

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: P301668

Luminaire Tested: **GLNA-AF-09-LED-E1-T2R-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301668  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-09-LED-E1-T2R-7027-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 38775 lumens  
Efficiency: N/A  
Efficacy: 103.7 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B3 - U0 - G4

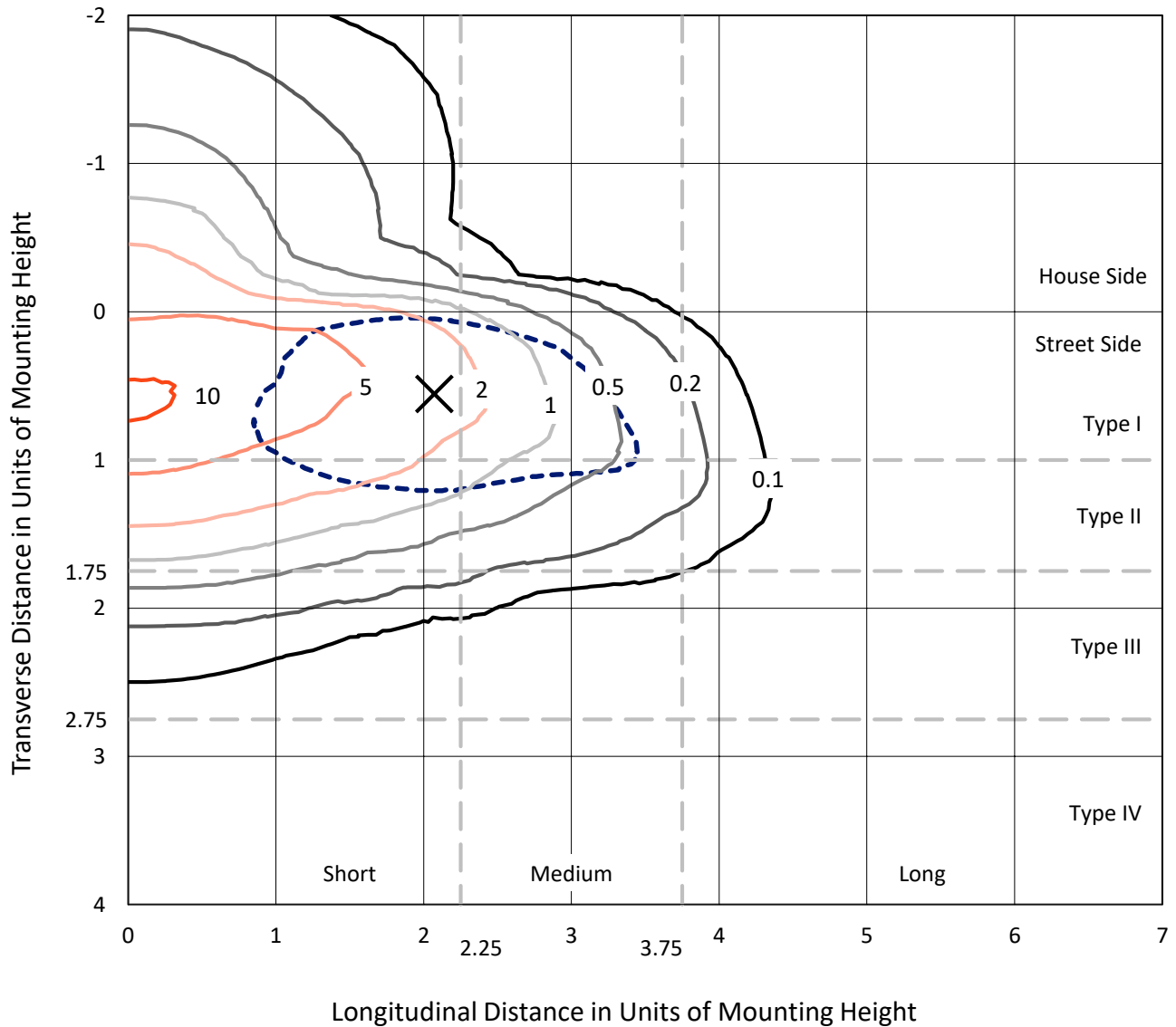
Input Watts (W): 374  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

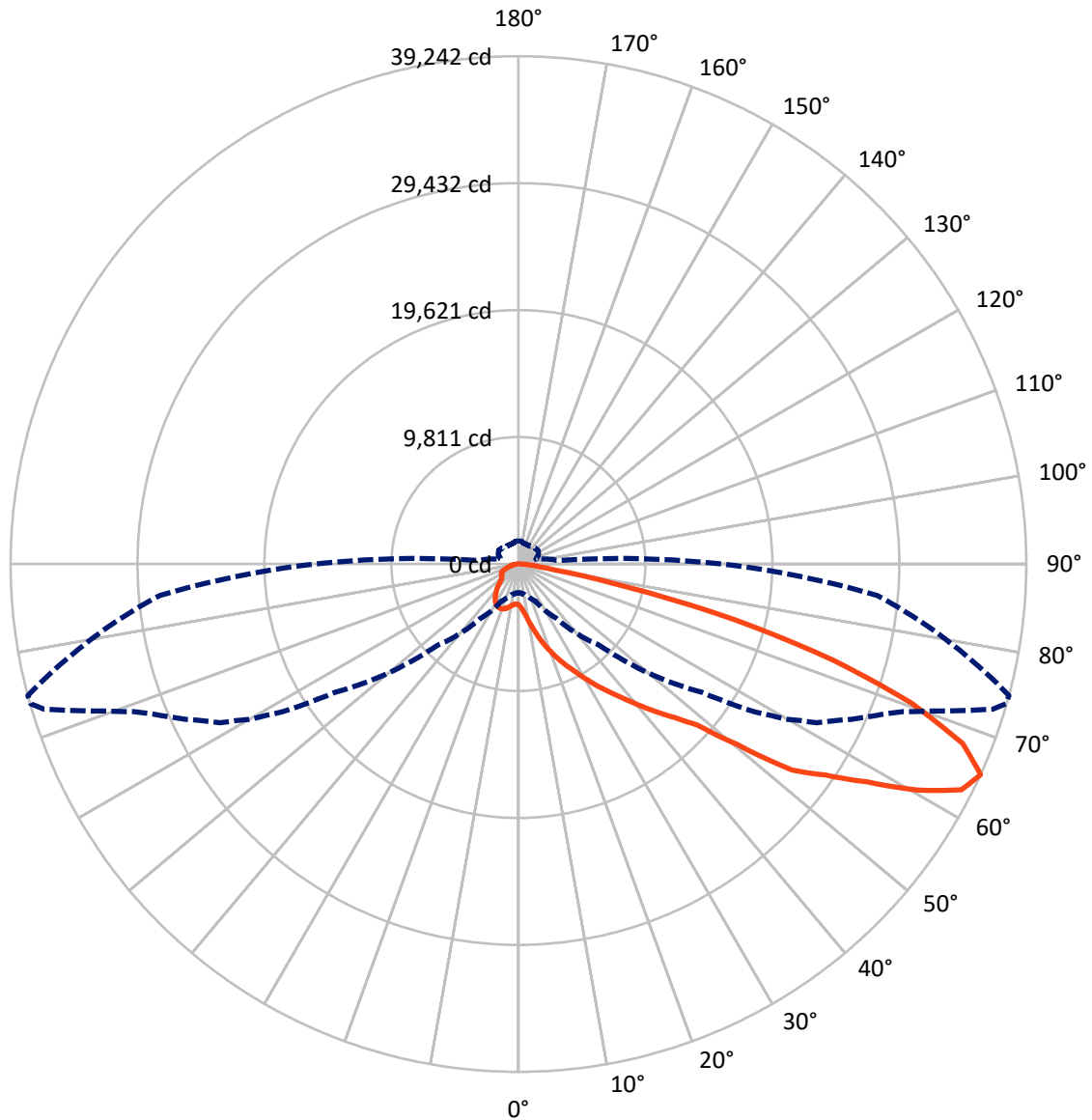
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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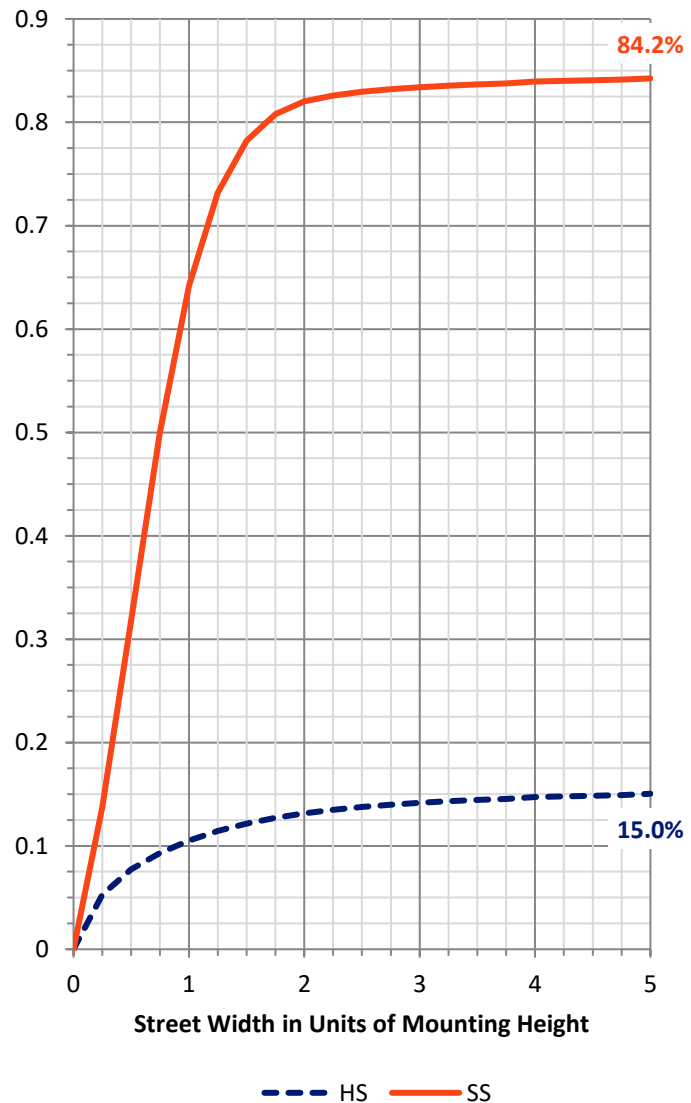
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5978.2	0.0	5978.2
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	32796.8	0.0	32796.8
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	38775.0	0.0	38775.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	389.5	1.0
10°-20°	1521.9	3.9
20°-30°	3122.4	8.1
30°-40°	5253.2	13.5
40°-50°	7258.5	18.7
50°-60°	9060.7	23.4
60°-70°	8153.7	21.0
70°-80°	3418.0	8.8
80°-90°	597.2	1.5
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°	38775.0	100.0
0°-180°	38775.0	100.0

**Coefficient of Utilization**



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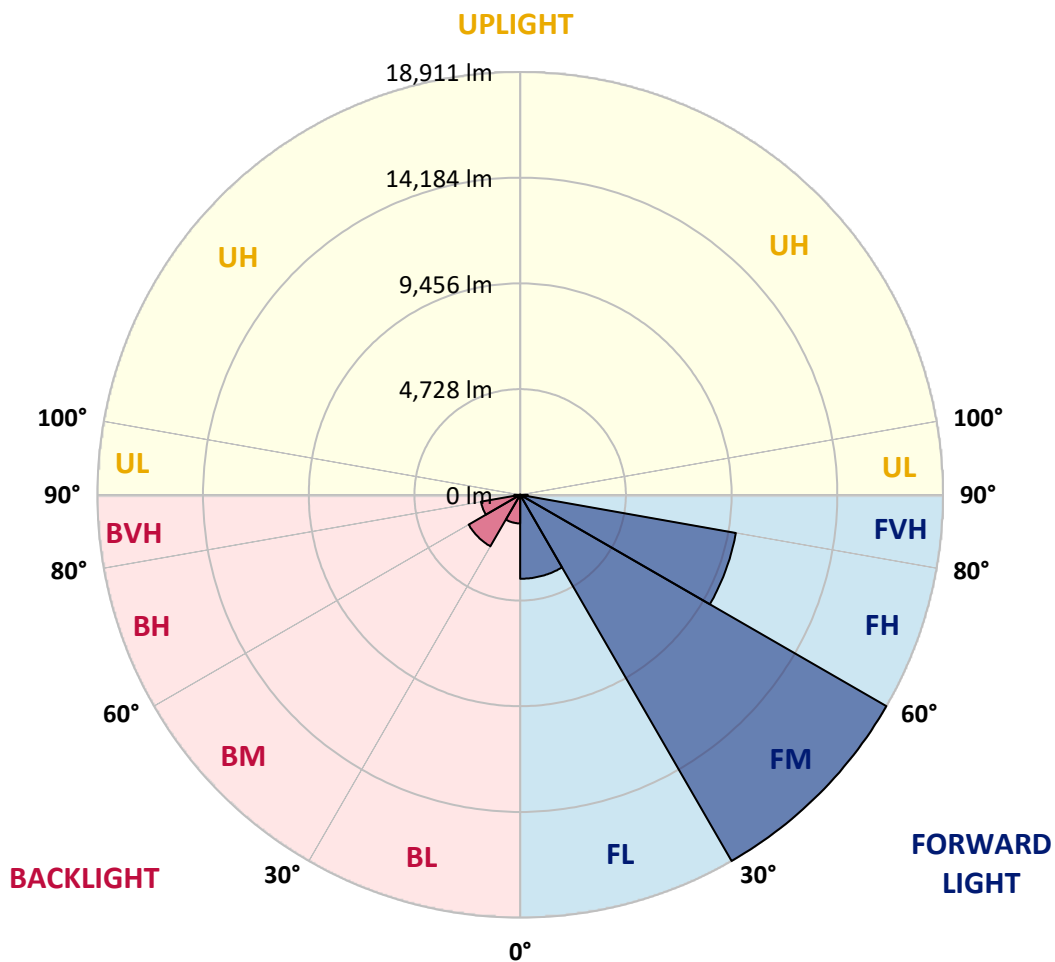
CATALOG NUMBER: GLNA-AF-09-LED-E1-T2R-7027-800

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3755.2	9.7			
FM	(30°-60°)	18911.5	48.8			
FH	(60°-80°)	9794.4	25.3			G4/12000
FVH	(80°-90°)	335.6	0.9			G3/500
BL	(0°-30°)	1278.5	3.3	B3/2500		
BM	(30°-60°)	2661.0	6.9	B3/5000		
BH	(60°-80°)	1777.2	4.6	B3/2500		G3/2500
BVH	(80°-90°)	261.5	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2
2.5°	4001.1	3957.0	3967.9	3894.4	3804.5	3686.9	3556.8	3555.2	3556.8	3543.8	3496.4
5°	5547.8	5495.0	5474.9	5309.4	5067.1	4722.5	4347.9	4307.6	4290.7	4248.8	4151.3
7.5°	6677.0	6647.6	6616.0	6491.3	6271.4	5885.9	5382.9	5296.8	5214.1	5193.9	5084.0
10°	7405.5	7397.8	7332.0	7298.8	7161.6	6827.3	6337.3	6254.5	6164.7	6133.7	6017.7
12.5°	7981.5	7979.8	7948.8	7958.1	7838.3	7596.6	7174.1	7098.9	7033.1	6937.2	6855.0
15°	8380.0	8381.6	8427.9	8479.1	8460.6	8297.3	7900.9	7867.7	7811.1	7745.2	7647.7
17.5°	8706.7	8715.9	8763.3	8856.9	8958.2	8945.1	8631.5	8603.8	8554.2	8464.4	8413.2
20°	9444.4	9479.2	9387.8	9387.8	9398.7	9448.2	9297.4	9275.6	9205.9	9158.0	9117.7
22.5°	10690.6	10730.9	10523.5	10312.8	10105.3	9954.5	9804.3	9831.5	9784.1	9750.9	9726.9
25°	12309.2	12340.8	12004.9	11648.8	11226.3	10675.9	10303.5	10286.6	10261.0	10240.9	10230.0
27.5°	13832.6	13845.6	13528.2	13006.6	12516.7	11725.6	10809.8	10789.7	10758.7	10720.0	10686.8
30°	15136.0	15132.1	14805.5	14307.9	13783.0	12907.6	11579.1	11516.5	11424.5	11320.0	11239.4
32.5°	16264.6	16259.1	15900.9	15385.3	14834.9	14078.7	12632.6	12504.1	12360.9	12156.8	12034.3
35°	17152.6	17149.3	16811.2	16273.8	15642.3	15181.7	13840.2	13682.3	13500.5	13227.1	13038.2
37.5°	17488.5	17488.5	17299.6	16932.6	16374.5	16058.8	15181.7	14990.6	14796.2	14485.9	14273.0
40°	17291.9	17295.7	17336.0	17268.5	16996.8	16754.6	16433.3	16319.6	16152.4	15873.7	15651.5
42.5°	16633.2	16653.3	16921.7	17250.0	17385.6	17347.5	17543.5	17492.3	17374.7	17160.2	16983.8
45°	15798.0	15860.6	16154.1	16774.7	17493.9	17859.2	18473.9	18479.4	18457.6	18342.2	18206.0
47.5°	14651.4	14739.1	15126.7	15965.1	17240.8	18356.9	19419.1	19468.6	19514.9	19439.7	19377.1
50°	13128.1	13232.6	13812.4	14924.7	16725.2	18872.4	21204.8	21429.1	21638.2	21612.6	21654.5
52.5°	11496.4	11619.4	12329.4	13568.5	15838.8	18991.7	22346.5	22711.8	23077.1	23376.0	23693.4
55°	10024.2	9958.3	10668.8	11973.3	14381.4	18453.8	23372.8	23813.2	24220.5	24587.4	24965.8
57.5°	8029.4	8137.7	8849.9	10140.2	12452.4	16935.9	24078.9	24723.5	25308.8	25916.4	26452.1
60°	5869.1	5977.4	6750.0	8060.4	10358.5	14634.5	23539.4	24516.1	25453.6	26384.1	27110.9
62.5°	3543.8	3624.9	4305.4	5553.8	7987.5	11905.8	21135.1	22416.2	23796.3	24908.6	26022.6
65°	2206.1	2251.8	2503.3	3189.9	5129.7	8888.5	17268.5	18665.0	20151.3	21563.1	22721.1
67.5°	1805.9	1822.2	1868.5	2015.0	2816.9	5796.1	12852.6	14089.5	15431.0	16796.5	18085.2
70°	1624.1	1613.2	1613.2	1622.4	1805.9	3116.4	8414.9	9220.6	10338.4	11525.8	12703.9
72.5°	1466.2	1455.3	1435.1	1407.9	1473.8	1901.2	4349.5	4957.1	5762.9	6818.0	7946.6
75°	1317.5	1302.8	1279.4	1244.6	1290.3	1435.1	2088.5	2343.8	2736.4	3298.2	3927.6
77.5°	1163.5	1145.0	1123.2	1097.6	1156.4	1116.1	1223.9	1315.9	1466.2	1646.4	1883.2
80°	989.2	972.9	965.3	952.8	1022.5	849.9	864.6	921.2	1009.4	1106.8	1216.8
82.5°	774.7	774.7	803.6	809.6	886.3	611.4	646.2	695.8	741.5	792.7	844.4
85°	510.1	514.0	613.0	651.7	699.1	411.1	484.6	500.9	537.9	567.3	589.1
87.5°	159.5	172.6	374.6	414.9	401.8	233.0	297.3	304.9	330.5	350.6	369.1
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):**

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2
2.5°	3496.4	3474.1	3453.9	3452.3	3437.6	3417.4	3424.5	3393.5	3395.1	3378.8	3360.3
5°	4111.1	4096.4	4022.9	4002.7	3947.7	3912.9	3907.4	3833.9	3824.7	3782.8	3736.5
7.5°	4995.8	4947.9	4845.0	4795.4	4701.8	4632.1	4599.4	4502.0	4454.1	4344.1	4294.5
10°	5922.4	5862.0	5735.1	5665.4	5575.6	5463.4	5403.0	5262.0	5206.5	5105.7	4984.9
12.5°	6781.5	6721.1	6590.4	6537.1	6417.8	6298.6	6232.7	6073.2	6001.4	5839.7	5744.4
15°	7575.9	7515.4	7401.6	7346.7	7227.4	7130.0	7041.8	6884.4	6800.0	6649.2	6524.6
17.5°	8346.8	8282.6	8183.5	8133.9	8018.5	7919.4	7824.1	7675.0	7588.9	7438.7	7326.5
20°	9062.7	9014.8	8943.5	8877.1	8761.7	8671.8	8558.0	8429.6	8304.9	8194.4	8088.2
22.5°	9686.7	9668.1	9591.4	9562.0	9462.9	9385.6	9286.5	9160.2	9069.8	8930.4	8831.3
25°	10224.6	10219.1	10182.1	10172.8	10103.2	10029.7	10007.9	9903.3	9820.6	9697.5	9595.2
27.5°	10686.8	10692.2	10683.5	10709.1	10690.6	10657.4	10659.6	10624.7	10576.8	10473.9	10384.1
30°	11200.7	11171.3	11188.2	11224.7	11235.6	11239.4	11299.8	11320.0	11316.7	11248.7	11204.6
32.5°	11927.6	11857.9	11793.6	11788.2	11824.7	11839.4	11942.3	11995.6	12041.4	12057.7	12065.3
35°	12854.2	12714.8	12580.9	12509.6	12447.0	12463.3	12536.8	12623.4	12724.1	12793.8	12876.5
37.5°	14021.5	13851.1	13614.2	13445.5	13403.0	13311.5	13358.9	13427.0	13526.0	13634.4	13777.6
40°	15436.5	15177.9	14911.6	14687.9	14567.0	14397.7	14396.1	14383.0	14444.0	14544.7	14746.7
42.5°	16798.7	16568.9	16286.4	16051.7	15893.8	15667.9	15622.1	15502.9	15530.1	15618.3	15814.9
45°	18073.7	17884.8	17712.2	17441.1	17306.6	17062.7	16985.4	16844.4	16765.5	16805.7	17002.3
47.5°	19309.1	19188.2	19008.0	18832.1	18729.2	18510.9	18411.8	18310.6	18209.9	18206.0	18411.8
50°	21717.1	21652.9	21440.0	21256.5	21306.1	21038.2	21054.5	20782.9	20905.9	20920.6	21351.8
52.5°	23979.8	24204.1	24362.0	24554.2	24679.4	24703.4	24785.6	24908.6	25057.3	25350.7	25750.9
55°	25275.6	25556.5	25719.8	25866.8	26109.1	26160.3	26298.0	26461.4	26591.5	26922.0	27261.7
57.5°	26815.8	27336.8	27590.0	27823.0	28149.7	28274.4	28504.1	28682.1	28850.9	29241.8	29652.9
60°	27764.2	28399.6	28915.2	29283.7	29693.2	29987.2	30334.0	30612.7	31009.1	31477.3	32090.3
62.5°	27010.2	27942.2	28627.2	29260.3	29816.2	30378.1	30875.1	31396.7	31998.3	32706.6	33657.8
65°	24006.0	24954.4	26127.1	26784.2	27520.3	28386.5	29142.7	29987.2	30807.1	31838.8	33244.5
67.5°	19326.0	20428.4	21746.5	22409.1	23255.2	24222.1	25070.3	26101.5	27059.7	28309.2	30047.6
70°	13930.0	15355.9	16464.4	17156.4	18144.0	19140.3	19959.1	21159.1	21951.8	23232.8	25030.0
72.5°	8820.5	9945.3	11303.6	12175.3	13052.4	14062.3	14899.1	15934.1	16673.4	17840.7	19468.6
75°	4742.6	5571.8	6764.7	7592.7	8532.4	9394.8	10374.8	11068.4	11615.6	12539.0	13860.3
77.5°	2222.4	2727.1	3330.9	3967.9	4604.9	5269.1	5915.3	6476.6	6711.8	7240.5	8020.1
80°	1349.1	1512.5	1688.3	1884.8	2151.1	2365.6	2650.3	2855.6	2870.3	3037.4	3275.9
82.5°	901.0	961.5	1014.8	1064.4	1132.4	1185.8	1246.2	1317.5	1346.9	1385.6	1462.9
85°	614.7	644.1	655.0	686.5	678.9	697.4	721.4	745.3	757.9	756.2	791.1
87.5°	377.8	392.5	400.2	407.2	401.8	394.7	405.6	418.7	421.9	411.1	414.9
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):**

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2
2.5°	3364.1	3347.8	3330.9	3320.0	3316.2	3219.3	3176.8	3149.6	3090.8	3042.9	3004.2
5°	3710.9	3676.1	3648.8	3615.6	3597.1	3351.0	3261.2	3199.1	3096.2	3035.8	2980.3
7.5°	4268.9	4171.5	4114.9	4050.6	3995.6	3551.4	3402.7	3305.3	3162.1	3081.5	3018.9
10°	4902.1	4801.4	4711.0	4611.9	4525.9	3817.6	3600.9	3450.1	3261.2	3156.7	3073.9
12.5°	5608.8	5509.7	5395.9	5269.1	5159.1	4155.2	3854.1	3639.6	3380.4	3241.0	3125.6
15°	6444.0	6269.2	6131.5	5985.0	5856.5	4559.1	4149.7	3852.5	3507.3	3318.4	3164.3
17.5°	7219.8	7036.3	6849.6	6721.1	6572.5	5012.1	4447.0	4068.6	3611.8	3367.9	3171.4
20°	7978.2	7777.9	7616.7	7444.1	7287.9	5482.0	4764.4	4259.7	3679.9	3369.5	3125.6
22.5°	8646.2	8521.0	8341.4	8154.1	7996.2	5951.8	5061.7	4421.4	3705.5	3327.6	3044.5
25°	9405.7	9274.0	9053.5	8895.6	8719.7	6430.9	5353.5	4546.1	3690.8	3248.7	2919.8
27.5°	10216.9	10070.5	9844.5	9679.6	9466.7	6928.0	5621.3	4635.9	3635.8	3120.2	2752.7
30°	11063.0	10929.1	10706.9	10540.3	10325.3	7455.0	5920.8	4696.3	3525.8	2942.1	2558.3
32.5°	11971.7	11859.5	11639.6	11465.3	11235.6	8025.6	6199.5	4714.8	3358.6	2730.9	2353.1
35°	12834.1	12757.3	12571.6	12408.3	12169.8	8565.1	6495.2	4705.6	3160.5	2499.5	2165.8
37.5°	13805.3	13759.1	13667.6	13460.2	13168.3	9297.4	6849.6	4666.9	2918.2	2270.3	2022.6
40°	14840.3	14844.1	14745.0	14603.5	14331.8	10185.9	7271.5	4591.8	2653.6	2068.3	1891.9
42.5°	15935.7	15992.9	15945.0	15844.3	15583.5	11081.5	7776.2	4500.3	2397.2	1871.8	1764.0
45°	17191.2	17260.9	17334.4	17185.8	16932.6	12263.5	8440.4	4381.1	2119.5	1708.4	1675.8
47.5°	18639.4	18749.4	18815.3	18817.4	18564.3	13728.0	9519.5	4309.2	1874.0	1598.5	1633.3
50°	21694.8	21730.2	21885.9	22157.6	21963.2	17117.7	11404.4	4265.1	1706.8	1530.4	1602.3
52.5°	26097.7	26481.5	26751.6	26733.0	26468.5	19270.4	12443.2	4037.6	1607.7	1504.8	1587.6
55°	27891.1	28370.2	28869.4	29001.2	28795.9	21107.9	13425.3	3810.0	1559.8	1523.3	1593.0
57.5°	30280.6	31088.0	31772.9	32060.9	31763.7	23458.8	14717.3	3690.8	1545.1	1572.9	1627.9
60°	33072.0	34070.5	34969.9	35487.1	35487.1	26160.3	16057.1	3641.2	1525.0	1646.4	1686.7
62.5°	34865.3	36331.5	37689.9	38447.7	38425.4	28041.3	16651.7	3472.4	1479.2	1697.6	1767.2
65°	34872.4	36616.2	38346.5	39198.5	39242.1	27810.5	15670.0	3066.8	1394.9	1705.2	1848.4
67.5°	31965.7	33824.4	35841.5	36794.3	37014.2	25600.6	13564.7	2521.8	1257.1	1631.7	1877.8
70°	26997.1	28812.3	30871.3	31807.8	32198.7	21823.3	10925.3	1943.6	1081.3	1470.0	1816.8
72.5°	21269.1	23049.4	24482.9	25167.2	25472.1	16681.1	7955.9	1468.4	886.3	1238.6	1653.5
75°	15058.6	16394.7	17156.4	17308.8	17356.2	10055.8	4834.1	1092.1	730.6	963.7	1396.5
77.5°	8499.2	9072.0	9009.4	9077.4	8512.3	3881.9	2105.3	781.8	602.1	732.3	1082.9
80°	3318.4	3421.3	3213.8	3149.6	2888.8	1444.4	928.8	545.0	480.7	554.2	757.9
82.5°	1462.9	1510.3	1466.2	1477.6	1413.4	745.3	555.9	394.7	367.0	405.6	503.1
85°	805.8	820.5	816.7	840.6	805.8	297.3	264.1	242.3	257.0	275.5	322.9
87.5°	392.5	396.4	383.8	404.0	390.9	150.3	130.1	137.7	150.3	154.1	154.1
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):**

	135°	145°	155°	165°	175°	180°
0°	3151.2	3151.2	3151.2	3151.2	3151.2	3151.2
2.5°	2977.0	2962.3	2963.9	2960.1	2953.0	2953.0
5°	2951.4	2936.7	2936.7	2932.9	2923.6	2925.3
7.5°	2977.0	2953.0	2943.8	2930.7	2918.2	2918.2
10°	3006.4	2963.9	2938.3	2916.6	2899.7	2899.7
12.5°	3028.2	2962.3	2919.8	2890.4	2874.1	2874.1
15°	3035.8	2949.2	2890.4	2855.6	2840.9	2839.2
17.5°	3011.8	2899.7	2828.4	2788.1	2769.6	2764.1
20°	2938.3	2809.9	2723.8	2677.6	2652.0	2642.7
22.5°	2828.4	2681.4	2580.6	2532.7	2499.5	2494.1
25°	2674.3	2516.4	2417.3	2371.0	2353.1	2347.1
27.5°	2494.1	2347.1	2262.7	2233.3	2217.0	2215.3
30°	2323.7	2198.4	2136.4	2114.1	2093.9	2090.6
32.5°	2163.6	2084.7	2061.2	2029.7	1982.3	1976.9
35°	2049.8	2042.7	2026.4	1956.2	1897.9	1881.0
37.5°	1980.1	2048.2	1963.8	1826.0	1784.1	1780.3
40°	1939.8	1991.6	1846.2	1798.8	1802.1	1798.8
42.5°	1848.4	1901.2	1850.0	1828.2	1842.4	1846.2
45°	1756.4	1815.2	1877.8	1863.1	1897.9	1897.9
47.5°	1705.2	1792.8	1875.6	1875.6	1927.3	1945.3
50°	1646.4	1774.9	1846.2	1871.8	1912.6	1897.9
52.5°	1642.6	1743.3	1804.3	1850.0	1868.5	1851.6
55°	1648.0	1717.7	1761.8	1813.5	1835.3	1836.9
57.5°	1655.6	1703.0	1732.4	1756.4	1822.2	1822.2
60°	1673.6	1690.5	1706.8	1719.9	1805.9	1807.5
62.5°	1703.0	1677.4	1673.6	1686.7	1796.6	1789.6
65°	1749.3	1658.9	1631.7	1644.2	1787.4	1765.6
67.5°	1811.3	1631.7	1578.3	1587.6	1780.3	1732.4
70°	1868.5	1587.6	1512.5	1503.2	1710.6	1626.2
72.5°	1874.0	1536.4	1420.4	1393.2	1486.9	1405.7
75°	1781.9	1501.0	1319.7	1238.6	1227.7	1216.8
77.5°	1606.1	1480.9	1202.1	1075.3	1053.5	1060.6
80°	1343.7	1405.7	1060.6	910.3	1029.5	1017.0
82.5°	1003.9	1240.8	901.0	805.8	803.6	710.5
85°	558.1	967.5	733.9	603.8	420.3	407.2
87.5°	156.3	537.9	514.0	341.4	233.0	242.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)