

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: P299350

Luminaire Tested: **GLNA-AF-03-LED-E1-SLR**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299350
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194679)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-03-LED-E1-SLR
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Right OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15917.6 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 166
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

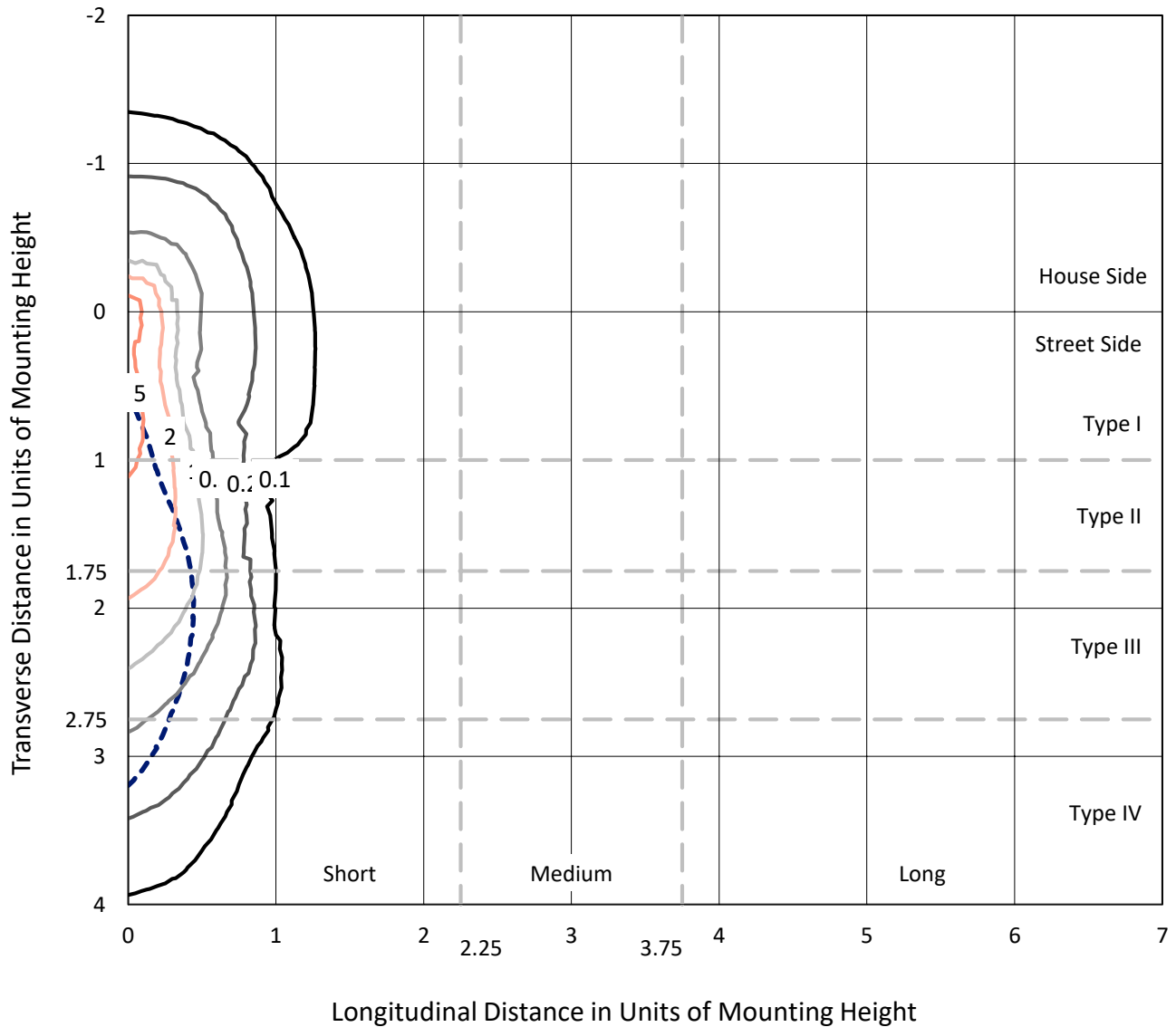


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

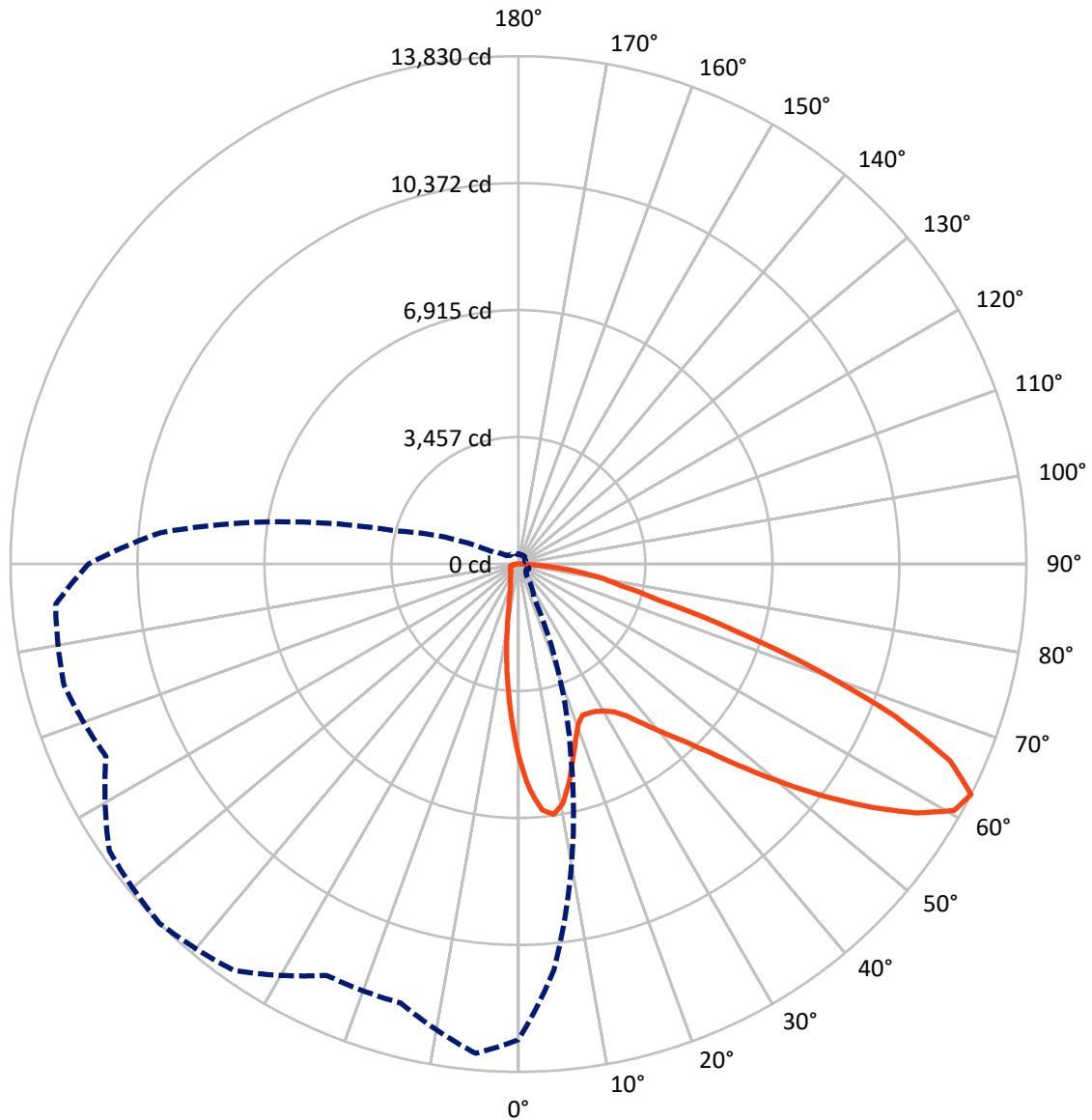


Based on 25 foot mounting height. Maximum calculated value = 8.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2634.2	0.0	2634.2
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	13283.5	0.0	13283.5
	% Fixture	83.5	0.0	83.5
Total	Lumens	15917.6	0.0	15917.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	391.5	2.5
10°-20°	717.9	4.5
20°-30°	1046.7	6.6
30°-40°	1612.0	10.1
40°-50°	2372.4	14.9
50°-60°	3479.9	21.9
60°-70°	3890.0	24.4
70°-80°	1904.5	12.0
80°-90°	502.8	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°	15917.6	100.0
0°-180°	15917.6	100.0



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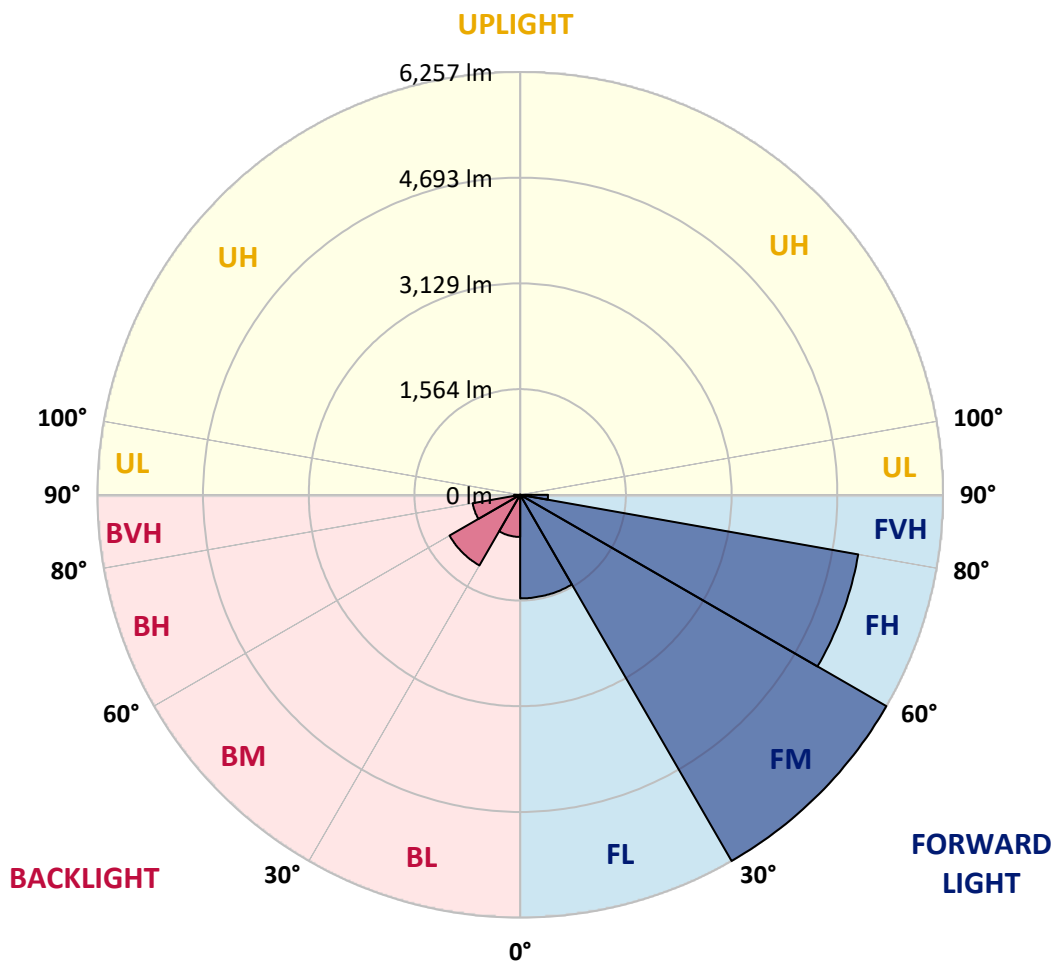
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1532.8	9.6			
FM	(30°-60°)	6257.4	39.3			
FH	(60°-80°)	5080.3	31.9			G3/7500
FVH	(80°-90°)	412.9	2.6			G3/500
BL	(0°-30°)	623.2	3.9	B2/1000		
BM	(30°-60°)	1206.9	7.6	B2/2500		
BH	(60°-80°)	714.1	4.5	B2/1000		G2/1000
BVH	(80°-90°)	89.9	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9
2.5°	5587.7	5474.1	5284.9	5088.1	4968.4	4828.3	4718.9	4622.7	4430.1	4392.5	4426.7
5°	5254.5	5026.1	4669.9	4311.2	4072.2	3815.8	3616.4	3456.4	3212.1	3169.2	3220.9
7.5°	4719.9	4446.8	3976.1	3518.4	3180.6	2860.3	2645.3	2473.6	2282.9	2200.8	2205.8
10°	4258.7	3950.7	3394.1	2896.4	2619.8	2403.7	2222.5	2046.6	1853.2	1726.3	1691.4
12.5°	4000.5	3646.3	3004.7	2560.2	2303.8	2076.5	1881.3	1693.2	1486.6	1357.1	1320.5
15°	3956.0	3570.8	2858.8	2345.1	2023.8	1736.1	1505.9	1295.9	1083.2	978.3	956.3
17.5°	4149.3	3705.6	2811.3	2153.3	1760.5	1405.3	1122.6	888.2	715.0	662.5	658.0
20°	4520.2	3964.7	2805.2	1973.2	1500.6	1084.2	782.2	611.6	535.6	520.5	521.6
22.5°	5041.0	4366.3	2880.5	1837.6	1261.7	808.5	588.1	511.8	482.1	468.1	468.1
25°	5714.6	4919.4	3053.7	1738.8	1054.3	645.8	518.9	473.4	445.3	435.8	437.6
27.5°	6367.6	5457.4	3255.0	1660.9	918.7	586.2	491.6	450.6	426.2	416.4	420.9
30°	6876.7	5935.3	3423.0	1554.9	849.5	569.5	501.4	459.3	424.4	409.5	410.3
32.5°	7298.4	6353.5	3563.9	1478.7	788.3	488.2	432.3	413.8	409.5	392.0	383.3
35°	7837.5	6809.4	3658.5	1480.5	759.5	435.8	384.9	352.6	329.0	308.9	308.9
37.5°	8469.3	7332.6	3759.1	1500.6	749.1	405.0	368.5	335.9	314.2	294.8	291.4
40°	9093.9	7845.4	3851.1	1520.0	742.8	386.7	355.2	325.6	305.4	286.1	280.8
42.5°	9625.3	8267.1	3933.2	1529.5	721.8	384.9	345.7	318.4	299.3	278.1	273.1
45°	10018.1	8620.5	4021.7	1544.3	700.9	392.0	345.7	317.6	294.0	273.9	268.6
47.5°	10368.8	9035.3	4169.5	1544.3	675.5	378.8	357.1	318.4	293.2	272.0	267.8
50°	10838.8	9604.1	4449.5	1508.6	639.7	364.8	376.2	315.0	285.3	268.6	263.3
52.5°	11486.2	10333.1	4894.0	1446.3	584.6	337.7	373.5	313.4	277.3	259.9	253.8
55°	12252.0	11113.5	5378.7	1373.8	502.2	318.4	360.5	308.9	268.6	249.3	243.2
57.5°	12849.6	11650.7	5719.9	1261.7	430.5	308.1	319.5	304.6	258.0	237.9	232.8
60°	13087.5	11629.7	5813.7	1112.0	395.5	299.3	279.2	341.2	249.3	229.1	223.0
62.5°	12959.0	11092.5	5551.2	1007.1	387.5	287.9	261.7	315.8	242.4	223.0	214.3
65°	12364.8	10140.5	4855.5	979.1	410.3	276.6	250.3	247.7	232.8	214.3	205.6
67.5°	11070.5	8717.7	3887.6	981.7	439.2	265.2	238.9	226.8	219.6	204.8	196.8
70°	9017.1	6892.6	2898.0	988.9	454.0	251.9	226.8	213.5	205.6	190.7	185.4
72.5°	6630.1	5312.2	2105.4	943.3	456.7	237.1	210.1	198.7	190.7	175.1	170.6
75°	4536.1	4063.5	1460.4	781.4	398.1	216.2	191.5	181.2	175.9	156.6	153.9
77.5°	3313.6	3050.3	934.6	580.1	307.0	189.9	169.0	161.1	157.6	136.4	133.0
80°	2659.3	2413.2	584.6	397.3	224.9	159.2	141.7	137.5	133.8	112.8	110.2
82.5°	1844.5	1616.1	375.4	258.0	169.0	123.4	112.1	110.2	104.9	85.8	83.2
85°	973.0	877.6	237.9	175.9	122.4	84.8	77.9	77.9	75.2	57.0	55.1
87.5°	124.2	202.1	120.8	91.9	67.3	37.6	37.6	36.8	39.5	32.3	28.1
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°	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9
2.5°	4346.2	4388.3	4348.0	4350.7	4395.2	4528.1	4588.5	4638.3	4691.8	4726.8	4742.4
5°	3150.1	3248.2	3281.3	3351.2	3454.5	3624.3	3691.6	3740.6	3773.2	3792.3	3800.2
7.5°	2154.4	2213.7	2280.2	2393.1	2618.0	2717.8	2762.3	2750.9	2714.4	2701.1	2688.2
10°	1624.1	1600.5	1588.1	1650.3	1832.3	1932.9	1964.5	1933.7	1913.6	1918.1	1939.8
12.5°	1258.3	1217.2	1167.4	1160.2	1280.2	1370.3	1390.4	1392.0	1428.8	1461.2	1509.4
15°	917.1	912.6	888.2	873.4	941.4	1015.1	1023.8	1039.5	1072.8	1096.4	1138.3
17.5°	646.6	670.2	689.5	699.1	750.7	803.2	793.6	785.7	779.6	779.6	799.7
20°	521.6	537.2	561.8	589.7	642.4	678.9	655.4	623.8	601.0	594.2	596.8
22.5°	469.9	482.1	496.2	520.5	567.9	593.4	567.9	545.2	522.4	514.4	511.8
25°	443.7	459.3	472.6	490.9	525.8	543.3	518.9	502.2	488.2	478.7	471.5
27.5°	428.9	442.6	446.3	455.1	484.8	500.4	488.2	481.3	472.6	463.8	455.1
30°	413.0	410.3	404.2	405.0	428.9	444.5	443.7	445.3	444.5	441.8	440.3
32.5°	377.2	371.9	366.6	371.9	393.6	407.7	408.7	412.2	412.2	411.4	418.3
35°	314.2	323.7	329.8	345.7	371.9	384.1	378.8	370.1	354.4	344.6	343.8
37.5°	290.6	292.2	302.8	324.5	353.6	364.8	357.1	336.9	326.4	324.5	327.1
40°	279.2	280.8	286.9	307.0	335.9	347.3	340.4	325.6	315.8	315.0	319.5
42.5°	271.3	273.1	276.6	290.6	314.2	328.2	329.0	318.4	307.0	308.1	312.3
45°	266.8	267.8	266.8	273.9	295.6	312.3	319.5	312.3	302.8	304.6	309.7
47.5°	266.0	263.3	259.9	261.7	284.5	300.9	309.7	307.0	302.8	304.6	308.9
50°	262.5	256.4	251.9	251.1	273.9	291.4	299.3	299.3	300.9	304.6	308.9
52.5°	251.9	245.0	245.0	242.4	266.8	283.4	288.7	289.5	292.2	298.3	304.6
55°	238.9	236.3	238.9	234.4	261.7	277.3	280.0	281.8	283.4	288.7	297.5
57.5°	227.5	224.1	230.2	228.3	257.2	271.3	271.3	274.7	274.7	281.8	288.7
60°	221.5	214.3	216.9	218.8	251.1	266.0	264.4	267.8	269.4	275.8	280.8
62.5°	213.5	207.4	207.4	211.7	244.2	258.0	257.2	259.9	266.8	268.6	273.9
65°	204.0	201.3	198.7	204.0	237.1	249.3	250.3	253.8	259.9	261.7	266.0
67.5°	194.2	195.2	189.9	195.2	231.0	240.5	240.5	247.7	250.3	253.8	258.0
70°	183.8	184.6	180.1	186.5	226.8	231.0	230.2	239.7	241.6	244.2	248.5
72.5°	170.6	170.6	169.0	177.7	219.6	221.5	219.6	227.5	228.3	231.0	232.8
75°	156.6	156.6	155.0	167.1	215.4	210.9	205.6	211.7	213.5	215.4	215.4
77.5°	138.3	140.1	140.1	155.0	200.3	206.6	188.9	192.6	195.2	196.0	193.4
80°	115.5	120.0	121.6	140.9	167.9	190.7	169.0	171.4	172.4	172.4	169.0
82.5°	88.5	96.2	100.7	121.6	128.7	160.0	147.0	149.7	147.0	141.7	140.1
85°	61.2	71.8	77.1	92.7	97.2	123.4	122.4	122.4	117.3	110.2	109.4
87.5°	33.4	39.5	42.9	55.1	66.5	83.2	90.1	87.4	83.2	78.7	79.7
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°	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9
2.5°	4824.8	4943.8	5133.7	5278.9	5425.1	5566.0	5718.3	5834.6	5933.4	5972.1	6089.2
5°	3879.9	4028.5	4207.9	4531.6	4761.0	5013.7	5306.1	5692.9	5841.5	6047.3	6384.0
7.5°	2743.3	2877.8	3166.6	3428.3	3753.0	4110.9	4505.4	5039.1	5234.3	5564.1	6112.7
10°	2048.4	2205.0	2436.8	2657.4	2943.5	3309.3	3762.6	4359.4	4596.5	4954.4	5586.1
12.5°	1650.3	1834.9	2080.8	2288.2	2509.6	2767.6	3207.9	3862.2	4180.1	4493.2	5131.8
15°	1267.8	1461.2	1689.8	1953.1	2197.0	2475.5	2936.6	3652.4	4017.9	4344.6	4889.5
17.5°	877.6	1042.9	1330.8	1605.5	1918.1	2274.1	2861.4	3696.9	4133.4	4509.9	4931.6
20°	622.2	716.5	952.8	1271.5	1660.9	2107.8	2847.4	3931.3	4499.3	4928.9	5201.0
22.5°	523.2	558.1	695.6	987.8	1437.6	1983.5	2896.4	4260.3	4992.8	5541.4	5630.6
25°	476.8	498.0	569.5	775.4	1238.9	1893.5	3061.7	4750.4	5603.6	6154.1	6138.2
27.5°	451.4	473.4	520.5	654.6	1089.5	1837.6	3227.0	5331.6	6301.9	6819.0	6622.9
30°	443.7	473.4	523.2	616.9	982.8	1749.1	3362.6	5841.5	6839.1	7268.0	6843.6
32.5°	437.6	441.8	464.6	531.9	881.0	1645.8	3454.5	6299.2	7364.9	7695.0	7161.2
35°	353.6	375.4	412.2	476.8	821.7	1583.8	3454.5	6693.9	7883.0	8126.2	7464.0
37.5°	340.4	359.7	392.0	447.1	788.3	1553.1	3385.4	7074.6	8412.3	8615.5	7713.2
40°	333.5	349.1	379.9	424.4	774.3	1518.1	3284.7	7410.5	8929.4	9105.3	7946.1
42.5°	328.2	342.2	371.1	410.3	756.0	1479.7	3203.4	7679.9	9378.4	9523.5	8168.3
45°	325.6	340.4	371.9	417.5	719.2	1428.8	3176.4	7971.3	9747.6	9872.7	8408.9
47.5°	325.6	343.0	376.2	432.3	675.5	1376.4	3261.1	8355.6	10096.8	10158.0	8692.3
50°	322.9	342.2	388.6	417.5	611.6	1309.9	3460.6	8839.3	10474.8	10481.7	9051.2
52.5°	317.6	340.4	418.3	408.7	538.0	1222.5	3730.3	9460.8	11034.0	11075.8	9612.8
55°	311.5	337.7	410.3	388.6	477.9	1118.4	3950.7	10215.7	11819.7	11936.0	10439.0
57.5°	303.6	334.3	397.3	360.5	438.4	984.4	4030.4	10768.8	12368.3	12660.4	11369.9
60°	296.7	331.6	358.7	343.8	413.8	871.5	3876.2	10659.4	12330.6	12960.6	12195.0
62.5°	289.5	334.3	327.1	333.5	402.4	798.9	3473.8	9783.4	11706.8	12650.9	12806.7
65°	281.8	310.7	308.9	324.5	400.0	770.1	2879.7	8470.1	10501.0	11671.9	12951.0
67.5°	271.3	286.9	295.6	313.4	408.7	744.6	2323.9	6986.9	8825.3	10204.3	12198.5
70°	259.9	273.1	282.6	299.3	403.4	733.2	1932.9	5509.8	7002.8	8363.3	10713.7
72.5°	245.0	256.4	265.2	280.8	398.1	727.1	1632.8	4437.3	5228.3	6212.6	8710.8
75°	227.5	237.9	244.2	259.9	381.5	665.9	1283.7	3754.6	3912.3	4321.8	6937.9
77.5°	207.4	215.4	220.4	237.9	337.7	553.9	928.5	2896.4	3038.1	3137.7	5319.1
80°	183.8	191.5	194.2	210.9	280.0	433.1	605.6	2139.3	2272.3	2295.1	3473.8
82.5°	156.6	164.5	164.5	180.1	229.1	311.5	397.3	1465.7	1491.9	1569.0	2455.3
85°	126.1	132.2	132.2	140.1	177.7	232.8	273.1	735.9	727.9	831.2	2127.1
87.5°	90.1	94.6	98.8	100.7	126.9	153.9	164.5	224.1	147.8	169.8	1365.8
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9	5377.9
2.5°	6177.6	6227.4	6176.6	6140.0	5981.6	5851.3	5677.0	5587.7
5°	6640.4	6767.3	6724.4	6570.5	6239.6	5867.7	5445.2	5254.5
7.5°	6584.5	6879.4	6886.2	6598.6	6111.2	5563.3	4991.2	4719.9
10°	6148.8	6525.7	6633.5	6354.3	5837.3	5224.8	4568.4	4258.7
12.5°	5662.2	6031.4	6113.8	6017.4	5585.3	4970.0	4304.3	4000.5
15°	5264.0	5429.6	5527.3	5611.6	5369.2	4868.5	4289.2	3956.0
17.5°	5021.6	5003.4	5031.4	5177.4	5218.5	4984.8	4516.7	4149.3
20°	4934.2	4653.4	4646.3	4847.6	5147.7	5262.4	4961.2	4520.2
22.5°	4982.4	4527.3	4469.6	4708.5	5185.3	5662.2	5544.0	5041.0
25°	5148.5	4537.9	4491.3	4722.6	5321.8	6088.4	6173.1	5714.6
27.5°	5410.2	4604.4	4543.0	4780.3	5503.0	6446.2	6792.7	6367.6
30°	5658.7	4719.9	4643.6	4894.0	5668.2	6588.0	7172.6	6876.7
32.5°	5960.7	4936.1	4802.0	5103.0	5873.0	6813.7	7511.1	7298.4
35°	6256.3	5243.9	5077.8	5425.9	6101.4	7094.7	7897.9	7837.5
37.5°	6581.1	5646.5	5509.0	5843.3	6413.9	7359.6	8391.4	8469.3
40°	6927.6	6180.3	6017.4	6452.3	6898.7	7692.3	8906.9	9093.9
42.5°	7276.7	6772.6	6578.4	7019.2	7431.4	8020.3	9347.7	9625.3
45°	7676.4	7415.8	7323.8	7800.7	7943.4	8332.8	9673.2	10018.1
47.5°	8142.1	8145.6	8293.4	8484.1	8459.7	8686.2	10000.6	10368.8
50°	8685.4	9056.3	9382.9	9509.5	8991.6	9066.1	10454.7	10838.8
52.5°	9338.1	10145.8	10550.0	10466.8	9564.9	9529.6	11173.8	11486.2
55°	10154.5	11299.1	11700.7	11641.1	10223.7	10161.4	12070.0	12252.0
57.5°	11099.4	12416.5	12785.7	12517.9	11014.6	10854.6	12811.2	12849.6
60°	11929.9	13302.0	13625.7	13329.0	11812.8	11592.1	13273.9	13087.5
62.5°	12391.8	13602.2	13829.7	13510.2	12359.5	12377.8	13375.4	12959.0
65°	12185.5	12843.5	12916.9	12890.6	12218.6	12833.7	13010.6	12364.8
67.5°	11054.9	10925.4	11048.8	11219.4	11011.2	12233.4	11999.8	11070.5
70°	9063.4	8351.9	8598.0	8712.4	8807.0	10527.2	10415.2	9017.1
72.5°	6830.3	5851.3	6045.5	6021.9	6459.2	8443.8	8100.0	6630.1
75°	4839.7	3967.3	3991.7	3982.2	4507.2	6606.2	5865.3	4536.1
77.5°	3386.2	2874.4	2887.6	2941.7	3030.1	4982.4	4190.4	3313.6
80°	2328.4	2181.4	2254.0	2258.5	2100.1	3347.0	3095.8	2659.3
82.5°	1734.3	1516.3	1498.8	1524.2	1645.8	2711.7	2379.0	1844.5
85°	1420.1	897.7	721.8	904.9	1458.5	2685.5	1580.4	973.0
87.5°	799.7	426.2	192.6	357.1	582.0	1778.0	456.7	124.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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