

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: McGRAW-EDISON

Report Number: P298864

Luminaire Tested: **GLNA-AF-02-LED-E1-SLL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298864
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191289)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-02-LED-E1-SLL
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10667.4 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 113
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: 25 FT

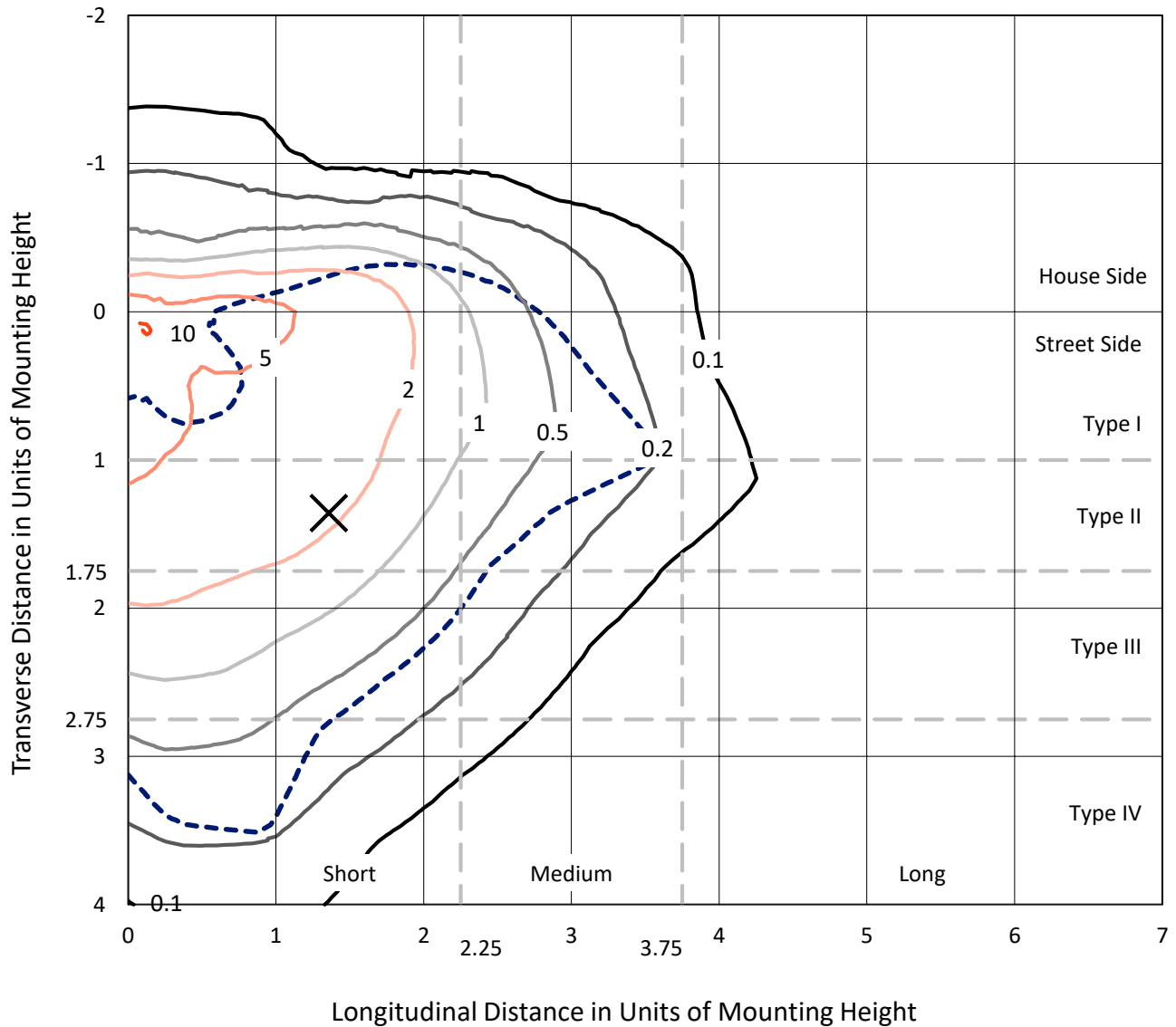


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

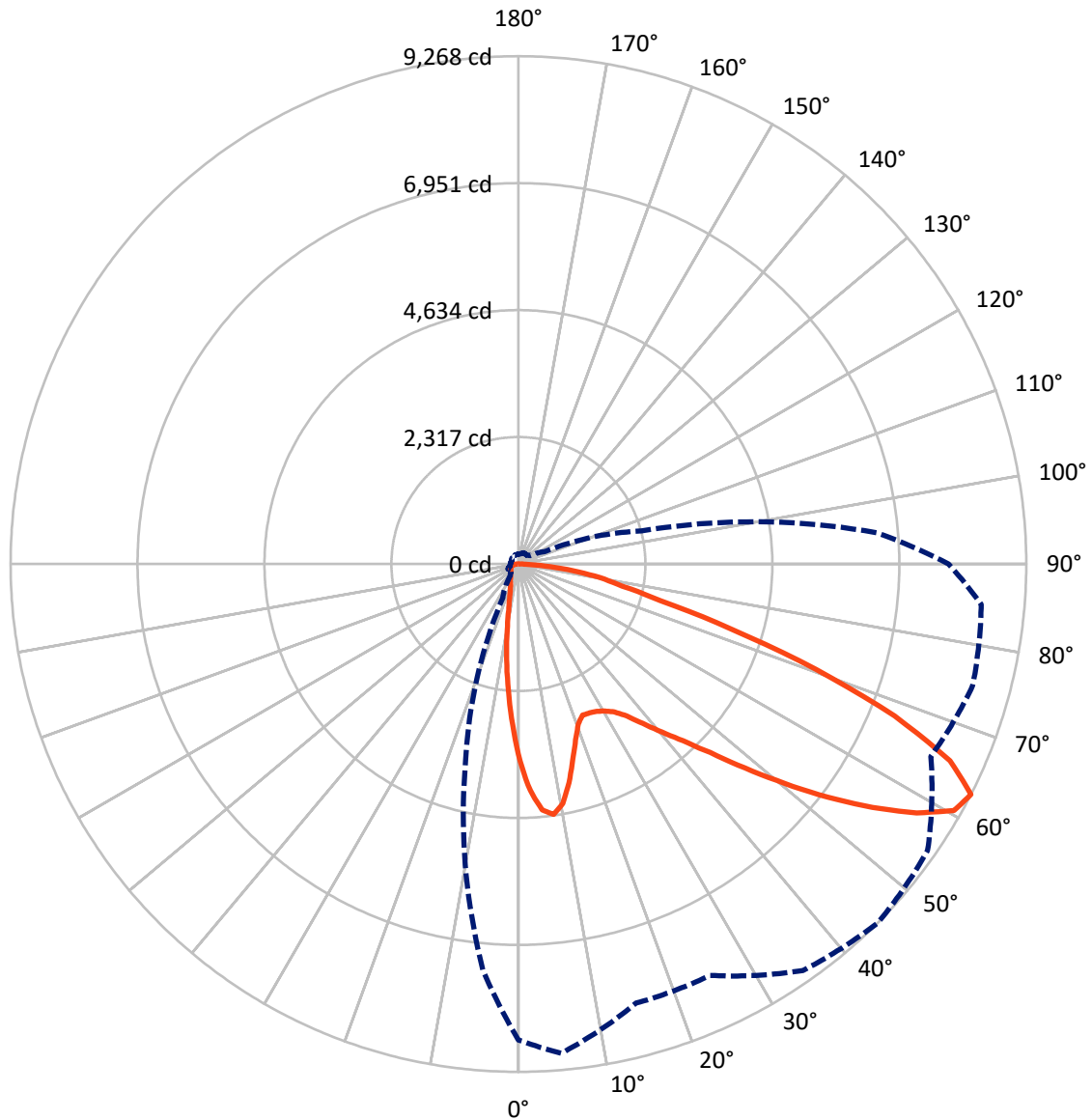


Based on 20 foot mounting height. Maximum calculated value = 10.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1765.3	0.0	1765.3
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	8902.1	0.0	8902.1
	% Fixture	83.5	0.0	83.5
Total	Lumens	10667.4	0.0	10667.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.4	2.5
10°-20°	481.1	4.5
20°-30°	701.4	6.6
30°-40°	1080.3	10.1
40°-50°	1589.9	14.9
50°-60°	2332.1	21.9
60°-70°	2606.9	24.4
70°-80°	1276.3	12.0
80°-90°	337.0	3.2
90°-100°	0.0	0.0
100°-110°	0.0	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°	10667.4	100.0
0°-180°	10667.4	100.0



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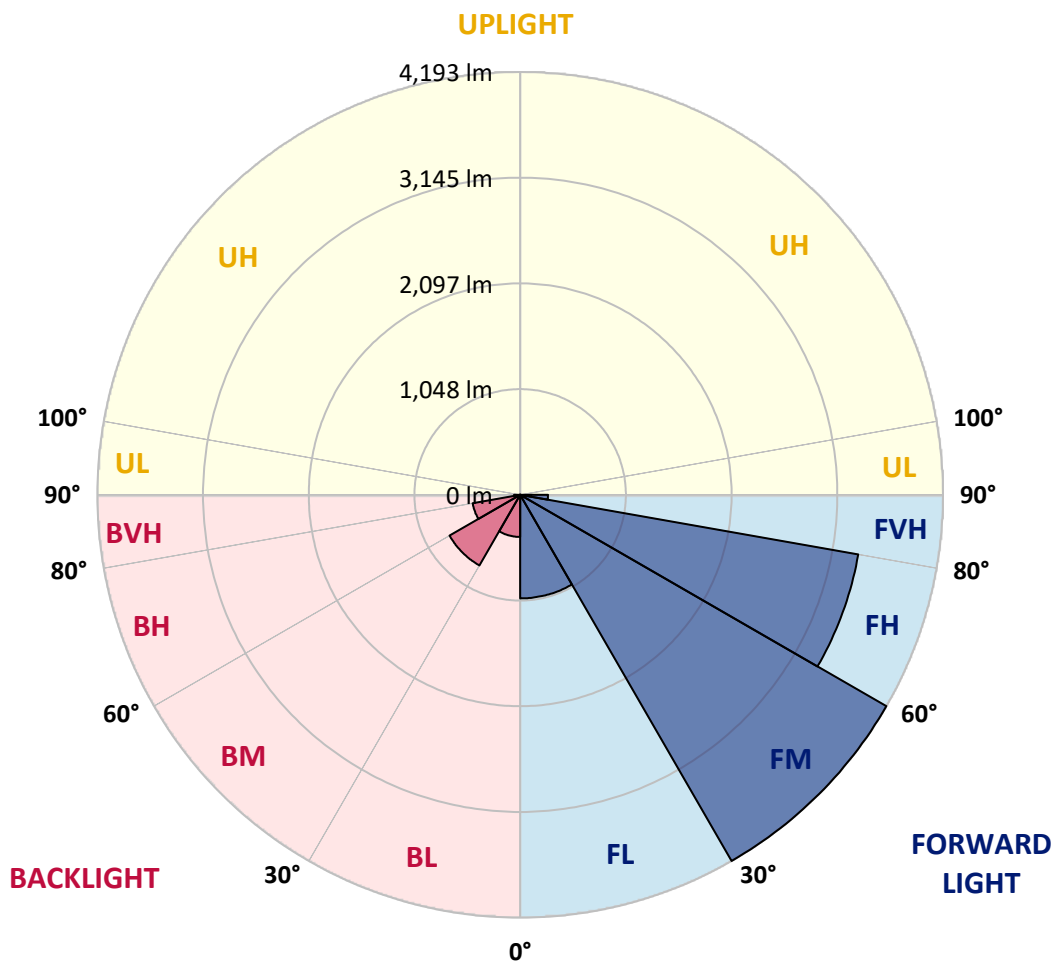
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1027.2	9.6			
FM	(30°-60°)	4193.4	39.3			
FH	(60°-80°)	3404.7	31.9			G2/5000
FVH	(80°-90°)	276.7	2.6			G3/500
BL	(0°-30°)	417.6	3.9	B1/500		
BM	(30°-60°)	808.9	7.6	B1/1000		
BH	(60°-80°)	478.6	4.5	B1/500		G1/500
BVH	(80°-90°)	60.2	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1
2.5°	3744.6	3804.6	3921.3	4008.5	4114.9	4139.4	4173.5	4140.0	4080.8	4002.2	3976.5
5°	3521.3	3649.2	3932.3	4181.7	4403.3	4506.5	4535.4	4450.1	4278.4	4052.6	3914.8
7.5°	3163.1	3344.9	3728.3	4095.5	4421.9	4615.0	4610.2	4412.6	4096.6	3728.8	3507.8
10°	2853.9	3061.6	3501.5	3912.0	4258.4	4445.5	4373.2	4120.8	3743.5	3320.1	3080.4
12.5°	2681.1	2884.6	3330.8	3742.9	4032.6	4097.2	4042.0	3794.5	3439.1	3011.2	2801.2
15°	2651.0	2874.7	3262.8	3598.2	3760.6	3704.5	3638.6	3527.8	3276.7	2911.4	2692.7
17.5°	2780.8	3027.0	3340.9	3497.3	3469.7	3371.7	3353.0	3365.4	3305.1	3022.2	2770.2
20°	3029.4	3324.9	3526.7	3449.9	3248.7	3113.8	3118.5	3306.8	3485.5	3303.2	3015.2
22.5°	3378.2	3715.5	3794.5	3475.1	3155.4	2995.4	3034.2	3339.1	3773.6	3713.8	3346.0
25°	3829.7	4137.1	4080.2	3566.4	3164.8	3010.0	3041.0	3450.5	4113.5	4124.2	3755.5
27.5°	4267.2	4552.3	4319.9	3687.9	3203.6	3044.7	3085.8	3625.6	4438.5	4569.8	4223.4
30°	4608.5	4806.8	4414.9	3798.7	3279.8	3112.0	3163.1	3792.2	4586.4	4870.6	4583.4
32.5°	4891.2	5033.6	4566.2	3935.9	3419.9	3218.1	3307.9	3994.6	4799.2	5156.9	4935.7
35°	5252.3	5292.8	4754.5	4089.0	3636.3	3402.9	3514.3	4192.7	5002.2	5445.9	5282.9
37.5°	5675.8	5623.7	4932.1	4298.4	3916.1	3691.9	3784.0	4410.3	5169.1	5773.7	5637.6
40°	6094.5	5968.8	5155.2	4623.1	4324.3	4032.6	4141.7	4642.6	5325.2	6102.1	5984.2
42.5°	6450.4	6264.5	5374.9	4980.3	4704.0	4408.6	4538.8	4876.5	5474.1	6382.3	6285.0
45°	6713.7	6482.6	5584.3	5323.3	5227.7	4908.1	4969.8	5144.4	5635.3	6616.4	6532.5
47.5°	6948.8	6701.9	5821.1	5669.4	5685.7	5557.8	5458.6	5456.4	5825.5	6807.6	6766.4
50°	7263.7	7006.3	6075.6	6025.7	6373.0	6287.9	6069.1	5820.5	6065.7	7024.6	7019.8
52.5°	7697.7	7488.5	6386.5	6409.9	7014.7	7070.3	6799.2	6258.2	6442.1	7422.6	7394.6
55°	8210.9	8088.7	6810.0	6851.5	7801.4	7841.4	7572.1	6805.1	6995.8	7999.2	7921.2
57.5°	8611.2	8585.5	7274.3	7381.7	8389.1	8568.6	8321.1	7438.6	7619.6	8484.6	8288.8
60°	8770.8	8895.6	7768.7	7916.4	8932.8	9131.3	8914.5	7994.8	8172.6	8685.9	8263.6
62.5°	8684.7	8963.6	8295.2	8282.9	9054.0	9268.0	9115.5	8304.6	8582.7	8478.2	7845.6
65°	8286.5	8719.2	8600.8	8188.4	8638.8	8656.4	8607.1	8166.2	8679.4	7822.0	7037.3
67.5°	7419.0	8041.9	8198.3	7379.4	7518.7	7404.5	7321.7	7408.5	8174.9	6838.6	5914.4
70°	6042.9	6980.0	7054.8	5902.2	5838.8	5761.9	5597.2	6073.9	7179.9	5604.8	4693.0
72.5°	4443.3	5428.4	5658.7	4328.8	4035.7	4051.3	3921.3	4577.3	5837.7	4163.4	3503.8
75°	3039.9	3930.6	4427.5	3020.5	2668.9	2675.2	2658.6	3243.4	4649.6	2896.2	2621.9
77.5°	2220.8	2808.2	3339.1	2030.6	1971.4	1935.0	1926.3	2269.3	3564.7	2102.9	2035.9
80°	1782.0	2074.8	2242.9	1407.4	1513.4	1510.5	1461.8	1560.4	2327.9	1538.1	1522.7
82.5°	1236.2	1594.5	1817.2	1103.0	1021.5	1004.4	1016.3	1162.2	1645.5	1051.4	999.8
85°	652.2	1059.0	1799.7	977.5	606.3	483.7	601.7	951.6	1425.6	557.2	487.7
87.5°	83.4	306.1	1191.5	390.1	239.3	128.9	285.7	535.9	915.5	113.6	99.2
90°	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°	185°
0°	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1
2.5°	3910.2	3832.2	3730.2	3635.5	3537.7	3440.2	3313.1	3233.3	3178.3	3167.6	3144.4
5°	3815.2	3556.0	3360.1	3190.7	3037.0	2819.8	2699.7	2600.0	2546.7	2541.5	2528.6
7.5°	3377.0	3019.3	2754.9	2515.1	2297.5	2122.2	1928.6	1838.5	1801.4	1810.2	1818.9
10°	2921.3	2521.5	2217.7	1972.5	1780.8	1633.1	1477.8	1372.9	1300.0	1285.3	1282.5
12.5°	2588.4	2149.8	1854.9	1681.7	1533.6	1394.4	1229.7	1105.8	1011.6	979.2	957.7
15°	2447.5	1968.0	1659.0	1472.5	1308.7	1132.3	979.2	849.6	763.0	734.8	719.0
17.5°	2477.6	1917.5	1524.0	1285.3	1076.1	891.8	699.0	588.0	535.9	522.5	522.5
20°	2634.8	1908.2	1412.5	1113.0	851.9	638.5	480.3	416.9	400.0	398.2	402.8
22.5°	2855.2	1941.1	1329.5	963.6	662.1	466.2	374.1	350.6	343.0	344.9	350.1
25°	3183.6	2051.9	1269.1	830.4	519.5	381.7	333.5	319.6	316.0	320.8	327.2
27.5°	3572.9	2162.7	1231.5	730.0	438.6	348.9	317.1	302.7	305.0	310.9	316.6
30°	3914.8	2253.7	1172.3	658.7	413.5	350.6	317.1	297.3	295.1	296.2	297.9
32.5°	4221.7	2315.2	1103.0	590.5	356.5	311.4	296.2	293.3	280.2	275.5	276.2
35°	4486.1	2315.2	1061.5	550.7	319.6	276.2	251.7	237.0	230.3	230.9	237.6
37.5°	4741.2	2268.7	1040.9	528.3	299.6	262.7	241.0	228.1	219.3	217.6	218.7
40°	4966.2	2201.4	1017.5	518.9	284.4	254.5	234.1	223.3	214.0	211.1	211.7
42.5°	5146.8	2146.7	991.6	506.7	274.9	248.6	229.2	219.9	209.4	206.4	205.8
45°	5342.1	2128.6	957.7	482.0	279.6	249.2	228.1	218.2	207.5	204.1	202.9
47.5°	5599.5	2185.6	922.5	452.7	289.7	252.2	229.8	218.2	206.9	204.1	202.9
50°	5923.7	2319.2	877.8	409.9	279.6	260.4	229.2	216.3	206.9	204.1	201.8
52.5°	6340.2	2499.8	819.3	360.7	273.7	280.2	228.1	212.8	204.1	200.1	195.9
55°	6846.2	2647.6	749.3	320.2	260.4	274.9	226.3	208.8	199.5	193.6	190.0
57.5°	7216.8	2700.9	659.8	293.9	241.6	266.1	223.9	203.5	193.6	188.8	184.3
60°	7143.5	2597.7	584.0	277.4	230.3	240.4	222.2	198.7	188.3	184.8	180.5
62.5°	6556.7	2327.9	535.3	269.7	223.3	219.3	223.9	194.2	183.7	179.9	178.8
65°	5676.4	1929.7	516.1	268.0	217.6	206.9	208.3	188.8	178.2	175.3	174.2
67.5°	4682.3	1557.5	499.1	273.7	210.0	198.2	192.5	181.8	172.8	170.0	167.7
70°	3692.5	1295.4	491.3	270.3	200.6	189.4	183.1	174.2	166.6	163.5	161.8
72.5°	2973.5	1094.2	487.1	266.7	188.3	177.6	171.7	164.1	155.9	154.8	153.1
75°	2516.4	860.2	446.4	255.7	174.2	163.5	159.5	152.5	144.3	144.3	143.2
77.5°	1941.1	622.1	371.2	226.3	159.5	147.7	144.3	139.0	129.6	131.4	130.8
80°	1433.8	405.9	290.3	187.7	141.4	130.2	128.3	123.2	113.1	115.6	115.6
82.5°	982.3	266.1	208.8	153.6	120.7	110.2	110.2	104.9	93.8	95.0	98.6
85°	493.2	183.1	155.9	119.0	93.8	88.5	88.5	84.5	73.3	73.9	78.6
87.5°	150.2	110.2	103.2	85.1	67.4	66.2	63.2	60.3	53.3	52.7	55.8
90°	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1
2.5°	3108.4	3074.9	3034.8	2945.5	2915.6	2913.7	2940.9	2912.5	2966.6	2943.8	2968.9
5°	2506.7	2474.1	2428.8	2315.2	2245.9	2198.9	2176.8	2111.1	2158.5	2123.9	2152.8
7.5°	1843.7	1851.3	1821.4	1754.6	1603.8	1528.2	1483.7	1443.7	1478.4	1474.7	1529.9
10°	1296.0	1316.4	1295.4	1228.0	1105.8	1064.3	1072.5	1088.3	1133.6	1156.8	1241.9
12.5°	933.0	931.8	918.3	858.0	777.6	782.2	815.7	843.1	884.8	909.6	996.2
15°	696.5	686.1	680.2	630.9	585.2	595.3	611.6	614.5	641.0	655.6	726.0
17.5°	526.5	531.9	538.2	503.1	468.5	462.0	449.3	433.3	441.1	443.9	479.0
20°	418.0	439.2	455.2	430.4	395.4	376.3	360.0	349.5	349.5	348.9	358.8
22.5°	365.3	380.5	397.7	380.5	348.9	332.4	323.0	314.9	313.7	313.7	323.0
25°	336.8	347.8	364.2	352.6	328.9	316.6	307.8	297.3	293.3	292.0	298.5
27.5°	322.5	327.2	335.4	324.8	305.0	299.1	296.8	287.4	281.9	279.1	285.7
30°	298.5	297.3	297.9	287.4	271.5	270.9	274.9	276.8	274.9	274.3	284.4
32.5°	276.2	273.7	273.2	263.8	249.2	245.8	249.2	252.8	256.8	262.7	274.3
35°	248.0	253.9	257.4	249.2	231.5	221.0	217.0	210.5	206.9	206.9	220.4
37.5°	225.8	239.3	244.6	237.0	217.6	202.9	195.9	194.7	195.3	197.6	210.5
40°	218.2	228.1	232.6	225.2	205.8	192.5	188.3	187.1	188.3	191.9	204.6
42.5°	213.4	220.4	219.9	210.5	194.7	185.4	183.1	181.8	183.1	186.6	200.6
45°	209.4	214.0	209.4	198.2	183.7	178.8	179.3	178.8	179.9	183.7	197.0
47.5°	205.8	207.5	201.8	190.6	175.3	174.2	176.5	178.2	179.3	182.6	196.5
50°	200.6	200.6	195.3	183.7	168.3	168.9	171.7	175.9	176.5	179.9	191.3
52.5°	194.2	193.6	190.0	178.8	162.4	164.1	164.1	168.9	170.0	174.2	186.0
55°	188.8	187.7	186.0	175.3	157.2	160.1	158.4	160.1	163.0	167.1	179.9
57.5°	184.3	181.8	181.8	172.3	153.1	154.2	150.2	152.5	155.9	159.5	172.8
60°	179.3	177.0	178.2	168.3	146.6	145.4	143.7	148.3	149.6	153.6	167.1
62.5°	174.2	172.3	172.8	163.5	142.0	139.0	139.0	143.2	143.7	149.6	162.4
65°	170.0	167.7	167.1	159.0	136.7	133.3	135.0	136.7	137.8	143.7	155.9
67.5°	166.0	161.2	161.2	154.8	130.8	127.2	130.8	130.2	132.1	137.3	147.2
70°	160.7	154.2	154.8	151.9	124.9	120.7	123.7	123.2	124.3	127.7	137.8
72.5°	152.5	147.2	148.3	147.2	119.0	113.1	114.2	114.2	114.2	117.3	127.7
75°	142.0	137.8	141.4	144.3	111.9	103.7	104.9	104.9	103.2	104.9	117.8
77.5°	128.9	126.6	138.4	134.4	103.7	93.8	93.8	92.7	89.3	91.6	105.5
80°	115.0	113.1	127.7	112.5	94.4	81.7	80.3	77.3	73.9	75.6	89.9
82.5°	100.3	98.6	107.4	86.2	81.7	67.4	64.5	59.2	55.8	57.5	70.2
85°	82.2	82.2	82.8	65.1	62.1	51.6	48.2	41.1	36.9	38.1	50.4
87.5°	58.6	60.3	55.8	44.5	36.9	28.7	26.5	22.3	18.7	21.7	26.5
90°	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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1	3604.1
2.5°	3098.0	3162.5	3235.8	3329.4	3410.0	3541.7	3668.5	3744.6
5°	2316.3	2423.7	2557.1	2729.2	2889.3	3129.6	3368.3	3521.3
7.5°	1657.7	1772.7	1917.0	2131.5	2358.0	2664.5	2980.1	3163.1
10°	1371.8	1489.6	1610.8	1755.7	1941.1	2274.6	2647.6	2853.9
12.5°	1134.8	1260.8	1391.6	1544.0	1715.7	2013.7	2443.5	2681.1
15°	868.4	1009.1	1163.3	1356.3	1571.4	1915.8	2393.0	2651.0
17.5°	595.3	752.5	941.7	1179.9	1443.1	1884.0	2483.5	2780.8
20°	409.9	524.3	726.6	1005.7	1322.4	1880.0	2656.9	3029.4
22.5°	343.0	394.1	541.8	845.6	1231.5	1930.5	2926.3	3378.2
25°	317.1	347.8	432.7	706.6	1165.2	2046.6	3296.9	3829.7
27.5°	302.1	329.5	392.9	615.8	1113.0	2181.4	3657.4	4267.2
30°	307.8	336.0	381.7	569.4	1042.0	2293.9	3977.6	4608.5
32.5°	277.4	289.7	327.2	528.3	991.0	2388.3	4257.8	4891.2
35°	236.4	257.9	292.0	509.0	992.2	2451.7	4563.4	5252.3
37.5°	225.2	246.9	271.5	502.0	1005.7	2519.3	4914.0	5675.8
40°	218.2	238.1	259.3	498.0	1018.6	2580.7	5257.8	6094.5
42.5°	213.4	231.5	257.9	483.7	1025.1	2636.0	5540.3	6450.4
45°	212.8	231.5	262.7	469.6	1035.0	2695.2	5777.3	6713.7
47.5°	213.4	239.3	253.9	452.7	1035.0	2794.1	6055.2	6948.8
50°	211.1	252.2	244.6	428.7	1011.0	2981.8	6436.3	7263.7
52.5°	210.0	250.5	226.3	391.8	969.3	3279.8	6924.8	7697.7
55°	206.9	241.6	213.4	336.8	920.8	3604.7	7447.9	8210.9
57.5°	204.1	214.0	206.4	288.6	845.6	3833.3	7807.9	8611.2
60°	228.6	187.1	200.6	265.0	745.3	3896.0	7794.0	8770.8
62.5°	211.7	175.3	193.0	259.8	675.0	3720.1	7433.8	8684.7
65°	166.0	167.7	185.4	274.9	656.2	3254.1	6795.8	8286.5
67.5°	151.9	160.1	177.6	294.5	658.1	2605.3	5842.4	7419.0
70°	143.2	151.9	168.9	304.4	662.7	1942.3	4619.0	6042.9
72.5°	133.3	140.9	159.0	306.1	632.0	1410.8	3560.2	4443.3
75°	121.3	128.3	144.9	266.7	523.7	978.7	2723.3	3039.9
77.5°	107.9	113.1	127.2	205.8	388.9	626.3	2044.1	2220.8
80°	92.1	95.0	106.8	150.8	266.1	391.8	1617.3	1782.0
82.5°	73.9	75.0	82.8	113.1	172.8	251.7	1083.2	1236.2
85°	52.2	52.2	56.9	82.2	117.8	159.5	588.0	652.2
87.5°	24.6	25.1	25.1	45.1	61.5	81.1	135.5	83.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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