

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: P301602

Luminaire Tested: **GLNA-AF-08-LED-E1-T2R-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301602
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-08-LED-E1-T2R-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43026.4 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

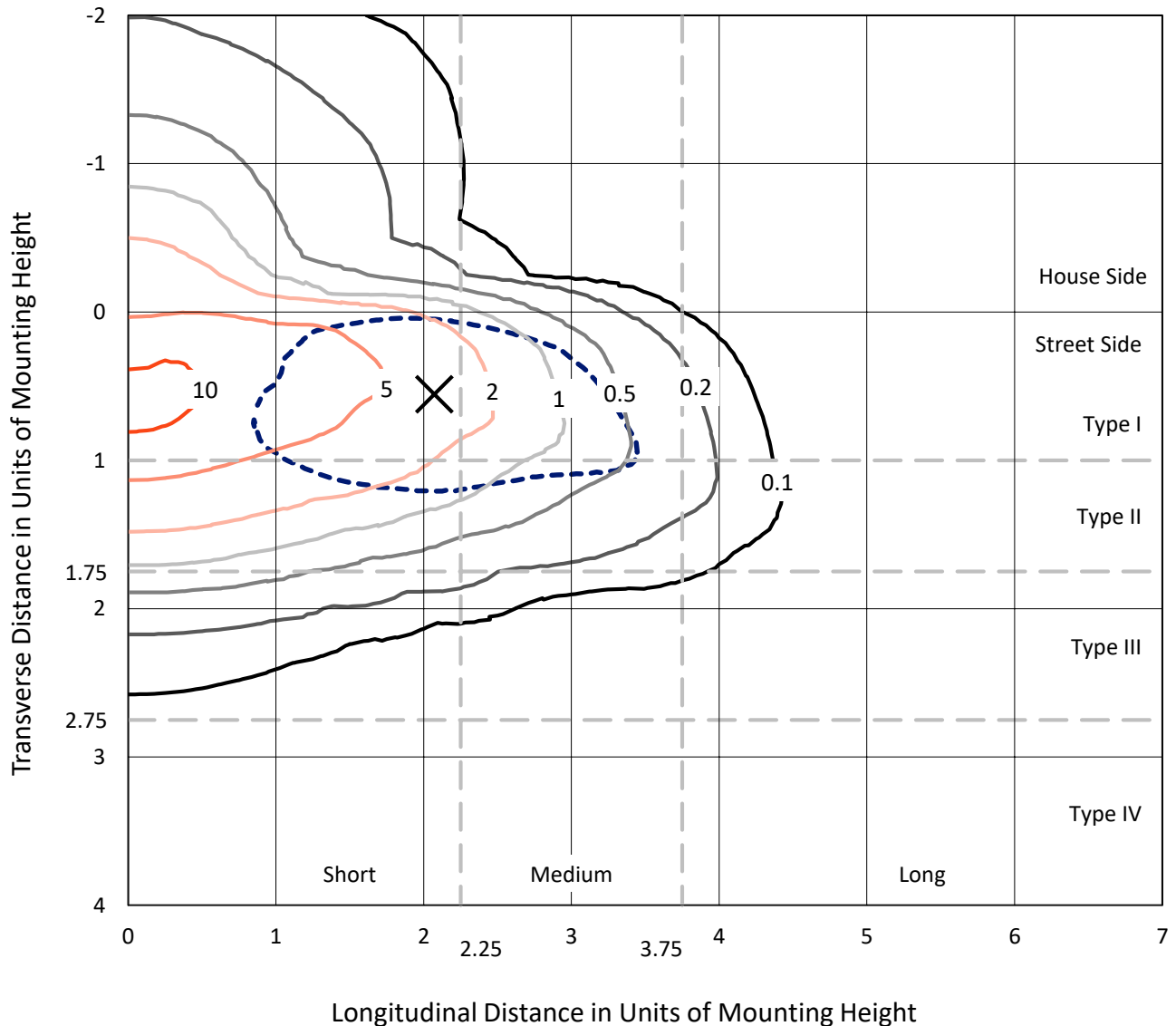
Input Watts (W): 445
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

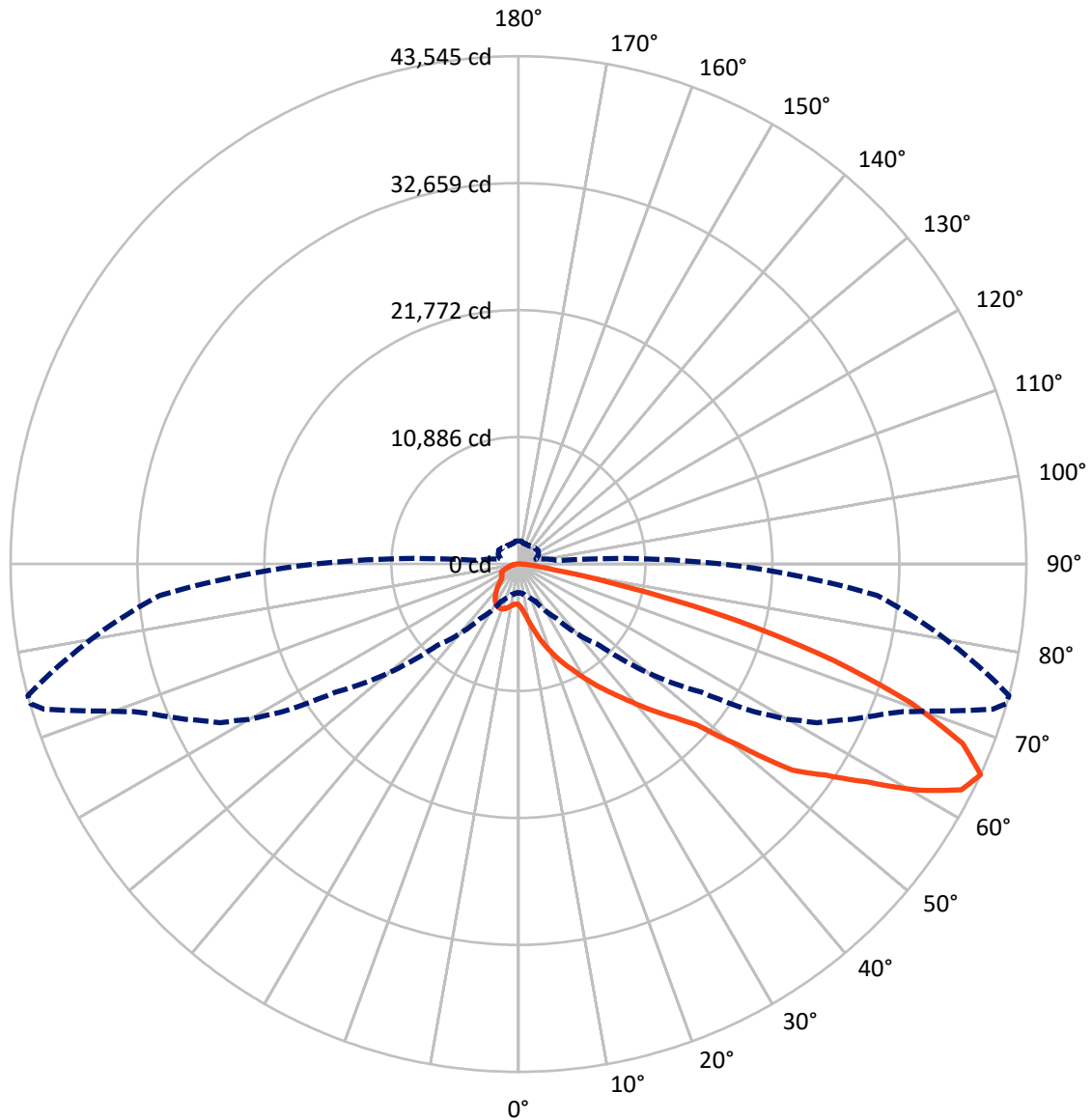
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12.1 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	6633.7	0.0	6633.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	36392.7	0.0	36392.7
	% Fixture	84.6	0.0	84.6
Total	Lumens	43026.4	0.0	43026.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	432.2	1.0
10°-20°	1688.7	3.9
20°-30°	3464.7	8.1
30°-40°	5829.2	13.5
40°-50°	8054.3	18.7
50°-60°	10054.2	23.4
60°-70°	9047.7	21.0
70°-80°	3792.7	8.8
80°-90°	662.6	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°	43026.4	100.0
0°-180°	43026.4	100.0

Coefficient of Utilization



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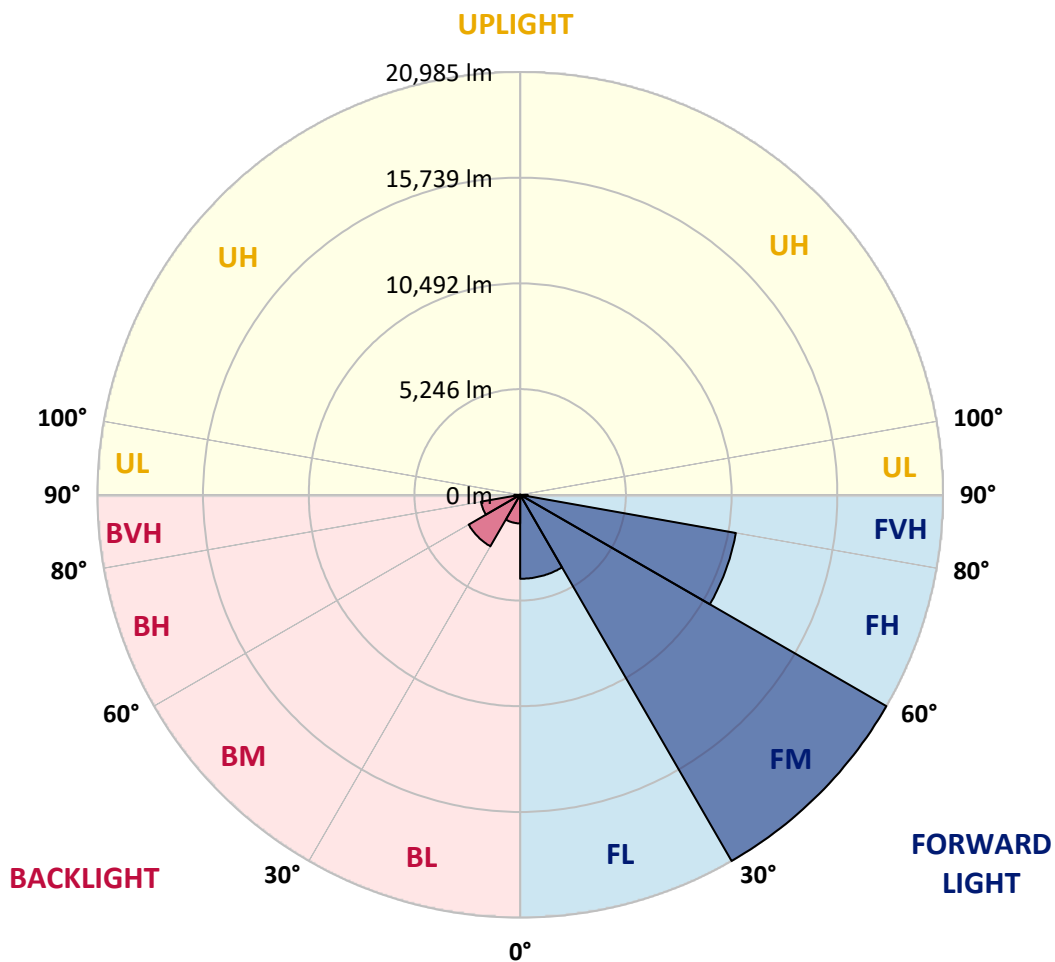
CATALOG NUMBER: GLNA-AF-08-LED-E1-T2R-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4167.0	9.7			
FM	(30°-60°)	20985.0	48.8			
FH	(60°-80°)	10868.3	25.3			G4/12000
FVH	(80°-90°)	372.4	0.9			G3/500
BL	(0°-30°)	1418.7	3.3	B3/2500		
BM	(30°-60°)	2952.7	6.9	B3/5000		
BH	(60°-80°)	1972.1	4.6	B3/2500		G3/2500
BVH	(80°-90°)	290.2	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°	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7
2.5°	4439.8	4390.8	4402.9	4321.4	4221.7	4091.2	3946.8	3945.0	3946.8	3932.3	3879.7
5°	6156.1	6097.5	6075.2	5891.5	5622.7	5240.2	4824.6	4779.9	4761.2	4714.7	4606.5
7.5°	7409.1	7376.5	7341.4	7203.1	6959.0	6531.3	5973.1	5877.6	5785.8	5763.4	5641.4
10°	8217.4	8209.0	8135.9	8099.0	7946.8	7575.8	7032.1	6940.3	6840.6	6806.2	6677.5
12.5°	8856.6	8854.8	8820.3	8830.6	8697.7	8429.5	7960.7	7877.3	7804.2	7697.9	7606.6
15°	9298.8	9300.6	9352.0	9408.8	9388.2	9207.0	8767.2	8730.3	8667.5	8594.4	8486.3
17.5°	9661.3	9671.6	9724.1	9828.0	9940.4	9925.9	9577.9	9547.1	9492.1	9392.5	9335.7
20°	10479.9	10518.6	10417.1	10417.1	10429.1	10484.1	10316.8	10292.6	10215.3	10162.1	10117.4
22.5°	11862.8	11907.5	11677.3	11443.5	11213.3	11046.0	10879.2	10909.4	10856.9	10820.0	10793.4
25°	13658.8	13693.9	13321.1	12926.0	12457.2	11846.4	11433.2	11414.5	11386.1	11363.7	11351.7
27.5°	15349.2	15363.7	15011.5	14432.7	13889.0	13011.2	11995.1	11972.7	11938.3	11895.4	11858.5
30°	16795.5	16791.3	16428.8	15876.6	15294.2	14322.8	12848.7	12779.2	12677.1	12561.1	12471.7
32.5°	18047.9	18041.8	17644.3	17072.2	16461.4	15622.3	14017.7	13875.1	13716.2	13489.7	13353.8
35°	19033.2	19029.6	18654.4	18058.1	17357.3	16846.2	15357.7	15182.5	14980.7	14677.4	14467.8
37.5°	19406.0	19406.0	19196.3	18789.1	18169.9	17819.5	16846.2	16634.2	16418.5	16074.2	15837.9
40°	19187.9	19192.1	19236.8	19161.9	18860.4	18591.6	18235.1	18108.9	17923.4	17614.1	17367.6
42.5°	18456.9	18479.2	18777.1	19141.3	19291.8	19249.5	19467.0	19410.2	19279.7	19041.7	18845.9
45°	17530.1	17599.6	17925.2	18613.9	19412.0	19817.4	20499.4	20505.5	20481.3	20353.2	20202.2
47.5°	16257.8	16355.1	16785.2	17715.6	19131.1	20369.5	21548.2	21603.2	21654.5	21571.2	21501.7
50°	14567.5	14683.4	15326.9	16561.1	18559.0	20941.7	23529.8	23778.7	24010.7	23982.3	24028.8
52.5°	12756.9	12893.4	13681.2	15056.2	17575.4	21074.0	24796.6	25202.0	25607.4	25939.0	26291.3
55°	11123.3	11050.2	11838.6	13286.1	15958.2	20477.1	25935.4	26424.2	26876.1	27283.2	27703.1
57.5°	8909.8	9030.0	9820.2	11252.0	13817.7	18792.8	26719.0	27434.3	28083.7	28757.9	29352.4
60°	6512.6	6632.8	7490.0	8944.2	11494.2	16239.1	26120.3	27204.1	28244.4	29276.9	30083.4
62.5°	3932.3	4022.3	4777.5	6162.8	8863.2	13211.2	23452.4	24874.0	26405.4	27639.7	28875.7
65°	2447.9	2498.7	2777.8	3539.6	5692.1	9863.1	19161.9	20711.5	22360.8	23927.3	25212.3
67.5°	2003.9	2022.0	2073.4	2235.9	3125.8	6431.6	14261.8	15634.4	17122.9	18638.1	20068.1
70°	1802.1	1790.0	1790.0	1800.3	2003.9	3458.1	9337.5	10231.6	11471.9	12789.5	14096.8
72.5°	1626.9	1614.8	1592.5	1562.3	1635.4	2109.6	4826.4	5500.6	6394.7	7565.6	8817.9
75°	1462.0	1445.7	1419.7	1381.0	1431.8	1592.5	2317.5	2600.8	3036.4	3659.8	4358.2
77.5°	1291.0	1270.5	1246.3	1217.9	1283.2	1238.5	1358.1	1460.2	1626.9	1826.9	2089.7
80°	1097.7	1079.6	1071.1	1057.2	1134.6	943.1	959.4	1022.2	1120.1	1228.2	1350.2
82.5°	859.7	859.7	891.7	898.3	983.5	678.4	717.1	772.1	822.8	879.6	937.0
85°	566.1	570.3	680.3	723.1	775.7	456.1	537.7	555.8	596.9	629.5	653.7
87.5°	177.0	191.5	415.6	460.3	445.9	258.6	329.9	338.3	366.7	389.1	409.6
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7
2.5°	3879.7	3855.0	3832.6	3830.8	3814.5	3792.1	3800.0	3765.6	3767.4	3749.2	3728.7
5°	4561.8	4545.5	4463.9	4441.6	4380.6	4341.9	4335.9	4254.3	4244.0	4197.5	4146.2
7.5°	5543.5	5490.4	5376.2	5321.2	5217.3	5140.0	5103.7	4995.6	4942.4	4820.4	4765.4
10°	6571.8	6504.7	6363.9	6286.6	6186.9	6062.5	5995.4	5838.9	5777.3	5665.6	5531.4
12.5°	7525.1	7458.0	7313.0	7253.8	7121.5	6989.2	6916.1	6739.1	6659.4	6479.9	6374.2
15°	8406.5	8339.5	8213.2	8152.2	8019.9	7911.7	7813.9	7639.3	7545.6	7378.3	7239.9
17.5°	9262.0	9190.7	9080.7	9025.7	8897.7	8787.7	8682.0	8516.5	8421.0	8254.3	8129.8
20°	10056.4	10003.2	9924.1	9850.4	9722.3	9622.6	9496.4	9353.8	9215.4	9092.8	8975.0
22.5°	10748.7	10728.2	10643.0	10610.4	10500.4	10414.6	10304.7	10164.5	10064.2	9909.6	9799.6
25°	11345.6	11339.6	11298.5	11288.2	11210.9	11129.3	11105.2	10989.2	10897.3	10760.8	10647.2
27.5°	11858.5	11864.6	11854.9	11883.3	11862.8	11825.9	11828.3	11789.7	11736.5	11622.3	11522.6
30°	12428.8	12396.2	12414.9	12455.4	12467.5	12471.7	12538.8	12561.1	12557.5	12482.0	12433.1
32.5°	13235.3	13158.0	13086.7	13080.7	13121.2	13137.5	13251.7	13310.9	13361.6	13379.7	13388.2
35°	14263.6	14108.9	13960.3	13881.2	13811.7	13829.8	13911.4	14007.4	14119.2	14196.5	14288.3
37.5°	15558.8	15369.7	15106.9	14919.7	14872.5	14771.0	14823.6	14899.1	15009.1	15129.3	15288.2
40°	17129.0	16842.0	16546.6	16298.3	16164.2	15976.3	15974.5	15960.0	16027.6	16139.4	16363.5
42.5°	18640.5	18385.6	18072.0	17811.6	17636.5	17385.7	17335.0	17202.7	17232.9	17330.8	17548.9
45°	20055.4	19845.8	19654.3	19353.4	19204.2	18933.5	18847.7	18691.3	18603.7	18648.4	18866.5
47.5°	21426.2	21292.1	21092.1	20897.0	20782.8	20540.5	20430.6	20318.2	20206.4	20202.2	20430.6
50°	24098.3	24027.0	23790.8	23587.2	23642.1	23344.9	23363.0	23061.6	23198.1	23214.4	23692.9
52.5°	26609.0	26857.9	27033.1	27246.4	27385.3	27411.9	27503.1	27639.7	27804.6	28130.2	28574.3
55°	28046.9	28358.6	28539.8	28703.0	28971.8	29028.6	29181.4	29362.7	29507.1	29873.8	30250.7
57.5°	29756.0	30334.1	30615.0	30873.6	31236.1	31374.4	31629.4	31826.9	32014.2	32448.0	32904.1
60°	30808.4	31513.4	32085.5	32494.5	32948.8	33275.0	33659.9	33969.2	34409.0	34928.5	35608.8
62.5°	29971.6	31005.9	31765.9	32468.5	33085.3	33708.8	34260.4	34839.1	35506.7	36292.7	37348.1
65°	26638.0	27690.4	28991.7	29720.9	30537.7	31498.9	32338.0	33275.0	34184.9	35329.7	36889.6
67.5°	21444.9	22668.3	24130.9	24866.1	25804.9	26877.9	27819.1	28963.3	30026.6	31413.1	33342.1
70°	15457.3	17039.6	18269.6	19037.4	20133.3	21238.9	22147.5	23479.0	24358.6	25780.2	27774.4
72.5°	9787.6	11035.7	12543.0	13510.2	14483.5	15604.1	16532.7	17681.2	18501.6	19796.8	21603.2
75°	5262.6	6182.7	7506.4	8425.2	9468.0	10424.9	11512.4	12282.0	12889.2	13913.8	15380.0
77.5°	2466.1	3026.1	3696.1	4402.9	5109.8	5846.8	6563.9	7186.8	7447.8	8034.4	8899.5
80°	1497.0	1678.3	1873.4	2091.5	2386.9	2625.0	2940.9	3168.7	3185.0	3370.5	3635.1
82.5°	999.8	1066.9	1126.1	1181.1	1256.6	1315.8	1382.9	1462.0	1494.6	1537.5	1623.3
85°	682.1	714.7	726.8	761.8	753.4	773.9	800.5	827.1	841.0	839.1	877.8
87.5°	419.3	435.6	444.0	451.9	445.9	438.0	450.1	464.6	468.2	456.1	460.3
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7
2.5°	3732.9	3714.8	3696.1	3684.0	3679.8	3572.2	3525.1	3494.9	3429.7	3376.5	3333.6
5°	4117.8	4079.1	4048.9	4012.0	3991.5	3718.4	3618.8	3549.9	3435.7	3368.6	3307.0
7.5°	4737.0	4628.9	4566.0	4494.7	4433.7	3940.8	3775.8	3667.7	3508.8	3419.4	3349.9
10°	5439.6	5327.8	5227.6	5117.6	5022.2	4236.2	3995.7	3828.4	3618.8	3502.8	3410.9
12.5°	6223.8	6113.8	5987.6	5846.8	5724.8	4610.7	4276.7	4038.6	3751.1	3596.4	3468.3
15°	7150.5	6956.6	6803.7	6641.2	6498.7	5059.0	4604.7	4274.8	3891.8	3682.2	3511.2
17.5°	8011.4	7807.8	7600.6	7458.0	7293.1	5561.6	4934.6	4514.7	4007.8	3737.2	3519.1
20°	8853.0	8630.6	8451.8	8260.3	8086.9	6083.0	5286.8	4726.7	4083.3	3739.0	3468.3
22.5°	9594.2	9455.3	9255.9	9048.1	8872.9	6604.4	5616.6	4906.2	4111.7	3692.5	3378.3
25°	10437.0	10290.8	10046.1	9870.9	9675.8	7136.0	5940.4	5044.5	4095.4	3604.9	3240.0
27.5°	11337.2	11174.6	10923.9	10740.9	10504.7	7687.6	6237.7	5144.2	4034.4	3462.3	3054.5
30°	12276.0	12127.4	11880.9	11696.0	11457.4	8272.4	6569.9	5211.3	3912.4	3264.7	2838.8
32.5°	13284.3	13159.8	12915.8	12722.4	12467.5	8905.5	6879.3	5231.8	3726.9	3030.3	2611.1
35°	14241.2	14156.0	13950.0	13768.8	13504.2	9504.2	7207.3	5221.5	3507.0	2773.6	2403.2
37.5°	15319.0	15267.6	15166.2	14936.0	14612.2	10316.8	7600.6	5178.6	3238.2	2519.2	2244.4
40°	16467.5	16471.7	16361.7	16204.7	15903.2	11302.7	8068.8	5095.3	2944.5	2295.1	2099.4
42.5°	17683.0	17746.4	17693.2	17581.5	17292.1	12296.5	8628.8	4993.8	2660.0	2077.0	1957.4
45°	19076.1	19153.4	19235.0	19070.1	18789.1	13608.1	9365.9	4861.5	2351.9	1895.8	1859.5
47.5°	20683.1	20805.1	20878.2	20880.6	20599.7	15233.2	10563.3	4781.7	2079.4	1773.7	1812.4
50°	24073.5	24112.8	24285.5	24587.0	24371.3	18994.5	12654.8	4732.8	1894.0	1698.2	1778.0
52.5°	28959.1	29385.0	29684.7	29664.1	29370.5	21383.3	13807.5	4480.2	1784.0	1669.8	1761.7
55°	30949.1	31480.8	32034.8	32181.0	31953.2	23422.2	14897.3	4227.7	1730.8	1690.4	1767.7
57.5°	33600.7	34496.6	35256.6	35576.2	35246.3	26030.9	16330.9	4095.4	1714.5	1745.3	1806.4
60°	36698.1	37806.0	38804.1	39378.0	39378.0	29028.6	17817.7	4040.4	1692.2	1826.9	1871.6
62.5°	38688.1	40315.0	41822.3	42663.3	42638.5	31115.9	18477.4	3853.2	1641.4	1883.7	1961.0
65°	38695.9	40631.0	42550.9	43496.4	43544.7	30859.7	17388.2	3403.1	1547.8	1892.1	2051.0
67.5°	35470.5	37533.0	39771.3	40828.5	41072.6	28407.5	15052.0	2798.3	1394.9	1810.6	2083.7
70°	29957.1	31971.3	34256.1	35295.3	35729.0	24216.1	12123.1	2156.8	1199.8	1631.2	2016.0
72.5°	23601.1	25576.6	27167.3	27926.6	28265.0	18510.0	8828.2	1629.3	983.5	1374.4	1834.8
75°	16709.7	18192.3	19037.4	19206.6	19259.2	11158.3	5364.1	1211.9	810.7	1069.3	1549.6
77.5°	9431.1	10066.7	9997.2	10072.7	9445.6	4307.5	2336.2	867.5	668.2	812.6	1201.6
80°	3682.2	3796.4	3566.2	3494.9	3205.5	1602.8	1030.7	604.7	533.4	615.0	841.0
82.5°	1623.3	1675.9	1626.9	1639.6	1568.3	827.1	616.8	438.0	407.2	450.1	558.2
85°	894.1	910.4	906.2	932.8	894.1	329.9	293.0	268.8	285.2	305.7	358.3
87.5°	435.6	439.8	425.9	448.3	433.8	166.7	144.4	152.8	166.7	171.0	171.0
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):

	135°	145°	155°	165°	175°	180°
0°	3496.7	3496.7	3496.7	3496.7	3496.7	3496.7
2.5°	3303.4	3287.1	3288.9	3284.7	3276.8	3276.8
5°	3275.0	3258.7	3258.7	3254.5	3244.2	3246.0
7.5°	3303.4	3276.8	3266.5	3252.0	3238.2	3238.2
10°	3336.0	3288.9	3260.5	3236.3	3217.6	3217.6
12.5°	3360.2	3287.1	3240.0	3207.3	3189.2	3189.2
15°	3368.6	3272.6	3207.3	3168.7	3152.4	3150.6
17.5°	3342.1	3217.6	3138.5	3093.8	3073.2	3067.2
20°	3260.5	3117.9	3022.5	2971.1	2942.7	2932.5
22.5°	3138.5	2975.4	2863.6	2810.4	2773.6	2767.5
25°	2967.5	2792.3	2682.4	2631.0	2611.1	2604.4
27.5°	2767.5	2604.4	2510.8	2478.2	2460.0	2458.2
30°	2578.4	2439.5	2370.6	2345.8	2323.5	2319.9
32.5°	2400.8	2313.2	2287.2	2252.2	2199.6	2193.6
35°	2274.6	2266.7	2248.6	2170.6	2106.0	2087.3
37.5°	2197.2	2272.7	2179.1	2026.3	1979.7	1975.5
40°	2152.5	2209.9	2048.6	1996.1	1999.7	1996.1
42.5°	2051.0	2109.6	2052.8	2028.7	2044.4	2048.6
45°	1948.9	2014.2	2083.7	2067.3	2106.0	2106.0
47.5°	1892.1	1989.4	2081.2	2081.2	2138.6	2158.6
50°	1826.9	1969.5	2048.6	2077.0	2122.3	2106.0
52.5°	1822.7	1934.4	2002.1	2052.8	2073.4	2054.7
55°	1828.7	1906.0	1955.0	2012.4	2036.5	2038.3
57.5°	1837.2	1889.7	1922.4	1948.9	2022.0	2022.0
60°	1857.1	1875.8	1894.0	1908.5	2003.9	2005.7
62.5°	1889.7	1861.3	1857.1	1871.6	1993.6	1985.8
65°	1941.1	1840.8	1810.6	1824.5	1983.4	1959.2
67.5°	2010.0	1810.6	1751.4	1761.7	1975.5	1922.4
70°	2073.4	1761.7	1678.3	1668.0	1898.2	1804.5
72.5°	2079.4	1704.9	1576.2	1546.0	1649.9	1559.9
75°	1977.3	1665.6	1464.4	1374.4	1362.3	1350.2
77.5°	1782.2	1643.2	1333.9	1193.2	1169.0	1176.9
80°	1491.0	1559.9	1176.9	1010.1	1142.4	1128.5
82.5°	1114.0	1376.8	999.8	894.1	891.7	788.4
85°	619.2	1073.5	814.4	670.0	466.4	451.9
87.5°	173.4	596.9	570.3	378.8	258.6	268.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)