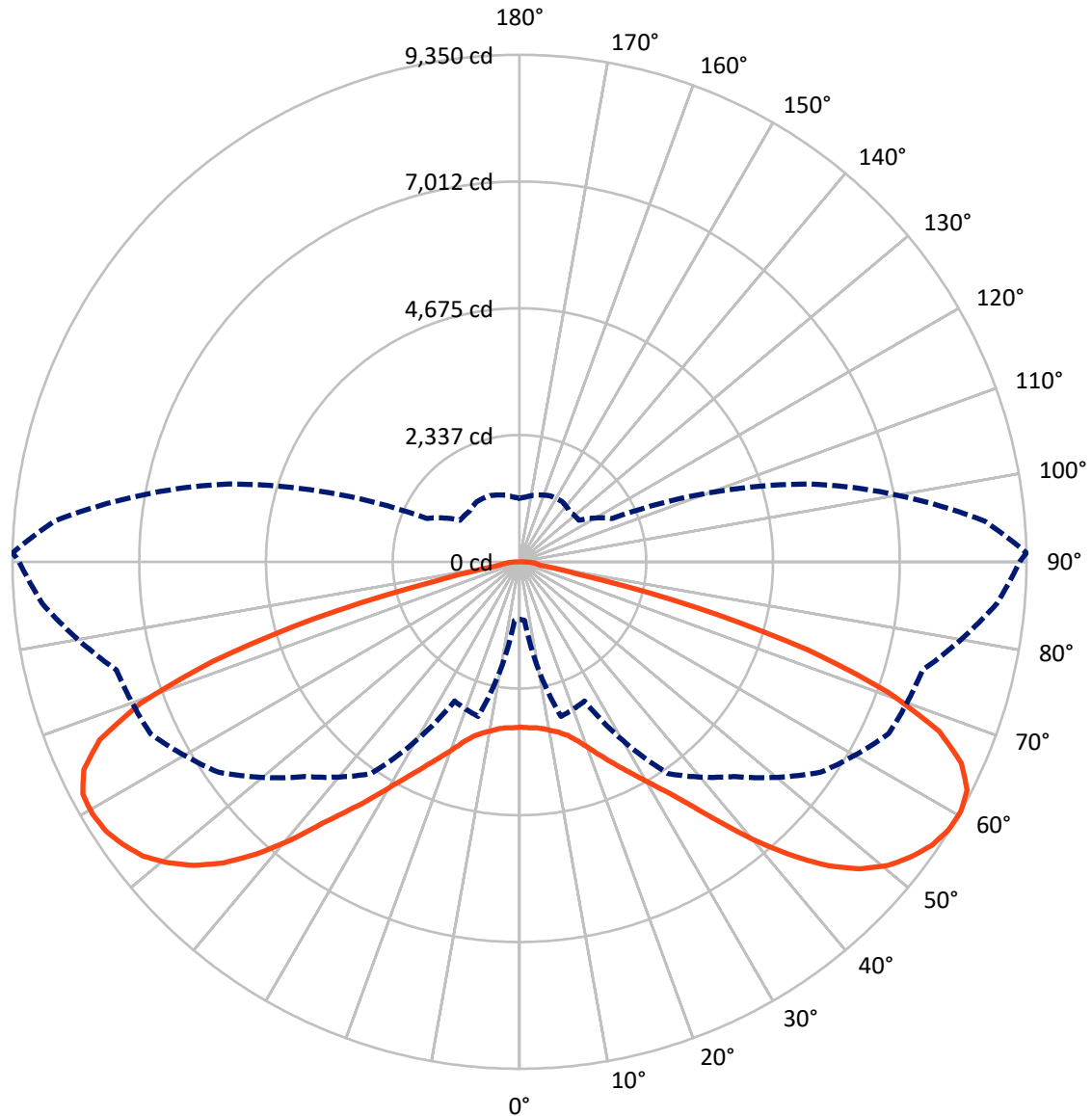
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - N/A

REPORT NUMBER: P591202  
CATALOG NUMBER: CTN-CA10-210-727-U-T4-SSS-HM-EX90

### Luminous Intensity Polar Plot



— Vertical Plane Through 91-Deg Lateral      - - - Horizontal Cone Through 60-Deg Vertical

REPORT NUMBER: P591202  
 CATALOG NUMBER: CTN-CA10-210-727-U-T4-SSS-HM-EX90

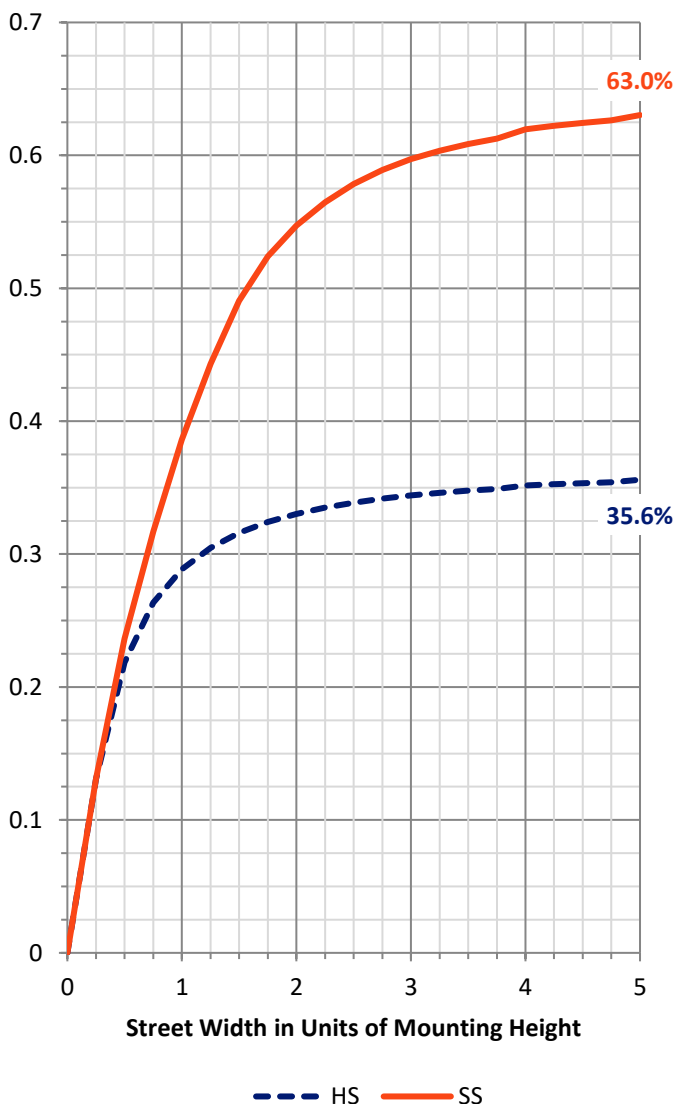
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6808.2	0.0	6808.2
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	11938.8	0.0	11938.8
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	18747.0	0.0	18747.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.3	1.6
10°-20°	911.7	4.9
20°-30°	1494.5	8.0
30°-40°	2110.7	11.3
40°-50°	2971.2	15.8
50°-60°	3738.7	19.9
60°-70°	3763.3	20.1
70°-80°	2768.5	14.8
80°-90°	691.1	3.7
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°	18747.0	100.0
0°-180°	18747.0	100.0

**Coefficient of Utilization**



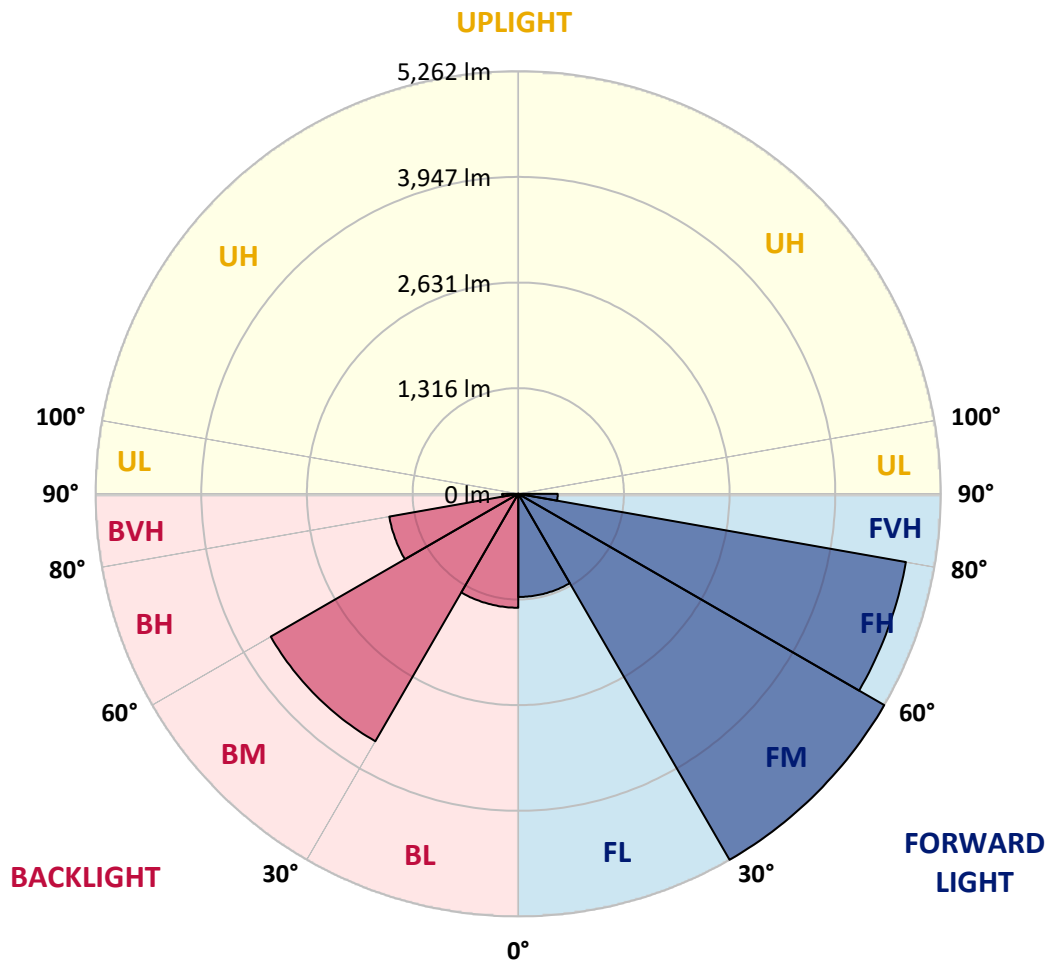
REPORT NUMBER: P591202  
 CATALOG NUMBER: CTN-CA10-210-727-U-T4-SSS-HM-EX90

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1284.4	6.9			
FM	(30°-60°)	5262.3	28.1			
FH	(60°-80°)	4901.2	26.1			G2/5000
FVH	(80°-90°)	490.9	2.6			G3/500
BL	(0°-30°)	1419.1	7.6	B3/2500		
BM	(30°-60°)	3558.3	19.0	B3/5000		
BH	(60°-80°)	1630.6	8.7	B3/2500		G3/2500
BVH	(80°-90°)	200.2	1.1			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type IV Short





REPORT NUMBER: P591202

CATALOG NUMBER: CTN-CA10-210-727-U-T4-SSS-HM-EX90

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0
2.5°	3018.8	2999.6	3000.6	3028.9	2985.9	3013.3	3006.9	3050.8	3042.6	3058.1	3061.8
5°	2997.8	2982.3	2982.3	3016.1	2986.9	3010.6	2990.5	3028.9	3042.6	3065.4	3070.0
7.5°	3006.0	2989.6	2996.0	3025.2	2992.3	3017.0	3015.2	3049.0	3057.2	3095.5	3101.0
10°	3020.6	3006.0	3007.9	3032.5	3010.6	3056.3	3048.0	3096.5	3095.5	3155.8	3160.4
12.5°	2995.1	2984.1	2984.1	3017.0	3029.8	3078.2	3094.6	3144.9	3150.4	3217.9	3223.4
15°	2954.9	2936.6	2964.0	3013.3	3039.8	3115.6	3144.0	3223.4	3238.0	3302.0	3315.7
17.5°	2870.8	2879.1	2955.8	2921.1	2800.5	2912.9	3224.3	3325.7	3357.7	3433.5	3466.4
20°	2610.5	2509.1	2308.2	2363.0	2611.4	2932.0	3336.7	3455.4	3525.8	3615.3	3671.0
22.5°	1972.1	2036.0	2411.4	2450.7	2461.6	2675.4	3493.8	3614.4	3707.5	3820.8	3894.8
25°	2045.1	2038.7	2167.5	2570.3	2581.3	2703.7	3289.2	3821.7	3905.7	4062.8	4136.8
27.5°	2112.7	2112.7	2105.4	2426.9	2705.5	2826.1	3396.1	3669.2	4166.1	4336.9	4423.6
30°	2225.1	2228.7	2187.6	2186.7	2807.8	2938.4	3602.5	3737.7	4396.2	4719.6	4739.7
32.5°	2447.9	2435.2	2384.0	2305.4	2428.8	3069.1	3804.4	3985.2	4174.3	5149.8	5131.5
35°	2608.7	2598.7	2562.1	2507.3	2450.7	3128.4	3993.4	4244.6	4554.3	5276.8	5627.5
37.5°	2803.3	2786.8	2745.7	2680.9	2644.3	2701.0	4188.0	4537.8	5029.2	5427.5	6187.4
40°	3016.1	3011.5	2948.5	2864.5	2814.2	2856.2	4336.9	4903.2	5618.4	6067.8	6804.9
42.5°	3179.6	3175.9	3123.9	3075.5	3051.7	3136.7	3966.9	5387.3	6292.5	6649.6	7399.5
45°	3326.6	3321.2	3319.3	3302.9	3322.1	3528.5	4372.5	5686.0	6954.7	7150.2	7940.3
47.5°	3438.1	3421.6	3375.1	3379.6	3433.5	3781.5	4794.5	5235.7	7491.8	7591.4	8362.3
50°	3703.0	3686.5	3525.8	3531.2	3635.4	4095.7	5158.0	5757.2	6992.2	7973.2	8685.6
52.5°	3939.5	3803.4	3715.8	3719.4	3861.9	4430.0	5570.9	6297.1	6873.4	8275.5	8946.9
55°	3402.5	3314.8	4167.9	4049.1	4127.7	4794.5	5971.9	6764.7	7199.5	8506.6	9096.7
57.5°	1996.7	1985.8	4587.1	4690.4	4599.0	5188.2	6377.4	7153.8	7485.4	8722.2	9197.1
60°	1059.6	1085.1	2950.3	2835.2	4767.1	5599.2	6770.2	7507.3	7697.3	8833.6	9224.5
62.5°	97.7	86.8	1939.2	2203.1	4272.9	6136.3	7236.0	7867.2	7840.7	8893.0	9176.1
65°	19.2	25.6	1902.6	2176.7	4747.9	7026.9	7996.9	8144.0	7918.4	8821.7	8922.2
67.5°	14.6	21.9	1797.6	2152.9	5039.3	7369.4	8872.9	8241.7	7922.9	8594.3	8363.2
70°	14.6	22.8	1586.6	2012.2	5177.2	7384.0	9080.2	8203.3	7820.6	8079.1	7310.0
72.5°	14.6	22.8	1332.7	1743.7	4942.5	7067.1	8716.7	7990.5	7439.7	6956.5	5701.5
75°	14.6	21.0	1045.9	1416.7	4272.0	6578.4	8092.8	7064.3	6262.3	5090.4	3658.2
77.5°	14.6	20.1	770.9	1108.9	3565.0	5802.0	7037.8	5806.5	4720.5	2665.3	1346.4
80°	13.7	20.1	469.5	781.9	2746.6	4680.3	5530.7	4290.3	2480.8	670.4	389.1
82.5°	13.7	19.2	223.8	500.5	1930.0	3344.0	3608.9	1837.8	528.0	309.6	309.6
85°	11.9	17.4	119.7	272.2	1261.4	2192.2	1741.0	311.5	206.4	209.2	238.4
87.5°	7.3	9.1	56.6	122.4	727.1	1171.9	670.4	114.2	85.9	90.4	135.2
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: P591202

CATALOG NUMBER: CTN-CA10-210-727-U-T4-SSS-HM-EX90

**CANDELA DISTRIBUTION (continued):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0	3049.0
2.5°	3064.5	3059.9	3070.0	3101.9	3096.5	3119.3	3101.0	3133.0	3139.4	3130.3	3144.9
5°	3074.5	3080.9	3114.7	3144.9	3128.4	3165.0	3175.0	3219.8	3218.9	3210.6	3228.9
7.5°	3107.4	3124.8	3158.6	3196.0	3204.2	3233.5	3229.8	3286.4	3280.1	3276.4	3294.7
10°	3164.1	3190.5	3222.5	3284.6	3264.5	3313.9	3280.1	3318.4	3314.8	3305.6	3322.1
12.5°	3227.1	3263.6	3302.0	3358.6	3350.4	3349.5	3319.3	3331.2	3321.2	3299.2	3312.9
15°	3322.1	3366.8	3419.8	3456.3	3407.9	3389.7	3342.2	3316.6	3281.9	3230.7	3239.0
17.5°	3470.0	3523.0	3579.7	3586.0	3511.1	3463.7	3348.6	3257.2	3166.8	3098.3	3104.7
20°	3669.2	3717.6	3759.6	3729.5	3628.1	3522.1	3348.6	3204.2	3035.3	2909.2	2900.1
22.5°	3902.1	3916.7	3956.9	3882.9	3708.4	3560.5	3339.4	3124.8	2849.8	2681.8	2661.7
25°	4153.3	4151.4	4134.1	3980.6	3758.7	3539.5	3270.0	2988.7	2637.9	2462.6	2447.9
27.5°	4426.4	4403.6	4284.8	4062.8	3737.7	3463.7	3138.5	2759.4	2445.2	2294.5	2289.9
30°	4734.2	4673.9	4433.7	4071.1	3659.1	3313.9	2924.7	2528.3	2273.5	2139.2	2126.4
32.5°	5093.2	4975.3	4552.4	4044.6	3517.5	3085.5	2664.4	2346.6	2132.8	1985.8	1957.4
35°	5561.8	5355.3	4662.0	3957.8	3307.5	2814.2	2424.2	2184.9	2002.2	1851.5	1821.3
37.5°	6150.9	5847.7	4827.4	3830.8	3067.2	2572.2	2258.0	2078.0	1911.8	1733.7	1697.1
40°	6804.9	6426.8	5021.0	3707.5	2838.9	2392.2	2149.3	2027.8	1853.3	1657.8	1623.1
42.5°	7424.2	7009.5	5311.5	3547.7	2621.5	2247.9	2110.0	2013.2	1825.9	1625.0	1587.5
45°	7996.0	7521.9	5611.1	3386.9	2400.4	2130.1	2077.1	1970.2	1783.9	1586.6	1543.7
47.5°	8462.7	7925.7	5876.0	3220.7	2205.9	2037.8	2014.1	1888.0	1709.9	1524.5	1484.3
50°	8801.6	8235.3	6031.2	3066.3	2018.6	1945.6	1903.5	1771.1	1605.8	1451.4	1422.2
52.5°	9041.8	8502.9	6108.9	3049.0	1848.7	1821.3	1774.8	1650.5	1518.1	1398.4	1363.7
55°	9227.3	8649.1	6042.2	2947.6	1688.0	1665.1	1616.7	1540.0	1460.5	1349.1	1326.3
57.5°	9327.7	8715.8	5889.7	2486.3	1517.2	1477.9	1471.5	1455.1	1385.6	1275.1	1257.8
60°	9349.7	8609.8	5544.4	1890.8	1338.1	1312.6	1361.0	1340.0	1277.9	1195.7	1171.0
62.5°	9263.8	8383.3	4889.5	1414.0	1189.3	1231.3	1280.6	1248.6	1176.5	1096.1	1080.6
65°	8954.2	7863.5	3940.5	1100.7	1120.8	1192.9	1236.8	1198.4	1110.7	1019.4	1009.3
67.5°	8348.6	7054.3	2594.1	990.1	1088.8	1160.9	1210.3	1149.1	1060.5	961.8	949.9
70°	7213.2	5576.4	1235.8	923.5	1027.6	1098.8	1138.1	1068.7	982.8	886.0	873.2
72.5°	5570.9	3789.7	682.3	850.4	951.8	1017.5	1045.9	963.6	884.2	844.0	840.3
75°	3353.1	1628.6	616.6	778.2	854.0	915.2	965.5	903.4	833.9	755.4	735.3
77.5°	1107.1	473.1	580.0	692.4	778.2	852.2	876.0	815.7	728.9	662.2	656.7
80°	388.2	396.4	540.7	576.4	677.8	739.9	766.4	696.9	655.8	586.4	572.7
82.5°	316.0	355.3	436.6	434.8	535.3	608.3	648.5	631.2	577.3	521.6	516.1
85°	258.5	325.2	276.8	304.2	383.6	463.1	539.8	541.7	500.5	443.9	406.5
87.5°	153.5	166.2	137.9	155.3	202.8	260.3	301.4	287.7	235.7	199.1	194.6
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)