

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: P299383

Luminaire Tested: **GLNA-AF-09-LED-E1-SLR-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299383  
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-09-LED-E1-SLR-7027  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 2700K 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: 40498.4 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

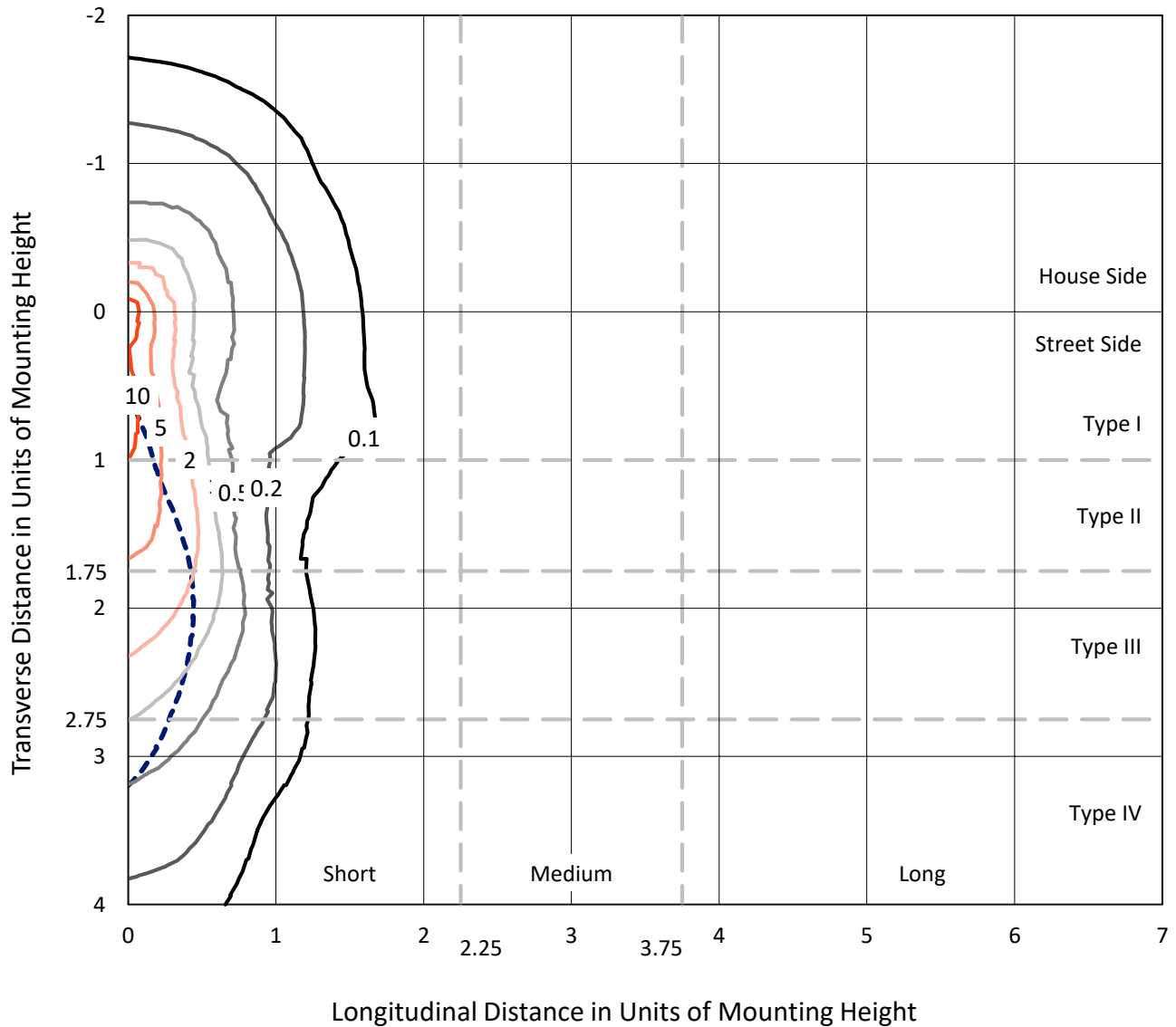
Input Watts (W): 501  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

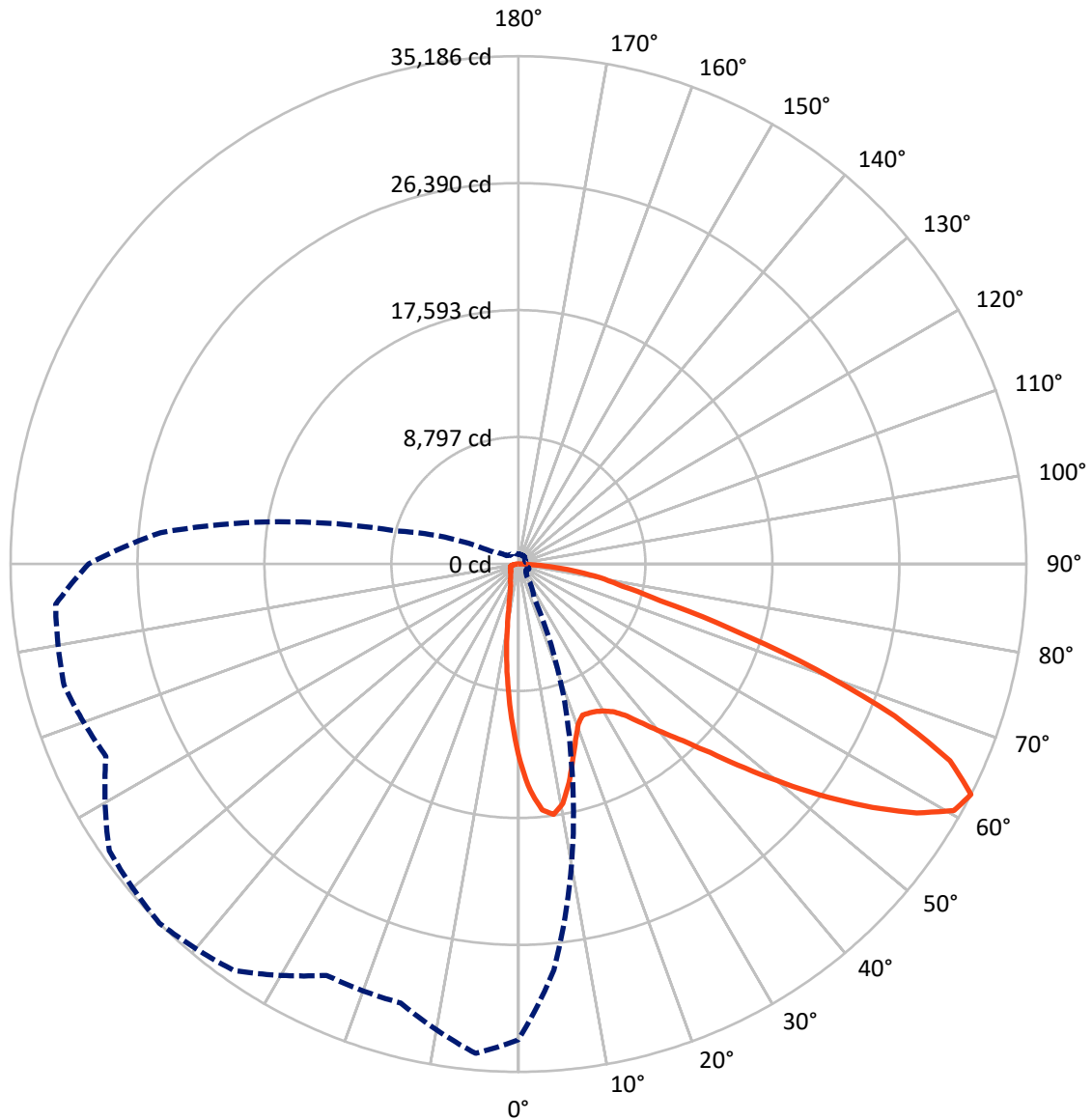
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15.2 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
<b>House Side</b>	Lumens	6701.9	0.0	6701.9
	% Fixture	16.5	0.0	16.5
<b>Street Side</b>	Lumens	33796.5	0.0	33796.5
	% Fixture	83.5	0.0	83.5
<b>Total</b>	Lumens	40498.4	0.0	40498.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	996.0	2.5
10°-20°	1826.4	4.5
20°-30°	2662.9	6.6
30°-40°	4101.3	10.1
40°-50°	6036.1	14.9
50°-60°	8853.6	21.9
60°-70°	9897.1	24.4
70°-80°	4845.5	12.0
80°-90°	1279.3	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°	40498.4	100.0
0°-180°	40498.4	100.0



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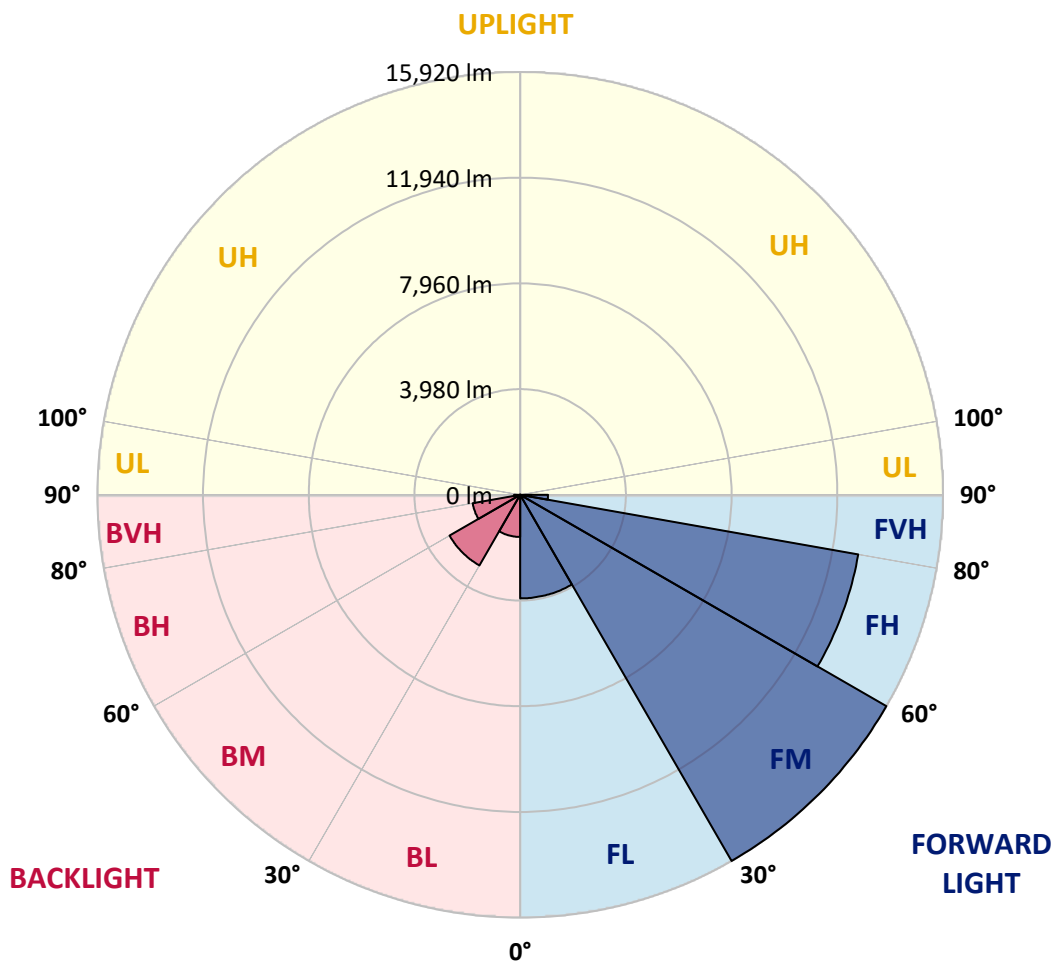
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3899.9	9.6			
FM	(30°-60°)	15920.3	39.3			
FH	(60°-80°)	12925.7	31.9			G5
FVH	(80°-90°)	1050.6	2.6			G5
BL	(0°-30°)	1585.6	3.9	B3/2500		
BM	(30°-60°)	3070.8	7.6	B3/5000		
BH	(60°-80°)	1816.9	4.5	B3/2500		G3/2500
BVH	(80°-90°)	228.7	0.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8
2.5°	14216.6	13927.4	13446.2	12945.5	12640.8	12284.3	12006.0	11761.3	11271.3	11175.6	11262.6
5°	13368.7	12787.8	11881.3	10968.7	10360.8	9708.4	9200.9	8793.9	8172.5	8063.3	8194.7
7.5°	12008.7	11313.8	10116.2	8951.6	8092.3	7277.4	6730.2	6293.5	5808.2	5599.3	5612.1
10°	10835.3	10051.5	8635.5	7369.1	6665.5	6115.5	5654.5	5207.0	4715.0	4392.2	4303.2
12.5°	10178.2	9277.1	7644.8	6513.8	5861.4	5283.2	4786.5	4308.0	3782.3	3452.7	3359.7
15°	10065.0	9085.0	7273.4	5966.6	5149.1	4417.1	3831.5	3297.0	2755.8	2488.9	2433.0
17.5°	10556.9	9428.1	7152.8	5478.6	4479.2	3575.4	2856.3	2259.8	1819.0	1685.6	1674.1
20°	11500.5	10087.2	7137.3	5020.3	3818.0	2758.5	1990.2	1556.2	1362.8	1324.3	1327.0
22.5°	12825.5	11108.9	7328.7	4675.3	3210.1	2056.9	1496.2	1302.1	1226.6	1190.9	1190.9
25°	14539.4	12516.2	7769.4	4423.9	2682.4	1643.1	1320.3	1204.4	1132.9	1108.7	1113.4
27.5°	16200.7	13885.0	8281.6	4225.7	2337.3	1491.5	1250.9	1146.4	1084.4	1059.5	1070.9
30°	17496.1	15100.8	8708.9	3956.2	2161.4	1449.0	1275.8	1168.7	1079.7	1041.9	1044.0
32.5°	18569.0	16165.0	9067.5	3762.1	2005.7	1242.1	1099.9	1052.7	1041.9	997.5	975.2
35°	19940.5	17324.9	9308.1	3766.8	1932.2	1108.7	979.3	897.0	837.1	785.8	785.8
37.5°	21547.9	18655.9	9564.2	3818.0	1906.0	1030.5	937.5	854.6	799.3	750.1	741.4
40°	23137.1	19960.7	9798.1	3867.2	1889.8	984.0	903.8	828.3	777.1	727.9	714.4
42.5°	24489.1	21033.7	10007.0	3891.5	1836.5	979.3	879.5	810.1	761.6	707.7	694.9
45°	25488.6	21932.8	10232.1	3929.2	1783.3	997.5	879.5	808.1	748.1	696.9	683.4
47.5°	26380.9	22988.2	10608.2	3929.2	1718.6	963.8	908.5	810.1	746.1	692.2	681.4
50°	27576.5	24435.2	11320.5	3838.2	1627.6	928.0	957.0	801.3	725.9	683.4	669.9
52.5°	29223.7	26289.9	12451.5	3679.8	1487.4	859.3	950.3	797.3	705.6	661.2	645.7
55°	31172.1	28275.4	13684.8	3495.2	1277.8	810.1	917.3	785.8	683.4	634.2	618.7
57.5°	32692.6	29642.2	14552.9	3210.1	1095.2	783.8	812.8	775.1	656.4	605.2	592.4
60°	33297.8	29589.0	14791.4	2829.3	1006.2	761.6	710.4	868.1	634.2	583.0	567.5
62.5°	32970.9	28222.2	14123.6	2562.4	986.0	732.6	665.9	803.4	616.7	567.5	545.2
65°	31459.2	25799.9	12353.7	2491.0	1044.0	703.6	636.9	630.2	592.4	545.2	523.0
67.5°	28166.2	22180.1	9891.1	2497.7	1117.4	674.6	607.9	576.9	558.7	521.0	500.8
70°	22941.7	17536.5	7373.1	2515.9	1155.2	640.9	576.9	543.2	523.0	485.3	471.8
72.5°	16868.6	13515.6	5356.7	2400.0	1161.9	603.2	534.5	505.5	485.3	445.5	434.0
75°	11540.9	10338.6	3715.6	1988.2	1013.0	550.0	487.3	461.0	447.5	398.3	391.6
77.5°	8430.6	7760.7	2377.7	1476.0	781.1	483.2	430.0	409.8	401.0	347.1	338.3
80°	6765.9	6139.8	1487.4	1010.9	572.2	405.1	360.6	349.8	340.4	287.1	280.4
82.5°	4692.8	4111.8	955.0	656.4	430.0	314.1	285.1	280.4	266.9	218.4	211.6
85°	2475.5	2232.8	605.2	447.5	311.4	215.7	198.1	198.1	191.4	144.9	140.2
87.5°	316.1	514.2	307.3	233.9	171.2	95.7	95.7	93.7	100.4	82.2	71.4
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°	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8
2.5°	11057.7	11164.9	11062.4	11069.2	11182.4	11520.7	11674.4	11801.1	11937.2	12026.2	12065.9
5°	8014.8	8264.1	8348.4	8526.3	8789.1	9221.2	9392.3	9517.0	9599.9	9648.4	9668.7
7.5°	5481.3	5632.3	5801.5	6088.6	6660.8	6914.9	7028.1	6999.1	6906.1	6872.4	6839.4
10°	4132.1	4072.1	4040.4	4198.8	4661.8	4917.9	4998.1	4919.9	4868.7	4880.2	4935.4
12.5°	3201.3	3096.9	2970.2	2952.0	3257.3	3486.4	3537.6	3541.7	3635.4	3717.6	3840.2
15°	2333.3	2321.8	2259.8	2222.1	2395.3	2582.6	2604.9	2644.6	2729.5	2789.5	2896.0
17.5°	1645.1	1705.1	1754.3	1778.6	1910.0	2043.5	2019.2	1999.0	1983.5	1983.5	2034.7
20°	1327.0	1366.8	1429.5	1500.2	1634.4	1727.4	1667.4	1587.2	1529.2	1511.7	1518.4
22.5°	1195.6	1226.6	1262.3	1324.3	1445.0	1509.7	1445.0	1387.0	1329.1	1308.8	1302.1
25°	1128.9	1168.7	1202.3	1248.9	1337.8	1382.3	1320.3	1277.8	1242.1	1217.8	1199.7
27.5°	1091.1	1126.2	1135.6	1157.9	1233.4	1273.1	1242.1	1224.6	1202.3	1180.1	1157.9
30°	1050.7	1044.0	1028.5	1030.5	1091.1	1130.9	1128.9	1132.9	1130.9	1124.2	1120.1
32.5°	959.7	946.2	932.8	946.2	1001.5	1037.2	1039.9	1048.7	1048.7	1046.7	1064.2
35°	799.3	823.6	839.1	879.5	946.2	977.2	963.8	941.5	901.8	876.8	874.8
37.5°	739.3	743.4	770.3	825.6	899.7	928.0	908.5	857.3	830.3	825.6	832.3
40°	710.4	714.4	729.9	781.1	854.6	883.6	866.0	828.3	803.4	801.3	812.8
42.5°	690.1	694.9	703.6	739.3	799.3	835.0	837.1	810.1	781.1	783.8	794.6
45°	678.7	681.4	678.7	696.9	752.1	794.6	812.8	794.6	770.3	775.1	787.9
47.5°	676.7	669.9	661.2	665.9	723.8	765.6	787.9	781.1	770.3	775.1	785.8
50°	667.9	652.4	640.9	638.9	696.9	741.4	761.6	761.6	765.6	775.1	785.8
52.5°	640.9	623.4	623.4	616.7	678.7	721.1	734.6	736.6	743.4	758.9	775.1
55°	607.9	601.2	607.9	596.5	665.9	705.6	712.4	717.1	721.1	734.6	756.9
57.5°	578.9	570.2	585.7	581.0	654.4	690.1	690.1	698.9	698.9	717.1	734.6
60°	563.4	545.2	552.0	556.7	638.9	676.7	672.6	681.4	685.4	701.6	714.4
62.5°	543.2	527.7	527.7	538.5	621.4	656.4	654.4	661.2	678.7	683.4	696.9
65°	519.0	512.2	505.5	519.0	603.2	634.2	636.9	645.7	661.2	665.9	676.7
67.5°	494.0	496.7	483.2	496.7	587.7	612.0	612.0	630.2	636.9	645.7	656.4
70°	467.7	469.8	458.3	474.5	576.9	587.7	585.7	609.9	614.7	621.4	632.2
72.5°	434.0	434.0	430.0	452.2	558.7	563.4	558.7	578.9	581.0	587.7	592.4
75°	398.3	398.3	394.3	425.3	547.9	536.5	523.0	538.5	543.2	547.9	547.9
77.5°	351.8	356.5	356.5	394.3	509.5	525.7	480.5	490.0	496.7	498.7	492.0
80°	293.8	305.3	309.3	358.5	427.3	485.3	430.0	436.1	438.7	438.7	430.0
82.5°	225.1	244.6	256.1	309.3	327.5	407.1	374.0	380.8	374.0	360.6	356.5
85°	155.7	182.6	196.1	235.9	247.3	314.1	311.4	311.4	298.6	280.4	278.3
87.5°	84.9	100.4	109.2	140.2	169.2	211.6	229.1	222.4	211.6	200.2	202.9
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8
2.5°	12275.5	12578.2	13061.4	13430.7	13802.7	14161.3	14548.8	14844.7	15096.1	15194.5	15492.4
5°	9871.5	10249.6	10705.9	11529.5	12113.1	12756.1	13500.1	14484.1	14862.2	15385.9	16242.5
7.5°	6979.6	7321.9	8056.5	8722.4	9548.7	10459.2	11462.7	12820.8	13317.5	14156.6	15552.4
10°	5211.8	5610.1	6199.8	6761.2	7489.1	8419.8	9573.0	11091.4	11694.6	12605.1	14212.5
12.5°	4198.8	4668.5	5294.0	5821.7	6385.1	7041.6	8161.7	9826.4	10635.1	11431.7	13056.7
15°	3225.6	3717.6	4299.2	4969.1	5589.8	6298.2	7471.5	9292.6	10222.7	11053.7	12440.0
17.5°	2232.8	2653.4	3386.0	4084.9	4880.2	5786.0	7280.1	9405.8	10516.5	11474.2	12547.2
20°	1583.1	1823.1	2424.2	3235.0	4225.7	5362.7	7244.4	10002.3	11447.2	12540.4	13232.6
22.5°	1331.1	1420.0	1769.8	2513.2	3657.6	5046.6	7369.1	10839.3	12702.8	14098.6	14325.7
25°	1213.1	1267.0	1449.0	1972.7	3152.1	4817.5	7789.7	12086.2	14257.0	15657.5	15617.1
27.5°	1148.4	1204.4	1324.3	1665.4	2772.0	4675.3	8210.2	13564.8	16033.6	17349.1	16850.4
30°	1128.9	1204.4	1331.1	1569.7	2500.4	4450.2	8555.3	14862.2	17400.4	18491.5	17411.8
32.5°	1113.4	1124.2	1182.1	1353.3	2241.6	4187.3	8789.1	16026.8	18738.2	19577.9	18219.9
35°	899.7	955.0	1048.7	1213.1	2090.6	4029.6	8789.1	17031.0	20056.4	20675.1	18990.2
37.5°	866.0	915.2	997.5	1137.6	2005.7	3951.4	8613.2	17999.5	21403.0	21919.9	19624.4
40°	848.5	888.3	966.5	1079.7	1970.0	3862.5	8357.1	18854.1	22718.6	23166.1	20216.8
42.5°	835.0	870.8	944.2	1044.0	1923.5	3764.8	8150.2	19539.5	23861.0	24230.3	20782.3
45°	828.3	866.0	946.2	1062.2	1829.8	3635.4	8081.5	20280.9	24800.5	25118.6	21394.3
47.5°	828.3	872.8	957.0	1099.9	1718.6	3501.9	8297.1	21258.8	25688.7	25844.4	22115.4
50°	821.6	870.8	988.7	1062.2	1556.2	3332.7	8804.6	22489.4	26650.5	26668.0	23028.6
52.5°	808.1	866.0	1064.2	1039.9	1368.8	3110.3	9490.7	24070.6	28073.2	28179.7	24457.4
55°	792.6	859.3	1044.0	988.7	1215.8	2845.5	10051.5	25991.4	30072.2	30368.1	26559.5
57.5°	772.4	850.5	1010.9	917.3	1115.4	2504.4	10254.3	27398.6	31468.0	32211.4	28927.8
60°	754.8	843.8	912.5	874.8	1052.7	2217.3	9862.1	27120.2	31372.3	32975.0	31027.2
62.5°	736.6	850.5	832.3	848.5	1023.7	2032.7	8838.3	24891.4	29785.1	32187.1	32583.4
65°	717.1	790.6	785.8	825.6	1017.7	1959.2	7326.6	21549.9	26717.2	29696.1	32950.7
67.5°	690.1	729.9	752.1	797.3	1039.9	1894.5	5912.7	17776.4	22453.7	25962.4	31036.0
70°	661.2	694.9	719.1	761.6	1026.4	1865.5	4917.9	14018.4	17816.9	21278.3	27258.4
72.5°	623.4	652.4	674.6	714.4	1013.0	1850.0	4154.3	11289.5	13302.0	15806.4	22162.6
75°	578.9	605.2	621.4	661.2	970.5	1694.3	3266.0	9552.7	9953.7	10995.7	17651.7
77.5°	527.7	547.9	560.7	605.2	859.3	1409.3	2362.2	7369.1	7729.7	7983.1	13533.2
80°	467.7	487.3	494.0	536.5	712.4	1101.9	1540.7	5442.9	5781.2	5839.2	8838.3
82.5°	398.3	418.5	418.5	458.3	583.0	792.6	1010.9	3729.0	3795.8	3991.9	6247.0
85°	320.8	336.3	336.3	356.5	452.2	592.4	694.9	1872.3	1852.0	2114.9	5411.9
87.5°	229.1	240.6	251.4	256.1	322.8	391.6	418.5	570.2	376.1	432.0	3474.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P299383

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**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8	13682.8
2.5°	15717.5	15844.2	15714.8	15621.8	15218.7	14887.2	14443.7	14216.6
5°	16894.9	17217.7	17108.5	16717.0	15875.2	14928.9	13854.0	13368.7
7.5°	16752.7	17502.8	17520.3	16788.4	15548.3	14154.6	12698.8	12008.7
10°	15644.0	16603.1	16877.4	16167.0	14851.4	13293.2	11623.2	10835.3
12.5°	14405.9	15345.4	15555.0	15309.7	14210.5	12644.9	10951.2	10178.2
15°	13393.0	13814.2	14062.9	14277.2	13660.5	12386.8	10912.8	10065.0
17.5°	12776.3	12729.8	12801.2	13172.6	13277.1	12682.6	11491.7	10556.9
20°	12553.9	11839.5	11821.3	12333.5	13097.1	13388.9	12622.6	11500.5
22.5°	12676.6	11518.7	11371.8	11979.7	13192.8	14405.9	14105.4	12825.5
25°	13099.1	11545.6	11427.0	12015.4	13539.9	15490.3	15706.0	14539.4
27.5°	13765.0	11714.8	11558.5	12162.3	14000.9	16400.9	17282.4	16200.7
30°	14397.2	12008.7	11814.6	12451.5	14421.4	16761.4	18248.9	17496.1
32.5°	15165.5	12558.6	12217.6	12983.2	14942.4	17335.7	19110.2	18569.0
35°	15917.6	13341.8	12919.2	13804.8	15523.4	18050.7	20094.2	19940.5
37.5°	16743.9	14366.2	14016.4	14866.9	16318.6	18724.7	21349.8	21547.9
40°	17625.5	15724.2	15309.7	16416.4	17552.0	19571.2	22661.3	23137.1
42.5°	18513.7	17231.2	16737.2	17858.7	18907.3	20405.6	23782.8	24489.1
45°	19530.8	18867.6	18633.7	19846.8	20210.1	21200.8	24611.1	25488.6
47.5°	20715.6	20724.3	21100.4	21585.7	21523.7	22099.9	25444.1	26380.9
50°	22097.9	23041.4	23872.4	24194.6	22877.0	23066.4	26599.3	27576.5
52.5°	23758.5	25813.4	26841.9	26630.3	24335.4	24245.8	28429.1	29223.7
55°	25835.7	28747.9	29769.6	29617.9	26011.6	25853.2	30709.1	31172.1
57.5°	28239.7	31590.6	32530.1	31848.8	28024.0	27617.0	32594.8	32692.6
60°	30352.6	33843.7	34667.3	33912.4	30054.7	29493.3	33772.2	33297.8
62.5°	31528.0	34607.3	35186.2	34373.4	31445.7	31492.2	34030.4	32970.9
65°	31002.9	32677.1	32863.7	32797.0	31087.2	32652.1	33102.3	31459.2
67.5°	28126.5	27796.9	28111.0	28545.0	28015.3	31124.9	30530.5	28166.2
70°	23059.6	21249.4	21875.5	22166.6	22407.2	26783.9	26498.8	22941.7
72.5°	17378.1	14887.2	15381.2	15321.2	16433.9	21483.2	20608.4	16868.6
75°	12313.3	10093.9	10155.9	10131.7	11467.5	16807.9	14922.9	11540.9
77.5°	8615.3	7313.2	7346.9	7484.4	7709.5	12676.6	10661.4	8430.6
80°	5924.1	5550.1	5734.7	5746.2	5343.2	8515.5	7876.6	6765.9
82.5°	4412.4	3857.8	3813.3	3878.0	4187.3	6899.4	6052.9	4692.8
85°	3613.1	2284.1	1836.5	2302.3	3710.8	6832.6	4020.9	2475.5
87.5°	2034.7	1084.4	490.0	908.5	1480.7	4523.6	1161.9	316.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)