

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: P256690

Luminaire Tested: **CST-10-3-D-U-T5R-7030-HSS-HM-EX90**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P256690  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-10-3-D-U-T5R-7030-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED 90  
DEGREE SHIELD - BLACK  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26234 lumens  
Efficiency: N/A  
Efficacy: 123.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B4 - U1 - G4

Input Watts (W): 212  
Input Voltage (V): NR  
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: 28.75 FT

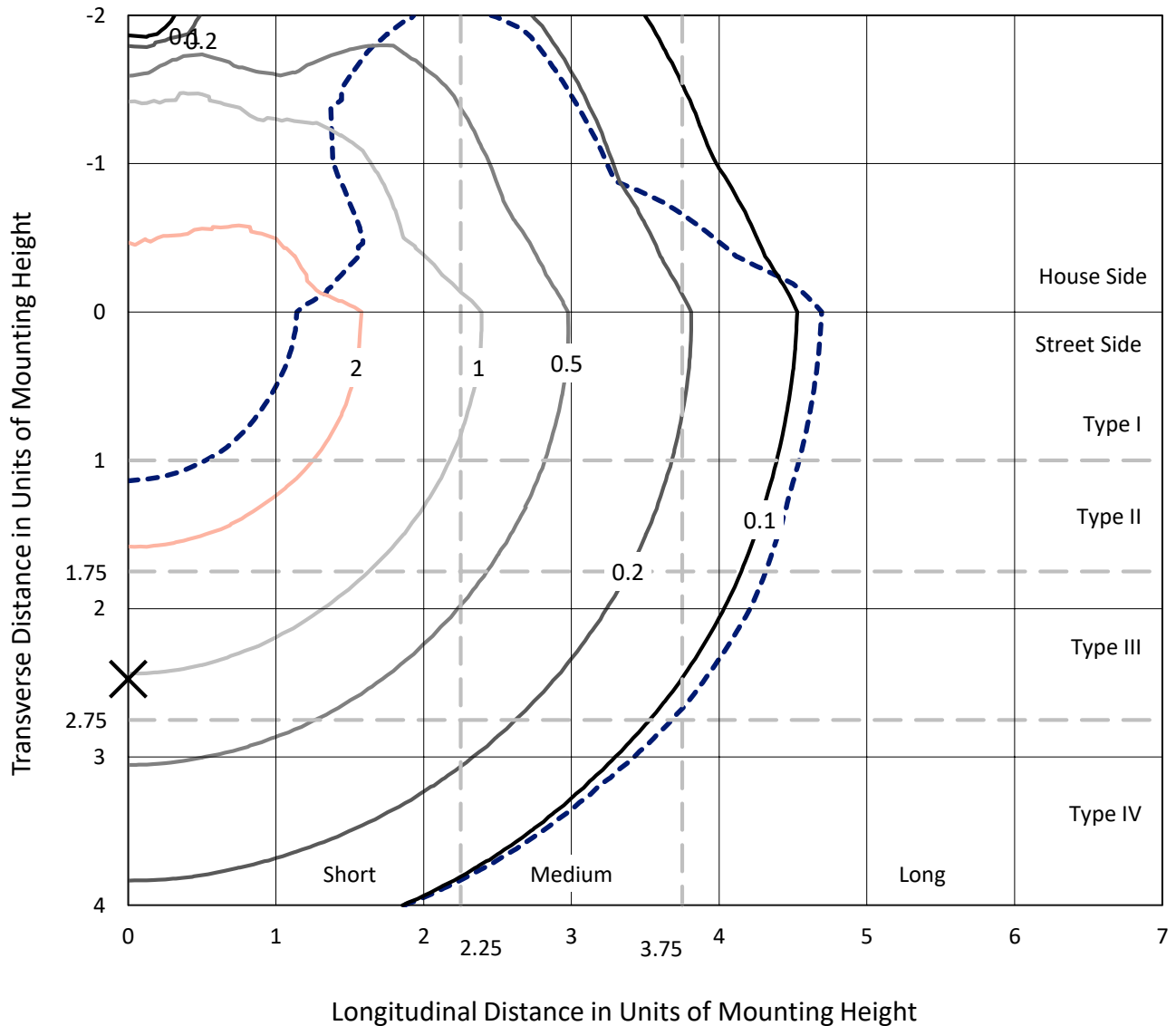


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

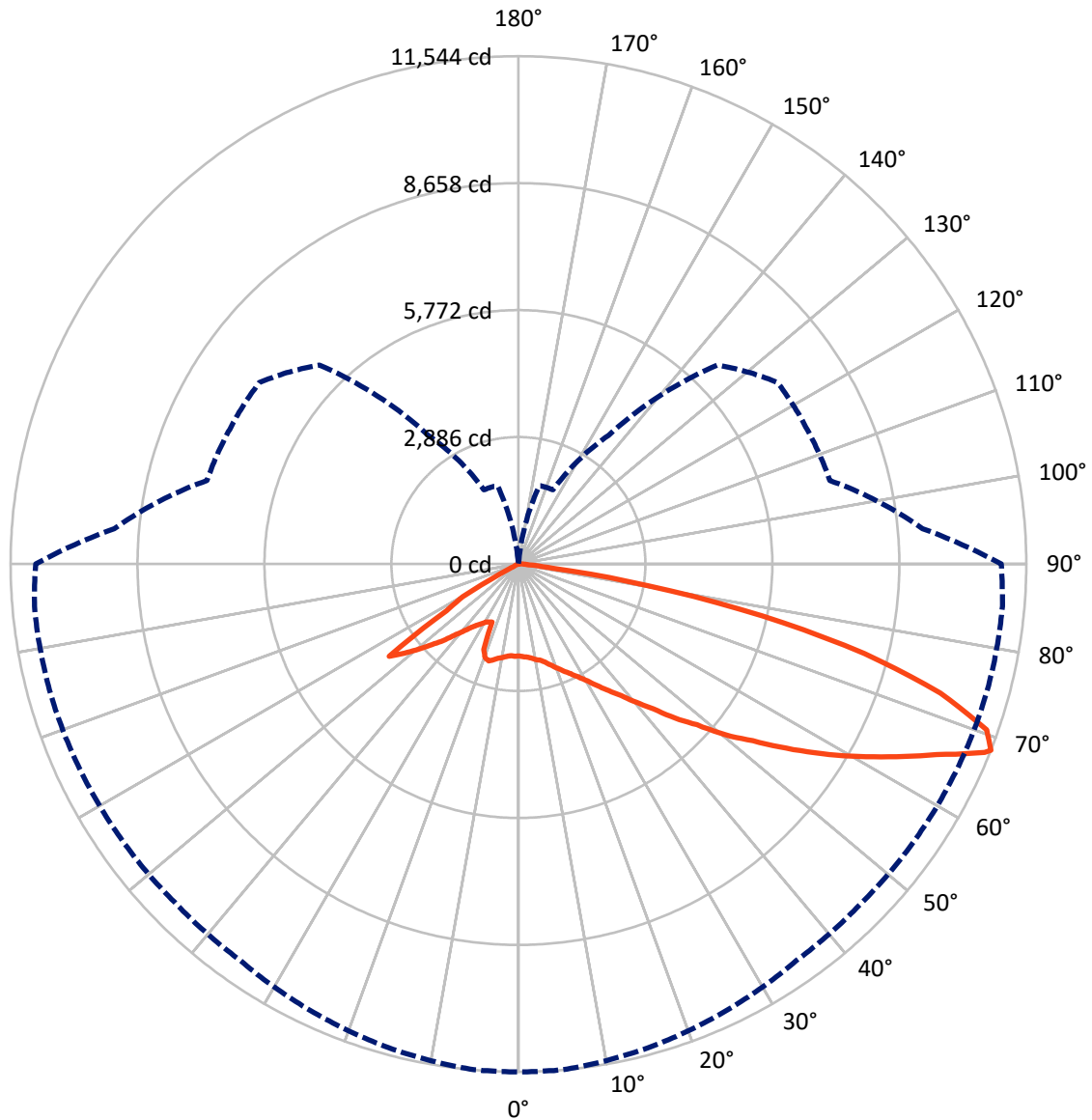


Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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



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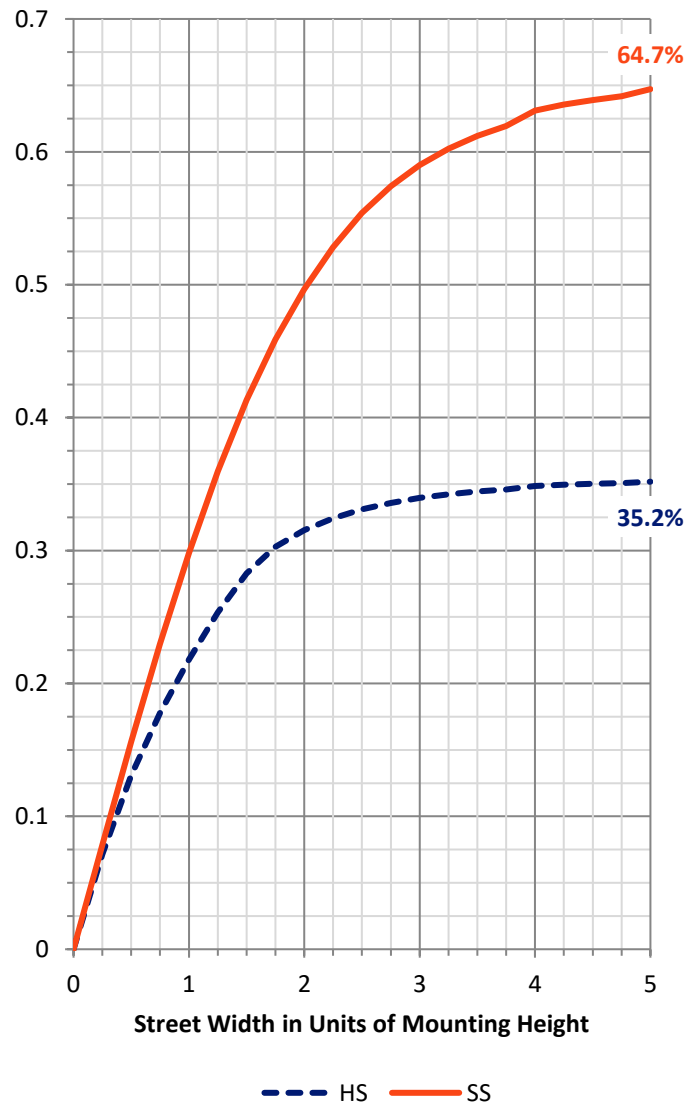
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9232.6	1.6	9234.2
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	16992.9	6.9	16999.9
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	26225.5	8.5	26234.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.0	0.8
10°-20°	647.1	2.5
20°-30°	1155.2	4.4
30°-40°	1879.3	7.2
40°-50°	3209.3	12.2
50°-60°	5354.9	20.4
60°-70°	7449.7	28.4
70°-80°	5774.7	22.0
80°-90°	553.4	2.1
90°-100°	6.7	0.0
100°-110°	0.6	0.0
110°-120°	0.3	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	26225.5	100.0
0°-180°	26234.0	100.0

**Coefficient of Utilization**



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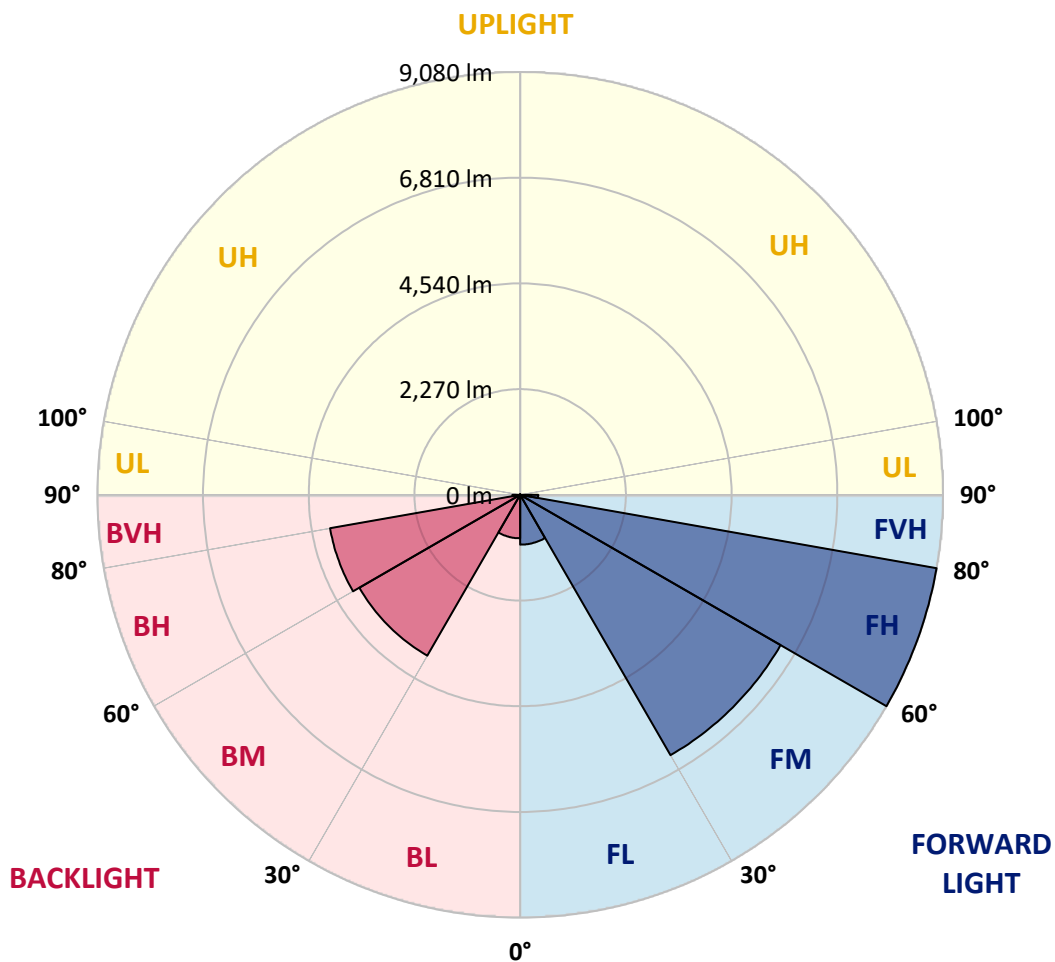
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1070.7	4.1			
FM	(30°-60°)	6455.4	24.6			
FH	(60°-80°)	9079.7	34.6			G4/12000
FVH	(80°-90°)	387.1	1.5			G3/500
BL	(0°-30°)	933.6	3.6	B2/1000		
BM	(30°-60°)	3988.1	15.2	B3/5000		
BH	(60°-80°)	4144.7	15.8	B4/5000		G4/5000
BVH	(80°-90°)	166.2	0.6			G2/225
UL	(90°-100°)	6.7	0.0		U1/10	
UH	(100°-180°)	1.6	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°	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8
2.5°	2111.5	2108.5	2106.5	2119.4	2082.8	2097.7	2087.8	2100.6	2097.7	2103.6	2104.6
5°	2126.3	2121.3	2114.4	2128.3	2106.5	2116.4	2105.6	2111.5	2092.7	2108.5	2110.5
7.5°	2159.8	2146.0	2145.0	2149.0	2134.2	2141.1	2122.3	2129.2	2119.4	2113.5	2119.4
10°	2210.2	2198.3	2185.5	2193.4	2168.7	2177.6	2157.9	2163.8	2158.9	2146.0	2157.9
12.5°	2244.7	2248.7	2239.8	2245.7	2224.0	2216.1	2209.2	2208.2	2205.3	2186.5	2183.5
15°	2321.7	2323.7	2307.9	2311.9	2306.9	2303.0	2293.1	2285.2	2269.4	2257.6	2249.7
17.5°	2422.4	2411.6	2396.8	2400.7	2414.5	2396.8	2390.8	2376.0	2353.3	2333.6	2329.6
20°	2528.0	2521.1	2507.3	2515.2	2514.2	2502.4	2505.3	2480.7	2448.1	2431.3	2418.5
22.5°	2645.5	2635.6	2625.8	2640.6	2628.7	2620.8	2617.9	2601.1	2560.6	2541.9	2538.9
25°	2763.0	2758.0	2765.0	2760.0	2743.2	2737.3	2741.3	2735.3	2688.0	2665.3	2651.4
27.5°	2910.1	2898.2	2909.1	2903.2	2885.4	2886.4	2887.4	2888.3	2835.0	2805.4	2785.7
30°	3077.9	3073.9	3087.7	3069.0	3052.2	3063.1	3072.0	3052.2	3005.8	2962.4	2955.5
32.5°	3296.0	3271.4	3287.2	3263.5	3237.8	3263.5	3279.3	3239.8	3202.3	3147.0	3156.8
35°	3537.9	3530.0	3530.0	3499.4	3485.6	3526.0	3541.8	3503.3	3445.1	3396.7	3384.9
37.5°	3794.5	3802.4	3827.1	3814.3	3801.4	3826.1	3861.7	3810.3	3735.3	3684.0	3670.2
40°	4135.1	4154.8	4171.6	4154.8	4140.0	4155.8	4196.3	4129.2	4076.9	4049.2	4019.6
42.5°	4501.3	4534.9	4524.0	4526.0	4538.8	4561.5	4602.0	4540.8	4480.6	4479.6	4436.2
45°	4996.9	4996.9	4974.2	4995.9	4993.9	5050.2	5067.9	5034.4	4984.0	4969.2	4931.7
47.5°	5459.8	5508.2	5499.3	5530.9	5506.2	5553.6	5613.8	5585.2	5527.0	5474.6	5466.7
50°	6105.4	6093.6	6081.7	6129.1	6125.2	6157.7	6213.0	6195.2	6114.3	6055.1	6044.2
52.5°	6673.0	6735.2	6720.4	6791.5	6752.0	6798.4	6864.5	6861.6	6762.8	6704.6	6687.8
55°	7389.7	7431.1	7428.2	7501.2	7446.9	7508.1	7563.4	7569.3	7461.7	7378.8	7404.5
57.5°	8135.9	8170.5	8150.8	8211.0	8157.7	8241.6	8275.1	8253.4	8190.2	8085.6	8124.1
60°	8883.2	8912.8	8935.5	8940.5	8909.9	8959.2	8990.8	9009.6	8909.9	8790.4	8836.8
62.5°	9642.3	9675.9	9656.1	9664.0	9579.1	9646.3	9685.7	9690.7	9576.2	9470.5	9503.1
65°	10441.9	10488.3	10417.2	10369.8	10265.2	10264.2	10316.5	10325.4	10244.5	10169.4	10156.6
67.5°	11432.0	11452.7	11300.7	11141.8	10965.1	10926.6	10963.1	10983.8	11030.2	11028.2	10970.0
68°	11543.5	11539.6	11385.6	11196.1	11006.5	10962.1	10979.9	11006.5	11037.1	11043.0	10973.0
70°	11289.8	11241.5	11153.6	10914.7	10727.2	10610.7	10548.5	10597.9	10514.9	10515.9	10384.6
72.5°	10028.3	10022.4	9860.5	9742.0	9575.2	9381.7	9292.9	9291.9	9299.8	9242.5	9107.3
75°	8123.1	8131.0	7942.5	7860.5	7809.2	7772.7	7791.4	7849.7	7855.6	7854.6	7807.2
77.5°	5665.2	5697.7	5647.4	5514.1	5657.3	5779.7	6015.6	6136.0	6097.5	6213.0	6286.1
80°	2969.3	3034.4	3036.4	3130.2	3245.7	3357.2	3560.6	3743.2	3609.0	3549.7	3488.5
82.5°	780.8	804.5	840.0	785.8	802.5	819.3	977.3	962.5	888.4	927.9	987.1
85°	223.1	230.0	220.1	199.4	182.6	167.8	171.8	145.1	126.4	125.4	121.4
87.5°	157.0	168.8	149.1	128.3	115.5	107.6	103.6	87.9	71.1	62.2	49.4
90°	73.0	72.1	62.2	48.4	42.4	40.5	40.5	31.6	17.8	10.9	9.9
92.5°	30.6	31.6	25.7	20.7	17.8	13.8	10.9	6.9	3.9	2.0	1.0
95°	10.9	11.8	9.9	7.9	6.9	5.9	4.9	3.9	2.0	1.0	1.0
97.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	1.0	1.0
100°	0.0	0.0	0.0	1.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
102.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
105°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0



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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	1.0	1.0	1.0	1.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
165°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8	2087.8
2.5°	2102.6	2097.7	2095.7	2071.0	2077.9	2063.1	2097.7	2087.8	2085.8	2099.6
5°	2107.5	2084.8	2098.6	2082.8	2086.8	2065.1	2092.7	2080.9	2081.9	2088.8
7.5°	2110.5	2097.7	2111.5	2083.8	2094.7	2086.8	2106.5	2094.7	2106.5	2112.5
10°	2140.1	2134.2	2124.3	2116.4	2124.3	2105.6	2130.2	2128.3	2135.2	2152.9
12.5°	2180.6	2173.7	2163.8	2150.0	2155.9	2149.0	2167.7	2169.7	2182.5	2191.4
15°	2240.8	2231.9	2227.0	2213.2	2215.1	2210.2	2221.0	2223.0	2248.7	2245.7
17.5°	2325.7	2315.8	2319.8	2306.9	2302.0	2290.1	2270.4	2263.5	2294.1	2303.0
20°	2418.5	2407.6	2412.6	2401.7	2309.9	2123.3	2248.7	2334.6	2269.4	2264.5
22.5°	2524.1	2512.3	2516.2	2499.4	2385.9	2036.5	1771.9	1750.2	1998.9	2099.6
25°	2640.6	2624.8	2622.8	2601.1	2228.0	1844.0	1814.3	1775.9	1594.2	1450.1
27.5°	2784.7	2761.0	2749.2	2421.4	2212.2	1916.0	1871.6	1734.4	1470.8	1479.7
30°	2940.7	2906.1	2684.0	2467.8	2327.7	2000.9	1941.7	1520.2	1522.2	1518.2
32.5°	3118.4	3041.4	2629.7	2610.0	2465.9	2091.7	1612.0	1594.2	1596.2	1602.1
35°	3351.3	2823.2	2812.3	2813.3	2634.7	2023.6	1707.7	1691.0	1692.9	1696.9
37.5°	3400.7	3043.3	3045.3	3022.6	2814.3	1848.9	1824.2	1823.2	1819.3	1815.3
40°	3440.2	3320.7	3292.1	3255.6	2609.0	1991.0	1983.1	1977.2	1980.2	1988.1
42.5°	3749.1	3659.3	3631.7	3588.2	2676.1	2206.2	2180.6	2173.7	2181.6	2177.6
45°	4159.8	4084.8	4030.5	3317.8	2956.5	2440.2	2419.5	2410.6	2413.5	2438.2
47.5°	4594.1	4549.7	4383.9	3584.3	3283.2	2716.6	2695.9	2682.0	2687.0	2681.1
50°	5066.9	5026.5	4058.1	3986.0	3644.5	3014.7	2984.1	2979.2	2981.1	2980.2
52.5°	5580.3	4734.3	4497.4	4422.4	4025.5	3326.6	3315.8	3289.1	3295.0	3289.1
55°	6182.4	4987.0	4981.1	4893.2	4453.9	3688.9	3676.1	3638.6	3402.6	3609.0
57.5°	6754.0	5469.7	5469.7	5384.8	4892.2	4049.2	4028.5	4000.8	2418.5	1950.6
60°	7379.8	5953.4	5939.6	5869.5	5314.7	4392.7	3570.5	3562.6	1461.0	1465.9
62.5°	7920.7	6384.8	6409.4	6344.3	5721.4	3289.1	1654.4	1620.9	144.1	222.1
65°	8526.8	6861.6	6891.2	6824.0	6161.7	3488.5	1795.6	1778.8	32.6	29.6
67.5°	9213.9	7337.4	7270.2	7196.2	6419.3	3592.2	1865.7	1850.9	8.9	5.9
68°	9219.8	7327.5	7240.6	7190.3	6394.6	3572.4	1859.8	1845.9	8.9	5.9
70°	8746.0	6958.3	6871.4	6884.3	6088.6	3416.5	1782.8	1757.1	8.9	5.9
72.5°	7673.0	6192.3	6094.6	6025.5	5399.6	3037.4	1598.2	1549.8	8.9	5.9
75°	6565.4	5247.6	5085.7	4933.7	4344.4	2485.6	1310.9	1256.6	8.9	5.9
77.5°	5174.5	3999.9	3769.9	3670.2	3264.4	1836.1	974.3	915.1	8.9	4.9
80°	2859.7	2295.1	2099.6	2038.4	1866.7	1078.9	558.7	523.2	7.9	4.9
82.5°	739.4	554.8	483.7	466.9	438.3	255.7	136.2	129.3	6.9	3.9
85°	105.6	78.0	85.9	101.7	97.7	66.1	47.4	40.5	5.9	3.0
87.5°	55.3	46.4	54.3	61.2	62.2	38.5	19.7	10.9	3.0	0.0
90°	8.9	8.9	9.9	10.9	10.9	4.9	3.9	0.0	0.0	0.0
92.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P256690

CATALOG NUMBER: CST-10-3-D-U-T5R-7030-HSS-HM-EX90

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	1.0	1.0	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)