

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: P522212

Luminaire Tested: **CST-CA8-230-750-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522212  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA8-230-750-U-T5R-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (8) 5000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30909.1 lumens  
Efficiency: N/A  
Efficacy: 135.3 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U1 - G4

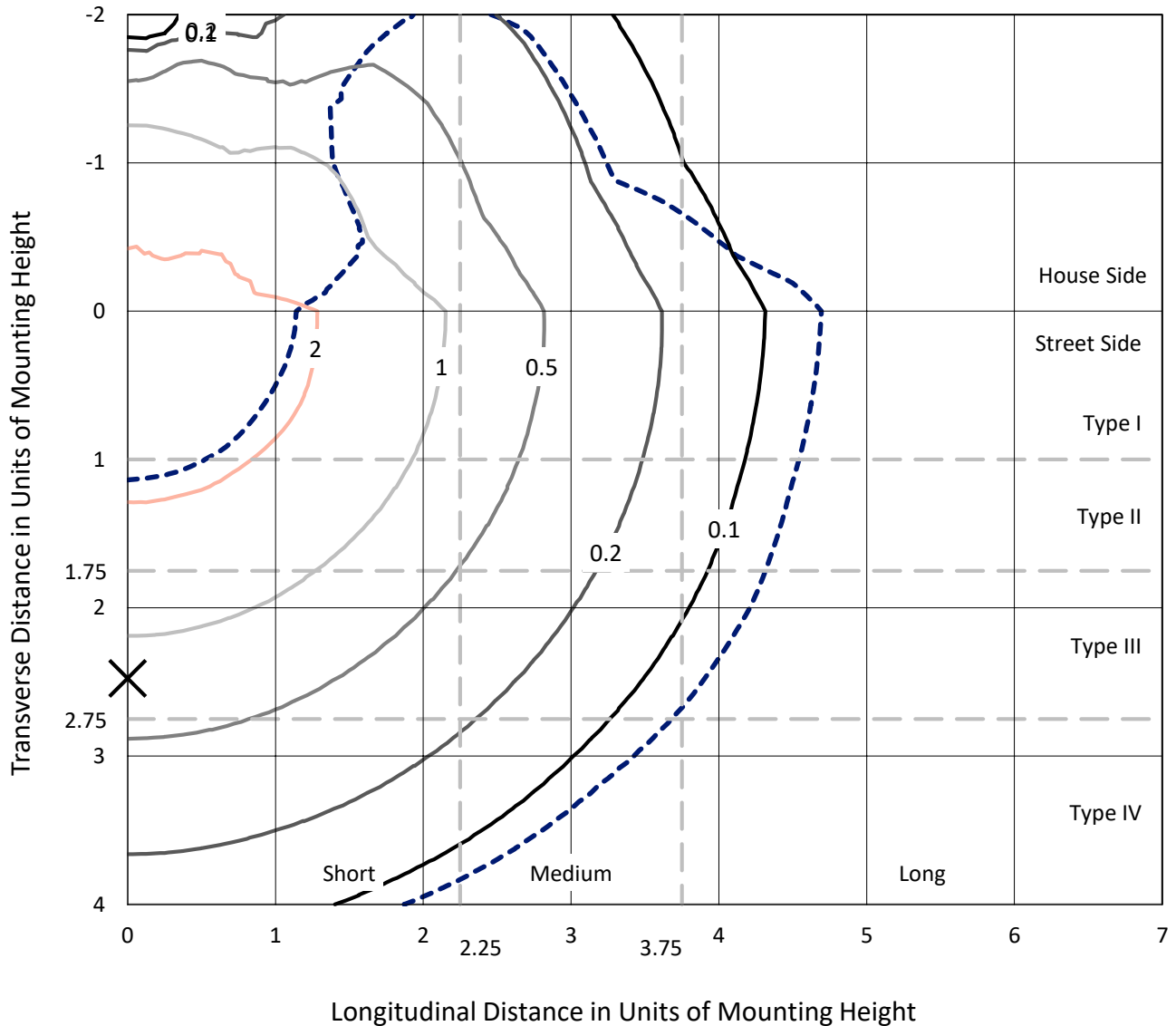
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

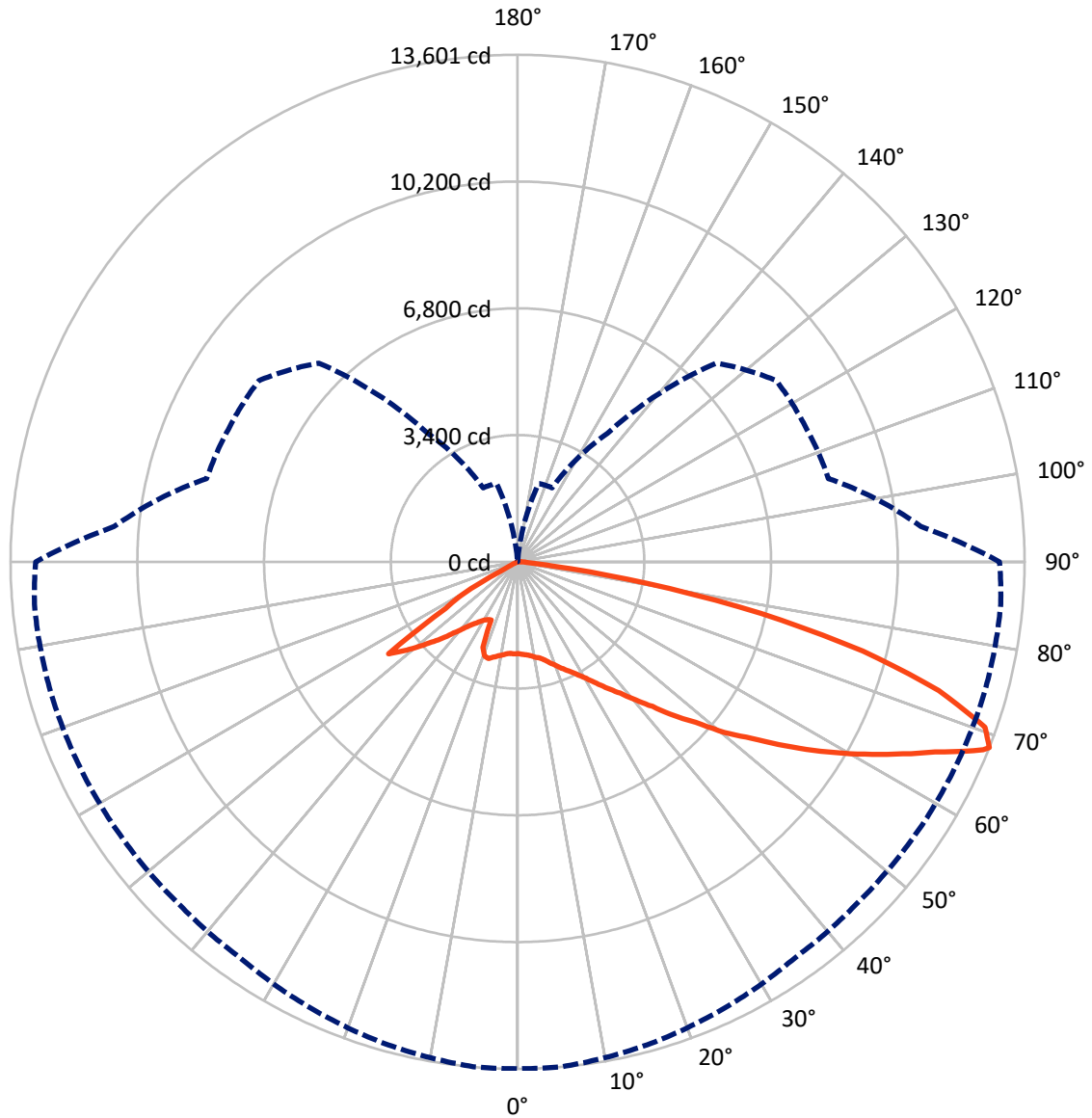
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 2.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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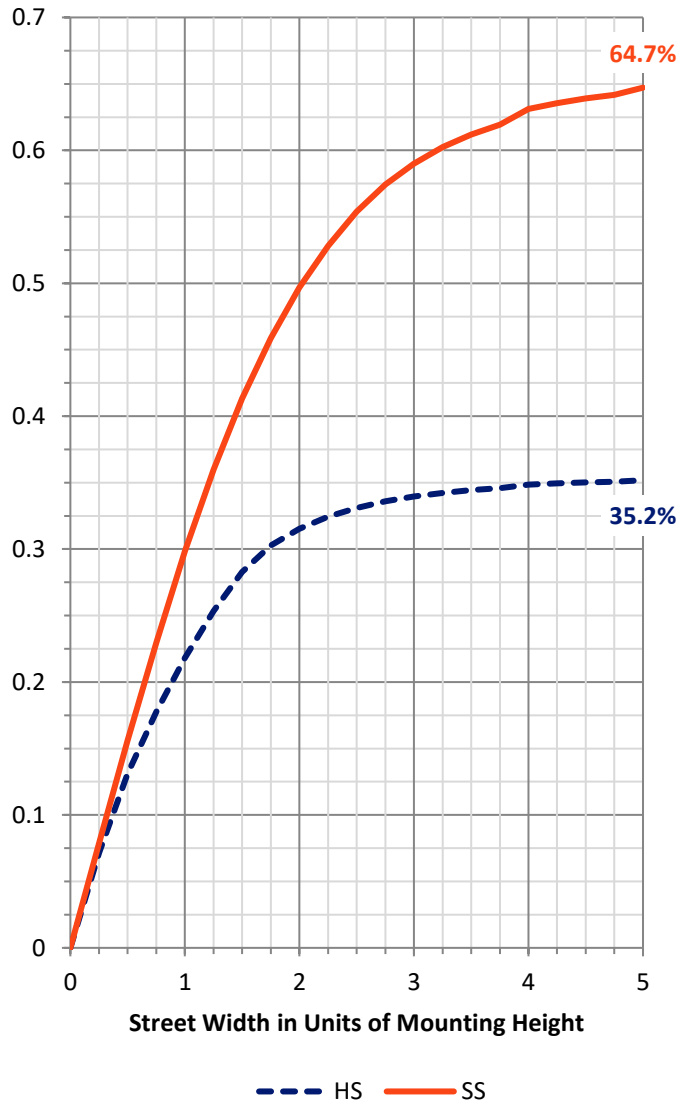
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10877.9	1.9	10879.8
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	20021.1	8.2	20029.3
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	30899.0	10.1	30909.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	238.0	0.8
10°-20°	762.4	2.5
20°-30°	1361.1	4.4
30°-40°	2214.2	7.2
40°-50°	3781.2	12.2
50°-60°	6309.1	20.4
60°-70°	8777.3	28.4
70°-80°	6803.7	22.0
80°-90°	652.0	2.1
90°-100°	7.9	0.0
100°-110°	0.7	0.0
110°-120°	0.4	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.1	0.0
0°-90°	30899.0	100.0
0°-180°	30909.1	100.0

**Coefficient of Utilization**



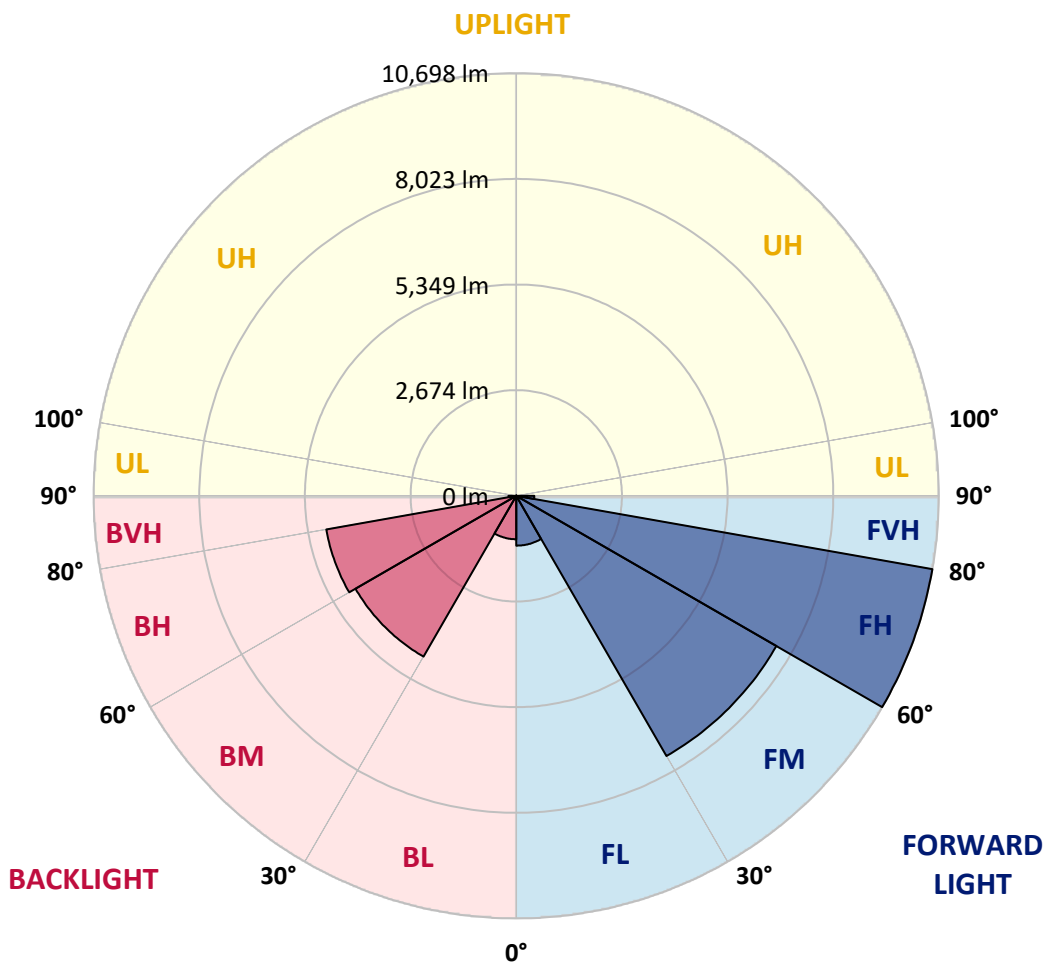
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1261.5	4.1			
FM	(30°-60°)	7605.8	24.6			
FH	(60°-80°)	10697.7	34.6			G4/12000
FVH	(80°-90°)	456.1	1.5			G3/500
BL	(0°-30°)	1100.0	3.6	B3/2500		
BM	(30°-60°)	4698.8	15.2	B3/5000		
BH	(60°-80°)	4883.3	15.8	B4/5000		G4/5000
BVH	(80°-90°)	195.9	0.6			G2/225
UL	(90°-100°)	7.9	0.0		U1/10	
UH	(100°-180°)	2.2	0.0		U1/10	

**BUG Rating: B4-U1-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8
2.5°	2487.7	2484.3	2481.9	2497.1	2454.0	2471.5	2459.8	2475.0	2471.5	2478.4	2479.6
5°	2505.2	2499.4	2491.2	2507.5	2481.9	2493.6	2480.8	2487.7	2465.7	2484.3	2486.6
7.5°	2544.7	2528.5	2527.3	2531.9	2514.5	2522.6	2500.5	2508.7	2497.1	2490.1	2497.1
10°	2604.1	2590.1	2575.0	2584.3	2555.2	2565.7	2542.4	2549.4	2543.6	2528.5	2542.4
12.5°	2644.8	2649.4	2638.9	2645.9	2620.3	2611.0	2602.9	2601.7	2598.2	2576.1	2572.7
15°	2735.5	2737.8	2719.2	2723.8	2718.0	2713.4	2701.7	2692.4	2673.8	2659.9	2650.6
17.5°	2854.1	2841.3	2823.9	2828.5	2844.8	2823.9	2816.9	2799.4	2772.7	2749.4	2744.8
20°	2978.6	2970.4	2954.1	2963.4	2962.3	2948.3	2951.8	2922.7	2884.3	2864.6	2849.5
22.5°	3117.0	3105.3	3093.7	3111.1	3097.2	3087.9	3084.4	3064.6	3016.9	2994.8	2991.3
25°	3255.4	3249.5	3257.7	3251.9	3232.1	3225.1	3229.8	3222.8	3167.0	3140.2	3123.9
27.5°	3428.7	3414.7	3427.5	3420.5	3399.6	3400.7	3401.9	3403.1	3340.3	3305.4	3282.1
30°	3626.4	3621.7	3638.0	3615.9	3596.1	3608.9	3619.4	3596.1	3541.5	3490.3	3482.2
32.5°	3883.4	3854.3	3872.9	3845.0	3814.8	3845.0	3863.6	3817.1	3772.9	3707.8	3719.4
35°	4168.3	4159.0	4159.0	4123.0	4106.7	4154.4	4173.0	4127.6	4059.0	4002.0	3988.1
37.5°	4470.7	4480.0	4509.1	4494.0	4478.9	4508.0	4549.8	4489.3	4401.0	4340.5	4324.2
40°	4872.0	4895.2	4915.0	4895.2	4877.8	4896.4	4944.1	4865.0	4803.4	4770.8	4735.9
42.5°	5303.5	5343.0	5330.2	5332.6	5347.7	5374.4	5422.1	5350.0	5279.1	5277.9	5226.7
45°	5887.3	5887.3	5860.6	5886.2	5883.8	5950.1	5971.1	5931.5	5872.2	5854.8	5810.6
47.5°	6432.8	6489.8	6479.3	6516.5	6487.5	6543.3	6614.2	6580.5	6511.9	6450.2	6440.9
50°	7193.4	7179.5	7165.5	7221.3	7216.7	7255.1	7320.2	7299.3	7203.9	7134.1	7121.3
52.5°	7862.2	7935.4	7918.0	8001.7	7955.2	8009.9	8087.8	8084.3	7968.0	7899.4	7879.6
55°	8706.5	8755.4	8751.9	8838.0	8774.0	8846.1	8911.2	8918.2	8791.4	8693.7	8724.0
57.5°	9585.8	9626.5	9603.2	9674.2	9611.4	9710.2	9749.8	9724.2	9649.8	9526.5	9571.8
60°	10466.2	10501.1	10527.9	10533.7	10497.6	10555.8	10593.0	10615.1	10497.6	10356.9	10411.6
62.5°	11360.6	11400.1	11376.9	11386.2	11286.2	11365.3	11411.8	11417.6	11282.7	11158.2	11196.6
65°	12302.7	12357.3	12273.6	12217.8	12094.5	12093.3	12155.0	12165.4	12070.1	11981.7	11966.5
67.5°	13469.2	13493.6	13314.5	13127.3	12919.1	12873.7	12916.8	12941.2	12995.8	12993.5	12924.9
68°	13600.6	13596.0	13414.5	13191.2	12967.9	12915.6	12936.5	12967.9	13004.0	13011.0	12928.4
70°	13301.7	13244.7	13141.2	12859.8	12638.8	12501.5	12428.3	12486.4	12388.7	12389.9	12235.2
72.5°	11815.4	11808.4	11617.6	11478.1	11281.5	11053.6	10948.9	10947.7	10957.0	10889.6	10730.2
75°	9570.7	9580.0	9357.8	9261.3	9200.8	9157.8	9179.9	9248.5	9255.5	9254.3	9198.5
77.5°	6674.7	6713.1	6653.8	6496.8	6665.4	6809.6	7087.6	7229.5	7184.1	7320.2	7406.3
80°	3498.4	3575.2	3577.5	3688.0	3824.1	3955.5	4195.1	4410.3	4252.1	4182.3	4110.2
82.5°	920.0	947.9	989.7	925.8	945.6	965.3	1151.4	1134.0	1046.7	1093.3	1163.0
85°	262.8	271.0	259.4	234.9	215.2	197.7	202.4	171.0	148.9	147.7	143.1
87.5°	184.9	198.9	175.6	151.2	136.1	126.8	122.1	103.5	83.7	73.3	58.2
90°	86.1	84.9	73.3	57.0	50.0	47.7	47.7	37.2	20.9	12.8	11.6
92.5°	36.1	37.2	30.2	24.4	20.9	16.3	12.8	8.1	4.7	2.3	1.2
95°	12.8	14.0	11.6	9.3	8.1	7.0	5.8	4.7	2.3	1.2	1.2
97.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.3	2.3	1.2	1.2
100°	0.0	0.0	0.0	1.2	2.3	2.3	2.3	2.3	1.2	1.2	1.2
102.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
105°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2
165°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
170°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
172.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
175°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
177.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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°	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8	2459.8
2.5°	2477.3	2471.5	2469.1	2440.1	2448.2	2430.8	2471.5	2459.8	2457.5	2473.8
5°	2483.1	2456.3	2472.6	2454.0	2458.7	2433.1	2465.7	2451.7	2452.9	2461.0
7.5°	2486.6	2471.5	2487.7	2455.2	2468.0	2458.7	2481.9	2468.0	2481.9	2488.9
10°	2521.5	2514.5	2502.9	2493.6	2502.9	2480.8	2509.8	2507.5	2515.7	2536.6
12.5°	2569.2	2561.0	2549.4	2533.1	2540.1	2531.9	2554.0	2556.4	2571.5	2582.0
15°	2640.1	2629.6	2623.8	2607.5	2609.9	2604.1	2616.8	2619.2	2649.4	2645.9
17.5°	2740.1	2728.5	2733.2	2718.0	2712.2	2698.3	2675.0	2666.9	2702.9	2713.4
20°	2849.5	2836.7	2842.5	2829.7	2721.5	2501.7	2649.4	2750.6	2673.8	2668.0
22.5°	2973.9	2959.9	2964.6	2944.8	2811.1	2399.4	2087.7	2062.1	2355.2	2473.8
25°	3111.1	3092.5	3090.2	3064.6	2625.0	2172.6	2137.7	2092.3	1878.3	1708.5
27.5°	3280.9	3253.0	3239.1	2852.9	2606.4	2257.5	2205.1	2043.5	1732.9	1743.4
30°	3464.7	3424.0	3162.3	2907.6	2742.5	2357.5	2287.7	1791.1	1793.4	1788.8
32.5°	3674.1	3583.3	3098.3	3075.1	2905.3	2464.5	1899.2	1878.3	1880.6	1887.6
35°	3948.5	3326.3	3313.5	3314.7	3104.2	2384.2	2012.1	1992.3	1994.6	1999.3
37.5°	4006.7	3585.7	3588.0	3561.2	3315.8	2178.4	2149.3	2148.1	2143.5	2138.8
40°	4053.2	3912.5	3878.7	3835.7	3073.9	2345.9	2336.6	2329.6	2333.1	2342.4
42.5°	4417.2	4311.4	4278.8	4227.7	3153.0	2599.4	2569.2	2561.0	2570.3	2565.7
45°	4901.1	4812.7	4748.7	3909.0	3483.3	2875.0	2850.6	2840.2	2843.6	2872.7
47.5°	5412.8	5360.5	5165.1	4223.0	3868.3	3200.7	3176.3	3160.0	3165.8	3158.8
50°	5969.9	5922.2	4781.3	4696.4	4294.0	3551.9	3515.9	3510.1	3512.4	3511.2
52.5°	6574.7	5578.0	5298.8	5210.4	4742.9	3919.5	3906.7	3875.3	3882.2	3875.3
55°	7284.1	5875.7	5868.7	5765.2	5247.6	4346.3	4331.2	4287.0	4009.0	4252.1
57.5°	7957.5	6444.4	6444.4	6344.4	5764.0	4770.8	4746.4	4713.8	2849.5	2298.2
60°	8694.9	7014.3	6998.0	6915.5	6261.8	5175.5	4206.7	4197.4	1721.3	1727.1
62.5°	9332.3	7522.6	7551.6	7474.9	6741.0	3875.3	1949.3	1909.7	169.8	261.7
65°	10046.4	8084.3	8119.2	8040.1	7259.7	4110.2	2115.6	2095.8	38.4	34.9
67.5°	10855.8	8644.9	8565.8	8478.6	7563.3	4232.3	2198.2	2180.7	10.5	7.0
68°	10862.8	8633.3	8530.9	8471.6	7534.2	4209.1	2191.2	2174.9	10.5	7.0
70°	10304.6	8198.3	8095.9	8111.1	7173.6	4025.3	2100.5	2070.2	10.5	7.0
72.5°	9040.3	7295.8	7180.6	7099.2	6361.8	3578.7	1883.0	1826.0	10.5	7.0
75°	7735.4	6182.7	5992.0	5812.9	5118.6	2928.5	1544.5	1480.6	10.5	7.0
77.5°	6096.7	4712.7	4441.7	4324.2	3846.2	2163.3	1147.9	1078.1	10.5	5.8
80°	3369.3	2704.1	2473.8	2401.7	2199.3	1271.2	658.3	616.4	9.3	5.8
82.5°	871.1	653.6	569.9	550.1	516.4	301.2	160.5	152.4	8.1	4.7
85°	124.4	91.9	101.2	119.8	115.1	77.9	55.8	47.7	7.0	3.5
87.5°	65.1	54.7	64.0	72.1	73.3	45.4	23.3	12.8	3.5	0.0
90°	10.5	10.5	11.6	12.8	12.8	5.8	4.7	0.0	0.0	0.0
92.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.2	2.3	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P522212  
 CATALOG NUMBER: CST-CA8-230-750-U-T5R-HSS-HM-EX90

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.2	1.2	1.2	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)