

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: P299023

Luminaire Tested: **GLNA-AF-09-LED-E1-SLL-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299023
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-09-LED-E1-SLL-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26678.9 lumens
Efficiency: N/A
Efficacy: 92.0 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 - G4

Input Watts (W): 290
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

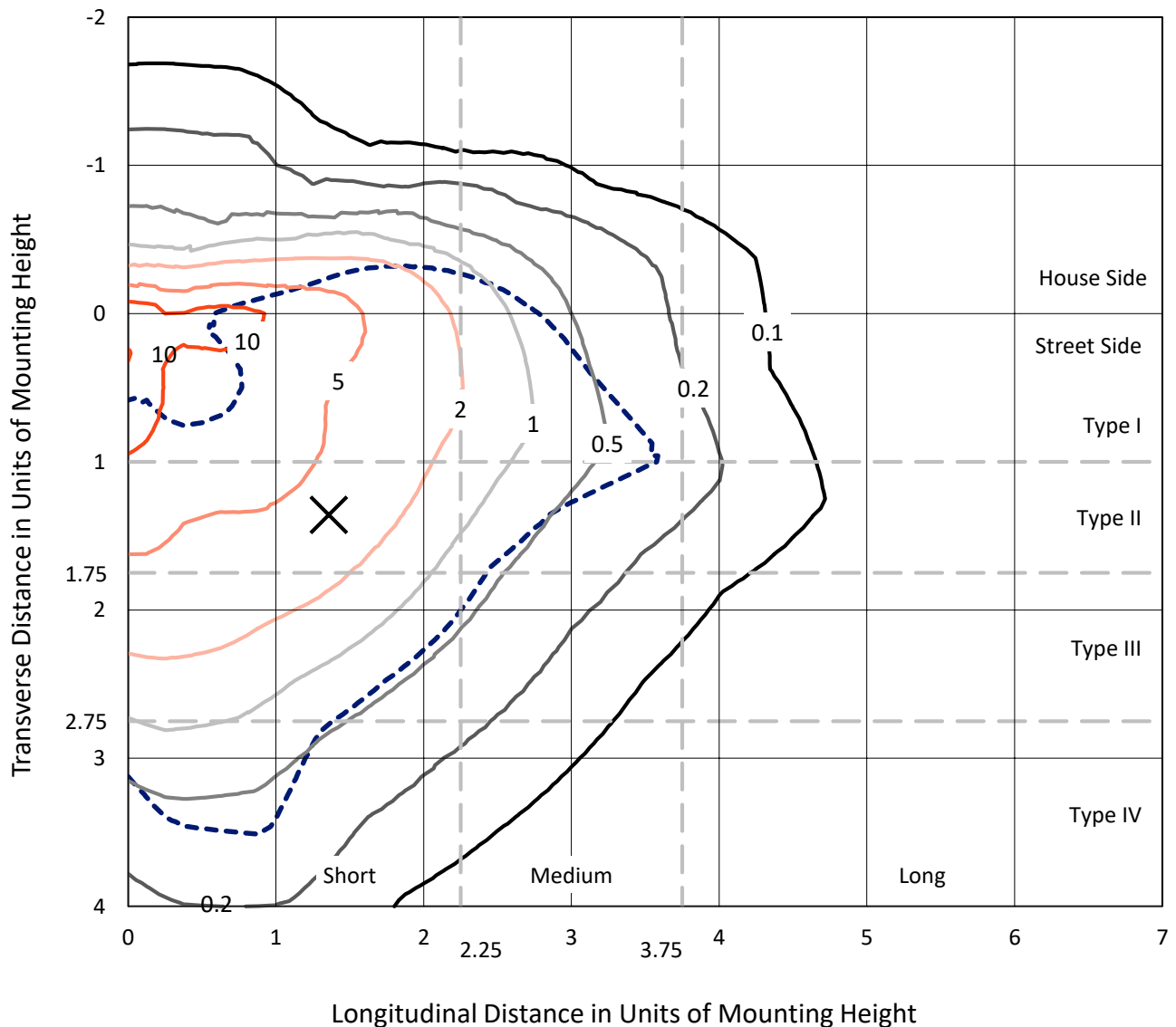


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

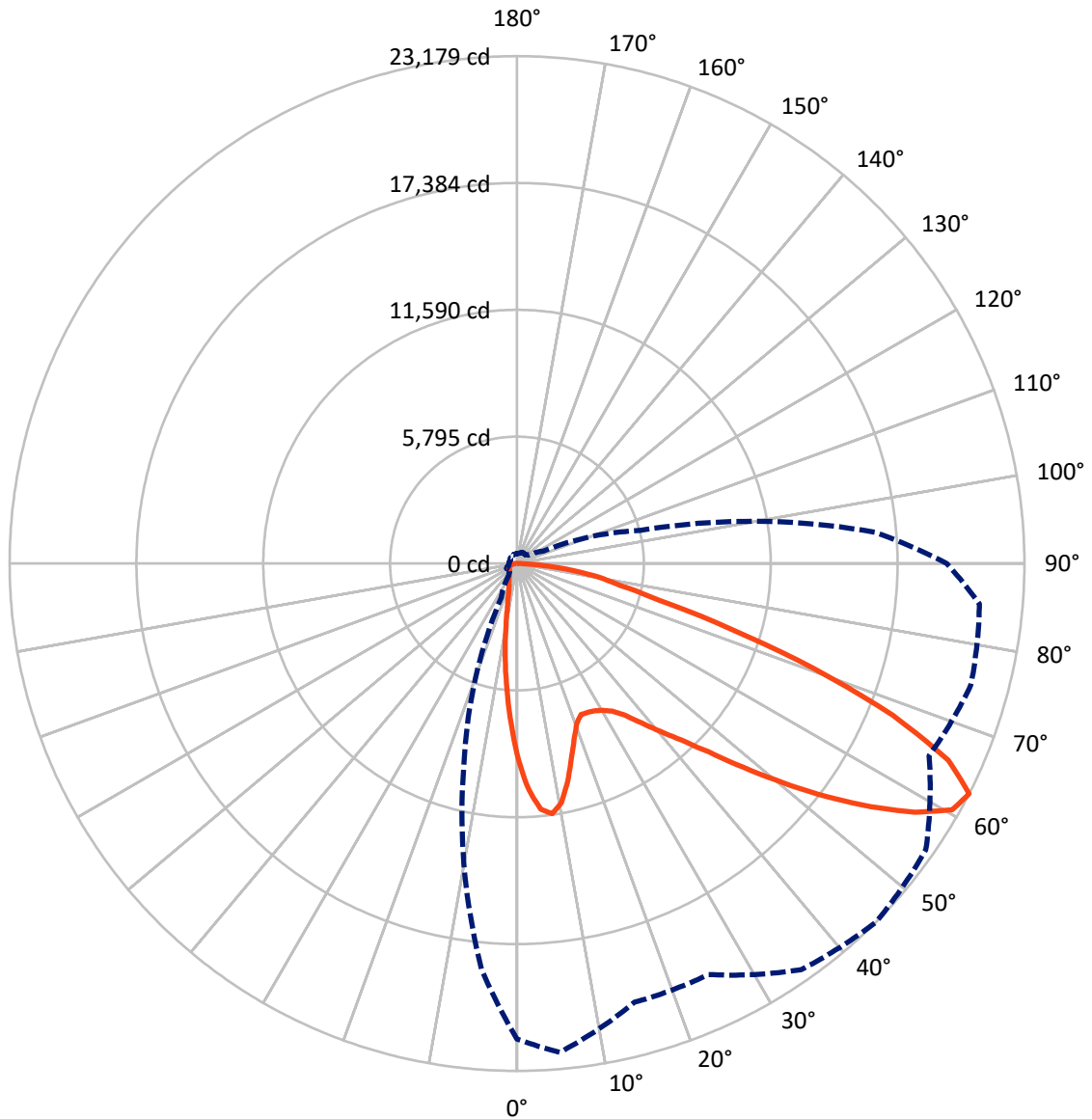


Based on 25 foot mounting height. Maximum calculated value = 17 fc
 Type IV - Short - Non-Cutoff

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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	4415.0	0.0	4415.0
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	22263.9	0.0	22263.9
	% Fixture	83.5	0.0	83.5
Total	Lumens	26678.9	0.0	26678.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	656.1	2.5
10°-20°	1203.2	4.5
20°-30°	1754.3	6.6
30°-40°	2701.8	10.1
40°-50°	3976.3	14.9
50°-60°	5832.5	21.9
60°-70°	6519.8	24.4
70°-80°	3192.0	12.0
80°-90°	842.8	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°	26678.9	100.0
0°-180°	26678.9	100.0

Coefficient of Utilization



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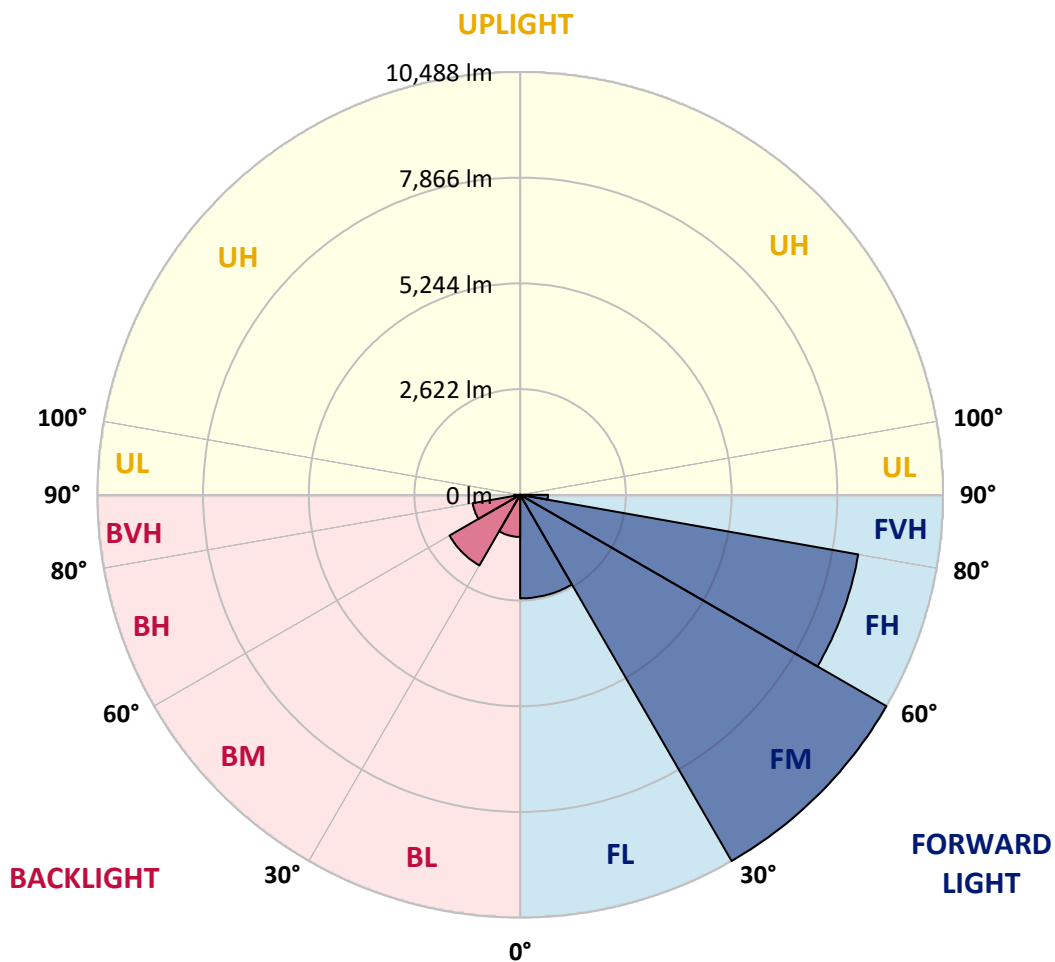
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2569.1	9.6			
FM	(30°-60°)	10487.7	39.3			
FH	(60°-80°)	8515.0	31.9			G4/12000
FVH	(80°-90°)	692.1	2.6			G4/750
BL	(0°-30°)	1044.5	3.9	B3/2500		
BM	(30°-60°)	2022.9	7.6	B2/2500		
BH	(60°-80°)	1196.9	4.5	B3/2500		G3/2500
BVH	(80°-90°)	150.7	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9
2.5°	9365.2	9515.2	9807.0	10025.1	10291.2	10352.6	10437.9	10354.1	10206.0	10009.4	9945.1
5°	8806.8	9126.7	9834.6	10458.3	11012.5	11270.5	11342.9	11129.6	10700.2	10135.5	9790.8
7.5°	7910.8	8365.4	9324.3	10242.7	11059.2	11541.9	11530.0	11035.8	10245.5	9325.7	8773.0
10°	7137.6	7657.0	8757.2	9783.7	10650.2	11118.2	10937.3	10306.0	9362.4	8303.5	7704.1
12.5°	6705.3	7214.2	8330.2	9360.9	10085.5	10246.9	10108.9	9490.0	8601.1	7530.8	7005.7
15°	6630.1	7189.5	8160.2	8999.1	9405.2	9264.8	9100.0	8822.9	8195.0	7281.4	6734.3
17.5°	6954.8	7570.3	8355.4	8746.8	8677.7	8432.6	8385.9	8416.8	8265.9	7558.4	6928.1
20°	7576.5	8315.4	8820.1	8628.2	8125.0	7787.4	7799.3	8270.2	8717.3	8261.2	7540.8
22.5°	8448.7	9292.4	9490.0	8691.1	7891.7	7491.3	7588.4	8351.1	9437.6	9288.1	8368.3
25°	9578.0	10346.9	10204.6	8919.6	7915.0	7528.0	7605.6	8629.7	10287.9	10314.5	9392.4
27.5°	10672.1	11385.3	10804.0	9223.3	8012.2	7614.6	7717.5	9067.7	11100.6	11429.1	10562.6
30°	11525.7	12021.8	11041.5	9500.4	8202.6	7783.2	7910.8	9484.2	11470.5	12181.3	11462.9
32.5°	12232.7	12588.8	11420.0	9843.7	8553.0	8048.3	8273.1	9990.3	12002.8	12897.3	12344.1
35°	13135.9	13237.3	11890.9	10226.5	9094.3	8510.6	8789.1	10485.9	12510.3	13620.1	13212.5
37.5°	14195.2	14064.7	12335.1	10750.2	9794.2	9233.3	9463.8	11030.1	12927.8	14439.9	14099.5
40°	15242.1	14927.9	12893.1	11562.4	10814.9	10085.5	10358.3	11610.9	13318.2	15261.1	14966.4
42.5°	16132.4	15667.3	13442.5	12455.5	11764.7	11025.8	11351.5	12196.1	13690.5	15962.0	15718.7
45°	16790.8	16212.9	13966.2	13313.5	13074.5	12275.1	12429.3	12865.9	14093.8	16547.5	16337.6
47.5°	17378.8	16761.3	14558.4	14179.0	14219.9	13900.0	13652.0	13646.2	14569.4	17025.5	16922.7
50°	18166.3	17522.6	15195.0	15070.2	15938.6	15725.8	15178.8	14557.0	15170.2	17568.3	17556.4
52.5°	19251.8	18728.5	15972.4	16031.0	17543.5	17682.6	17004.6	15651.5	16111.4	18563.8	18493.8
55°	20535.3	20229.6	17031.7	17135.5	19511.2	19611.2	18937.5	17019.4	17496.4	20005.9	19810.7
57.5°	21536.5	21472.3	18192.9	18461.4	20980.9	21429.9	20811.0	18603.8	19056.6	21219.9	20730.0
60°	21935.5	22247.8	19429.3	19798.8	22340.6	22837.2	22294.9	19994.9	20439.6	21723.2	20667.2
62.5°	21720.3	22417.8	20746.2	20715.3	22643.9	23179.0	22797.7	20769.5	21465.1	21203.7	19621.7
65°	20724.3	21806.5	21510.3	20479.1	21605.6	21649.4	21526.1	20423.4	21707.0	19562.6	17600.2
67.5°	18554.8	20112.5	20503.9	18455.7	18804.2	18518.6	18311.5	18528.6	20445.3	17103.1	14791.7
70°	15113.1	17456.9	17644.0	14761.3	14602.7	14410.4	13998.6	15190.7	17956.8	14017.6	11737.1
72.5°	11112.5	13576.3	14152.3	10826.3	10093.2	10132.2	9807.0	11447.6	14599.9	10412.6	8763.0
75°	7602.7	9830.4	11073.0	7554.2	6674.8	6690.5	6649.1	8111.7	11628.6	7243.3	6557.2
77.5°	5554.1	7023.3	8351.1	5078.5	4930.4	4839.5	4817.6	5675.5	8915.3	5259.4	5091.8
80°	4456.7	5188.9	5609.3	3519.8	3784.9	3777.8	3655.9	3902.5	5822.1	3846.8	3808.3
82.5°	3091.7	3987.8	4544.8	2758.5	2554.7	2511.9	2541.9	2906.5	4115.3	2629.5	2500.4
85°	1631.1	2648.5	4501.0	2444.7	1516.4	1209.8	1504.9	2380.0	3565.5	1393.5	1219.7
87.5°	208.5	765.6	2979.9	975.5	598.4	322.3	714.6	1340.2	2289.5	284.2	248.0
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°	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9
2.5°	9779.4	9584.2	9329.0	9092.4	8847.7	8603.9	8285.9	8086.4	7948.8	7922.2	7864.1
5°	9541.8	8893.4	8403.5	7979.8	7595.6	7052.4	6751.9	6502.5	6369.2	6356.3	6323.9
7.5°	8445.9	7551.3	6890.0	6290.1	5746.0	5307.5	4823.3	4598.1	4505.3	4527.2	4549.1
10°	7306.1	6306.3	5546.5	4933.3	4453.8	4084.4	3695.9	3433.6	3251.2	3214.6	3207.4
12.5°	6473.4	5376.5	4639.0	4205.8	3835.4	3487.4	3075.6	2765.6	2530.0	2449.0	2395.2
15°	6121.1	4921.8	4149.1	3682.6	3273.1	2831.8	2449.0	2124.8	1908.2	1837.7	1798.2
17.5°	6196.3	4795.7	3811.6	3214.6	2691.4	2230.5	1748.2	1470.6	1340.2	1306.9	1306.9
20°	6589.6	4772.4	3532.6	2783.7	2130.5	1596.8	1201.2	1042.6	1000.3	996.0	1007.4
22.5°	7140.9	4854.7	3325.0	2410.0	1655.9	1166.0	935.5	877.0	857.9	862.7	875.5
25°	7962.2	5131.8	3174.1	2076.7	1299.3	954.6	834.1	799.4	790.3	802.2	818.4
27.5°	8935.8	5408.9	3079.8	1825.8	1096.9	872.7	793.2	757.0	762.7	777.5	791.7
30°	9790.8	5636.5	2931.8	1647.3	1034.1	877.0	793.2	743.7	737.9	740.8	745.1
32.5°	10558.3	5790.2	2758.5	1476.8	891.7	778.9	740.8	733.7	700.8	688.9	690.8
35°	11219.6	5790.2	2654.7	1377.3	799.4	690.8	629.4	592.7	576.1	577.5	594.2
37.5°	11857.6	5674.1	2603.3	1321.2	749.4	657.0	602.7	570.4	548.5	544.2	547.0
40°	12420.3	5505.5	2544.7	1297.8	711.3	636.5	585.6	558.5	535.1	528.0	529.4
42.5°	12872.1	5368.9	2480.0	1267.4	687.5	621.8	573.2	549.9	523.7	516.1	514.7
45°	13360.6	5323.7	2395.2	1205.5	699.4	623.2	570.4	545.6	518.9	510.4	507.5
47.5°	14004.3	5466.0	2307.1	1132.1	724.6	630.8	574.6	545.6	517.5	510.4	507.5
50°	14815.0	5800.2	2195.3	1025.0	699.4	651.3	573.2	540.8	517.5	510.4	504.7
52.5°	15856.7	6252.0	2049.1	902.2	684.6	700.8	570.4	532.3	510.4	500.4	489.9
55°	17122.2	6621.5	1873.9	800.8	651.3	687.5	566.1	522.3	498.9	484.2	475.1
57.5°	18049.1	6754.8	1650.1	735.1	604.2	665.6	559.9	508.9	484.2	472.3	460.9
60°	17865.9	6496.8	1460.7	693.7	576.1	601.3	555.6	497.0	470.9	462.3	451.3
62.5°	16398.1	5822.1	1338.8	674.6	558.5	548.5	559.9	485.6	459.4	449.9	447.1
65°	14196.6	4826.2	1290.7	670.3	544.2	517.5	520.8	472.3	445.6	438.5	435.6
67.5°	11710.4	3895.4	1248.3	684.6	525.1	495.6	481.3	454.7	432.3	425.2	419.4
70°	9234.8	3239.8	1228.8	676.1	501.8	473.7	458.0	435.6	416.6	409.0	404.7
72.5°	7436.6	2736.6	1218.3	667.0	470.9	444.2	429.4	410.4	389.9	387.1	382.8
75°	6293.5	2151.5	1116.4	639.4	435.6	409.0	399.0	381.4	360.9	360.9	358.0
77.5°	4854.7	1555.9	928.4	566.1	399.0	369.4	360.9	347.5	324.2	328.5	327.1
80°	3585.9	1015.0	726.0	469.4	353.7	325.6	320.9	308.0	282.8	289.0	289.0
82.5°	2456.6	665.6	522.3	384.2	301.8	275.7	275.7	262.3	234.7	237.6	246.6
85°	1233.6	458.0	389.9	297.6	234.7	221.4	221.4	211.4	183.3	184.7	196.6
87.5°	375.6	275.7	258.0	212.8	168.5	165.7	158.1	150.9	133.3	131.9	139.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9
2.5°	7774.1	7690.3	7589.9	7366.6	7291.8	7287.1	7355.2	7284.2	7419.4	7362.3	7425.1
5°	6269.2	6187.8	6074.5	5790.2	5616.9	5499.3	5444.1	5279.9	5398.4	5311.8	5384.1
7.5°	4611.0	4630.0	4555.3	4388.1	4011.1	3822.1	3710.7	3610.7	3697.3	3688.3	3826.4
10°	3241.2	3292.2	3239.8	3071.3	2765.6	2661.8	2682.3	2721.8	2835.1	2893.2	3106.0
12.5°	2333.3	2330.5	2296.7	2145.7	1944.8	1956.3	2040.1	2108.6	2212.9	2274.8	2491.4
15°	1742.0	1715.8	1701.1	1577.8	1463.5	1488.7	1529.7	1536.8	1603.0	1639.7	1815.8
17.5°	1316.9	1330.2	1345.9	1258.3	1171.7	1155.5	1123.6	1083.6	1103.1	1110.2	1197.8
20°	1045.5	1098.3	1138.3	1076.4	988.8	941.2	900.3	874.1	874.1	872.7	897.4
22.5°	913.6	951.7	994.6	951.7	872.7	831.3	807.9	787.5	784.6	784.6	807.9
25°	842.2	869.8	910.8	881.7	822.7	791.7	769.8	743.7	733.7	730.3	746.5
27.5°	806.5	818.4	838.9	812.2	762.7	747.9	742.2	718.9	705.1	698.0	714.6
30°	746.5	743.7	745.1	718.9	678.9	677.5	687.5	692.2	687.5	686.0	711.3
32.5°	690.8	684.6	683.2	659.9	623.2	614.6	623.2	632.3	642.2	657.0	686.0
35°	620.3	635.1	643.7	623.2	578.9	552.7	542.7	526.6	517.5	517.5	551.3
37.5°	564.6	598.4	611.8	592.7	544.2	507.5	489.9	487.0	488.5	494.2	526.6
40°	545.6	570.4	581.8	563.2	514.7	481.3	470.9	468.0	470.9	479.9	511.8
42.5°	533.7	551.3	549.9	526.6	487.0	463.7	458.0	454.7	458.0	466.6	501.8
45°	523.7	535.1	523.7	495.6	459.4	447.1	448.5	447.1	449.9	459.4	492.8
47.5°	514.7	518.9	504.7	476.6	438.5	435.6	441.3	445.6	448.5	456.6	491.3
50°	501.8	501.8	488.5	459.4	420.9	422.3	429.4	439.9	441.3	449.9	478.5
52.5°	485.6	484.2	475.1	447.1	406.1	410.4	410.4	422.3	425.2	435.6	465.1
55°	472.3	469.4	465.1	438.5	393.3	400.4	396.1	400.4	407.5	418.0	449.9
57.5°	460.9	454.7	454.7	430.9	382.8	385.6	375.6	381.4	389.9	399.0	432.3
60°	448.5	442.8	445.6	420.9	366.6	363.7	359.4	370.9	374.2	384.2	418.0
62.5°	435.6	430.9	432.3	409.0	355.2	347.5	347.5	358.0	359.4	374.2	406.1
65°	425.2	419.4	418.0	397.5	341.8	333.3	337.5	341.8	344.7	359.4	389.9
67.5°	415.2	403.3	403.3	387.1	327.1	318.0	327.1	325.6	330.4	343.3	368.0
70°	401.8	385.6	387.1	379.9	312.3	301.8	309.5	308.0	310.9	319.5	344.7
72.5°	381.4	368.0	370.9	368.0	297.6	282.8	285.7	285.7	285.7	293.3	319.5
75°	355.2	344.7	353.7	360.9	279.9	259.5	262.3	262.3	258.0	262.3	294.7
77.5°	322.3	316.6	346.1	336.1	259.5	234.7	234.7	231.9	223.3	229.0	263.8
80°	287.6	282.8	319.5	281.4	236.1	204.2	200.9	193.3	184.7	189.0	224.7
82.5°	250.9	246.6	268.5	215.7	204.2	168.5	161.4	148.1	139.5	143.8	175.7
85°	205.7	205.7	207.1	162.8	155.2	129.0	120.5	102.8	92.4	95.2	126.2
87.5°	146.6	150.9	139.5	111.4	92.4	71.9	66.2	55.7	46.7	54.3	66.2
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: P299023

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CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9	9013.9
2.5°	7747.9	7909.3	8092.6	8326.9	8528.2	8857.7	9174.8	9365.2
5°	5793.1	6061.6	6395.4	6825.7	7226.1	7827.0	8424.0	8806.8
7.5°	4145.8	4433.4	4794.3	5330.8	5897.4	6663.9	7453.2	7910.8
10°	3430.7	3725.4	4028.7	4391.0	4854.7	5688.8	6621.5	7137.6
12.5°	2838.0	3153.2	3480.2	3861.6	4291.0	5036.1	6111.1	6705.3
15°	2171.9	2523.8	2909.4	3392.2	3930.1	4791.4	5985.0	6630.1
17.5°	1488.7	1882.0	2355.2	2950.8	3609.3	4711.9	6211.1	6954.8
20°	1025.0	1311.2	1817.2	2515.2	3307.4	4701.9	6644.8	7576.5
22.5°	857.9	985.5	1355.0	2114.8	3079.8	4828.1	7318.5	8448.7
25°	793.2	869.8	1082.2	1767.3	2914.2	5118.5	8245.4	9578.0
27.5°	755.6	824.1	982.7	1540.2	2783.7	5455.5	9147.2	10672.1
30°	769.8	840.3	954.6	1424.0	2606.1	5736.9	9948.0	11525.7
32.5°	693.7	724.6	818.4	1321.2	2478.5	5973.1	10648.8	12232.7
35°	591.3	645.1	730.3	1273.1	2481.4	6131.6	11412.9	13135.9
37.5°	563.2	617.5	678.9	1255.5	2515.2	6300.6	12289.9	14195.2
40°	545.6	595.6	648.4	1245.5	2547.6	6454.4	13149.7	15242.1
42.5°	533.7	578.9	645.1	1209.8	2563.8	6592.5	13856.2	16132.4
45°	532.3	578.9	657.0	1174.5	2588.5	6740.5	14448.9	16790.8
47.5°	533.7	598.4	635.1	1132.1	2588.5	6988.1	15144.0	17378.8
50°	528.0	630.8	611.8	1072.2	2528.5	7457.5	16097.2	18166.3
52.5°	525.1	626.5	566.1	979.8	2424.3	8202.6	17318.8	19251.8
55°	517.5	604.2	533.7	842.2	2302.9	9015.3	18627.1	20535.3
57.5°	510.4	535.1	516.1	721.8	2114.8	9587.1	19527.4	21536.5
60°	571.8	468.0	501.8	662.7	1863.9	9743.7	19492.7	21935.5
62.5°	529.4	438.5	482.8	649.9	1688.2	9303.8	18591.9	21720.3
65°	415.2	419.4	463.7	687.5	1641.1	8138.3	16996.0	20724.3
67.5°	379.9	400.4	444.2	736.5	1645.9	6515.8	14611.8	18554.8
70°	358.0	379.9	422.3	761.3	1657.3	4857.6	11551.9	15113.1
72.5°	333.3	352.3	397.5	765.6	1580.6	3528.3	8903.9	11112.5
75°	303.3	320.9	362.3	667.0	1309.7	2447.6	6811.0	7602.7
77.5°	269.9	282.8	318.0	514.7	972.7	1566.3	5112.3	5554.1
80°	230.4	237.6	267.1	377.1	665.6	979.8	4044.9	4456.7
82.5°	184.7	187.6	207.1	282.8	432.3	629.4	2709.0	3091.7
85°	130.4	130.4	142.4	205.7	294.7	399.0	1470.6	1631.1
87.5°	61.4	62.8	62.8	112.8	153.8	202.8	339.0	208.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)