

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: P301626

Luminaire Tested: **GLNA-AF-02-LED-E1-T2R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301626
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-02-LED-E1-T2R-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 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: 8873.8 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

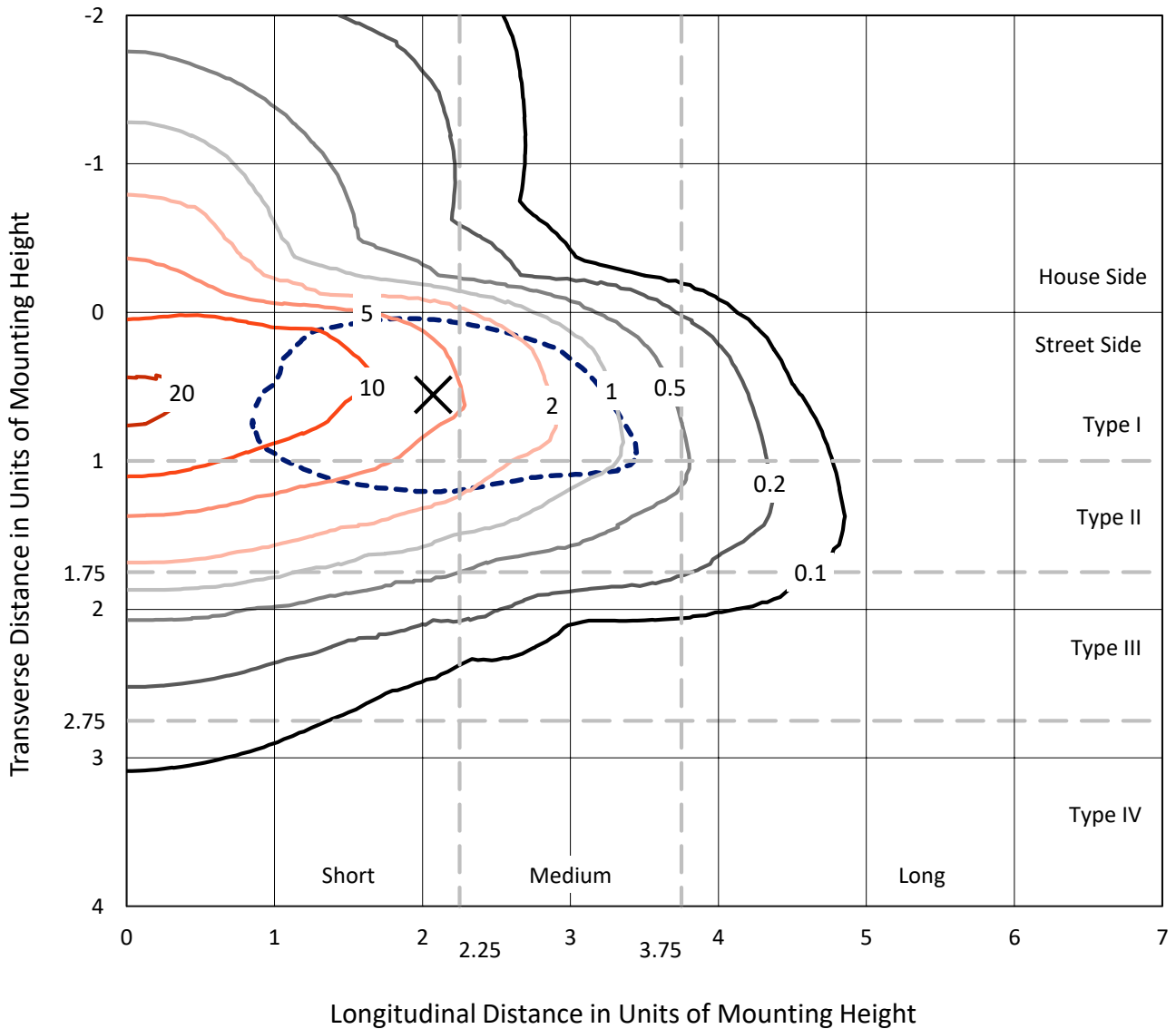
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

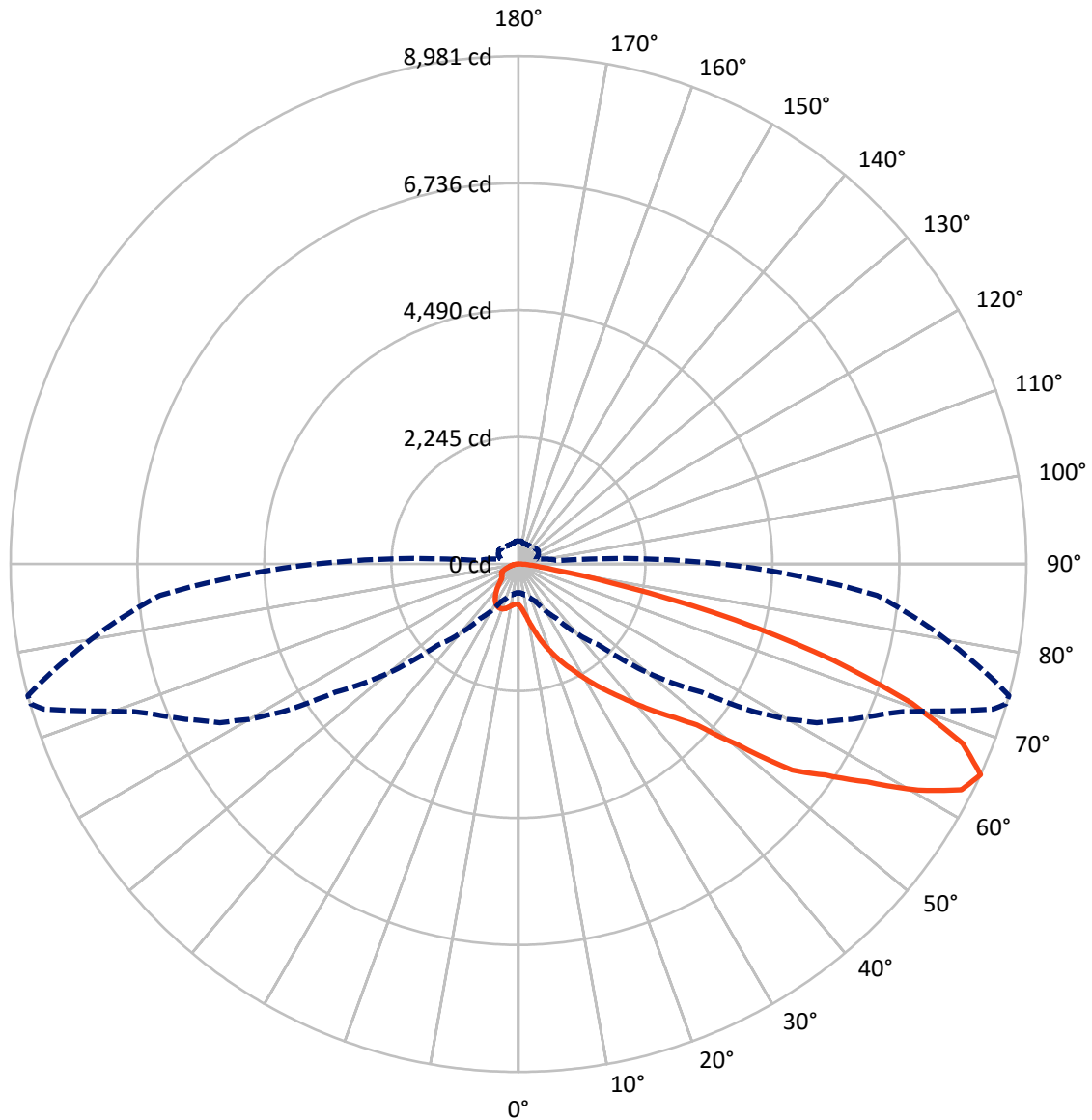
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.4 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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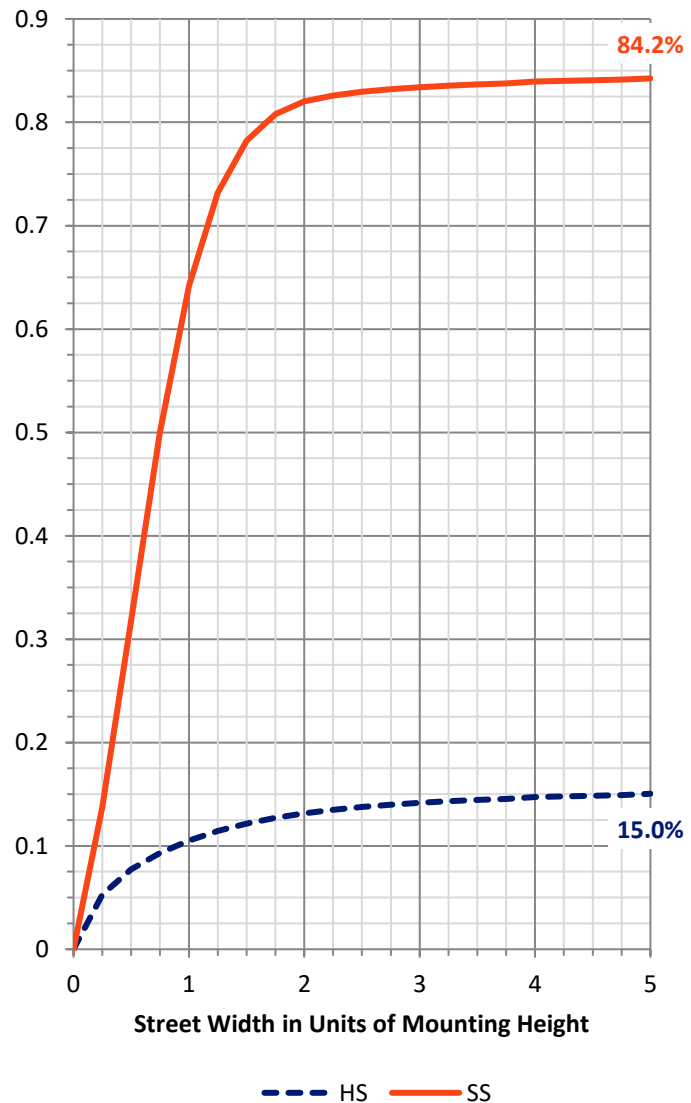
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1368.1	0.0	1368.1
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	7505.7	0.0	7505.7
	% Fixture	84.6	0.0	84.6
Total	Lumens	8873.8	0.0	8873.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	1.0
10°-20°	348.3	3.9
20°-30°	714.6	8.1
30°-40°	1202.2	13.5
40°-50°	1661.1	18.7
50°-60°	2073.6	23.4
60°-70°	1866.0	21.0
70°-80°	782.2	8.8
80°-90°	136.7	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°	8873.8	100.0
0°-180°	8873.8	100.0

Coefficient of Utilization



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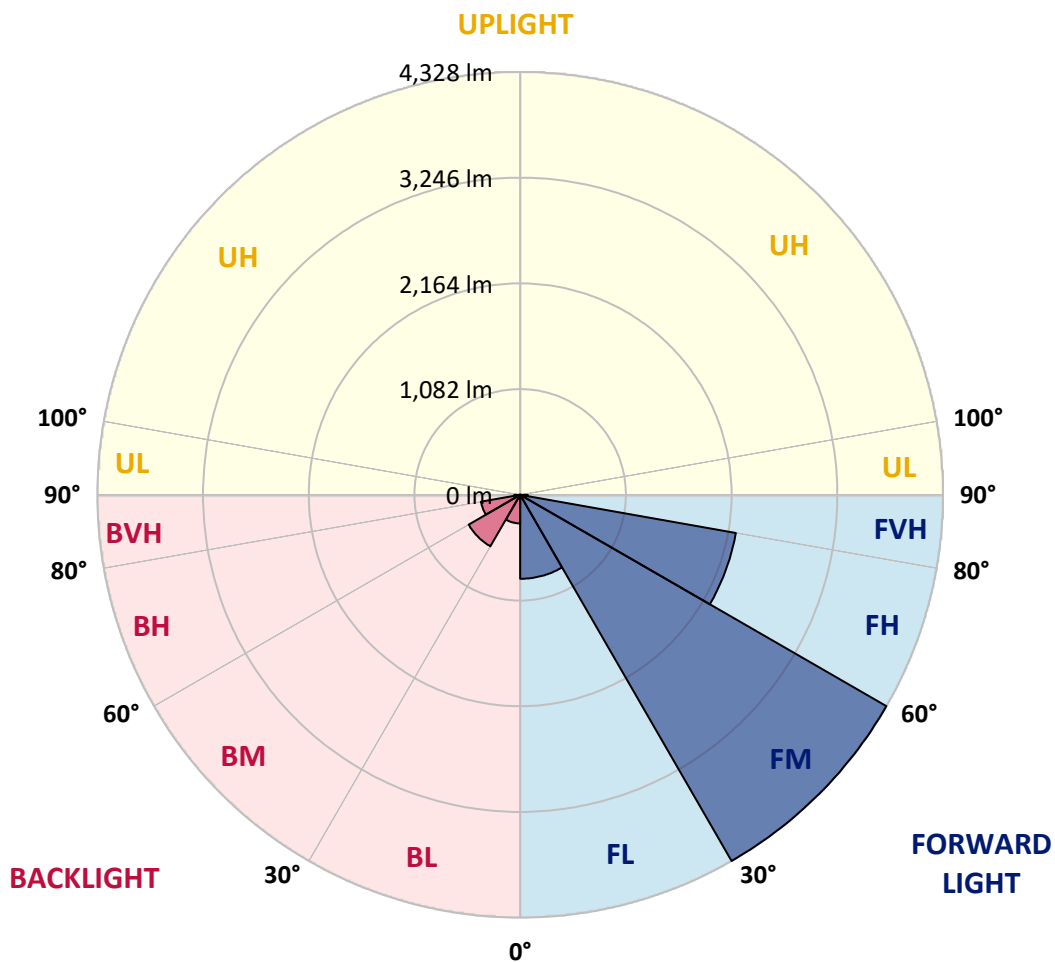
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	859.4	9.7			
FM (30°-60°)	4328.0	48.8			
FH (60°-80°)	2241.5	25.3			G2/5000
FVH (80°-90°)	76.8	0.9			G1/100
BL (0°-30°)	292.6	3.3	B1/500		
BM (30°-60°)	609.0	6.9	B1/1000		
BH (60°-80°)	406.7	4.6	B1/500		G1/500
BVH (80°-90°)	59.8	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2
2.5°	915.7	905.6	908.1	891.2	870.7	843.8	814.0	813.6	814.0	811.0	800.2
5°	1269.6	1257.6	1252.9	1215.1	1159.6	1080.8	995.0	985.8	982.0	972.4	950.1
7.5°	1528.1	1521.3	1514.1	1485.6	1435.2	1347.0	1231.9	1212.2	1193.3	1188.7	1163.5
10°	1694.8	1693.0	1678.0	1670.4	1639.0	1562.4	1450.3	1431.4	1410.8	1403.7	1377.2
12.5°	1826.6	1826.2	1819.1	1821.2	1793.8	1738.5	1641.8	1624.6	1609.5	1587.6	1568.8
15°	1917.8	1918.2	1928.8	1940.5	1936.2	1898.9	1808.2	1800.6	1787.6	1772.5	1750.2
17.5°	1992.6	1994.7	2005.5	2026.9	2050.1	2047.1	1975.4	1969.0	1957.7	1937.1	1925.4
20°	2161.4	2169.4	2148.4	2148.4	2150.9	2162.3	2127.7	2122.8	2106.8	2095.8	2086.6
22.5°	2446.6	2455.8	2408.3	2360.1	2312.6	2278.1	2243.7	2250.0	2239.1	2231.5	2226.1
25°	2817.0	2824.2	2747.4	2665.9	2569.2	2443.2	2358.0	2354.1	2348.3	2343.7	2341.2
27.5°	3165.6	3168.6	3096.0	2976.6	2864.5	2683.5	2473.9	2469.3	2462.2	2453.3	2445.7
30°	3463.9	3463.1	3388.3	3274.4	3154.3	2954.0	2649.9	2635.6	2614.5	2590.6	2572.2
32.5°	3722.2	3721.0	3639.0	3521.0	3395.0	3222.0	2891.0	2861.6	2828.9	2782.1	2754.1
35°	3925.4	3924.7	3847.3	3724.3	3579.8	3474.4	3167.4	3131.3	3089.6	3027.1	2983.9
37.5°	4002.3	4002.3	3959.1	3875.1	3747.4	3675.1	3474.4	3430.7	3386.2	3315.2	3266.4
40°	3957.3	3958.2	3967.4	3952.0	3889.8	3834.4	3760.8	3734.8	3696.6	3632.8	3581.9
42.5°	3806.6	3811.2	3872.6	3947.7	3978.8	3970.0	4014.9	4003.2	3976.3	3927.2	3886.8
45°	3615.4	3629.8	3696.9	3839.0	4003.6	4087.2	4227.8	4229.1	4224.1	4197.7	4166.5
47.5°	3353.0	3373.1	3461.8	3653.7	3945.6	4201.0	4444.1	4455.5	4466.1	4448.9	4434.5
50°	3004.4	3028.3	3161.0	3415.6	3827.6	4319.0	4852.8	4904.1	4952.0	4946.1	4955.7
52.5°	2631.0	2659.2	2821.6	3105.2	3624.8	4346.3	5114.1	5197.7	5281.3	5349.7	5422.3
55°	2294.1	2279.0	2441.6	2740.1	3291.2	4223.2	5349.0	5449.8	5543.0	5626.9	5713.5
57.5°	1837.6	1862.4	2025.3	2320.6	2849.8	3875.8	5510.6	5658.1	5792.0	5931.1	6053.7
60°	1343.2	1368.0	1544.8	1844.7	2370.6	3349.2	5387.1	5610.6	5825.2	6038.1	6204.4
62.5°	811.0	829.6	985.3	1271.0	1828.0	2724.7	4836.9	5130.0	5445.9	5700.4	5955.4
65°	504.9	515.3	572.9	730.0	1174.0	2034.2	3952.0	4271.6	4611.7	4934.8	5199.8
67.5°	413.3	417.0	427.6	461.1	644.7	1326.5	2941.4	3224.5	3531.5	3843.9	4138.9
70°	371.7	369.2	369.2	371.3	413.3	713.2	1925.8	2110.2	2366.0	2637.7	2907.4
72.5°	335.5	333.0	328.4	322.2	337.3	435.1	995.4	1134.5	1318.9	1560.3	1818.6
75°	301.5	298.2	292.8	284.8	295.3	328.4	478.0	536.4	626.2	754.8	898.8
77.5°	266.3	262.0	257.0	251.2	264.6	255.4	280.1	301.2	335.5	376.8	431.0
80°	226.4	222.7	220.9	218.0	234.0	194.5	197.9	210.8	231.0	253.3	278.5
82.5°	177.3	177.3	183.9	185.3	202.8	139.9	147.9	159.2	169.7	181.4	193.3
85°	116.7	117.6	140.3	149.1	160.0	94.1	110.9	114.6	123.1	129.8	134.8
87.5°	36.5	39.5	85.7	94.9	92.0	53.3	68.0	69.8	75.6	80.2	84.5
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2
2.5°	800.2	795.1	790.4	790.1	786.7	782.1	783.7	776.6	777.0	773.3	769.0
5°	940.8	937.5	920.6	916.0	903.5	895.5	894.2	877.4	875.3	865.7	855.1
7.5°	1143.3	1132.3	1108.8	1097.5	1076.0	1060.1	1052.6	1030.3	1019.3	994.2	982.8
10°	1355.4	1341.5	1312.5	1296.6	1276.0	1250.3	1236.5	1204.2	1191.5	1168.5	1140.8
12.5°	1552.0	1538.2	1508.2	1496.0	1468.8	1441.5	1426.4	1389.9	1373.4	1336.4	1314.6
15°	1733.8	1719.9	1693.9	1681.3	1654.0	1631.7	1611.5	1575.5	1556.2	1521.7	1493.2
17.5°	1910.2	1895.5	1872.8	1861.5	1835.1	1812.4	1790.6	1756.4	1736.8	1702.4	1676.7
20°	2074.0	2063.1	2046.8	2031.6	2005.1	1984.6	1958.5	1929.1	1900.6	1875.3	1851.0
22.5°	2216.8	2212.6	2195.0	2188.3	2165.6	2147.9	2125.3	2096.3	2075.7	2043.8	2021.1
25°	2339.9	2338.7	2330.2	2328.1	2312.2	2295.3	2290.3	2266.4	2247.5	2219.3	2195.9
27.5°	2445.7	2447.0	2445.0	2450.8	2446.6	2439.0	2439.5	2431.5	2420.6	2397.0	2376.4
30°	2563.3	2556.6	2560.5	2568.8	2571.3	2572.2	2586.0	2590.6	2589.9	2574.3	2564.2
32.5°	2729.7	2713.7	2699.0	2697.8	2706.1	2709.5	2733.0	2745.3	2755.7	2759.5	2761.2
35°	2941.7	2909.8	2879.2	2862.9	2848.5	2852.3	2869.1	2888.9	2912.0	2927.9	2946.8
37.5°	3208.9	3169.9	3115.7	3077.1	3067.3	3046.4	3057.2	3072.8	3095.5	3120.3	3153.1
40°	3532.7	3473.5	3412.6	3361.4	3333.7	3295.0	3294.6	3291.6	3305.6	3328.6	3374.8
42.5°	3844.4	3791.9	3727.2	3673.5	3637.4	3585.7	3575.2	3547.9	3554.1	3574.3	3619.3
45°	4136.3	4093.0	4053.5	3991.5	3960.7	3904.9	3887.2	3854.9	3836.8	3846.1	3891.0
47.5°	4419.0	4391.3	4350.1	4309.8	4286.3	4236.3	4213.6	4190.5	4167.4	4166.5	4213.6
50°	4970.1	4955.4	4906.6	4864.6	4876.0	4814.7	4818.4	4756.2	4784.4	4787.8	4886.5
52.5°	5487.9	5539.2	5575.4	5619.3	5648.0	5653.5	5672.3	5700.4	5734.5	5801.6	5893.2
55°	5784.4	5848.7	5886.1	5919.7	5975.2	5986.9	6018.4	6055.8	6085.6	6161.2	6239.0
57.5°	6136.9	6256.2	6314.1	6367.4	6442.2	6470.7	6523.3	6564.0	6602.7	6692.1	6786.2
60°	6354.0	6499.4	6617.4	6701.7	6795.4	6862.7	6942.1	7005.9	7096.6	7203.7	7344.0
62.5°	6181.4	6394.7	6551.4	6696.4	6823.6	6952.2	7065.9	7185.3	7323.0	7485.1	7702.7
65°	5493.9	5710.9	5979.3	6129.7	6298.1	6496.4	6669.4	6862.7	7050.3	7286.4	7608.2
67.5°	4422.8	4675.1	4976.8	5128.4	5322.0	5543.3	5737.5	5973.4	6192.7	6478.7	6876.5
70°	3187.9	3514.3	3767.9	3926.3	4152.3	4380.3	4567.7	4842.3	5023.8	5316.9	5728.2
72.5°	2018.6	2276.0	2586.9	2786.4	2987.1	3218.2	3409.7	3646.6	3815.8	4082.9	4455.5
75°	1085.4	1275.1	1548.1	1737.6	1952.7	2150.0	2374.3	2533.1	2658.3	2869.6	3172.0
77.5°	508.6	624.1	762.3	908.1	1053.8	1205.9	1353.7	1482.2	1536.0	1657.0	1835.4
80°	308.8	346.1	386.4	431.4	492.3	541.4	606.5	653.5	656.9	695.1	749.7
82.5°	206.2	220.0	232.2	243.6	259.2	271.4	285.2	301.5	308.3	317.1	334.8
85°	140.7	147.4	149.9	157.1	155.4	159.6	165.1	170.6	173.4	173.1	181.0
87.5°	86.5	89.8	91.6	93.2	92.0	90.3	92.8	95.8	96.6	94.1	94.9
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2
2.5°	769.9	766.1	762.3	759.8	758.9	736.7	727.0	720.8	707.3	696.4	687.5
5°	849.3	841.3	835.1	827.5	823.2	766.9	746.3	732.1	708.6	694.8	682.0
7.5°	977.0	954.7	941.7	927.0	914.4	812.7	778.7	756.4	723.7	705.2	690.9
10°	1121.9	1098.8	1078.1	1055.5	1035.8	873.7	824.1	789.6	746.3	722.4	703.5
12.5°	1283.6	1260.9	1234.9	1205.9	1180.7	950.9	882.0	832.9	773.6	741.7	715.3
15°	1474.7	1434.7	1403.2	1369.7	1340.3	1043.4	949.7	881.6	802.7	759.4	724.2
17.5°	1652.3	1610.3	1567.6	1538.2	1504.1	1147.0	1017.7	931.1	826.6	770.8	725.8
20°	1825.8	1780.0	1743.1	1703.6	1667.9	1254.6	1090.4	974.8	842.2	771.1	715.3
22.5°	1978.7	1950.1	1909.0	1866.1	1830.0	1362.1	1158.4	1011.9	848.0	761.5	696.7
25°	2152.5	2122.4	2071.9	2035.8	1995.5	1471.7	1225.2	1040.4	844.6	743.5	668.2
27.5°	2338.2	2304.7	2253.0	2215.2	2166.5	1585.5	1286.5	1060.9	832.1	714.1	630.0
30°	2531.8	2501.2	2450.3	2412.2	2363.0	1706.1	1355.0	1074.8	806.9	673.3	585.5
32.5°	2739.8	2714.1	2663.8	2623.9	2571.3	1836.7	1418.8	1079.0	768.6	625.0	538.5
35°	2937.1	2919.6	2877.1	2839.7	2785.1	1960.2	1486.4	1076.9	723.3	572.0	495.6
37.5°	3159.4	3148.8	3127.9	3080.4	3013.6	2127.7	1567.6	1068.0	667.8	519.6	462.9
40°	3396.3	3397.1	3374.5	3342.1	3279.9	2331.1	1664.1	1050.9	607.3	473.3	433.0
42.5°	3647.0	3660.0	3649.1	3626.0	3566.3	2536.1	1779.6	1029.9	548.6	428.4	403.7
45°	3934.3	3950.2	3967.1	3933.0	3875.1	2806.6	1931.6	1002.6	485.1	391.0	383.5
47.5°	4265.7	4290.9	4306.0	4306.5	4248.5	3141.7	2178.6	986.2	428.9	365.8	373.8
50°	4964.9	4973.0	5008.7	5070.9	5026.4	3917.5	2609.9	976.1	390.6	350.2	366.7
52.5°	5972.6	6060.4	6122.2	6118.0	6057.4	4410.1	2847.7	924.0	367.9	344.4	363.3
55°	6383.0	6492.6	6606.9	6637.0	6590.1	4830.6	3072.4	871.9	357.0	348.6	364.6
57.5°	6929.8	7114.6	7271.4	7337.3	7269.3	5368.6	3368.1	844.6	353.6	360.0	372.5
60°	7568.7	7797.2	8003.0	8121.4	8121.4	5986.9	3674.7	833.3	349.0	376.8	386.0
62.5°	7979.1	8314.6	8625.5	8798.9	8793.8	6417.4	3810.8	794.7	338.5	388.5	404.4
65°	7980.7	8379.8	8775.8	8970.8	8980.7	6364.6	3586.2	701.9	319.2	390.2	423.0
67.5°	7315.5	7740.9	8202.5	8420.5	8470.9	5858.8	3104.3	577.1	287.7	373.4	429.7
70°	6178.4	6593.8	7065.0	7279.3	7368.8	4994.4	2500.3	444.8	247.5	336.4	415.8
72.5°	4867.5	5274.9	5603.0	5759.6	5829.4	3817.5	1820.7	336.0	202.8	283.5	378.4
75°	3446.2	3752.0	3926.3	3961.2	3972.0	2301.3	1106.3	249.9	167.2	220.5	319.6
77.5°	1945.1	2076.2	2061.8	2077.4	1948.1	888.4	481.8	178.9	137.8	167.6	247.8
80°	759.4	783.0	735.5	720.8	661.1	330.6	212.6	124.7	110.0	126.8	173.4
82.5°	334.8	345.6	335.5	338.2	323.5	170.6	127.2	90.3	84.0	92.8	115.1
85°	184.4	187.8	186.9	192.4	184.4	68.0	60.4	55.4	58.8	63.0	73.9
87.5°	89.8	90.7	87.8	92.5	89.5	34.4	29.8	31.5	34.4	35.3	35.3
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):

	135°	145°	155°	165°	175°	180°
0°	721.2	721.2	721.2	721.2	721.2	721.2
2.5°	681.3	677.9	678.3	677.4	675.8	675.8
5°	675.4	672.1	672.1	671.2	669.1	669.5
7.5°	681.3	675.8	673.7	670.7	667.8	667.8
10°	688.0	678.3	672.5	667.5	663.6	663.6
12.5°	693.0	677.9	668.2	661.5	657.7	657.7
15°	694.8	674.9	661.5	653.5	650.1	649.8
17.5°	689.3	663.6	647.3	638.1	633.8	632.6
20°	672.5	643.0	623.4	612.8	606.9	604.8
22.5°	647.3	613.6	590.6	579.6	572.0	570.8
25°	612.0	575.9	553.2	542.6	538.5	537.1
27.5°	570.8	537.1	517.8	511.1	507.4	507.0
30°	531.8	503.1	488.9	483.8	479.2	478.5
32.5°	495.1	477.1	471.7	464.5	453.7	452.4
35°	469.1	467.5	463.8	447.7	434.3	430.5
37.5°	453.2	468.7	449.4	417.9	408.3	407.4
40°	443.9	455.8	422.5	411.7	412.4	411.7
42.5°	423.0	435.1	423.4	418.4	421.6	422.5
45°	402.0	415.4	429.7	426.4	434.3	434.3
47.5°	390.2	410.3	429.2	429.2	441.1	445.2
50°	376.8	406.2	422.5	428.4	437.7	434.3
52.5°	375.9	399.0	412.9	423.4	427.6	423.8
55°	377.2	393.1	403.2	415.0	420.0	420.4
57.5°	378.9	389.7	396.5	402.0	417.0	417.0
60°	383.0	386.9	390.6	393.6	413.3	413.7
62.5°	389.7	383.9	383.0	386.0	411.2	409.6
65°	400.3	379.6	373.4	376.3	409.1	404.1
67.5°	414.5	373.4	361.2	363.3	407.4	396.5
70°	427.6	363.3	346.1	344.0	391.5	372.2
72.5°	428.9	351.6	325.1	318.8	340.3	321.7
75°	407.8	343.5	302.0	283.5	281.0	278.5
77.5°	367.6	338.9	275.1	246.1	241.1	242.7
80°	307.5	321.7	242.7	208.3	235.6	232.7
82.5°	229.8	284.0	206.2	184.4	183.9	162.6
85°	127.7	221.4	168.0	138.2	96.2	93.2
87.5°	35.8	123.1	117.6	78.1	53.3	55.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)