

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: P256711

Luminaire Tested: **CST-10-9-D-U-T5R-7050-HSS-HM-EX90**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256711
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-10-9-D-U-T5R-7050-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K 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: 79700 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B5 - U2 - G5

Input Watts (W): 760
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

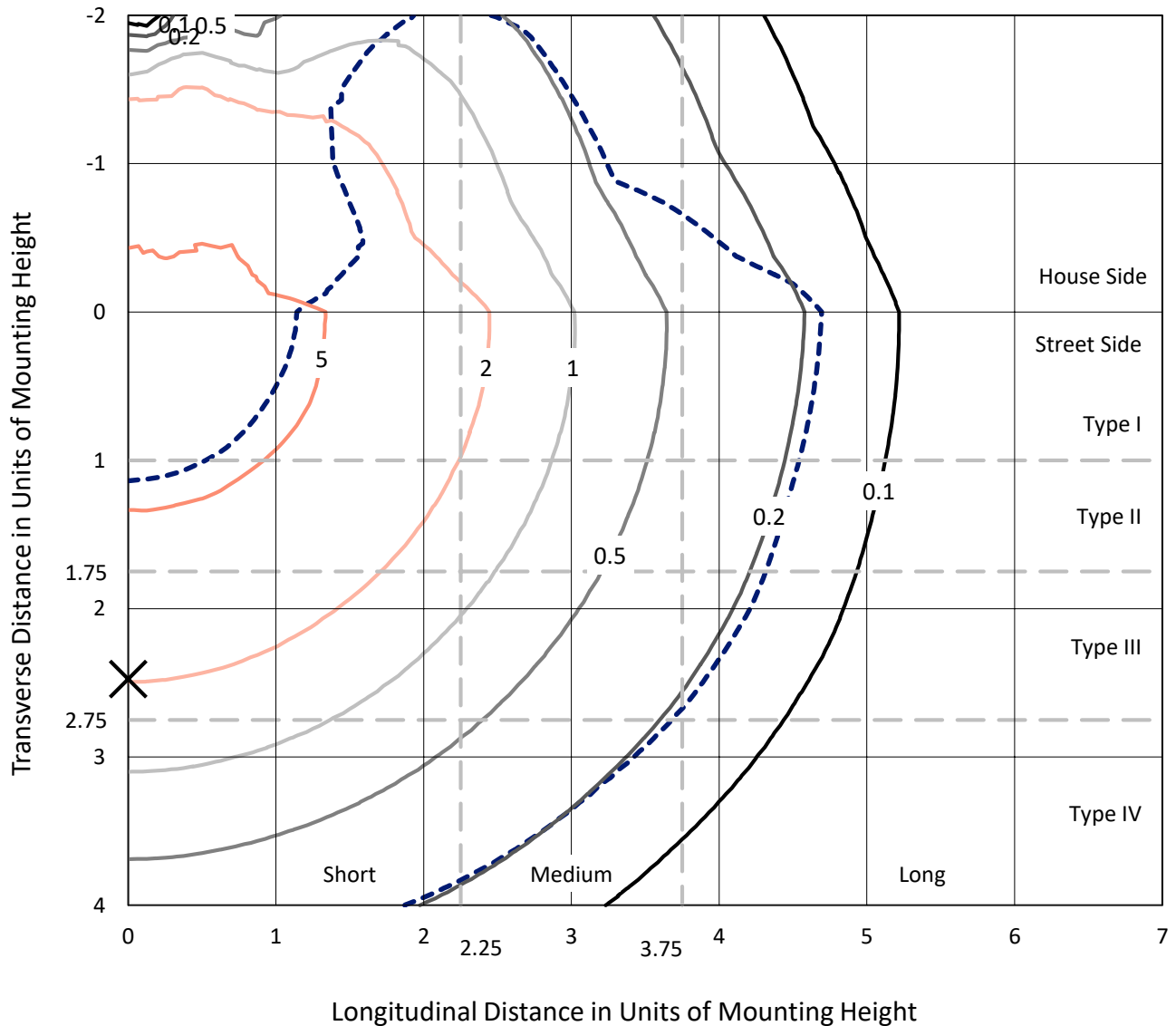


REPORT NUMBER: P256711

CATALOG NUMBER: CST-10-9-D-U-T5R-7050-HSS-HM-EX90

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

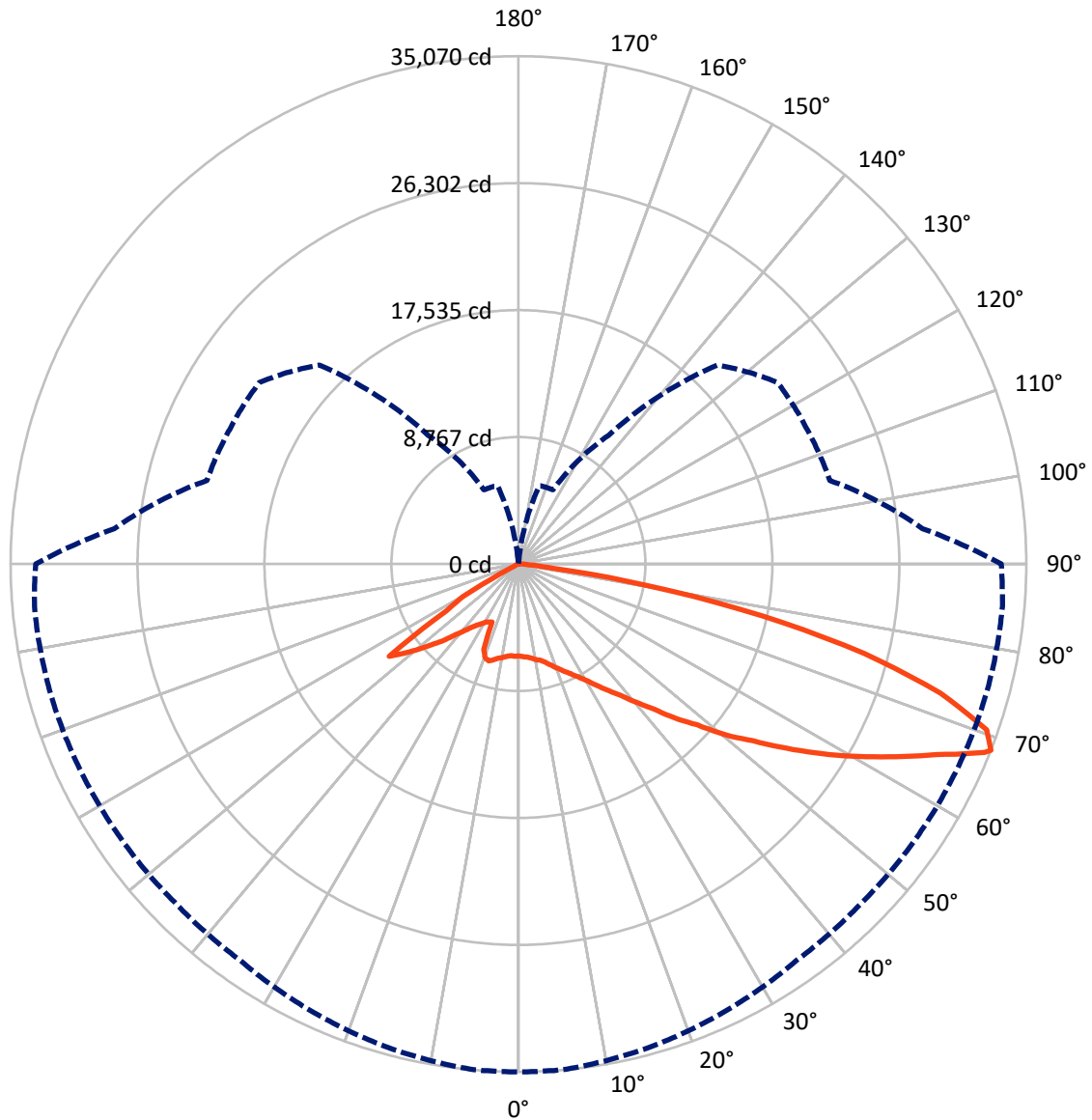


Based on 30 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P256711

CATALOG NUMBER: CST-10-9-D-U-T5R-7050-HSS-HM-EX90

Luminous Intensity Polar Plot



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

REPORT NUMBER: P256711

CATALOG NUMBER: CST-10-9-D-U-T5R-7050-HSS-HM-EX90

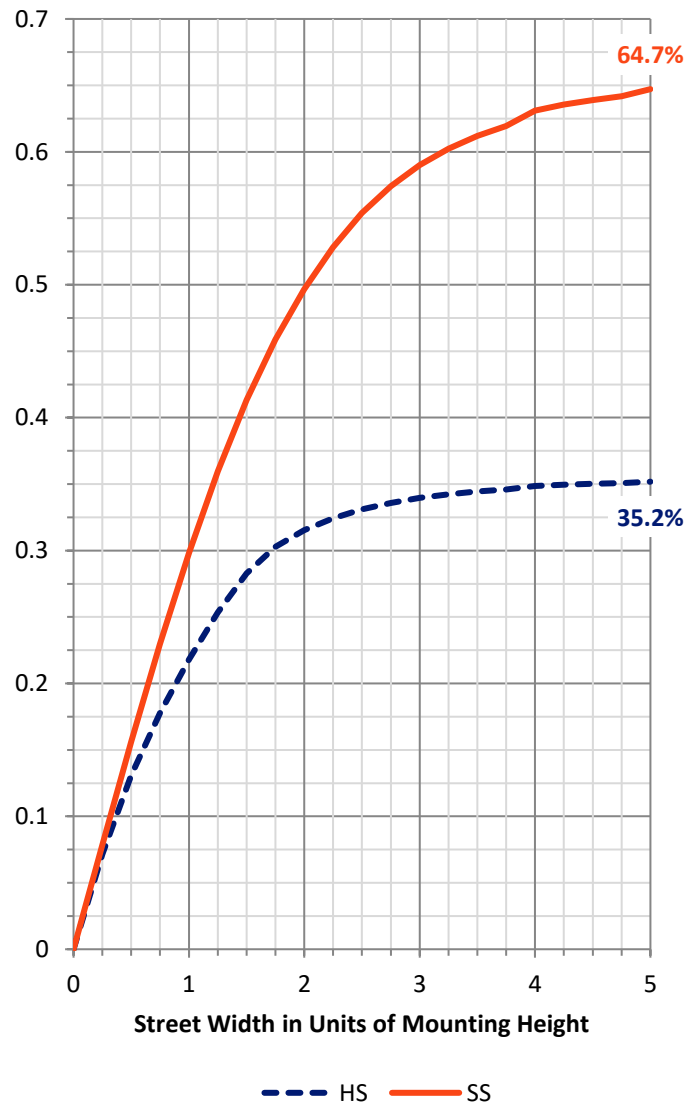
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	28049.0	4.8	28053.8
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	51625.2	21.0	51646.2
	% Fixture	64.8	0.0	64.8
Total	Lumens	79674.2	25.8	79700.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	613.6	0.8
10°-20°	1966.0	2.5
20°-30°	3509.6	4.4
30°-40°	5709.4	7.2
40°-50°	9750.0	12.2
50°-60°	16268.3	20.4
60°-70°	22632.5	28.4
70°-80°	17543.7	22.0
80°-90°	1681.1	2.1
90°-100°	20.3	0.0
100°-110°	1.7	0.0
110°-120°	0.9	0.0
120°-130°	0.6	0.0
130°-140°	0.6	0.0
140°-150°	0.7	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-90°	79674.2	100.0
0°-180°	79700.0	100.0

Coefficient of Utilization



REPORT NUMBER: P256711

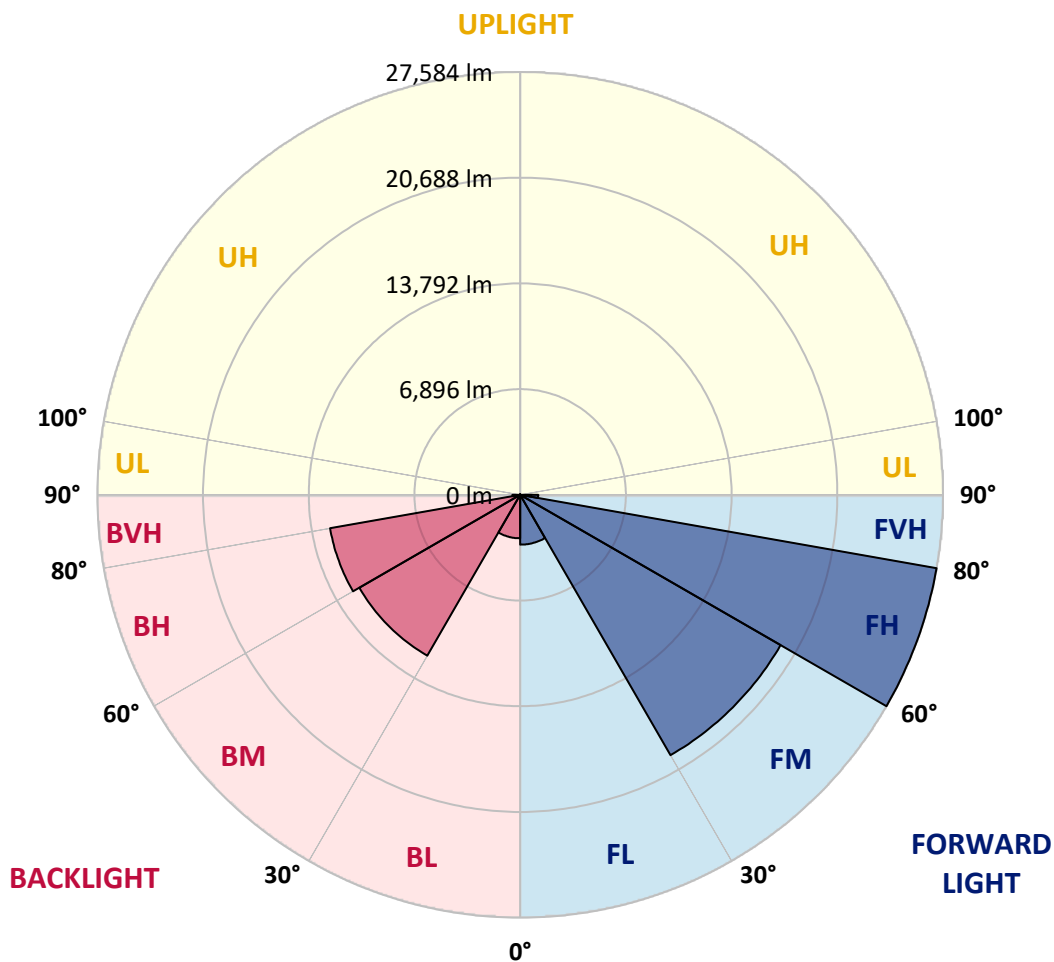
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3252.9	4.1			
FM	(30°-60°)	19611.8	24.6			
FH	(60°-80°)	27584.4	34.6			G5
FVH	(80°-90°)	1176.1	1.5			G5
BL	(0°-30°)	2836.3	3.6	B4/5000		
BM	(30°-60°)	12115.9	15.2	B5		
BH	(60°-80°)	12591.7	15.8	B5		G5
BVH	(80°-90°)	505.0	0.6			G4/750
UL	(90°-100°)	20.3	0.0		U2/50	
UH	(100°-180°)	4.8	0.0		U1/10	

BUG Rating: B5-U2-G5

Type IV Short





REPORT NUMBER: P256711

CATALOG NUMBER: CST-10-9-D-U-T5R-7050-HSS-HM-EX90

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8
2.5°	6414.8	6405.8	6399.8	6438.7	6327.8	6372.8	6342.8	6381.8	6372.8	6390.8	6393.8
5°	6459.7	6444.7	6423.7	6465.7	6399.8	6429.7	6396.8	6414.8	6357.8	6405.8	6411.8
7.5°	6561.7	6519.7	6516.7	6528.7	6483.7	6504.7	6447.7	6468.7	6438.7	6420.8	6438.7
10°	6714.6	6678.7	6639.7	6663.7	6588.7	6615.7	6555.7	6573.7	6558.7	6519.7	6555.7
12.5°	6819.6	6831.6	6804.6	6822.6	6756.6	6732.6	6711.6	6708.6	6699.7	6642.7	6633.7
15°	7053.5	7059.5	7011.5	7023.5	7008.5	6996.5	6966.6	6942.6	6894.6	6858.6	6834.6
17.5°	7359.4	7326.4	7281.4	7293.4	7335.4	7281.4	7263.5	7218.5	7149.5	7089.5	7077.5
20°	7680.3	7659.3	7617.3	7641.3	7638.3	7602.3	7611.3	7536.4	7437.4	7386.4	7347.4
22.5°	8037.2	8007.2	7977.2	8022.2	7986.2	7962.2	7953.2	7902.2	7779.3	7722.3	7713.3
25°	8394.1	8379.1	8400.1	8385.1	8334.1	8316.1	8328.1	8310.1	8166.1	8097.2	8055.2
27.5°	8840.9	8804.9	8837.9	8819.9	8765.9	8768.9	8771.9	8774.9	8613.0	8523.0	8463.0
30°	9350.7	9338.7	9380.7	9323.7	9272.8	9305.7	9332.7	9272.8	9131.8	8999.8	8978.9
32.5°	10013.5	9938.5	9986.5	9914.5	9836.6	9914.5	9962.5	9842.6	9728.6	9560.7	9590.6
35°	10748.2	10724.2	10724.2	10631.3	10589.3	10712.2	10760.2	10643.3	10466.3	10319.4	10283.4
37.5°	11528.0	11552.0	11626.9	11587.9	11549.0	11623.9	11731.9	11575.9	11348.0	11192.1	11150.1
40°	12562.6	12622.6	12673.6	12622.6	12577.6	12625.6	12748.5	12544.6	12385.7	12301.7	12211.7
42.5°	13675.2	13777.2	13744.2	13750.2	13789.2	13858.1	13981.1	13795.2	13612.2	13609.2	13477.3
45°	15180.7	15180.7	15111.7	15177.7	15171.7	15342.6	15396.6	15294.6	15141.7	15096.7	14982.8
47.5°	16587.2	16734.1	16707.1	16803.1	16728.1	16872.1	17055.0	16968.1	16791.1	16632.2	16608.2
50°	18548.5	18512.5	18476.5	18620.5	18608.5	18707.4	18875.4	18821.4	18575.5	18395.6	18362.6
52.5°	20272.9	20461.8	20416.8	20632.8	20512.8	20653.8	20854.7	20845.7	20545.8	20368.9	20317.9
55°	22450.1	22576.1	22567.1	22789.0	22624.1	22810.0	22977.9	22995.9	22669.1	22417.1	22495.1
57.5°	24717.3	24822.3	24762.3	24945.3	24783.3	25038.2	25140.2	25074.2	24882.3	24564.4	24681.4
60°	26987.5	27077.5	27146.5	27161.5	27068.5	27218.5	27314.4	27371.4	27068.5	26705.6	26846.6
62.5°	29293.7	29395.7	29335.7	29359.7	29101.8	29305.7	29425.7	29440.7	29092.8	28771.9	28870.9
65°	31722.9	31863.8	31647.9	31504.0	31186.1	31183.1	31342.0	31369.0	31123.1	30895.2	30856.2
67.5°	34730.8	34793.8	34332.0	33849.1	33312.3	33195.4	33306.3	33369.3	33510.3	33504.3	33327.3
68°	35069.7	35057.7	34589.9	34014.1	33438.3	33303.3	33357.3	33438.3	33531.3	33549.2	33336.3
70°	34299.0	34152.0	33885.1	33159.4	32589.6	32235.7	32046.8	32196.7	31944.8	31947.8	31548.9
72.5°	30466.3	30448.3	29956.5	29596.6	29089.8	28502.0	28232.1	28229.1	28253.1	28079.2	27668.3
75°	24678.4	24702.3	24129.5	23880.6	23724.7	23613.7	23670.7	23847.6	23865.6	23862.6	23718.7
77.5°	17211.0	17309.9	17157.0	16752.1	17187.0	17558.8	18275.6	18641.5	18524.5	18875.4	19097.3
80°	9020.8	9218.8	9224.8	9509.7	9860.5	10199.4	10817.2	11372.0	10964.2	10784.2	10598.3
82.5°	2372.2	2444.1	2552.1	2387.2	2438.1	2489.1	2969.0	2924.0	2699.1	2819.0	2998.9
85°	677.8	698.8	668.8	605.8	554.8	509.8	521.8	440.8	383.9	380.9	368.9
87.5°	476.8	512.8	452.8	389.9	350.9	326.9	314.9	266.9	215.9	188.9	149.9
90°	221.9	218.9	188.9	146.9	129.0	123.0	123.0	96.0	54.0	33.0	30.0
92.5°	93.0	96.0	78.0	63.0	54.0	42.0	33.0	21.0	12.0	6.0	3.0
95°	33.0	36.0	30.0	24.0	21.0	18.0	15.0	12.0	6.0	3.0	3.0
97.5°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	6.0	6.0	3.0	3.0
100°	0.0	0.0	0.0	3.0	6.0	6.0	6.0	6.0	3.0	3.0	3.0
102.5°	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
105°	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0



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CATALOG NUMBER: CST-10-9-D-U-T5R-7050-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	3.0	3.0	3.0	3.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
165°	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
167.5°	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
170°	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
172.5°	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
175°	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
177.5°	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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°	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8	6342.8
2.5°	6387.8	6372.8	6366.8	6291.8	6312.8	6267.8	6372.8	6342.8	6336.8	6378.8
5°	6402.8	6333.8	6375.8	6327.8	6339.8	6273.8	6357.8	6321.8	6324.8	6345.8
7.5°	6411.8	6372.8	6414.8	6330.8	6363.8	6339.8	6399.8	6363.8	6399.8	6417.8
10°	6501.7	6483.7	6453.7	6429.7	6453.7	6396.8	6471.7	6465.7	6486.7	6540.7
12.5°	6624.7	6603.7	6573.7	6531.7	6549.7	6528.7	6585.7	6591.7	6630.7	6657.7
15°	6807.6	6780.6	6765.6	6723.6	6729.6	6714.6	6747.6	6753.6	6831.6	6822.6
17.5°	7065.5	7035.5	7047.5	7008.5	6993.5	6957.6	6897.6	6876.6	6969.6	6996.5
20°	7347.4	7314.4	7329.4	7296.4	7017.5	6450.7	6831.6	7092.5	6894.6	6879.6
22.5°	7668.3	7632.3	7644.3	7593.3	7248.5	6186.8	5383.1	5317.1	6072.9	6378.8
25°	8022.2	7974.2	7968.2	7902.2	6768.6	5602.0	5512.1	5395.1	4843.3	4405.5
27.5°	8460.0	8388.1	8352.1	7356.4	6720.6	5821.0	5686.0	5269.2	4468.4	4495.4
30°	8933.9	8828.9	8154.1	7497.4	7071.5	6078.9	5898.9	4618.4	4624.4	4612.4
32.5°	9473.7	9239.8	7989.2	7929.2	7491.4	6354.8	4897.3	4843.3	4849.3	4867.3
35°	10181.4	8577.0	8544.0	8547.0	8004.2	6147.8	5188.2	5137.2	5143.2	5155.2
37.5°	10331.4	9245.8	9251.8	9182.8	8550.0	5617.0	5542.1	5539.1	5527.1	5515.1
40°	10451.3	10088.5	10001.5	9890.5	7926.2	6048.9	6024.9	6006.9	6015.9	6039.9
42.5°	11390.0	11117.1	11033.1	10901.2	8130.2	6702.7	6624.7	6603.7	6627.7	6615.7
45°	12637.6	12409.7	12244.7	10079.5	8981.9	7413.4	7350.4	7323.4	7332.4	7407.4
47.5°	13957.1	13822.2	13318.3	10889.2	9974.5	8253.1	8190.1	8148.1	8163.1	8145.1
50°	15393.6	15270.6	12328.7	12109.8	11072.1	9158.8	9065.8	9050.8	9056.8	9053.8
52.5°	16953.1	14383.0	13663.2	13435.3	12229.7	10106.5	10073.5	9992.5	10010.5	9992.5
55°	18782.4	15150.7	15132.7	14865.8	13531.3	11207.1	11168.1	11054.1	10337.4	10964.2
57.5°	20518.8	16617.2	16617.2	16359.3	14862.8	12301.7	12238.7	12154.7	7347.4	5925.9
60°	22420.1	18086.7	18044.7	17831.8	16146.3	13345.3	10847.2	10823.2	4438.4	4453.4
62.5°	24063.6	19397.2	19472.2	19274.2	17381.9	9992.5	5026.2	4924.3	437.8	674.8
65°	25904.9	20845.7	20935.7	20731.7	18719.4	10598.3	5455.1	5404.1	99.0	90.0
67.5°	27992.2	22291.2	22087.3	21862.3	19502.2	10913.2	5668.0	5623.0	27.0	18.0
68°	28010.2	22261.2	21997.3	21844.3	19427.2	10853.2	5650.0	5608.0	27.0	18.0
70°	26570.7	21139.6	20875.7	20914.7	18497.5	10379.4	5416.1	5338.1	27.0	18.0
72.5°	23310.8	18812.4	18515.5	18305.6	16404.3	9227.8	4855.3	4708.4	27.0	18.0
75°	19946.0	15942.4	15450.6	14988.7	13198.4	7551.4	3982.6	3817.7	27.0	18.0
77.5°	15720.5	12151.7	11453.0	11150.1	9917.5	5578.0	2960.0	2780.0	27.0	15.0
80°	8688.0	6972.6	6378.8	6192.8	5671.0	3277.9	1697.4	1589.4	24.0	15.0
82.5°	2246.2	1685.4	1469.5	1418.5	1331.5	776.7	413.9	392.9	21.0	12.0
85°	320.9	236.9	260.9	308.9	296.9	200.9	143.9	123.0	18.0	9.0
87.5°	167.9	141.0	164.9	185.9	188.9	117.0	60.0	33.0	9.0	0.0
90°	27.0	27.0	30.0	33.0	33.0	15.0	12.0	0.0	0.0	0.0
92.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	3.0	6.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P256711

CATALOG NUMBER: CST-10-9-D-U-T5R-7050-HSS-HM-EX90

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	3.0	3.0	3.0	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)