

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: P191402

Luminaire Tested: **GLEON-AF-04-LED-E1-T2R-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P191402
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24657)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLEON-AF-04-LED-E1-T2R-800
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20674.9 lumens
Efficiency: N/A
Efficacy: 120.9 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 (A_{in}): 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

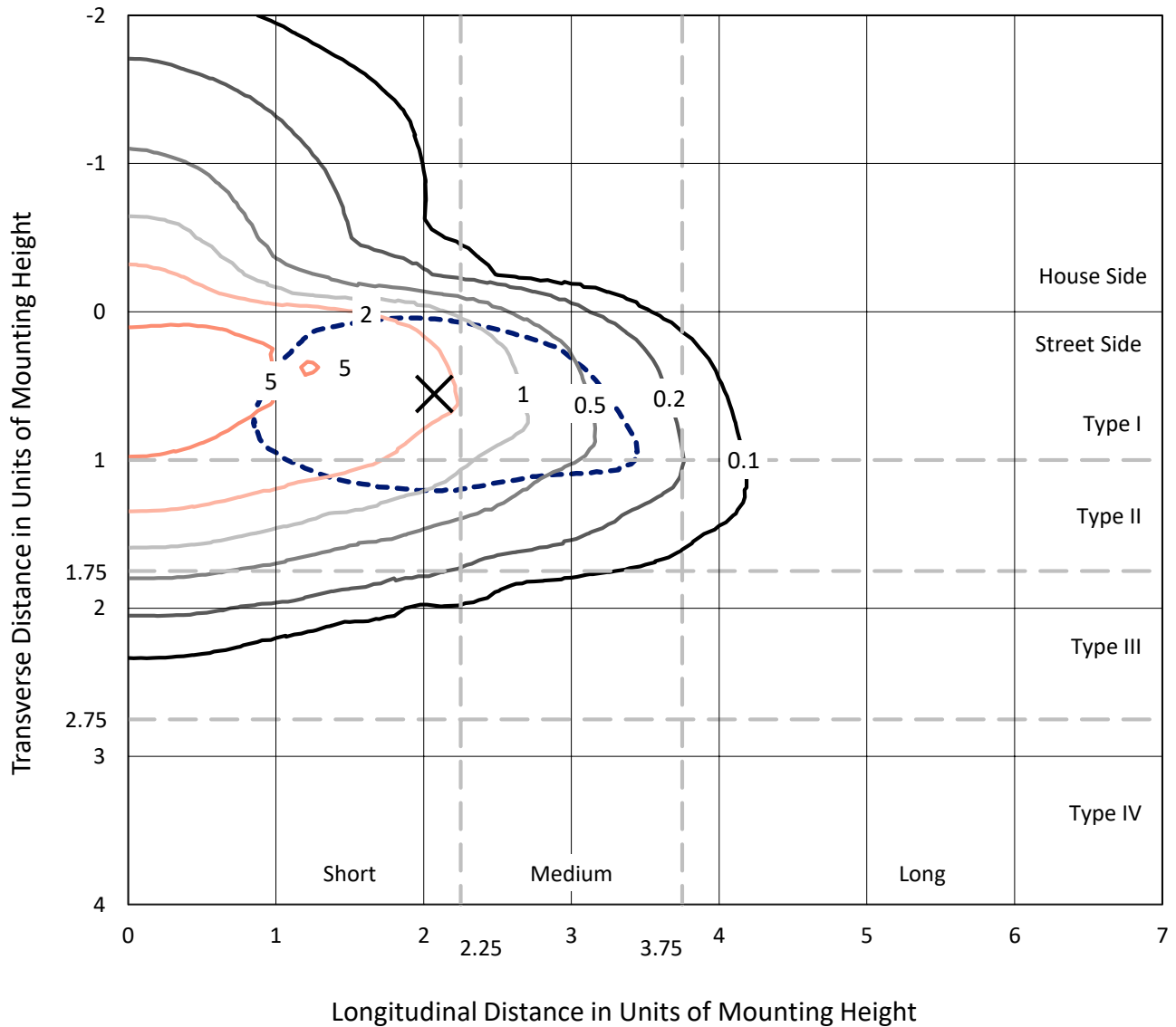


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Iso-Footcandle Lines of Horizontal Illumination

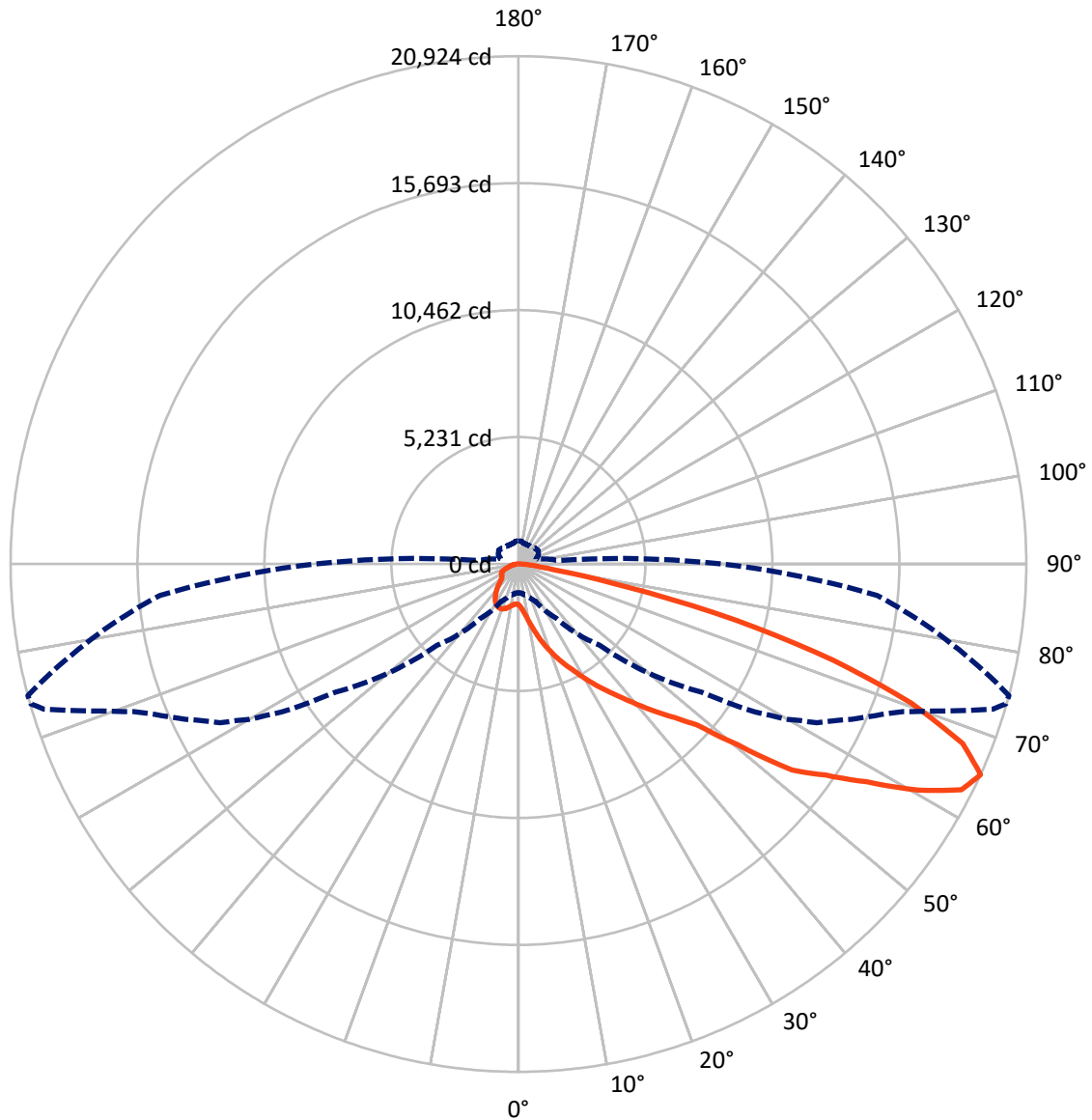
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 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	3187.6	0.0	3187.6
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	17487.3	0.0	17487.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	20674.9	0.0	20674.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.7	1.0
10°-20°	811.5	3.9
20°-30°	1664.9	8.1
30°-40°	2801.0	13.5
40°-50°	3870.2	18.7
50°-60°	4831.2	23.4
60°-70°	4347.6	21.0
70°-80°	1822.5	8.8
80°-90°	318.4	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°	20674.9	100.0
0°-180°	20674.9	100.0



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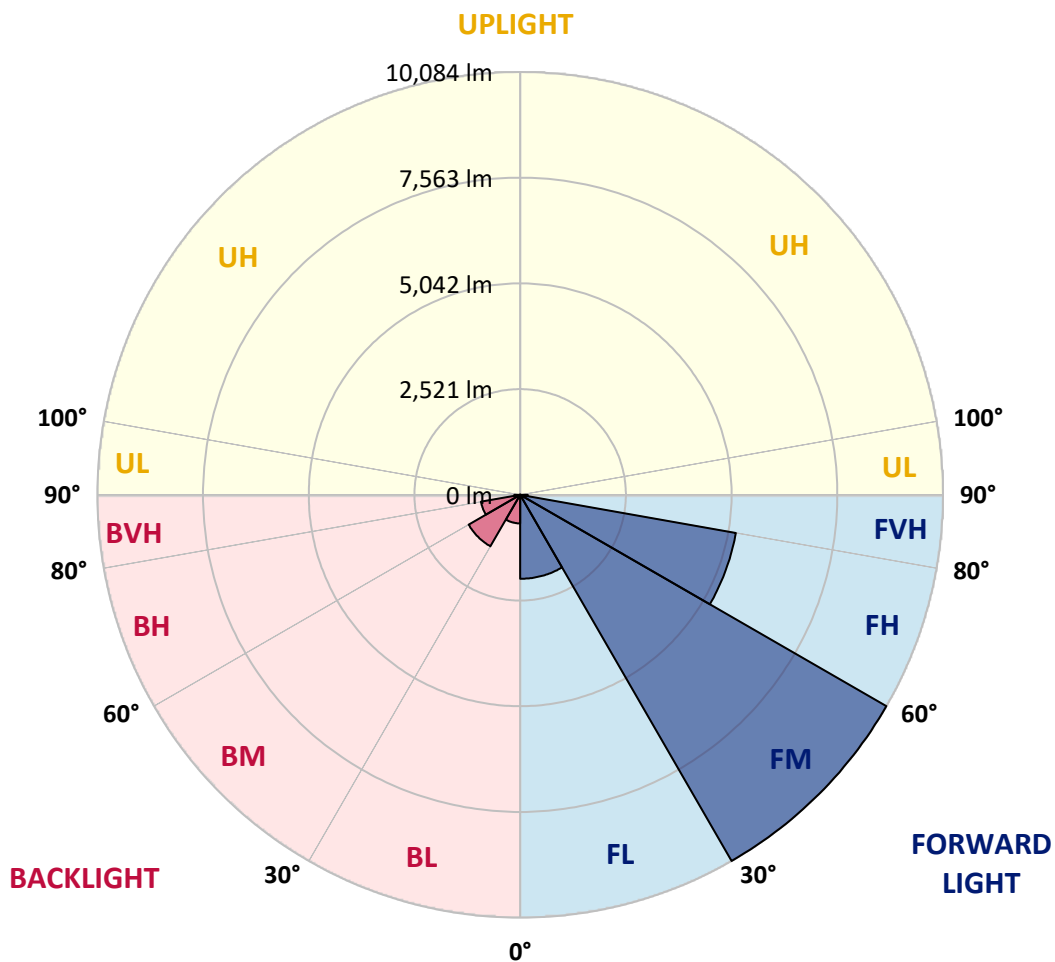
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2002.3	9.7			
FM	(30°-60°)	10083.6	48.8			
FH	(60°-80°)	5222.4	25.3			G3/7500
FVH	(80°-90°)	179.0	0.9			G2/225
BL	(0°-30°)	681.7	3.3	B2/1000		
BM	(30°-60°)	1418.8	6.9	B2/2500		
BH	(60°-80°)	947.6	4.6	B2/1000		G2/1000
BVH	(80°-90°)	139.4	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°	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2
2.5°	2133.3	2109.8	2115.7	2076.6	2028.6	1966.0	1896.4	1895.5	1896.4	1889.6	1864.2
5°	2958.3	2929.8	2919.1	2831.0	2701.9	2517.9	2318.3	2296.7	2287.9	2265.4	2213.6
7.5°	3560.1	3544.4	3527.7	3461.3	3343.8	3138.3	2870.2	2824.2	2780.2	2769.4	2710.7
10°	3948.6	3944.7	3909.4	3891.8	3818.5	3640.4	3379.0	3335.0	3287.0	3270.5	3208.8
12.5°	4255.9	4254.9	4238.3	4243.1	4179.6	4050.4	3825.3	3785.1	3749.9	3699.1	3655.0
15°	4468.2	4469.2	4493.6	4521.0	4511.3	4424.2	4212.8	4195.2	4164.8	4129.7	4077.8
17.5°	4642.4	4647.3	4672.7	4722.7	4776.5	4769.6	4602.3	4587.6	4561.1	4513.3	4485.8
20°	5035.8	5054.4	5005.5	5005.5	5011.3	5037.7	4957.5	4945.8	4908.5	4883.2	4861.6
22.5°	5700.3	5721.8	5611.2	5498.7	5388.1	5307.9	5227.6	5242.3	5216.8	5199.2	5186.5
25°	6563.4	6580.0	6400.9	6211.1	5986.0	5692.4	5493.8	5485.0	5471.3	5460.5	5454.6
27.5°	7375.6	7382.4	7213.1	6935.2	6673.9	6252.2	5763.8	5753.1	5736.5	5715.9	5698.2
30°	8070.4	8068.4	7894.2	7629.1	7349.2	6882.4	6173.9	6140.6	6091.7	6035.9	5992.9
32.5°	8672.2	8669.3	8478.4	8203.5	7909.9	7506.7	6735.6	6667.1	6590.8	6482.1	6416.6
35°	9145.8	9143.9	8963.8	8677.1	8340.4	8094.8	7379.5	7295.4	7198.5	7052.6	6951.9
37.5°	9324.9	9324.9	9224.2	9028.5	8730.9	8562.6	8094.8	7993.0	7889.3	7724.0	7610.4
40°	9220.2	9222.2	9243.7	9207.5	9062.6	8933.5	8762.2	8701.5	8612.5	8463.8	8345.3
42.5°	8868.9	8879.6	9022.5	9197.7	9270.1	9249.5	9354.3	9326.9	9264.3	9149.8	9055.8
45°	8423.7	8456.9	8613.5	8944.3	9327.9	9522.5	9850.4	9853.4	9841.6	9779.9	9707.6
47.5°	7812.1	7859.0	8065.5	8512.7	9192.8	9787.8	10354.4	10380.8	10405.3	10365.2	10331.9
50°	6999.8	7055.6	7364.8	7957.8	8917.9	10062.8	11306.6	11426.0	11537.5	11523.8	11546.4
52.5°	6129.8	6195.4	6574.1	7234.7	8445.2	10126.4	11915.2	12110.0	12304.7	12464.2	12633.5
55°	5345.0	5309.8	5688.5	6384.2	7668.1	9839.7	12462.3	12697.1	12914.3	13110.0	13311.7
57.5°	4281.3	4339.1	4718.8	5406.7	6639.7	9030.4	12839.1	13182.5	13494.7	13818.5	14104.3
60°	3129.5	3187.2	3599.3	4297.9	5523.1	7803.3	12551.3	13071.9	13572.0	14068.1	14455.6
62.5°	1889.6	1932.7	2295.7	2961.2	4258.7	6348.0	11269.3	11952.5	12688.3	13281.4	13875.3
65°	1176.3	1200.7	1334.7	1700.8	2735.2	4739.2	9207.5	9952.2	10744.9	11497.4	12114.9
67.5°	962.9	971.7	996.1	1074.5	1502.1	3090.3	6853.1	7512.6	8227.9	8956.0	9642.9
70°	866.0	860.2	860.2	865.1	962.9	1661.7	4486.8	4916.4	5512.4	6145.5	6773.8
72.5°	781.8	776.0	765.3	750.5	785.8	1013.8	2319.2	2643.2	3072.7	3635.5	4237.3
75°	702.7	694.8	682.1	663.5	687.9	765.3	1113.6	1249.6	1459.0	1758.6	2094.2
77.5°	620.4	610.6	598.9	585.2	616.5	594.9	652.7	701.6	781.8	877.8	1004.0
80°	527.4	518.6	514.7	507.9	545.0	453.1	460.9	491.2	538.2	590.0	648.8
82.5°	413.0	413.0	428.6	431.6	472.7	325.9	344.4	370.9	395.4	422.8	450.1
85°	272.0	274.0	326.8	347.4	372.9	219.2	258.3	267.2	286.7	302.4	314.1
87.5°	85.1	92.0	199.7	221.2	214.3	124.3	158.6	162.4	176.2	186.9	196.7
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°	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2
2.5°	1864.2	1852.5	1841.7	1840.7	1832.9	1822.1	1826.1	1809.4	1810.4	1801.6	1791.8
5°	2192.0	2184.2	2145.0	2134.3	2104.9	2086.3	2083.4	2044.3	2039.4	2016.8	1992.4
7.5°	2663.7	2638.3	2583.5	2557.1	2507.2	2469.9	2452.3	2400.5	2375.0	2316.3	2289.9
10°	3157.8	3125.6	3058.1	3020.9	2972.9	2913.3	2880.9	2805.6	2776.3	2722.4	2657.8
12.5°	3615.8	3583.6	3514.1	3485.7	3422.1	3358.4	3323.3	3238.2	3200.0	3113.9	3062.9
15°	4039.6	4007.3	3946.6	3917.3	3853.7	3801.8	3754.8	3670.7	3625.6	3545.4	3478.9
17.5°	4450.6	4416.4	4363.5	4337.1	4275.4	4222.6	4171.7	4092.4	4046.5	3966.2	3906.5
20°	4832.2	4806.8	4768.6	4733.4	4671.7	4623.8	4563.2	4494.6	4428.0	4369.3	4312.7
22.5°	5165.0	5155.2	5114.0	5098.4	5045.6	5004.5	4951.6	4884.1	4836.2	4761.8	4708.9
25°	5451.7	5448.7	5429.2	5424.3	5387.1	5348.0	5336.2	5280.5	5236.4	5170.8	5116.1
27.5°	5698.2	5701.2	5696.3	5710.0	5700.3	5682.6	5683.6	5665.0	5639.5	5584.8	5536.8
30°	5972.3	5956.6	5965.4	5985.0	5990.9	5992.9	6025.2	6035.9	6034.0	5997.8	5974.2
32.5°	6359.8	6322.7	6288.4	6285.4	6305.1	6312.8	6367.7	6396.0	6420.4	6429.2	6433.2
35°	6854.0	6779.6	6708.2	6670.0	6636.8	6645.6	6684.7	6730.7	6784.5	6821.8	6865.7
37.5°	7476.3	7385.4	7259.2	7169.1	7146.6	7097.6	7123.1	7159.3	7212.1	7269.9	7346.2
40°	8230.9	8092.9	7951.0	7831.6	7767.1	7676.9	7676.0	7669.2	7701.5	7755.3	7862.9
42.5°	8957.0	8834.6	8683.9	8558.7	8474.5	8354.1	8329.7	8266.1	8280.8	8327.7	8432.5
45°	9637.1	9536.3	9444.3	9299.4	9228.0	9097.9	9056.8	8981.4	8939.4	8960.8	9065.6
47.5°	10295.7	10231.0	10135.2	10041.3	9986.5	9870.0	9817.2	9763.3	9709.5	9707.6	9817.2
50°	11579.6	11545.3	11431.8	11334.0	11360.4	11217.5	11226.3	11081.5	11147.1	11154.9	11384.8
52.5°	12786.2	12905.5	12989.7	13092.4	13159.0	13171.7	13215.8	13281.4	13360.6	13517.2	13730.5
55°	13477.1	13626.7	13713.9	13792.1	13921.3	13948.8	14022.1	14109.3	14178.7	14354.9	14535.9
57.5°	14298.1	14576.0	14711.1	14835.3	15009.6	15076.0	15198.4	15293.3	15383.3	15591.8	15810.9
60°	14804.0	15142.6	15417.6	15614.3	15832.5	15989.0	16174.0	16322.8	16534.2	16783.7	17110.5
62.5°	14401.8	14899.0	15264.0	15601.5	15898.1	16197.5	16462.8	16740.6	17061.6	17439.4	17946.2
65°	12799.9	13305.8	13931.2	14281.4	14673.8	15135.8	15538.9	15989.0	16426.5	16976.5	17726.1
67.5°	10304.5	10892.6	11595.2	11948.5	12399.6	12915.4	13367.4	13917.5	14428.2	15094.7	16021.4
70°	7427.4	8187.8	8778.9	9147.8	9674.3	10205.7	10642.1	11282.1	11704.8	12387.9	13345.9
72.5°	4703.1	5303.0	6027.1	6492.0	6959.6	7497.9	7944.1	8496.0	8890.5	9512.8	10380.8
75°	2528.6	2971.0	3607.0	4048.4	4549.5	5009.4	5531.9	5901.8	6193.5	6685.7	7390.3
77.5°	1185.1	1454.1	1776.1	2115.7	2455.3	2809.5	3154.0	3453.4	3578.7	3860.5	4276.4
80°	719.2	806.4	900.3	1005.0	1146.9	1261.4	1413.1	1522.7	1530.5	1619.5	1746.8
82.5°	480.5	512.8	541.1	567.5	603.7	632.2	664.5	702.7	718.3	738.9	779.9
85°	327.9	343.5	349.3	366.0	362.1	371.8	384.6	397.3	404.2	403.1	421.8
87.5°	201.6	209.4	213.3	217.3	214.3	210.4	216.3	223.1	225.0	219.2	221.2
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°	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2
2.5°	1793.7	1784.9	1776.1	1770.2	1768.3	1716.4	1693.9	1679.3	1648.0	1622.5	1601.9
5°	1978.7	1960.1	1945.4	1927.9	1918.0	1786.9	1738.9	1705.7	1650.8	1618.6	1589.3
7.5°	2276.2	2224.3	2194.0	2159.8	2130.4	1893.6	1814.3	1762.4	1686.1	1643.1	1609.8
10°	2613.8	2559.9	2512.1	2459.2	2413.1	2035.5	1920.0	1839.8	1738.9	1683.2	1639.2
12.5°	2990.6	2937.7	2877.0	2809.5	2750.8	2215.5	2055.0	1940.5	1802.5	1728.2	1666.5
15°	3435.8	3342.8	3269.5	3191.2	3122.7	2430.8	2212.5	2054.1	1870.1	1769.3	1687.1
17.5°	3849.8	3751.9	3652.0	3583.6	3504.3	2672.6	2371.1	2169.5	1925.8	1795.7	1691.0
20°	4253.9	4147.2	4061.1	3969.2	3886.0	2923.0	2540.4	2271.3	1962.0	1796.7	1666.5
22.5°	4610.1	4543.5	4447.7	4347.8	4263.7	3173.5	2699.0	2357.4	1975.7	1774.2	1623.4
25°	5015.2	4944.7	4827.3	4743.2	4649.2	3428.9	2854.5	2424.0	1968.0	1732.1	1556.9
27.5°	5447.7	5369.5	5249.2	5161.1	5047.5	3694.2	2997.5	2471.9	1938.6	1663.6	1467.8
30°	5898.9	5827.4	5709.1	5620.0	5505.5	3975.0	3156.9	2504.2	1879.9	1568.7	1364.1
32.5°	6383.3	6323.6	6206.1	6113.3	5990.9	4279.3	3305.7	2514.0	1790.8	1456.2	1254.5
35°	6843.2	6802.1	6703.3	6616.2	6489.0	4567.1	3463.2	2509.1	1685.1	1332.8	1154.7
37.5°	7360.9	7336.4	7287.5	7176.9	7021.3	4957.5	3652.0	2488.5	1555.9	1210.5	1078.4
40°	7912.8	7914.8	7861.9	7786.6	7641.7	5431.2	3877.2	2448.4	1415.0	1102.8	1008.9
42.5°	8497.0	8527.4	8501.9	8448.1	8309.1	5908.7	4146.2	2399.5	1278.1	998.2	940.4
45°	9166.4	9203.6	9242.8	9163.5	9028.5	6538.9	4500.5	2335.9	1130.3	911.0	893.4
47.5°	9938.5	9997.2	10032.5	10033.4	9898.4	7319.8	5075.9	2297.8	999.1	852.3	870.9
50°	11567.8	11586.5	11669.6	11814.5	11710.7	9127.3	6080.9	2274.2	910.1	816.1	854.3
52.5°	13915.5	14120.0	14263.8	14254.0	14113.1	10275.1	6634.8	2152.9	857.2	802.4	846.5
55°	14871.6	15127.0	15393.2	15463.5	15354.0	11254.7	7158.3	2031.6	831.8	812.2	849.5
57.5°	16145.6	16576.2	16941.2	17094.8	16936.4	12508.2	7847.3	1968.0	824.0	838.6	868.0
60°	17634.0	18166.4	18645.9	18921.9	18921.9	13948.8	8561.6	1941.6	813.2	877.8	899.3
62.5°	18590.2	19372.0	20096.2	20500.3	20488.6	14951.8	8878.7	1851.4	788.7	905.2	942.3
65°	18594.1	19523.7	20446.5	20900.6	20924.0	14828.5	8355.2	1635.2	743.7	909.1	985.4
67.5°	17044.0	18035.3	19110.8	19618.7	19736.1	13650.3	7232.7	1344.6	670.3	869.9	1001.1
70°	14395.0	15362.8	16460.7	16959.8	17168.3	11636.4	5825.5	1036.4	576.4	783.9	968.8
72.5°	11340.8	12290.0	13054.3	13419.3	13581.7	8894.4	4242.2	782.9	472.7	660.5	881.7
75°	8029.2	8741.7	9147.8	9229.1	9254.4	5361.7	2577.6	582.3	389.4	513.7	744.7
77.5°	4531.8	4837.1	4803.9	4840.1	4538.6	2069.7	1122.5	416.9	321.0	390.5	577.4
80°	1769.3	1824.1	1713.5	1679.3	1540.3	770.2	495.2	290.6	256.4	295.5	404.2
82.5°	779.9	805.4	781.8	787.8	753.5	397.3	296.6	210.4	195.7	216.3	268.1
85°	429.6	437.4	435.5	448.2	429.6	158.6	141.0	129.2	137.0	146.8	172.3
87.5°	209.4	211.3	204.5	215.3	208.5	80.2	69.5	73.3	80.2	82.2	82.2
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):

	135°	145°	155°	165°	175°	180°
0°	1680.2	1680.2	1680.2	1680.2	1680.2	1680.2
2.5°	1587.3	1579.4	1580.5	1578.4	1574.5	1574.5
5°	1573.6	1565.7	1565.7	1563.8	1558.9	1559.9
7.5°	1587.3	1574.5	1569.6	1562.8	1555.9	1555.9
10°	1603.0	1580.5	1566.8	1555.0	1546.2	1546.2
12.5°	1614.6	1579.4	1556.9	1541.3	1532.5	1532.5
15°	1618.6	1572.6	1541.3	1522.7	1514.9	1513.9
17.5°	1605.8	1546.2	1508.0	1486.4	1476.7	1473.8
20°	1566.8	1498.2	1452.2	1427.7	1414.0	1409.1
22.5°	1508.0	1429.7	1375.9	1350.4	1332.8	1329.9
25°	1425.8	1341.6	1288.8	1264.4	1254.5	1251.6
27.5°	1329.9	1251.6	1206.6	1190.9	1182.1	1181.2
30°	1238.9	1172.3	1139.1	1127.3	1116.6	1114.6
32.5°	1153.8	1111.6	1099.0	1082.3	1056.9	1053.9
35°	1093.1	1089.1	1080.3	1043.2	1011.9	1003.0
37.5°	1055.9	1092.1	1047.1	973.6	951.1	949.2
40°	1034.4	1061.7	984.5	959.0	961.0	959.0
42.5°	985.4	1013.8	986.4	974.7	982.5	984.5
45°	936.5	967.8	1001.1	993.3	1011.9	1011.9
47.5°	909.1	956.0	1000.1	1000.1	1027.6	1037.3
50°	877.8	946.3	984.5	998.2	1019.7	1011.9
52.5°	875.9	929.7	962.0	986.4	996.1	987.4
55°	878.8	916.0	939.5	966.8	978.6	979.6
57.5°	882.7	908.2	923.8	936.5	971.7	971.7
60°	892.4	901.3	910.1	917.0	962.9	963.9
62.5°	908.2	894.5	892.4	899.3	958.0	954.1
65°	932.6	884.6	869.9	876.8	953.2	941.4
67.5°	965.9	869.9	841.6	846.5	949.2	923.8
70°	996.1	846.5	806.4	801.5	912.1	867.1
72.5°	999.1	819.1	757.4	742.8	792.7	749.6
75°	950.2	800.5	703.6	660.5	654.7	648.8
77.5°	856.2	789.7	641.0	573.5	561.7	565.6
80°	716.4	749.6	565.6	485.4	549.0	542.2
82.5°	535.3	661.5	480.5	429.6	428.6	378.7
85°	297.5	515.7	391.5	321.9	224.1	217.3
87.5°	83.2	286.7	274.0	182.0	124.3	129.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)