

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: P256745

Luminaire Tested: **CST-8-3-D-U-T5R-HSS-HM-EX180**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P256745  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-7)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-8-3-D-U-T5R-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE  
(8) 70 CRI, 4000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED 180  
DEGREE SHIELD - BLACK  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20825 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B3 - U2 - G4

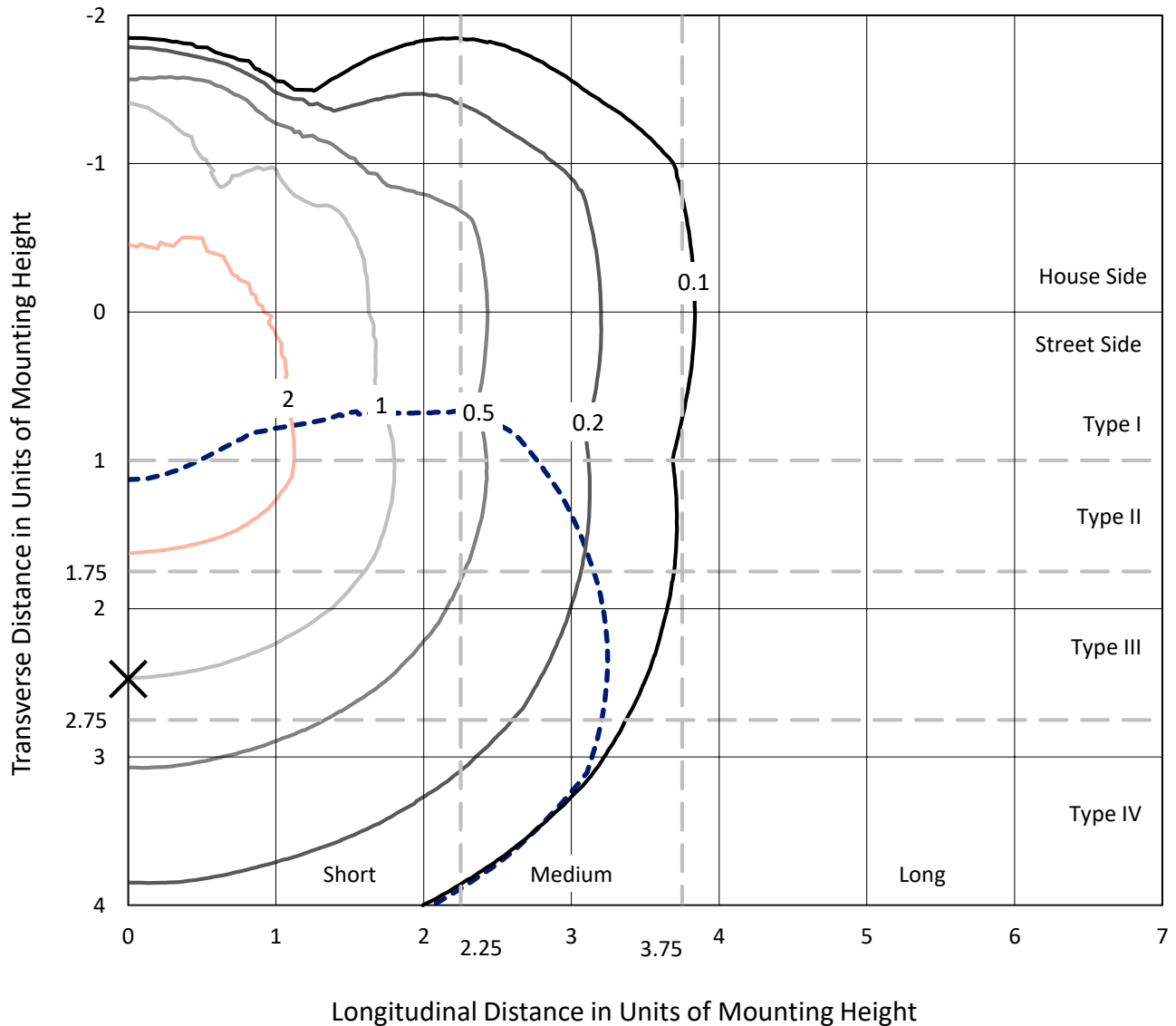
Input Watts (W): 226  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

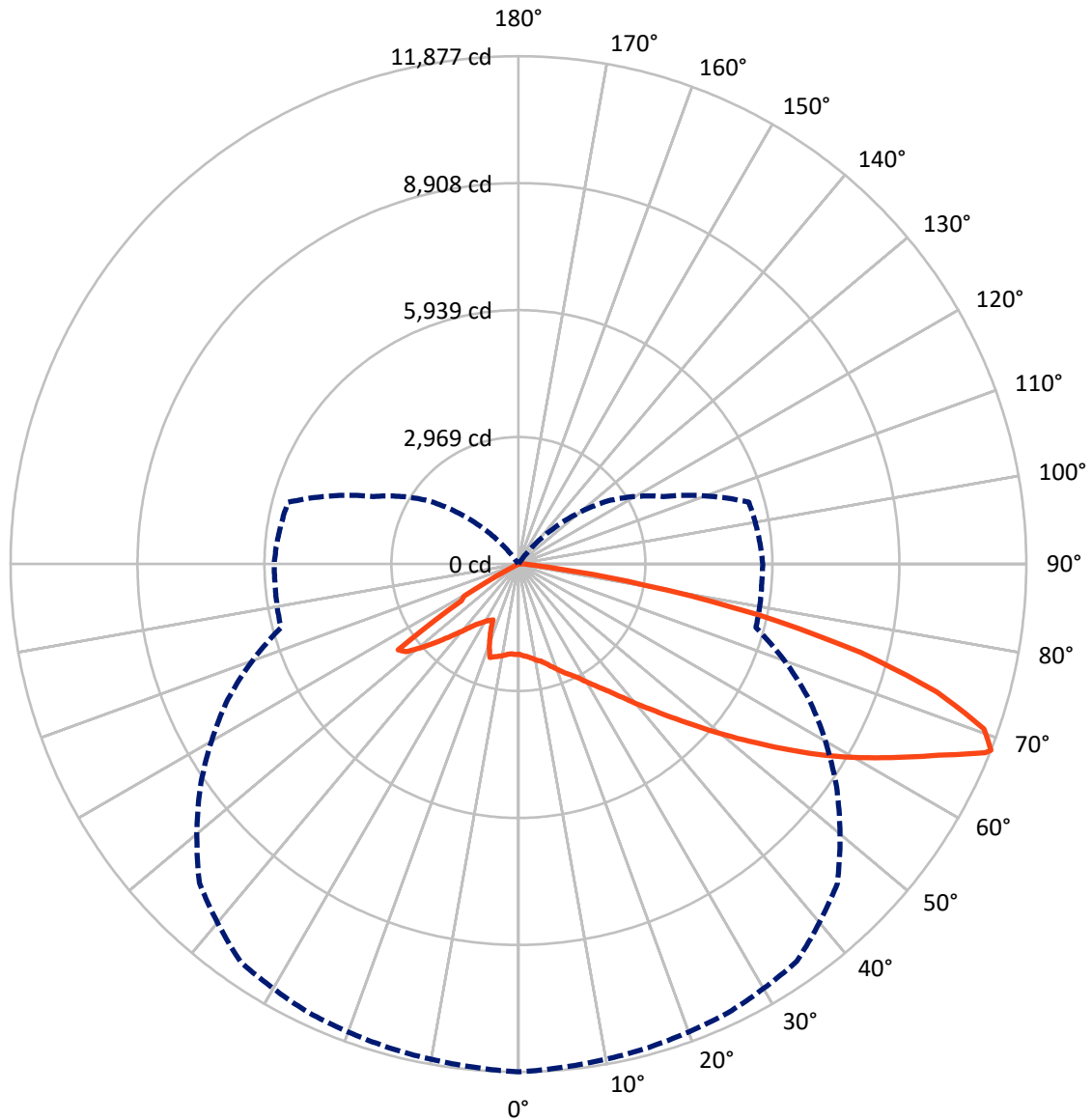


Based on 25 foot mounting height. Maximum calculated value = 3.5 fc  
 Type IV - Short - Semi-Cutoff

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CATALOG NUMBER: CST-8-3-D-U-T5R-HSS-HM-EX180

### Luminous Intensity Polar Plot



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

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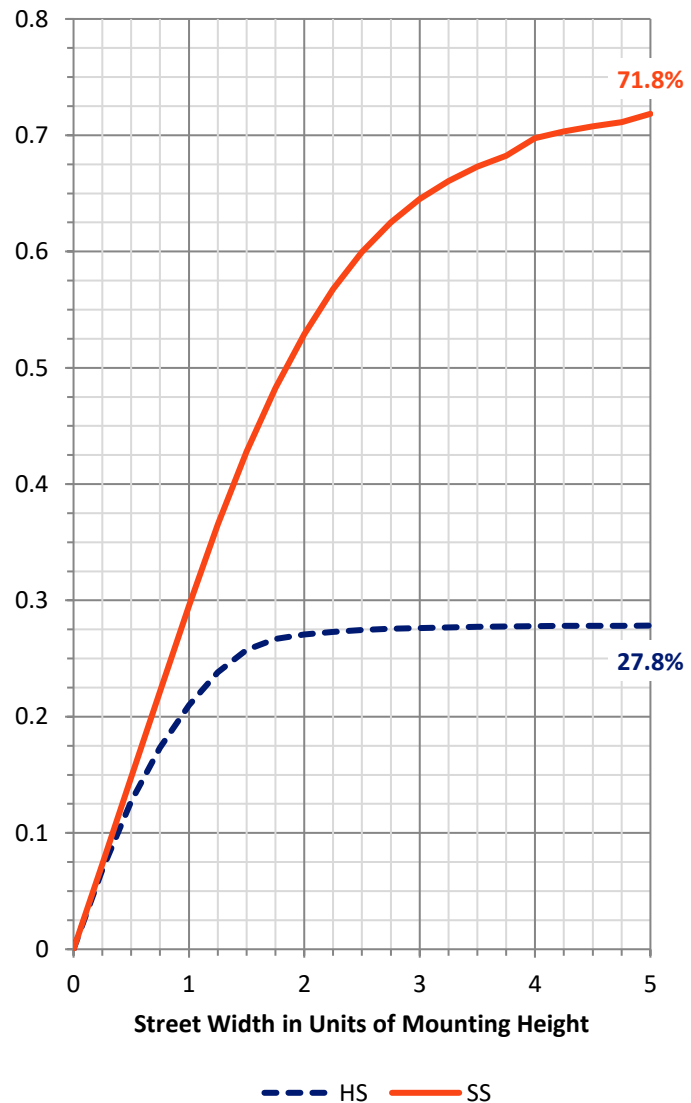
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5816.5	0.1	5816.6
	% Fixture	27.9	0.0	27.9
<b>Street Side</b>	Lumens	14996.5	11.9	15008.4
	% Fixture	72.0	0.1	72.1
<b>Total</b>	Lumens	20813.0	12.1	20825.0
	% Fixture	99.9	0.1	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	204.8	1.0
10°-20°	648.8	3.1
20°-30°	1098.5	5.3
30°-40°	1740.3	8.4
40°-50°	2845.2	13.7
50°-60°	4358.2	20.9
60°-70°	5358.7	25.7
70°-80°	4140.6	19.9
80°-90°	417.8	2.0
90°-100°	11.9	0.1
100°-110°	0.2	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°	20813.0	99.9
0°-180°	20825.0	100.0



REPORT NUMBER: P256745

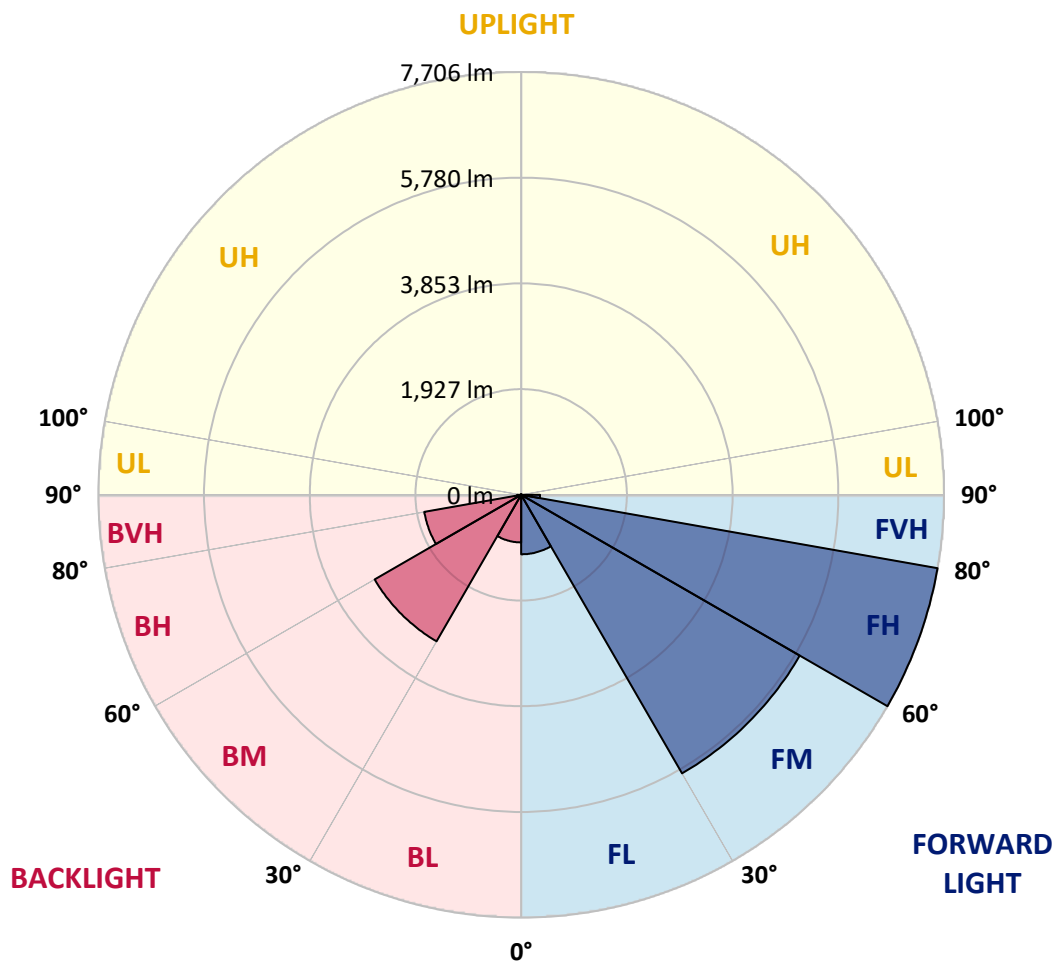
CATALOG NUMBER: CST-8-3-D-U-T5R-HSS-HM-EX180

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1084.0	5.2			
FM	(30°-60°)	5861.9	28.1			
FH	(60°-80°)	7706.1	37.0			G4/12000
FVH	(80°-90°)	344.5	1.7			G3/500
BL	(0°-30°)	868.2	4.2	B2/1000		
BM	(30°-60°)	3081.8	14.8	B3/5000		
BH	(60°-80°)	1793.2	8.6	B3/2500		G3/2500
BVH	(80°-90°)	73.2	0.4			G1/100
UL	(90°-100°)	11.9	0.1		U2/50	
UH	(100°-180°)	0.1	0.0		U1/10	

**BUG Rating: B3-U2-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2147.9	2143.9	2139.9	2148.9	2113.8	2128.9	2116.8	2127.9	2119.8	2128.9	2125.8
5°	2176.0	2172.0	2160.0	2170.0	2146.9	2152.9	2137.9	2141.9	2114.8	2130.9	2129.9
7.5°	2222.2	2211.1	2203.1	2203.1	2183.0	2182.0	2157.9	2159.0	2137.9	2135.9	2139.9
10°	2284.4	2276.3	2254.3	2256.3	2228.2	2224.2	2194.1	2193.1	2176.0	2166.0	2175.0
12.5°	2330.5	2338.5	2318.5	2318.5	2290.4	2270.3	2249.2	2235.2	2222.2	2207.1	2200.1
15°	2414.8	2422.8	2395.7	2394.7	2383.7	2359.6	2336.5	2306.4	2283.4	2276.3	2265.3
17.5°	2524.1	2519.1	2496.0	2497.0	2499.0	2459.9	2436.8	2397.7	2364.6	2340.5	2334.5
20°	2635.5	2635.5	2610.4	2618.4	2608.4	2572.3	2557.2	2503.1	2456.9	2430.8	2409.8
22.5°	2759.9	2754.9	2737.8	2754.9	2734.8	2698.7	2673.6	2619.4	2560.2	2412.8	2352.6
25°	2878.3	2875.3	2882.3	2887.3	2862.2	2817.1	2800.0	2742.8	2578.3	2384.7	2263.3
27.5°	3027.8	3017.7	3033.8	3043.8	3018.7	2979.6	2943.5	2879.3	2531.2	2378.7	2365.6
30°	3219.4	3197.3	3220.4	3225.4	3199.3	3175.2	3121.1	2800.0	2547.2	2503.1	2499.0
32.5°	3424.0	3397.9	3428.0	3432.1	3397.9	3377.9	3241.4	2758.9	2704.7	2653.5	2658.6
35°	3666.8	3666.8	3681.9	3683.9	3658.8	3624.7	3105.0	2959.5	2911.4	2864.2	2863.2
37.5°	3962.8	3953.7	3993.9	4017.9	3990.9	3893.5	3303.6	3235.4	3161.2	3101.0	2976.6
40°	4319.9	4336.0	4347.0	4371.1	4345.0	4126.3	3593.6	3516.3	3458.1	3256.5	2942.5
42.5°	4705.2	4709.2	4733.2	4763.3	4763.3	4532.6	3932.7	3866.5	3791.2	3184.3	3042.8
45°	5165.6	5156.6	5202.8	5250.9	5237.9	4999.1	4326.9	4277.8	3925.6	3393.9	3394.9
47.5°	5688.3	5677.3	5743.5	5806.7	5741.5	5516.8	4760.3	4722.2	3789.2	3749.1	3741.0
50°	6292.3	6265.2	6341.4	6425.7	6372.5	6094.6	5287.0	4554.7	4169.4	4137.3	4132.3
52.5°	6937.3	6916.3	6962.4	7105.9	7035.7	6699.6	5785.6	4699.1	4609.8	4573.7	4564.7
55°	7665.7	7624.6	7723.9	7833.2	7752.0	7368.7	6277.2	5178.7	5086.4	5024.2	4933.9
57.5°	8431.2	8372.0	8423.1	8560.6	8482.3	8053.9	6911.3	5672.3	5562.9	4603.8	4237.6
60°	9193.6	9166.5	9186.6	9308.0	9211.7	8720.1	7505.2	6166.9	4708.2	4553.7	4571.7
62.5°	9960.1	9900.9	9918.9	10043.3	9919.9	9354.1	8068.0	6616.3	4955.0	4900.8	4919.8
65°	10781.7	10711.5	10727.5	10763.7	10611.2	9923.0	8565.6	7040.7	5326.2	5269.0	5290.0
67.5°	11771.9	11707.7	11620.4	11513.1	11302.4	10526.9	9060.2	7487.1	5743.5	5711.4	5718.4
68°	11877.3	11815.0	11709.7	11582.3	11345.5	10552.0	9081.2	7500.2	5749.5	5709.4	5711.4
70°	11549.2	11586.3	11466.9	11253.2	11055.6	10184.8	8737.1	7211.2	5493.7	5434.5	5419.5
72.5°	10227.9	10309.2	10144.7	10108.6	9865.8	9073.2	7645.6	6257.2	4778.4	4797.4	4743.3
75°	8257.6	8377.0	8177.3	8188.4	8049.9	7568.4	6407.6	5209.8	3923.6	4010.9	4027.0
77.5°	5742.5	5914.0	5826.8	5914.0	5845.8	5672.3	4959.0	4011.9	2993.6	3094.0	3133.1
80°	2994.6	3198.3	3313.7	3349.8	3371.9	3364.8	3019.7	2407.8	1730.6	1767.7	1765.7
82.5°	947.0	897.9	927.0	919.0	893.9	903.9	814.6	637.1	441.4	486.6	465.5
85°	285.9	287.9	279.9	277.9	256.8	225.7	184.6	106.3	52.2	61.2	57.2
87.5°	210.7	212.7	196.6	186.6	174.6	151.5	117.4	66.2	25.1	24.1	19.1
90°	116.4	112.4	104.3	96.3	91.3	78.3	59.2	25.1	9.0	7.0	6.0
92.5°	63.2	60.2	56.2	53.2	46.1	37.1	24.1	8.0	4.0	1.0	0.0
95°	29.1	27.1	26.1	23.1	20.1	14.0	8.0	5.0	3.0	1.0	0.0
97.5°	13.0	12.0	11.0	9.0	7.0	4.0	4.0	3.0	2.0	1.0	0.0
100°	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0



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CATALOG NUMBER: CST-8-3-D-U-T5R-HSS-HM-EX180

**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	0.0	0.0	0.0	0.0
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°	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2122.8	2116.8	2113.8	2094.7	2100.8	2083.7	2116.8	2108.8	2103.8	2117.8
5°	2124.8	2103.8	2116.8	2105.8	2109.8	2085.7	2111.8	2100.8	2099.8	2105.8
7.5°	2129.9	2115.8	2128.9	2106.8	2116.8	2106.8	2125.8	2114.8	2123.8	2129.9
10°	2156.9	2148.9	2142.9	2137.9	2144.9	2124.8	2148.9	2149.9	2152.9	2171.0
12.5°	2195.1	2187.0	2177.0	2164.0	2171.0	2163.0	2181.0	2186.0	2197.1	2206.1
15°	2248.2	2233.2	2229.2	2217.1	2224.2	2220.1	2224.2	2221.2	2242.2	2239.2
17.5°	2321.5	2304.4	2247.2	2189.0	2151.9	2163.0	2209.1	2269.3	2284.4	2286.4
20°	2348.6	2228.2	2222.2	2155.9	2125.8	2123.8	2028.5	1886.1	1929.2	2030.5
22.5°	2316.5	2151.9	2134.9	2121.8	1993.4	1782.7	1762.7	1741.6	1736.6	1751.6
25°	2244.2	2225.2	2210.1	2039.6	1836.9	1837.9	1808.8	1670.4	1454.7	1436.6
27.5°	2354.6	2328.5	2183.0	1920.2	1916.2	1914.2	1871.0	1515.9	1469.7	1480.8
30°	2480.0	2436.8	2056.6	2022.5	2021.5	2003.5	1677.4	1528.9	1528.9	1530.9
32.5°	2624.5	2356.6	2128.9	2144.9	2143.9	2058.6	1620.2	1610.2	1606.2	1616.2
35°	2734.8	2292.4	2284.4	2313.5	2293.4	1746.6	1721.5	1712.5	1708.5	1703.5
37.5°	2700.7	2477.0	2477.0	2495.0	2333.5	1860.0	1848.0	1848.0	1839.9	1835.9
40°	2752.9	2706.7	2683.6	2690.7	1695.5	1997.4	2006.5	2004.5	2003.5	2010.5
42.5°	3027.8	2986.6	2965.6	2716.7	1898.1	1985.4	2206.1	2205.1	2208.1	2205.1
45°	3377.9	3339.8	3284.6	2542.2	2154.9	1740.6	2431.8	2442.9	2443.9	2442.9
47.5°	3745.1	3721.0	3156.2	2814.1	2433.8	1868.0	2324.5	2714.7	2709.7	2715.7
50°	4133.3	4025.0	3140.1	3136.1	2730.8	2078.7	2079.7	2952.5	3003.7	3019.7
52.5°	4565.7	3648.8	3480.2	3175.2	3031.8	2295.4	2273.3	2616.4	3314.7	3330.7
55°	4240.7	3854.4	3851.4	2826.1	3154.2	2504.1	2507.1	2483.0	3039.8	3455.1
57.5°	4219.6	4228.6	4221.6	3153.2	2301.4	2347.6	2731.8	2710.7	1968.3	1595.1
60°	4583.8	4596.8	4101.2	3405.0	2488.0	1443.6	1682.4	1429.6	1448.7	1463.7
62.5°	4931.9	4935.9	3335.7	2232.2	1233.0	58.2	28.1	23.1	22.1	22.1
65°	5317.1	5317.1	3575.5	2434.8	1190.8	22.1	4.0	3.0	11.0	11.0
67.5°	5689.3	5607.1	3751.1	2585.3	1211.9	3.0	0.0	0.0	0.0	0.0
68°	5668.3	5578.0	3735.0	2581.3	1208.9	2.0	0.0	0.0	0.0	0.0
70°	5353.2	5266.0	3543.4	2463.9	1163.7	2.0	0.0	0.0	0.0	0.0
72.5°	4725.2	4645.0	3138.1	2172.0	1049.4	1.0	0.0	0.0	0.0	0.0
75°	3999.9	3988.8	2710.7	1832.9	899.9	1.0	0.0	0.0	0.0	0.0
77.5°	3218.4	3168.2	2118.8	1436.6	725.3	0.0	0.0	0.0	0.0	0.0
80°	1792.8	1867.0	1240.0	844.7	456.5	0.0	0.0	0.0	0.0	0.0
82.5°	484.6	453.5	270.9	183.6	87.3	0.0	0.0	0.0	0.0	0.0
85°	62.2	68.2	31.1	25.1	6.0	0.0	0.0	0.0	0.0	0.0
87.5°	32.1	38.1	10.0	8.0	2.0	0.0	0.0	0.0	0.0	0.0
90°	6.0	7.0	3.0	1.0	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



REPORT NUMBER: P256745

CATALOG NUMBER: CST-8-3-D-U-T5R-HSS-HM-EX180

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)