

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: P301594

Luminaire Tested: **GLNA-AF-06-LED-E1-T2R-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301594
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-06-LED-E1-T2R-7050
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(6) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36957.8 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

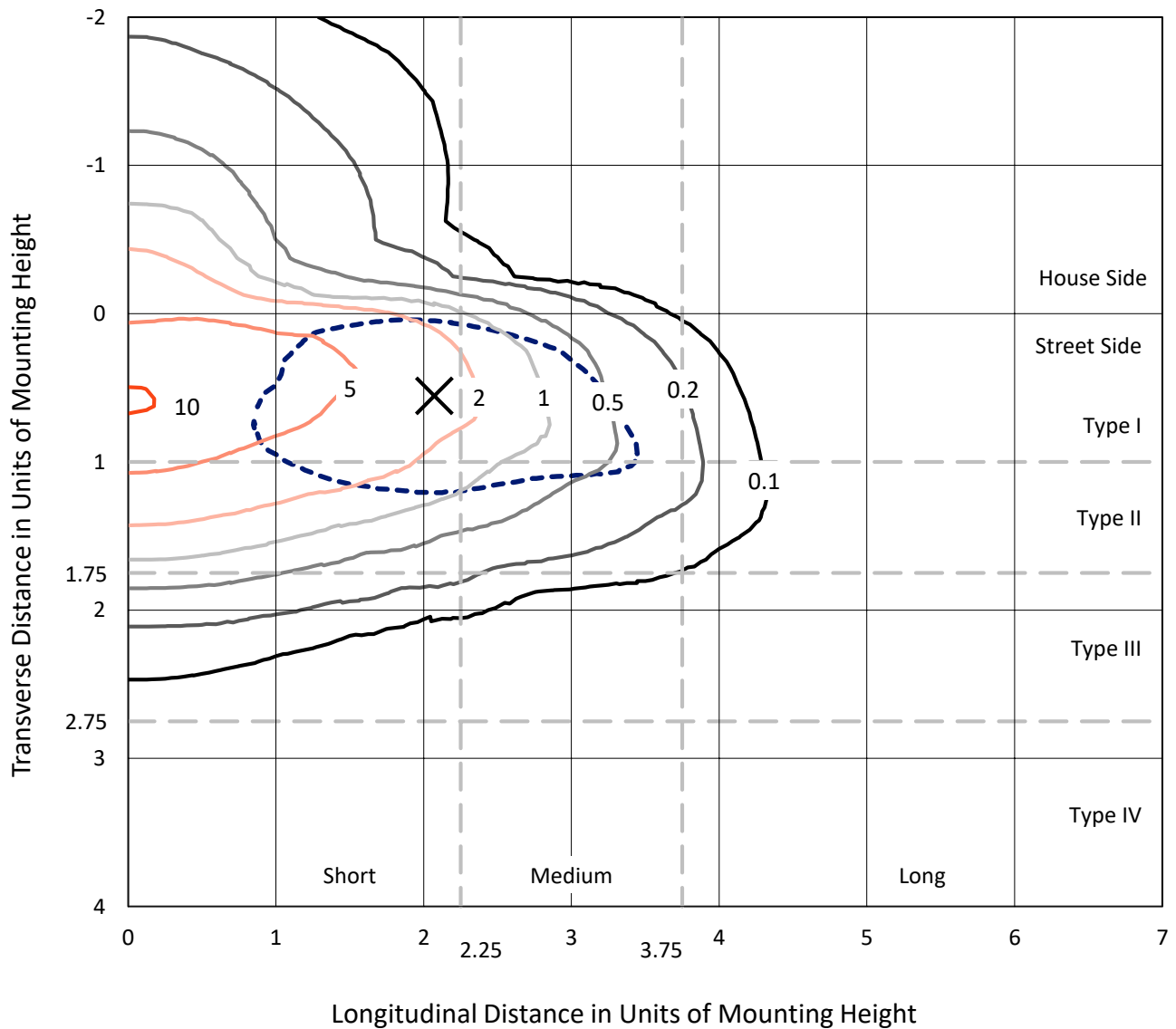
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

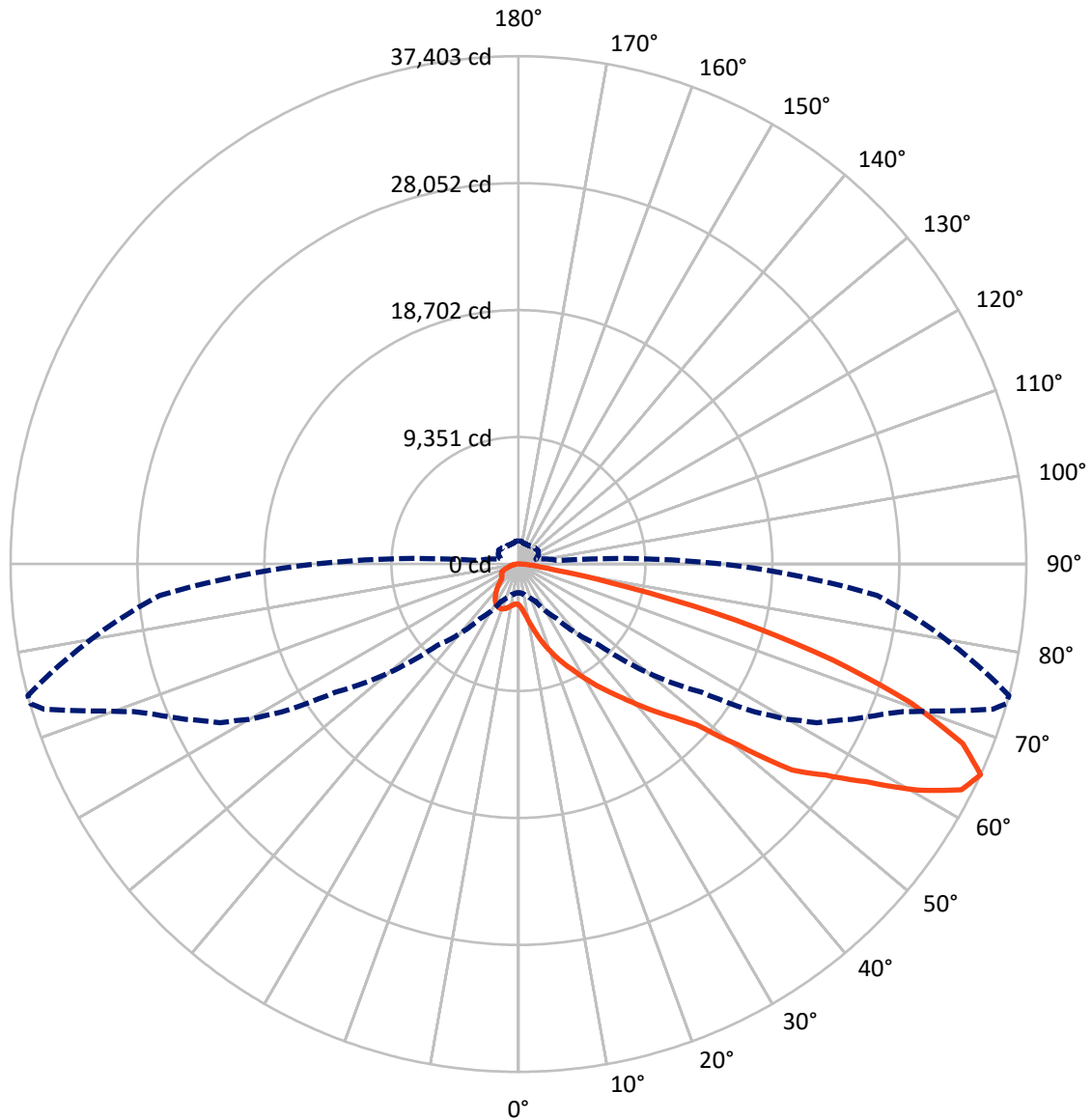
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.4 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	5698.0	0.0	5698.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	31259.7	0.0	31259.7
	% Fixture	84.6	0.0	84.6
Total	Lumens	36957.8	0.0	36957.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	371.2	1.0
10°-20°	1450.5	3.9
20°-30°	2976.0	8.1
30°-40°	5007.0	13.5
40°-50°	6918.3	18.7
50°-60°	8636.1	23.4
60°-70°	7771.6	21.0
70°-80°	3257.8	8.8
80°-90°	569.2	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°	36957.8	100.0
0°-180°	36957.8	100.0



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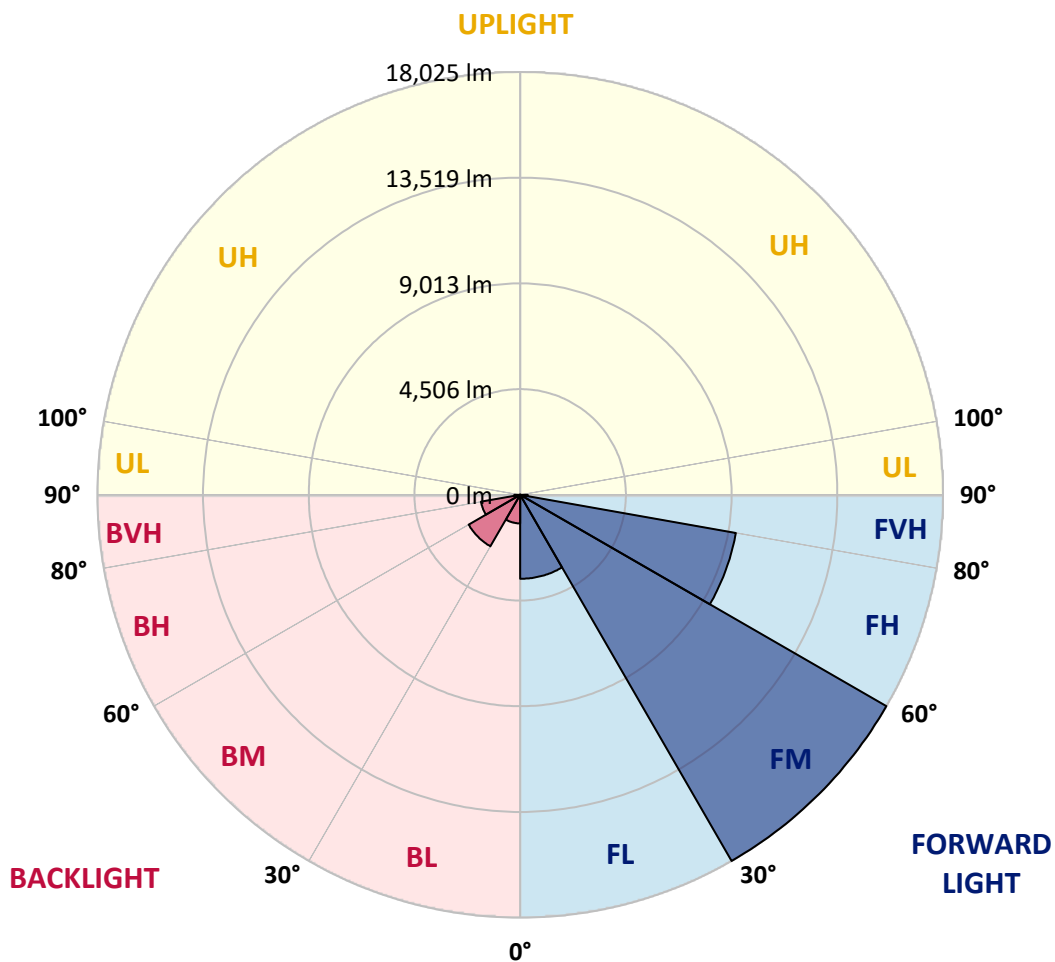
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3579.2	9.7			
FM	(30°-60°)	18025.2	48.8			
FH	(60°-80°)	9335.4	25.3			G4/12000
FVH	(80°-90°)	319.9	0.9			G3/500
BL	(0°-30°)	1218.6	3.3	B3/2500		
BM	(30°-60°)	2536.2	6.9	B3/5000		
BH	(60°-80°)	1694.0	4.6	B3/2500		G3/2500
BVH	(80°-90°)	249.2	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5
2.5°	3813.6	3771.5	3781.9	3711.9	3626.2	3514.1	3390.1	3388.6	3390.1	3377.7	3332.5
5°	5287.8	5237.5	5218.3	5060.5	4829.6	4501.1	4144.1	4105.7	4089.6	4049.7	3956.8
7.5°	6364.1	6336.1	6306.0	6187.1	5977.5	5610.1	5130.6	5048.6	4969.7	4950.5	4845.7
10°	7058.4	7051.1	6988.3	6956.7	6825.9	6507.3	6040.3	5961.4	5875.8	5846.2	5735.7
12.5°	7607.4	7605.9	7576.3	7585.1	7470.9	7240.5	6837.9	6766.2	6703.5	6612.1	6533.8
15°	7987.3	7988.8	8032.9	8081.7	8064.1	7908.4	7530.6	7499.0	7445.0	7382.2	7289.3
17.5°	8298.6	8307.4	8352.6	8441.8	8538.4	8525.9	8227.0	8200.5	8153.3	8067.7	8018.9
20°	9001.8	9035.0	8947.8	8947.8	8958.2	9005.4	8861.7	8840.9	8774.5	8728.8	8690.4
22.5°	10189.6	10228.0	10030.3	9829.4	9631.7	9488.0	9344.8	9370.7	9325.6	9293.9	9271.1
25°	11732.3	11762.4	11442.3	11102.9	10700.2	10175.6	9820.6	9804.5	9780.1	9760.9	9750.6
27.5°	13184.3	13196.7	12894.2	12397.1	11930.0	11176.1	10303.2	10284.0	10254.4	10217.6	10185.9
30°	14426.6	14423.0	14111.6	13637.3	13137.1	12302.6	11036.5	10976.8	10889.1	10789.5	10712.7
32.5°	15502.3	15497.1	15155.7	14664.3	14139.6	13418.8	12040.6	11918.1	11781.6	11587.0	11470.3
35°	16348.7	16345.6	16023.3	15511.1	14909.2	14470.2	13191.5	13041.1	12867.7	12607.2	12427.2
37.5°	16668.9	16668.9	16488.8	16139.0	15607.1	15306.2	14470.2	14288.0	14102.8	13807.0	13604.1
40°	16481.5	16485.2	16523.6	16459.2	16200.3	15969.3	15663.2	15554.7	15395.4	15129.7	14918.0
42.5°	15853.6	15872.8	16128.7	16441.6	16570.8	16534.5	16721.3	16672.5	16560.4	16355.9	16187.8
45°	15057.6	15117.3	15397.0	15988.5	16674.0	17022.2	17608.1	17613.3	17592.5	17482.5	17352.8
47.5°	13964.7	14048.3	14417.8	15216.9	16432.7	17496.5	18509.0	18556.2	18600.3	18528.7	18469.0
50°	12512.8	12612.4	13165.1	14225.2	15941.3	17988.0	20211.0	20424.8	20624.1	20599.7	20639.7
52.5°	10957.6	11074.9	11751.5	12932.6	15096.5	18101.6	21299.2	21647.4	21995.6	22280.5	22583.0
55°	9554.4	9491.6	10168.8	11412.2	13707.4	17588.9	22277.4	22697.2	23085.3	23435.1	23795.7
57.5°	7653.1	7756.3	8435.1	9664.9	11868.8	16142.1	22950.4	23564.8	24122.7	24701.8	25212.4
60°	5594.0	5697.3	6433.6	7682.7	9873.0	13948.7	22436.2	23367.1	24260.7	25147.5	25840.3
62.5°	3377.7	3455.0	4103.6	5293.5	7613.1	11347.8	20144.6	21365.6	22681.1	23741.3	24803.0
65°	2102.7	2146.3	2386.0	3040.4	4889.3	8471.9	16459.2	17790.2	19206.9	20552.5	21656.2
67.5°	1721.3	1736.8	1780.9	1920.5	2684.9	5524.5	12250.2	13429.2	14707.8	16009.3	17237.6
70°	1547.9	1537.6	1537.6	1546.4	1721.3	2970.3	8020.5	8788.5	9853.8	10985.6	12108.6
72.5°	1397.5	1387.1	1367.9	1341.9	1404.7	1812.1	4145.7	4724.8	5492.8	6498.5	7574.2
75°	1255.8	1241.8	1219.5	1186.3	1229.8	1367.9	1990.6	2234.0	2608.1	3143.6	3743.5
77.5°	1108.9	1091.3	1070.5	1046.1	1102.2	1063.8	1166.5	1254.2	1397.5	1569.2	1795.0
80°	942.9	927.3	920.1	908.1	974.5	810.0	824.1	878.0	962.1	1055.0	1159.8
82.5°	738.4	738.4	765.9	771.6	844.8	582.8	616.0	663.2	706.8	755.6	804.8
85°	486.2	489.9	584.3	621.2	666.3	391.8	461.8	477.4	512.7	540.7	561.5
87.5°	152.0	164.5	357.0	395.4	383.0	222.1	283.3	290.6	315.0	334.2	351.8
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°	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5
2.5°	3332.5	3311.2	3292.0	3290.5	3276.5	3257.3	3264.0	3234.4	3236.0	3220.4	3202.8
5°	3918.4	3904.4	3834.3	3815.1	3762.7	3729.5	3724.3	3654.3	3645.4	3605.5	3561.4
7.5°	4761.6	4716.0	4617.9	4570.7	4481.4	4415.0	4383.9	4291.0	4245.3	4140.5	4093.3
10°	5644.8	5587.2	5466.3	5399.9	5314.3	5207.4	5149.8	5015.4	4962.5	4866.5	4751.3
12.5°	6463.7	6406.1	6281.6	6230.7	6117.1	6003.4	5940.6	5788.6	5720.1	5566.0	5475.2
15°	7220.8	7163.2	7054.8	7002.4	6888.7	6795.8	6711.8	6561.8	6481.4	6337.6	6218.8
17.5°	7955.6	7894.4	7799.9	7752.7	7642.7	7548.3	7457.4	7315.3	7233.3	7090.0	6983.2
20°	8638.0	8592.3	8524.4	8461.0	8351.0	8265.4	8157.0	8034.5	7915.7	7810.3	7709.1
22.5°	9232.7	9215.0	9141.9	9113.8	9019.4	8945.7	8851.3	8730.9	8644.7	8511.9	8417.5
25°	9745.4	9740.2	9704.9	9696.1	9629.7	9559.6	9538.8	9439.2	9360.3	9243.1	9145.5
27.5°	10185.9	10191.1	10182.8	10207.2	10189.6	10157.9	10160.0	10126.8	10081.1	9983.0	9897.4
30°	10675.8	10647.8	10663.9	10698.6	10709.0	10712.7	10770.3	10789.5	10786.3	10721.5	10679.4
32.5°	11368.6	11302.1	11240.9	11235.7	11270.5	11284.5	11382.6	11433.4	11477.0	11492.6	11499.9
35°	12251.8	12118.9	11991.3	11923.3	11863.6	11879.2	11949.2	12031.8	12127.8	12194.2	12273.1
37.5°	13364.3	13201.9	12976.2	12815.3	12774.9	12687.7	12732.8	12797.7	12892.1	12995.4	13131.9
40°	14713.0	14466.5	14212.8	13999.5	13884.3	13722.9	13721.4	13708.9	13767.0	13863.0	14055.6
42.5°	16011.4	15792.4	15523.1	15299.4	15148.9	14933.6	14890.0	14776.3	14802.3	14886.4	15073.7
45°	17226.7	17046.6	16882.1	16623.7	16495.5	16263.1	16189.4	16055.0	15979.7	16018.1	16205.5
47.5°	18404.1	18288.9	18117.2	17949.6	17851.5	17643.4	17548.9	17452.4	17356.4	17352.8	17548.9
50°	20699.3	20638.1	20435.2	20260.3	20307.5	20052.2	20067.8	19808.9	19926.1	19940.1	20351.1
52.5°	22856.0	23069.8	23220.3	23403.4	23522.8	23545.6	23624.0	23741.3	23882.9	24162.6	24544.0
55°	24091.0	24358.8	24514.5	24654.6	24885.5	24934.3	25065.6	25221.2	25345.3	25660.2	25984.0
57.5°	25559.0	26055.7	26297.0	26519.1	26830.4	26949.2	27168.2	27337.9	27498.8	27871.4	28263.2
60°	26463.0	27068.6	27560.0	27911.3	28301.6	28581.8	28912.3	29178.0	29555.8	30002.1	30586.4
62.5°	25744.3	26632.7	27285.5	27889.0	28418.8	28954.4	29428.1	29925.3	30498.7	31173.8	32080.4
65°	22880.9	23784.8	24902.6	25528.9	26230.5	27056.1	27776.9	28581.8	29363.3	30346.6	31686.5
67.5°	18420.2	19471.0	20727.4	21358.9	22165.3	23086.9	23895.4	24878.2	25791.5	26982.5	28639.4
70°	13277.2	14636.2	15692.8	16352.3	17293.6	18243.3	19023.7	20167.4	20923.0	22144.0	23857.0
72.5°	8407.1	9479.2	10773.9	11604.7	12440.7	13403.3	14200.9	15187.3	15892.0	17004.6	18556.2
75°	4520.3	5310.7	6447.6	7236.9	8132.6	8954.5	9888.6	10549.7	11071.2	11951.3	13210.7
77.5°	2118.2	2599.3	3174.8	3781.9	4389.1	5022.1	5638.1	6173.1	6397.3	6901.2	7644.3
80°	1285.9	1441.6	1609.2	1796.5	2050.3	2254.7	2526.1	2721.8	2735.8	2895.1	3122.4
82.5°	858.8	916.4	967.3	1014.5	1079.4	1130.2	1187.8	1255.8	1283.8	1320.7	1394.3
85°	585.9	613.9	624.3	654.4	647.1	664.7	687.6	710.4	722.3	720.8	754.0
87.5°	360.1	374.1	381.4	388.2	383.0	376.2	386.6	399.1	402.2	391.8	395.4
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°	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5
2.5°	3206.4	3190.9	3174.8	3164.4	3160.8	3068.4	3027.9	3002.0	2945.9	2900.3	2863.4
5°	3537.0	3503.8	3477.8	3446.2	3428.5	3194.0	3108.4	3049.2	2951.1	2893.5	2840.6
7.5°	4068.9	3976.0	3922.0	3860.8	3808.4	3384.9	3243.3	3150.4	3013.9	2937.1	2877.4
10°	4672.4	4576.4	4490.2	4395.8	4313.8	3638.7	3432.2	3288.4	3108.4	3008.7	2929.8
12.5°	5345.9	5251.5	5143.0	5022.1	4917.3	3960.4	3673.5	3469.0	3222.0	3089.2	2979.1
15°	6142.0	5975.4	5844.1	5704.5	5582.1	4345.5	3955.2	3671.9	3342.9	3162.8	3016.0
17.5°	6881.4	6706.6	6528.6	6406.1	6264.4	4777.2	4238.6	3877.9	3442.5	3210.1	3022.7
20°	7604.3	7413.3	7259.7	7095.2	6946.3	5225.0	4541.1	4060.1	3507.4	3211.6	2979.1
22.5°	8241.0	8121.7	7950.4	7771.9	7621.4	5672.9	4824.4	4214.2	3531.8	3171.7	2901.8
25°	8964.9	8839.3	8629.2	8478.7	8311.1	6129.5	5102.6	4333.0	3517.8	3096.4	2783.0
27.5°	9738.1	9598.5	9383.2	9225.9	9023.0	6603.3	5357.9	4418.6	3465.4	2973.9	2623.7
30°	10544.5	10416.9	10205.1	10046.4	9841.4	7105.6	5643.3	4476.2	3360.5	2804.3	2438.4
32.5°	11410.6	11303.7	11094.1	10928.0	10709.0	7649.4	5909.0	4493.9	3201.2	2602.9	2242.8
35°	12232.6	12159.4	11982.5	11826.8	11599.5	8163.7	6190.8	4485.1	3012.3	2382.4	2064.3
37.5°	13158.3	13114.2	13027.0	12829.3	12551.2	8861.7	6528.6	4448.2	2781.4	2163.9	1927.8
40°	14144.8	14148.4	14054.0	13919.1	13660.1	9708.5	6930.7	4376.6	2529.2	1971.4	1803.3
42.5°	15188.9	15243.4	15197.7	15101.7	14853.1	10562.2	7411.8	4289.4	2284.8	1784.1	1681.3
45°	16385.5	16451.9	16522.0	16380.3	16139.0	11688.7	8044.9	4175.8	2020.2	1628.4	1597.2
47.5°	17765.9	17870.7	17933.5	17935.5	17694.2	13084.7	9073.4	4107.3	1786.1	1523.6	1556.8
50°	20678.1	20711.8	20860.2	21119.1	20933.9	16315.5	10869.9	4065.2	1626.8	1458.7	1527.2
52.5°	24874.6	25240.4	25497.8	25480.2	25228.0	18367.3	11860.0	3848.3	1532.4	1434.3	1513.2
55°	26583.9	27040.6	27516.4	27642.0	27446.4	20118.7	12796.1	3631.4	1486.7	1451.9	1518.4
57.5°	28861.5	29631.0	30283.8	30558.4	30275.0	22359.4	14027.5	3517.8	1472.7	1499.2	1551.6
60°	31522.0	32473.7	33331.0	33823.9	33823.9	24934.3	15304.6	3470.6	1453.5	1569.2	1607.6
62.5°	33231.3	34628.8	35923.5	36645.8	36624.6	26727.1	15871.3	3309.7	1409.9	1618.0	1684.4
65°	33238.1	34900.2	36549.3	37361.4	37403.0	26507.1	14935.6	2923.1	1329.5	1625.3	1761.7
67.5°	30467.5	32239.1	34161.8	35069.9	35279.5	24400.8	12929.0	2403.7	1198.2	1555.2	1789.8
70°	25731.8	27461.9	29424.5	30317.1	30689.6	20800.5	10413.2	1852.6	1030.6	1401.1	1731.6
72.5°	20272.3	21969.1	23335.5	23987.7	24278.3	15899.3	7583.0	1399.5	844.8	1180.6	1576.0
75°	14352.9	15626.3	16352.3	16497.6	16542.8	9584.5	4607.5	1041.0	696.4	918.5	1331.0
77.5°	8100.9	8646.8	8587.1	8652.0	8113.4	3699.9	2006.7	745.2	573.9	698.0	1032.1
80°	3162.8	3260.9	3063.2	3002.0	2753.4	1376.7	885.3	519.4	458.2	528.3	722.3
82.5°	1394.3	1439.5	1397.5	1408.4	1347.1	710.4	529.8	376.2	349.8	386.6	479.5
85°	768.0	782.0	778.4	801.2	768.0	283.3	251.7	230.9	244.9	262.6	307.7
87.5°	374.1	377.8	365.8	385.0	372.6	143.2	124.0	131.3	143.2	146.9	146.9
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):

	135°	145°	155°	165°	175°	180°
0°	3003.5	3003.5	3003.5	3003.5	3003.5	3003.5
2.5°	2837.5	2823.5	2825.0	2821.4	2814.6	2814.6
5°	2813.1	2799.1	2799.1	2795.4	2786.6	2788.2
7.5°	2837.5	2814.6	2805.8	2793.4	2781.4	2781.4
10°	2865.5	2825.0	2800.6	2779.9	2763.8	2763.8
12.5°	2886.3	2823.5	2783.0	2755.0	2739.4	2739.4
15°	2893.5	2811.0	2755.0	2721.8	2707.7	2706.2
17.5°	2870.7	2763.8	2695.8	2657.4	2639.8	2634.6
20°	2800.6	2678.2	2596.2	2552.1	2527.7	2518.9
22.5°	2695.8	2555.7	2459.7	2414.0	2382.4	2377.2
25°	2549.0	2398.5	2304.0	2259.9	2242.8	2237.1
27.5°	2377.2	2237.1	2156.6	2128.6	2113.1	2111.5
30°	2214.8	2095.4	2036.3	2015.0	1995.8	1992.7
32.5°	2062.2	1987.0	1964.6	1934.5	1889.4	1884.2
35°	1953.7	1947.0	1931.4	1864.5	1809.0	1792.9
37.5°	1887.3	1952.2	1871.8	1740.5	1700.5	1696.9
40°	1848.9	1898.2	1759.7	1714.5	1717.6	1714.5
42.5°	1761.7	1812.1	1763.3	1742.5	1756.0	1759.7
45°	1674.0	1730.1	1789.8	1775.8	1809.0	1809.0
47.5°	1625.3	1708.8	1787.7	1787.7	1837.0	1854.1
50°	1569.2	1691.7	1759.7	1784.1	1823.0	1809.0
52.5°	1565.6	1661.6	1719.7	1763.3	1780.9	1764.9
55°	1570.8	1637.2	1679.2	1728.5	1749.3	1750.8
57.5°	1578.0	1623.2	1651.2	1674.0	1736.8	1736.8
60°	1595.2	1611.3	1626.8	1639.3	1721.3	1722.8
62.5°	1623.2	1598.8	1595.2	1607.6	1712.4	1705.7
65°	1667.3	1581.2	1555.2	1567.1	1703.6	1682.9
67.5°	1726.5	1555.2	1504.4	1513.2	1696.9	1651.2
70°	1780.9	1513.2	1441.6	1432.7	1630.5	1550.0
72.5°	1786.1	1464.4	1353.9	1327.9	1417.2	1339.9
75°	1698.4	1430.7	1257.9	1180.6	1170.2	1159.8
77.5°	1530.8	1411.5	1145.8	1024.9	1004.1	1010.9
80°	1280.7	1339.9	1010.9	867.6	981.3	969.3
82.5°	956.9	1182.6	858.8	768.0	765.9	677.2
85°	531.9	922.1	699.5	575.5	400.6	388.2
87.5°	148.9	512.7	489.9	325.4	222.1	230.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)