

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: P579387

Luminaire Tested: **CTN-CA10-310-722-U-T5N-HSS-HM-EX90**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579387  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-310-722-U-T5N-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (10) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33635 lumens  
Efficiency: N/A  
Efficacy: 107.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U2 - G4

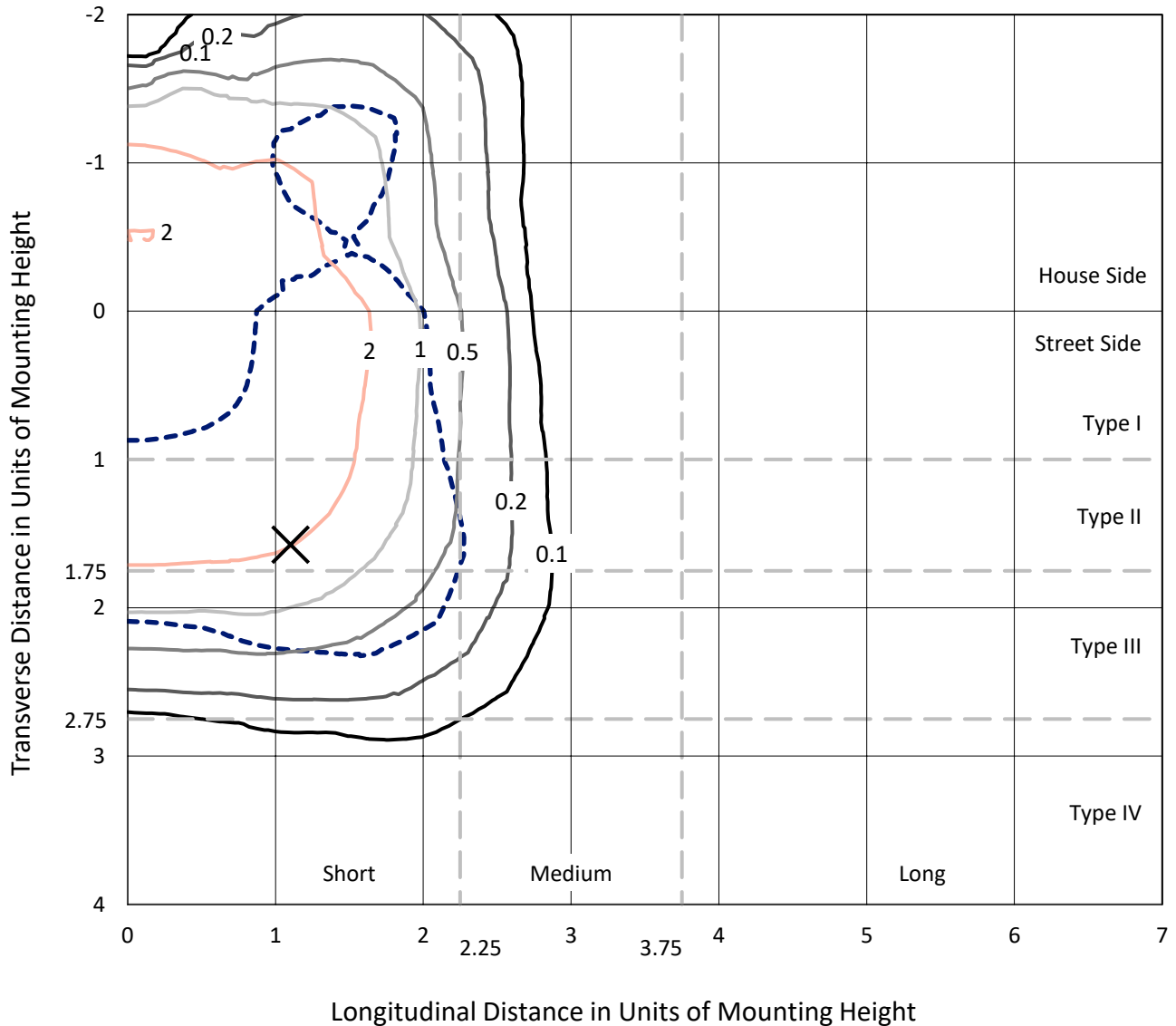
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

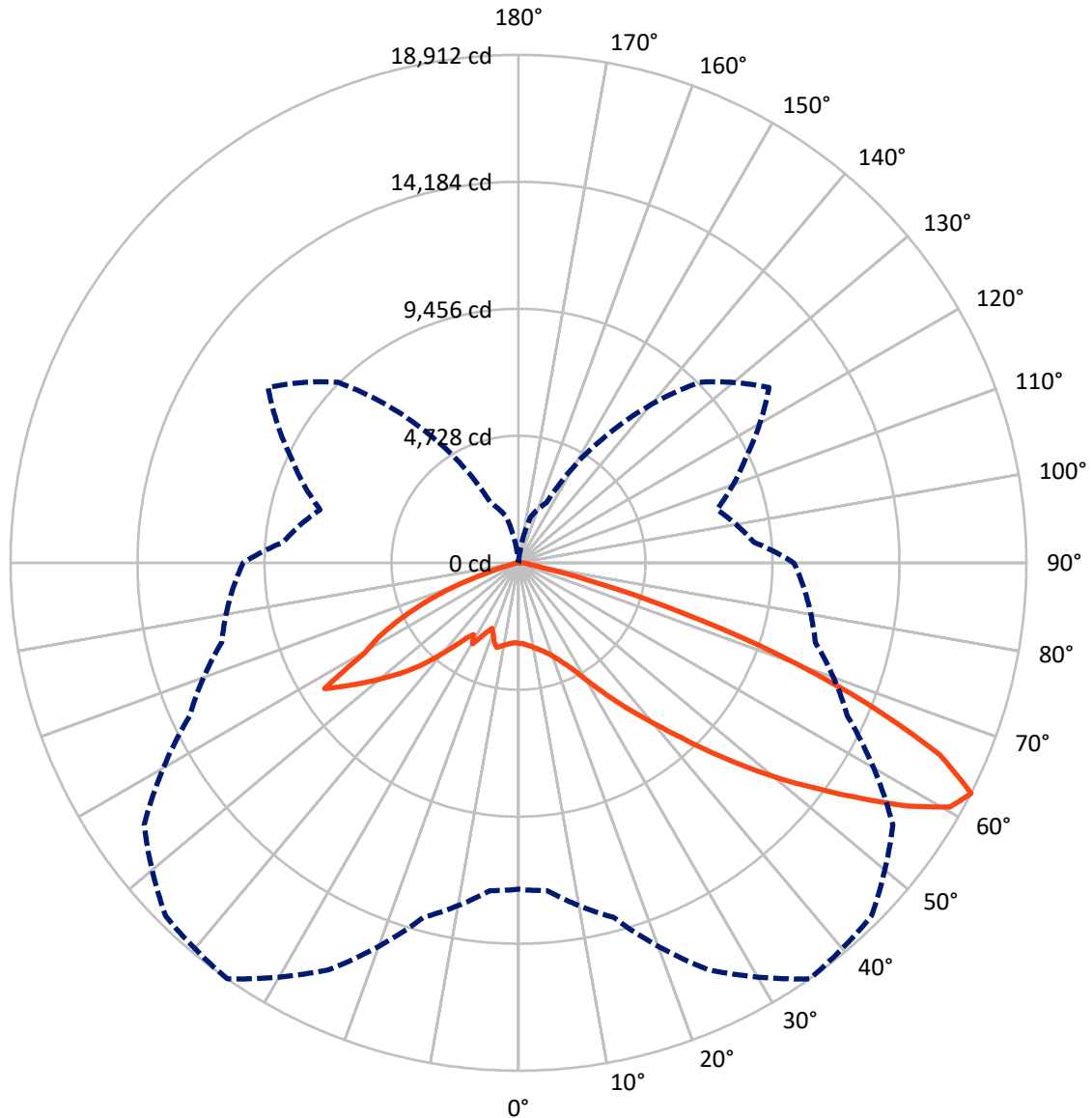
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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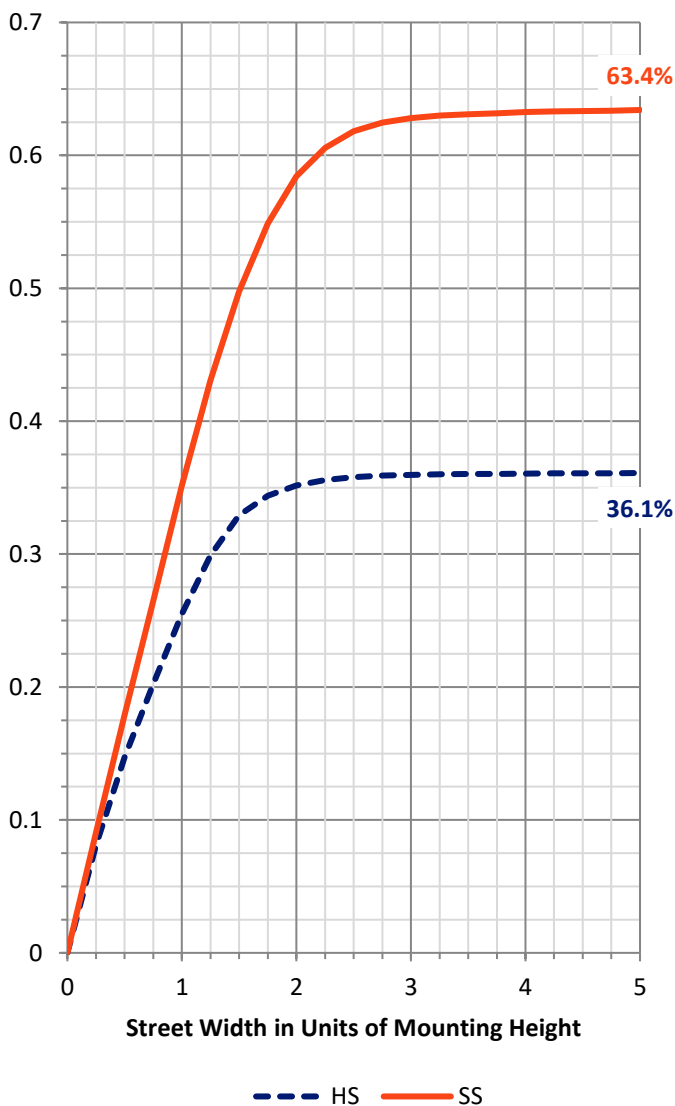
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12208.7	0.0	12208.7
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	21410.3	15.9	21426.3
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	33619.0	16.0	33635.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	295.9	0.9
10°-20°	956.3	2.8
20°-30°	1839.7	5.5
30°-40°	3670.0	10.9
40°-50°	6701.3	19.9
50°-60°	10014.0	29.8
60°-70°	8390.8	24.9
70°-80°	1570.3	4.7
80°-90°	180.7	0.5
90°-100°	14.4	0.0
100°-110°	1.5	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°	33619.0	100.0
0°-180°	33635.0	100.0

**Coefficient of Utilization**

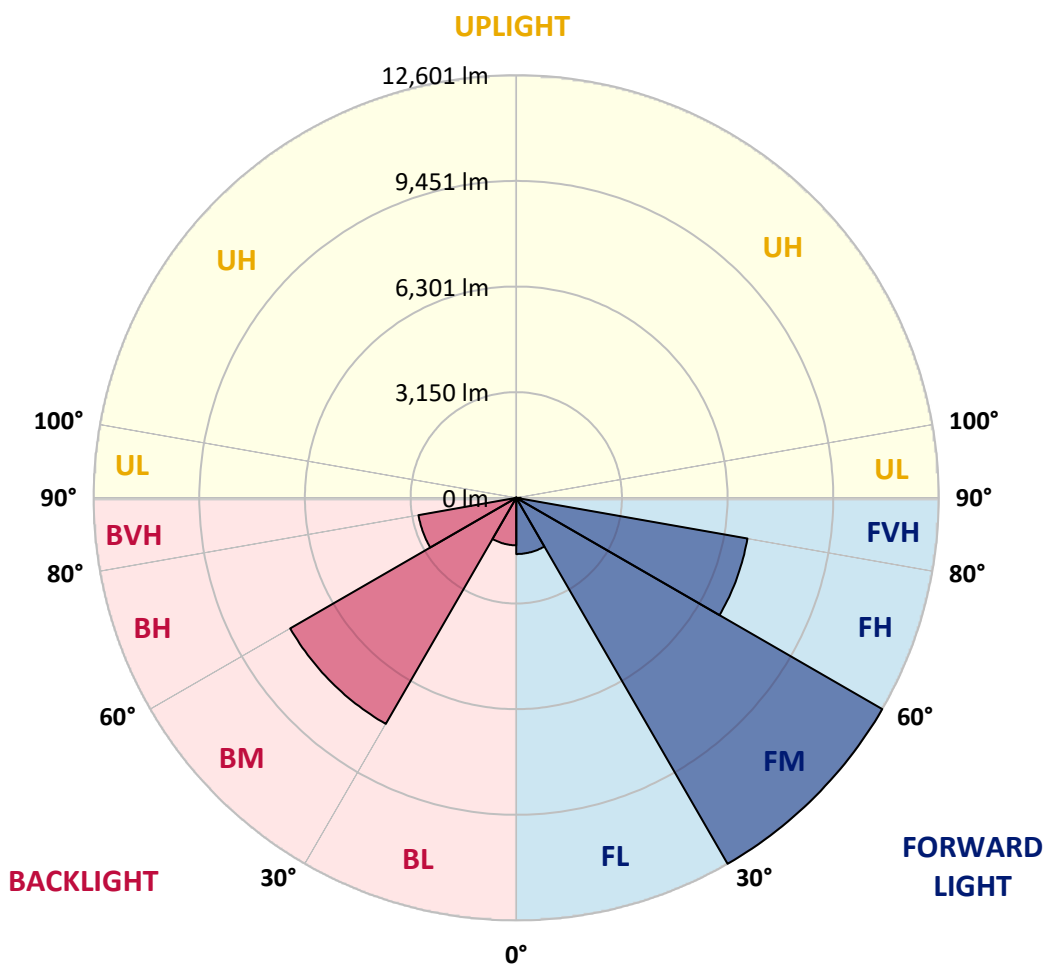


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1677.1	5.0			
FM (30°-60°)	12601.2	37.5			
FH (60°-80°)	7000.4	20.8			G3/7500
FVH (80°-90°)	131.6	0.4			G2/225
BL (0°-30°)	1414.8	4.2	B3/2500		
BM (30°-60°)	7784.1	23.1	B4/8500		
BH (60°-80°)	2960.7	8.8	B4/5000		G4/5000
BVH (80°-90°)	49.1	0.1			G1/100
UL (90°-100°)	14.4	0.0		U2/50	
UH (100°-180°)	1.6	0.0		U1/10	

**BUG Rating: B4-U2-G4**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5
2.5°	3073.8	3048.6	3052.4	3070.1	3014.6	3037.3	3013.3	3036.0	3028.5	3038.5	3046.1
5°	3118.0	3086.5	3089.0	3109.1	3066.3	3085.2	3061.2	3076.4	3063.8	3077.6	3078.9
7.5°	3178.5	3152.0	3148.2	3168.4	3131.8	3148.2	3124.3	3131.8	3119.2	3135.6	3130.6
10°	3259.2	3235.2	3228.9	3242.8	3213.8	3222.6	3197.4	3207.5	3188.6	3207.5	3198.7
12.5°	3348.7	3317.2	3318.4	3333.6	3304.6	3310.9	3290.7	3302.0	3279.4	3299.5	3293.2
15°	3454.6	3409.2	3418.0	3434.4	3406.7	3425.6	3401.7	3418.0	3396.6	3418.0	3410.5
17.5°	3592.0	3540.3	3546.6	3573.1	3550.4	3580.7	3552.9	3573.1	3563.0	3576.9	3574.4
20°	3766.0	3732.0	3725.7	3758.5	3725.7	3763.5	3748.4	3783.7	3786.2	3800.1	3806.4
22.5°	3998.0	3975.3	3960.2	3982.9	3953.9	3980.4	4001.8	4062.3	4085.0	4121.6	4124.1
25°	4306.9	4305.7	4271.6	4272.9	4236.3	4271.6	4332.1	4426.7	4487.2	4533.9	4516.2
27.5°	4724.2	4731.8	4680.1	4659.9	4617.1	4670.0	4794.8	4912.1	5021.8	5087.4	5087.4
30°	5268.9	5276.5	5200.8	5160.5	5121.4	5213.4	5362.2	5514.8	5671.1	5765.7	5744.2
32.5°	5990.1	5966.1	5857.7	5784.6	5717.8	5823.7	5995.1	6167.9	6380.9	6517.1	6500.7
35°	6865.1	6778.1	6669.7	6533.5	6389.8	6473.0	6634.4	6851.2	7147.5	7351.8	7300.1
37.5°	7881.3	7795.6	7610.2	7375.7	7124.8	7134.9	7262.2	7638.0	8008.6	8175.1	8139.8
40°	8936.6	8869.8	8699.6	8398.2	7944.3	7839.7	8049.0	8501.6	8855.9	9065.2	9005.9
42.5°	10012.1	9944.0	9815.4	9512.8	8911.4	8659.2	8877.3	9370.3	9748.5	9954.1	9886.0
45°	11085.0	11006.8	10904.7	10637.4	10063.7	9694.3	9816.6	10269.3	10614.7	10848.0	10708.0
47.5°	12028.1	11976.4	11907.0	11798.6	11296.8	10888.3	10879.5	11178.3	11416.6	11570.4	11398.9
50°	12848.9	12812.3	12851.4	12828.7	12645.9	12273.9	12045.7	12025.6	12102.5	12214.7	11970.1
52.5°	13585.2	13520.9	13665.9	13846.2	13981.1	13905.4	13166.6	12751.8	12667.3	12705.1	12427.8
55°	14187.8	14157.6	14400.9	14853.5	15477.6	15644.1	14317.7	13457.8	13146.4	13126.2	12811.0
57.5°	14556.0	14598.9	15085.5	15947.9	17092.7	17145.7	15731.1	14213.1	13612.9	13396.1	13032.9
60°	13969.7	14134.9	14965.8	16744.8	18463.2	18496.0	16768.7	14351.7	13030.4	12545.0	12094.9
62.5°	12156.7	12255.0	13668.4	16718.3	18912.1	18591.8	17015.8	13514.6	11440.5	10666.4	10250.3
65°	8563.4	8747.5	10261.7	15041.4	17234.0	17274.3	15610.0	11685.1	9135.8	8279.7	8011.2
67.5°	5171.8	5348.3	6960.9	10858.1	14010.1	14462.7	13021.6	8847.1	6551.1	5469.4	5198.3
70°	1679.4	1871.0	3172.2	6399.8	10305.8	11391.4	9799.0	5758.1	3430.7	2403.1	2111.8
72.5°	638.0	696.0	1032.6	2795.2	6418.8	7605.2	6060.7	2888.5	1062.9	632.9	556.0
75°	414.8	423.6	482.9	979.6	3095.3	4187.1	2921.3	846.0	426.2	378.2	350.5
77.5°	356.8	363.1	388.3	487.9	985.9	1601.2	838.4	432.5	355.5	315.2	296.3
80°	336.6	339.2	355.5	413.5	461.5	534.6	403.5	361.9	310.2	296.3	282.4
82.5°	319.0	327.8	336.6	375.7	374.5	384.5	324.0	283.7	263.5	277.4	272.3
85°	297.6	302.6	308.9	335.4	305.1	258.5	249.6	195.4	190.4	203.0	190.4
87.5°	209.3	221.9	214.3	225.7	211.8	165.2	139.9	111.0	88.3	73.1	70.6
90°	85.7	87.0	82.0	75.6	66.8	55.5	44.1	27.7	12.6	6.3	2.5
92.5°	66.8	66.8	64.3	58.0	50.4	41.6	31.5	17.7	8.8	3.8	1.3
95°	41.6	42.9	40.3	36.6	31.5	25.2	18.9	10.1	6.3	2.5	1.3
97.5°	26.5	26.5	24.0	21.4	17.7	12.6	8.8	7.6	5.0	2.5	0.0
100°	15.1	15.1	13.9	11.3	8.8	6.3	6.3	5.0	3.8	1.3	0.0
102.5°	8.8	8.8	6.3	5.0	3.8	3.8	3.8	3.8	2.5	1.3	0.0
105°	3.8	3.8	2.5	2.5	1.3	1.3	2.5	2.5	2.5	1.3	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	2.5	1.3	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5	3009.5
2.5°	3041.1	3018.4	3022.2	3000.7	2996.9	2975.5	3018.4	3023.4	3010.8	3022.2
5°	3076.4	3048.6	3057.5	3033.5	3029.7	3000.7	3038.5	3036.0	3025.9	3037.3
7.5°	3129.3	3100.3	3105.4	3078.9	3073.8	3042.3	3077.6	3066.3	3056.2	3070.1
10°	3203.7	3170.9	3173.4	3139.4	3143.2	3101.6	3144.4	3124.3	3111.7	3130.6
12.5°	3293.2	3256.7	3257.9	3222.6	3221.4	3181.0	3218.8	3207.5	3188.6	3217.6
15°	3409.2	3367.6	3363.8	3317.2	3304.6	3259.2	3294.5	3273.1	3260.4	3302.0
17.5°	3571.9	3525.2	3511.3	3454.6	3218.8	3082.7	3271.8	3336.1	3257.9	3245.3
20°	3788.7	3749.6	3718.1	3632.4	3236.5	2811.6	2497.7	2500.2	2830.5	2983.1
22.5°	4082.5	4035.8	3976.6	3854.3	2969.2	2633.8	2635.1	2631.3	2258.1	2100.5
25°	4484.7	4427.9	4306.9	3616.0	3152.0	2841.9	2834.3	2464.9	2259.4	2270.7
27.5°	5028.1	4912.1	4203.5	3917.3	3477.3	3111.7	2930.1	2481.3	2506.5	2524.1
30°	5719.0	5252.5	4542.7	4372.5	3868.2	3469.7	2709.5	2771.3	2821.7	2833.0
32.5°	6427.6	5267.6	5084.8	4904.5	4349.8	3157.1	3053.7	3170.9	3223.9	3230.2
35°	6421.3	5913.2	5677.4	5474.4	4796.1	3377.7	3443.3	3623.6	3758.5	3752.2
37.5°	6795.7	6625.5	6344.4	6087.2	4317.0	3805.1	3922.4	4126.6	4290.5	4285.5
40°	7578.7	7382.0	7084.5	6544.8	4779.7	4294.3	4458.2	4677.6	4793.6	4799.9
42.5°	8318.8	8156.2	7852.3	6114.9	5358.4	4883.1	5031.9	5179.4	5251.3	5273.9
45°	9055.1	8939.1	7927.9	6757.9	6058.2	5475.7	5574.0	5601.8	5677.4	5668.6
47.5°	9652.7	9524.1	7622.8	7564.8	6906.7	6038.0	6030.4	5993.9	6021.6	6027.9
50°	10198.7	8649.1	8235.6	8428.5	7796.8	6611.7	6467.9	6393.5	6355.7	6339.3
52.5°	10629.9	8651.6	8808.0	9321.1	8801.7	7234.5	6925.6	6716.3	5880.4	6534.8
55°	10996.7	9008.5	9350.1	10275.6	9667.9	7886.3	7339.1	6966.0	3924.9	3147.0
57.5°	11207.3	9279.5	9887.2	11169.5	10424.3	8611.3	6756.7	5842.6	2219.0	2216.5
60°	10394.1	8792.9	9872.1	11638.5	10206.2	6679.7	2751.1	2302.2	419.8	431.2
62.5°	8799.2	7649.3	9362.7	11381.3	9505.2	5876.6	2467.4	1772.7	13.9	11.3
65°	6817.2	6102.3	7883.8	10010.8	8647.9	4903.3	1839.5	1277.2	3.8	0.0
67.5°	4459.5	4300.6	5817.4	8301.1	7052.9	3798.8	1234.3	611.5	2.5	0.0
70°	1901.3	2202.6	3685.3	6019.1	5398.8	2613.6	595.1	220.6	1.3	0.0
72.5°	532.1	704.8	1640.3	3526.5	3395.3	1374.3	232.0	93.3	1.3	0.0
75°	315.2	271.1	470.3	1407.1	1652.9	482.9	107.2	71.9	1.3	0.0
77.5°	262.2	211.8	269.8	359.3	500.5	174.0	90.8	64.3	0.0	0.0
80°	245.9	187.9	233.2	250.9	247.1	145.0	89.5	64.3	0.0	0.0
82.5°	233.2	163.9	192.9	192.9	206.8	133.6	84.5	63.0	0.0	0.0
85°	175.3	114.7	128.6	166.4	148.8	94.6	61.8	50.4	0.0	0.0
87.5°	66.8	41.6	50.4	53.0	42.9	21.4	5.0	5.0	0.0	0.0
90°	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P579387  
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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)