

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: P256727

Luminaire Tested: **CST-10-9-D-U-T5R-HSS-HM-EX120**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P256727  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-6)  
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-HSS-HM-EX120  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED  
120 DEGREE SHIELD - BLACK  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 71788 lumens  
Efficiency: N/A  
Efficacy: 94.5 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

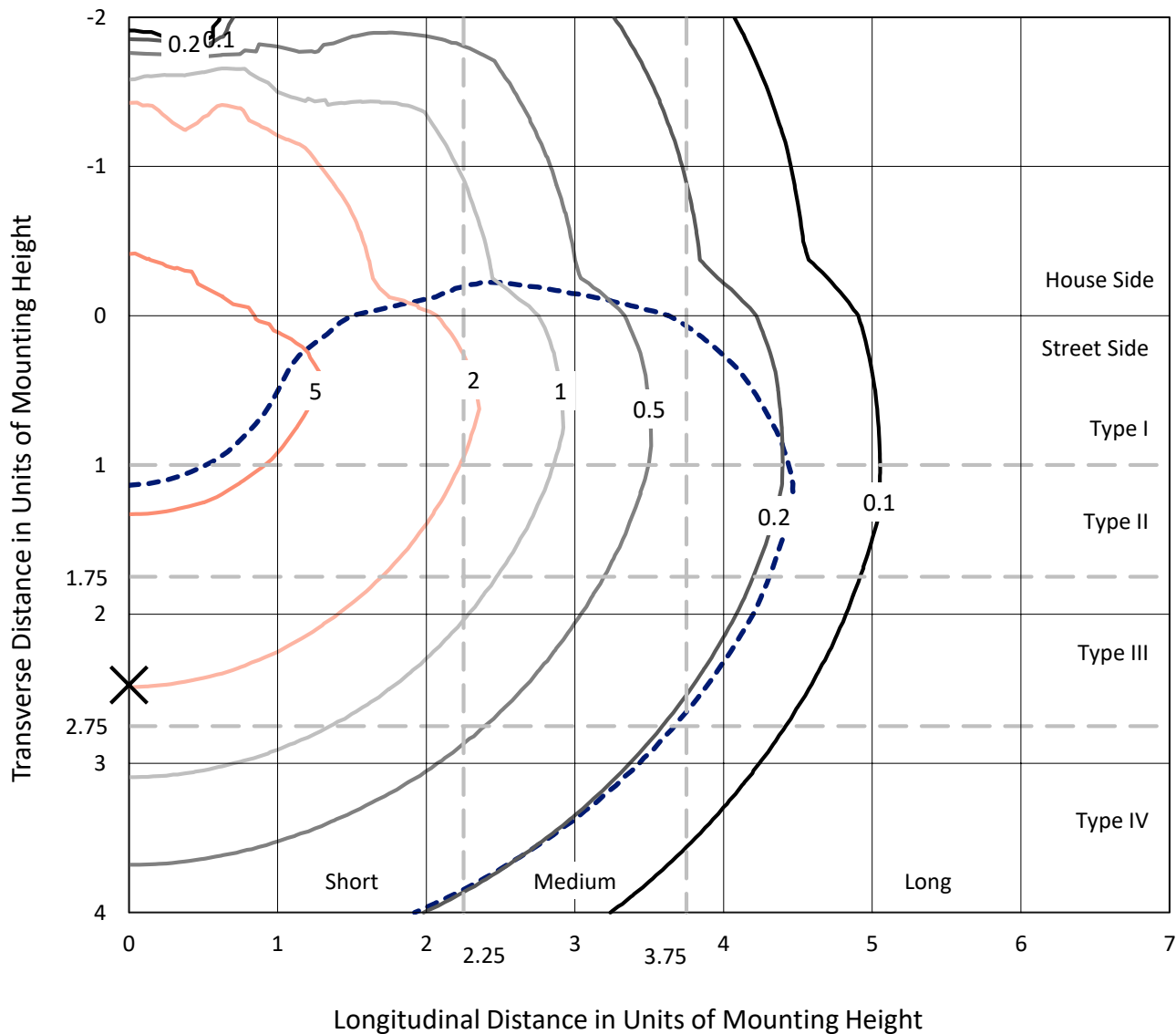


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

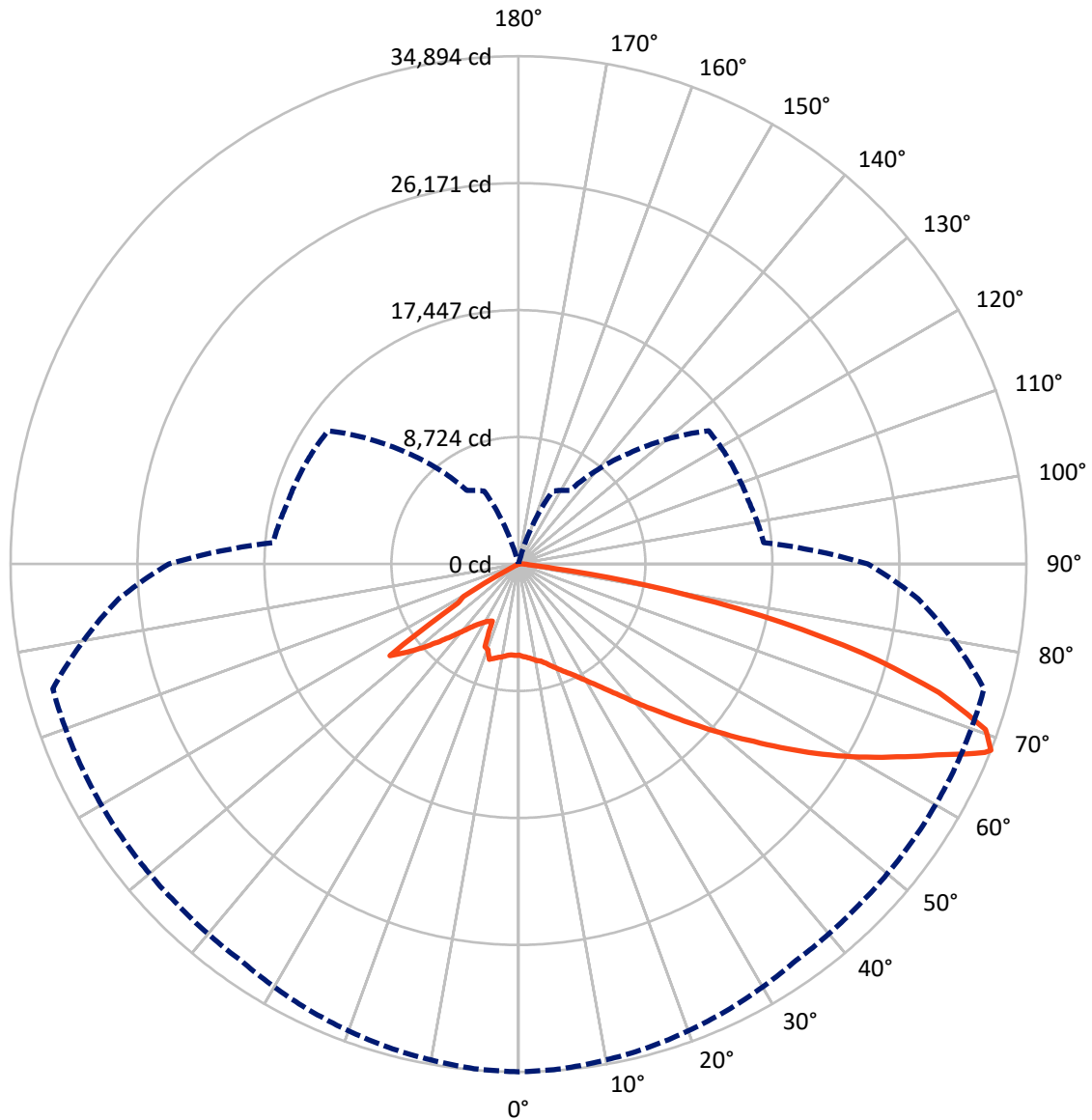


Based on 30 foot mounting height. Maximum calculated value = 7.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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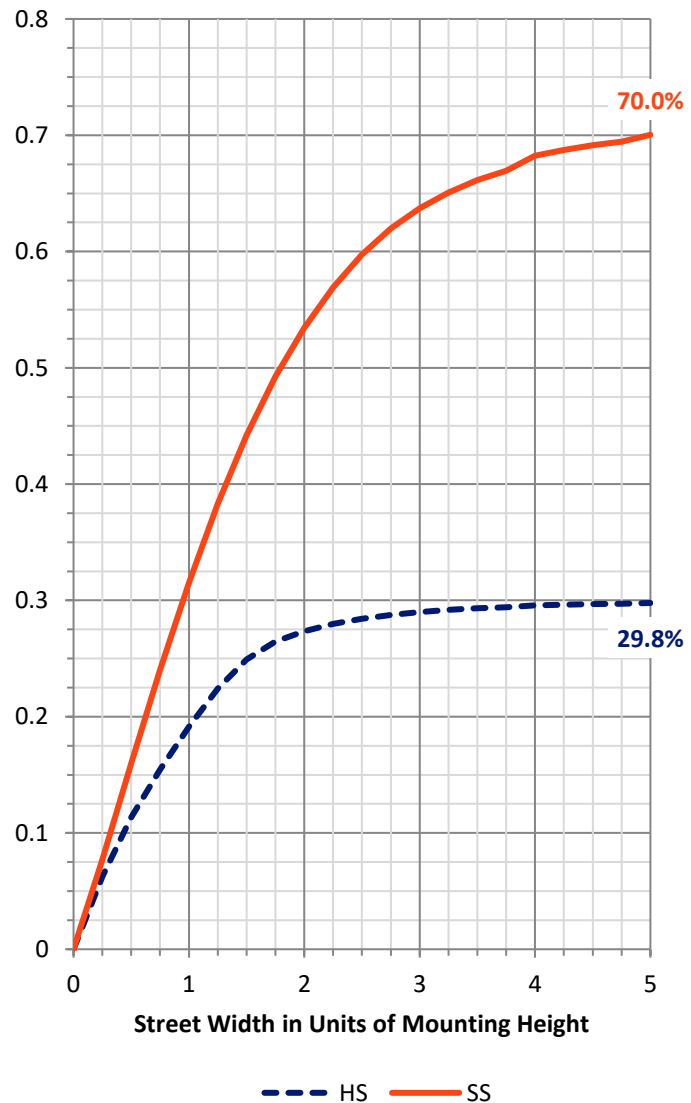
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	21399.2	3.3	21402.5
	% Fixture	29.8	0.0	29.8
<b>Street Side</b>	Lumens	50356.1	29.4	50385.5
	% Fixture	70.1	0.0	70.2
<b>Total</b>	Lumens	71755.3	32.7	71788.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	607.4	0.8
10°-20°	1933.3	2.7
20°-30°	3311.5	4.6
30°-40°	5372.0	7.5
40°-50°	9059.6	12.6
50°-60°	14767.4	20.6
60°-70°	19805.4	27.6
70°-80°	15383.7	21.4
80°-90°	1515.1	2.1
90°-100°	28.8	0.0
100°-110°	1.7	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-90°	71755.3	100.0
0°-180°	71788.0	100.0



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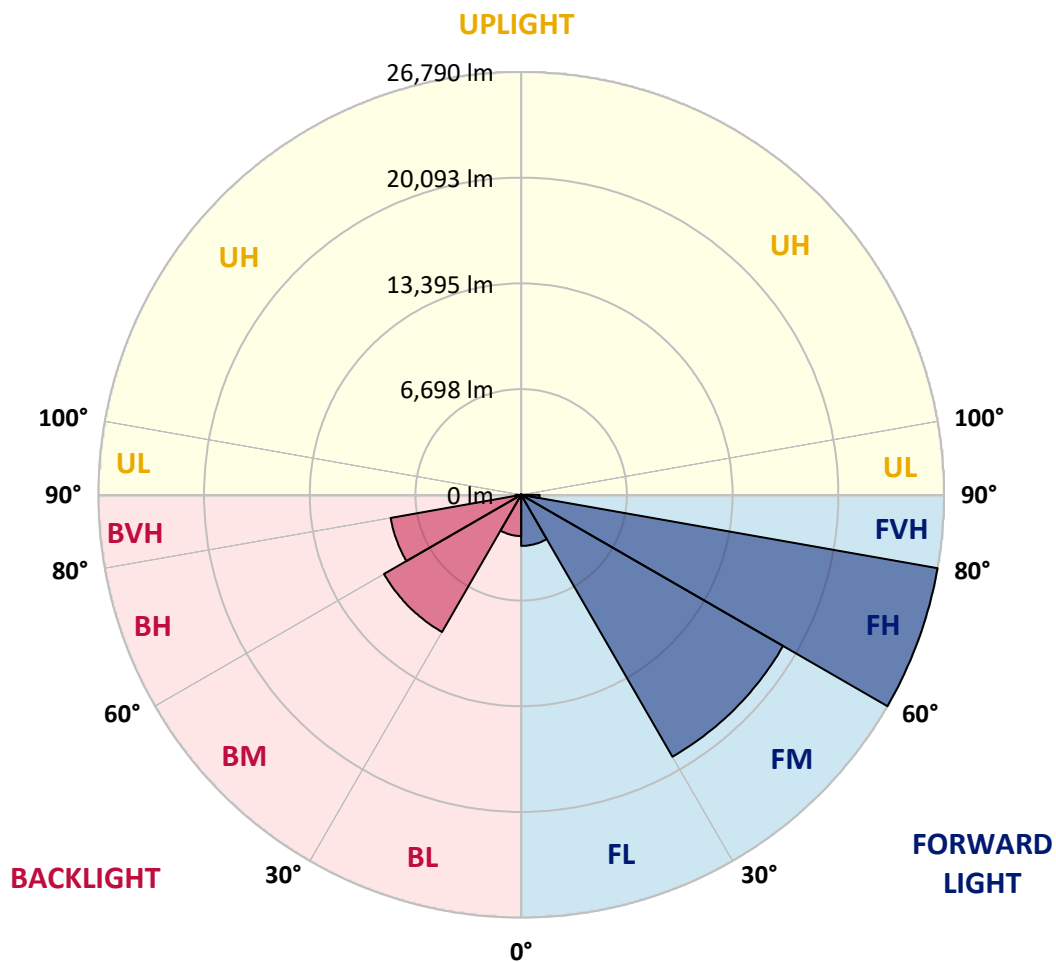
CATALOG NUMBER: CST-10-9-D-U-T5R-HSS-HM-EX120

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3238.0	4.5			
FM	(30°-60°)	19162.7	26.7			
FH	(60°-80°)	26790.4	37.3			G5
FVH	(80°-90°)	1164.9	1.6			G5
BL	(0°-30°)	2614.2	3.6	B4/5000		
BM	(30°-60°)	10036.2	14.0	B5		
BH	(60°-80°)	8398.7	11.7	B5		G5
BVH	(80°-90°)	350.2	0.5			G3/500
UL	(90°-100°)	28.8	0.0		U2/50	
UH	(100°-180°)	3.3	0.0		U1/10	

**BUG Rating: B5-U2-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6
2.5°	6362.5	6344.7	6341.7	6377.3	6264.5	6320.9	6270.5	6312.0	6285.3	6306.1	6309.1
5°	6448.6	6415.9	6395.2	6436.7	6365.5	6392.2	6335.8	6353.6	6279.4	6320.9	6326.9
7.5°	6573.3	6519.9	6513.9	6525.8	6463.4	6484.2	6392.2	6413.0	6359.5	6335.8	6356.6
10°	6742.5	6692.1	6653.5	6680.2	6597.0	6608.9	6510.9	6513.9	6475.3	6430.8	6466.4
12.5°	6837.5	6843.5	6825.7	6846.4	6778.2	6739.6	6671.3	6647.5	6608.9	6555.5	6537.7
15°	7075.1	7063.2	7027.5	7060.2	7051.3	7015.7	6932.5	6879.1	6796.0	6766.3	6736.6
17.5°	7366.0	7327.4	7297.7	7339.3	7383.8	7309.6	7229.4	7155.2	7045.4	6986.0	6950.4
20°	7671.8	7645.1	7615.4	7680.7	7695.6	7639.2	7579.8	7469.9	7342.3	7265.1	7190.8
22.5°	8013.2	7959.8	7968.7	8054.8	8028.1	8001.4	7924.2	7835.1	7680.7	7582.7	7369.0
25°	8366.6	8336.9	8378.4	8417.0	8396.2	8339.8	8301.2	8235.9	8063.7	7945.0	7633.2
27.5°	8806.0	8758.5	8811.9	8826.7	8808.9	8794.1	8740.6	8690.2	8503.1	8369.5	7980.6
30°	9322.6	9266.2	9352.3	9331.5	9313.7	9325.5	9292.9	9183.0	9016.8	8835.7	8446.7
32.5°	9937.1	9862.9	9960.9	9916.4	9874.8	9957.9	9880.7	9776.8	9580.9	9370.1	8990.0
35°	10649.7	10652.7	10703.1	10628.9	10614.1	10703.1	10652.7	10525.0	10343.9	10124.2	9583.8
37.5°	11513.7	11489.9	11617.6	11581.9	11528.5	11647.3	11662.1	11501.8	11175.2	10958.5	10320.1
40°	12564.7	12558.7	12600.3	12606.2	12591.4	12647.8	12674.5	12460.8	12250.0	11923.4	9738.2
42.5°	13686.9	13710.7	13784.9	13731.5	13802.7	13877.0	13885.9	13707.7	13404.9	11439.4	10343.9
45°	15034.9	15109.1	15159.6	15147.7	15180.3	15287.2	15296.1	15201.1	14904.2	12392.5	11442.4
47.5°	16581.7	16652.9	16667.8	16762.8	16733.1	16884.5	16863.7	16866.7	16549.0	13719.6	12638.9
50°	18360.1	18392.8	18514.5	18567.9	18493.7	18698.6	18645.1	18710.4	18318.5	15239.7	13924.5
52.5°	20248.4	20304.8	20355.3	20557.1	20462.1	20640.3	20569.0	20720.4	20266.2	16786.6	15352.5
55°	22394.9	22403.8	22489.9	22694.8	22570.1	22783.9	22680.0	22736.4	22374.2	18496.7	16840.0
57.5°	24669.2	24639.5	24672.1	24835.4	24722.6	24882.9	24841.4	24894.8	24556.3	20295.9	17926.6
60°	26919.6	26875.1	26922.6	27032.5	26878.1	27154.2	27005.7	27056.2	26691.0	22133.7	19476.4
62.5°	29182.0	29149.3	29095.9	29205.7	28980.1	29122.6	29185.0	29101.8	28781.2	23796.3	20824.3
65°	31610.6	31578.0	31382.0	31450.3	31046.5	30978.2	31002.0	31028.7	30814.9	25444.1	22302.9
67.5°	34561.8	34514.3	34146.1	33683.0	33101.0	32973.4	32985.2	33056.5	33086.2	27563.9	24033.8
68°	34894.3	34808.2	34398.5	33861.1	33252.5	33104.0	33089.2	33104.0	33118.9	27581.7	24016.0
70°	34045.2	34012.5	33700.8	33050.6	32427.1	32070.8	31762.0	31750.2	31607.6	26171.5	22688.9
72.5°	30212.2	30170.7	29799.5	29339.4	28953.4	28395.2	27994.4	28018.2	27783.6	23131.2	19859.4
75°	24449.5	24446.5	24001.1	23615.2	23621.1	23579.6	23445.9	23680.5	23437.0	19618.9	16938.0
77.5°	17038.9	17098.3	17068.6	16843.0	17160.6	17600.0	18078.1	18529.3	18389.8	15498.0	13505.8
80°	8901.0	9067.2	9655.1	9681.8	9904.5	10332.0	10658.6	10961.4	10982.2	8794.1	7802.5
82.5°	2366.3	2416.7	2615.7	2559.3	2541.4	2627.5	2698.8	2707.7	2713.6	2292.0	2140.6
85°	736.3	757.1	733.3	700.7	650.2	593.8	578.9	472.1	374.1	308.8	270.2
87.5°	522.5	558.2	504.7	475.0	421.6	400.8	359.2	282.1	219.7	154.4	103.9
90°	270.2	276.1	246.4	210.8	196.0	184.1	157.4	112.8	56.4	29.7	26.7
92.5°	136.6	139.5	121.7	103.9	89.1	77.2	59.4	32.7	17.8	8.9	3.0
95°	53.4	56.4	50.5	44.5	35.6	26.7	23.8	17.8	11.9	5.9	3.0
97.5°	17.8	17.8	17.8	14.8	14.8	14.8	14.8	11.9	8.9	5.9	3.0
100°	0.0	0.0	0.0	3.0	5.9	8.9	8.9	8.9	5.9	3.0	3.0
102.5°	0.0	0.0	0.0	0.0	0.0	3.0	5.9	5.9	5.9	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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**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	3.0	3.0	3.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
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	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	3.0	3.0	3.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	3.0	3.0	3.0	3.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	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°	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6	6258.6
2.5°	6294.2	6276.4	6285.3	6211.1	6228.9	6181.4	6282.3	6255.6	6243.7	6285.3
5°	6309.1	6243.7	6297.2	6246.7	6255.6	6187.3	6270.5	6237.8	6234.8	6258.6
7.5°	6315.0	6282.3	6332.8	6249.7	6276.4	6249.7	6312.0	6279.4	6309.1	6329.8
10°	6398.1	6380.3	6374.4	6344.7	6365.5	6306.1	6383.3	6383.3	6398.1	6454.5
12.5°	6519.9	6496.1	6481.3	6427.8	6448.6	6430.8	6493.1	6505.0	6531.7	6555.5
15°	6686.1	6644.6	6629.7	6582.2	6597.0	6594.1	6638.6	6641.6	6701.0	6698.0
17.5°	6899.9	6840.5	6858.3	6822.7	6825.7	6801.9	6778.2	6778.2	6831.6	6843.5
20°	7155.2	6816.8	6371.4	6122.0	6077.5	6110.1	6237.8	6448.6	6184.4	6258.6
22.5°	6695.0	6389.2	6368.4	6312.0	6276.4	5480.7	5275.9	5210.5	5552.0	6139.8
25°	6754.4	6623.8	6585.2	6513.9	5462.9	5454.0	5394.6	5296.6	4328.8	4308.0
27.5°	7069.1	6941.4	6879.1	5706.4	5682.6	5679.6	5590.6	4607.8	4385.2	4414.9
30°	7437.3	7288.8	6172.5	5994.3	5973.6	5926.1	5415.4	4551.4	4548.5	4551.4
32.5°	7861.8	7369.0	6350.6	6341.7	6353.6	6208.1	4797.9	4780.0	4777.1	4806.8
35°	8443.7	6837.5	6796.0	6840.5	6778.2	5367.9	5085.8	5076.9	5079.9	5065.1
37.5°	8057.8	7372.0	7363.0	7363.0	7217.6	5492.6	5436.2	5477.7	5471.8	5451.0
40°	8221.1	8019.2	7965.7	7947.9	6101.2	5926.1	5893.4	5946.8	5955.8	5970.6
42.5°	9013.8	8829.7	8803.0	8592.2	6638.6	6582.2	6481.3	6537.7	6531.7	6549.5
45°	9987.6	9862.9	9747.1	7449.1	7363.0	7291.8	7187.9	7253.2	7271.0	7259.1
47.5°	11121.8	10985.2	10147.9	8191.4	8188.4	8132.0	8016.2	8069.7	8060.8	8060.8
50°	12261.8	12113.4	9218.6	9135.5	9105.8	9016.8	8921.8	8930.7	8933.6	8963.3
52.5°	13535.5	10818.9	10204.3	10038.1	10061.8	10002.5	9910.4	7502.6	9865.9	9892.6
55°	12650.8	11323.6	11288.0	11068.3	11124.7	11047.5	10988.2	7401.6	9812.4	10842.7
57.5°	12508.3	12413.3	12383.6	12157.9	12229.2	11495.8	12045.1	8099.3	6787.1	4958.2
60°	13597.9	13496.9	13479.1	13280.2	13274.3	9135.5	10949.6	5554.9	4340.6	4370.3
62.5°	14654.8	14491.5	14536.1	14301.5	10082.6	5566.8	4907.7	124.7	198.9	210.8
65°	15833.5	15560.4	15604.9	15388.2	10400.3	5869.7	5305.5	65.3	56.4	53.4
67.5°	16967.7	16489.7	16261.0	16032.4	10801.1	6181.4	5528.2	17.8	0.0	0.0
68°	16911.2	16406.5	16172.0	15955.2	10759.5	6172.5	5516.3	17.8	0.0	0.0
70°	15958.2	15504.0	15281.3	15115.0	10272.6	5961.7	5293.7	17.8	0.0	0.0
72.5°	13951.2	13698.8	13556.3	13410.8	9126.6	5332.3	4747.4	17.8	0.0	0.0
75°	11855.1	11783.8	11694.8	11374.1	7606.5	4364.4	3901.2	17.8	0.0	0.0
77.5°	9393.8	9390.8	9174.1	8797.1	5727.1	3203.5	2876.9	14.8	0.0	0.0
80°	5079.9	5537.1	5370.9	5177.9	3248.1	1742.8	1659.7	11.9	0.0	0.0
82.5°	1428.1	1350.9	1297.4	1214.3	682.9	380.0	371.1	11.9	0.0	0.0
85°	198.9	219.7	243.5	276.1	157.4	100.9	89.1	5.9	0.0	0.0
87.5°	112.8	127.7	157.4	163.3	59.4	47.5	14.8	0.0	0.0	0.0
90°	23.8	26.7	29.7	29.7	11.9	11.9	0.0	0.0	0.0	0.0
92.5°	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	3.0	3.0	3.0	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°
110°	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	3.0	3.0	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)