

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: P256698

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256698
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-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K 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: 26959 lumens
Efficiency: N/A
Efficacy: 127.2 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B4 - U1 - G4

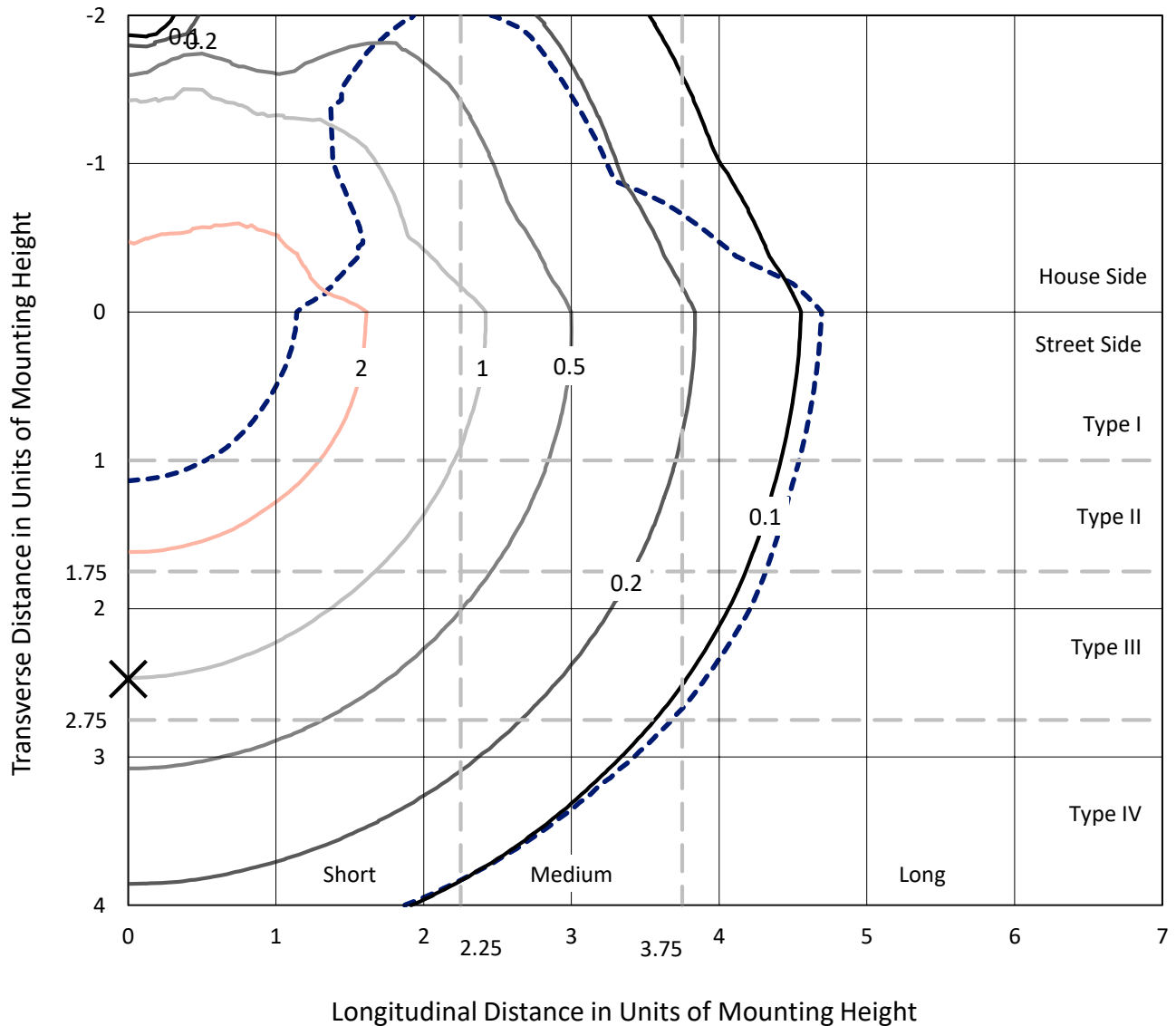
Input Watts (W): 212
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P256698
 CATALOG NUMBER: CST-10-3-D-U-T5R-HSS-HM-EX90

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

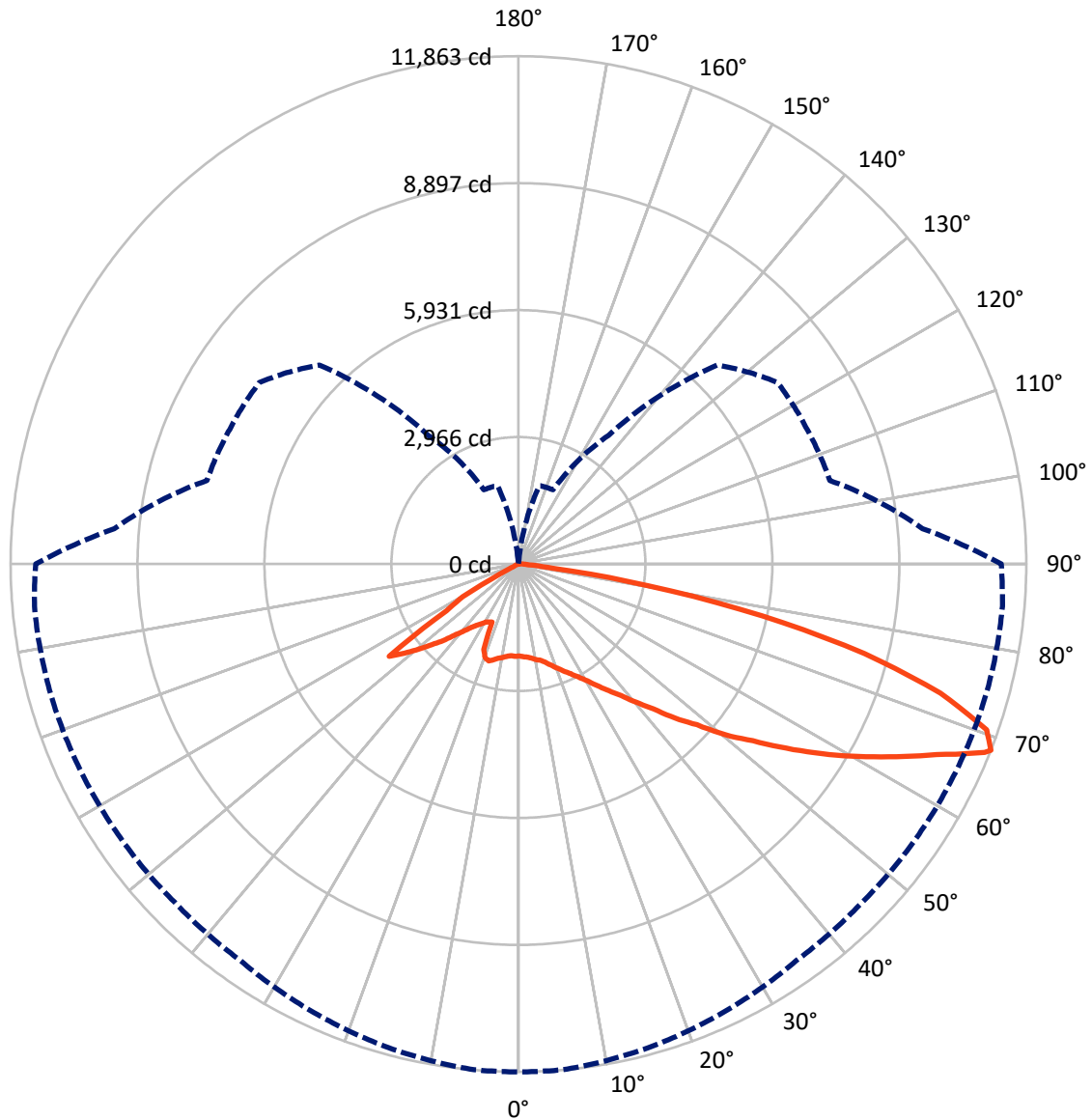


Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P256698

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

Luminous Intensity Polar Plot



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

REPORT NUMBER: P256698

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

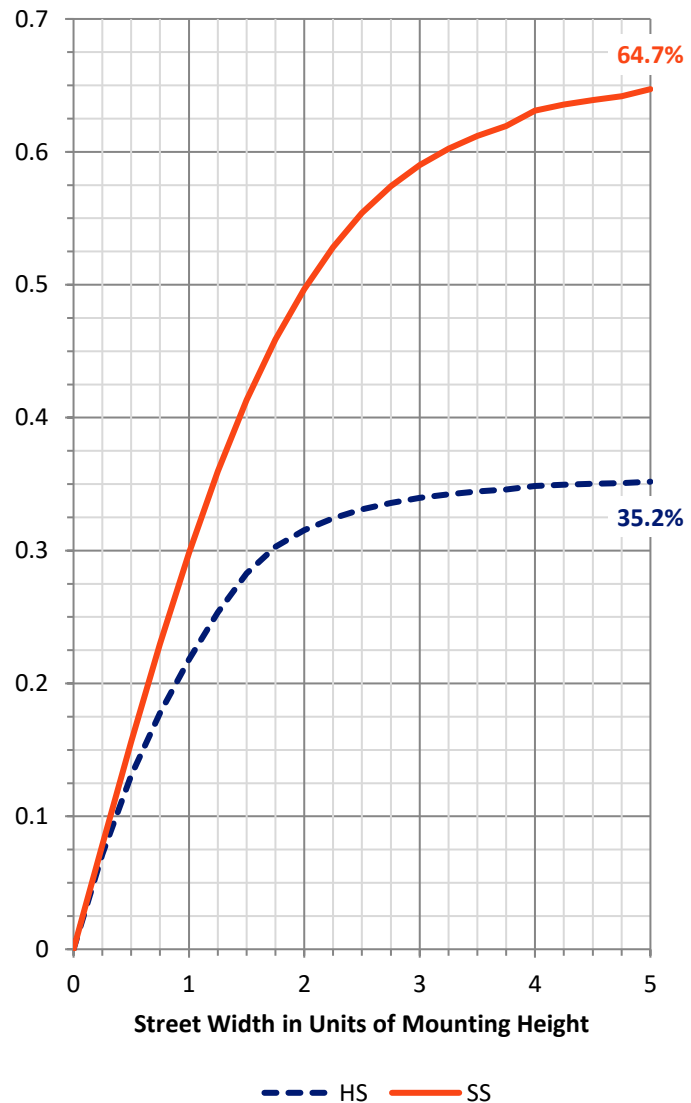
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9487.7	1.6	9489.3
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	17462.5	7.1	17469.6
	% Fixture	64.8	0.0	64.8
Total	Lumens	26950.3	8.7	26959.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.6	0.8
10°-20°	665.0	2.5
20°-30°	1187.1	4.4
30°-40°	1931.2	7.2
40°-50°	3298.0	12.2
50°-60°	5502.9	20.4
60°-70°	7655.6	28.4
70°-80°	5934.3	22.0
80°-90°	568.7	2.1
90°-100°	6.9	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°	26950.3	100.0
0°-180°	26959.0	100.0



REPORT NUMBER: P256698

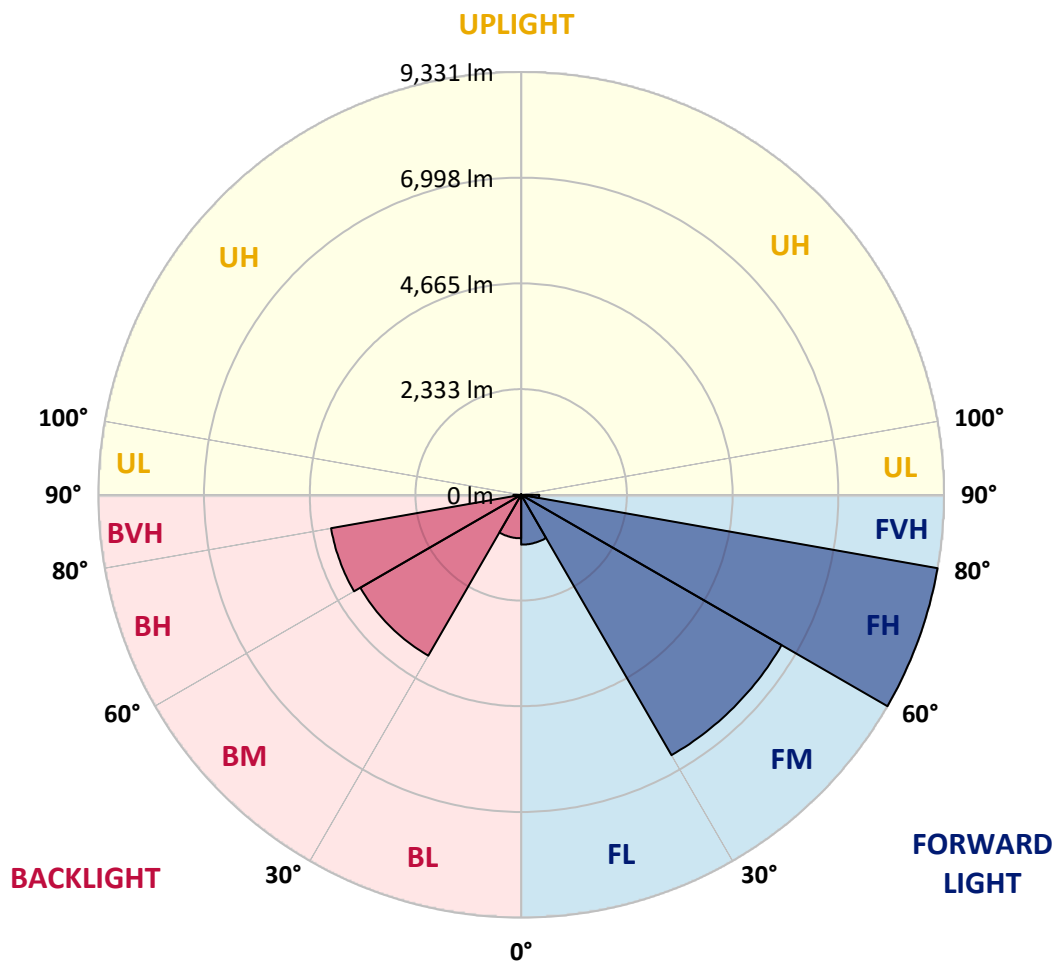
CATALOG NUMBER: CST-10-3-D-U-T5R-HSS-HM-EX90

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1100.3	4.1			
FM	(30°-60°)	6633.8	24.6			
FH	(60°-80°)	9330.6	34.6			G4/12000
FVH	(80°-90°)	397.8	1.5			G3/500
BL	(0°-30°)	959.4	3.6	B2/1000		
BM	(30°-60°)	4098.3	15.2	B3/5000		
BH	(60°-80°)	4259.2	15.8	B4/5000		G4/5000
BVH	(80°-90°)	170.8	0.6			G2/225
UL	(90°-100°)	6.9	0.0		U1/10	
UH	(100°-180°)	1.6	0.0		U1/10	

BUG Rating: B4-U1-G4

Type IV Short





REPORT NUMBER: P256698

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5
2.5°	2169.8	2166.8	2164.8	2177.9	2140.4	2155.6	2145.5	2158.7	2155.6	2161.7	2162.7
5°	2185.0	2180.0	2172.9	2187.1	2164.8	2174.9	2163.7	2169.8	2150.6	2166.8	2168.8
7.5°	2219.5	2205.3	2204.3	2208.4	2193.2	2200.3	2181.0	2188.1	2177.9	2171.9	2177.9
10°	2271.3	2259.1	2245.9	2254.0	2228.7	2237.8	2217.5	2223.6	2218.5	2205.3	2217.5
12.5°	2306.8	2310.8	2301.7	2307.8	2285.5	2277.4	2270.3	2269.2	2266.2	2246.9	2243.9
15°	2385.9	2387.9	2371.7	2375.8	2370.7	2366.6	2356.5	2348.4	2332.1	2320.0	2311.8
17.5°	2489.4	2478.2	2463.0	2467.1	2481.3	2463.0	2456.9	2441.7	2418.4	2398.1	2394.0
20°	2597.9	2590.8	2576.6	2584.7	2583.7	2571.5	2574.6	2549.2	2515.7	2498.5	2485.3
22.5°	2718.6	2708.5	2698.3	2713.6	2701.4	2693.3	2690.2	2673.0	2631.4	2612.1	2609.1
25°	2839.3	2834.3	2841.4	2836.3	2819.1	2813.0	2817.0	2810.9	2762.2	2738.9	2724.7
27.5°	2990.5	2978.3	2989.5	2983.4	2965.1	2966.1	2967.2	2968.2	2913.4	2883.0	2862.7
30°	3162.9	3158.9	3173.1	3153.8	3136.6	3147.7	3156.9	3136.6	3088.9	3044.3	3037.2
32.5°	3387.1	3361.8	3378.0	3353.6	3327.3	3353.6	3369.9	3329.3	3290.8	3233.9	3244.1
35°	3635.7	3627.5	3627.5	3596.1	3581.9	3623.5	3639.7	3600.1	3540.3	3490.6	3478.4
37.5°	3899.4	3907.5	3932.9	3919.7	3906.5	3931.9	3968.4	3915.6	3838.5	3785.8	3771.6
40°	4249.4	4269.7	4286.9	4269.7	4254.4	4270.7	4312.3	4243.3	4189.5	4161.1	4130.7
42.5°	4625.7	4660.2	4649.1	4651.1	4664.3	4687.6	4729.2	4666.3	4604.4	4603.4	4558.8
45°	5135.0	5135.0	5111.6	5133.9	5131.9	5189.7	5208.0	5173.5	5121.8	5106.6	5068.0
47.5°	5610.7	5660.4	5651.3	5683.8	5658.4	5707.1	5769.0	5739.5	5679.7	5625.9	5617.8
50°	6274.1	6262.0	6249.8	6298.5	6294.4	6327.9	6384.7	6366.5	6283.3	6222.4	6211.2
52.5°	6857.4	6921.3	6906.1	6979.2	6938.6	6986.3	7054.2	7051.2	6949.7	6889.9	6872.6
55°	7593.9	7636.5	7633.5	7708.5	7652.7	7715.6	7772.4	7778.5	7667.9	7582.7	7609.1
57.5°	8360.8	8396.3	8376.0	8437.9	8383.1	8469.3	8503.8	8481.5	8416.6	8309.1	8348.6
60°	9128.7	9159.1	9182.5	9187.5	9156.1	9206.8	9239.3	9258.5	9156.1	9033.3	9081.0
62.5°	9908.8	9943.3	9923.0	9931.1	9843.9	9912.8	9953.4	9958.5	9840.8	9732.3	9765.7
65°	10730.5	10778.1	10705.1	10656.4	10548.9	10547.9	10601.6	10610.8	10527.6	10450.5	10437.3
67.5°	11747.9	11769.2	11613.0	11449.7	11268.1	11228.5	11266.1	11287.4	11335.0	11333.0	11273.2
68°	11862.5	11858.5	11700.2	11505.5	11310.7	11265.1	11283.3	11310.7	11342.1	11348.2	11276.2
70°	11601.8	11552.1	11461.8	11216.4	11023.6	10903.9	10840.0	10890.7	10805.5	10806.5	10671.6
72.5°	10305.4	10299.3	10133.0	10011.2	9839.8	9641.0	9549.7	9548.7	9556.8	9497.9	9359.0
75°	8347.6	8355.7	8162.0	8077.8	8025.0	7987.5	8006.8	8066.6	8072.7	8071.7	8023.0
77.5°	5821.7	5855.2	5803.5	5666.5	5813.6	5939.4	6181.8	6305.6	6266.0	6384.7	6459.8
80°	3051.4	3118.3	3120.3	3216.7	3335.4	3450.0	3659.0	3846.7	3708.7	3647.8	3584.9
82.5°	802.4	826.7	863.3	807.5	824.7	842.0	1004.3	989.1	913.0	953.5	1014.4
85°	229.3	236.4	226.2	204.9	187.7	172.5	176.5	149.1	129.8	128.8	124.8
87.5°	161.3	173.5	153.2	131.9	118.7	110.6	106.5	90.3	73.0	63.9	50.7
90°	75.1	74.1	63.9	49.7	43.6	41.6	41.6	32.5	18.3	11.2	10.1
92.5°	31.4	32.5	26.4	21.3	18.3	14.2	11.2	7.1	4.1	2.0	1.0
95°	11.2	12.2	10.1	8.1	7.1	6.1	5.1	4.1	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



REPORT NUMBER: P256698

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

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



REPORT NUMBER: P256698

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

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5	2145.5
2.5°	2160.7	2155.6	2153.6	2128.2	2135.3	2120.1	2155.6	2145.5	2143.5	2157.7
5°	2165.8	2142.4	2156.6	2140.4	2144.5	2122.2	2150.6	2138.4	2139.4	2146.5
7.5°	2168.8	2155.6	2169.8	2141.4	2152.6	2144.5	2164.8	2152.6	2164.8	2170.8
10°	2199.2	2193.2	2183.0	2174.9	2183.0	2163.7	2189.1	2187.1	2194.2	2212.4
12.5°	2240.8	2233.7	2223.6	2209.4	2215.5	2208.4	2227.6	2229.7	2242.9	2252.0
15°	2302.7	2293.6	2288.5	2274.3	2276.3	2271.3	2282.4	2284.5	2310.8	2307.8
17.5°	2390.0	2379.8	2383.9	2370.7	2365.6	2353.4	2333.1	2326.0	2357.5	2366.6
20°	2485.3	2474.2	2479.2	2468.1	2373.7	2182.0	2310.8	2399.1	2332.1	2327.1
22.5°	2593.9	2581.7	2585.7	2568.5	2451.8	2092.7	1820.9	1798.6	2054.2	2157.7
25°	2713.6	2697.3	2695.3	2673.0	2289.5	1894.9	1864.5	1824.9	1638.3	1490.2
27.5°	2861.7	2837.3	2825.1	2488.4	2273.3	1969.0	1923.3	1782.3	1511.5	1520.6
30°	3021.9	2986.4	2758.2	2536.0	2392.0	2056.2	1995.3	1562.2	1564.2	1560.2
32.5°	3204.5	3125.4	2702.4	2682.1	2534.0	2149.5	1656.5	1638.3	1640.3	1646.4
35°	3443.9	2901.2	2890.1	2891.1	2707.5	2079.5	1754.9	1737.7	1739.7	1743.8
37.5°	3494.7	3127.4	3129.5	3106.1	2892.1	1900.0	1874.6	1873.6	1869.6	1865.5
40°	3535.2	3412.5	3383.1	3345.5	2681.1	2046.1	2038.0	2031.9	2034.9	2043.0
42.5°	3852.7	3760.4	3732.0	3687.4	2750.1	2267.2	2240.8	2233.7	2241.9	2237.8
45°	4274.7	4197.6	4141.8	3409.4	3038.2	2507.6	2486.3	2477.2	2480.2	2505.6
47.5°	4721.1	4675.4	4505.0	3683.3	3373.9	2791.7	2770.4	2756.2	2761.2	2755.1
50°	5207.0	5165.4	4170.2	4096.2	3745.2	3098.0	3066.6	3061.5	3063.5	3062.5
52.5°	5734.5	4865.1	4621.7	4544.6	4136.8	3418.6	3407.4	3380.0	3386.1	3380.0
55°	6353.3	5124.8	5118.7	5028.4	4577.0	3790.9	3777.7	3739.1	3496.7	3708.7
57.5°	6940.6	5620.9	5620.9	5533.6	5027.4	4161.1	4139.8	4111.4	2485.3	2004.5
60°	7583.7	6117.9	6103.7	6031.7	5461.6	4514.1	3669.1	3661.0	1501.3	1506.4
62.5°	8139.6	6561.2	6586.6	6519.6	5879.5	3380.0	1700.2	1665.7	148.1	228.2
65°	8762.5	7051.2	7081.6	7012.6	6332.0	3584.9	1845.2	1828.0	33.5	30.4
67.5°	9468.5	7540.1	7471.1	7395.1	6596.7	3691.4	1917.2	1902.0	9.1	6.1
68°	9474.6	7530.0	7440.7	7389.0	6571.4	3671.2	1911.2	1897.0	9.1	6.1
70°	8987.7	7150.6	7061.3	7074.5	6256.9	3510.9	1832.0	1805.7	9.1	6.1
72.5°	7885.0	6363.4	6263.0	6192.0	5548.8	3121.3	1642.3	1592.6	9.1	6.1
75°	6746.9	5392.6	5226.3	5070.0	4464.4	2554.3	1347.1	1291.3	9.1	6.1
77.5°	5317.6	4110.4	3874.0	3771.6	3354.7	1886.8	1001.2	940.4	9.1	5.1
80°	2938.8	2358.5	2157.7	2094.8	1918.3	1108.8	574.2	537.6	8.1	5.1
82.5°	759.8	570.1	497.1	479.8	450.4	262.7	140.0	132.9	7.1	4.1
85°	108.5	80.1	88.3	104.5	100.4	68.0	48.7	41.6	6.1	3.0
87.5°	56.8	47.7	55.8	62.9	63.9	39.6	20.3	11.2	3.0	0.0
90°	9.1	9.1	10.1	11.2	11.2	5.1	4.1	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: P256698

CATALOG NUMBER: CST-10-3-D-U-T5R-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)