

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: P298873

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298873
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
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18273.6 lumens
Efficiency: N/A
Efficacy: 81.2 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

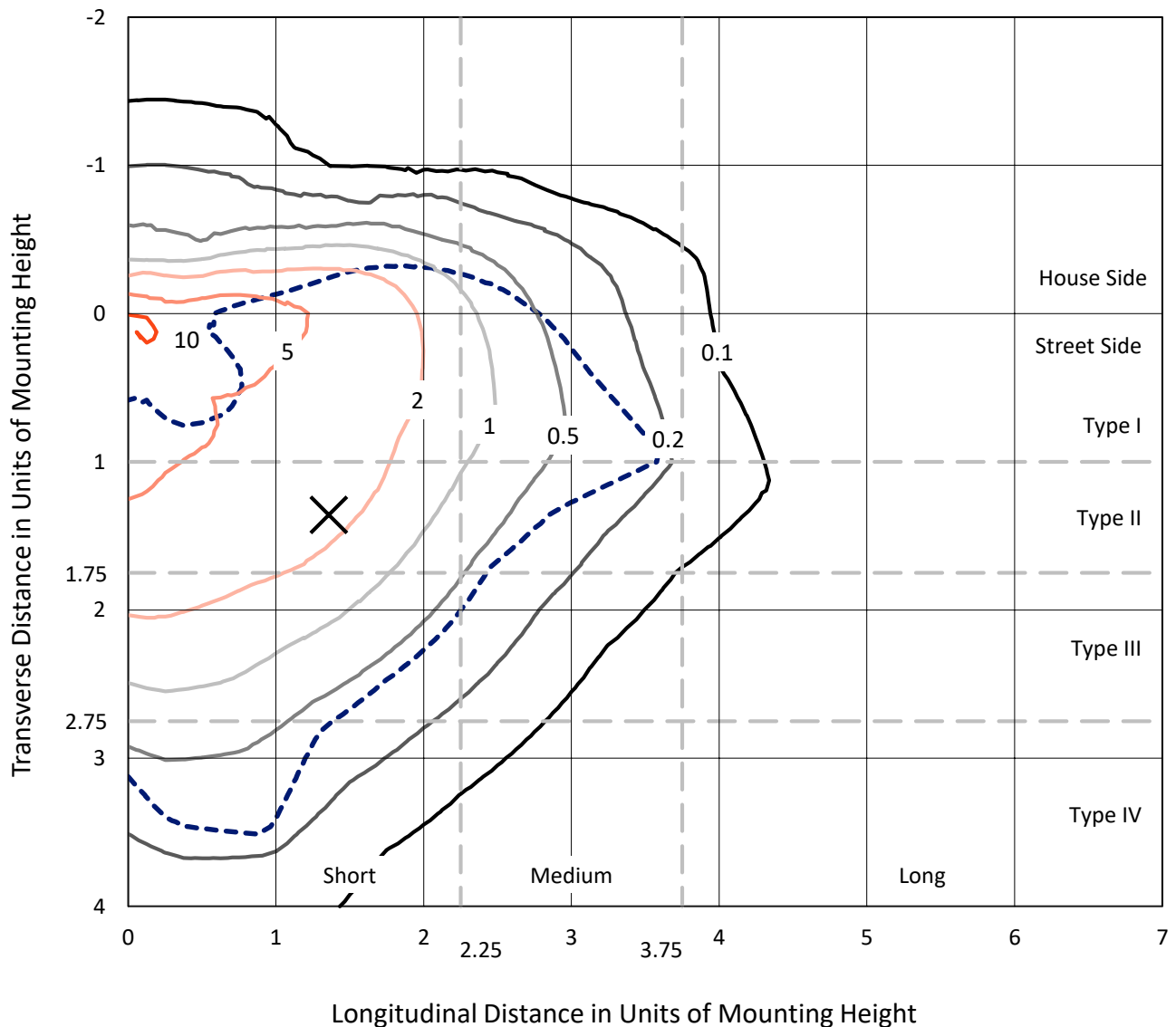
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

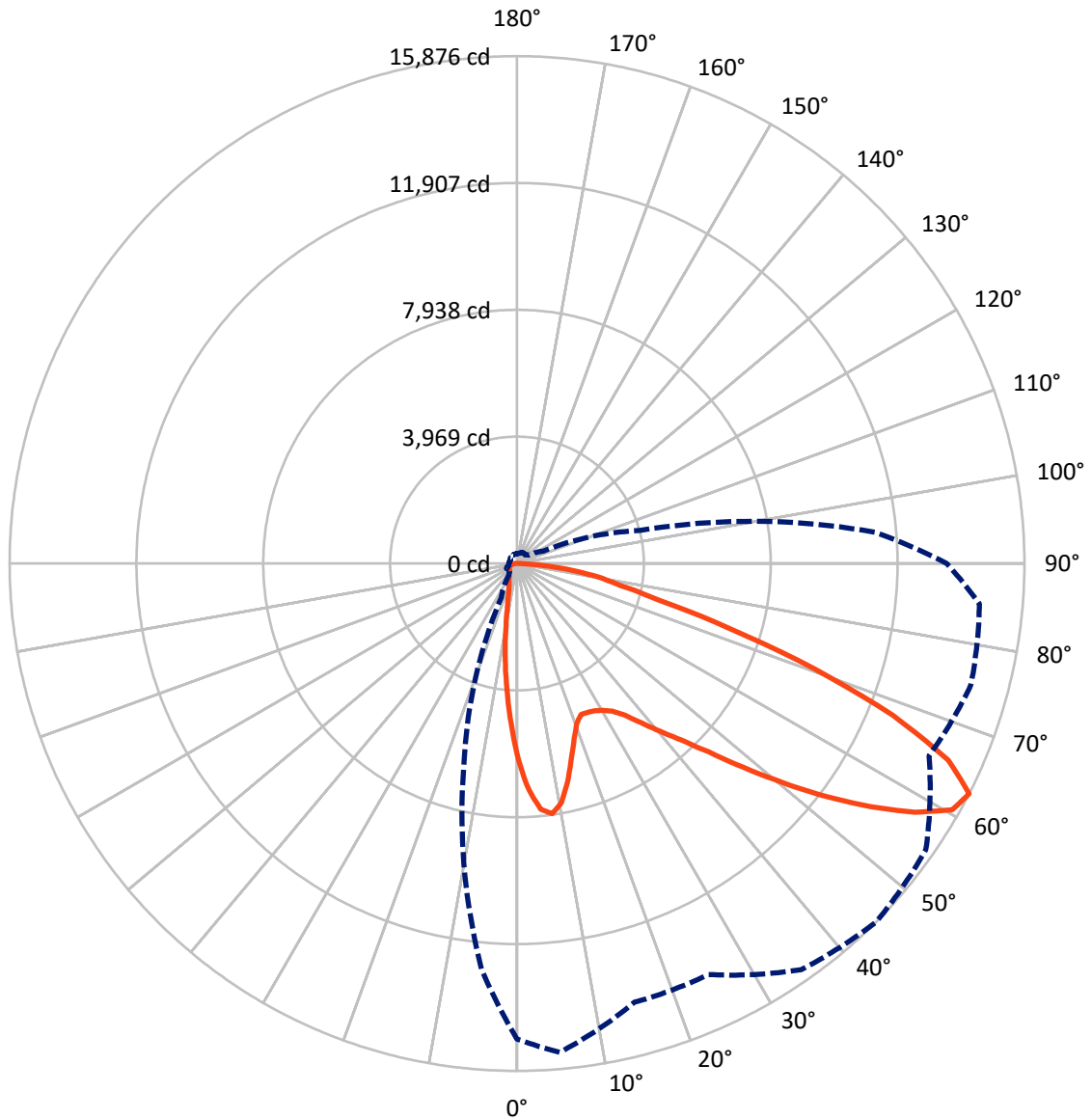
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.6 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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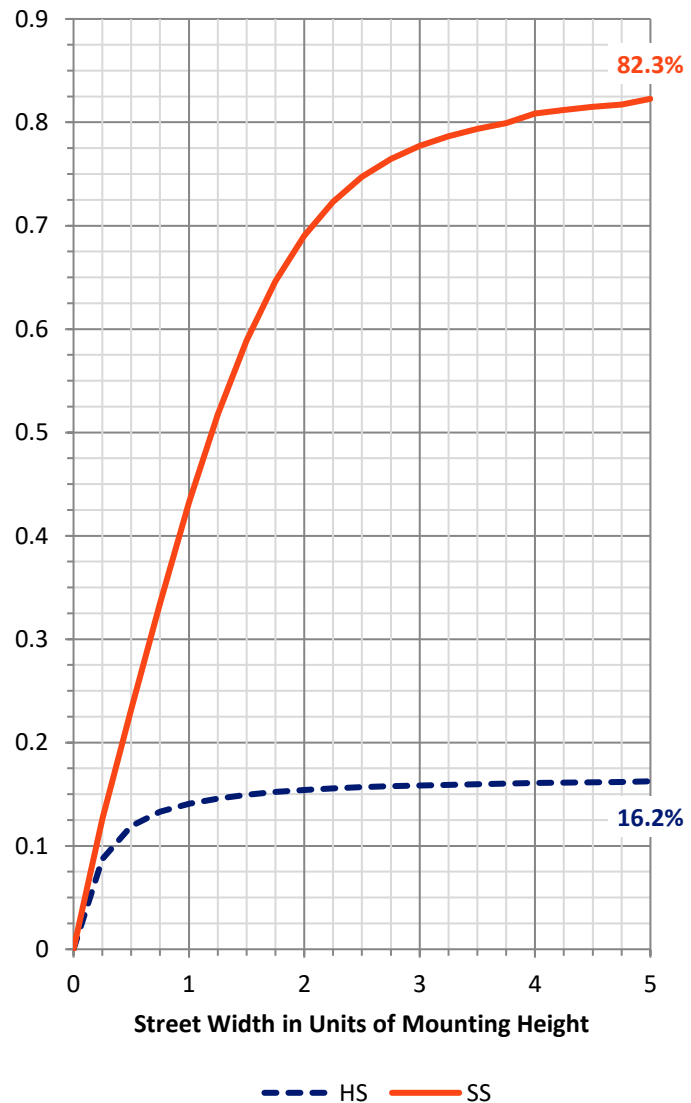
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3024.0	0.0	3024.0
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	15249.6	0.0	15249.6
	% Fixture	83.5	0.0	83.5
Total	Lumens	18273.6	0.0	18273.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	449.4	2.5
10°-20°	824.1	4.5
20°-30°	1201.6	6.6
30°-40°	1850.6	10.1
40°-50°	2723.6	14.9
50°-60°	3994.9	21.9
60°-70°	4465.7	24.4
70°-80°	2186.4	12.0
80°-90°	577.3	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°	18273.6	100.0
0°-180°	18273.6	100.0



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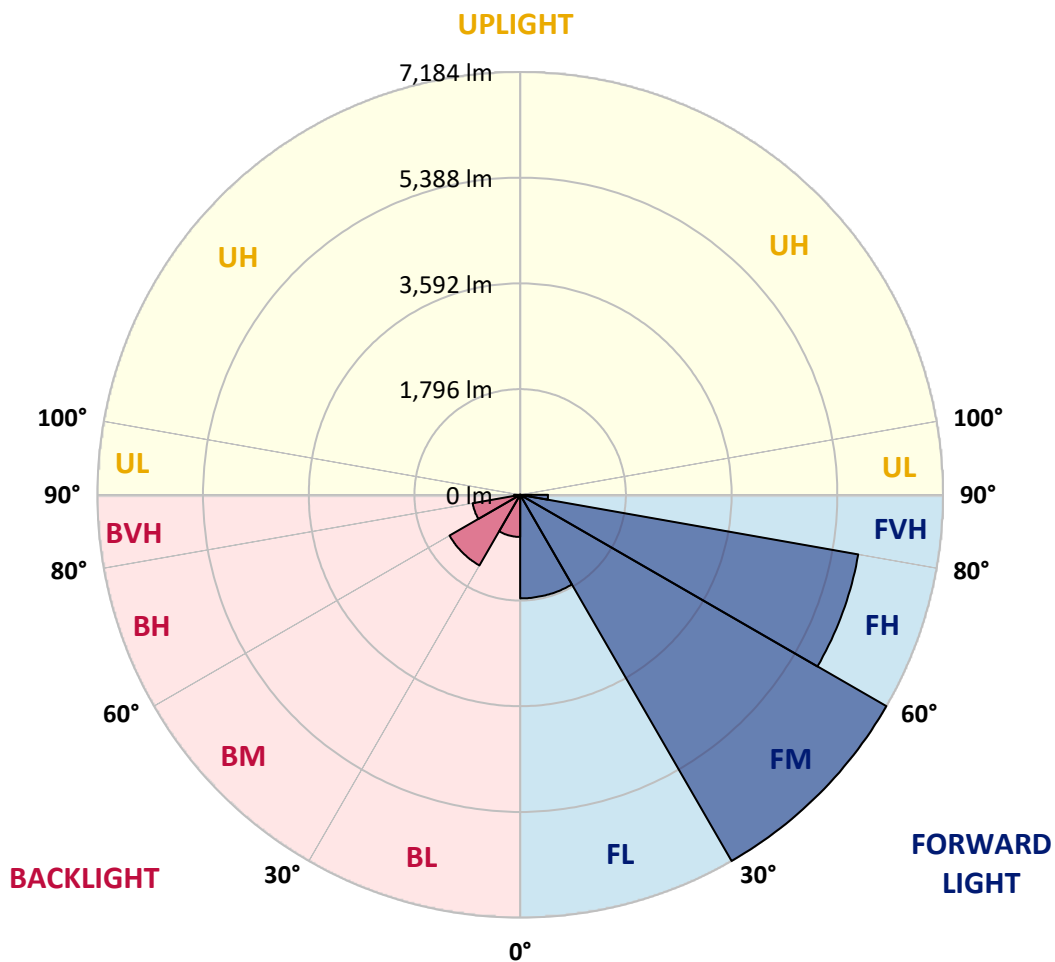
CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1759.7	9.6			
FM (30°-60°)	7183.5	39.3			
FH (60°-80°)	5832.3	31.9			G3/7500
FVH (80°-90°)	474.1	2.6			G3/500
BL (0°-30°)	715.4	3.9	B2/1000		
BM (30°-60°)	1385.6	7.6	B2/2500		
BH (60°-80°)	819.8	4.5	B2/1000		G2/1000
BVH (80°-90°)	103.2	0.6			G2/225
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°	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0
2.5°	6414.7	6517.4	6717.3	6866.6	7048.9	7091.0	7149.4	7092.0	6990.5	6855.9	6811.8
5°	6032.1	6251.3	6736.2	7163.4	7543.0	7719.7	7769.3	7623.2	7329.0	6942.3	6706.2
7.5°	5418.4	5729.9	6386.6	7015.7	7574.9	7905.6	7897.4	7558.9	7017.6	6387.6	6009.0
10°	4888.8	5244.6	5998.2	6701.3	7294.8	7615.3	7491.4	7059.0	6412.7	5687.5	5276.9
12.5°	4592.8	4941.4	5705.7	6411.7	6908.0	7018.6	6924.0	6500.1	5891.3	5158.2	4798.5
15°	4541.2	4924.4	5589.3	6163.9	6442.0	6345.9	6233.0	6043.2	5613.1	4987.3	4612.6
17.5°	4763.6	5185.3	5723.0	5991.1	5943.8	5775.8	5743.9	5765.1	5661.7	5177.1	4745.4
20°	5189.5	5695.6	6041.3	5909.9	5565.2	5334.0	5342.1	5664.6	5970.8	5658.4	5165.1
22.5°	5786.9	6364.8	6500.1	5952.9	5405.4	5131.1	5197.7	5720.1	6464.2	6361.8	5731.8
25°	6560.4	7087.1	6989.6	6109.4	5421.4	5156.2	5209.4	5910.8	7046.6	7064.9	6433.2
27.5°	7309.8	7798.3	7400.1	6317.5	5487.9	5215.6	5286.0	6210.8	7603.3	7828.3	7234.8
30°	7894.5	8234.3	7562.8	6507.3	5618.3	5331.0	5418.4	6496.2	7856.7	8343.5	7851.4
32.5°	8378.7	8622.7	7822.1	6742.4	5858.3	5512.7	5666.6	6842.8	8221.2	8834.0	8455.0
35°	8997.3	9066.8	8144.6	7004.6	6229.1	5829.3	6020.1	7182.3	8568.9	9329.0	9049.8
37.5°	9722.9	9633.6	8448.9	7363.3	6708.5	6324.3	6482.2	7555.0	8854.8	9890.5	9657.4
40°	10440.0	10224.8	8831.0	7919.6	7407.6	6908.0	7094.9	7952.9	9122.2	10453.0	10251.2
42.5°	11049.8	10731.2	9207.4	8531.4	8058.2	7552.1	7775.1	8353.6	9377.3	10933.1	10766.4
45°	11500.8	11104.9	9566.1	9119.0	8955.3	8407.8	8513.4	8812.4	9653.5	11334.2	11190.4
47.5°	11903.5	11480.6	9971.7	9711.8	9739.9	9520.7	9350.8	9346.9	9979.2	11661.6	11591.1
50°	12442.9	12002.0	10407.7	10322.3	10917.1	10771.3	10396.6	9970.7	10390.8	12033.3	12025.2
52.5°	13186.4	12828.0	10940.2	10980.3	12016.4	12111.6	11647.2	10720.4	11035.5	12715.2	12667.2
55°	14065.5	13856.2	11665.8	11736.9	13364.1	13432.6	12971.2	11657.3	11984.1	13702.9	13569.2
57.5°	14751.3	14707.3	12461.2	12645.1	14370.8	14678.3	14254.4	12742.6	13052.7	14534.5	14198.9
60°	15024.6	15238.5	13308.0	13561.1	15302.1	15642.2	15270.8	13695.4	14000.0	14879.2	14155.9
62.5°	14877.2	15354.9	14210.0	14188.8	15509.8	15876.4	15615.2	14226.0	14702.4	14523.4	13439.8
65°	14195.0	14936.2	14733.4	14027.1	14798.6	14828.6	14744.2	13988.9	14868.1	13399.3	12055.2
67.5°	12709.0	13776.0	14044.0	12641.2	12879.9	12684.2	12542.3	12691.0	14003.9	11714.7	10131.5
70°	10351.6	11957.0	12085.2	10110.6	10002.1	9870.3	9588.2	10404.8	12299.4	9601.3	8039.3
72.5°	7611.4	9299.0	9693.6	7415.4	6913.3	6940.0	6717.3	7841.0	10000.1	7132.1	6002.1
75°	5207.4	6733.3	7584.4	5174.2	4571.9	4582.6	4554.3	5556.0	7964.9	4961.2	4491.3
77.5°	3804.2	4810.6	5720.1	3478.5	3377.1	3314.8	3299.8	3887.4	6106.5	3602.4	3487.6
80°	3052.6	3554.1	3842.1	2410.8	2592.5	2587.6	2504.1	2673.0	3987.8	2634.9	2608.5
82.5°	2117.7	2731.4	3112.9	1889.4	1749.8	1720.5	1741.0	1990.8	2818.8	1801.0	1712.7
85°	1117.2	1814.1	3082.9	1674.5	1038.6	828.6	1030.8	1630.2	2442.1	954.5	835.5
87.5°	142.8	524.4	2041.0	668.2	409.9	220.8	489.5	918.0	1568.2	194.7	169.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0
2.5°	6698.4	6564.7	6389.9	6227.8	6060.2	5893.2	5675.4	5538.8	5444.5	5426.3	5386.5
5°	6535.6	6091.5	5755.9	5465.7	5202.6	4830.5	4624.7	4453.8	4362.5	4353.7	4331.5
7.5°	5785.0	5172.2	4719.3	4308.4	3935.7	3635.3	3303.7	3149.4	3085.9	3100.9	3115.9
10°	5004.3	4319.5	3799.0	3379.0	3050.6	2797.6	2531.5	2351.8	2226.9	2201.8	2196.9
12.5°	4433.9	3682.6	3177.5	2880.7	2627.0	2388.7	2106.6	1894.3	1732.9	1677.4	1640.6
15°	4192.6	3371.2	2841.9	2522.4	2241.9	1939.6	1677.4	1455.4	1307.0	1258.7	1231.7
17.5°	4244.2	3284.8	2610.7	2201.8	1843.4	1527.8	1197.4	1007.3	918.0	895.1	895.1
20°	4513.5	3268.8	2419.6	1906.7	1459.3	1093.7	822.7	714.2	685.1	682.2	690.0
22.5°	4891.1	3325.2	2277.5	1650.7	1134.2	798.6	640.8	600.7	587.6	590.9	599.7
25°	5453.6	3515.0	2174.1	1422.4	889.9	653.8	571.3	547.5	541.3	549.5	560.6
27.5°	6120.5	3704.8	2109.5	1250.6	751.3	597.7	543.3	518.5	522.4	532.5	542.3
30°	6706.2	3860.7	2008.1	1128.3	708.3	600.7	543.3	509.4	505.5	507.4	510.3
32.5°	7231.9	3966.0	1889.4	1011.6	610.8	533.5	507.4	502.5	480.0	471.9	473.2
35°	7684.8	3966.0	1818.3	943.4	547.5	473.2	431.1	406.0	394.6	395.6	407.0
37.5°	8121.8	3886.4	1783.1	904.9	513.3	450.0	412.8	390.7	375.7	372.7	374.7
40°	8507.2	3771.0	1743.0	888.9	487.2	436.0	401.1	382.5	366.5	361.6	362.6
42.5°	8816.7	3677.4	1698.6	868.1	470.9	425.9	392.6	376.6	358.7	353.5	352.5
45°	9151.3	3646.4	1640.6	825.7	479.0	426.9	390.7	373.7	355.4	349.6	347.6
47.5°	9592.1	3743.9	1580.3	775.5	496.3	432.1	393.6	373.7	354.5	349.6	347.6
50°	10147.5	3972.8	1503.6	702.1	479.0	446.1	392.6	370.4	354.5	349.6	345.7
52.5°	10861.0	4282.3	1403.5	618.0	468.9	480.0	390.7	364.6	349.6	342.7	335.6
55°	11727.8	4535.4	1283.5	548.5	446.1	470.9	387.7	357.7	341.7	331.6	325.4
57.5°	12362.7	4626.7	1130.3	503.5	413.8	455.9	383.5	348.6	331.6	323.5	315.7
60°	12237.1	4449.9	1000.5	475.1	394.6	411.9	380.6	340.4	322.5	316.6	309.1
62.5°	11231.8	3987.8	917.0	462.1	382.5	375.7	383.5	332.6	314.7	308.2	306.2
65°	9723.9	3305.6	884.0	459.1	372.7	354.5	356.8	323.5	305.2	300.3	298.4
67.5°	8021.0	2668.1	855.0	468.9	359.7	339.5	329.7	311.4	296.1	291.2	287.3
70°	6325.3	2219.1	841.7	463.1	343.7	324.5	313.7	298.4	285.3	280.1	277.2
72.5°	5093.6	1874.4	834.5	456.9	322.5	304.2	294.1	281.1	267.1	265.1	262.2
75°	4310.7	1473.6	764.7	437.9	298.4	280.1	273.3	261.2	247.2	247.2	245.2
77.5°	3325.2	1065.7	635.9	387.7	273.3	253.1	247.2	238.1	222.1	225.0	224.0
80°	2456.2	695.2	497.3	321.5	242.3	223.1	219.8	211.0	193.7	197.9	197.9
82.5°	1682.7	455.9	357.7	263.2	206.7	188.8	188.8	179.7	160.8	162.7	168.9
85°	844.9	313.7	267.1	203.8	160.8	151.6	151.6	144.8	125.5	126.5	134.7
87.5°	257.3	188.8	176.7	145.8	115.4	113.5	108.3	103.4	91.3	90.3	95.5
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°	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0
2.5°	5324.8	5267.4	5198.6	5045.7	4994.5	4991.2	5037.9	4989.3	5081.9	5042.8	5085.8
5°	4294.0	4238.3	4160.7	3966.0	3847.3	3766.7	3728.9	3616.4	3697.6	3638.3	3687.8
7.5°	3158.3	3171.3	3120.1	3005.6	2747.4	2617.9	2541.6	2473.1	2532.5	2526.3	2620.8
10°	2220.1	2255.0	2219.1	2103.7	1894.3	1823.2	1837.2	1864.3	1941.9	1981.7	2127.5
12.5°	1598.2	1596.2	1573.1	1469.7	1332.1	1339.9	1397.3	1444.3	1515.7	1558.1	1706.5
15°	1193.2	1175.3	1165.1	1080.7	1002.4	1019.7	1047.8	1052.6	1098.0	1123.1	1243.7
17.5°	902.0	911.1	921.9	861.9	802.5	791.4	769.6	742.2	755.6	760.5	820.5
20°	716.1	752.3	779.7	737.3	677.3	644.7	616.6	598.7	598.7	597.7	614.7
22.5°	625.8	651.9	681.2	651.9	597.7	569.4	553.4	539.4	537.4	537.4	553.4
25°	576.9	595.8	623.8	603.9	563.5	542.3	527.3	509.4	502.5	500.2	511.3
27.5°	552.4	560.6	574.6	556.3	522.4	512.3	508.4	492.4	482.9	478.1	489.5
30°	511.3	509.4	510.3	492.4	465.0	464.0	470.9	474.1	470.9	469.9	487.2
32.5°	473.2	468.9	467.9	452.0	426.9	421.0	426.9	433.1	439.9	450.0	469.9
35°	424.9	435.0	440.9	426.9	396.5	378.6	371.8	360.7	354.5	354.5	377.6
37.5°	386.8	409.9	419.0	406.0	372.7	347.6	335.6	333.6	334.6	338.5	360.7
40°	373.7	390.7	398.5	385.8	352.5	329.7	322.5	320.6	322.5	328.7	350.6
42.5°	365.6	377.6	376.6	360.7	333.6	317.6	313.7	311.4	313.7	319.6	343.7
45°	358.7	366.5	358.7	339.5	314.7	306.2	307.2	306.2	308.2	314.7	337.5
47.5°	352.5	355.4	345.7	326.4	300.3	298.4	302.3	305.2	307.2	312.7	336.5
50°	343.7	343.7	334.6	314.7	288.3	289.2	294.1	301.3	302.3	308.2	327.7
52.5°	332.6	331.6	325.4	306.2	278.2	281.1	281.1	289.2	291.2	298.4	318.6
55°	323.5	321.5	318.6	300.3	269.4	274.2	271.3	274.2	279.1	286.3	308.2
57.5°	315.7	311.4	311.4	295.1	262.2	264.1	257.3	261.2	267.1	273.3	296.1
60°	307.2	303.3	305.2	288.3	251.1	249.1	246.2	254.0	256.3	263.2	286.3
62.5°	298.4	295.1	296.1	280.1	243.3	238.1	238.1	245.2	246.2	256.3	278.2
65°	291.2	287.3	286.3	272.3	234.1	228.3	231.2	234.1	236.1	246.2	267.1
67.5°	284.4	276.2	276.2	265.1	224.0	217.8	224.0	223.1	226.3	235.1	252.1
70°	275.2	264.1	265.1	260.2	213.9	206.7	212.0	211.0	212.9	218.8	236.1
72.5°	261.2	252.1	254.0	252.1	203.8	193.7	195.7	195.7	195.7	200.9	218.8
75°	243.3	236.1	242.3	247.2	191.7	177.7	179.7	179.7	176.7	179.7	201.9
77.5°	220.8	216.9	237.1	230.2	177.7	160.8	160.8	158.8	152.9	156.9	180.7
80°	197.0	193.7	218.8	192.7	161.7	139.9	137.6	132.4	126.5	129.5	153.9
82.5°	171.9	168.9	183.9	147.7	139.9	115.4	110.5	101.4	95.5	98.5	120.3
85°	140.9	140.9	141.9	111.5	106.3	88.4	82.5	70.4	63.3	65.2	86.4
87.5°	100.4	103.4	95.5	76.3	63.3	49.2	45.3	38.2	32.0	37.2	45.3
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0	6174.0
2.5°	5306.9	5417.5	5543.0	5703.4	5841.4	6067.0	6284.2	6414.7
5°	3968.0	4151.9	4380.5	4675.3	4949.5	5361.0	5770.0	6032.1
7.5°	2839.7	3036.6	3283.8	3651.3	4039.4	4564.4	5105.1	5418.4
10°	2349.9	2551.7	2759.4	3007.6	3325.2	3896.5	4535.4	4888.8
12.5°	1943.9	2159.7	2383.8	2645.0	2939.1	3449.5	4185.8	4592.8
15°	1487.7	1728.6	1992.8	2323.4	2691.9	3281.8	4099.4	4541.2
17.5°	1019.7	1289.1	1613.2	2021.2	2472.1	3227.4	4254.3	4763.6
20°	702.1	898.1	1244.7	1722.8	2265.4	3220.5	4551.3	5189.5
22.5°	587.6	675.0	928.1	1448.5	2109.5	3307.0	5012.8	5786.9
25°	543.3	595.8	741.2	1210.5	1996.0	3505.9	5647.7	6560.4
27.5°	517.5	564.5	673.1	1054.9	1906.7	3736.7	6265.3	7309.8
30°	527.3	575.6	653.8	975.4	1785.1	3929.5	6813.8	7894.5
32.5°	475.1	496.3	560.6	904.9	1697.7	4091.2	7293.8	8378.7
35°	405.0	441.9	500.2	872.0	1699.6	4199.8	7817.2	8997.3
37.5°	385.8	422.9	465.0	859.9	1722.8	4315.6	8417.9	9722.9
40°	373.7	407.9	444.1	853.1	1744.9	4420.9	9006.8	10440.0
42.5°	365.6	396.5	441.9	828.6	1756.0	4515.5	9490.7	11049.8
45°	364.6	396.5	450.0	804.5	1773.0	4616.9	9896.7	11500.8
47.5°	365.6	409.9	435.0	775.5	1773.0	4786.5	10372.8	11903.5
50°	361.6	432.1	419.0	734.4	1731.9	5108.0	11025.7	12442.9
52.5°	359.7	429.1	387.7	671.1	1660.5	5618.3	11862.4	13186.4
55°	354.5	413.8	365.6	576.9	1577.3	6175.0	12758.6	14065.5
57.5°	349.6	366.5	353.5	494.4	1448.5	6566.6	13375.2	14751.3
60°	391.6	320.6	343.7	453.9	1276.7	6673.9	13351.4	15024.6
62.5°	362.6	300.3	330.7	445.1	1156.3	6372.6	12734.4	14877.2
65°	284.4	287.3	317.6	470.9	1124.1	5574.3	11641.3	14195.0
67.5°	260.2	274.2	304.2	504.5	1127.3	4463.0	10008.2	12709.0
70°	245.2	260.2	289.2	521.4	1135.1	3327.2	7912.4	10351.6
72.5°	228.3	241.3	272.3	524.4	1082.6	2416.7	6098.7	7611.4
75°	207.7	219.8	248.2	456.9	897.1	1676.5	4665.1	5207.4
77.5°	184.9	193.7	217.8	352.5	666.2	1072.9	3501.6	3804.2
80°	157.8	162.7	182.9	258.3	455.9	671.1	2770.5	3052.6
82.5°	126.5	128.5	141.9	193.7	296.1	431.1	1855.5	2117.7
85°	89.4	89.4	97.5	140.9	201.9	273.3	1007.3	1117.2
87.5°	42.1	43.0	43.0	77.3	105.3	138.9	232.2	142.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)