

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: P301644

Luminaire Tested: **GLNA-AF-05-LED-E1-T2R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301644
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-05-LED-E1-T2R-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 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: 21677.8 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G3

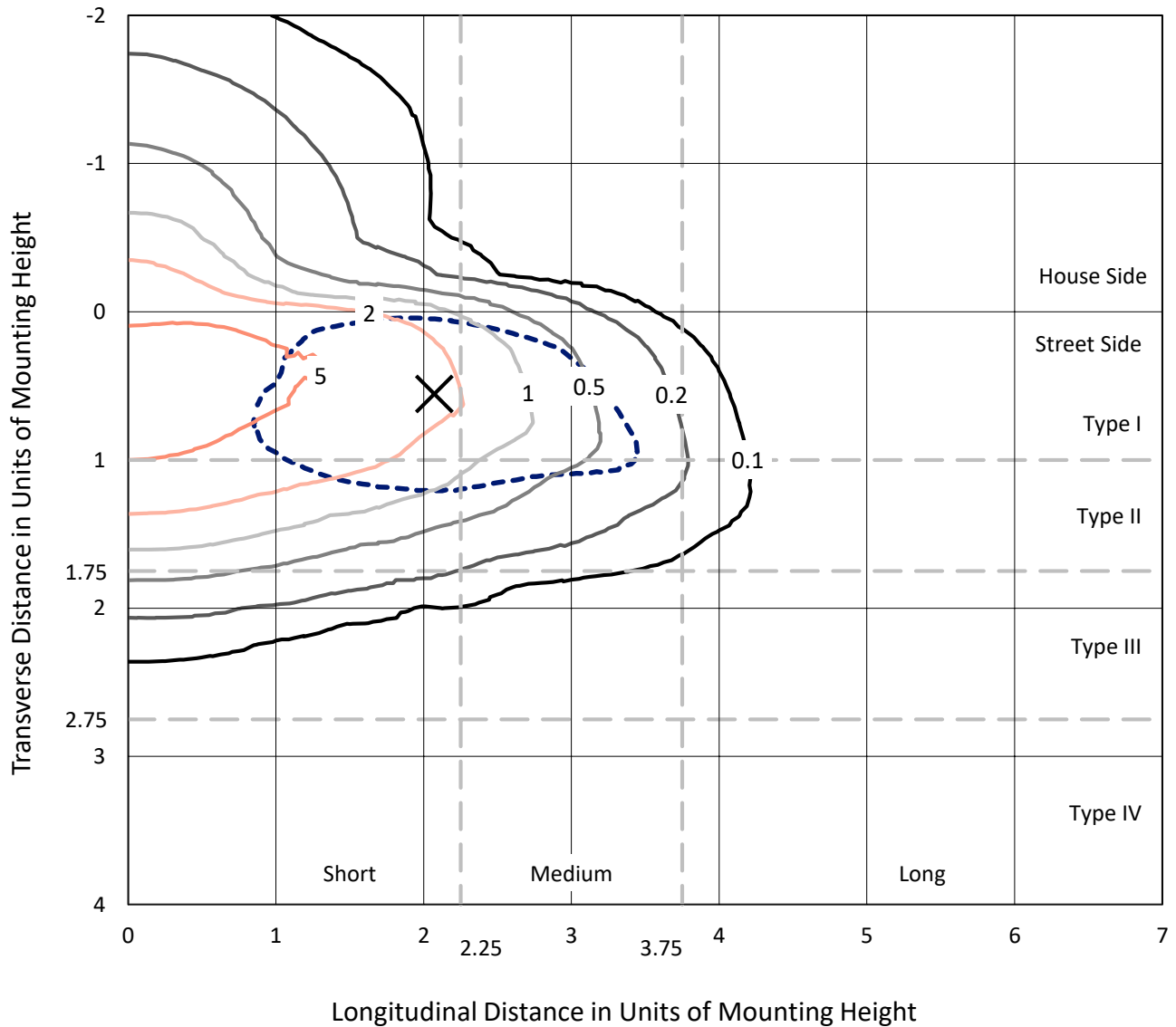
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

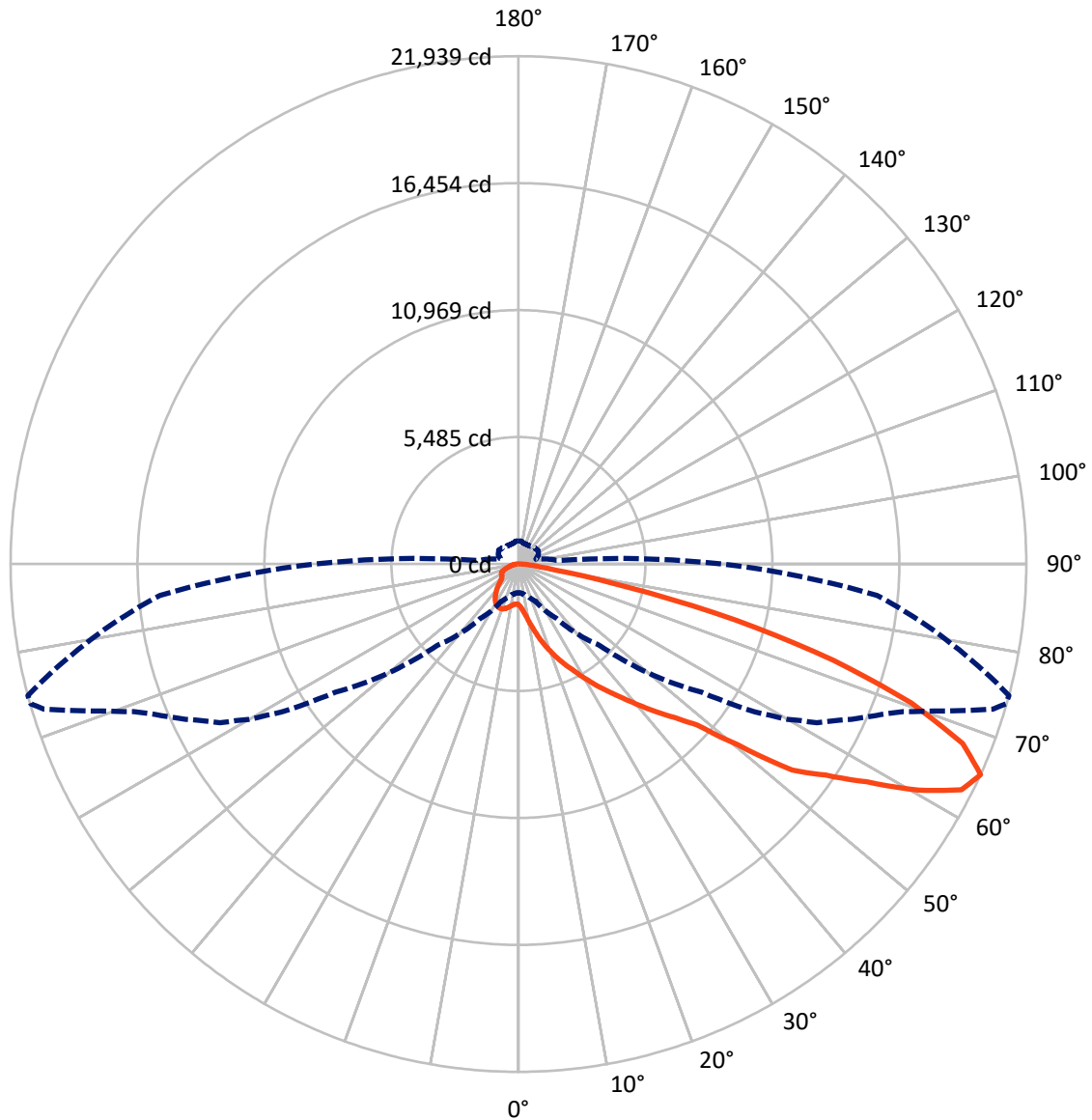
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 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	3342.2	0.0	3342.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	18335.6	0.0	18335.6
	% Fixture	84.6	0.0	84.6
Total	Lumens	21677.8	0.0	21677.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.8	1.0
10°-20°	850.8	3.9
20°-30°	1745.6	8.1
30°-40°	2936.9	13.5
40°-50°	4058.0	18.7
50°-60°	5065.6	23.4
60°-70°	4558.5	21.0
70°-80°	1910.9	8.8
80°-90°	333.8	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°	21677.8	100.0
0°-180°	21677.8	100.0

Coefficient of Utilization



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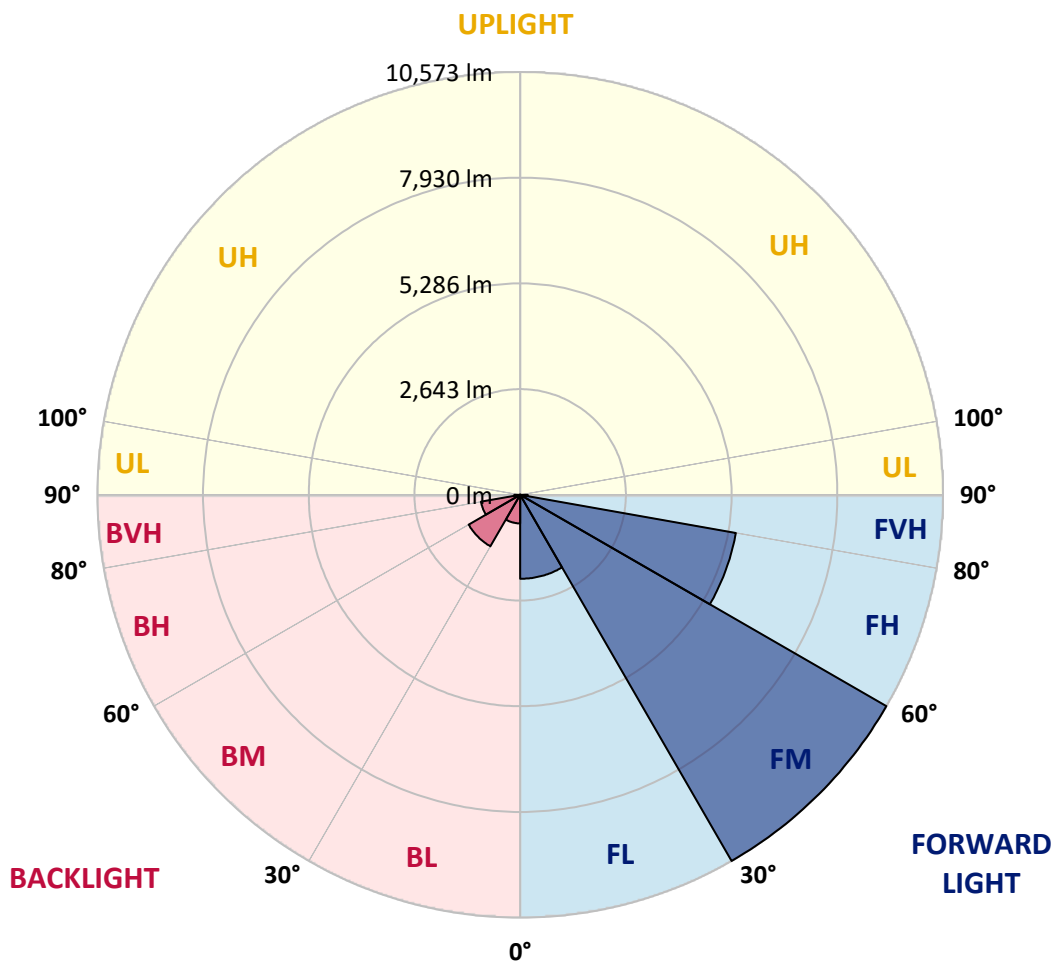
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2099.4	9.7			
FM (30°-60°)	10572.8	48.8			
FH (60°-80°)	5475.7	25.3			G3/7500
FVH (80°-90°)	187.6	0.9			G2/225
BL (0°-30°)	714.8	3.3	B2/1000		
BM (30°-60°)	1487.7	6.9	B2/2500		
BH (60°-80°)	993.6	4.6	B2/1000		G2/1000
BVH (80°-90°)	146.2	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°	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7
2.5°	2236.9	2212.2	2218.3	2177.2	2127.0	2061.2	1988.5	1987.6	1988.5	1981.2	1954.7
5°	3101.6	3072.1	3060.8	2968.3	2832.8	2640.2	2430.8	2408.2	2398.8	2375.4	2320.9
7.5°	3732.9	3716.4	3698.8	3629.1	3506.1	3290.6	3009.4	2961.3	2915.0	2903.8	2842.3
10°	4140.1	4135.9	4099.1	4080.5	4003.8	3816.9	3543.0	3496.7	3446.5	3429.1	3364.3
12.5°	4462.2	4461.3	4443.9	4449.1	4382.1	4247.0	4010.8	3968.8	3931.9	3878.4	3832.4
15°	4685.0	4685.9	4711.8	4740.4	4730.0	4638.7	4417.1	4398.6	4366.9	4330.1	4275.6
17.5°	4867.6	4872.8	4899.3	4951.6	5008.2	5000.9	4825.6	4810.1	4782.4	4732.2	4703.5
20°	5280.0	5299.5	5248.4	5248.4	5254.5	5282.2	5197.9	5185.7	5146.7	5119.9	5097.4
22.5°	5976.8	5999.3	5883.3	5765.5	5649.6	5565.2	5481.2	5496.4	5470.0	5451.4	5438.0
25°	6881.7	6899.3	6711.5	6512.5	6276.3	5968.5	5760.3	5750.9	5736.6	5725.3	5719.3
27.5°	7733.3	7740.6	7563.2	7271.6	6997.6	6555.4	6043.4	6032.2	6014.8	5993.2	5974.6
30°	8462.0	8459.9	8277.2	7999.0	7705.6	7216.2	6473.5	6438.5	6387.1	6328.6	6283.6
32.5°	9093.0	9089.9	8889.7	8601.4	8293.7	7870.9	7062.5	6990.6	6910.6	6796.4	6728.0
35°	9589.4	9587.6	9398.6	9098.1	8745.1	8487.6	7737.6	7649.3	7547.6	7394.9	7289.2
37.5°	9777.2	9777.2	9671.6	9466.4	9154.5	8977.9	8487.6	8380.7	8272.1	8098.6	7979.6
40°	9667.3	9669.5	9692.0	9654.2	9502.4	9366.9	9187.3	9123.7	9030.3	8874.4	8750.2
42.5°	9299.0	9310.3	9460.4	9643.9	9719.7	9698.4	9808.0	9779.3	9713.6	9593.7	9495.1
45°	8832.1	8867.1	9031.2	9378.2	9780.3	9984.5	10328.1	10331.2	10319.0	10254.5	10178.4
47.5°	8191.1	8240.1	8456.8	8925.6	9638.7	10262.7	10856.5	10884.2	10910.1	10868.1	10833.1
50°	7339.5	7397.9	7722.1	8343.9	9350.5	10550.9	11854.9	11980.3	12097.2	12082.9	12106.3
52.5°	6427.2	6496.0	6892.9	7585.7	8855.0	10617.6	12493.2	12697.4	12901.7	13068.8	13246.2
55°	5604.2	5567.4	5964.6	6693.9	8040.1	10316.9	13066.9	13313.2	13540.8	13746.0	13957.5
57.5°	4489.0	4549.5	4947.7	5669.0	6961.7	9468.3	13461.7	13822.1	14149.3	14489.0	14788.5
60°	3281.2	3341.8	3773.7	4506.3	5791.1	8181.7	13160.1	13706.1	14230.3	14750.4	15156.8
62.5°	1981.2	2026.5	2407.0	3105.0	4465.5	6656.1	11815.9	12532.1	13303.7	13925.6	14548.3
65°	1233.3	1258.9	1399.5	1783.3	2867.8	4969.3	9654.2	10435.0	11265.9	12055.2	12702.6
67.5°	1009.6	1018.8	1044.6	1126.5	1574.8	3240.4	7185.4	7877.0	8627.0	9390.4	10110.8
70°	908.0	901.9	901.9	907.0	1009.6	1742.3	4704.5	5154.9	5779.8	6443.7	7102.3
72.5°	819.7	813.6	802.3	787.1	823.9	1062.9	2431.7	2771.4	3221.8	3811.7	4442.7
75°	736.6	728.4	715.3	695.8	721.4	802.3	1167.6	1310.3	1529.8	1843.9	2195.8
77.5°	650.5	640.1	627.9	613.6	646.5	624.0	684.2	735.7	819.7	920.4	1052.8
80°	553.1	543.9	539.7	532.7	571.6	475.1	483.4	515.0	564.3	618.8	680.3
82.5°	433.1	433.1	449.3	452.6	495.5	341.8	361.3	389.0	414.6	443.2	472.1
85°	285.2	287.3	342.7	364.3	390.8	229.8	270.9	280.0	300.7	317.2	329.3
87.5°	89.2	96.5	209.4	231.9	224.6	130.3	166.2	170.5	184.8	196.0	206.4
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7
2.5°	1954.7	1942.2	1931.0	1930.1	1921.8	1910.6	1914.5	1897.2	1898.1	1889.0	1878.6
5°	2298.4	2290.1	2249.0	2237.8	2207.0	2187.6	2184.5	2143.4	2138.3	2114.8	2088.9
7.5°	2793.0	2766.2	2708.7	2681.0	2628.6	2589.6	2571.4	2516.9	2490.1	2428.6	2400.9
10°	3311.0	3277.2	3206.3	3167.4	3117.1	3054.4	3020.6	2941.8	2910.8	2854.5	2786.9
12.5°	3791.3	3757.5	3684.5	3654.7	3588.0	3521.3	3484.5	3395.3	3355.2	3264.8	3211.5
15°	4235.4	4201.6	4138.0	4107.3	4040.6	3986.1	3936.8	3848.9	3801.7	3717.4	3647.7
17.5°	4666.4	4630.5	4575.1	4547.4	4482.9	4427.5	4374.2	4290.8	4242.7	4158.7	4096.0
20°	5066.7	5039.9	5000.0	4962.9	4898.3	4848.1	4784.5	4712.7	4643.0	4581.2	4521.8
22.5°	5415.5	5405.1	5362.2	5345.8	5290.4	5247.2	5191.8	5121.2	5070.6	4992.7	4937.3
25°	5716.2	5713.2	5692.5	5687.3	5648.3	5607.2	5595.1	5536.6	5490.4	5421.6	5364.3
27.5°	5974.6	5977.7	5972.8	5987.1	5976.8	5958.2	5959.4	5939.9	5913.1	5855.6	5805.4
30°	6262.0	6245.5	6255.0	6275.4	6281.4	6283.6	6317.4	6328.6	6326.8	6288.7	6264.1
32.5°	6668.3	6629.3	6593.4	6590.4	6610.8	6619.0	6676.5	6706.4	6731.9	6741.0	6745.3
35°	7186.4	7108.4	7033.6	6993.7	6958.7	6967.8	7008.9	7057.3	7113.6	7152.6	7198.8
37.5°	7838.9	7743.7	7611.3	7516.9	7493.2	7442.0	7468.5	7506.6	7562.0	7622.5	7702.6
40°	8630.0	8485.4	8336.6	8211.5	8143.9	8049.3	8048.4	8041.0	8075.1	8131.4	8244.4
42.5°	9391.6	9263.1	9105.1	8974.0	8885.7	8759.4	8733.8	8667.2	8682.4	8731.7	8841.6
45°	10104.4	9998.8	9902.3	9750.7	9675.6	9539.2	9496.0	9417.1	9373.0	9395.5	9505.4
47.5°	10795.1	10727.5	10626.7	10528.4	10470.9	10348.8	10293.4	10236.8	10180.5	10178.4	10293.4
50°	12141.3	12105.4	11986.4	11883.8	11911.5	11761.8	11770.9	11619.0	11687.8	11696.0	11937.1
52.5°	13406.3	13531.7	13620.0	13727.4	13797.4	13810.8	13856.8	13925.6	14008.7	14172.7	14396.4
55°	14130.7	14287.8	14379.1	14461.3	14596.7	14625.3	14702.3	14793.7	14866.4	15051.2	15241.1
57.5°	14991.8	15283.1	15424.6	15554.9	15737.5	15807.2	15935.7	16035.2	16129.6	16348.1	16577.9
60°	15522.0	15877.2	16165.5	16371.6	16600.4	16764.8	16958.7	17114.5	17336.1	17597.9	17940.6
62.5°	15100.5	15621.6	16004.5	16358.5	16669.2	16983.4	17261.2	17552.8	17889.2	18285.2	18816.9
65°	13420.9	13951.1	14606.8	14974.2	15385.7	15869.9	16292.7	16764.8	17223.2	17800.0	18585.9
67.5°	10804.5	11420.9	12157.8	12528.2	13001.2	13541.8	14016.0	14592.5	15128.2	15826.7	16798.6
70°	7787.8	8585.0	9204.7	9591.5	10143.7	10700.7	11158.5	11829.3	12272.5	12988.7	13993.5
72.5°	4931.2	5560.1	6319.5	6806.8	7297.1	7861.8	8329.6	8908.2	9321.6	9974.1	10884.2
75°	2651.4	3115.0	3781.9	4244.8	4770.2	5252.3	5800.2	6188.0	6493.9	7010.1	7748.8
77.5°	1242.5	1524.6	1862.2	2218.3	2574.4	2945.8	3307.1	3620.9	3752.4	4047.9	4483.8
80°	754.2	845.6	943.9	1053.8	1202.6	1322.5	1481.7	1596.5	1604.7	1698.1	1831.4
82.5°	503.7	537.5	567.4	595.1	633.1	662.9	696.7	736.6	753.0	774.6	817.9
85°	343.6	360.1	366.2	383.8	379.6	389.9	403.3	416.7	423.7	422.8	442.3
87.5°	211.2	219.5	223.7	227.7	224.6	220.7	226.8	234.1	235.9	229.8	231.9
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°	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7
2.5°	1880.7	1871.6	1862.2	1856.1	1854.0	1799.8	1776.0	1760.8	1728.0	1701.2	1679.6
5°	2074.6	2055.2	2039.9	2021.4	2011.0	1873.4	1823.2	1788.5	1731.0	1697.2	1666.2
7.5°	2386.6	2332.1	2300.5	2264.6	2233.8	1985.5	1902.4	1847.9	1767.8	1722.8	1687.8
10°	2740.6	2684.3	2633.8	2578.4	2530.3	2134.3	2013.2	1928.8	1823.2	1764.8	1718.5
12.5°	3135.7	3080.3	3016.7	2945.8	2884.3	2323.0	2154.7	2034.8	1889.9	1812.0	1747.4
15°	3602.6	3504.9	3427.9	3346.0	3274.2	2548.9	2320.0	2153.8	1960.8	1855.2	1769.0
17.5°	4036.4	3933.8	3829.4	3757.5	3674.4	2802.1	2486.2	2274.6	2019.2	1882.9	1773.0
20°	4460.3	4348.3	4258.2	4161.8	4074.4	3064.8	2663.6	2381.4	2057.3	1883.8	1747.4
22.5°	4833.8	4763.8	4663.4	4558.7	4470.4	3327.5	2829.8	2471.8	2071.6	1860.4	1702.1
25°	5258.4	5184.8	5061.5	4973.2	4874.9	3595.3	2992.9	2541.6	2063.4	1816.2	1632.4
27.5°	5711.9	5630.1	5503.8	5411.5	5292.5	3873.2	3142.7	2591.8	2032.6	1744.4	1538.9
30°	6185.0	6110.1	5985.9	5892.7	5772.5	4167.8	3310.1	2625.6	1971.1	1644.9	1430.3
32.5°	6693.0	6630.3	6507.3	6409.9	6281.4	4486.8	3465.9	2635.9	1877.7	1526.8	1315.5
35°	7175.1	7132.2	7028.4	6937.1	6803.8	4788.5	3631.2	2630.7	1766.9	1397.4	1210.8
37.5°	7718.1	7692.2	7641.1	7525.1	7362.0	5197.9	3829.4	2609.1	1631.5	1269.3	1130.8
40°	8296.7	8298.9	8243.5	8164.3	8012.4	5694.6	4065.3	2567.1	1483.5	1156.3	1057.7
42.5°	8909.1	8941.1	8914.3	8858.0	8712.2	6195.3	4347.4	2516.0	1340.2	1046.4	986.2
45°	9611.0	9650.0	9691.1	9608.0	9466.4	6856.1	4718.8	2449.3	1184.9	955.1	936.9
47.5°	10420.7	10482.2	10519.0	10520.2	10378.7	7674.9	5322.0	2409.1	1047.7	893.7	913.1
50°	12128.8	12148.6	12235.7	12387.6	12278.9	9569.9	6375.8	2384.5	954.2	855.6	895.8
52.5°	14590.3	14804.9	14955.9	14945.5	14797.6	10773.4	6956.5	2257.3	898.8	841.3	887.6
55°	15593.0	15860.8	16139.9	16213.6	16098.8	11800.7	7505.6	2130.0	872.0	851.6	890.6
57.5°	16928.9	17380.3	17763.2	17924.2	17758.0	13115.0	8227.9	2063.4	863.8	879.3	910.1
60°	18489.4	19047.6	19550.5	19839.6	19839.6	14625.3	8977.0	2035.7	852.6	920.4	943.0
62.5°	19492.0	20311.7	21071.1	21494.8	21482.4	15677.0	9309.4	1941.3	827.0	949.0	988.0
65°	19496.0	20470.9	21438.2	21914.6	21938.9	15547.9	8760.6	1714.6	779.8	953.3	1033.4
67.5°	17870.9	18910.1	20037.8	20570.4	20693.4	14312.4	7583.6	1409.9	702.8	912.2	1049.8
70°	15093.2	16108.0	17259.1	17782.6	18001.2	12200.7	6107.9	1086.6	604.5	821.8	1015.7
72.5°	11890.8	12886.1	13687.6	14070.2	14240.6	9325.8	4447.9	820.9	495.5	692.5	924.4
75°	8418.8	9165.7	9591.5	9676.8	9703.3	5621.9	2702.6	610.6	408.5	538.7	780.7
77.5°	4751.6	5071.8	5036.8	5074.9	4758.9	2170.2	1177.0	437.1	336.6	409.4	605.4
80°	1855.2	1912.7	1796.7	1760.8	1615.0	807.5	519.3	304.7	268.8	309.9	423.7
82.5°	817.9	844.3	819.7	826.1	790.2	416.7	310.8	220.7	205.2	226.8	281.2
85°	450.5	458.7	456.6	470.0	450.5	166.2	147.6	135.4	143.7	154.0	180.5
87.5°	219.5	221.6	214.6	225.8	218.5	84.0	72.7	77.0	84.0	86.1	86.1
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°	1761.7	1761.7	1761.7	1761.7	1761.7	1761.7
2.5°	1664.3	1656.1	1657.0	1654.9	1650.9	1650.9
5°	1650.0	1641.8	1641.8	1639.7	1634.5	1635.4
7.5°	1664.3	1650.9	1645.8	1638.5	1631.5	1631.5
10°	1680.8	1657.0	1642.7	1630.6	1621.1	1621.1
12.5°	1692.9	1656.1	1632.4	1615.9	1606.8	1606.8
15°	1697.2	1648.8	1615.9	1596.5	1588.2	1587.3
17.5°	1683.8	1621.1	1581.2	1558.7	1548.4	1545.3
20°	1642.7	1570.9	1522.8	1496.9	1482.6	1477.4
22.5°	1581.2	1499.1	1442.7	1416.0	1397.4	1394.4
25°	1495.1	1406.8	1351.4	1325.6	1315.5	1312.2
27.5°	1394.4	1312.2	1265.0	1248.6	1239.4	1238.5
30°	1299.1	1229.1	1194.4	1181.9	1170.6	1168.8
32.5°	1209.6	1165.5	1152.4	1134.7	1108.2	1105.2
35°	1146.0	1142.0	1132.9	1093.6	1061.1	1051.6
37.5°	1107.0	1145.1	1097.9	1020.9	997.4	995.3
40°	1084.5	1113.4	1032.1	1005.7	1007.5	1005.7
42.5°	1033.4	1062.9	1034.3	1022.1	1030.0	1032.1
45°	981.9	1014.8	1049.8	1041.6	1061.1	1061.1
47.5°	953.3	1002.3	1048.6	1048.6	1077.5	1087.5
50°	920.4	992.3	1032.1	1046.4	1069.3	1061.1
52.5°	918.3	974.6	1008.7	1034.3	1044.6	1035.2
55°	921.4	960.3	985.0	1013.9	1026.1	1027.0
57.5°	925.6	952.1	968.5	981.9	1018.8	1018.8
60°	935.7	945.1	954.2	961.5	1009.6	1010.5
62.5°	952.1	937.8	935.7	943.0	1004.4	1000.5
65°	978.0	927.4	912.2	919.2	999.3	987.1
67.5°	1012.7	912.2	882.4	887.6	995.3	968.5
70°	1044.6	887.6	845.6	840.4	956.4	909.2
72.5°	1047.7	859.0	794.1	778.9	831.3	785.9
75°	996.2	839.2	737.8	692.5	686.4	680.3
77.5°	897.9	827.9	672.1	601.1	589.0	592.9
80°	751.2	785.9	592.9	508.9	575.6	568.6
82.5°	561.3	693.7	503.7	450.5	449.3	397.2
85°	312.0	540.9	410.3	337.6	235.0	227.7
87.5°	87.4	300.7	287.3	190.8	130.3	135.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)