

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: 767437_400MP

Luminaire Tested: **OVX40PXX3EG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: 767437_400MP
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: OVX40PXX3EG
Description: 400 WATT MH TYPE III ROADWAY
Light Source: 400 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 40000 (1 lamp)
Luminaire Lumens: 30913.8 lumens
Efficiency: 77.3%
Efficacy: 68.4 lumens/watt
Luminous Opening: Point Source (0' x 0' x 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B3 - U4 - G5

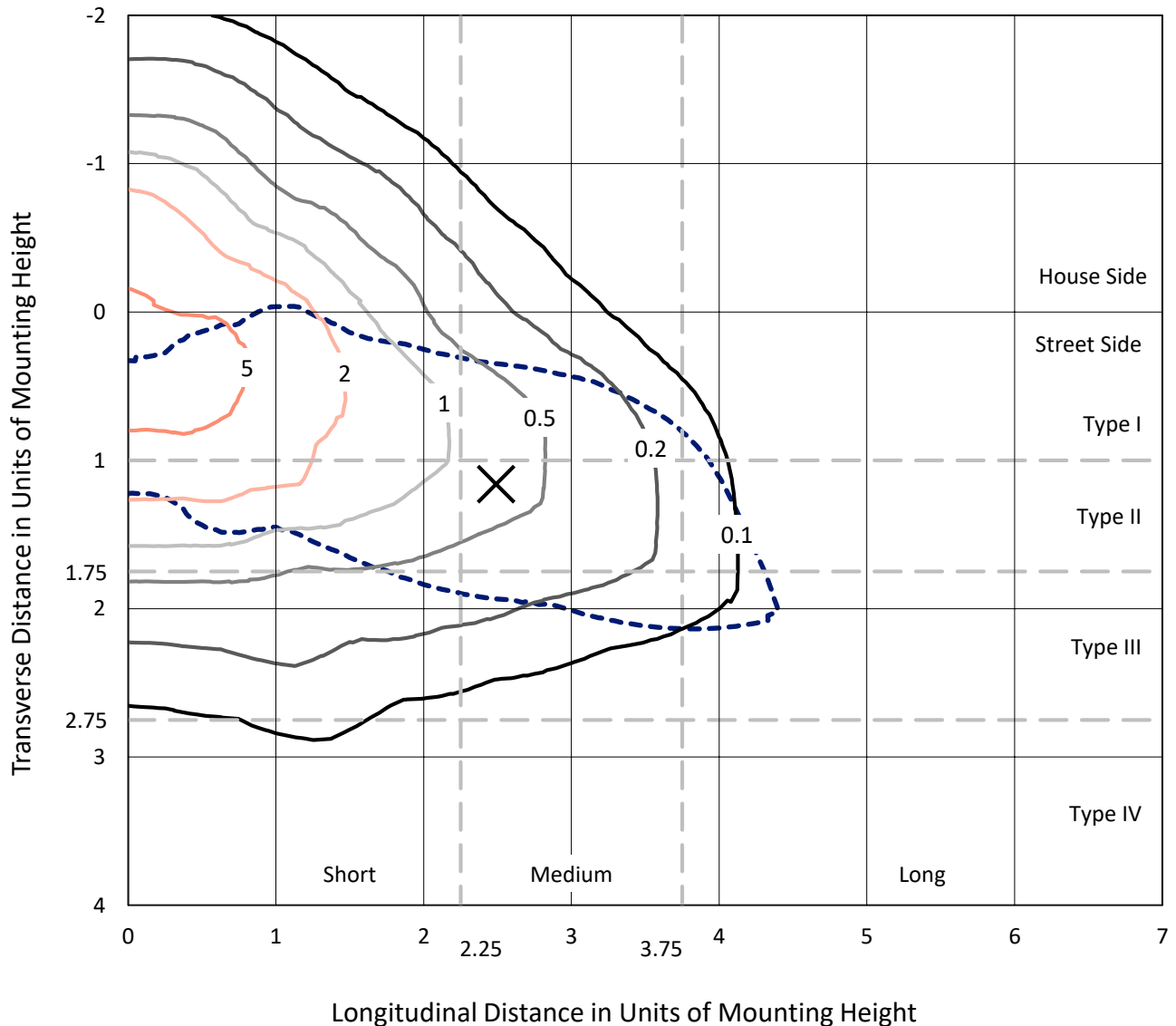
Input Watts (W): 452
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

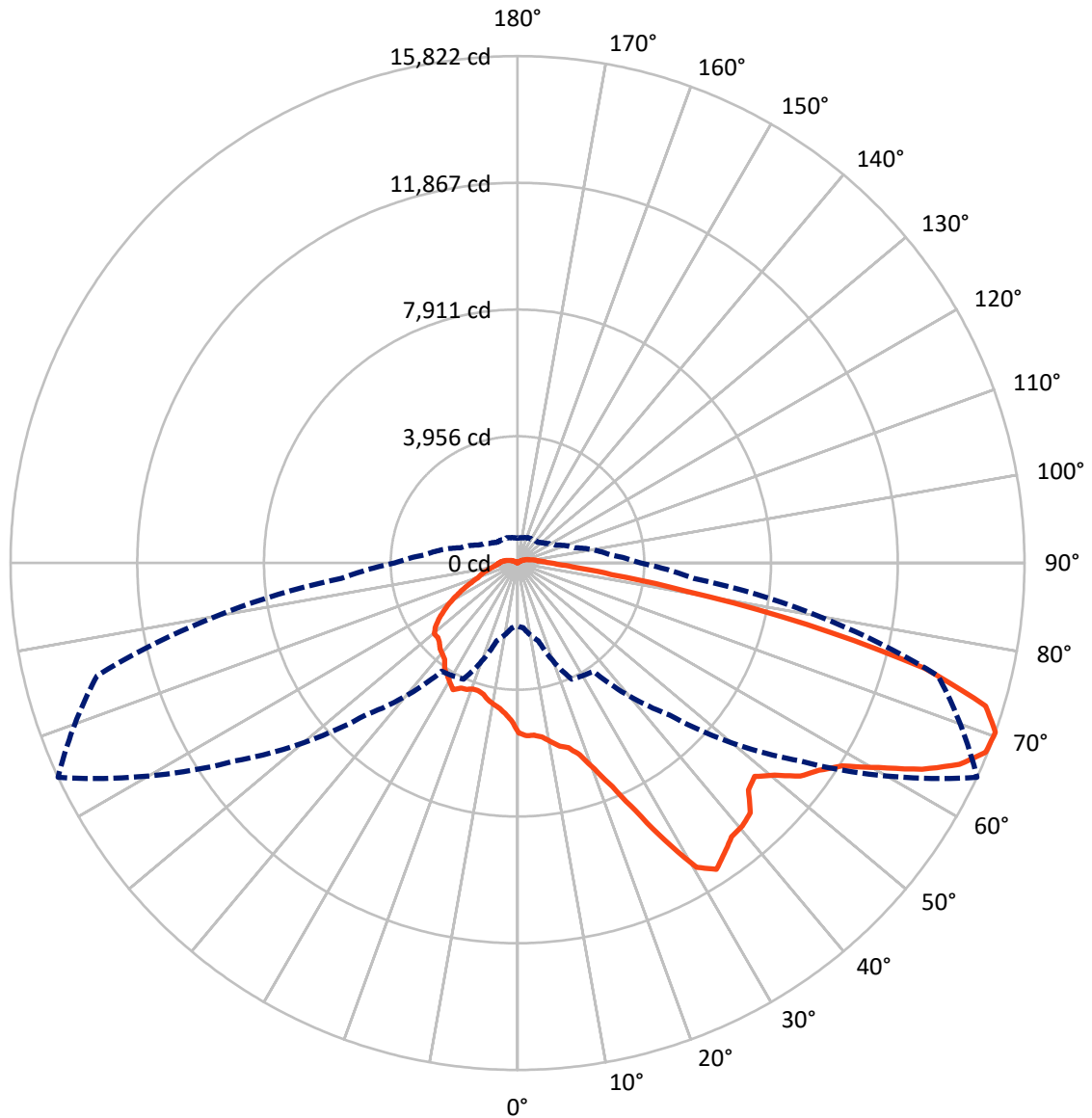
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical



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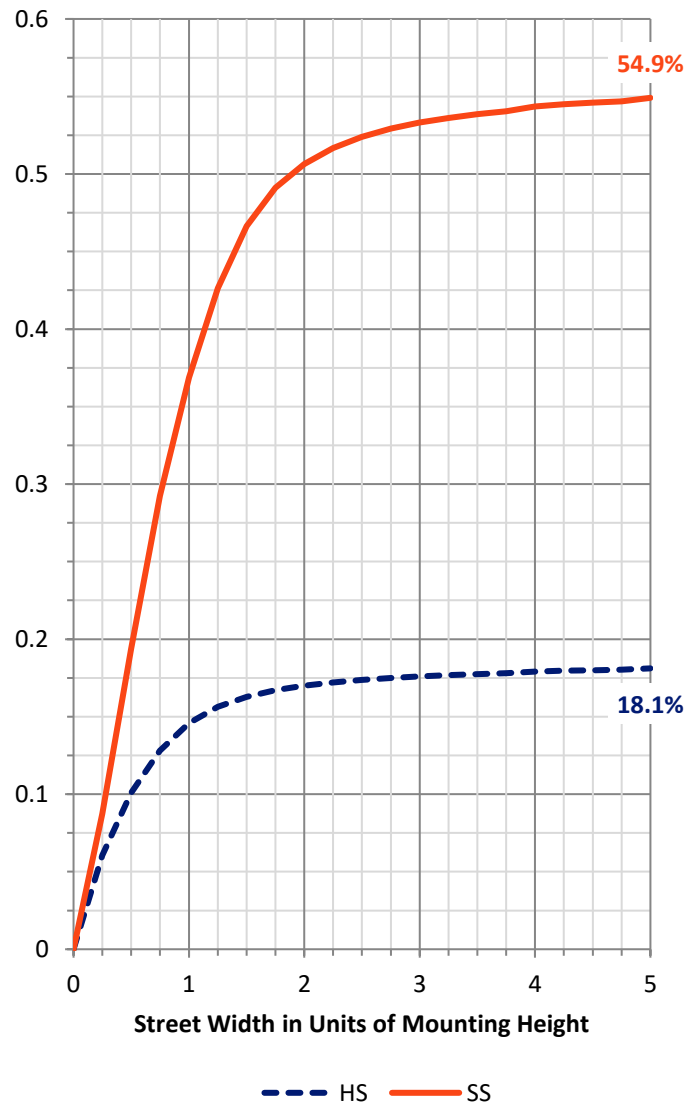
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7439.5	391.0	7830.5
	% Lamp	18.6	1.0	19.6
Street Side	Lumens	22307.2	776.1	23083.3
	% Lamp	55.8	1.9	57.7
Total	Lumens	29746.7	1167.1	30913.8
	% Lamp	74.4	2.9	77.3

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	500.5	1.6	1.3
10°-20°	1558.7	5.0	3.9
20°-30°	3028.9	9.8	7.6
30°-40°	4640.6	15.0	11.6
40°-50°	5396.0	17.5	13.5
50°-60°	5484.2	17.7	13.7
60°-70°	4832.0	15.6	12.1
70°-80°	3178.9	10.3	7.9
80°-90°	1126.9	3.6	2.8
90°-100°	579.4	1.9	1.4
100°-110°	355.7	1.2	0.9
110°-120°	181.4	0.6	0.5
120°-130°	62.2	0.2	0.2
130°-140°	9.8	0.0	0.0
140°-150°	0.1	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	29746.7	96.2	74.4
0°-180°	30913.8	100.0	77.3

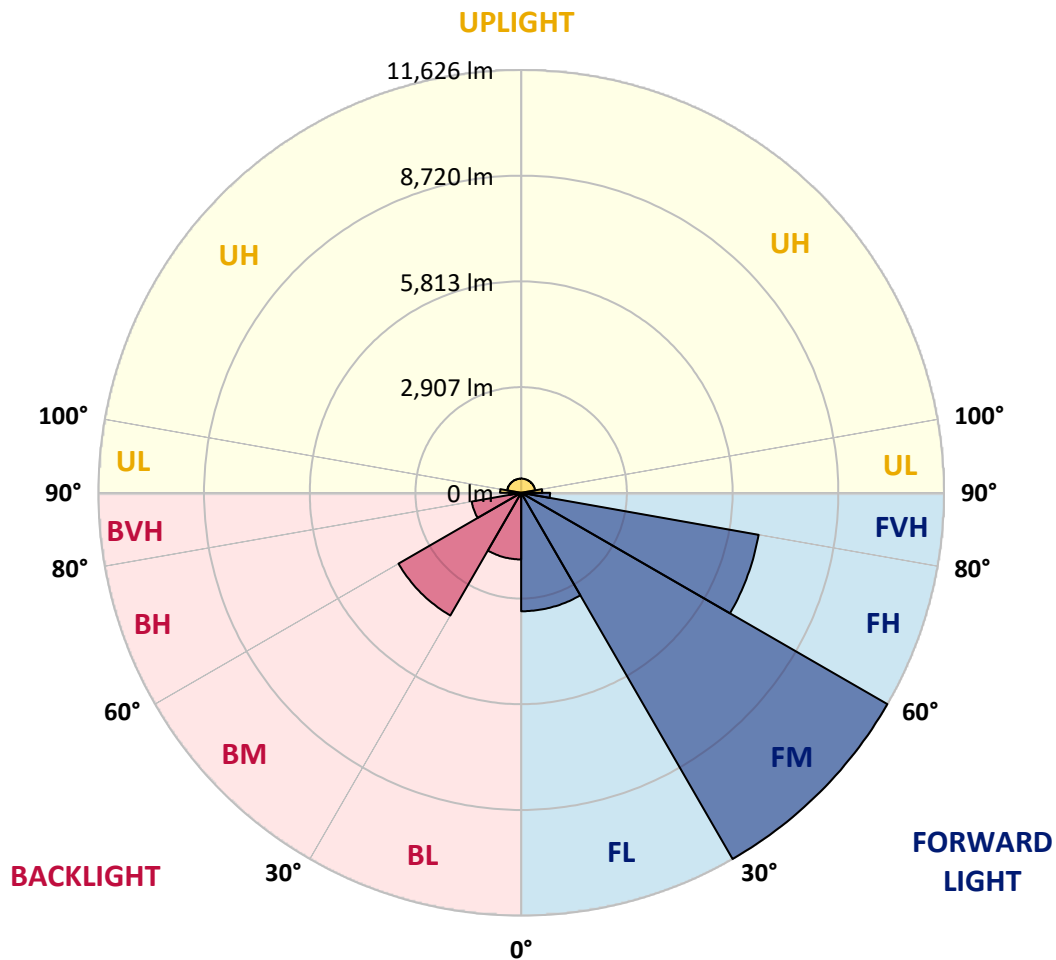


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3256.0	8.1			
FM (30°-60°)	11626.4	29.1			
FH (60°-80°)	6630.0	16.6			G3/7500
FVH (80°-90°)	794.8	2.0			G5
BL (0°-30°)	1832.1	4.6	B3/2500		
BM (30°-60°)	3894.4	9.7	B3/5000		
BH (60°-80°)	1380.9	3.5	B3/2500		G3/2500
BVH (80°-90°)	332.1	0.8			G3/500
UL (90°-100°)	579.4	1.4		U4/1000	
UH (100°-180°)	391.0	1.0		U3/500	
Trapped Light	9086.2	22.7			

BUG Rating: B3-U4-G5
 Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8
2.5°	5650.0	5641.1	5632.2	5605.6	5560.0	5514.4	5442.2	5397.8	5343.3	5307.8	5271.1
5°	5885.6	5875.6	5848.9	5794.4	5722.2	5632.2	5514.4	5397.8	5280.0	5198.9	5144.4
7.5°	6137.8	6173.3	6120.0	6020.0	5903.3	5776.7	5632.2	5478.9	5288.9	5126.7	5063.3
10°	6481.1	6507.8	6426.7	6282.2	6146.7	5993.3	5840.0	5668.9	5424.4	5154.4	5045.6
12.5°	6877.8	6860.0	6770.0	6597.8	6408.9	6245.6	6083.3	5866.7	5551.1	5207.8	5063.3
15°	7275.6	7275.6	7221.1	6995.6	6787.8	6597.8	6317.8	5984.4	5577.8	5225.6	5045.6
17.5°	7654.4	7672.2	7762.2	7554.4	7311.1	7013.3	6643.3	6291.1	5831.1	5334.4	5117.8
20°	8123.3	8213.3	8403.3	8241.1	7897.8	7645.6	7356.7	6860.0	6183.3	5524.4	5235.6
22.5°	8683.3	8791.1	9143.3	8990.0	8628.9	8457.8	8267.8	7582.2	6625.6	5758.9	5415.6
25°	9405.6	9541.1	9856.7	9567.8	9252.2	9414.4	9305.6	8565.6	7175.6	6092.2	5731.1
27.5°	10307.8	10406.7	10388.9	10027.8	9847.8	10362.2	10596.7	9802.2	7915.6	6534.4	6111.1
30°	10921.1	11030.0	10786.7	10515.6	10570.0	11192.2	11923.3	11021.1	8530.0	6995.6	6498.9
32.5°	10975.6	11021.1	10804.4	10993.3	11210.0	11968.9	12980.0	11400.0	8800.0	7392.2	6860.0
35°	10253.3	10262.2	10415.6	11408.9	11643.3	12492.2	13052.2	11120.0	8863.3	7437.8	6995.6
37.5°	9441.1	9405.6	9802.2	11616.7	12032.2	12582.2	12582.2	10848.9	8953.3	7698.9	7148.9
40°	8972.2	8917.8	9368.9	11445.6	12076.7	12275.6	12094.4	10795.6	9684.4	8357.8	7582.2
42.5°	9007.8	8935.6	9414.4	11047.8	11787.8	12176.7	11706.7	10660.0	10217.8	9035.6	8051.1
45°	9261.1	9107.8	9423.3	10316.7	11318.9	12185.6	11111.1	10100.0	10397.8	9730.0	8430.0
47.5°	8972.2	8900.0	9134.4	9666.7	10714.4	12013.3	10506.7	9955.6	11137.8	10605.6	8764.4
50°	8051.1	8042.2	8466.7	9261.1	10145.6	11634.4	10334.4	10406.7	11544.4	9811.1	7934.4
52.5°	7221.1	7293.3	7862.2	9287.8	9856.7	11652.2	10145.6	11047.8	11218.9	8935.6	7230.0
55°	6842.2	6904.4	7608.9	9486.7	10100.0	12185.6	10506.7	11417.8	11120.0	8123.3	6652.2
57.5°	5975.6	6056.7	6733.3	8755.6	9703.3	12744.4	11435.6	11941.1	11047.8	7418.9	6210.0
60°	4513.3	4531.1	5225.6	6941.1	8015.6	12790.0	12591.1	12952.2	11192.2	7112.2	6065.6
62.5°	3357.8	3421.1	3990.0	5235.6	6327.8	11165.6	13304.4	14171.1	11851.1	6995.6	5641.1
65°	2762.2	2797.8	3331.1	4404.4	5343.3	9324.4	13403.3	15154.4	12844.4	6065.6	4612.2
67.5°	2292.2	2355.6	2878.9	4161.1	4693.3	8042.2	12510.0	15760.0	13223.3	5505.6	3998.9
70°	1967.8	2031.1	2517.8	3998.9	4124.4	6706.7	10776.7	15822.2	13584.4	5514.4	3835.6
72.5°	1751.1	1786.7	2157.8	3393.3	3393.3	5207.8	8755.6	15281.1	12654.4	5280.0	3583.3
75°	1552.2	1570.0	1814.4	2455.6	2617.8	3845.6	6678.9	13133.3	9784.4	4485.6	3060.0
77.5°	1354.4	1363.3	1561.1	1805.6	2057.8	2861.1	4865.6	9215.6	6146.7	3421.1	2455.6
80°	1210.0	1227.8	1435.6	1480.0	1696.7	2211.1	3303.3	5307.8	3583.3	2445.6	1913.3
82.5°	1065.6	1101.1	1282.2	1272.2	1444.4	1742.2	2211.1	2961.1	2301.1	1687.8	1453.3
85°	956.7	993.3	1110.0	1092.2	1227.8	1354.4	1534.4	1832.2	1661.1	1164.4	1101.1
87.5°	884.4	893.3	965.6	956.7	1028.9	1083.3	1164.4	1282.2	1245.6	857.8	838.9
90°	776.7	794.4	830.0	838.9	875.6	893.3	938.9	965.6	956.7	695.6	676.7
95°	650.0	650.0	658.9	685.6	685.6	685.6	676.7	658.9	623.3	532.2	514.4
105°	468.9	478.9	487.8	496.7	478.9	460.0	433.3	378.9	352.2	352.2	343.3
115°	324.4	324.4	306.7	306.7	288.9	252.2	216.7	216.7	216.7	216.7	216.7
125°	107.8	107.8	90.0	72.2	45.6	54.4	72.2	90.0	90.0	90.0	90.0
135°	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
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	0.0	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	0.0	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°	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8	5307.8
2.5°	5253.3	4892.2	4937.8	4892.2	5100.0	5100.0	5054.4	5072.2	5054.4	5091.1
5°	5100.0	4738.9	4730.0	4721.1	4918.9	4892.2	4892.2	4892.2	4883.3	4874.4
7.5°	4982.2	4594.4	4566.7	4557.8	4756.7	4730.0	4765.6	4756.7	4774.4	4747.8
10°	4973.3	4494.4	4476.7	4423.3	4638.9	4638.9	4638.9	4648.9	4666.7	4675.6
12.5°	4946.7	4423.3	4377.8	4323.3	4522.2	4504.4	4494.4	4522.2	4522.2	4548.9
15°	4855.6	4351.1	4233.3	4206.7	4395.6	4377.8	4377.8	4404.4	4404.4	4423.3
17.5°	4901.1	4323.3	4170.0	4106.7	4296.7	4278.9	4278.9	4268.9	4332.2	4314.4
20°	5018.9	4368.9	4170.0	4062.2	4196.7	4152.2	4115.6	4143.3	4206.7	4187.8
22.5°	5163.3	4494.4	4251.1	4016.7	4088.9	3980.0	3953.3	4016.7	4052.2	4080.0
25°	5388.9	4638.9	4287.8	3962.2	3953.3	3800.0	3808.9	3907.8	3953.3	3971.1
27.5°	5704.4	4783.3	4432.2	3890.0	3817.8	3718.9	3773.3	3863.3	3944.4	3935.6
30°	6020.0	5000.0	4278.9	3754.4	3718.9	3637.8	3745.6	3881.1	3980.0	3971.1
32.5°	6282.2	5000.0	4134.4	3592.2	3610.0	3601.1	3710.0	3935.6	4088.9	4134.4
35°	6327.8	4955.6	4007.8	3412.2	3493.3	3528.9	3673.3	3935.6	4170.0	4224.4
37.5°	6562.2	5108.9	3773.3	3213.3	3331.1	3384.4	3583.3	3835.6	4106.7	4170.0
40°	6742.2	5163.3	3682.2	3068.9	3150.0	3186.7	3393.3	3601.1	3854.4	3917.8
42.5°	6823.3	4765.6	3610.0	2924.4	2906.7	2978.9	3176.7	3312.2	3484.4	3537.8
45°	6814.4	4522.2	3475.6	2734.4	2653.3	2744.4	2942.2	3014.4	3104.4	3158.9
47.5°	6770.0	4522.2	3403.3	2517.8	2401.1	2517.8	2725.6	2734.4	2753.3	2762.2
50°	6291.1	4504.4	3412.2	2311.1	2157.8	2274.4	2508.9	2482.2	2410.0	2418.9
52.5°	5822.2	4233.3	3248.9	2094.4	1950.0	2013.3	2265.6	2238.9	2103.3	2094.4
55°	5442.2	3935.6	3014.4	2013.3	1724.4	1751.1	1967.8	1976.7	1823.3	1805.6
57.5°	5253.3	3583.3	2744.4	1832.2	1534.4	1516.7	1661.1	1705.6	1580.0	1552.2
60°	5225.6	3195.6	2455.6	1670.0	1372.2	1335.6	1407.8	1444.4	1372.2	1335.6
62.5°	4846.7	2816.7	2138.9	1516.7	1227.8	1191.1	1210.0	1227.8	1173.3	1155.6
65°	3872.2	2383.3	1850.0	1354.4	1110.0	1065.6	1055.6	1065.6	1011.1	1011.1
67.5°	3213.3	2040.0	1561.1	1210.0	1011.1	956.7	947.8	930.0	884.4	884.4
70°	2915.6	1850.0	1326.7	1065.6	911.1	875.6	857.8	821.1	785.6	776.7
72.5°	2617.8	1678.9	1210.0	884.4	848.9	821.1	803.3	757.8	704.4	704.4
75°	2138.9	1416.7	1092.2	776.7	776.7	757.8	740.0	667.8	632.2	632.2
77.5°	1714.4	1127.8	947.8	704.4	695.6	685.6	650.0	595.6	551.1	541.1
80°	1407.8	930.0	830.0	650.0	650.0	641.1	613.3	541.1	523.3	505.6
82.5°	1146.7	794.4	740.0	595.6	604.4	586.7	568.9	496.7	468.9	468.9
85°	938.9	722.2	667.8	541.1	560.0	551.1	514.4	451.1	415.6	433.3
87.5°	757.8	650.0	613.3	496.7	523.3	505.6	468.9	406.7	378.9	361.1
90°	650.0	613.3	577.8	451.1	478.9	460.0	415.6	361.1	324.4	324.4
95°	514.4	415.6	505.6	378.9	396.7	361.1	324.4	271.1	243.3	252.2
105°	361.1	207.8	324.4	171.1	225.6	190.0	162.2	162.2	162.2	144.4
115°	216.7	190.0	162.2	54.4	54.4	35.6	63.3	54.4	26.7	0.0
125°	81.1	54.4	35.6	8.9	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	8.9	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
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)