

Scaled data based on original data using
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: 768913

Luminaire Tested: **UTR50SXX33**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: 768913
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: UTR50SXX33
Description: 50W HPS TYPE III TRADITIONAIRE POST TOP
Light Source: 50W HPS COATED ED-23.5
Ballast/Driver: -

Summary

Lumens per Lamp: 3800 (1 lamp)
Luminaire Lumens: 1956.7 lumens
Efficiency: 51.5%
Efficacy: 19.6 lumens/watt
Luminous Opening: Point Source (0' x 0' x 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U3 - G1

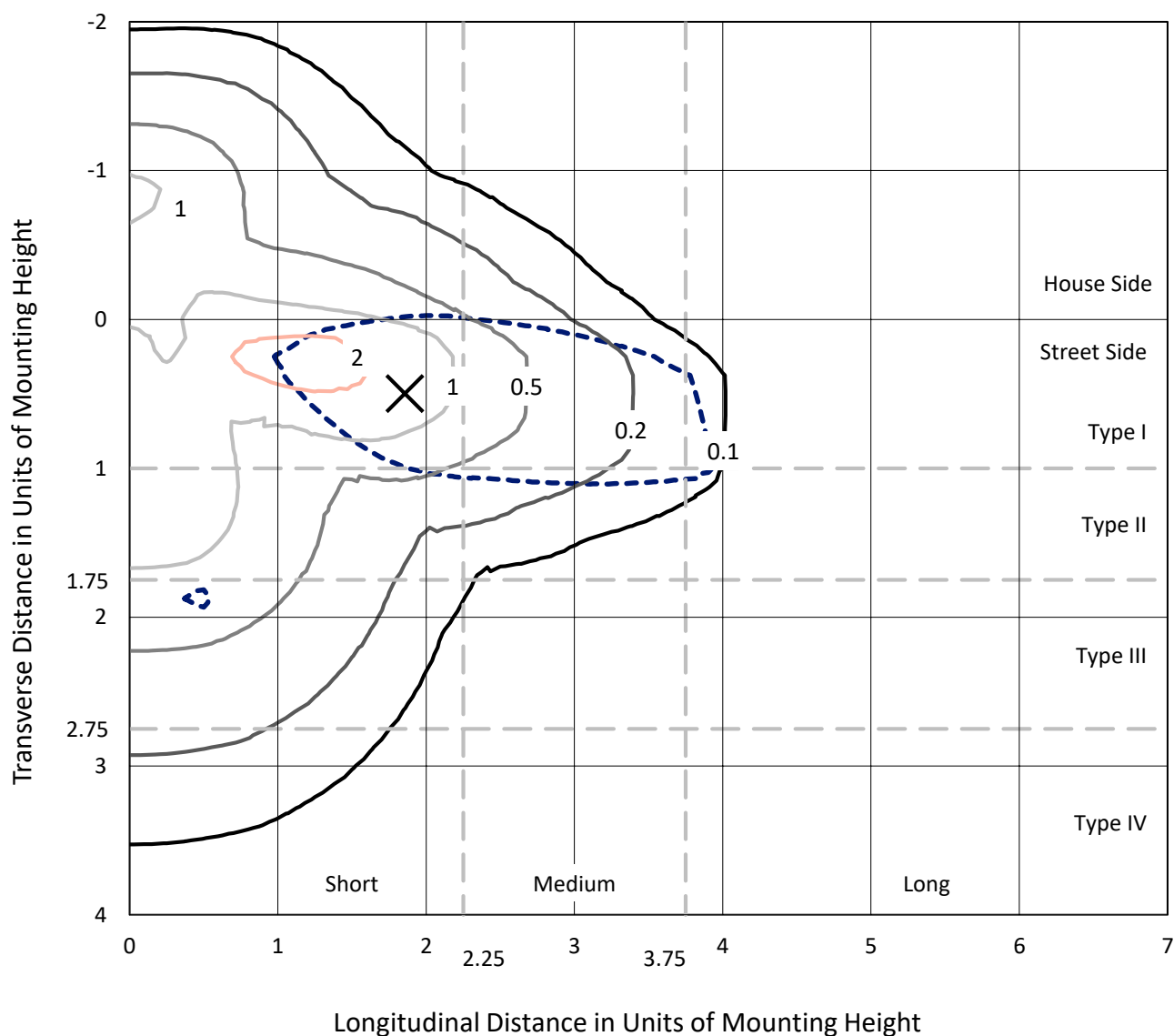
Input Watts (W): 100
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

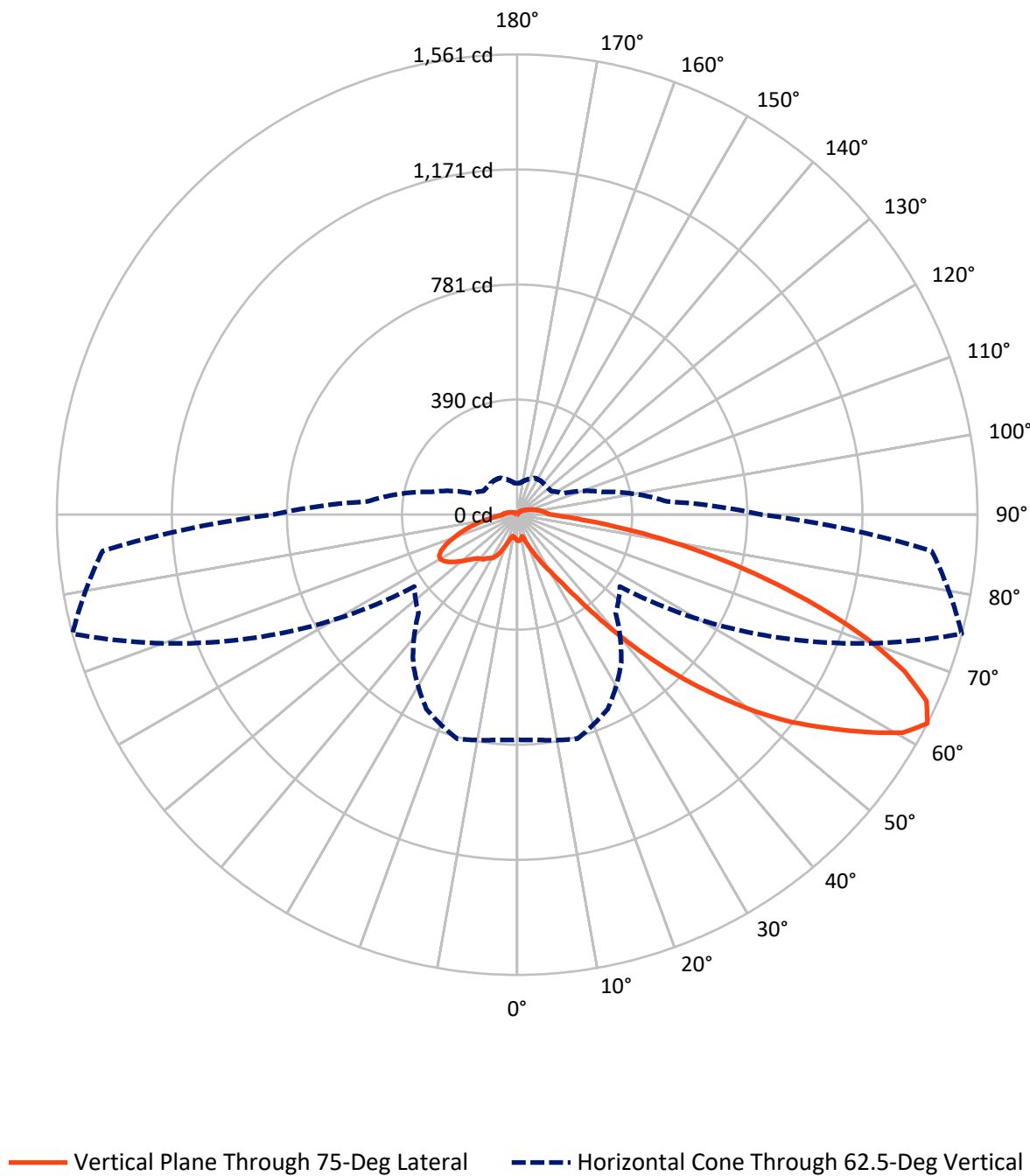
× Max cd
- - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.7 fc
Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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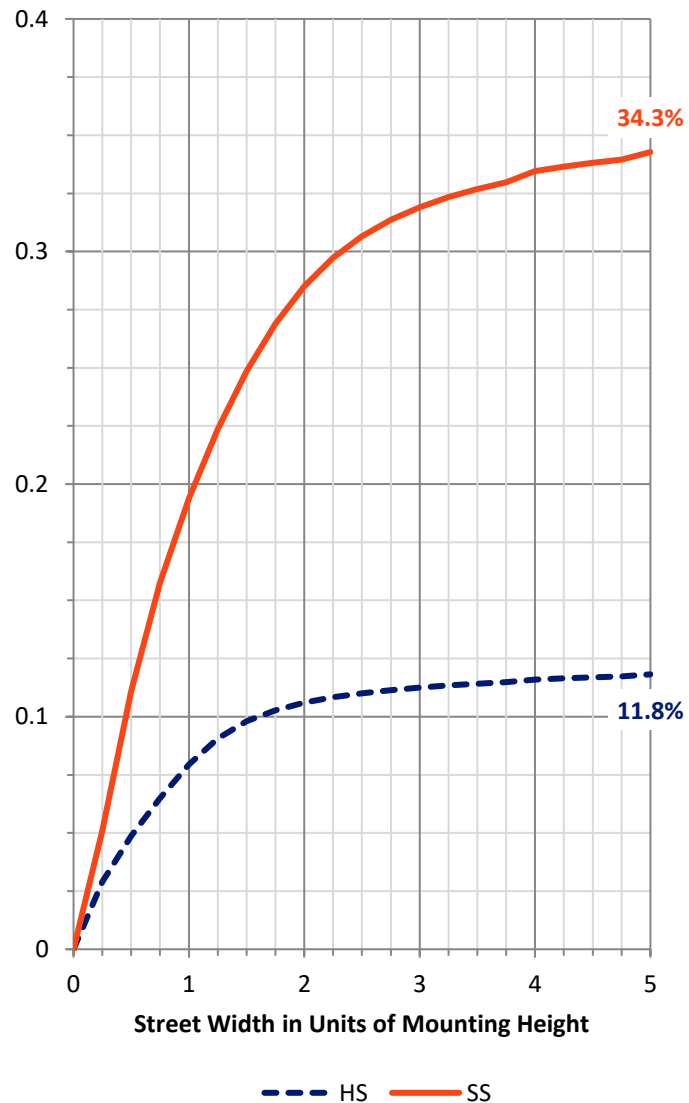
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	467.9	58.9	526.8
	% Lamp	12.3	1.6	13.9
Street Side	Lumens	1339.5	90.4	1429.9
	% Lamp	35.3	2.4	37.6
Total	Lumens	1807.4	149.4	1956.7
	% Lamp	47.6	3.9	51.5

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	8.4	0.4	0.2
10°-20°	26.0	1.3	0.7
20°-30°	66.5	3.4	1.7
30°-40°	134.7	6.9	3.5
40°-50°	252.7	12.9	6.6
50°-60°	410.1	21.0	10.8
60°-70°	484.5	24.8	12.7
70°-80°	303.6	15.5	8.0
80°-90°	121.0	6.2	3.2
90°-100°	60.8	3.1	1.6
100°-110°	40.3	2.1	1.1
110°-120°	25.0	1.3	0.7
120°-130°	15.0	0.8	0.4
130°-140°	7.6	0.4	0.2
140°-150°	2.3	0.1	0.1
150°-160°	0.2	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	1807.4	92.4	47.6
0°-180°	1956.7	100.0	51.5

Coefficient of Utilization



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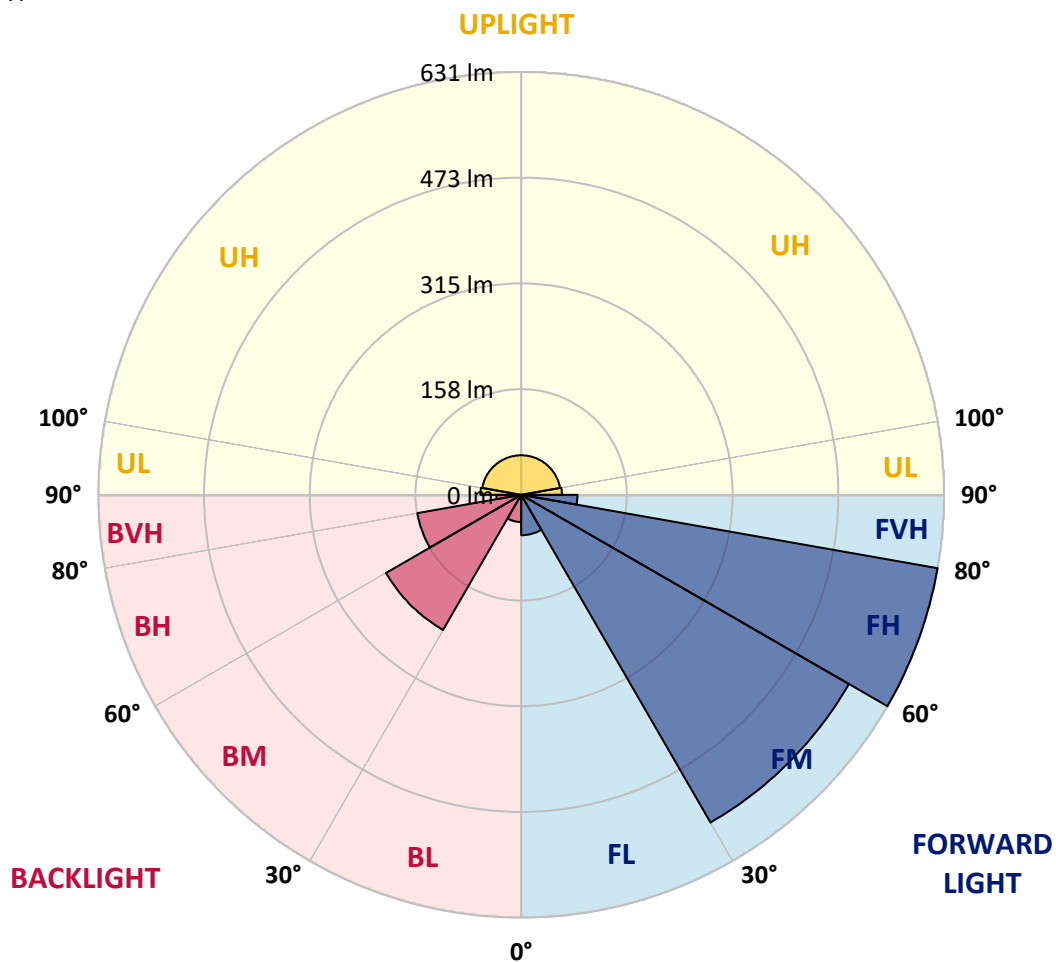
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	60.2	1.6			
FM	(30°-60°)	564.6	14.9			
FH	(60°-80°)	630.8	16.6			G0/660
FVH	(80°-90°)	83.9	2.2			G1/100
BL	(0°-30°)	40.6	1.1	B0/110		
BM	(30°-60°)	232.8	6.1	B1/1000		
BH	(60°-80°)	157.3	4.1	B1/500		G1/500
BVH	(80°-90°)	37.1	1.0			G1/100
UL	(90°-100°)	60.8	1.6		U3/500	
UH	(100°-180°)	58.9	1.6		U3/500	
Trapped Light		1843.3	48.5			

BUG Rating: B1-U3-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
2.5°	99.7	99.7	99.3	98.5	97.2	94.6	92.4	90.7	89.0	87.2	86.4
5°	114.0	113.6	112.3	110.1	106.2	101.9	97.2	92.4	88.1	84.6	83.3
7.5°	123.5	123.1	121.3	118.3	113.1	107.1	99.3	91.5	85.5	81.2	79.9
10°	129.1	129.1	127.4	124.4	117.9	107.5	97.2	87.7	81.2	76.9	76.0
12.5°	134.7	134.3	131.7	127.0	117.0	104.9	91.1	79.9	74.7	75.1	76.0
15°	142.5	141.6	137.7	129.5	116.2	99.7	84.2	77.7	81.6	85.9	86.4
17.5°	151.1	150.3	146.0	134.7	118.3	97.6	86.8	87.7	98.5	104.1	104.1
20°	162.4	162.4	159.3	148.1	130.8	111.8	101.5	100.6	117.5	123.9	122.6
22.5°	178.3	179.2	174.5	159.3	145.5	142.1	127.0	120.5	136.5	149.0	145.5
25°	186.5	187.8	181.4	165.8	163.7	175.3	168.0	149.4	164.1	175.7	169.7
27.5°	193.5	194.3	185.7	168.4	173.6	196.0	209.4	188.7	194.7	196.5	185.2
30°	207.7	208.6	198.2	177.9	180.1	199.5	229.3	234.5	225.4	215.5	200.4
32.5°	231.0	229.7	216.8	195.6	190.0	199.9	245.3	291.9	270.7	241.0	217.6
35°	266.9	264.3	246.1	221.1	206.4	206.4	256.1	343.3	340.7	274.6	238.8
37.5°	304.9	301.4	279.8	250.9	227.1	221.5	269.0	391.2	434.0	316.1	265.6
40°	343.7	339.4	316.1	282.8	249.2	239.2	282.8	435.3	547.1	362.3	291.9
42.5°	385.2	382.2	357.5	319.1	276.4	258.2	297.1	480.6	671.5	424.5	326.9
45°	433.1	430.5	405.0	359.3	308.3	278.1	315.7	531.1	797.1	507.4	366.2
47.5°	485.4	483.2	460.7	407.6	345.0	299.7	335.5	591.6	923.7	618.4	414.5
50°	536.3	533.7	518.2	462.5	388.2	326.5	358.0	664.6	1050.6	758.3	474.1
52.5°	586.4	586.4	575.6	518.2	435.7	358.4	384.3	742.3	1169.8	902.5	541.9
55°	647.3	646.9	640.8	577.8	487.5	392.1	407.6	818.7	1277.7	1047.6	621.4
57.5°	711.6	711.6	712.1	644.3	541.1	427.1	423.2	887.8	1390.5	1194.0	707.3
60°	754.0	755.7	767.3	704.3	590.3	456.9	429.7	957.8	1501.9	1333.5	785.0
62.5°	763.5	766.5	786.8	727.6	614.9	472.4	425.8	990.6	1561.0	1411.2	827.8
65°	742.7	746.2	765.6	706.0	596.8	459.5	403.7	940.9	1525.6	1394.8	820.0
67.5°	692.6	697.0	710.3	649.5	541.9	414.1	361.0	817.9	1416.4	1295.5	763.0
70°	625.3	627.9	633.9	569.6	464.6	347.6	305.7	662.8	1258.3	1146.9	674.5
72.5°	547.5	548.8	545.8	481.9	386.5	284.6	250.9	521.2	1069.6	977.6	572.2
75°	464.6	465.1	455.1	398.1	316.5	231.9	203.0	401.2	871.0	790.7	460.3
77.5°	379.6	380.9	369.6	318.7	254.3	187.4	163.7	298.0	679.7	611.5	355.0
80°	295.4	295.8	285.9	246.6	198.6	150.7	130.8	209.0	495.3	440.5	262.5
82.5°	220.2	220.2	212.5	185.2	152.9	120.9	104.1	145.1	334.2	293.6	188.3
85°	155.9	157.2	153.7	138.6	120.0	101.5	85.9	107.5	221.5	195.6	135.2
87.5°	108.4	110.1	114.9	111.0	100.6	86.8	73.8	84.2	149.4	134.3	98.0
90°	74.7	76.0	85.5	88.1	86.8	75.6	65.6	71.2	108.4	101.5	75.1
95°	57.4	58.3	66.1	71.7	71.2	61.3	58.3	62.2	92.4	82.0	60.9
105°	39.7	39.3	38.4	38.9	38.9	37.1	44.5	56.1	61.3	54.0	39.7
115°	23.3	23.3	23.3	23.7	23.7	23.7	28.5	37.1	37.6	31.5	24.2
125°	13.8	13.8	13.8	13.4	16.4	21.2	25.0	22.9	23.3	20.3	16.8
135°	10.8	10.8	10.4	9.1	7.3	11.7	15.1	13.4	16.0	15.1	13.0
145°	2.6	2.6	2.2	1.3	0.4	0.4	0.9	1.7	2.6	3.0	3.0
155°	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	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
175°	0.0	0.0	0.0	0.4	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°	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
2.5°	85.9	84.6	83.8	82.9	82.5	82.0	82.0	81.6	81.6	81.6
5°	82.9	80.7	79.5	78.6	77.3	77.3	77.3	76.9	77.3	76.9
7.5°	78.6	77.3	75.6	74.3	72.5	70.4	69.5	69.5	70.0	70.0
10°	75.6	75.1	73.8	71.2	66.9	63.5	61.3	60.5	60.9	60.5
12.5°	76.0	74.7	72.5	68.7	63.9	58.3	54.8	54.4	55.7	56.1
15°	85.9	79.9	73.0	67.8	62.6	60.5	58.7	58.7	60.5	60.9
17.5°	101.5	91.1	80.3	69.1	65.6	65.2	66.9	67.8	69.1	69.5
20°	118.7	105.4	92.0	78.6	70.4	71.7	74.3	76.4	78.2	79.0
22.5°	139.9	124.4	107.5	89.4	81.2	77.7	85.1	93.7	98.0	98.5
25°	161.5	143.8	124.8	103.6	94.1	93.3	100.2	109.7	115.7	117.0
27.5°	175.7	157.2	133.4	114.0	105.4	104.1	112.7	125.2	133.4	134.7
30°	187.0	168.8	135.2	118.3	113.1	114.9	124.4	136.5	146.4	148.5
32.5°	198.6	174.0	140.8	120.0	116.6	123.1	135.2	149.4	162.4	164.5
35°	212.0	179.2	144.7	119.6	119.2	133.4	151.1	169.7	186.5	189.1
37.5°	228.4	189.6	145.1	120.0	124.8	146.0	171.9	194.7	214.6	219.4
40°	245.3	194.3	145.5	122.6	131.7	161.9	195.6	221.5	244.8	248.7
42.5°	269.5	199.5	147.2	127.0	143.4	178.8	217.6	244.8	266.4	270.3
45°	294.5	209.9	152.9	134.7	154.2	194.7	233.2	256.1	272.0	275.1
47.5°	321.3	224.5	161.5	142.1	161.5	203.4	237.9	256.5	267.3	268.6
50°	351.5	242.2	171.9	146.4	165.8	205.5	236.2	248.7	253.0	252.6
52.5°	381.7	259.1	177.0	146.0	164.1	201.7	227.1	230.6	227.6	226.7
55°	416.7	276.4	178.3	144.2	162.4	194.3	209.9	204.2	194.3	193.0
57.5°	456.0	291.5	177.0	143.4	158.0	179.2	186.1	174.0	160.6	158.0
60°	491.4	300.1	174.9	142.5	149.4	159.3	160.6	146.4	131.3	129.5
62.5°	509.5	299.2	169.7	139.5	137.3	139.9	137.3	122.2	107.5	106.2
65°	500.9	285.9	161.1	132.1	125.7	123.9	118.3	103.2	89.4	87.2
67.5°	468.5	263.0	148.5	122.6	115.7	111.4	102.8	87.7	74.3	72.5
70°	421.9	234.5	132.6	111.4	105.8	100.2	89.4	74.7	62.2	60.5
72.5°	370.1	205.5	117.5	101.9	97.6	91.5	80.7	66.9	54.4	51.8
75°	311.3	174.9	103.2	93.7	91.5	84.2	72.1	59.6	48.4	45.3
77.5°	254.3	145.5	89.8	86.4	86.4	79.0	66.9	57.0	47.1	44.5
80°	198.6	117.9	77.7	79.9	82.0	75.6	64.8	55.7	47.1	44.9
82.5°	149.4	93.3	66.5	71.7	76.0	70.8	60.9	52.7	46.2	43.6
85°	111.8	74.3	58.3	64.8	70.0	65.6	58.3	51.0	44.0	42.3
87.5°	85.1	60.5	51.0	57.0	62.2	60.0	53.5	46.6	40.6	38.9
90°	65.6	50.5	44.9	49.7	54.4	53.1	48.8	42.7	36.3	35.8
95°	50.1	43.6	39.3	40.6	44.0	43.6	41.0	36.7	32.4	32.0
105°	32.4	28.9	26.3	26.8	28.1	29.4	29.4	27.2	27.2	27.6
115°	21.2	17.7	16.0	17.3	18.1	20.3	21.6	21.6	22.9	22.5
125°	14.7	12.5	11.2	12.1	13.4	14.2	14.7	15.5	16.8	16.4
135°	12.1	10.8	8.6	6.9	6.9	6.9	8.6	9.9	10.8	11.2
145°	3.0	2.2	1.3	0.4	0.4	1.3	2.6	3.9	3.9	4.3
155°	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



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
175°	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)