

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: P301704

Luminaire Tested: **GLNA-AF-05-LED-E1-T2R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301704
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-T2R-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17676.5 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 162
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

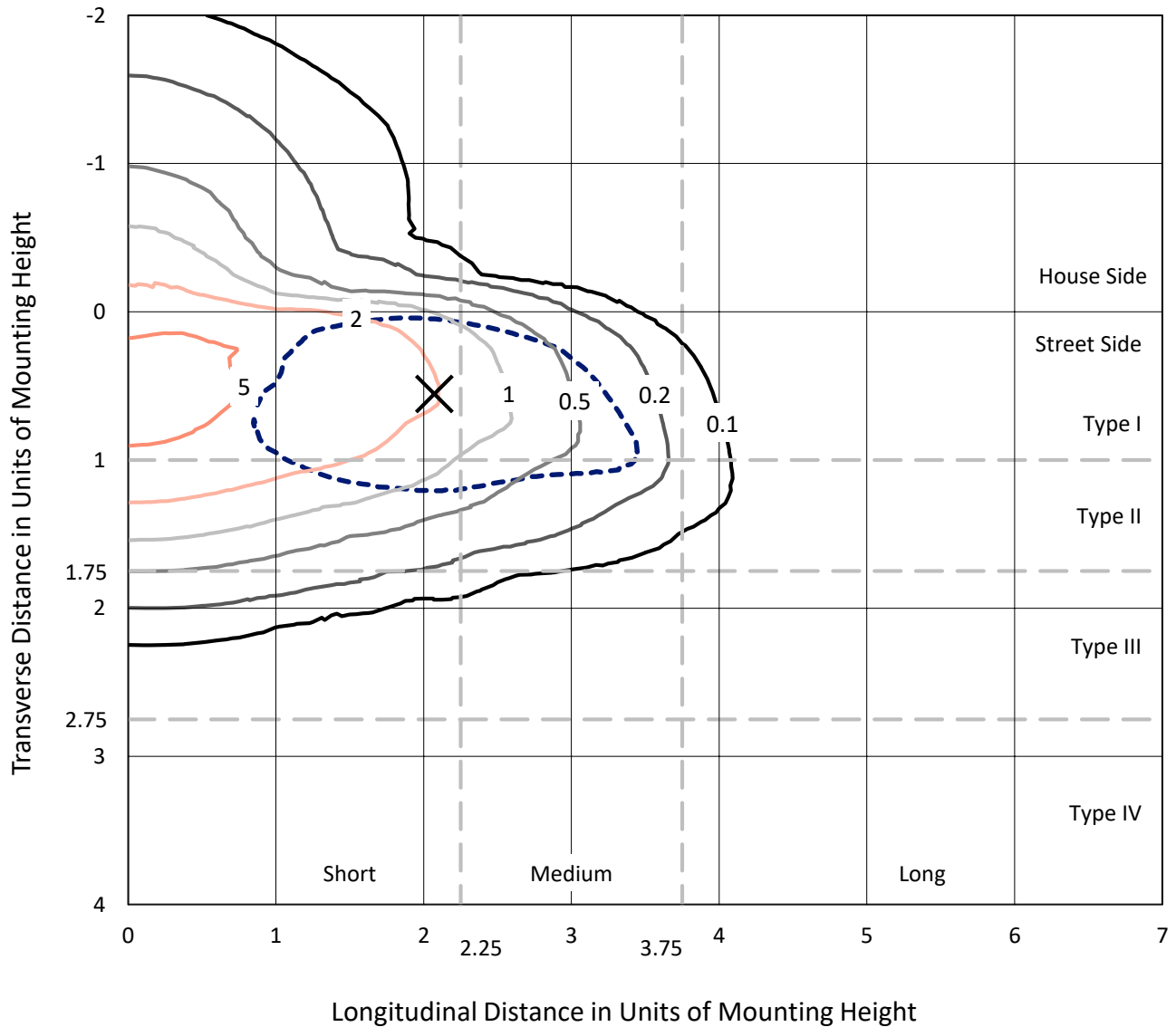


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Iso-Footcandle Lines of Horizontal Illumination

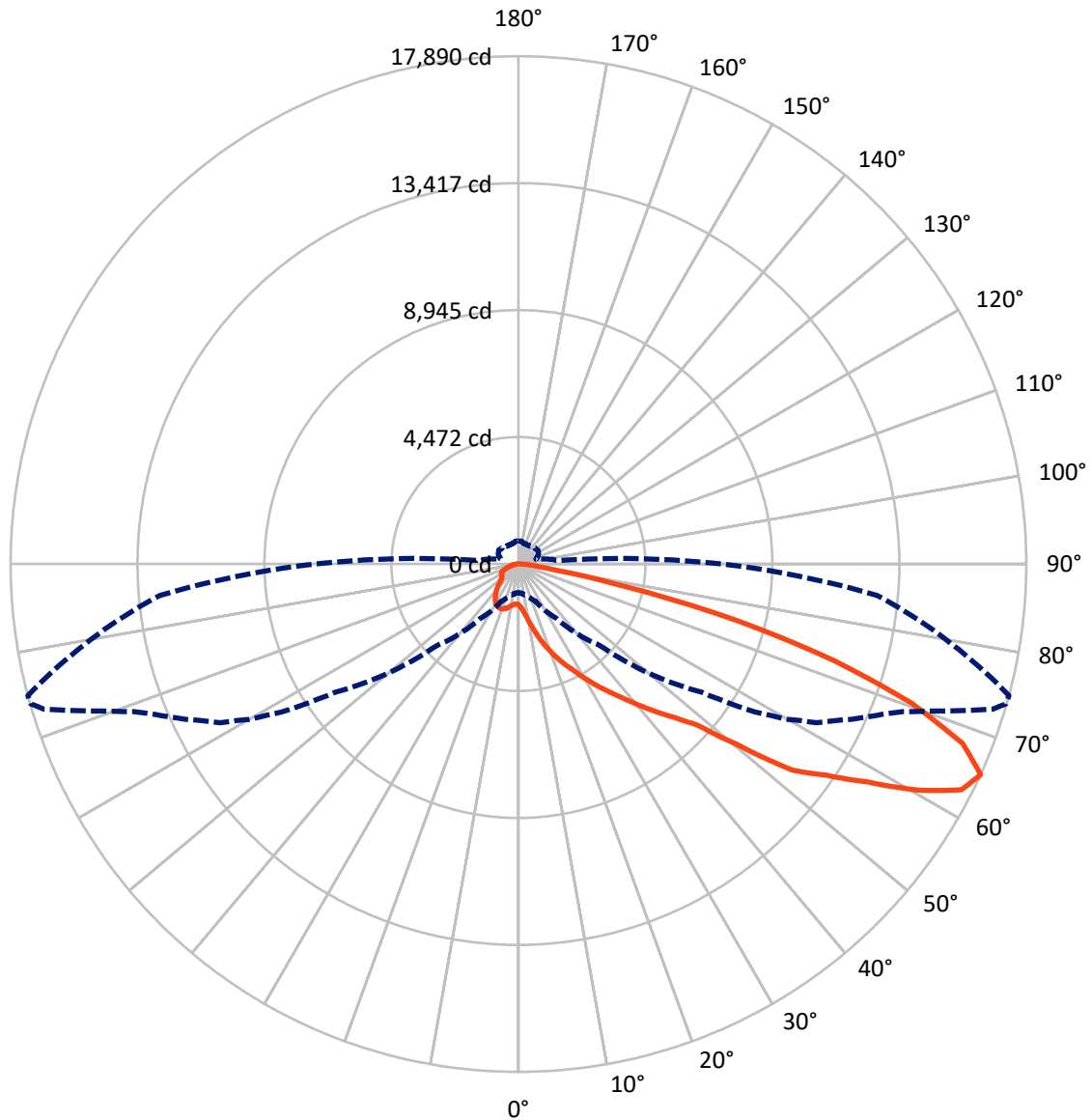
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2725.3	0.0	2725.3
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	14951.2	0.0	14951.2
	% Fixture	84.6	0.0	84.6
Total	Lumens	17676.5	0.0	17676.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.6	1.0
10°-20°	693.8	3.9
20°-30°	1423.4	8.1
30°-40°	2394.8	13.5
40°-50°	3309.0	18.7
50°-60°	4130.6	23.4
60°-70°	3717.1	21.0
70°-80°	1558.2	8.8
80°-90°	272.2	1.5
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°	17676.5	100.0
0°-180°	17676.5	100.0

Coefficient of Utilization



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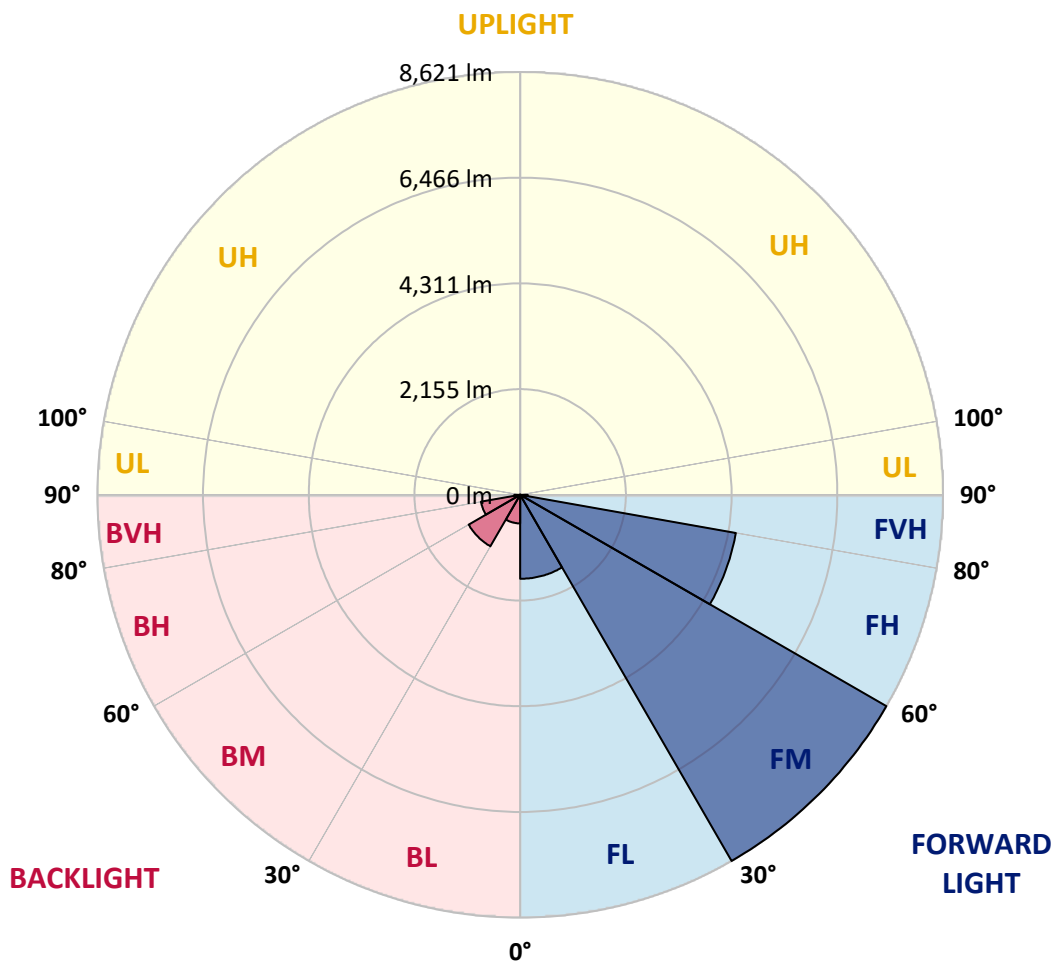
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1711.9	9.7			
FM (30°-60°)	8621.3	48.8			
FH (60°-80°)	4465.0	25.3			G2/5000
FVH (80°-90°)	153.0	0.9			G2/225
BL (0°-30°)	582.8	3.3	B2/1000		
BM (30°-60°)	1213.1	6.9	B2/2500		
BH (60°-80°)	810.2	4.6	B2/1000		G2/1000
BVH (80°-90°)	119.2	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6
2.5°	1824.0	1803.9	1808.9	1775.3	1734.4	1680.8	1621.5	1620.7	1621.5	1615.5	1593.9
5°	2529.1	2505.0	2495.9	2420.4	2310.0	2152.9	1982.1	1963.7	1956.0	1936.9	1892.5
7.5°	3043.9	3030.5	3016.1	2959.2	2859.0	2683.2	2453.9	2414.7	2377.0	2367.8	2317.7
10°	3376.0	3372.5	3342.5	3327.3	3264.8	3112.4	2889.0	2851.3	2810.3	2796.2	2743.3
12.5°	3638.6	3637.8	3623.7	3627.9	3573.3	3463.1	3270.5	3236.2	3206.2	3162.5	3125.0
15°	3820.2	3821.0	3842.1	3865.4	3857.0	3782.5	3601.8	3586.7	3560.9	3530.8	3486.4
17.5°	3969.2	3973.4	3995.0	4037.7	4083.8	4077.9	3934.9	3922.2	3899.7	3858.7	3835.4
20°	4305.5	4321.3	4279.6	4279.6	4284.6	4307.2	4238.4	4228.5	4196.7	4174.9	4156.5
22.5°	4873.6	4891.9	4797.4	4701.3	4606.8	4538.0	4469.5	4481.9	4460.3	4445.2	4434.3
25°	5611.5	5625.9	5472.7	5310.4	5117.8	4866.9	4697.1	4689.4	4677.8	4668.6	4663.6
27.5°	6305.9	6311.9	6167.2	5929.4	5706.0	5345.4	4927.9	4918.8	4904.6	4887.0	4871.8
30°	6900.1	6898.4	6749.4	6522.6	6283.3	5884.2	5278.6	5250.1	5208.1	5160.5	5123.8
32.5°	7414.6	7412.1	7248.8	7013.8	6762.8	6418.1	5758.9	5700.3	5635.0	5542.0	5486.1
35°	7819.4	7817.9	7663.8	7418.8	7130.9	6920.9	6309.4	6237.4	6154.5	6029.9	5943.8
37.5°	7972.6	7972.6	7886.4	7719.1	7464.7	7320.8	6920.9	6833.8	6745.2	6603.8	6506.7
40°	7883.0	7884.7	7903.1	7872.3	7748.4	7638.0	7491.6	7439.7	7363.5	7236.4	7135.1
42.5°	7582.6	7591.8	7714.2	7863.8	7925.6	7908.3	7997.6	7974.3	7920.7	7822.9	7742.5
45°	7201.9	7230.4	7364.2	7647.2	7975.0	8141.6	8421.8	8424.3	8414.3	8361.7	8299.7
47.5°	6679.2	6719.2	6895.9	7278.1	7859.6	8368.4	8852.7	8875.2	8896.3	8862.1	8833.5
50°	5984.8	6032.4	6296.7	6803.8	7624.6	8603.5	9666.7	9769.0	9864.3	9852.6	9871.8
52.5°	5240.9	5297.0	5620.6	6185.5	7220.5	8657.8	10187.2	10353.7	10520.3	10656.5	10801.2
55°	4569.8	4539.8	4863.7	5458.3	6556.1	8412.6	10655.1	10855.9	11041.5	11208.8	11381.3
57.5°	3660.4	3709.8	4034.4	4622.7	5676.7	7720.6	10977.0	11270.8	11537.6	11814.6	12058.9
60°	2675.6	2724.9	3077.1	3674.5	4722.2	6671.5	10731.0	11176.3	11603.7	12027.8	12359.2
62.5°	1615.5	1652.5	1962.7	2531.8	3641.3	5427.6	9635.0	10219.0	10848.2	11355.2	11863.0
65°	1005.7	1026.5	1141.2	1454.2	2338.5	4052.0	7872.3	8508.9	9186.5	9830.1	10358.0
67.5°	823.3	830.7	851.8	918.6	1284.2	2642.3	5859.2	6423.1	7034.6	7657.1	8244.6
70°	740.4	735.4	735.4	739.6	823.3	1420.7	3836.1	4203.4	4713.0	5254.3	5791.4
72.5°	668.4	663.4	654.2	641.8	671.9	866.7	1982.8	2259.8	2627.2	3108.2	3622.7
75°	600.6	593.9	583.3	567.4	588.2	654.2	952.1	1068.5	1247.4	1503.6	1790.5
77.5°	530.4	522.0	512.0	500.4	527.2	508.8	557.9	599.9	668.4	750.5	858.5
80°	451.0	443.5	440.1	434.3	466.1	387.4	394.1	419.9	460.2	504.6	554.7
82.5°	353.2	353.2	366.3	369.1	404.1	278.7	294.6	317.2	338.0	361.4	385.0
85°	232.6	234.3	279.5	297.1	318.7	187.4	220.9	228.3	245.2	258.6	268.5
87.5°	72.7	78.7	170.8	189.1	183.2	106.2	135.5	139.0	150.7	159.8	168.3
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6
2.5°	1593.9	1583.7	1574.6	1573.8	1567.1	1557.9	1561.2	1547.0	1547.8	1540.3	1531.9
5°	1874.1	1867.4	1833.9	1824.7	1799.7	1783.8	1781.3	1747.8	1743.6	1724.5	1703.4
7.5°	2277.4	2255.6	2208.7	2186.1	2143.4	2111.7	2096.8	2052.3	2030.5	1980.4	1957.8
10°	2699.9	2672.3	2614.5	2582.7	2541.8	2490.6	2463.1	2398.8	2373.5	2327.6	2272.5
12.5°	3091.5	3064.0	3004.4	2980.1	2925.7	2871.4	2841.3	2768.6	2735.9	2662.2	2618.7
15°	3453.6	3426.1	3374.2	3349.2	3294.8	3250.4	3210.2	3138.4	3100.0	3031.2	2974.4
17.5°	3805.1	3775.8	3730.6	3708.1	3655.4	3610.3	3566.8	3498.8	3459.6	3391.1	3340.0
20°	4131.5	4109.6	4077.1	4046.8	3994.2	3953.3	3901.4	3842.8	3786.0	3735.6	3687.2
22.5°	4415.9	4407.5	4372.5	4359.1	4313.9	4278.7	4233.5	4175.9	4134.7	4071.2	4026.0
25°	4661.1	4658.6	4641.8	4637.5	4605.8	4572.3	4562.3	4514.7	4477.0	4420.9	4374.2
27.5°	4871.8	4874.3	4870.4	4882.0	4873.6	4858.4	4859.4	4843.5	4821.7	4774.8	4733.8
30°	5106.1	5092.7	5100.4	5117.1	5122.0	5123.8	5151.3	5160.5	5159.0	5128.0	5107.9
32.5°	5437.5	5405.7	5376.4	5373.9	5390.6	5397.3	5444.2	5468.5	5489.4	5496.8	5500.3
35°	5859.9	5796.4	5735.3	5702.8	5674.3	5681.7	5715.2	5754.7	5800.6	5832.4	5870.1
37.5°	6392.0	6314.4	6206.4	6129.5	6110.1	6068.4	6090.0	6121.0	6166.2	6215.6	6280.9
40°	7037.1	6919.2	6797.8	6695.8	6640.7	6563.5	6562.8	6556.8	6584.6	6630.6	6722.6
42.5°	7658.1	7553.4	7424.5	7317.6	7245.6	7142.6	7121.7	7067.4	7079.8	7120.0	7209.6
45°	8239.4	8153.2	8074.6	7951.0	7889.7	7778.5	7743.2	7678.9	7643.0	7661.3	7750.9
47.5°	8802.5	8747.4	8665.3	8585.1	8538.2	8438.7	8393.5	8347.3	8301.4	8299.7	8393.5
50°	9900.3	9871.0	9774.0	9690.3	9712.9	9590.8	9598.2	9474.4	9530.5	9537.2	9733.8
52.5°	10931.8	11034.1	11106.0	11193.6	11250.7	11261.7	11299.1	11355.2	11423.0	11556.8	11739.2
55°	11522.5	11650.6	11725.0	11792.0	11902.5	11925.8	11988.6	12063.1	12122.4	12273.1	12427.9
57.5°	12224.7	12462.2	12577.6	12683.8	12832.7	12889.6	12994.3	13075.5	13152.4	13330.6	13518.0
60°	12657.0	12946.7	13181.7	13349.7	13536.4	13670.4	13828.5	13955.6	14136.3	14349.7	14629.2
62.5°	12313.3	12738.2	13050.4	13339.1	13592.5	13848.6	14075.2	14313.0	14587.2	14910.1	15343.7
65°	10943.7	11376.1	11910.7	12210.3	12545.8	12940.7	13285.4	13670.4	14044.2	14514.5	15155.4
67.5°	8810.2	9312.8	9913.7	10215.8	10601.4	11042.2	11428.9	11899.0	12335.8	12905.5	13697.9
70°	6350.3	7000.4	7505.7	7821.2	8271.4	8725.6	9098.9	9645.9	10007.3	10591.3	11410.6
72.5°	4021.0	4533.8	5153.0	5550.4	5950.3	6410.7	6792.1	7264.0	7601.0	8133.1	8875.2
75°	2162.0	2540.0	3083.8	3461.3	3889.7	4282.9	4729.6	5045.8	5295.3	5716.2	6318.6
77.5°	1013.1	1243.2	1518.5	1808.9	2099.2	2402.0	2696.7	2952.5	3059.8	3300.8	3656.2
80°	615.0	689.5	769.7	859.3	980.6	1078.4	1208.2	1301.8	1308.5	1384.7	1493.4
82.5°	410.8	438.3	462.6	485.2	516.2	540.6	568.1	600.6	614.0	631.7	666.9
85°	280.2	293.6	298.6	313.0	309.5	317.9	328.9	339.8	345.5	344.7	360.6
87.5°	172.2	178.9	182.4	185.7	183.2	179.9	184.9	190.9	192.4	187.4	189.1
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6
2.5°	1533.6	1526.2	1518.5	1513.5	1511.8	1467.6	1448.2	1435.8	1409.0	1387.2	1369.5
5°	1691.7	1675.8	1663.4	1648.3	1639.8	1527.6	1486.7	1458.4	1411.5	1383.9	1358.6
7.5°	1946.1	1901.7	1875.9	1846.6	1821.5	1619.0	1551.2	1506.8	1441.5	1404.8	1376.2
10°	2234.8	2188.8	2147.6	2102.5	2063.3	1740.4	1641.6	1572.8	1486.7	1439.0	1401.3
12.5°	2556.9	2511.7	2459.9	2402.0	2351.9	1894.2	1757.0	1659.2	1541.0	1477.5	1424.9
15°	2937.6	2858.0	2795.2	2728.4	2669.8	2078.4	1891.8	1756.2	1598.9	1512.8	1442.5
17.5°	3291.3	3207.7	3122.6	3064.0	2996.2	2284.9	2027.3	1854.8	1646.5	1535.3	1445.7
20°	3637.1	3545.7	3472.3	3393.6	3322.4	2499.1	2172.0	1941.9	1677.6	1536.1	1424.9
22.5°	3941.6	3884.5	3802.6	3717.2	3645.3	2713.3	2307.5	2015.6	1689.2	1517.0	1387.9
25°	4287.8	4227.8	4127.3	4055.3	3975.1	2931.7	2440.5	2072.4	1682.5	1481.0	1331.1
27.5°	4657.6	4590.9	4487.9	4412.7	4315.6	3158.3	2562.6	2113.4	1657.5	1422.4	1254.9
30°	5043.3	4982.3	4881.0	4805.1	4707.0	3398.5	2699.1	2140.9	1607.3	1341.3	1166.3
32.5°	5457.6	5406.5	5306.2	5226.8	5122.0	3658.7	2826.2	2149.4	1531.1	1245.0	1072.7
35°	5850.7	5815.7	5731.1	5656.6	5547.9	3904.6	2961.0	2145.2	1440.8	1139.5	987.3
37.5°	6293.5	6272.4	6230.7	6136.2	6003.1	4238.4	3122.6	2127.5	1330.3	1035.0	922.0
40°	6765.3	6767.1	6721.9	6657.4	6533.5	4643.5	3314.9	2093.3	1209.7	942.9	862.5
42.5°	7264.7	7290.8	7268.9	7223.0	7104.1	5051.8	3545.0	2051.6	1092.8	853.3	804.2
45°	7837.0	7868.8	7902.3	7834.6	7719.1	5590.6	3847.8	1997.2	966.2	778.8	763.9
47.5°	8497.2	8547.4	8577.4	8578.4	8463.0	6258.3	4339.7	1964.5	854.3	728.7	744.6
50°	9890.1	9906.3	9977.2	10101.1	10012.5	7803.5	5199.0	1944.4	778.1	697.7	730.4
52.5°	11897.3	12072.3	12195.4	12186.9	12066.3	8784.9	5672.5	1840.6	732.9	686.0	723.7
55°	12714.8	12933.3	13160.8	13220.9	13127.3	9622.6	6120.3	1736.9	711.1	694.5	726.2
57.5°	13804.2	14172.2	14484.5	14615.8	14480.3	10694.3	6709.2	1682.5	704.4	717.0	742.1
60°	15076.7	15531.9	15941.9	16177.7	16177.7	11925.8	7320.0	1659.9	695.2	750.5	768.9
62.5°	15894.2	16562.6	17181.9	17527.4	17517.2	12783.3	7591.1	1583.0	674.3	773.9	805.6
65°	15897.5	16692.4	17481.2	17869.6	17889.5	12678.1	7143.6	1398.1	635.9	777.4	842.6
67.5°	14572.3	15419.7	16339.2	16773.6	16873.9	11670.7	6183.8	1149.6	573.1	743.8	856.0
70°	12307.3	13134.8	14073.5	14500.4	14678.6	9948.7	4980.6	886.1	492.9	670.1	828.2
72.5°	9696.0	10507.6	11161.1	11473.1	11612.1	7604.5	3626.9	669.4	404.1	564.6	753.8
75°	6864.9	7473.9	7821.2	7890.7	7912.2	4584.2	2203.7	497.9	333.1	439.3	636.6
77.5°	3874.6	4135.7	4107.1	4138.2	3880.5	1769.6	959.8	356.4	274.5	333.8	493.7
80°	1512.8	1559.7	1465.1	1435.8	1316.9	658.5	423.4	248.4	219.2	252.7	345.5
82.5°	666.9	688.5	668.4	673.6	644.3	339.8	253.4	179.9	167.3	184.9	229.3
85°	367.3	374.0	372.3	383.2	367.3	135.5	120.4	110.4	117.1	125.6	147.2
87.5°	178.9	180.7	175.0	184.2	178.2	68.5	59.3	62.8	68.5	70.2	70.2
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):

	135°	145°	155°	165°	175°	180°
0°	1436.6	1436.6	1436.6	1436.6	1436.6	1436.6
2.5°	1357.1	1350.4	1351.2	1349.4	1346.2	1346.2
5°	1345.5	1338.8	1338.8	1337.0	1332.8	1333.6
7.5°	1357.1	1346.2	1342.0	1336.0	1330.3	1330.3
10°	1370.5	1351.2	1339.5	1329.6	1321.9	1321.9
12.5°	1380.5	1350.4	1331.1	1317.7	1310.2	1310.2
15°	1383.9	1344.5	1317.7	1301.8	1295.1	1294.3
17.5°	1373.0	1321.9	1289.4	1271.0	1262.6	1260.1
20°	1339.5	1280.9	1241.7	1220.6	1209.0	1204.7
22.5°	1289.4	1222.4	1176.4	1154.6	1139.5	1137.0
25°	1219.1	1147.2	1102.0	1080.9	1072.7	1070.0
27.5°	1137.0	1070.0	1031.5	1018.1	1010.7	1009.9
30°	1059.3	1002.2	973.9	963.7	954.6	953.1
32.5°	986.3	950.3	939.7	925.3	903.7	901.2
35°	934.5	931.2	923.8	891.8	865.2	857.5
37.5°	902.7	933.7	895.2	832.4	813.3	811.6
40°	884.3	907.9	841.6	820.0	821.5	820.0
42.5°	842.6	866.7	843.4	833.4	839.9	841.6
45°	800.7	827.5	856.0	849.3	865.2	865.2
47.5°	777.4	817.3	855.0	855.0	878.6	886.8
50°	750.5	809.1	841.6	853.3	871.9	865.2
52.5°	748.8	794.7	822.5	843.4	851.8	844.1
55°	751.3	783.1	803.2	826.7	836.7	837.4
57.5°	754.8	776.4	789.8	800.7	830.7	830.7
60°	763.0	770.6	778.1	784.1	823.3	824.0
62.5°	776.4	764.7	763.0	768.9	819.0	815.8
65°	797.5	756.3	743.8	749.6	814.8	804.9
67.5°	825.7	743.8	719.5	723.7	811.6	789.8
70°	851.8	723.7	689.5	685.3	779.8	741.4
72.5°	854.3	700.4	647.5	635.1	677.8	640.8
75°	812.3	684.3	601.6	564.6	559.7	554.7
77.5°	732.2	675.1	548.0	490.2	480.3	483.5
80°	612.5	640.8	483.5	415.0	469.3	463.6
82.5°	457.7	565.6	410.8	367.3	366.3	323.9
85°	254.4	441.0	334.6	275.2	191.6	185.7
87.5°	71.2	245.2	234.3	155.6	106.2	110.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)