

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: STREETWORKS

Report Number: P579627

Luminaire Tested: **CST-CA10-310-727-U-T5N-HSS-HM-EX90**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579627  
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: STREETWORKS  
Catalog Number: CST-CA10-310-727-U-T5N-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33828 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U2 - G4

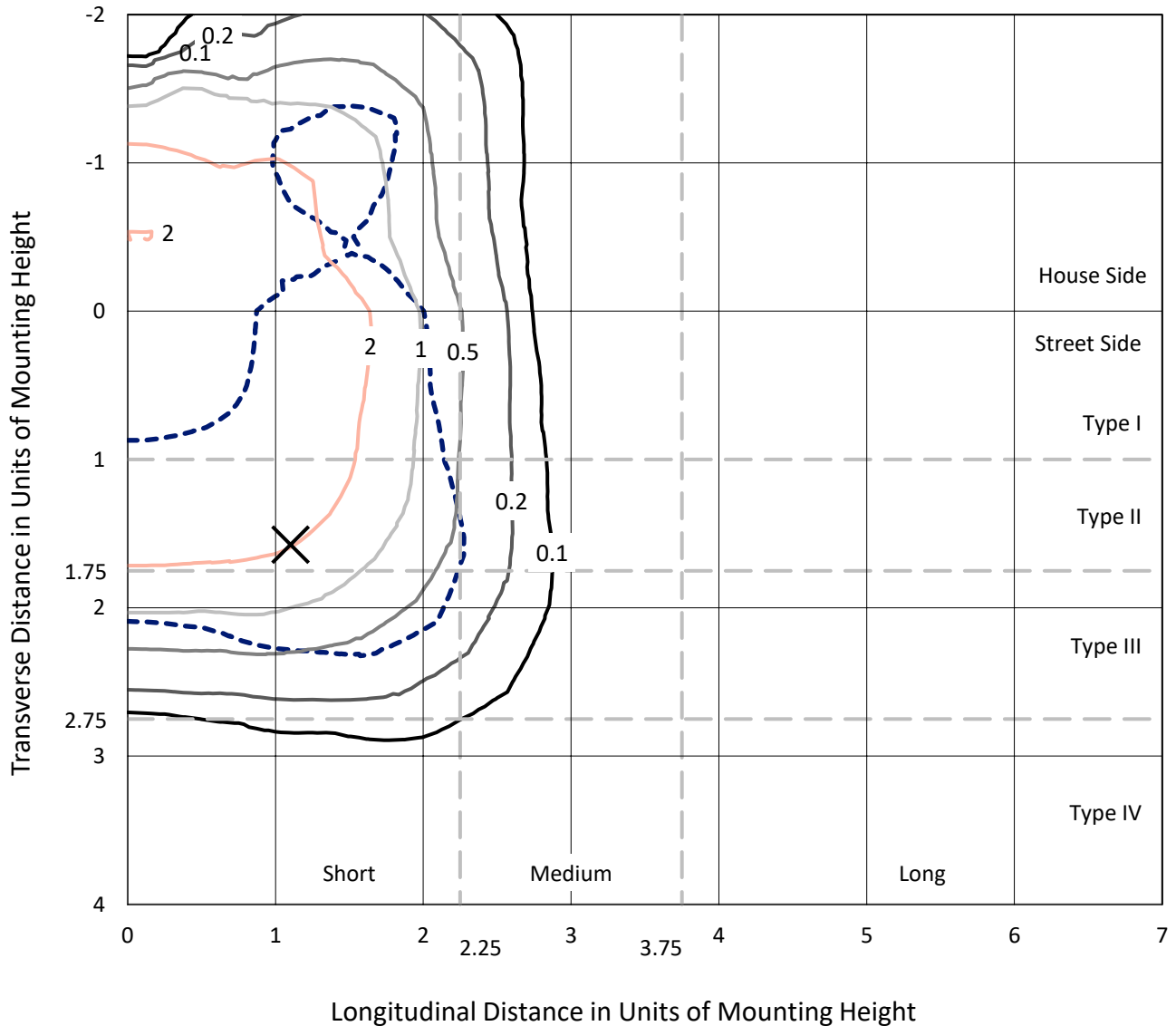
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

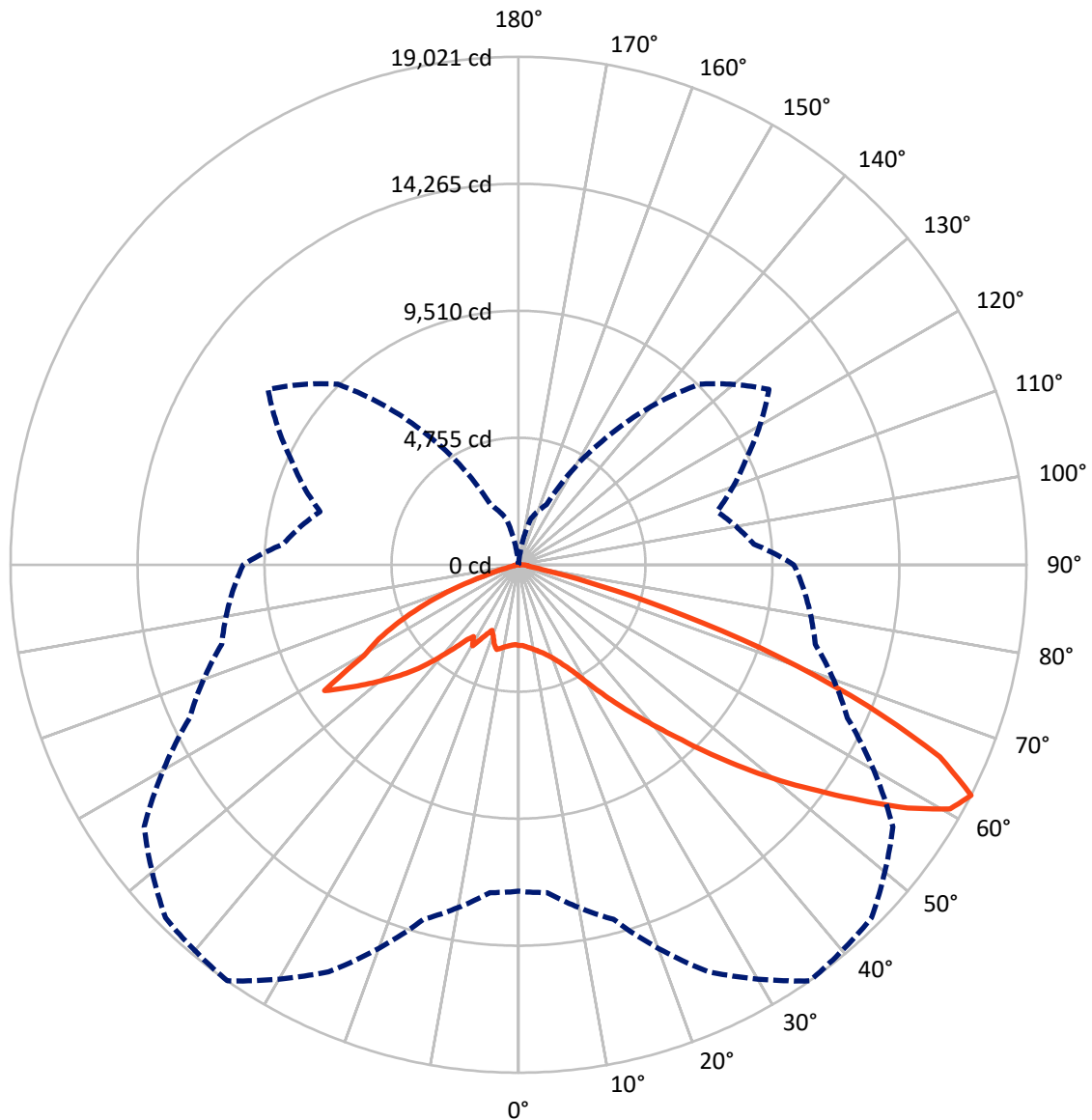
✕ Max cd  
 - - - 1/2 Max cd



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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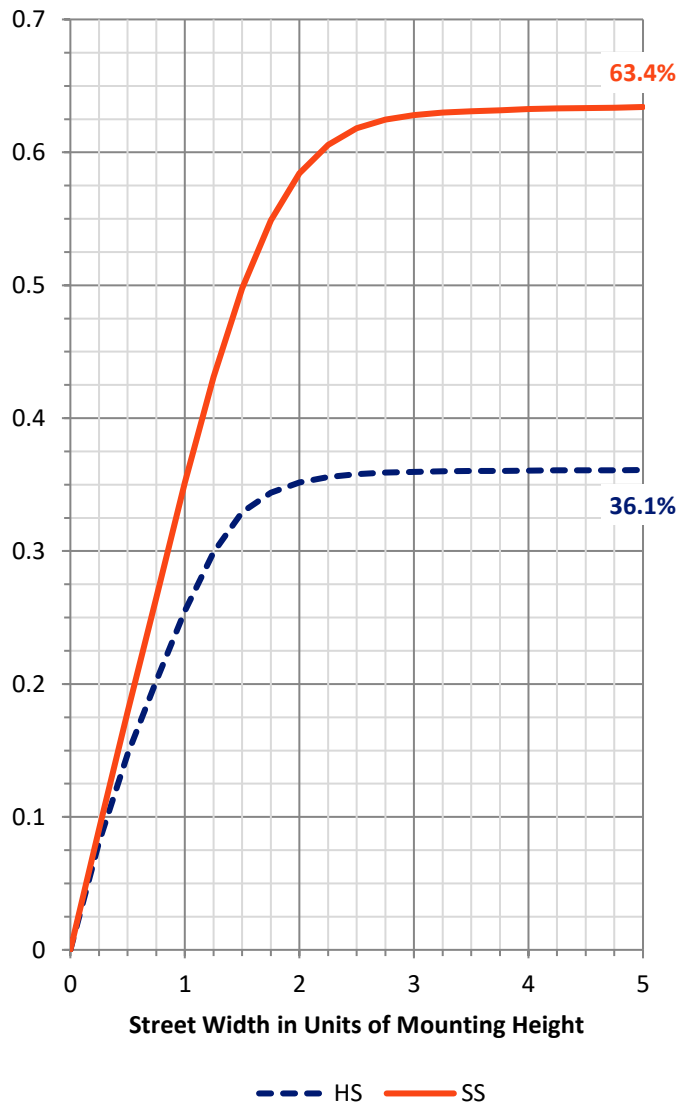
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12278.8	0.0	12278.8
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	21533.2	16.0	21549.2
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	33811.9	16.1	33828.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.6	0.9
10°-20°	961.8	2.8
20°-30°	1850.3	5.5
30°-40°	3691.1	10.9
40°-50°	6739.7	19.9
50°-60°	10071.5	29.8
60°-70°	8439.0	24.9
70°-80°	1579.3	4.7
80°-90°	181.8	0.5
90°-100°	14.5	0.0
100°-110°	1.6	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°	33811.9	100.0
0°-180°	33828.0	100.0

**Coefficient of Utilization**



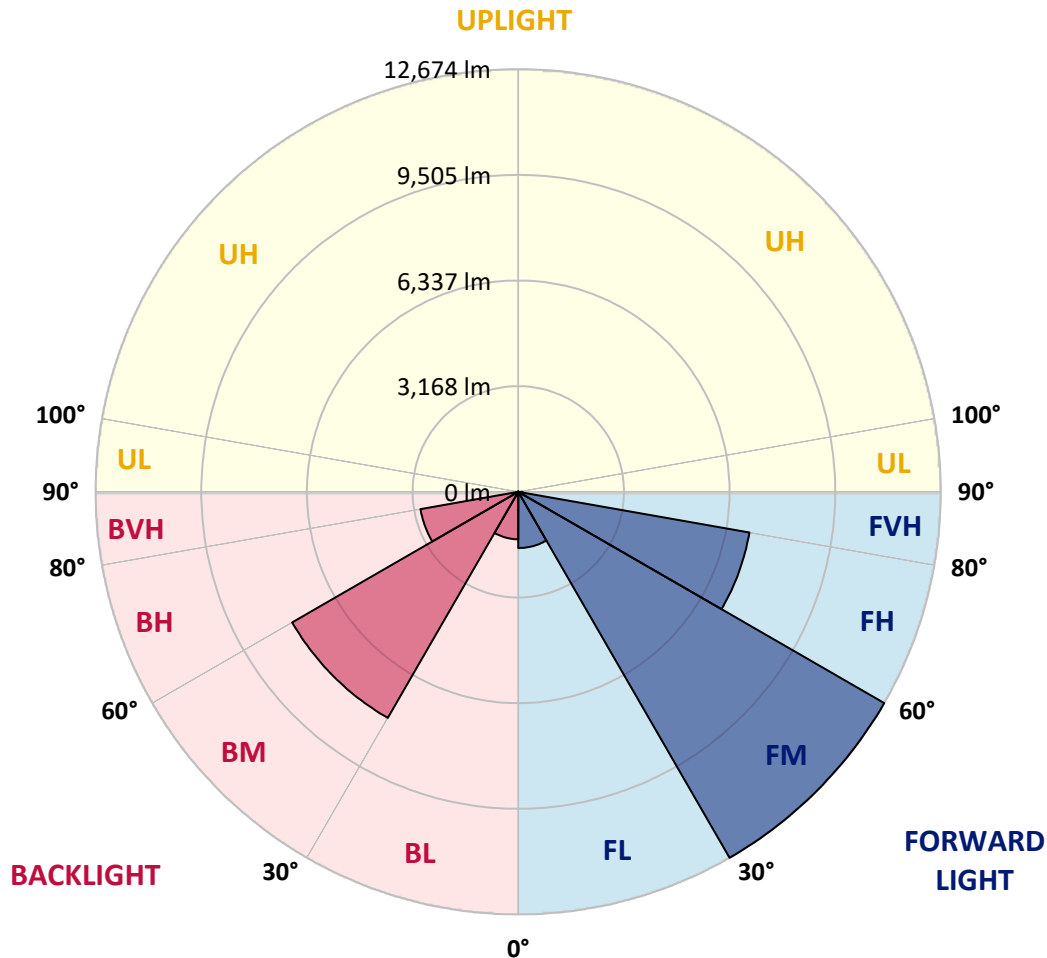
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1686.7	5.0			
FM (30°-60°)	12673.5	37.5			
FH (60°-80°)	7040.6	20.8			G3/7500
FVH (80°-90°)	132.4	0.4			G2/225
BL (0°-30°)	1422.9	4.2	B3/2500		
BM (30°-60°)	7828.8	23.1	B4/8500		
BH (60°-80°)	2977.7	8.8	B4/5000		G4/5000
BVH (80°-90°)	49.4	0.1			G1/100
UL (90°-100°)	14.5	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°	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8
2.5°	3091.5	3066.1	3069.9	3087.7	3031.9	3054.7	3030.6	3053.4	3045.8	3056.0	3063.6
5°	3135.9	3104.2	3106.7	3127.0	3083.9	3102.9	3078.8	3094.0	3081.3	3095.3	3096.6
7.5°	3196.7	3170.1	3166.3	3186.6	3149.8	3166.3	3142.2	3149.8	3137.1	3153.6	3148.5
10°	3277.9	3253.8	3247.5	3261.4	3232.2	3241.1	3215.7	3225.9	3206.9	3225.9	3217.0
12.5°	3367.9	3336.2	3337.5	3352.7	3323.5	3329.9	3309.6	3321.0	3298.2	3318.5	3312.1
15°	3474.4	3428.8	3437.7	3454.1	3426.2	3445.3	3421.2	3437.7	3416.1	3437.7	3430.0
17.5°	3612.6	3560.7	3567.0	3593.6	3570.8	3601.2	3573.3	3593.6	3583.5	3597.4	3594.9
20°	3787.6	3753.4	3747.1	3780.0	3747.1	3785.1	3769.9	3805.4	3807.9	3821.9	3828.2
22.5°	4021.0	3998.1	3982.9	4005.7	3976.6	4003.2	4024.8	4085.6	4108.4	4145.2	4147.8
25°	4331.6	4330.4	4296.1	4297.4	4260.6	4296.1	4357.0	4452.1	4513.0	4559.9	4542.1
27.5°	4751.3	4759.0	4707.0	4686.7	4643.6	4696.8	4822.4	4940.3	5050.6	5116.5	5116.5
30°	5299.1	5306.7	5230.7	5190.1	5150.8	5243.3	5393.0	5546.4	5703.6	5798.7	5777.2
32.5°	6024.5	6000.4	5891.3	5817.8	5750.6	5857.1	6029.5	6203.3	6417.6	6554.5	6538.0
35°	6904.5	6817.0	6707.9	6571.0	6426.4	6510.1	6672.4	6890.5	7188.5	7393.9	7342.0
37.5°	7926.5	7840.3	7653.9	7418.0	7165.7	7175.8	7303.9	7681.8	8054.6	8222.0	8186.5
40°	8987.9	8920.7	8749.5	8446.4	7989.9	7884.7	8095.2	8550.4	8906.7	9117.2	9057.6
42.5°	10069.5	10001.0	9871.7	9567.4	8962.5	8708.9	8928.3	9424.1	9804.5	10011.2	9942.7
45°	11148.6	11070.0	10967.3	10698.5	10121.5	9750.0	9873.0	10328.2	10675.6	10910.2	10769.5
47.5°	12097.1	12045.1	11975.4	11866.3	11361.6	10950.8	10941.9	11242.4	11482.1	11636.8	11464.4
50°	12922.6	12885.8	12925.1	12902.3	12718.4	12344.4	12114.9	12094.6	12171.9	12284.8	12038.8
52.5°	13663.1	13598.5	13744.3	13925.6	14061.3	13985.2	13242.1	12825.0	12740.0	12778.0	12499.1
55°	14269.3	14238.8	14483.6	14938.8	15566.5	15733.8	14399.9	13535.1	13221.9	13201.6	12884.6
57.5°	14639.5	14682.6	15172.1	16039.4	17190.8	17244.1	15821.3	14294.6	13691.0	13472.9	13107.7
60°	14049.9	14216.0	15051.6	16840.8	18569.2	18602.1	16864.9	14434.1	13105.2	12617.0	12164.3
62.5°	12226.4	12325.3	13746.8	16814.2	19020.6	18698.5	17113.5	13592.1	11506.2	10727.6	10309.2
65°	8612.5	8797.7	10320.6	15127.7	17332.8	17373.4	15699.6	11752.2	9188.2	8327.2	8057.1
67.5°	5201.5	5379.0	7000.8	10920.4	14090.5	14545.7	13096.3	8897.8	6588.7	5500.8	5228.1
70°	1689.0	1881.8	3190.4	6436.6	10365.0	11456.7	9855.2	5791.1	3450.3	2416.9	2124.0
72.5°	641.6	700.0	1038.5	2811.2	6455.6	7648.8	6095.5	2905.1	1069.0	636.6	559.2
75°	417.2	426.1	485.7	985.3	3113.0	4211.2	2938.0	850.9	428.6	380.4	352.5
77.5°	358.9	365.2	390.6	490.7	991.6	1610.4	843.2	434.9	357.6	317.0	298.0
80°	338.6	341.1	357.6	415.9	464.1	537.6	405.8	363.9	311.9	298.0	284.0
82.5°	320.8	329.7	338.6	377.9	376.6	386.8	325.9	285.3	265.0	279.0	273.9
85°	299.3	304.3	310.7	337.3	306.9	259.9	251.1	196.5	191.5	204.2	191.5
87.5°	210.5	223.2	215.6	227.0	213.0	166.1	140.8	111.6	88.8	73.5	71.0
90°	86.2	87.5	82.4	76.1	67.2	55.8	44.4	27.9	12.7	6.3	2.5
92.5°	67.2	67.2	64.7	58.3	50.7	41.8	31.7	17.8	8.9	3.8	1.3
95°	41.8	43.1	40.6	36.8	31.7	25.4	19.0	10.1	6.3	2.5	1.3
97.5°	26.6	26.6	24.1	21.6	17.8	12.7	8.9	7.6	5.1	2.5	0.0
100°	15.2	15.2	13.9	11.4	8.9	6.3	6.3	5.1	3.8	1.3	0.0
102.5°	8.9	8.9	6.3	5.1	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°	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8	3026.8
2.5°	3058.5	3035.7	3039.5	3017.9	3014.1	2992.6	3035.7	3040.8	3028.1	3039.5
5°	3094.0	3066.1	3075.0	3050.9	3047.1	3017.9	3056.0	3053.4	3043.3	3054.7
7.5°	3147.3	3118.1	3123.2	3096.6	3091.5	3059.8	3095.3	3083.9	3073.7	3087.7
10°	3222.1	3189.1	3191.7	3157.4	3161.2	3119.4	3162.5	3142.2	3129.5	3148.5
12.5°	3312.1	3275.3	3276.6	3241.1	3239.8	3199.3	3237.3	3225.9	3206.9	3236.0
15°	3428.8	3386.9	3383.1	3336.2	3323.5	3277.9	3313.4	3291.8	3279.2	3321.0
17.5°	3592.4	3545.4	3531.5	3474.4	3237.3	3100.4	3290.6	3355.2	3276.6	3263.9
20°	3810.5	3771.2	3739.5	3653.2	3255.1	2827.7	2512.0	2514.5	2846.7	3000.2
22.5°	4105.9	4059.0	3999.4	3876.4	2986.2	2648.9	2650.2	2646.4	2271.1	2112.6
25°	4510.4	4453.4	4331.6	3636.7	3170.1	2858.2	2850.6	2479.0	2272.3	2283.7
27.5°	5056.9	4940.3	4227.6	3939.8	3497.3	3129.5	2946.9	2495.5	2520.9	2538.6
30°	5751.8	5282.7	4568.7	4397.6	3890.3	3489.6	2725.0	2787.2	2837.9	2849.3
32.5°	6464.5	5297.9	5114.0	4932.7	4374.7	3175.2	3071.2	3189.1	3242.4	3248.7
35°	6458.1	5947.1	5710.0	5505.8	4823.6	3397.1	3463.0	3644.3	3780.0	3773.7
37.5°	6834.7	6663.6	6380.8	6122.1	4341.8	3826.9	3944.9	4150.3	4315.1	4310.1
40°	7622.2	7424.4	7125.1	6582.4	4807.1	4318.9	4483.8	4704.4	4821.1	4827.4
42.5°	8366.5	8203.0	7897.4	6150.0	5389.2	4911.1	5060.7	5209.1	5281.4	5304.2
45°	9107.1	8990.4	7973.4	6796.7	6092.9	5507.1	5606.0	5633.9	5710.0	5701.1
47.5°	9708.1	9578.8	7666.6	7608.2	6946.3	6072.6	6065.0	6028.3	6056.2	6062.5
50°	10257.2	8698.8	8282.8	8476.8	7841.6	6649.6	6505.0	6430.2	6392.2	6375.7
52.5°	10690.8	8701.3	8858.5	9374.6	8852.2	7276.0	6965.3	6754.8	5914.1	6572.3
55°	11059.8	9060.1	9403.8	10334.5	9723.3	7931.6	7381.3	7005.9	3947.4	3165.0
57.5°	11271.6	9332.8	9944.0	11233.6	10484.2	8660.7	6795.4	5876.1	2231.8	2229.2
60°	10453.7	8843.3	9928.8	11705.3	10264.8	6718.1	2766.9	2315.4	422.3	433.7
62.5°	8849.7	7693.2	9416.5	11446.6	9559.8	5910.3	2481.6	1782.9	13.9	11.4
65°	6856.3	6137.3	7929.1	10068.2	8697.5	4931.4	1850.1	1284.5	3.8	0.0
67.5°	4485.1	4325.3	5850.7	8348.8	7093.4	3820.6	1241.4	615.0	2.5	0.0
70°	1912.2	2215.3	3706.5	6053.6	5429.7	2628.6	598.5	221.9	1.3	0.0
72.5°	535.1	708.8	1649.7	3546.7	3414.8	1382.2	233.3	93.8	1.3	0.0
75°	317.0	272.6	473.0	1415.1	1662.4	485.7	107.8	72.3	1.3	0.0
77.5°	263.8	213.0	271.4	361.4	503.4	175.0	91.3	64.7	0.0	0.0
80°	247.3	188.9	234.6	252.3	248.5	145.8	90.0	64.7	0.0	0.0
82.5°	234.6	164.8	194.0	194.0	208.0	134.4	85.0	63.4	0.0	0.0
85°	176.3	115.4	129.3	167.4	149.6	95.1	62.1	50.7	0.0	0.0
87.5°	67.2	41.8	50.7	53.3	43.1	21.6	5.1	5.1	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: P579627  
 CATALOG NUMBER: CST-CA10-310-727-U-T5N-HSS-HM-EX90

**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)