

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: P299513

Luminaire Tested: **GLNA-AF-10-LED-E1-SLR-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299513
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-10-LED-E1-SLR-7050-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Right OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33996.9 lumens
Efficiency: N/A
Efficacy: 105.3 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): 323
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

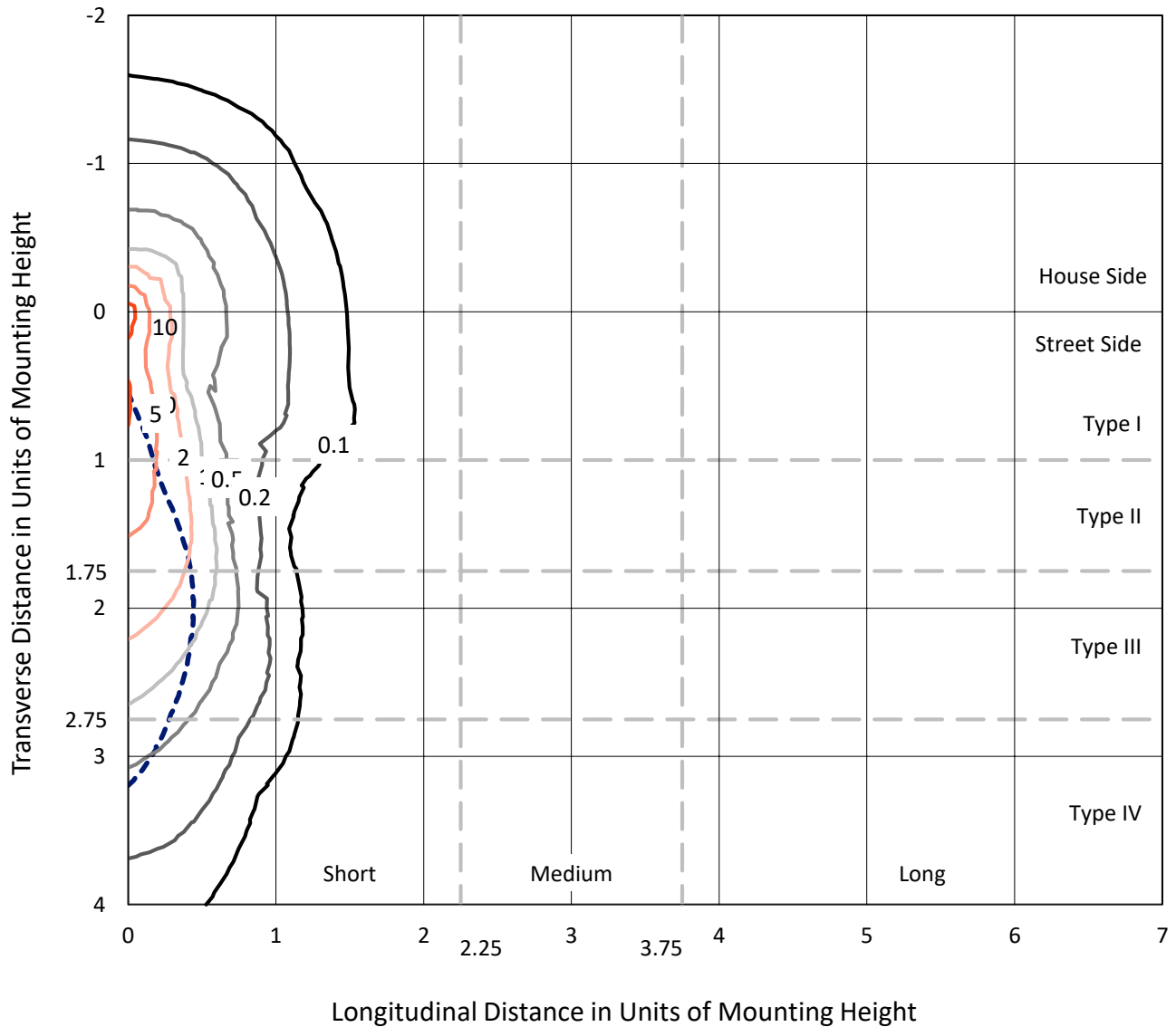


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Iso-Footcandle Lines of Horizontal Illumination

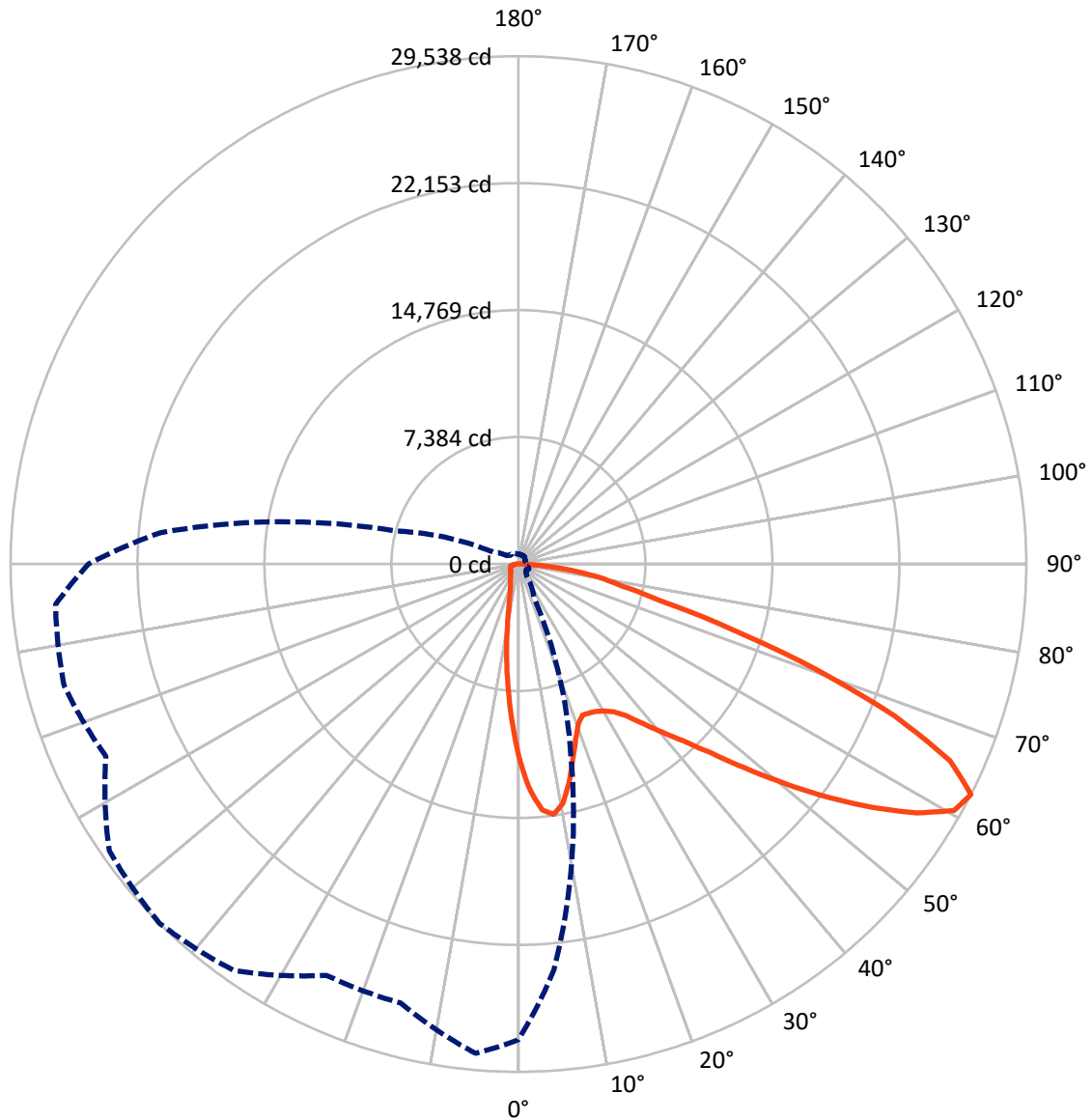
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12.8 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	5626.0	0.0	5626.0
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	28370.8	0.0	28370.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	33996.9	0.0	33996.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	836.1	2.5
10°-20°	1533.2	4.5
20°-30°	2235.4	6.6
30°-40°	3442.9	10.1
40°-50°	5067.1	14.9
50°-60°	7432.3	21.9
60°-70°	8308.2	24.4
70°-80°	4067.6	12.0
80°-90°	1073.9	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°	33996.9	100.0
0°-180°	33996.9	100.0



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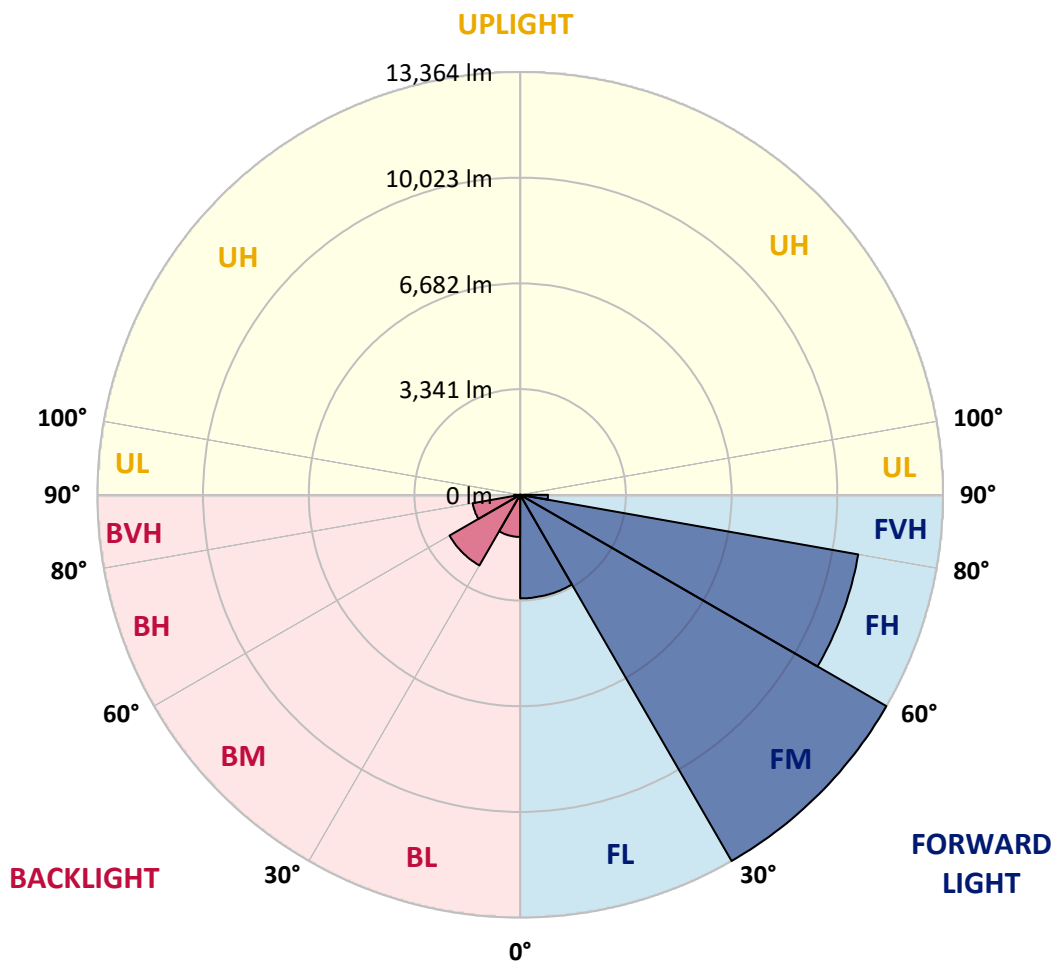
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3273.8	9.6			
FM	(30°-60°)	13364.5	39.3			
FH	(60°-80°)	10850.6	31.9			G4/12000
FVH	(80°-90°)	882.0	2.6			G5
BL	(0°-30°)	1331.0	3.9	B3/2500		
BM	(30°-60°)	2577.8	7.6	B3/5000		
BH	(60°-80°)	1525.2	4.5	B3/2500		G3/2500
BVH	(80°-90°)	192.0	0.6			G2/225
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°	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2
2.5°	11934.3	11691.5	11287.6	10867.2	10611.5	10312.2	10078.5	9873.2	9461.9	9381.5	9454.5
5°	11222.5	10734.8	9973.9	9207.8	8697.5	8149.9	7723.8	7382.1	6860.5	6768.8	6879.1
7.5°	10080.8	9497.5	8492.1	7514.5	6793.1	6109.1	5649.7	5283.1	4875.8	4700.4	4711.1
10°	9095.8	8437.8	7249.2	6186.1	5595.4	5133.8	4746.8	4371.1	3958.1	3687.1	3612.4
12.5°	8544.2	7787.8	6417.5	5468.1	4920.5	4435.0	4018.1	3616.4	3175.1	2898.4	2820.3
15°	8449.1	7626.5	6105.7	5008.7	4322.4	3708.0	3216.4	2767.7	2313.4	2089.4	2042.4
17.5°	8862.2	7914.5	6004.5	4599.1	3760.1	3001.4	2397.7	1897.0	1527.0	1415.0	1405.4
20°	9654.2	8467.8	5991.5	4214.4	3205.1	2315.7	1670.7	1306.4	1144.0	1111.7	1114.0
22.5°	10766.5	9325.5	6152.1	3924.7	2694.7	1726.7	1256.0	1093.1	1029.7	999.7	999.7
25°	12205.3	10506.8	6522.1	3713.7	2251.7	1379.3	1108.3	1011.0	951.1	930.7	934.6
27.5°	13599.9	11655.9	6952.1	3547.4	1962.1	1252.0	1050.1	962.4	910.3	889.4	899.0
30°	14687.3	12676.5	7310.8	3321.0	1814.4	1216.4	1071.0	981.0	906.4	874.7	876.4
32.5°	15588.0	13569.9	7611.8	3158.1	1683.7	1042.7	923.3	883.7	874.7	837.3	818.7
35°	16739.3	14543.6	7813.8	3162.1	1622.0	930.7	822.1	753.0	702.7	659.7	659.7
37.5°	18088.7	15661.0	8028.8	3205.1	1600.0	865.1	787.0	717.4	671.0	629.7	622.3
40°	19422.7	16756.3	8225.1	3246.4	1586.4	826.0	758.7	695.3	652.3	611.0	599.7
42.5°	20557.7	17657.0	8400.5	3266.7	1541.7	822.1	738.3	680.1	639.3	594.1	583.3
45°	21396.7	18411.7	8589.5	3298.4	1497.0	837.3	738.3	678.4	628.0	585.0	573.7
47.5°	22145.8	19297.7	8905.2	3298.4	1442.7	809.0	762.7	680.1	626.3	581.0	572.0
50°	23149.4	20512.4	9503.2	3222.0	1366.3	779.1	803.4	672.7	609.3	573.7	562.4
52.5°	24532.2	22069.4	10452.5	3089.1	1248.6	721.4	797.7	669.3	592.4	555.0	542.0
55°	26167.8	23736.1	11487.9	2934.1	1072.7	680.1	770.0	659.7	573.7	532.4	519.4
57.5°	27444.2	24883.5	12216.6	2694.7	919.4	658.0	682.3	650.6	551.1	508.1	497.3
60°	27952.2	24838.8	12416.9	2375.1	844.7	639.3	596.3	728.7	532.4	489.4	476.4
62.5°	27677.8	23691.4	11856.2	2151.0	827.7	615.0	559.0	674.4	517.7	476.4	457.7
65°	26408.8	21658.1	10370.5	2091.1	876.4	590.7	534.6	529.0	497.3	457.7	439.0
67.5°	23644.5	18619.3	8303.2	2096.7	938.0	566.3	510.3	484.3	469.0	437.3	420.4
70°	19258.7	14721.2	6189.5	2112.0	969.7	538.0	484.3	456.0	439.0	407.4	396.0
72.5°	14160.5	11345.9	4496.7	2014.7	975.4	506.4	448.7	424.3	407.4	374.0	364.4
75°	9688.2	8678.8	3119.1	1669.0	850.3	461.7	409.0	387.0	375.7	334.4	328.7
77.5°	7077.2	6514.8	1996.0	1239.0	655.7	405.7	361.0	344.0	336.6	291.4	284.0
80°	5679.7	5154.1	1248.6	848.6	480.3	340.0	302.7	293.6	285.7	241.0	235.4
82.5°	3939.4	3451.7	801.7	551.1	361.0	263.6	239.3	235.4	224.0	183.3	177.7
85°	2078.1	1874.4	508.1	375.7	261.4	181.0	166.3	166.3	160.7	121.6	117.7
87.5°	265.3	431.7	258.0	196.3	143.7	80.3	80.3	78.6	84.3	69.0	60.0
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°	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2
2.5°	9282.5	9372.5	9286.5	9292.1	9387.2	9671.2	9800.2	9906.6	10020.8	10095.5	10128.9
5°	6728.1	6937.4	7008.1	7157.5	7378.1	7740.8	7884.5	7989.2	8058.8	8099.5	8116.5
7.5°	4601.4	4728.1	4870.1	5111.1	5591.5	5804.8	5899.8	5875.5	5797.4	5769.1	5741.4
10°	3468.7	3418.4	3391.8	3524.7	3913.4	4128.4	4195.7	4130.1	4087.1	4096.7	4143.1
12.5°	2687.4	2599.7	2493.3	2478.1	2734.3	2926.7	2969.7	2973.1	3051.7	3120.8	3223.7
15°	1958.7	1949.1	1897.0	1865.3	2010.7	2168.0	2186.7	2220.1	2291.4	2341.7	2431.1
17.5°	1381.0	1431.4	1472.7	1493.1	1603.4	1715.4	1695.0	1678.1	1665.0	1665.0	1708.0
20°	1114.0	1147.4	1200.0	1259.4	1372.0	1450.1	1399.7	1332.4	1283.7	1269.0	1274.7
22.5°	1003.7	1029.7	1059.7	1111.7	1213.0	1267.3	1213.0	1164.3	1115.7	1098.7	1093.1
25°	947.7	981.0	1009.3	1048.4	1123.0	1160.4	1108.3	1072.7	1042.7	1022.3	1007.1
27.5°	916.0	945.4	953.3	972.0	1035.4	1068.7	1042.7	1028.0	1009.3	990.7	972.0
30°	882.0	876.4	863.4	865.1	916.0	949.4	947.7	951.1	949.4	943.7	940.3
32.5°	805.7	794.3	783.0	794.3	840.7	870.7	873.0	880.3	880.3	878.6	893.3
35°	671.0	691.4	704.4	738.3	794.3	820.4	809.0	790.4	757.0	736.1	734.4
37.5°	620.6	624.0	646.7	693.1	755.3	779.1	762.7	719.7	697.0	693.1	698.7
40°	596.3	599.7	612.7	655.7	717.4	741.7	727.0	695.3	674.4	672.7	682.3
42.5°	579.3	583.3	590.7	620.6	671.0	701.0	702.7	680.1	655.7	658.0	667.0
45°	569.7	572.0	569.7	585.0	631.4	667.0	682.3	667.0	646.7	650.6	661.4
47.5°	568.0	562.4	555.0	559.0	607.6	642.7	661.4	655.7	646.7	650.6	659.7
50°	560.7	547.7	538.0	536.3	585.0	622.3	639.3	639.3	642.7	650.6	659.7
52.5°	538.0	523.3	523.3	517.7	569.7	605.4	616.7	618.4	624.0	637.1	650.6
55°	510.3	504.7	510.3	500.7	559.0	592.4	598.0	602.0	605.4	616.7	635.4
57.5°	486.0	478.6	491.7	487.7	549.4	579.3	579.3	586.7	586.7	602.0	616.7
60°	473.0	457.7	463.4	467.3	536.3	568.0	564.6	572.0	575.4	589.0	599.7
62.5°	456.0	443.0	443.0	452.0	521.6	551.1	549.4	555.0	569.7	573.7	585.0
65°	435.6	430.0	424.3	435.6	506.4	532.4	534.6	542.0	555.0	559.0	568.0
67.5°	414.7	417.0	405.7	417.0	493.3	513.7	513.7	529.0	534.6	542.0	551.1
70°	392.6	394.3	384.7	398.3	484.3	493.3	491.7	512.0	516.0	521.6	530.7
72.5°	364.4	364.4	361.0	379.6	469.0	473.0	469.0	486.0	487.7	493.3	497.3
75°	334.4	334.4	331.0	357.0	460.0	450.3	439.0	452.0	456.0	460.0	460.0
77.5°	295.3	299.3	299.3	331.0	427.7	441.3	403.4	411.3	417.0	418.7	413.0
80°	246.7	256.3	259.7	301.0	358.7	407.4	361.0	366.1	368.3	368.3	361.0
82.5°	189.0	205.4	215.0	259.7	275.0	341.7	314.0	319.7	314.0	302.7	299.3
85°	130.7	153.3	164.6	198.0	207.6	263.6	261.4	261.4	250.6	235.4	233.7
87.5°	71.3	84.3	91.7	117.7	142.0	177.7	192.4	186.7	177.7	168.0	170.3
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°	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2
2.5°	10304.9	10558.9	10964.5	11274.6	11586.9	11887.9	12213.2	12461.6	12672.6	12755.2	13005.3
5°	8286.8	8604.2	8987.2	9678.6	10168.5	10708.2	11332.9	12158.9	12476.3	12915.9	13635.0
7.5°	5859.1	6146.5	6763.2	7322.1	8015.8	8780.1	9622.5	10762.6	11179.5	11883.9	13055.6
10°	4375.1	4709.4	5204.5	5675.8	6286.8	7068.1	8036.1	9310.8	9817.2	10581.5	11930.9
12.5°	3524.7	3919.1	4444.1	4887.1	5360.1	5911.1	6851.4	8248.9	8927.8	9596.5	10960.6
15°	2707.8	3120.8	3609.0	4171.4	4692.5	5287.1	6272.1	7800.8	8581.5	9279.1	10442.9
17.5°	1874.4	2227.4	2842.4	3429.1	4096.7	4857.1	6111.4	7895.8	8828.2	9632.2	10532.9
20°	1329.0	1530.4	2035.1	2715.7	3547.4	4501.8	6081.4	8396.5	9609.5	10527.2	11108.2
22.5°	1117.4	1192.1	1485.7	2109.7	3070.4	4236.5	6186.1	9099.2	10663.6	11835.3	12025.9
25°	1018.4	1063.6	1216.4	1656.0	2646.1	4044.1	6539.1	10145.9	11968.2	13143.9	13109.9
27.5°	964.1	1011.0	1111.7	1398.0	2327.0	3924.7	6892.2	11387.2	13459.6	14563.9	14145.3
30°	947.7	1011.0	1117.4	1317.7	2099.0	3735.8	7181.8	12476.3	14606.9	15522.9	14616.6
32.5°	934.6	943.7	992.4	1136.1	1881.7	3515.1	7378.1	13453.9	15730.0	16434.9	15294.9
35°	755.3	801.7	880.3	1018.4	1755.0	3382.7	7378.1	14296.9	16836.6	17356.0	15941.6
37.5°	727.0	768.3	837.3	955.0	1683.7	3317.1	7230.5	15109.9	17967.0	18401.0	16474.0
40°	712.3	745.7	811.3	906.4	1653.7	3242.4	7015.5	15827.3	19071.4	19447.1	16971.3
42.5°	701.0	731.0	792.6	876.4	1614.7	3160.4	6841.8	16402.7	20030.4	20340.4	17445.9
45°	695.3	727.0	794.3	891.6	1536.1	3051.7	6784.1	17025.0	20819.0	21086.1	17959.7
47.5°	695.3	732.7	803.4	923.3	1442.7	2939.7	6965.1	17845.9	21564.7	21695.4	18565.0
50°	689.7	731.0	830.0	891.6	1306.4	2797.7	7391.2	18879.0	22372.1	22386.8	19331.6
52.5°	678.4	727.0	893.3	873.0	1149.1	2611.0	7967.1	20206.3	23566.4	23655.8	20531.1
55°	665.3	721.4	876.4	830.0	1020.6	2388.7	8437.8	21818.8	25244.5	25492.8	22295.7
57.5°	648.4	714.0	848.6	770.0	936.3	2102.4	8608.1	23000.1	26416.2	27040.2	24283.8
60°	633.7	708.3	766.0	734.4	883.7	1861.4	8278.8	22766.4	26335.8	27681.2	26046.2
62.5°	618.4	714.0	698.7	712.3	859.4	1706.3	7419.5	20895.4	25003.4	27019.8	27352.5
65°	602.0	663.6	659.7	693.1	854.3	1644.7	6150.4	18090.4	22428.1	24928.8	27660.8
67.5°	579.3	612.7	631.4	669.3	873.0	1590.4	4963.5	14922.6	18849.0	21794.4	26053.5
70°	555.0	583.3	603.7	639.3	861.7	1566.0	4128.4	11767.9	14956.6	17862.4	22882.4
72.5°	523.3	547.7	566.3	599.7	850.3	1553.0	3487.4	9477.1	11166.5	13268.9	18604.6
75°	486.0	508.1	521.6	555.0	814.7	1422.3	2741.7	8019.2	8355.8	9230.5	14818.0
77.5°	443.0	460.0	470.7	508.1	721.4	1183.0	1983.0	6186.1	6488.8	6701.5	11360.6
80°	392.6	409.0	414.7	450.3	598.0	925.0	1293.3	4569.1	4853.1	4901.8	7419.5
82.5°	334.4	351.3	351.3	384.7	489.4	665.3	848.6	3130.4	3186.4	3351.0	5244.1
85°	269.3	282.3	282.3	299.3	379.6	497.3	583.3	1571.7	1554.7	1775.4	4543.1
87.5°	192.4	202.0	211.0	215.0	271.0	328.7	351.3	478.6	315.7	362.7	2917.1
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: P299513

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CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2	11486.2
2.5°	13194.2	13300.6	13192.0	13113.9	12775.6	12497.2	12124.9	11934.3
5°	14182.6	14453.6	14362.0	14033.3	13326.6	12532.3	11629.9	11222.5
7.5°	14063.2	14692.9	14707.6	14093.2	13052.2	11882.2	10660.2	10080.8
10°	13132.6	13937.6	14167.9	13571.6	12467.2	11159.2	9757.2	9095.8
12.5°	12093.2	12881.9	13057.9	12851.9	11929.2	10614.9	9193.1	8544.2
15°	11242.9	11596.5	11805.3	11985.2	11467.5	10398.2	9160.9	8449.1
17.5°	10725.2	10686.2	10746.2	11057.9	11145.6	10646.6	9646.9	8862.2
20°	10538.5	9938.8	9923.5	10353.5	10994.5	11239.5	10596.2	9654.2
22.5°	10641.5	9669.5	9546.2	10056.5	11074.9	12093.2	11840.9	10766.5
25°	10996.2	9692.1	9592.6	10086.5	11366.2	13003.6	13184.6	12205.3
27.5°	11555.2	9834.1	9702.9	10209.8	11753.2	13767.9	14507.9	13599.9
30°	12085.9	10080.8	9917.9	10452.5	12106.3	14070.6	15319.2	14687.3
32.5°	12730.9	10542.5	10256.2	10898.9	12543.6	14552.6	16042.3	15588.0
35°	13362.3	11199.9	10845.2	11588.6	13031.3	15152.9	16868.3	16739.3
37.5°	14055.9	12059.9	11766.2	12480.2	13698.9	15718.7	17922.3	18088.7
40°	14795.9	13199.9	12851.9	13780.9	14734.2	16429.3	19023.3	19422.7
42.5°	15541.6	14464.9	14050.2	14991.7	15872.0	17129.7	19964.7	20557.7
45°	16395.3	15838.6	15642.3	16660.7	16965.6	17797.3	20660.1	21396.7
47.5°	17389.9	17397.3	17713.0	18120.3	18068.3	18552.0	21359.3	22145.8
50°	18550.3	19342.4	20040.0	20310.4	19204.3	19363.3	22329.1	23149.4
52.5°	19944.4	21669.4	22532.7	22355.1	20428.7	20353.4	23865.1	24532.2
55°	21688.1	24132.7	24990.4	24863.1	21835.7	21702.8	25779.1	26167.8
57.5°	23706.1	26519.1	27307.8	26735.8	23525.1	23183.4	27362.1	27444.2
60°	25479.8	28410.5	29101.9	28468.2	25229.8	24758.5	28350.5	27952.2
62.5°	26466.5	29051.5	29537.5	28855.2	26397.5	26436.5	28567.2	27677.8
65°	26025.8	27431.1	27587.9	27531.9	26096.5	27410.2	27788.1	26408.8
67.5°	23611.1	23334.4	23598.1	23962.4	23517.7	26128.2	25629.2	23644.5
70°	19357.7	17838.0	18363.6	18608.0	18810.0	22484.1	22244.8	19258.7
72.5°	14588.3	12497.2	12911.9	12861.5	13795.6	18034.3	17300.0	14160.5
75°	10336.5	8473.5	8525.5	8505.2	9626.5	14109.6	12527.2	9688.2
77.5°	7232.2	6139.1	6167.4	6282.8	6471.8	10641.5	8949.8	7077.2
80°	4973.1	4659.1	4814.1	4823.7	4485.4	7148.4	6612.1	5679.7
82.5°	3704.1	3238.4	3201.1	3255.4	3515.1	5791.7	5081.1	3939.4
85°	3033.1	1917.4	1541.7	1932.7	3115.1	5735.7	3375.4	2078.1
87.5°	1708.0	910.3	411.3	762.7	1243.0	3797.4	975.4	265.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)