

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: P256695

Luminaire Tested: **CST-10-9-D-U-T5R-7030-HSS-HM-EX90**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256695
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-7030-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 3000K 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: 76783 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B5 - U2 - G5

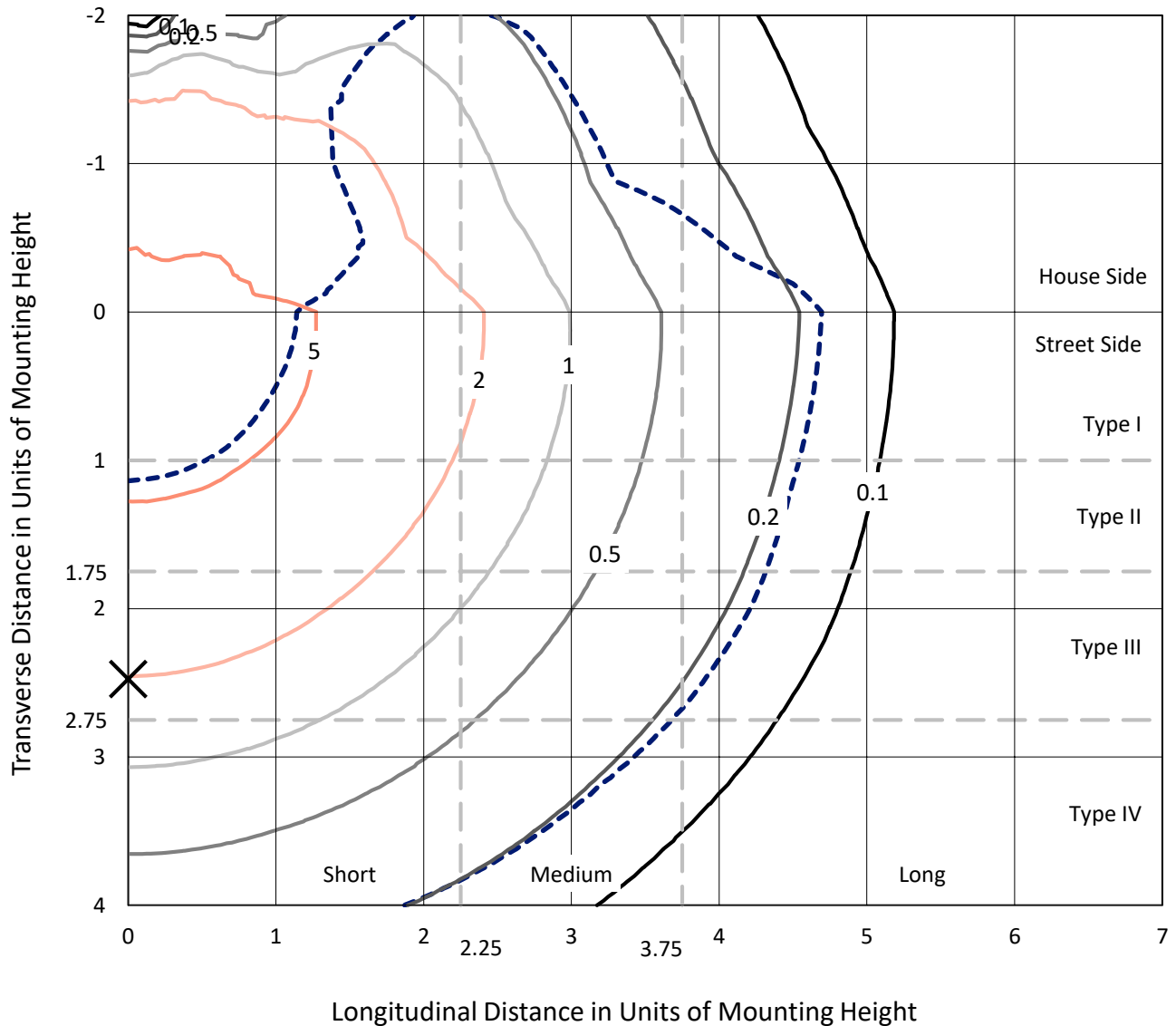
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

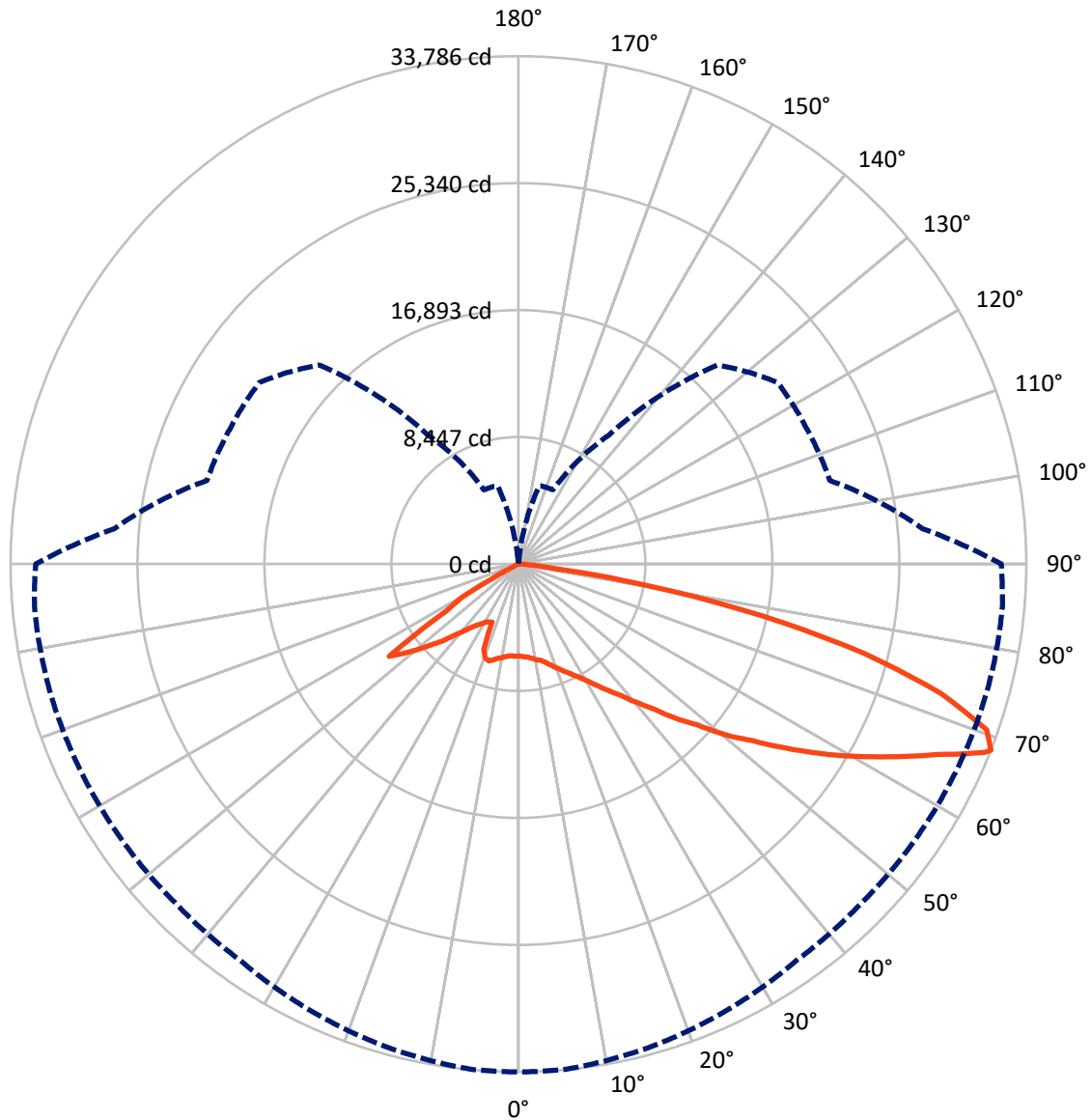


Based on 30 foot mounting height. Maximum calculated value = 6.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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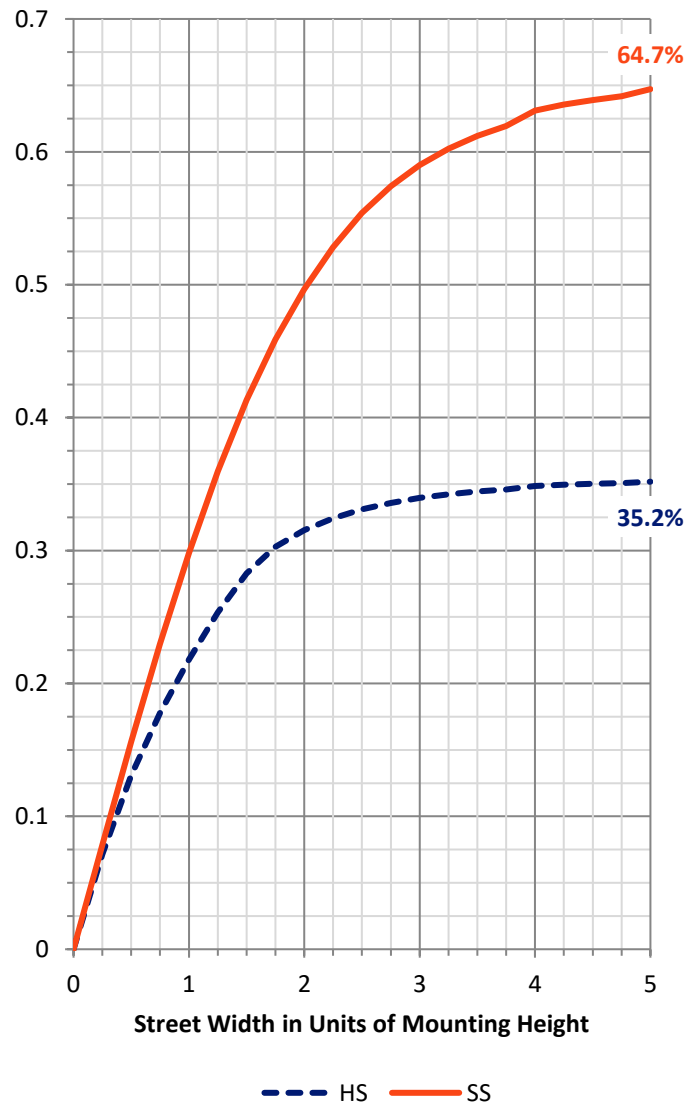
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	27022.4	4.7	27027.0
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	49735.7	20.3	49756.0
	% Fixture	64.8	0.0	64.8
Total	Lumens	76758.1	24.9	76783.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	591.2	0.8
10°-20°	1894.0	2.5
20°-30°	3381.2	4.4
30°-40°	5500.4	7.2
40°-50°	9393.1	12.2
50°-60°	15672.9	20.4
60°-70°	21804.2	28.4
70°-80°	16901.6	22.0
80°-90°	1619.6	2.1
90°-100°	19.6	0.0
100°-110°	1.7	0.0
110°-120°	0.8	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°	0.3	0.0
170°-180°	0.1	0.0
0°-90°	76758.1	100.0
0°-180°	76783.0	100.0



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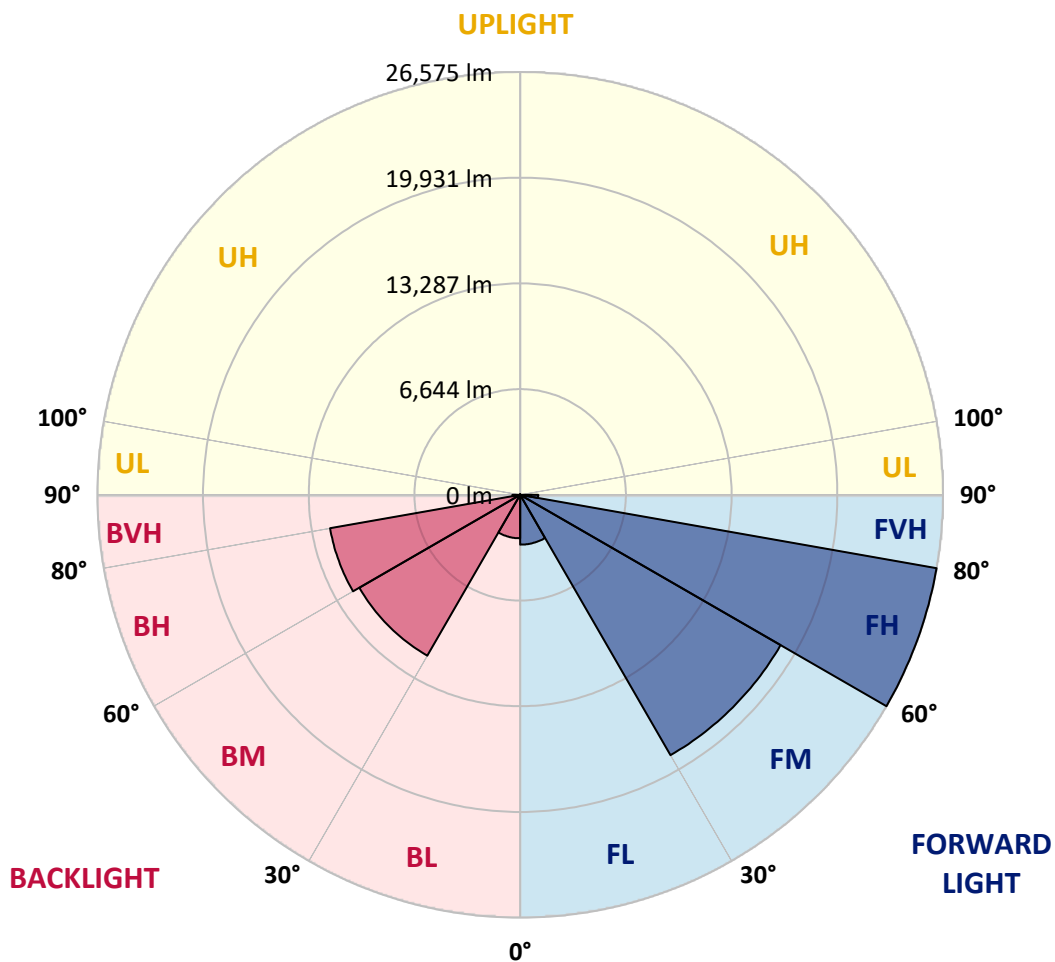
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3133.8	4.1			
FM	(30°-60°)	18894.0	24.6			
FH	(60°-80°)	26574.9	34.6			G5
FVH	(80°-90°)	1133.1	1.5			G5
BL	(0°-30°)	2732.5	3.6	B4/5000		
BM	(30°-60°)	11672.5	15.2	B5		
BH	(60°-80°)	12130.9	15.8	B5		G5
BVH	(80°-90°)	486.5	0.6			G3/500
UL	(90°-100°)	19.6	0.0		U2/50	
UH	(100°-180°)	4.7	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°	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6
2.5°	6180.0	6171.3	6165.5	6203.1	6096.2	6139.5	6110.6	6148.2	6139.5	6156.9	6159.7
5°	6223.3	6208.9	6188.6	6229.1	6165.5	6194.4	6162.6	6180.0	6125.1	6171.3	6177.1
7.5°	6321.5	6281.1	6278.2	6289.8	6246.4	6266.6	6211.8	6232.0	6203.1	6185.8	6203.1
10°	6468.9	6434.2	6396.7	6419.8	6347.5	6373.5	6315.8	6333.1	6318.7	6281.1	6315.8
12.5°	6570.0	6581.6	6555.6	6572.9	6509.3	6486.2	6466.0	6463.1	6454.4	6399.6	6390.9
15°	6795.4	6801.1	6754.9	6766.5	6752.0	6740.5	6711.6	6688.5	6642.2	6607.6	6584.5
17.5°	7090.1	7058.3	7014.9	7026.5	7067.0	7014.9	6997.6	6954.3	6887.8	6830.0	6818.5
20°	7399.2	7379.0	7338.5	7361.7	7358.8	7324.1	7332.8	7260.5	7165.2	7116.1	7078.5
22.5°	7743.0	7714.1	7685.2	7728.6	7693.9	7670.8	7662.1	7613.0	7494.6	7439.7	7431.0
25°	8086.8	8072.4	8092.6	8078.2	8029.1	8011.7	8023.3	8005.9	7867.3	7800.8	7760.4
27.5°	8517.3	8482.7	8514.4	8497.1	8445.1	8448.0	8450.9	8453.8	8297.7	8211.1	8153.3
30°	9008.5	8996.9	9037.4	8982.5	8933.4	8965.2	8991.2	8933.4	8797.6	8670.5	8650.2
32.5°	9647.0	9574.8	9621.0	9551.7	9476.5	9551.7	9597.9	9482.3	9372.5	9210.7	9239.6
35°	10354.9	10331.7	10331.7	10242.2	10201.7	10320.2	10366.4	10253.7	10083.3	9941.7	9907.0
37.5°	11106.0	11129.2	11201.4	11163.8	11126.3	11198.5	11302.5	11152.3	10932.7	10782.5	10742.0
40°	12102.8	12160.6	12209.7	12160.6	12117.3	12163.5	12281.9	12085.5	11932.3	11851.5	11764.8
42.5°	13174.7	13272.9	13241.2	13246.9	13284.5	13350.9	13469.4	13290.3	13114.0	13111.1	12984.0
45°	14625.1	14625.1	14558.6	14622.2	14616.4	14781.1	14833.1	14734.9	14587.5	14544.2	14434.4
47.5°	15980.1	16121.7	16095.7	16188.1	16115.9	16254.6	16430.8	16347.0	16176.6	16023.4	16000.3
50°	17869.6	17835.0	17800.3	17939.0	17927.4	18022.8	18184.6	18132.5	17895.6	17722.3	17690.5
52.5°	19530.9	19712.9	19669.6	19877.6	19762.0	19897.8	20091.4	20082.7	19793.8	19623.4	19574.3
55°	21628.5	21749.8	21741.1	21954.9	21796.0	21975.2	22137.0	22154.3	21839.4	21596.7	21671.8
57.5°	23812.7	23913.8	23856.0	24032.3	23876.3	24121.8	24220.1	24156.5	23971.6	23665.3	23778.0
60°	25999.8	26086.5	26152.9	26167.4	26077.8	26222.3	26314.7	26369.6	26077.8	25728.2	25864.0
62.5°	28221.6	28319.8	28262.0	28285.2	28036.7	28233.2	28348.7	28363.2	28028.0	27718.9	27814.2
65°	30561.8	30697.6	30489.6	30350.9	30044.7	30041.8	30194.9	30220.9	29984.0	29764.4	29726.9
67.5°	33459.7	33520.4	33075.4	32610.3	32093.1	31980.4	32087.3	32148.0	32283.8	32278.0	32107.6
68°	33786.2	33774.6	33323.9	32769.2	32214.5	32084.4	32136.4	32214.5	32304.0	32321.4	32116.2
70°	33043.6	32902.1	32644.9	31945.8	31396.8	31055.9	30873.9	31018.3	30775.6	30778.5	30394.3
72.5°	29351.3	29333.9	28860.1	28513.4	28025.1	27458.8	27198.8	27195.9	27219.0	27051.5	26655.7
75°	23775.1	23798.2	23246.4	23006.6	22856.4	22749.5	22804.4	22974.8	22992.2	22989.3	22850.6
77.5°	16581.1	16676.4	16529.0	16139.0	16557.9	16916.2	17606.7	17959.2	17846.5	18184.6	18398.4
80°	8690.7	8881.4	8887.1	9161.6	9499.7	9826.1	10421.3	10955.8	10562.9	10389.5	10210.4
82.5°	2285.3	2354.7	2458.7	2299.8	2348.9	2398.0	2860.3	2817.0	2600.3	2715.8	2889.2
85°	653.0	673.2	644.3	583.6	534.5	491.2	502.7	424.7	369.8	366.9	355.4
87.5°	459.4	494.1	436.3	375.6	338.0	314.9	303.4	257.1	208.0	182.0	144.5
90°	213.8	210.9	182.0	141.6	124.2	118.5	118.5	92.5	52.0	31.8	28.9
92.5°	89.6	92.5	75.1	60.7	52.0	40.4	31.8	20.2	11.6	5.8	2.9
95°	31.8	34.7	28.9	23.1	20.2	17.3	14.4	11.6	5.8	2.9	2.9
97.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	5.8	5.8	2.9	2.9
100°	0.0	0.0	0.0	2.9	5.8	5.8	5.8	5.8	2.9	2.9	2.9
102.5°	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
105°	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9



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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	2.9	2.9	2.9	2.9
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9
145°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
150°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
160°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9
165°	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9
167.5°	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9
170°	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
172.5°	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
175°	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
177.5°	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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°	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6	6110.6
2.5°	6154.0	6139.5	6133.7	6061.5	6081.7	6038.4	6139.5	6110.6	6104.9	6145.3
5°	6168.4	6102.0	6142.4	6096.2	6107.7	6044.2	6125.1	6090.4	6093.3	6113.5
7.5°	6177.1	6139.5	6180.0	6099.1	6130.9	6107.7	6165.5	6130.9	6165.5	6182.9
10°	6263.8	6246.4	6217.5	6194.4	6217.5	6162.6	6234.9	6229.1	6249.3	6301.3
12.5°	6382.2	6362.0	6333.1	6292.7	6310.0	6289.8	6344.7	6350.4	6388.0	6414.0
15°	6558.5	6532.5	6518.0	6477.6	6483.3	6468.9	6500.7	6506.5	6581.6	6572.9
17.5°	6806.9	6778.0	6789.6	6752.0	6737.6	6702.9	6645.1	6624.9	6714.5	6740.5
20°	7078.5	7046.7	7061.2	7029.4	6760.7	6214.6	6581.6	6832.9	6642.2	6627.8
22.5°	7387.7	7353.0	7364.5	7315.4	6983.2	5960.4	5186.1	5122.5	5850.6	6145.3
25°	7728.6	7682.4	7676.6	7613.0	6520.9	5397.0	5310.3	5197.7	4666.0	4244.2
27.5°	8150.4	8081.1	8046.4	7087.2	6474.7	5607.9	5477.9	5076.3	4304.9	4330.9
30°	8606.9	8505.8	7855.7	7223.0	6812.7	5856.4	5683.0	4449.4	4455.1	4443.6
32.5°	9126.9	8901.6	7696.8	7639.0	7217.2	6122.2	4718.0	4666.0	4671.8	4689.2
35°	9808.8	8263.1	8231.3	8234.2	7711.2	5922.8	4998.3	4949.2	4955.0	4966.5
37.5°	9953.3	8907.4	8913.1	8846.7	8237.1	5411.5	5339.2	5336.3	5324.8	5313.2
40°	10068.8	9719.2	9635.4	9528.5	7636.1	5827.5	5804.4	5787.0	5795.7	5818.8
42.5°	10973.1	10710.2	10629.3	10502.2	7832.6	6457.3	6382.2	6362.0	6385.1	6373.5
45°	12175.0	11955.5	11796.6	9710.6	8653.1	7142.1	7081.4	7055.4	7064.1	7136.3
47.5°	13446.3	13316.3	12830.9	10490.6	9609.4	7951.0	7890.4	7849.9	7864.4	7847.0
50°	14830.2	14711.7	11877.5	11666.5	10666.9	8823.6	8734.0	8719.6	8725.3	8722.5
52.5°	16332.6	13856.5	13163.1	12943.6	11782.1	9736.6	9704.8	9626.8	9644.1	9626.8
55°	18095.0	14596.2	14578.8	14321.7	13036.0	10796.9	10759.3	10649.5	9959.0	10562.9
57.5°	19767.8	16009.0	16009.0	15760.5	14318.8	11851.5	11790.8	11709.9	7078.5	5709.0
60°	21599.6	17424.7	17384.2	17179.1	15555.4	12856.9	10450.2	10427.1	4276.0	4290.4
62.5°	23182.8	18687.3	18759.5	18568.8	16745.7	9626.8	4842.3	4744.0	421.8	650.1
65°	24956.8	20082.7	20169.4	19973.0	18034.3	10210.4	5255.4	5206.3	95.3	86.7
67.5°	26967.7	21475.3	21278.9	21062.2	18788.4	10513.8	5460.6	5417.2	26.0	17.3
68°	26985.0	21446.4	21192.2	21044.8	18716.2	10456.0	5443.2	5402.8	26.0	17.3
70°	25598.2	20365.9	20111.6	20149.2	17820.5	9999.5	5217.9	5142.8	26.0	17.3
72.5°	22457.7	18123.9	17837.8	17635.6	15803.9	8890.0	4677.6	4536.0	26.0	17.3
75°	19216.0	15358.9	14885.1	14440.2	12715.3	7275.0	3836.8	3677.9	26.0	17.3
77.5°	15145.1	11707.0	11033.8	10742.0	9554.5	5373.9	2851.6	2678.3	26.0	14.4
80°	8370.0	6717.4	6145.3	5966.2	5463.5	3157.9	1635.3	1531.3	23.1	14.4
82.5°	2164.0	1623.7	1415.7	1366.6	1282.8	748.3	398.7	378.5	20.2	11.6
85°	309.1	228.2	251.4	297.6	286.0	193.6	138.7	118.5	17.3	8.7
87.5°	161.8	135.8	158.9	179.1	182.0	112.7	57.8	31.8	8.7	0.0
90°	26.0	26.0	28.9	31.8	31.8	14.4	11.6	0.0	0.0	0.0
92.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	2.9	5.8	2.9	2.9	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°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	2.9	2.9	2.9	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)