

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: P256751

Luminaire Tested: **CST-10-9-D-U-T5R-HSS-HM-EX180**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256751
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-10-9-D-U-T5R-HSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 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: 61631 lumens
Efficiency: N/A
Efficacy: 81.1 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

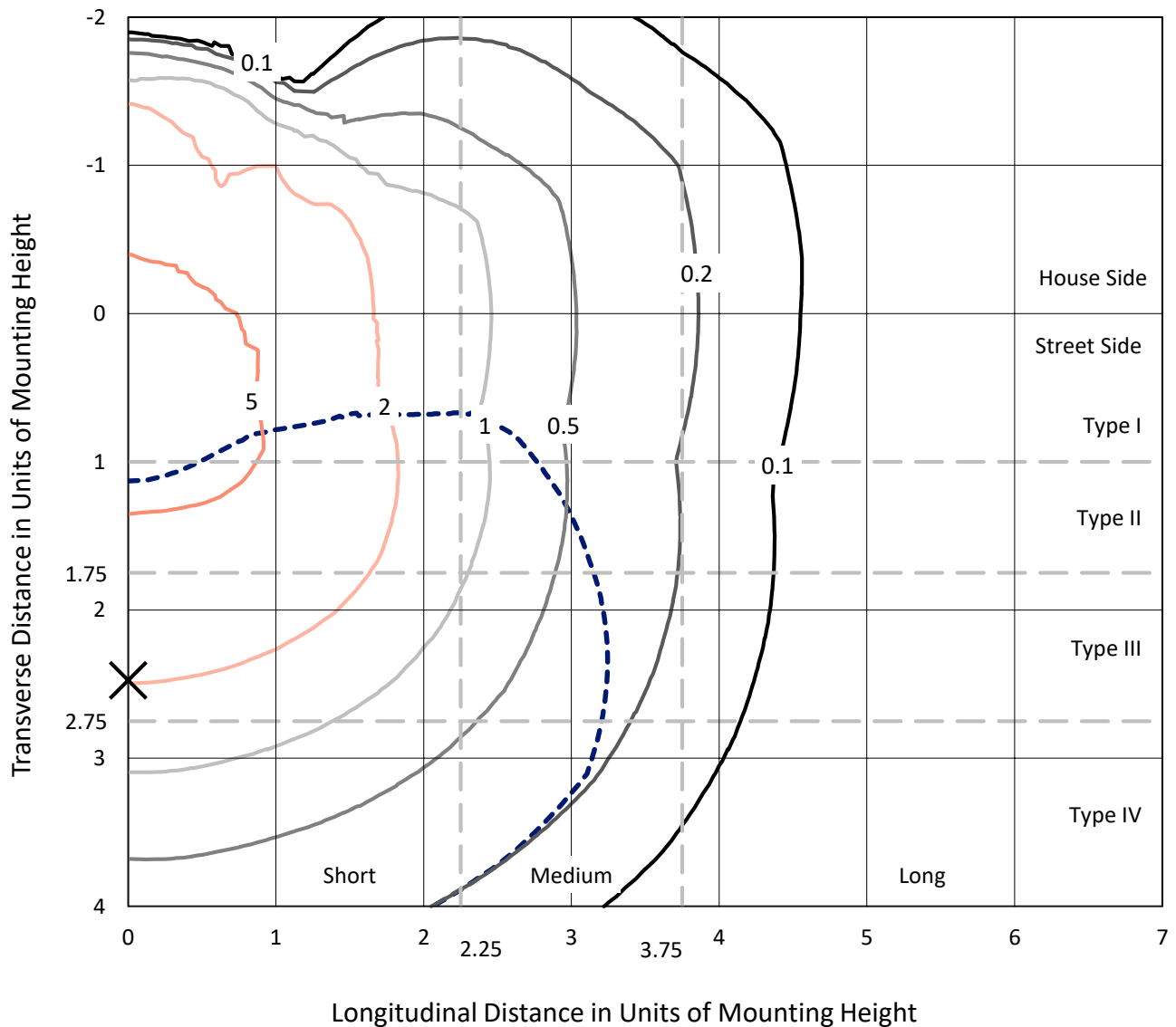


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

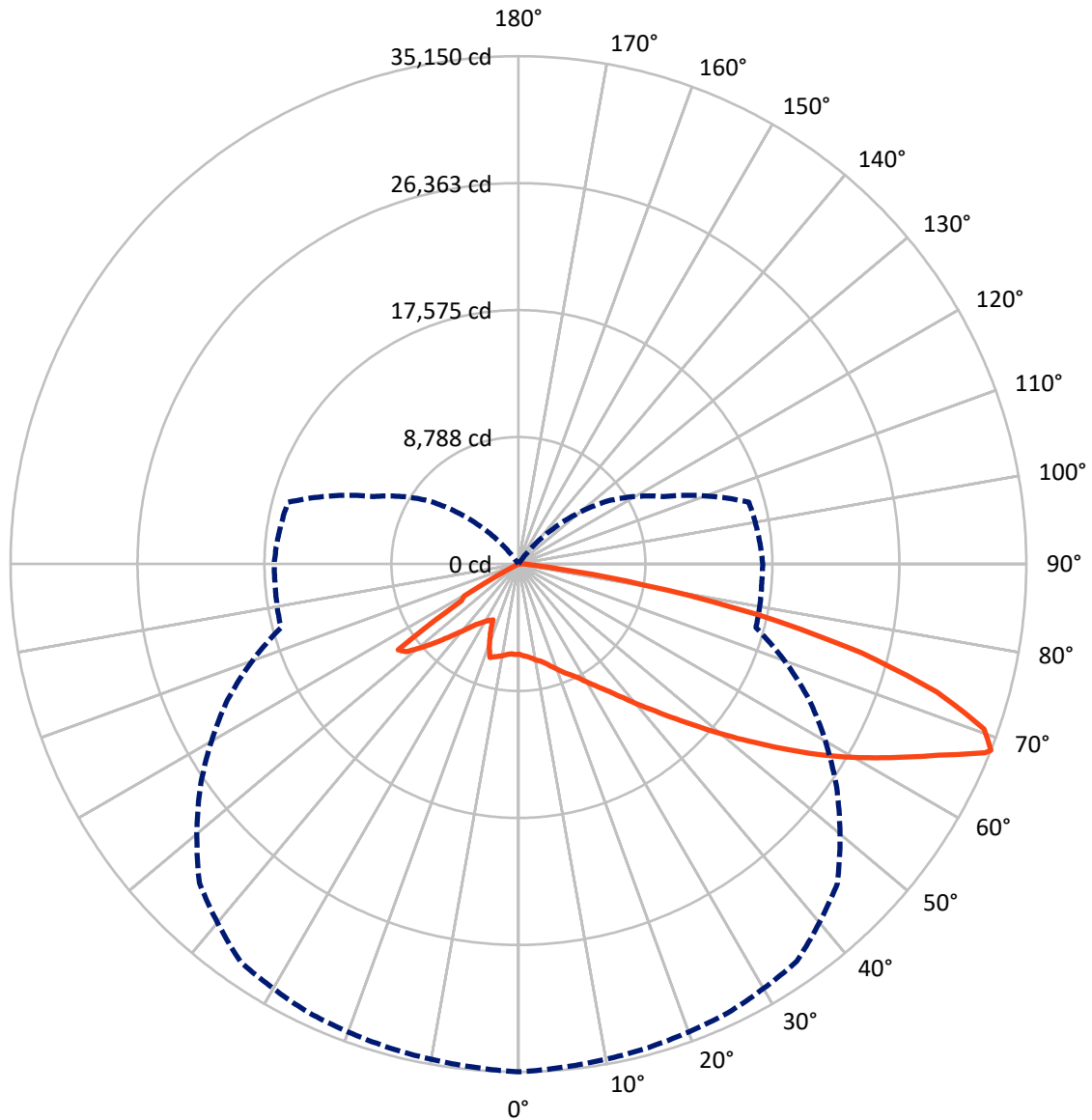


Based on 30 foot mounting height. Maximum calculated value = 7.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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



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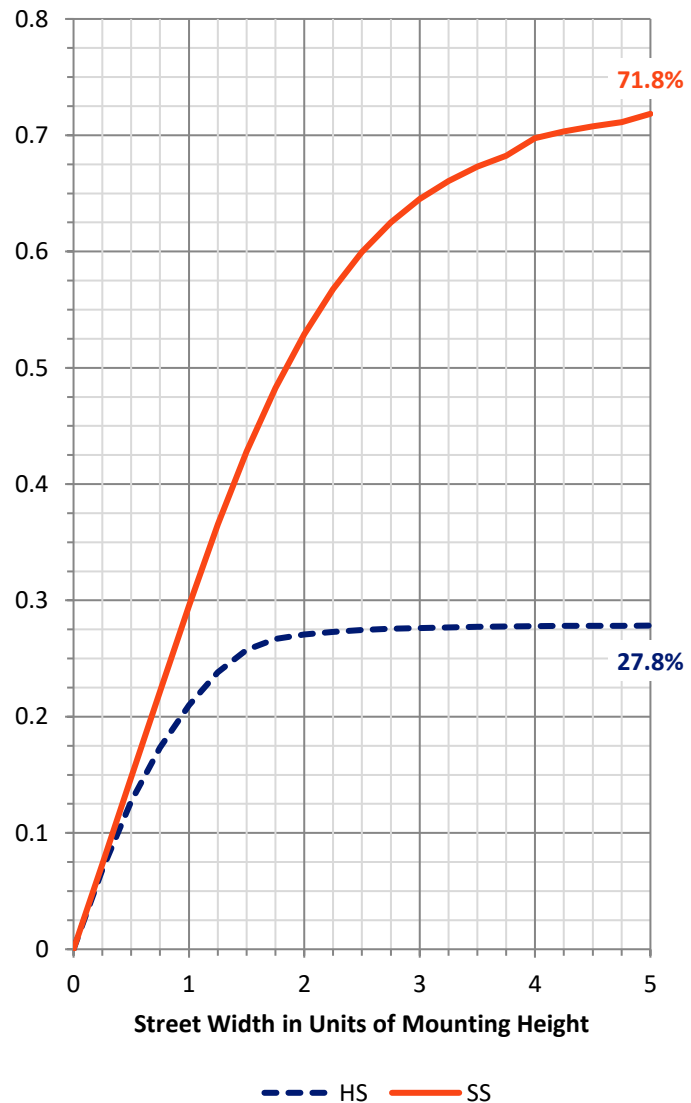
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17213.6	0.4	17214.0
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	44381.7	35.3	44417.0
	% Fixture	72.0	0.1	72.1
Total	Lumens	61595.3	35.7	61631.0
	% Fixture	99.9	0.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	606.0	1.0
10°-20°	1920.3	3.1
20°-30°	3251.0	5.3
30°-40°	5150.3	8.4
40°-50°	8420.4	13.7
50°-60°	12897.9	20.9
60°-70°	15859.0	25.7
70°-80°	12254.1	19.9
80°-90°	1236.4	2.0
90°-100°	35.1	0.1
100°-110°	0.6	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°	61595.3	99.9
0°-180°	61631.0	100.0



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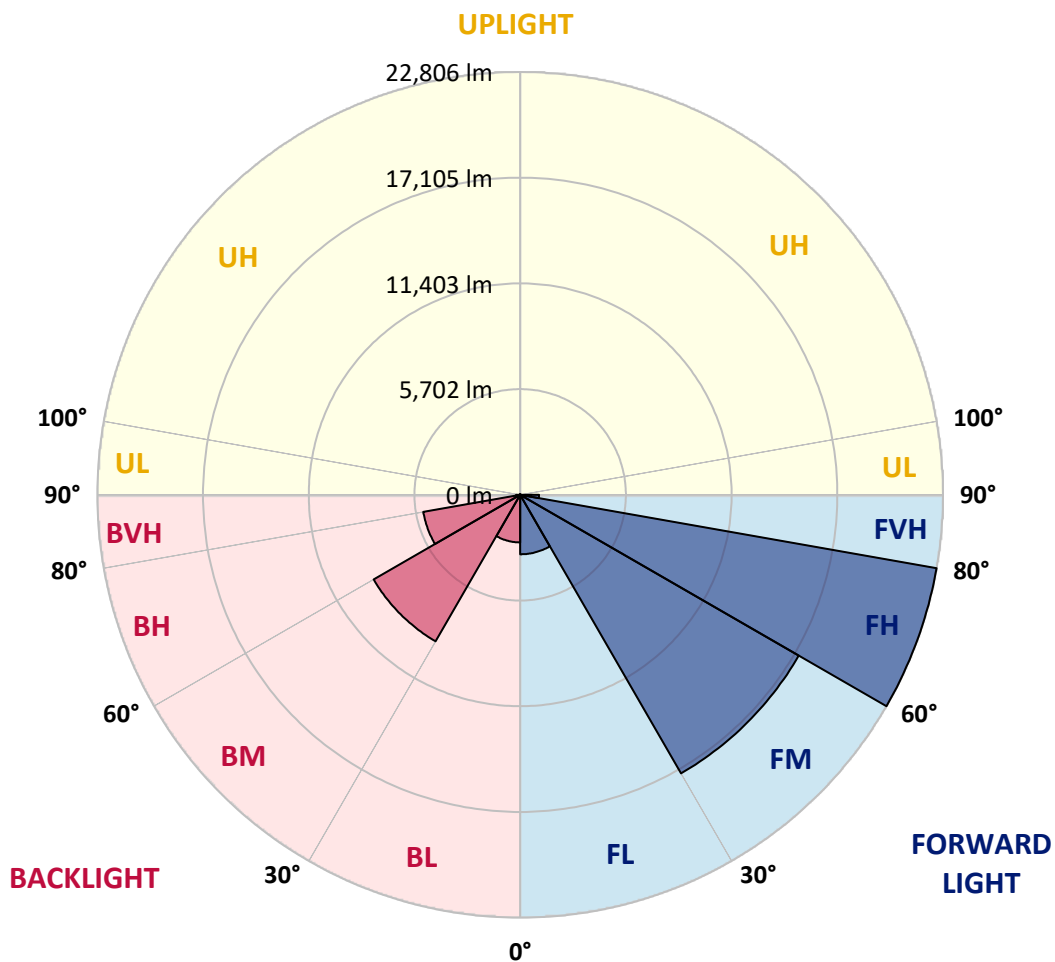
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3207.9	5.2			
FM	(30°-60°)	17348.1	28.1			
FH	(60°-80°)	22806.0	37.0			G5
FVH	(80°-90°)	1019.7	1.7			G5
BL	(0°-30°)	2569.3	4.2	B4/5000		
BM	(30°-60°)	9120.5	14.8	B5		
BH	(60°-80°)	5307.0	8.6	B5		G5
BVH	(80°-90°)	216.8	0.4			G2/225
UL	(90°-100°)	35.1	0.1		U2/50	
UH	(100°-180°)	0.4	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°	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9
2.5°	6356.7	6344.8	6332.9	6359.7	6255.8	6300.3	6264.7	6297.3	6273.6	6300.3	6291.4
5°	6439.8	6428.0	6392.3	6422.0	6353.7	6371.5	6327.0	6338.9	6258.7	6306.2	6303.3
7.5°	6576.4	6543.7	6520.0	6520.0	6460.6	6457.6	6386.4	6389.4	6327.0	6321.1	6332.9
10°	6760.5	6736.7	6671.4	6677.4	6594.2	6582.3	6493.3	6490.3	6439.8	6410.1	6436.9
12.5°	6897.1	6920.8	6861.4	6861.4	6778.3	6718.9	6656.6	6615.0	6576.4	6531.9	6511.1
15°	7146.5	7170.2	7090.1	7087.1	7054.4	6983.2	6914.9	6825.8	6757.5	6736.7	6704.1
17.5°	7470.1	7455.2	7387.0	7389.9	7395.9	7280.1	7211.8	7096.0	6998.0	6926.8	6908.9
20°	7799.7	7799.7	7725.4	7749.2	7719.5	7612.6	7568.1	7407.7	7271.2	7194.0	7131.6
22.5°	8167.8	8153.0	8102.5	8153.0	8093.6	7986.7	7912.5	7752.1	7577.0	7140.5	6962.4
25°	8518.2	8509.2	8530.0	8544.9	8470.7	8337.0	8286.6	8117.3	7630.4	7057.4	6698.1
27.5°	8960.5	8930.9	8978.4	9008.0	8933.8	8818.0	8711.1	8521.1	7490.9	7039.6	7001.0
30°	9527.6	9462.3	9530.6	9545.4	9468.2	9397.0	9236.7	8286.6	7538.4	7407.7	7395.9
32.5°	10133.3	10056.1	10145.2	10157.1	10056.1	9996.7	9592.9	8164.8	8004.5	7853.1	7867.9
35°	10851.8	10851.8	10896.4	10902.3	10828.1	10727.1	9189.2	8758.6	8616.1	8476.6	8473.6
37.5°	11727.7	11701.0	11819.7	11891.0	11810.8	11522.8	9777.0	9575.1	9355.4	9177.3	8809.1
40°	12784.7	12832.2	12864.8	12936.1	12858.9	12211.6	10635.1	10406.5	10234.3	9637.5	8708.2
42.5°	13924.8	13936.6	14007.9	14097.0	14097.0	13414.1	11638.6	11442.7	11220.0	9423.7	9005.1
45°	15287.6	15260.8	15397.4	15539.9	15501.3	14794.7	12805.4	12660.0	11617.8	10044.2	10047.2
47.5°	16834.4	16801.8	16997.7	17184.8	16991.8	16326.7	14088.1	13975.2	11214.0	11095.3	11071.5
50°	18621.8	18541.6	18767.3	19016.7	18859.3	18036.9	15646.8	13479.4	12339.3	12244.3	12229.4
52.5°	20530.9	20468.5	20605.1	21029.7	20821.8	19827.2	17122.4	13907.0	13642.7	13535.8	13509.1
55°	22686.4	22564.7	22858.6	23182.2	22941.7	21807.6	18577.2	15326.2	15053.0	14868.9	14601.7
57.5°	24951.8	24776.6	24928.0	25334.8	25103.2	23835.4	20453.7	16786.9	16463.3	13624.9	12541.2
60°	27208.2	27128.1	27187.4	27546.7	27261.7	25806.8	22211.3	18250.6	13933.7	13476.4	13529.9
62.5°	29476.6	29301.4	29354.8	29723.0	29357.8	27683.3	23877.0	19580.8	14664.1	14503.7	14560.1
65°	31908.2	31700.4	31747.9	31854.8	31403.5	29366.7	25349.6	20836.7	15762.6	15593.4	15655.7
67.5°	34838.6	34648.6	34390.3	34072.6	33449.1	31154.1	26813.3	22157.9	16997.7	16902.7	16923.5
68°	35150.4	34966.3	34654.6	34277.5	33576.8	31228.3	26875.7	22196.5	17015.5	16896.8	16902.7
70°	34179.5	34289.4	33936.1	33303.6	32718.7	30141.6	25857.3	21341.4	16258.4	16083.3	16038.7
72.5°	30269.3	30509.8	30022.9	29916.0	29197.5	26851.9	22627.0	18517.9	14141.5	14197.9	14037.6
75°	24438.1	24791.4	24200.6	24233.3	23823.5	22398.4	18963.2	15418.2	11611.9	11870.2	11917.7
77.5°	16994.7	17502.5	17244.1	17502.5	17300.6	16786.9	14675.9	11873.2	8859.6	9156.5	9272.3
80°	8862.6	9465.3	9806.7	9913.6	9978.9	9958.1	8936.8	7125.7	5121.6	5231.4	5225.5
82.5°	2802.8	2657.3	2743.4	2719.6	2645.4	2675.1	2410.9	1885.3	1306.4	1440.0	1377.6
85°	846.2	852.1	828.4	822.4	760.1	668.0	546.3	314.7	154.4	181.1	169.2
87.5°	623.5	629.4	581.9	552.2	516.6	448.3	347.4	196.0	74.2	71.3	56.4
90°	344.4	332.5	308.8	285.0	270.2	231.6	175.2	74.2	26.7	20.8	17.8
92.5°	187.0	178.1	166.3	157.4	136.6	109.9	71.3	23.8	11.9	3.0	0.0
95°	86.1	80.2	77.2	68.3	59.4	41.6	23.8	14.8	8.9	3.0	0.0
97.5°	38.6	35.6	32.7	26.7	20.8	11.9	11.9	8.9	5.9	3.0	0.0
100°	8.9	8.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	3.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0



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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	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°	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9	6243.9
2.5°	6282.5	6264.7	6255.8	6199.3	6217.2	6166.7	6264.7	6240.9	6226.1	6267.6
5°	6288.4	6226.1	6264.7	6232.0	6243.9	6172.6	6249.8	6217.2	6214.2	6232.0
7.5°	6303.3	6261.7	6300.3	6235.0	6264.7	6235.0	6291.4	6258.7	6285.4	6303.3
10°	6383.4	6359.7	6341.9	6327.0	6347.8	6288.4	6359.7	6362.6	6371.5	6425.0
12.5°	6496.2	6472.5	6442.8	6404.2	6425.0	6401.2	6454.7	6469.5	6502.2	6528.9
15°	6653.6	6609.1	6597.2	6561.6	6582.3	6570.5	6582.3	6573.4	6635.8	6626.9
17.5°	6870.3	6819.9	6650.6	6478.4	6368.6	6401.2	6537.8	6716.0	6760.5	6766.4
20°	6950.5	6594.2	6576.4	6380.5	6291.4	6285.4	6003.4	5581.8	5709.5	6009.3
22.5°	6855.5	6368.6	6318.1	6279.5	5899.5	5276.0	5216.6	5154.2	5139.4	5183.9
25°	6641.7	6585.3	6540.8	6036.0	5436.3	5439.3	5353.2	4943.4	4305.1	4251.7
27.5°	6968.3	6891.1	6460.6	5682.7	5670.9	5664.9	5537.2	4486.2	4349.6	4382.3
30°	7339.5	7211.8	6086.5	5985.6	5982.6	5929.2	4964.2	4524.8	4524.8	4530.7
32.5°	7767.0	6974.3	6300.3	6347.8	6344.8	6092.5	4795.0	4765.3	4753.4	4783.1
35°	8093.6	6784.2	6760.5	6846.6	6787.2	5169.1	5094.9	5068.1	5056.3	5041.4
37.5°	7992.6	7330.5	7330.5	7384.0	6906.0	5504.6	5469.0	5469.0	5445.2	5433.3
40°	8147.0	8010.5	7942.2	7962.9	5017.7	5911.3	5938.1	5932.1	5929.2	5949.9
42.5°	8960.5	8838.8	8776.5	8040.1	5617.4	5875.7	6528.9	6525.9	6534.8	6525.9
45°	9996.7	9883.9	9720.6	7523.5	6377.5	5151.3	7196.9	7229.6	7232.6	7229.6
47.5°	11083.4	11012.1	9340.6	8328.1	7202.9	5528.3	6879.3	8034.2	8019.4	8037.2
50°	12232.4	11911.8	9293.1	9281.2	8081.7	6151.8	6154.8	8737.9	8889.3	8936.8
52.5°	13512.1	10798.4	10299.6	9397.0	8972.4	6793.1	6727.8	7743.2	9809.7	9857.2
55°	12550.1	11407.0	11398.1	8363.8	9334.6	7410.7	7419.6	7348.4	8996.2	10225.4
57.5°	12487.8	12514.5	12493.7	9331.7	6811.0	6947.5	8084.7	8022.3	5825.2	4720.8
60°	13565.5	13604.1	12137.4	10076.9	7363.2	4272.4	4979.1	4230.9	4287.3	4331.8
62.5°	14595.8	14607.6	9872.0	6606.1	3648.9	172.2	83.1	68.3	65.3	65.3
65°	15735.9	15735.9	10581.6	7205.8	3524.2	65.3	11.9	8.9	32.7	32.7
67.5°	16837.4	16593.9	11101.2	7651.2	3586.6	8.9	0.0	0.0	0.0	0.0
68°	16775.0	16507.8	11053.7	7639.3	3577.7	5.9	0.0	0.0	0.0	0.0
70°	15842.8	15584.5	10486.6	7291.9	3444.1	5.9	0.0	0.0	0.0	0.0
72.5°	13984.1	13746.6	9287.1	6428.0	3105.6	3.0	0.0	0.0	0.0	0.0
75°	11837.5	11804.9	8022.3	5424.4	2663.2	3.0	0.0	0.0	0.0	0.0
77.5°	9524.7	9376.2	6270.6	4251.7	2146.6	0.0	0.0	0.0	0.0	0.0
80°	5305.7	5525.4	3669.7	2499.9	1350.9	0.0	0.0	0.0	0.0	0.0
82.5°	1434.0	1342.0	801.6	543.3	258.3	0.0	0.0	0.0	0.0	0.0
85°	184.1	201.9	92.0	74.2	17.8	0.0	0.0	0.0	0.0	0.0
87.5°	95.0	112.8	29.7	23.8	5.9	0.0	0.0	0.0	0.0	0.0
90°	17.8	20.8	8.9	3.0	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



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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)