

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: P301638

Luminaire Tested: **GLNA-AF-04-LED-E1-T2R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301638
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-04-LED-E1-T2R-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17495.9 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

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

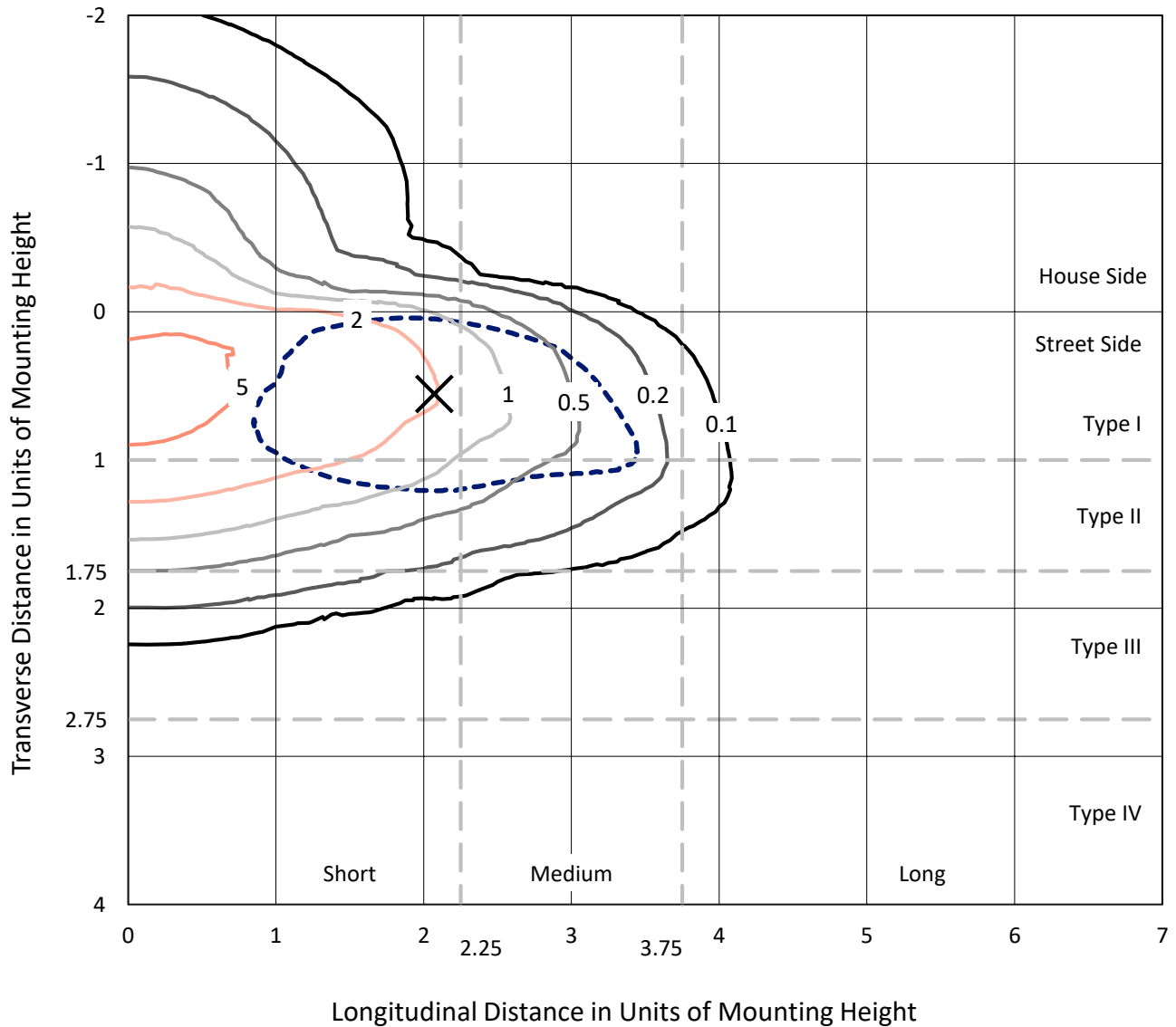


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Iso-Footcandle Lines of Horizontal Illumination

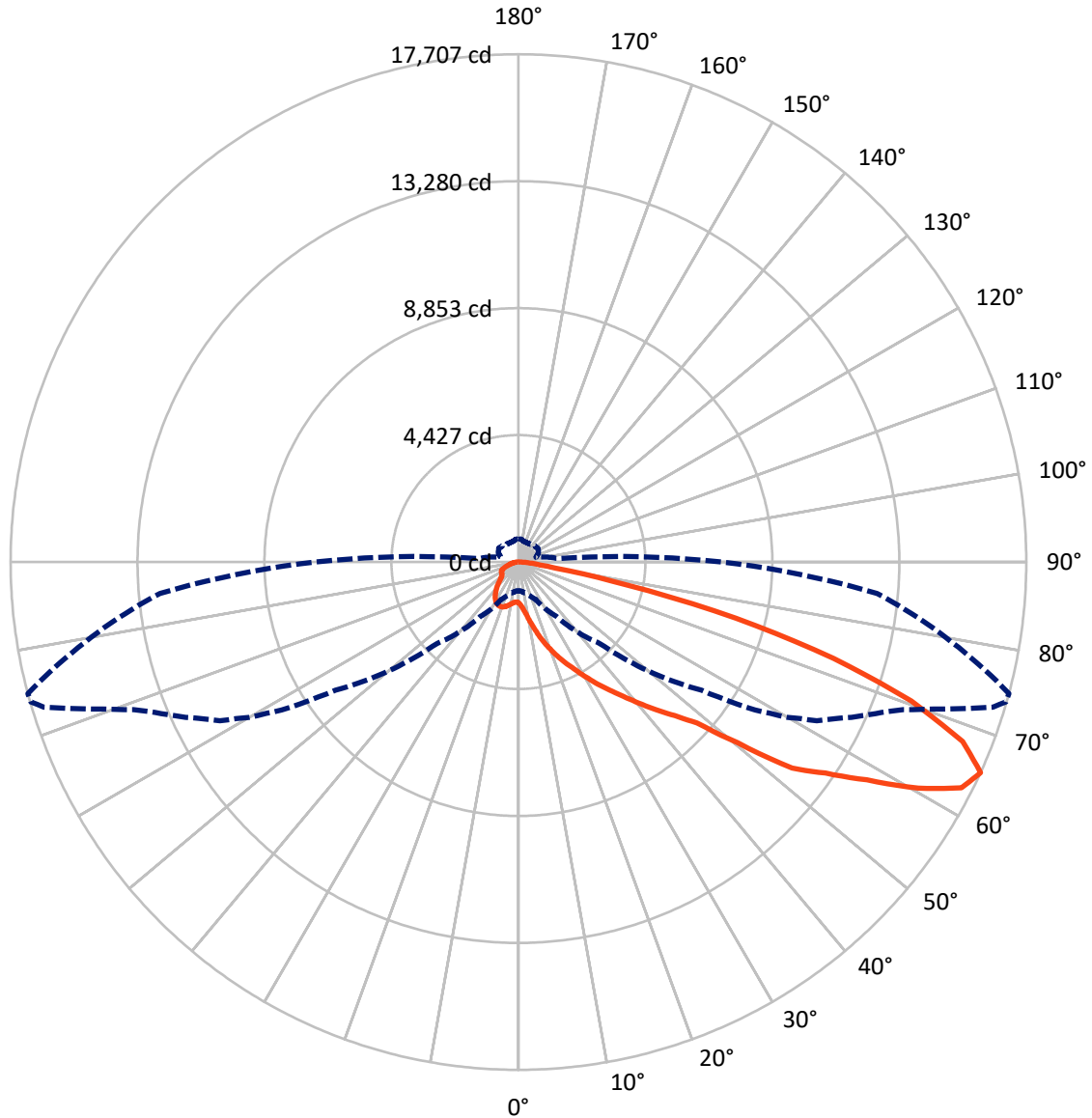
× Max cd
 - - - 1/2 Max cd



Based on 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	2697.5	0.0	2697.5
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	14798.5	0.0	14798.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	17495.9	0.0	17495.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.7	1.0
10°-20°	686.7	3.9
20°-30°	1408.9	8.1
30°-40°	2370.3	13.5
40°-50°	3275.2	18.7
50°-60°	4088.4	23.4
60°-70°	3679.1	21.0
70°-80°	1542.2	8.8
80°-90°	269.4	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°	17495.9	100.0
0°-180°	17495.9	100.0

Coefficient of Utilization



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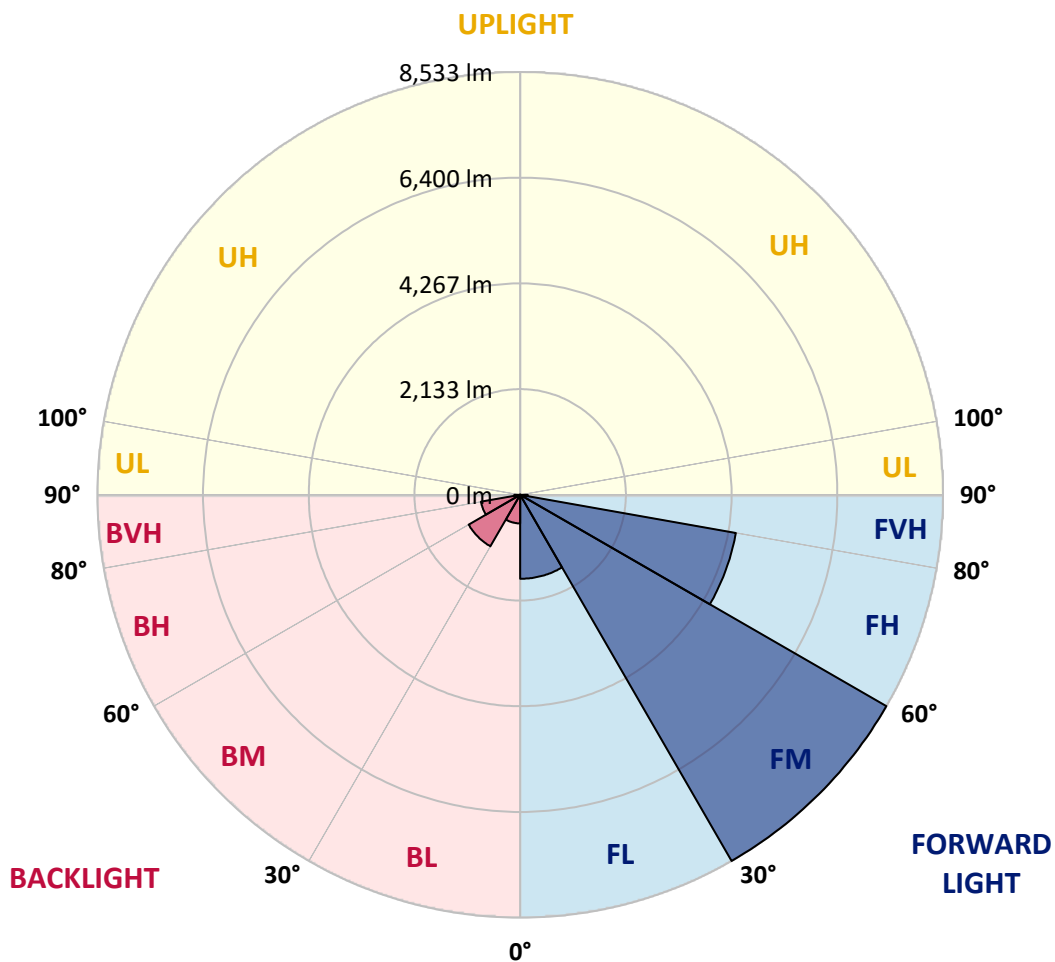
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1694.4	9.7			
FM (30°-60°)	8533.2	48.8			
FH (60°-80°)	4419.4	25.3			G2/5000
FVH (80°-90°)	151.4	0.9			G2/225
BL (0°-30°)	576.9	3.3	B2/1000		
BM (30°-60°)	1200.7	6.9	B2/2500		
BH (60°-80°)	801.9	4.6	B2/1000		G2/1000
BVH (80°-90°)	118.0	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°	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9
2.5°	1805.4	1785.5	1790.4	1757.2	1716.7	1663.6	1604.9	1604.2	1604.9	1599.0	1577.6
5°	2503.3	2479.4	2470.4	2395.7	2286.4	2130.9	1961.8	1943.7	1936.0	1917.1	1873.2
7.5°	3012.8	2999.5	2985.3	2929.0	2829.8	2655.8	2428.8	2390.0	2352.7	2343.6	2294.0
10°	3341.5	3338.0	3308.3	3293.3	3231.4	3080.6	2859.5	2822.1	2781.6	2767.6	2715.3
12.5°	3601.4	3600.6	3586.6	3590.8	3536.8	3427.7	3237.1	3203.2	3173.4	3130.2	3093.1
15°	3781.2	3781.9	3802.8	3825.9	3817.6	3743.9	3565.0	3550.0	3524.5	3494.8	3450.8
17.5°	3928.6	3932.8	3954.1	3996.4	4042.1	4036.2	3894.7	3882.2	3859.8	3819.3	3796.2
20°	4261.5	4277.2	4235.9	4235.9	4240.8	4263.2	4195.1	4185.3	4153.9	4132.2	4114.1
22.5°	4823.8	4842.0	4748.4	4653.3	4559.7	4491.6	4423.8	4436.1	4414.8	4399.8	4389.0
25°	5554.1	5568.4	5416.8	5256.1	5065.5	4817.1	4649.1	4641.5	4630.0	4620.9	4616.0
27.5°	6241.5	6247.4	6104.2	5868.8	5647.7	5290.8	4877.6	4868.5	4854.5	4837.0	4822.1
30°	6829.6	6827.9	6680.5	6455.9	6219.1	5824.1	5224.7	5196.4	5154.9	5107.8	5071.4
32.5°	7338.9	7336.4	7174.7	6942.1	6693.7	6352.5	5700.1	5642.1	5577.5	5485.3	5430.1
35°	7739.5	7738.0	7585.5	7343.0	7058.1	6850.2	6244.9	6173.7	6091.6	5968.3	5883.1
37.5°	7891.1	7891.1	7805.9	7640.3	7388.5	7246.0	6850.2	6764.0	6676.3	6536.3	6440.2
40°	7802.4	7804.1	7822.3	7791.8	7669.3	7559.9	7415.0	7363.7	7288.2	7162.5	7062.2
42.5°	7505.2	7514.3	7635.4	7783.5	7844.7	7827.5	7915.9	7892.8	7839.8	7743.0	7663.4
45°	7128.3	7156.6	7289.0	7569.0	7893.6	8058.4	8335.7	8338.2	8328.4	8276.3	8214.9
47.5°	6611.0	6650.5	6825.4	7203.7	7779.3	8282.9	8762.2	8784.6	8805.4	8771.5	8743.3
50°	5923.6	5970.8	6232.4	6734.3	7546.7	8515.6	9568.0	9669.2	9763.5	9752.0	9770.9
52.5°	5187.4	5242.9	5563.2	6122.3	7146.7	8569.4	10083.1	10248.0	10412.8	10547.7	10690.9
55°	4523.1	4493.4	4814.0	5402.6	6489.1	8326.7	10546.2	10744.9	10928.7	11094.3	11265.0
57.5°	3623.0	3671.9	3993.2	4575.4	5618.7	7641.7	10864.8	11155.7	11419.8	11693.9	11935.6
60°	2648.2	2697.1	3045.7	3637.0	4673.9	6603.3	10621.4	11062.1	11485.1	11904.9	12232.9
62.5°	1599.0	1635.6	1942.7	2506.0	3604.1	5372.1	9536.5	10114.6	10737.3	11239.2	11741.8
65°	995.4	1016.1	1129.5	1439.3	2314.6	4010.6	7791.8	8422.0	9092.6	9729.6	10252.1
67.5°	814.9	822.2	843.1	909.2	1271.0	2615.3	5799.3	6357.4	6962.7	7578.9	8160.3
70°	732.8	727.9	727.9	732.1	814.9	1406.2	3796.9	4160.5	4664.8	5200.6	5732.2
72.5°	661.6	656.6	647.6	635.3	665.0	857.8	1962.6	2236.7	2600.3	3076.4	3585.7
75°	594.5	587.9	577.3	561.6	582.2	647.6	942.4	1057.6	1234.7	1488.2	1772.2
77.5°	525.0	516.6	506.8	495.3	521.8	503.6	552.2	593.8	661.6	742.9	849.7
80°	446.4	439.0	435.6	429.9	461.3	383.5	390.1	415.7	455.5	499.4	549.1
82.5°	349.6	349.6	362.6	365.3	399.9	275.9	291.6	314.0	334.6	357.7	381.0
85°	230.2	231.9	276.6	294.1	315.4	185.5	218.6	226.0	242.7	256.0	265.8
87.5°	72.0	77.9	169.0	187.2	181.3	105.1	134.1	137.6	149.1	158.2	166.6
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°	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9
2.5°	1577.6	1567.6	1558.5	1557.7	1551.1	1542.0	1545.2	1531.2	1531.9	1524.6	1516.2
5°	1855.0	1848.3	1815.2	1806.1	1781.3	1765.6	1763.1	1729.9	1725.8	1706.8	1686.0
7.5°	2254.2	2232.6	2186.1	2163.8	2121.5	2090.1	2075.3	2031.4	2009.7	1960.1	1937.8
10°	2672.3	2645.0	2587.8	2556.3	2515.8	2465.2	2437.9	2374.3	2349.2	2303.8	2249.3
12.5°	3059.9	3032.7	2973.7	2949.6	2895.8	2842.0	2812.3	2740.3	2707.9	2635.0	2592.0
15°	3418.4	3391.1	3339.7	3314.9	3261.1	3217.2	3177.4	3106.4	3068.3	3000.2	2944.0
17.5°	3766.2	3737.2	3692.5	3670.2	3618.1	3573.4	3530.4	3463.1	3424.3	3356.5	3305.8
20°	4089.3	4067.6	4035.5	4005.5	3953.4	3912.9	3861.5	3803.6	3747.3	3697.4	3649.5
22.5°	4370.8	4362.4	4327.8	4314.5	4269.8	4234.9	4190.2	4133.2	4092.5	4029.6	3984.9
25°	4613.5	4611.0	4594.3	4590.2	4558.7	4525.6	4515.7	4468.6	4431.2	4375.7	4329.5
27.5°	4822.1	4824.5	4820.6	4832.1	4823.8	4808.8	4809.8	4794.1	4772.4	4726.0	4685.5
30°	5054.0	5040.7	5048.3	5064.8	5069.7	5071.4	5098.7	5107.8	5106.3	5075.6	5055.7
32.5°	5381.9	5350.5	5321.5	5319.0	5335.5	5342.1	5388.6	5412.6	5433.3	5440.6	5444.1
35°	5800.0	5737.1	5676.7	5644.5	5616.3	5623.7	5656.8	5695.9	5741.3	5772.8	5810.1
37.5°	6326.7	6249.8	6143.0	6066.8	6047.7	6006.4	6027.8	6058.5	6103.2	6152.1	6216.7
40°	6965.2	6848.5	6728.4	6627.4	6572.9	6496.5	6495.7	6489.8	6517.4	6562.8	6654.0
42.5°	7579.8	7476.2	7348.7	7242.8	7171.6	7069.6	7049.0	6995.2	7007.5	7047.3	7135.9
45°	8155.2	8069.9	7992.1	7869.7	7809.0	7699.0	7664.1	7600.5	7564.9	7583.0	7671.7
47.5°	8712.6	8658.0	8576.7	8497.4	8451.0	8352.4	8307.7	8262.0	8216.6	8214.9	8307.7
50°	9799.1	9770.1	9674.1	9591.3	9613.7	9492.8	9500.2	9377.6	9433.1	9439.7	9634.3
52.5°	10820.1	10921.3	10992.6	11079.3	11135.8	11146.6	11183.7	11239.2	11306.3	11438.7	11619.2
55°	11404.8	11531.5	11605.2	11671.6	11780.9	11804.0	11866.1	11939.8	11998.5	12147.6	12300.9
57.5°	12099.7	12334.8	12449.1	12554.2	12701.6	12757.9	12861.5	12941.9	13018.0	13194.4	13379.9
60°	12527.7	12814.4	13047.0	13213.3	13398.1	13530.7	13687.2	13813.0	13991.8	14203.1	14479.7
62.5°	12187.4	12608.0	12917.1	13202.8	13453.6	13707.1	13931.4	14166.7	14438.2	14757.8	15187.0
65°	10831.9	11259.8	11789.0	12085.5	12417.6	12808.5	13149.7	13530.7	13900.7	14366.2	15000.5
67.5°	8720.2	9217.7	9812.4	10111.4	10493.1	10929.4	11312.2	11777.4	12209.8	12773.6	13558.0
70°	6285.5	6928.8	7429.0	7741.2	8186.9	8636.4	9005.9	9547.3	9905.0	10483.1	11294.0
72.5°	3979.9	4487.5	5100.4	5493.7	5889.5	6345.2	6722.7	7189.7	7523.3	8050.0	8784.6
75°	2139.9	2514.1	3052.3	3426.0	3850.0	4239.1	4681.3	4994.3	5241.2	5657.8	6254.0
77.5°	1002.8	1230.5	1502.9	1790.4	2077.8	2377.5	2669.1	2922.4	3028.5	3267.0	3618.8
80°	608.7	682.4	761.8	850.5	970.6	1067.4	1195.9	1288.5	1295.1	1370.5	1478.1
82.5°	406.6	433.8	457.9	480.3	511.0	535.0	562.3	594.5	607.8	625.2	660.1
85°	277.4	290.6	295.5	309.8	306.3	314.7	325.5	336.3	342.0	341.2	356.9
87.5°	170.5	177.1	180.6	183.8	181.3	178.1	183.0	188.9	190.4	185.5	187.2
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9
2.5°	1517.9	1510.6	1502.9	1498.0	1496.3	1452.6	1433.4	1421.1	1394.6	1373.0	1355.6
5°	1674.4	1658.7	1646.4	1631.4	1623.1	1512.0	1471.5	1443.5	1397.1	1369.8	1344.7
7.5°	1926.2	1882.2	1856.7	1827.7	1802.9	1602.4	1535.4	1491.4	1426.8	1390.4	1362.2
10°	2211.9	2166.5	2125.7	2081.0	2042.2	1722.6	1624.8	1556.7	1471.5	1424.3	1387.0
12.5°	2530.8	2486.1	2434.7	2377.5	2327.9	1874.9	1739.0	1642.2	1525.3	1462.4	1410.3
15°	2907.6	2828.8	2766.6	2700.5	2642.6	2057.2	1872.4	1738.3	1582.5	1497.3	1427.8
17.5°	3257.7	3174.9	3090.7	3032.7	2965.6	2261.5	2006.6	1835.8	1629.7	1519.7	1431.0
20°	3599.9	3509.5	3436.8	3358.9	3288.4	2473.6	2149.8	1922.0	1660.4	1520.4	1410.3
22.5°	3901.3	3844.8	3763.8	3679.3	3608.0	2685.6	2283.9	1995.0	1672.0	1501.5	1373.7
25°	4244.0	4184.6	4085.1	4013.8	3934.5	2901.7	2415.6	2051.3	1665.3	1465.9	1317.5
27.5°	4610.1	4544.0	4442.0	4367.6	4271.5	3126.0	2536.4	2091.8	1640.5	1407.9	1242.1
30°	4991.8	4931.4	4831.2	4756.0	4658.9	3363.8	2671.6	2119.1	1590.9	1327.5	1154.4
32.5°	5401.8	5351.2	5252.0	5173.4	5069.7	3621.3	2797.3	2127.4	1515.5	1232.2	1061.7
35°	5790.9	5756.3	5672.5	5598.8	5491.2	3864.7	2930.7	2123.2	1426.1	1127.8	977.2
37.5°	6229.2	6208.3	6167.1	6073.5	5941.8	4195.1	3090.7	2105.8	1316.7	1024.4	912.6
40°	6696.2	6697.9	6653.2	6589.3	6466.8	4596.1	3281.0	2071.9	1197.3	933.3	853.7
42.5°	7190.5	7216.3	7194.6	7149.2	7031.5	5000.2	3508.8	2030.6	1081.6	844.6	795.9
45°	7757.0	7788.4	7821.6	7754.5	7640.3	5533.5	3808.5	1976.8	956.4	770.9	756.1
47.5°	8410.4	8460.0	8489.8	8490.8	8376.5	6194.3	4295.4	1944.4	845.6	721.3	737.0
50°	9789.1	9805.0	9875.3	9997.9	9910.2	7723.8	5145.8	1924.5	770.1	690.6	723.0
52.5°	11775.7	11948.9	12070.8	12062.4	11943.0	8695.1	5614.6	1821.8	725.4	679.0	716.3
55°	12584.9	12801.1	13026.4	13085.8	12993.2	9524.2	6057.7	1719.1	703.8	687.4	718.8
57.5°	13663.1	14027.4	14336.5	14466.4	14332.3	10585.0	6640.7	1665.3	697.2	709.7	734.5
60°	14922.6	15373.2	15779.0	16012.4	16012.4	11804.0	7245.3	1643.0	688.1	742.9	761.1
62.5°	15731.8	16393.4	17006.3	17348.3	17338.2	12652.7	7513.5	1566.8	667.5	766.0	797.4
65°	15735.0	16521.9	17302.6	17687.0	17706.7	12548.6	7070.6	1383.8	629.4	769.4	834.0
67.5°	14423.4	15262.1	16172.3	16602.2	16701.4	11551.4	6120.6	1137.9	567.2	736.2	847.3
70°	12181.5	13000.6	13929.7	14352.2	14528.6	9847.0	4929.7	877.0	487.9	663.3	819.8
72.5°	9597.0	10400.3	11047.1	11355.9	11493.5	7526.8	3589.8	662.5	399.9	558.9	746.1
75°	6794.7	7397.6	7741.2	7810.0	7831.4	4537.3	2181.2	492.8	329.7	434.8	630.1
77.5°	3835.0	4093.4	4065.2	4095.9	3840.9	1751.6	950.0	352.8	271.7	330.4	488.6
80°	1497.3	1543.7	1450.1	1421.1	1303.5	651.7	419.1	245.9	216.9	250.1	342.0
82.5°	660.1	681.5	661.6	666.7	637.7	336.3	250.8	178.1	165.6	183.0	227.0
85°	363.6	370.2	368.5	379.3	363.6	134.1	119.1	109.3	116.0	124.3	145.7
87.5°	177.1	178.8	173.2	182.3	176.4	67.8	58.7	62.2	67.8	69.5	69.5
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):

	135°	145°	155°	165°	175°	180°
0°	1421.9	1421.9	1421.9	1421.9	1421.9	1421.9
2.5°	1343.3	1336.6	1337.4	1335.7	1332.5	1332.5
5°	1331.7	1325.1	1325.1	1323.4	1319.2	1319.9
7.5°	1343.3	1332.5	1328.3	1322.4	1316.7	1316.7
10°	1356.5	1337.4	1325.8	1316.0	1308.4	1308.4
12.5°	1366.4	1336.6	1317.5	1304.2	1296.8	1296.8
15°	1369.8	1330.7	1304.2	1288.5	1281.9	1281.1
17.5°	1359.0	1308.4	1276.2	1258.0	1249.7	1247.2
20°	1325.8	1267.9	1229.0	1208.2	1196.6	1192.4
22.5°	1276.2	1209.9	1164.4	1142.8	1127.8	1125.4
25°	1206.7	1135.4	1090.7	1069.8	1061.7	1059.0
27.5°	1125.4	1059.0	1021.0	1007.7	1000.3	999.6
30°	1048.5	992.0	964.0	953.9	944.8	943.3
32.5°	976.3	940.6	930.1	915.8	894.4	892.0
35°	924.9	921.7	914.3	882.7	856.4	848.8
37.5°	893.5	924.2	886.1	823.9	805.0	803.3
40°	875.3	898.6	833.0	811.7	813.1	811.7
42.5°	834.0	857.8	834.8	824.9	831.3	833.0
45°	792.5	819.0	847.3	840.6	856.4	856.4
47.5°	769.4	809.0	846.3	846.3	869.6	877.7
50°	742.9	800.9	833.0	844.6	863.0	856.4
52.5°	741.2	786.6	814.1	834.8	843.1	835.5
55°	743.6	775.1	795.0	818.3	828.1	828.9
57.5°	747.1	768.4	781.7	792.5	822.2	822.2
60°	755.2	762.8	770.1	776.0	814.9	815.6
62.5°	768.4	756.9	755.2	761.1	810.7	807.5
65°	789.3	748.5	736.2	741.9	806.5	796.7
67.5°	817.3	736.2	712.2	716.3	803.3	781.7
70°	843.1	716.3	682.4	678.3	771.9	733.8
72.5°	845.6	693.3	640.9	628.6	670.9	634.3
75°	804.0	677.3	595.5	558.9	554.0	549.1
77.5°	724.7	668.2	542.4	485.2	475.4	478.5
80°	606.3	634.3	478.5	410.7	464.5	458.9
82.5°	453.0	559.9	406.6	363.6	362.6	320.6
85°	251.8	436.5	331.1	272.4	189.6	183.8
87.5°	70.5	242.7	231.9	154.0	105.1	109.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)