

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: P298933

Luminaire Tested: **GLNA-AF-04-LED-E1-SLL-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298933
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-04-LED-E1-SLL-7027-800
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14762.9 lumens
Efficiency: N/A
Efficacy: 86.3 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): 171
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

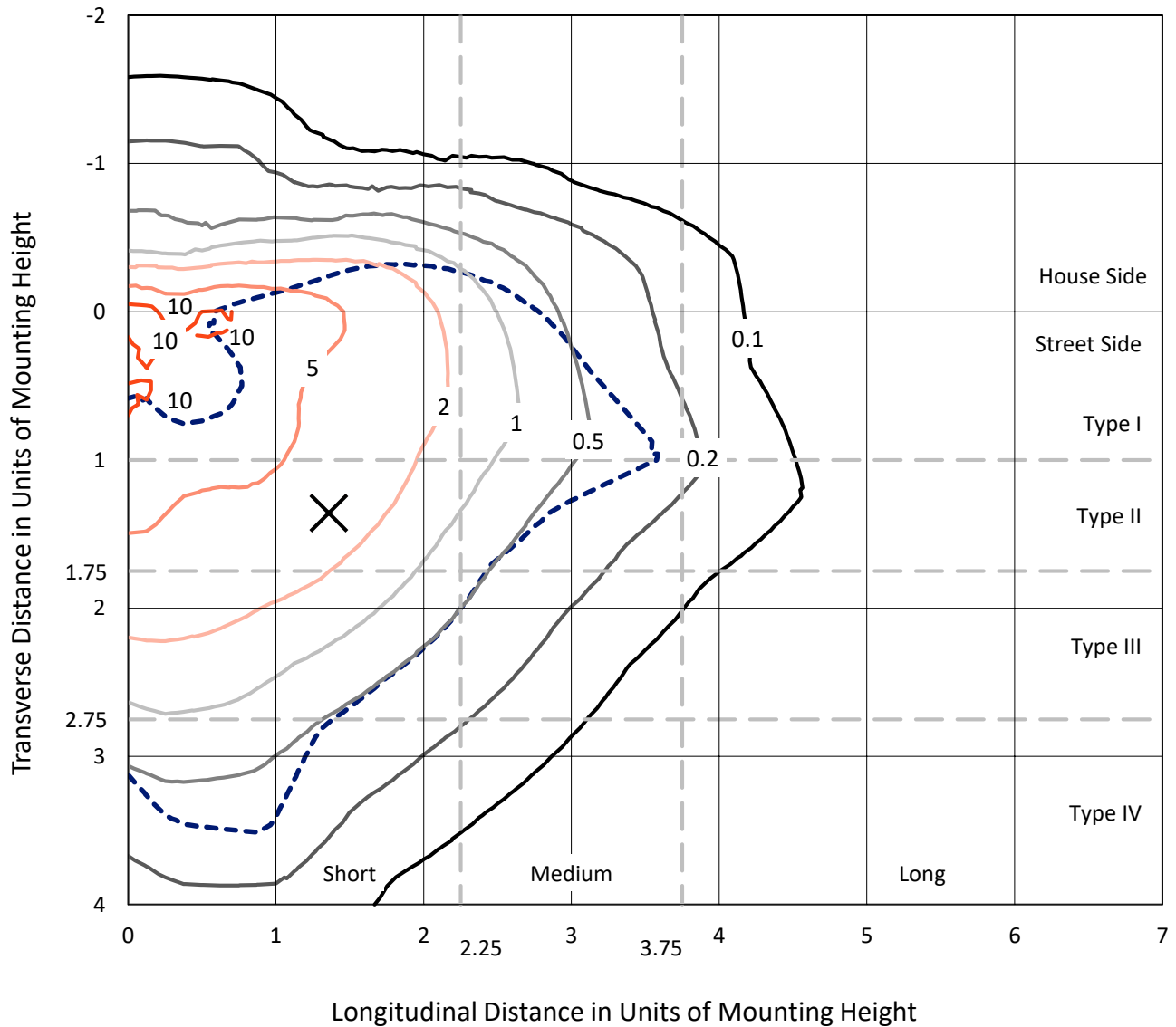


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Iso-Footcandle Lines of Horizontal Illumination

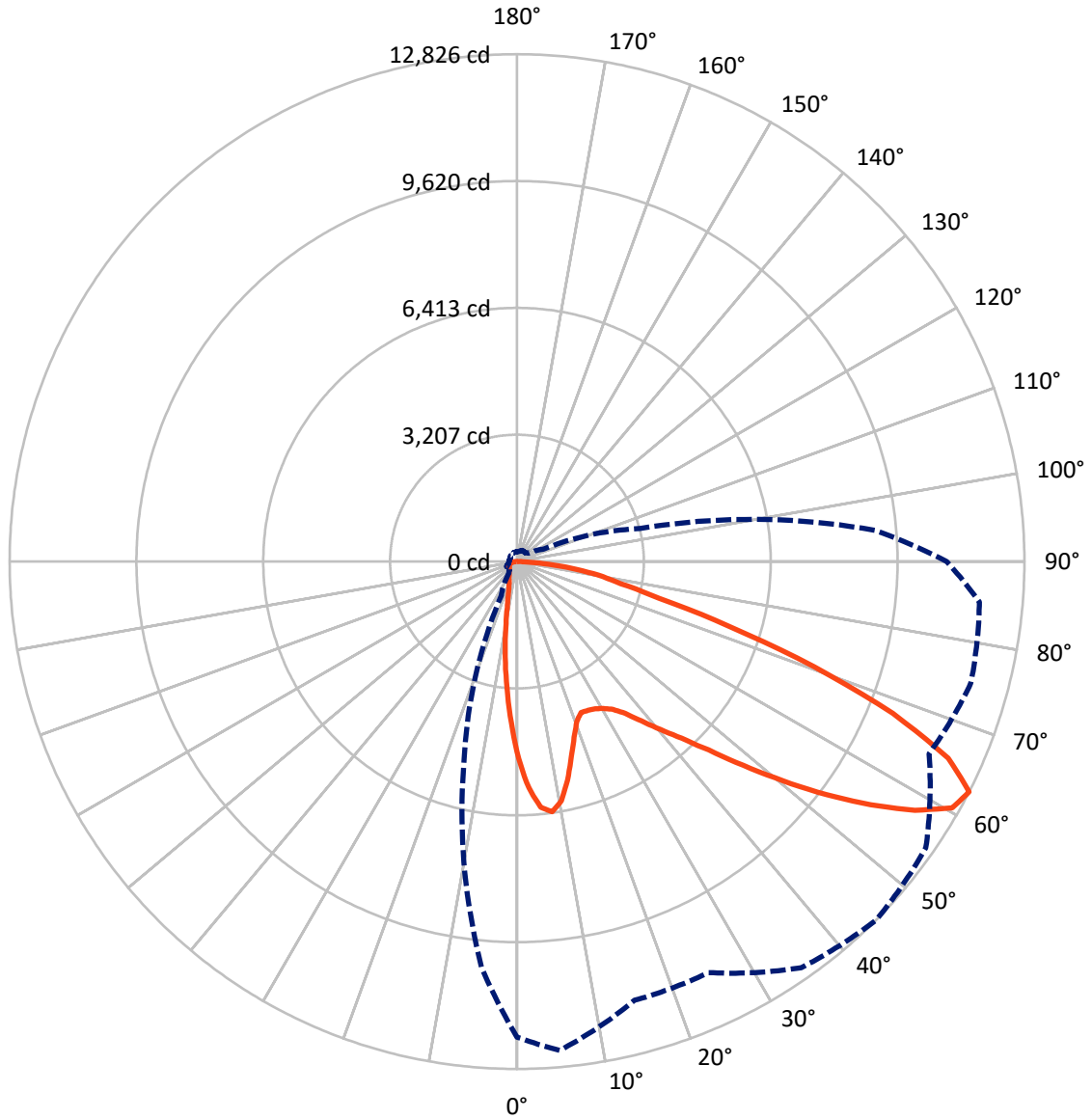
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 14.7 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	2443.0	0.0	2443.0
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	12319.8	0.0	12319.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	14762.9	0.0	14762.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.1	2.5
10°-20°	665.8	4.5
20°-30°	970.7	6.6
30°-40°	1495.1	10.1
40°-50°	2200.3	14.9
50°-60°	3227.4	21.9
60°-70°	3607.8	24.4
70°-80°	1766.3	12.0
80°-90°	466.4	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°	14762.9	100.0
0°-180°	14762.9	100.0

Coefficient of Utilization



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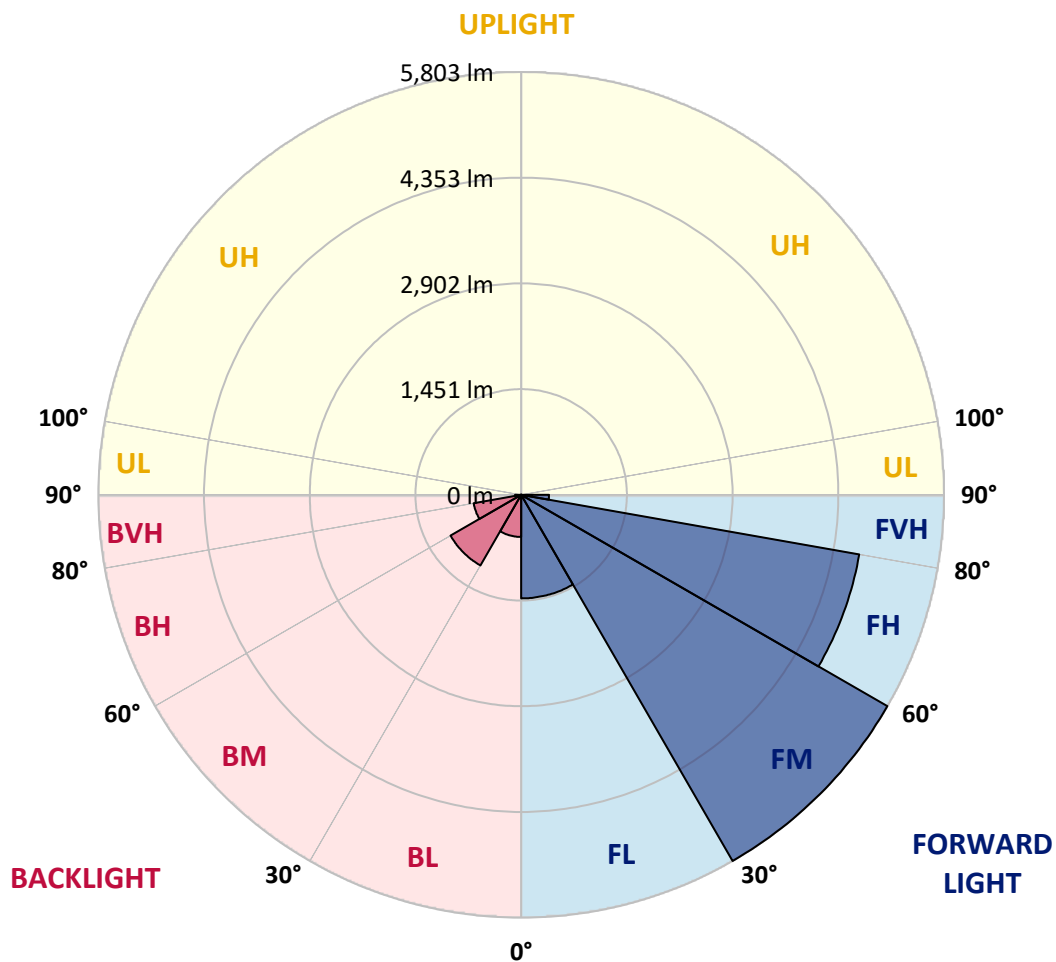
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1421.6	9.6			
FM	(30°-60°)	5803.4	39.3			
FH	(60°-80°)	4711.8	31.9			G2/5000
FVH	(80°-90°)	383.0	2.6			G3/500
BL	(0°-30°)	578.0	3.9	B2/1000		
BM	(30°-60°)	1119.4	7.6	B2/2500		
BH	(60°-80°)	662.3	4.5	B2/1000		G2/1000
BVH	(80°-90°)	83.4	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°	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9
2.5°	5182.3	5265.3	5426.8	5547.4	5694.7	5728.7	5775.8	5729.5	5647.5	5538.7	5503.2
5°	4873.3	5050.3	5442.0	5787.2	6093.8	6236.6	6276.6	6158.6	5921.0	5608.5	5417.8
7.5°	4377.4	4629.0	5159.6	5667.8	6119.6	6386.8	6380.2	6106.7	5669.4	5160.4	4854.6
10°	3949.6	4237.0	4845.9	5413.9	5893.3	6152.3	6052.2	5702.9	5180.7	4594.8	4263.1
12.5°	3710.4	3992.0	4609.5	5179.9	5580.9	5670.2	5593.8	5251.3	4759.4	4167.2	3876.6
15°	3668.8	3978.3	4515.5	4979.7	5204.4	5126.7	5035.5	4882.2	4534.7	4029.2	3726.5
17.5°	3848.4	4189.1	4623.5	4840.1	4801.9	4666.2	4640.4	4657.5	4574.0	4182.5	3833.7
20°	4192.5	4601.4	4880.6	4774.5	4496.0	4309.2	4315.8	4576.3	4823.7	4571.3	4172.7
22.5°	4675.1	5142.0	5251.3	4809.2	4366.9	4145.3	4199.1	4621.1	5222.3	5139.6	4630.6
25°	5300.0	5725.5	5646.7	4935.7	4379.8	4165.6	4208.6	4775.3	5692.8	5707.6	5197.3
27.5°	5905.4	6300.1	5978.4	5103.8	4433.6	4213.6	4270.5	5017.6	6142.5	6324.3	5844.9
30°	6377.8	6652.3	6109.9	5257.1	4538.9	4306.8	4377.4	5248.1	6347.2	6740.6	6343.0
32.5°	6769.0	6966.1	6319.3	5447.0	4732.8	4453.6	4577.9	5528.2	6641.8	7136.8	6830.7
35°	7268.8	7324.9	6579.9	5658.9	5032.4	4709.4	4863.5	5802.4	6922.6	7536.7	7311.2
37.5°	7855.0	7782.8	6825.7	5948.6	5419.6	5109.3	5236.8	6103.6	7153.7	7990.4	7802.0
40°	8434.3	8260.4	7134.4	6398.1	5984.5	5580.9	5731.8	6425.0	7369.7	8444.8	8281.7
42.5°	8926.9	8669.5	7438.4	6892.3	6510.1	6101.2	6281.4	6748.7	7575.7	8832.6	8698.0
45°	9291.3	8971.4	7728.2	7367.1	7234.8	6792.5	6877.8	7119.4	7798.8	9156.7	9040.5
47.5°	9616.6	9274.9	8056.0	7846.0	7868.7	7691.6	7554.4	7551.2	8062.0	9421.2	9364.2
50°	10052.4	9696.2	8408.2	8339.2	8819.7	8701.9	8399.2	8055.2	8394.5	9721.5	9714.9
52.5°	10653.0	10363.5	8838.4	8870.8	9707.8	9784.7	9409.6	8660.8	8915.3	10272.4	10233.6
55°	11363.3	11194.2	9424.6	9482.0	10796.6	10851.9	10479.2	9417.7	9681.7	11070.3	10962.3
57.5°	11917.3	11881.8	10067.1	10215.7	11609.9	11858.3	11515.8	10294.5	10545.0	11742.1	11471.0
60°	12138.1	12310.9	10751.3	10955.7	12362.3	12637.1	12337.0	11064.3	11310.3	12020.6	11436.3
62.5°	12019.0	12405.0	11480.0	11462.9	12530.1	12826.2	12615.2	11492.9	11877.8	11733.2	10857.7
65°	11467.9	12066.7	11902.8	11332.2	11955.5	11979.8	11911.5	11301.4	12011.6	10825.1	9739.1
67.5°	10267.3	11129.3	11345.9	10212.5	10405.4	10247.3	10132.7	10252.9	11313.5	9464.1	8185.1
70°	8362.9	9659.8	9763.4	8168.2	8080.5	7974.0	7746.2	8405.8	9936.5	7756.7	6494.8
72.5°	6149.1	7512.5	7831.2	5990.8	5585.1	5606.7	5426.8	6334.6	8078.9	5761.9	4849.0
75°	4207.0	5439.7	6127.3	4180.1	3693.5	3702.2	3679.3	4488.6	6434.7	4008.1	3628.5
77.5°	3073.4	3886.4	4621.1	2810.2	2728.3	2677.9	2665.8	3140.6	4933.3	2910.3	2817.6
80°	2466.1	2871.3	3103.9	1947.7	2094.4	2090.5	2023.0	2159.5	3221.7	2128.7	2107.3
82.5°	1710.8	2206.6	2514.9	1526.4	1413.7	1390.0	1406.5	1608.3	2277.2	1455.0	1383.6
85°	902.6	1465.6	2490.6	1352.8	839.1	669.4	832.8	1317.0	1973.0	771.1	675.0
87.5°	115.4	423.6	1648.9	539.8	331.2	178.4	395.4	741.6	1266.9	157.3	137.3
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9
2.5°	5411.5	5303.5	5162.3	5031.3	4895.9	4761.0	4585.0	4474.7	4398.5	4383.8	4351.6
5°	5280.0	4921.2	4650.1	4415.6	4203.0	3902.5	3736.2	3598.2	3524.4	3517.3	3499.4
7.5°	4673.6	4178.5	3812.6	3480.7	3179.6	2936.9	2669.0	2544.4	2493.0	2505.1	2517.2
10°	4042.9	3489.6	3069.2	2729.8	2464.6	2260.1	2045.1	1900.0	1799.1	1778.8	1774.8
12.5°	3582.1	2975.1	2567.0	2327.3	2122.3	1929.8	1701.9	1530.4	1400.0	1355.2	1325.4
15°	3387.1	2723.5	2295.9	2037.8	1811.2	1567.0	1355.2	1175.8	1055.9	1016.9	995.0
17.5°	3428.8	2653.7	2109.2	1778.8	1489.3	1234.3	967.4	813.8	741.6	723.2	723.2
20°	3646.4	2640.8	1954.8	1540.4	1178.9	883.6	664.7	577.0	553.5	551.1	557.5
22.5°	3951.5	2686.4	1839.9	1333.6	916.3	645.2	517.7	485.3	474.7	477.4	484.5
25°	4405.9	2839.7	1756.4	1149.2	718.9	528.2	461.6	442.3	437.3	443.9	452.9
27.5°	4944.6	2993.0	1704.2	1010.3	607.0	482.9	438.9	418.9	422.0	430.2	438.1
30°	5417.8	3119.0	1622.3	911.5	572.2	485.3	438.9	411.5	408.3	409.9	412.3
32.5°	5842.5	3204.1	1526.4	817.2	493.4	431.0	409.9	406.0	387.8	381.2	382.3
35°	6208.4	3204.1	1469.0	762.2	442.3	382.3	348.3	328.0	318.8	319.6	328.8
37.5°	6561.4	3139.8	1440.5	731.1	414.7	363.6	333.5	315.6	303.5	301.1	302.7
40°	6872.8	3046.5	1408.1	718.2	393.6	352.2	324.0	309.0	296.1	292.2	293.0
42.5°	7122.8	2970.9	1372.3	701.3	380.4	344.1	317.2	304.3	289.8	285.6	284.8
45°	7393.1	2945.9	1325.4	667.0	387.0	344.9	315.6	301.9	287.2	282.4	280.8
47.5°	7749.3	3024.6	1276.7	626.5	401.0	349.1	318.0	301.9	286.4	282.4	280.8
50°	8198.0	3209.6	1214.8	567.2	387.0	360.4	317.2	299.3	286.4	282.4	279.3
52.5°	8774.4	3459.6	1133.9	499.2	378.8	387.8	315.6	294.5	282.4	276.9	271.1
55°	9474.6	3664.0	1036.9	443.1	360.4	380.4	313.2	289.0	276.1	267.9	262.9
57.5°	9987.6	3737.8	913.1	406.8	334.3	368.3	309.8	281.6	267.9	261.3	255.0
60°	9886.1	3595.0	808.3	383.8	318.8	332.7	307.4	275.0	260.5	255.8	249.7
62.5°	9073.9	3221.7	740.8	373.3	309.0	303.5	309.8	268.7	254.2	249.0	247.4
65°	7855.7	2670.6	714.2	370.9	301.1	286.4	288.2	261.3	246.6	242.6	241.1
67.5°	6480.0	2155.5	690.8	378.8	290.6	274.2	266.3	251.6	239.2	235.3	232.1
70°	5110.1	1792.8	680.0	374.1	277.7	262.1	253.4	241.1	230.5	226.3	223.9
72.5°	4115.1	1514.3	674.2	369.1	260.5	245.8	237.6	227.1	215.8	214.2	211.8
75°	3482.5	1190.5	617.8	353.8	241.1	226.3	220.8	211.0	199.7	199.7	198.1
77.5°	2686.4	860.9	513.7	313.2	220.8	204.4	199.7	192.3	179.4	181.8	181.0
80°	1984.3	561.7	401.8	259.8	195.7	180.2	177.6	170.5	156.5	159.9	159.9
82.5°	1359.4	368.3	289.0	212.6	167.0	152.5	152.5	145.2	129.9	131.5	136.5
85°	682.6	253.4	215.8	164.7	129.9	122.5	122.5	117.0	101.4	102.2	108.8
87.5°	207.9	152.5	142.8	117.8	93.3	91.7	87.5	83.5	73.8	73.0	77.2
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°	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9
2.5°	4301.8	4255.5	4199.9	4076.3	4035.0	4032.3	4070.0	4030.7	4105.6	4074.0	4108.7
5°	3469.1	3424.0	3361.3	3204.1	3108.2	3043.1	3012.5	2921.6	2987.2	2939.3	2979.3
7.5°	2551.5	2562.0	2520.7	2428.2	2219.5	2115.0	2053.3	1998.0	2045.9	2040.9	2117.3
10°	1793.6	1821.7	1792.8	1699.5	1530.4	1472.9	1484.3	1506.1	1568.8	1601.0	1718.7
12.5°	1291.2	1289.6	1270.9	1187.4	1076.2	1082.5	1128.9	1166.8	1224.5	1258.8	1378.6
15°	964.0	949.5	941.3	873.1	809.8	823.8	846.5	850.4	887.0	907.3	1004.8
17.5°	728.7	736.1	744.8	696.3	648.3	639.4	621.7	599.6	610.4	614.4	662.8
20°	578.5	607.8	629.9	595.7	547.2	520.8	498.2	483.7	483.7	482.9	496.6
22.5°	505.6	526.6	550.3	526.6	482.9	460.0	447.1	435.7	434.2	434.2	447.1
25°	466.0	481.3	504.0	487.9	455.2	438.1	426.0	411.5	406.0	404.1	413.1
27.5°	446.3	452.9	464.2	449.4	422.0	413.9	410.7	397.8	390.2	386.2	395.4
30°	413.1	411.5	412.3	397.8	375.7	374.9	380.4	383.1	380.4	379.6	393.6
32.5°	382.3	378.8	378.0	365.1	344.9	340.1	344.9	349.9	355.4	363.6	379.6
35°	343.3	351.4	356.2	344.9	320.4	305.9	300.3	291.4	286.4	286.4	305.1
37.5°	312.4	331.2	338.5	328.0	301.1	280.8	271.1	269.5	270.3	273.5	291.4
40°	301.9	315.6	321.9	311.7	284.8	266.3	260.5	259.0	260.5	265.6	283.2
42.5°	295.3	305.1	304.3	291.4	269.5	256.6	253.4	251.6	253.4	258.2	277.7
45°	289.8	296.1	289.8	274.2	254.2	247.4	248.2	247.4	249.0	254.2	272.7
47.5°	284.8	287.2	279.3	263.7	242.6	241.1	244.2	246.6	248.2	252.6	271.9
50°	277.7	277.7	270.3	254.2	232.9	233.7	237.6	243.4	244.2	249.0	264.8
52.5°	268.7	267.9	262.9	247.4	224.7	227.1	227.1	233.7	235.3	241.1	257.4
55°	261.3	259.8	257.4	242.6	217.6	221.6	219.2	221.6	225.5	231.3	249.0
57.5°	255.0	251.6	251.6	238.4	211.8	213.4	207.9	211.0	215.8	220.8	239.2
60°	248.2	245.0	246.6	232.9	202.9	201.3	198.9	205.2	207.1	212.6	231.3
62.5°	241.1	238.4	239.2	226.3	196.5	192.3	192.3	198.1	198.9	207.1	224.7
65°	235.3	232.1	231.3	220.0	189.2	184.4	186.8	189.2	190.7	198.9	215.8
67.5°	229.7	223.1	223.1	214.2	181.0	176.0	181.0	180.2	182.8	189.9	203.6
70°	222.3	213.4	214.2	210.2	172.8	167.0	171.2	170.5	172.0	176.8	190.7
72.5°	211.0	203.6	205.2	203.6	164.7	156.5	158.1	158.1	158.1	162.3	176.8
75°	196.5	190.7	195.7	199.7	154.9	143.6	145.2	145.2	142.8	145.2	163.1
77.5°	178.4	175.2	191.5	186.0	143.6	129.9	129.9	128.3	123.6	126.7	146.0
80°	159.1	156.5	176.8	155.7	130.7	113.0	111.2	107.0	102.2	104.6	124.3
82.5°	138.8	136.5	148.6	119.3	113.0	93.3	89.3	81.9	77.2	79.6	97.2
85°	113.8	113.8	114.6	90.1	85.9	71.4	66.7	56.9	51.1	52.7	69.8
87.5°	81.1	83.5	77.2	61.6	51.1	39.8	36.6	30.8	25.8	30.0	36.6
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°	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9	4987.9
2.5°	4287.3	4376.7	4478.1	4607.7	4719.1	4901.4	5076.9	5182.3
5°	3205.6	3354.2	3538.9	3777.0	3998.6	4331.1	4661.4	4873.3
7.5°	2294.1	2453.2	2652.9	2949.8	3263.3	3687.5	4124.3	4377.4
10°	1898.4	2061.5	2229.3	2429.8	2686.4	3147.9	3664.0	3949.6
12.5°	1570.4	1744.8	1925.8	2136.8	2374.5	2786.7	3381.6	3710.4
15°	1201.8	1396.5	1609.9	1877.1	2174.8	2651.3	3311.8	3668.8
17.5°	823.8	1041.4	1303.3	1632.8	1997.2	2607.3	3436.9	3848.4
20°	567.2	725.5	1005.6	1391.8	1830.2	2601.8	3676.9	4192.5
22.5°	474.7	545.3	749.8	1170.2	1704.2	2671.6	4049.7	4675.1
25°	438.9	481.3	598.8	977.9	1612.6	2832.3	4562.7	5300.0
27.5°	418.1	456.0	543.8	852.3	1540.4	3018.8	5061.6	5905.4
30°	426.0	465.0	528.2	788.0	1442.1	3174.5	5504.7	6377.8
32.5°	383.8	401.0	452.9	731.1	1371.5	3305.2	5892.5	6769.0
35°	327.2	357.0	404.1	704.5	1373.1	3392.9	6315.4	7268.8
37.5°	311.7	341.7	375.7	694.7	1391.8	3486.5	6800.6	7855.0
40°	301.9	329.6	358.8	689.2	1409.7	3571.6	7276.4	8434.3
42.5°	295.3	320.4	357.0	669.4	1418.7	3648.0	7667.4	8926.9
45°	294.5	320.4	363.6	649.9	1432.4	3729.9	7995.4	9291.3
47.5°	295.3	331.2	351.4	626.5	1432.4	3866.9	8380.0	9616.6
50°	292.2	349.1	338.5	593.3	1399.2	4126.6	8907.4	10052.4
52.5°	290.6	346.7	313.2	542.2	1341.5	4538.9	9583.4	10653.0
55°	286.4	334.3	295.3	466.0	1274.3	4988.6	10307.4	11363.3
57.5°	282.4	296.1	285.6	399.4	1170.2	5305.0	10805.6	11917.3
60°	316.4	259.0	277.7	366.7	1031.4	5391.7	10786.3	12138.1
62.5°	293.0	242.6	267.1	359.6	934.2	5148.3	10287.9	12019.0
65°	229.7	232.1	256.6	380.4	908.1	4503.4	9404.8	11467.9
67.5°	210.2	221.6	245.8	407.6	910.7	3605.5	8085.5	10267.3
70°	198.1	210.2	233.7	421.3	917.1	2688.0	6392.3	8362.9
72.5°	184.4	195.0	220.0	423.6	874.6	1952.4	4927.0	6149.1
75°	167.8	177.6	200.5	369.1	724.7	1354.4	3768.9	4207.0
77.5°	149.4	156.5	176.0	284.8	538.2	866.7	2828.9	3073.4
80°	127.5	131.5	147.8	208.7	368.3	542.2	2238.3	2466.1
82.5°	102.2	103.8	114.6	156.5	239.2	348.3	1499.0	1710.8
85°	72.2	72.2	78.8	113.8	163.1	220.8	813.8	902.6
87.5°	34.0	34.8	34.8	62.4	85.1	112.2	187.6	115.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)