

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: P301642

Luminaire Tested: **GLNA-AF-04-LED-E1-T2R-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301642
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-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20137.1 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G3

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

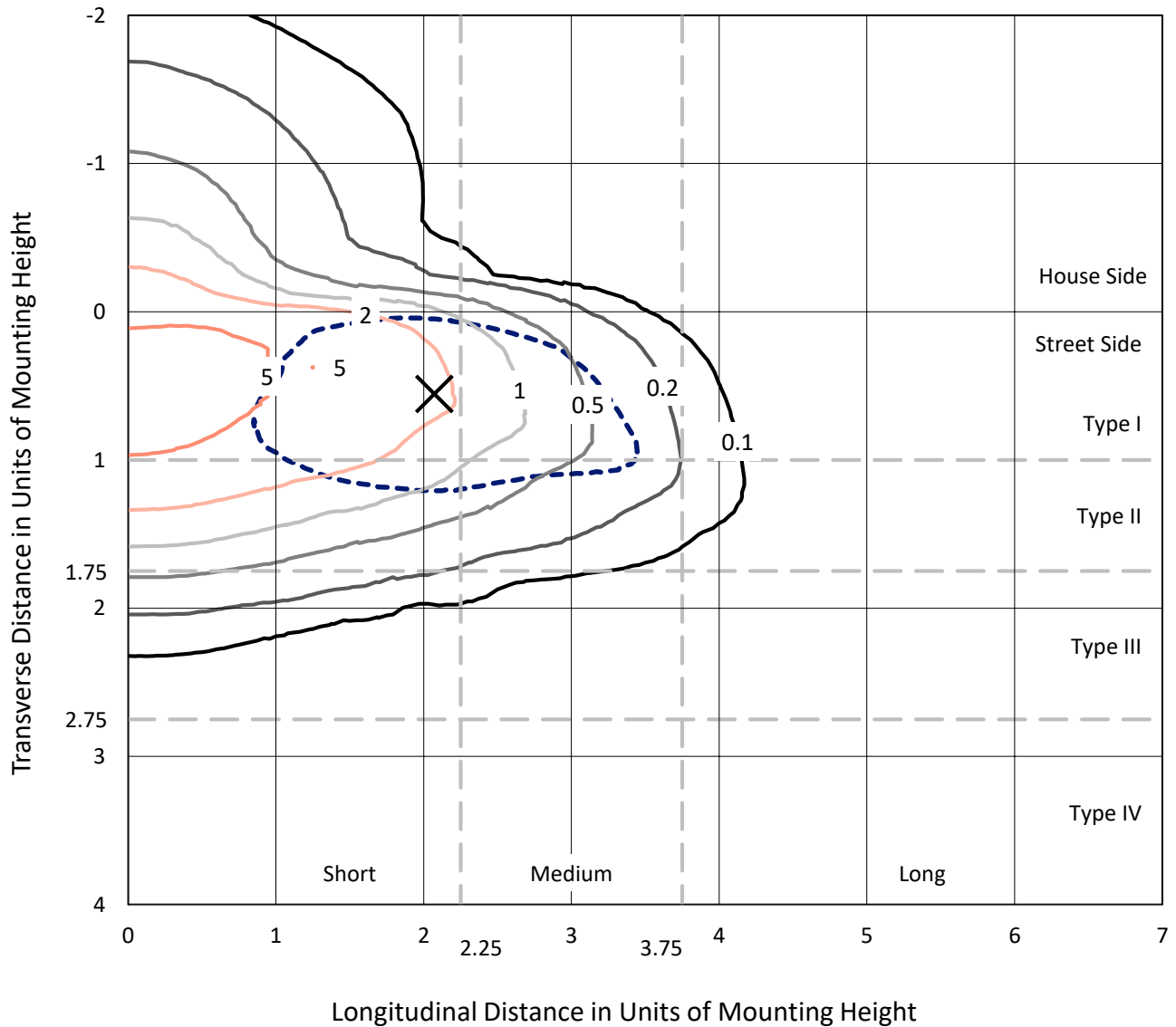


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Iso-Footcandle Lines of Horizontal Illumination

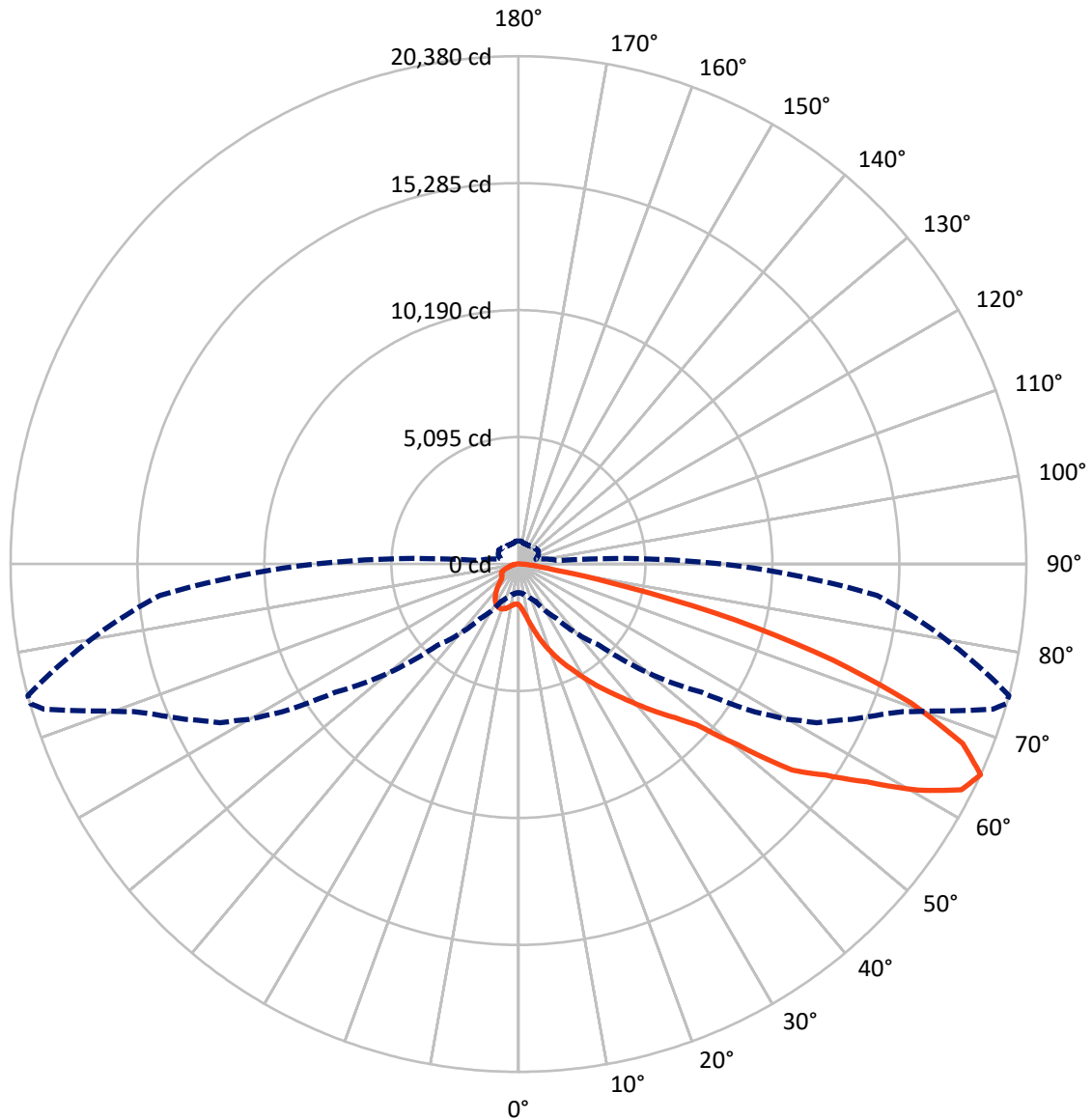
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 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	3104.7	0.0	3104.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	17032.5	0.0	17032.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	20137.1	0.0	20137.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.3	1.0
10°-20°	790.4	3.9
20°-30°	1621.6	8.1
30°-40°	2728.2	13.5
40°-50°	3769.6	18.7
50°-60°	4705.5	23.4
60°-70°	4234.5	21.0
70°-80°	1775.1	8.8
80°-90°	310.1	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°	20137.1	100.0
0°-180°	20137.1	100.0



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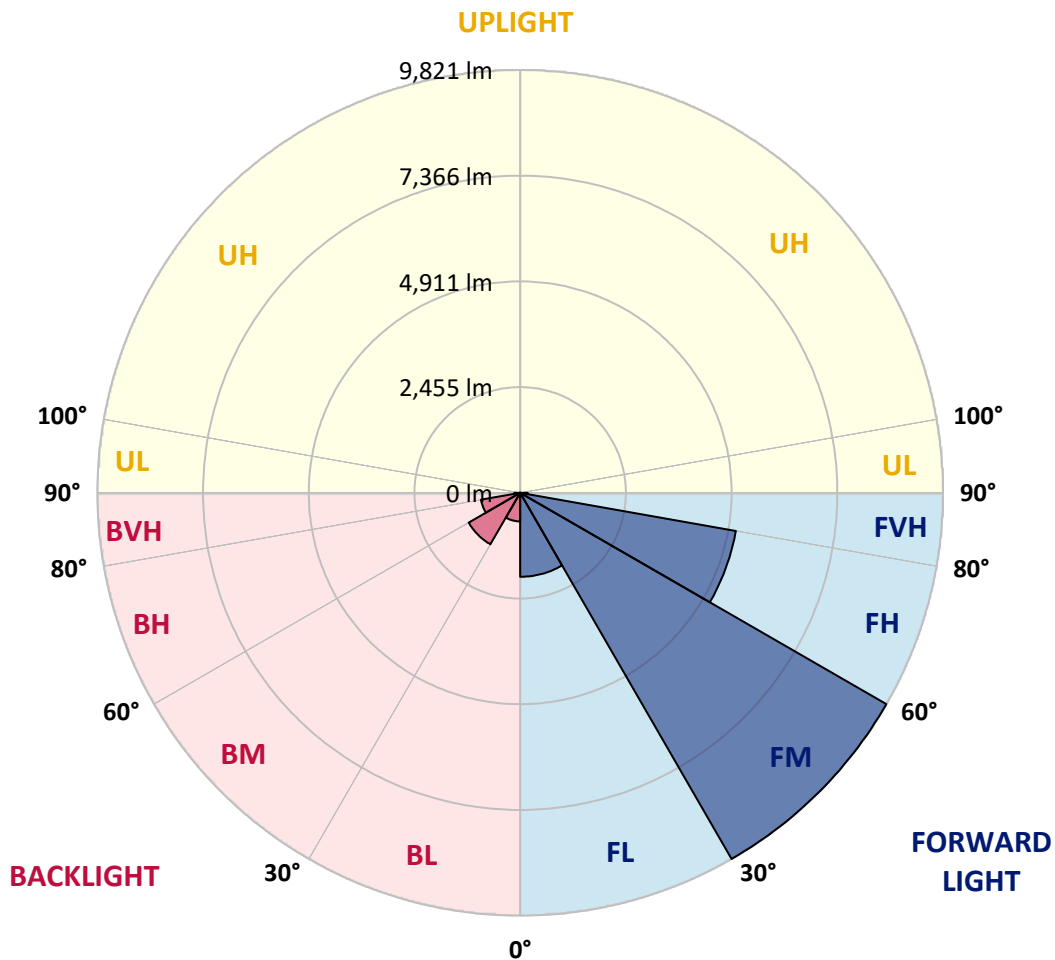
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1950.2	9.7			
FM (30°-60°)	9821.4	48.8			
FH (60°-80°)	5086.6	25.3			G3/7500
FVH (80°-90°)	174.3	0.9			G2/225
BL (0°-30°)	664.0	3.3	B2/1000		
BM (30°-60°)	1381.9	6.9	B2/2500		
BH (60°-80°)	923.0	4.6	B2/1000		G2/1000
BVH (80°-90°)	135.8	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-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5
2.5°	2077.9	2055.0	2060.6	2022.5	1975.8	1914.8	1847.2	1846.3	1847.2	1840.4	1815.8
5°	2881.2	2853.7	2843.3	2757.3	2631.5	2452.5	2258.0	2237.1	2228.3	2206.5	2155.9
7.5°	3467.6	3452.3	3435.9	3371.2	3256.9	3056.8	2795.5	2750.8	2707.9	2697.4	2640.3
10°	3845.9	3841.9	3807.7	3790.5	3719.2	3545.6	3291.2	3248.2	3201.5	3185.4	3125.2
12.5°	4145.0	4144.2	4128.1	4132.9	4070.7	3945.1	3725.7	3686.7	3652.5	3602.7	3560.0
15°	4352.0	4352.9	4376.9	4403.5	4393.9	4309.0	4103.2	4086.0	4056.5	4022.3	3971.7
17.5°	4521.7	4526.5	4551.1	4599.7	4652.3	4645.5	4482.6	4468.2	4442.5	4395.8	4369.3
20°	4904.8	4922.9	4875.4	4875.4	4881.0	4906.8	4828.4	4817.1	4780.9	4756.1	4735.1
22.5°	5552.0	5572.9	5465.2	5355.8	5248.0	5169.7	5091.7	5105.8	5081.2	5064.0	5051.5
25°	6392.6	6409.0	6234.5	6049.6	5830.2	5544.4	5351.0	5342.2	5328.9	5318.4	5312.8
27.5°	7183.7	7190.5	7025.7	6754.8	6500.3	6089.5	5613.9	5603.4	5587.3	5567.3	5550.0
30°	7860.6	7858.6	7689.0	7430.5	7158.0	6703.3	6013.4	5980.9	5933.1	5878.8	5837.0
32.5°	8446.7	8443.9	8257.9	7990.1	7704.2	7311.5	6560.5	6493.8	6419.5	6313.4	6249.8
35°	8907.9	8906.2	8730.6	8451.5	8123.6	7884.4	7187.7	7105.7	7011.2	6869.3	6771.2
37.5°	9082.3	9082.3	8984.2	8793.7	8503.8	8339.9	7884.4	7785.1	7684.2	7523.0	7412.5
40°	8980.3	8982.3	9003.2	8968.1	8827.0	8701.2	8534.4	8475.3	8388.5	8243.7	8128.4
42.5°	8638.2	8648.6	8788.0	8958.5	9028.9	9009.1	9110.9	9084.3	9023.3	8911.9	8820.2
45°	8204.4	8236.9	8389.3	8711.7	9085.2	9274.9	9594.1	9596.9	9585.6	9525.7	9455.0
47.5°	7609.0	7654.5	7855.8	8291.2	8953.7	9533.3	10085.0	10110.7	10134.7	10095.7	10063.2
50°	6817.8	6872.1	7173.2	7750.9	8685.9	9801.1	11012.4	11128.9	11237.4	11224.1	11245.9
52.5°	5970.5	6034.4	6403.1	7046.6	8225.6	9863.0	11605.3	11795.0	11984.7	12140.0	12304.8
55°	5205.9	5171.7	5540.7	6218.1	7468.7	9583.7	12138.3	12367.0	12578.5	12769.1	12965.6
57.5°	4169.9	4226.2	4596.0	5266.1	6467.0	8795.4	12505.0	12839.7	13143.7	13459.2	13737.5
60°	3048.0	3104.3	3505.5	4186.0	5379.5	7600.2	12224.8	12732.0	13218.9	13702.1	14079.6
62.5°	1840.4	1882.5	2236.0	2884.3	4148.2	6183.1	10976.2	11641.5	12358.2	12935.9	13514.4
65°	1145.7	1169.4	1300.1	1656.6	2664.0	4616.1	8968.1	9693.4	10465.3	11198.4	11799.8
67.5°	937.9	946.3	970.4	1046.4	1462.9	3010.1	6674.8	7317.2	8013.9	8723.0	9392.2
70°	843.4	837.8	837.8	842.6	937.9	1618.4	4370.1	4788.6	5369.1	5985.7	6597.6
72.5°	761.4	755.8	745.3	731.2	765.4	987.3	2258.9	2574.4	2992.9	3540.8	4127.0
75°	684.2	676.6	664.5	646.4	670.1	745.3	1084.6	1217.2	1421.1	1712.9	2039.7
77.5°	604.2	594.6	583.3	570.0	600.6	579.6	635.6	683.4	761.4	855.0	978.0
80°	513.7	505.3	501.3	494.8	531.0	441.4	449.0	478.4	524.2	574.8	631.9
82.5°	402.3	402.3	417.3	420.4	460.3	317.5	335.6	361.3	385.1	411.7	438.5
85°	264.9	266.9	318.4	338.4	363.0	213.5	251.6	260.1	279.4	294.6	305.9
87.5°	82.8	89.6	194.5	215.5	208.7	121.0	154.4	158.3	171.6	182.1	191.7
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°	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5
2.5°	1815.8	1804.2	1793.7	1792.9	1785.3	1774.8	1778.5	1762.4	1763.2	1754.7	1745.1
5°	2135.0	2127.4	2089.2	2078.7	2050.2	2032.1	2029.3	1991.1	1986.3	1964.5	1940.5
7.5°	2594.5	2569.6	2516.2	2490.4	2441.8	2405.6	2388.6	2338.0	2313.1	2256.0	2230.3
10°	3075.7	3044.3	2978.4	2942.2	2895.6	2837.3	2806.0	2732.7	2703.9	2651.6	2588.8
12.5°	3521.9	3490.5	3422.6	3394.9	3333.0	3271.1	3236.9	3154.0	3116.7	3032.7	2983.2
15°	3934.4	3903.0	3843.9	3815.4	3753.4	3702.8	3657.0	3575.3	3531.5	3453.2	3388.4
17.5°	4334.8	4301.4	4249.9	4224.2	4164.3	4112.8	4063.3	3985.9	3941.2	3863.1	3804.9
20°	4706.6	4681.7	4644.7	4610.2	4550.2	4503.6	4444.5	4377.7	4313.0	4255.6	4200.5
22.5°	5030.6	5021.0	4981.1	4965.9	4914.4	4874.2	4822.8	4757.2	4710.3	4637.9	4586.4
25°	5310.0	5307.1	5287.9	5283.1	5246.9	5208.7	5197.4	5143.1	5100.2	5036.3	4983.1
27.5°	5550.0	5552.8	5548.3	5561.6	5552.0	5534.7	5535.9	5517.8	5492.9	5439.5	5392.8
30°	5816.9	5801.7	5810.4	5829.4	5835.0	5837.0	5868.4	5878.8	5877.1	5841.8	5818.9
32.5°	6194.4	6158.2	6124.8	6122.0	6140.9	6148.6	6202.0	6229.7	6253.5	6262.0	6265.9
35°	6675.6	6603.2	6533.7	6496.6	6464.1	6472.6	6510.8	6555.7	6608.0	6644.2	6687.2
37.5°	7281.8	7193.3	7070.3	6982.7	6960.6	6913.1	6937.7	6973.1	7024.5	7080.8	7155.2
40°	8016.7	7882.4	7744.1	7627.9	7565.1	7477.2	7476.4	7469.6	7501.2	7553.5	7658.4
42.5°	8724.1	8604.8	8458.0	8336.2	8254.2	8136.8	8113.1	8051.2	8065.3	8111.1	8213.2
45°	9386.3	9288.2	9198.6	9057.7	8987.9	8861.2	8821.1	8747.9	8706.9	8727.8	8829.9
47.5°	10027.8	9965.1	9871.5	9780.2	9726.7	9613.3	9561.9	9509.3	9457.0	9455.0	9561.9
50°	11278.4	11245.1	11134.5	11039.2	11065.0	10925.8	10934.3	10793.2	10857.1	10864.8	11088.7
52.5°	12453.5	12570.0	12652.0	12751.8	12816.8	12829.3	12872.0	12935.9	13013.1	13165.5	13373.3
55°	13126.5	13272.4	13357.2	13433.5	13559.3	13585.9	13657.4	13742.3	13809.8	13981.5	14157.9
57.5°	13926.3	14196.9	14328.4	14449.4	14619.1	14683.8	14803.1	14895.6	14983.2	15186.3	15399.7
60°	14418.9	14748.8	15016.6	15208.0	15420.6	15573.3	15753.4	15898.2	16104.0	16347.2	16665.6
62.5°	14027.3	14511.3	14867.0	15195.9	15484.6	15776.3	16034.5	16305.4	16617.8	16985.6	17479.6
65°	12467.1	12959.6	13568.7	13909.9	14292.2	14742.1	15134.8	15573.3	15999.1	16534.9	17265.0
67.5°	10036.6	10609.2	11293.7	11637.8	12077.2	12579.3	13019.9	13555.4	14053.0	14701.9	15604.7
70°	7234.3	7974.8	8550.5	8909.9	9422.8	9940.2	10365.4	10988.6	11400.3	12065.6	12998.9
72.5°	4580.8	5164.9	5870.4	6323.0	6778.5	7303.0	7737.6	8275.1	8659.1	9265.3	10110.7
75°	2463.0	2893.6	3513.1	3943.2	4431.2	4879.1	5388.0	5748.2	6032.4	6511.9	7198.1
77.5°	1154.2	1416.3	1729.8	2060.6	2391.5	2736.4	3072.0	3363.5	3485.7	3760.2	4165.1
80°	700.6	785.5	876.8	978.9	1117.1	1228.5	1376.4	1483.0	1490.6	1577.4	1701.3
82.5°	467.9	499.3	527.0	552.8	588.1	615.8	647.2	684.2	699.5	719.6	759.7
85°	319.2	334.5	340.1	356.5	352.6	362.2	374.6	387.1	393.6	392.7	410.8
87.5°	196.2	203.9	207.8	211.5	208.7	205.0	210.6	217.4	219.1	213.5	215.5
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5
2.5°	1747.1	1738.6	1729.8	1724.2	1722.2	1671.9	1649.8	1635.7	1605.1	1580.3	1560.2
5°	1927.2	1909.1	1895.0	1877.7	1868.1	1740.3	1693.6	1661.4	1608.0	1576.6	1547.7
7.5°	2217.0	2166.4	2137.0	2103.6	2075.1	1844.3	1767.2	1716.5	1642.2	1600.3	1567.8
10°	2545.8	2493.5	2446.6	2395.1	2350.5	1982.6	1870.1	1791.8	1693.6	1639.4	1596.4
12.5°	2912.8	2861.4	2802.3	2736.4	2679.3	2157.9	2001.6	1890.2	1755.6	1683.2	1623.2
15°	3346.6	3255.8	3184.3	3108.2	3041.5	2367.7	2155.1	2000.7	1821.4	1723.3	1643.3
17.5°	3749.5	3654.2	3557.2	3490.5	3413.3	2603.0	2309.5	2113.0	1875.7	1749.1	1647.0
20°	4143.4	4039.3	3955.6	3866.0	3784.8	2847.0	2474.3	2212.2	1911.1	1749.9	1623.2
22.5°	4490.3	4425.2	4331.9	4234.7	4152.7	3091.0	2628.7	2296.2	1924.4	1728.1	1581.1
25°	4884.7	4816.3	4701.8	4619.8	4528.4	3339.8	2780.2	2360.9	1916.7	1687.1	1516.4
27.5°	5306.0	5229.9	5112.6	5026.9	4916.4	3597.9	2919.3	2407.6	1888.2	1620.4	1429.6
30°	5745.4	5675.8	5560.5	5474.0	5362.3	3871.6	3074.9	2439.0	1831.1	1528.0	1328.6
32.5°	6217.3	6159.0	6044.8	5954.3	5835.0	4167.9	3219.6	2448.6	1744.3	1418.3	1222.0
35°	6665.2	6625.3	6528.9	6444.0	6320.2	4448.2	3373.2	2443.8	1641.3	1298.1	1124.8
37.5°	7169.6	7145.5	7098.0	6990.3	6838.8	4828.4	3557.2	2423.7	1515.5	1179.0	1050.4
40°	7707.1	7709.1	7657.6	7584.1	7443.0	5289.9	3776.3	2384.7	1378.1	1074.1	982.5
42.5°	8276.0	8305.6	8280.8	8228.5	8093.0	5755.0	4038.5	2337.2	1244.9	972.1	916.1
45°	8928.0	8964.2	9002.3	8925.1	8793.7	6368.8	4383.4	2275.3	1100.7	887.3	870.3
47.5°	9680.1	9737.2	9771.4	9772.5	9641.1	7129.4	4943.8	2237.9	973.2	830.1	848.2
50°	11266.8	11285.2	11366.1	11507.2	11406.2	8889.8	5922.7	2215.0	886.4	794.8	832.1
52.5°	13553.4	13752.7	13893.0	13883.4	13745.9	10007.8	6462.1	2096.8	834.9	781.5	824.5
55°	14484.8	14733.6	14992.9	15061.3	14954.7	10962.0	6972.2	1978.7	810.1	791.1	827.3
57.5°	15725.7	16145.0	16500.7	16650.3	16495.9	12182.9	7643.2	1916.7	802.4	816.9	845.4
60°	17175.4	17693.9	18161.0	18429.6	18429.6	13585.9	8339.0	1891.0	792.0	855.0	875.9
62.5°	18106.7	18868.2	19573.6	19967.2	19955.6	14562.8	8647.8	1803.3	768.2	881.6	917.8
65°	18110.4	19016.0	19914.6	20357.1	20379.7	14442.9	8138.0	1592.7	724.4	885.6	959.9
67.5°	16600.8	17566.1	18613.7	19108.5	19222.7	13295.3	7044.6	1309.7	652.9	847.4	975.2
70°	14020.5	14963.2	16032.5	16518.8	16721.8	11333.6	5673.9	1009.4	561.5	763.4	943.5
72.5°	11045.7	11970.3	12714.8	13070.2	13228.5	8663.0	4131.8	762.6	460.3	643.2	858.7
75°	7820.5	8514.3	8909.9	8989.0	9013.6	5222.3	2510.5	567.2	379.4	500.5	725.2
77.5°	4413.9	4711.4	4678.9	4714.2	4420.7	2016.0	1093.4	406.0	312.7	380.3	562.4
80°	1723.3	1776.8	1669.0	1635.7	1500.2	750.1	482.4	283.0	249.7	287.8	393.6
82.5°	759.7	784.3	761.4	767.4	734.0	387.1	288.7	205.0	190.6	210.6	261.3
85°	418.5	426.1	424.1	436.6	418.5	154.4	137.1	125.8	133.5	143.1	167.7
87.5°	203.9	205.8	199.3	209.8	203.0	78.0	67.6	71.5	78.0	80.0	80.0
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°	1636.5	1636.5	1636.5	1636.5	1636.5	1636.5
2.5°	1546.1	1538.4	1539.3	1537.3	1533.6	1533.6
5°	1532.8	1525.1	1525.1	1523.1	1518.3	1519.2
7.5°	1546.1	1533.6	1528.8	1522.0	1515.5	1515.5
10°	1561.3	1539.3	1526.0	1514.7	1505.9	1505.9
12.5°	1572.6	1538.4	1516.4	1501.1	1492.6	1492.6
15°	1576.6	1531.6	1501.1	1483.0	1475.4	1474.5
17.5°	1564.1	1505.9	1468.9	1447.9	1438.3	1435.5
20°	1526.0	1459.2	1414.6	1390.5	1377.3	1372.4
22.5°	1468.9	1392.5	1340.2	1315.3	1298.1	1295.3
25°	1388.8	1306.8	1255.4	1231.4	1222.0	1218.9
27.5°	1295.3	1218.9	1175.1	1159.8	1151.3	1150.5
30°	1206.8	1141.7	1109.5	1097.9	1087.4	1085.7
32.5°	1123.6	1082.6	1070.5	1054.1	1029.5	1026.6
35°	1064.5	1060.9	1052.4	1015.9	985.7	976.9
37.5°	1028.3	1063.7	1019.9	948.3	926.6	924.6
40°	1007.4	1034.3	958.8	934.2	935.9	934.2
42.5°	959.9	987.3	960.8	949.5	956.8	958.8
45°	912.1	942.7	975.2	967.6	985.7	985.7
47.5°	885.6	931.1	974.1	974.1	1000.9	1010.2
50°	855.0	921.7	958.8	972.1	993.3	985.7
52.5°	853.0	905.4	937.0	960.8	970.4	961.6
55°	855.9	892.1	915.0	941.8	953.1	954.0
57.5°	859.8	884.4	899.7	912.1	946.3	946.3
60°	869.2	877.9	886.4	893.2	937.9	938.7
62.5°	884.4	871.1	869.2	875.9	933.1	929.4
65°	908.5	861.5	847.4	853.9	928.3	916.9
67.5°	940.7	847.4	819.7	824.5	924.6	899.7
70°	970.4	824.5	785.5	780.7	888.4	844.6
72.5°	973.2	797.9	737.7	723.5	772.2	730.0
75°	925.4	779.5	685.4	643.2	637.6	631.9
77.5°	834.1	769.1	624.3	558.4	547.1	550.8
80°	697.8	730.0	550.8	472.8	534.7	528.2
82.5°	521.4	644.4	467.9	418.5	417.3	369.0
85°	289.8	502.4	381.1	313.6	218.3	211.5
87.5°	81.1	279.4	266.9	177.3	121.0	125.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)