

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: P191397

Luminaire Tested: **GLEON-AF-09-LED-E1-T2R-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P191397
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-09-LED-E1-T2R-600
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37365.3 lumens
Efficiency: N/A
Efficacy: 128.8 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 290
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

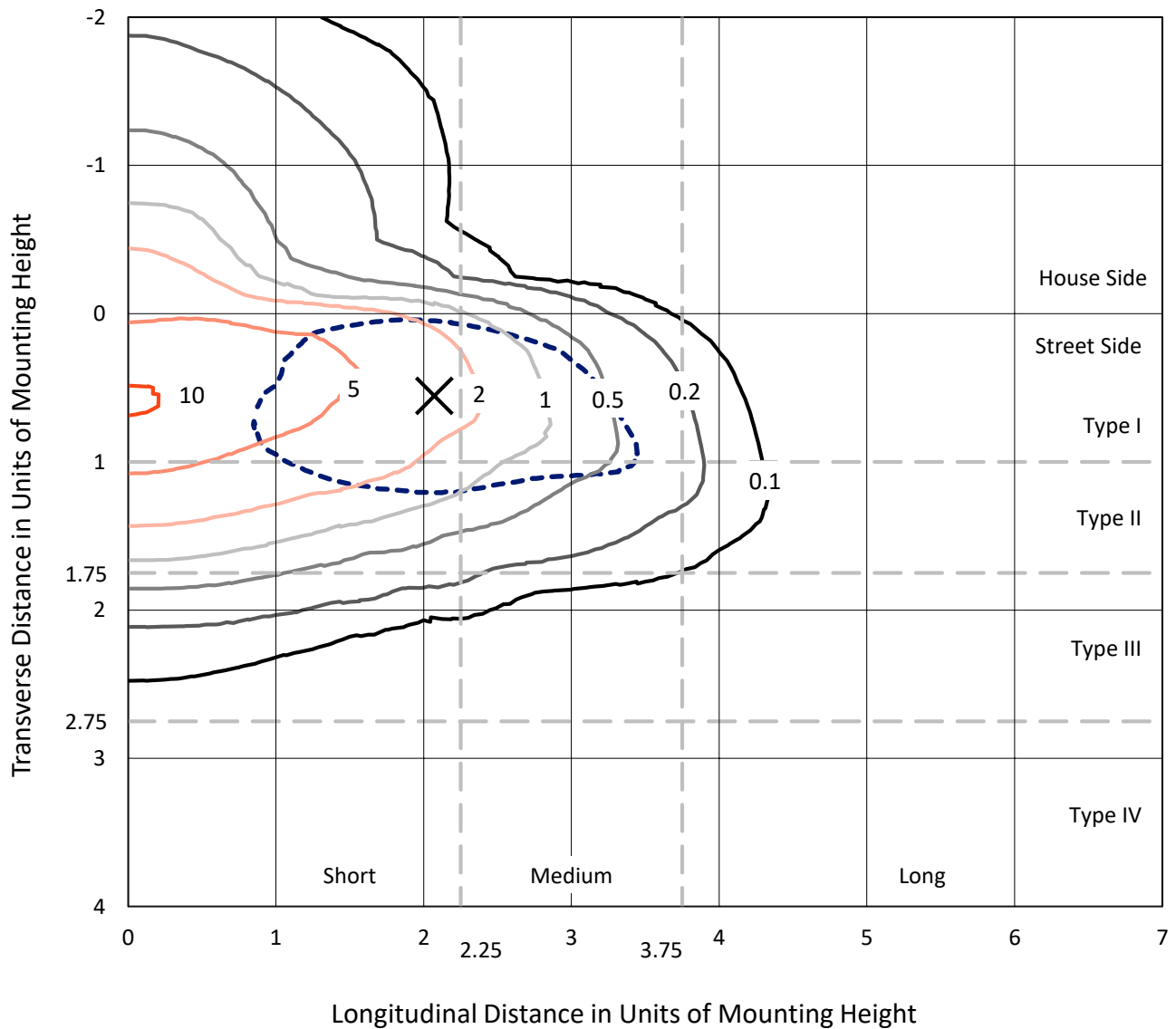


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Iso-Footcandle Lines of Horizontal Illumination

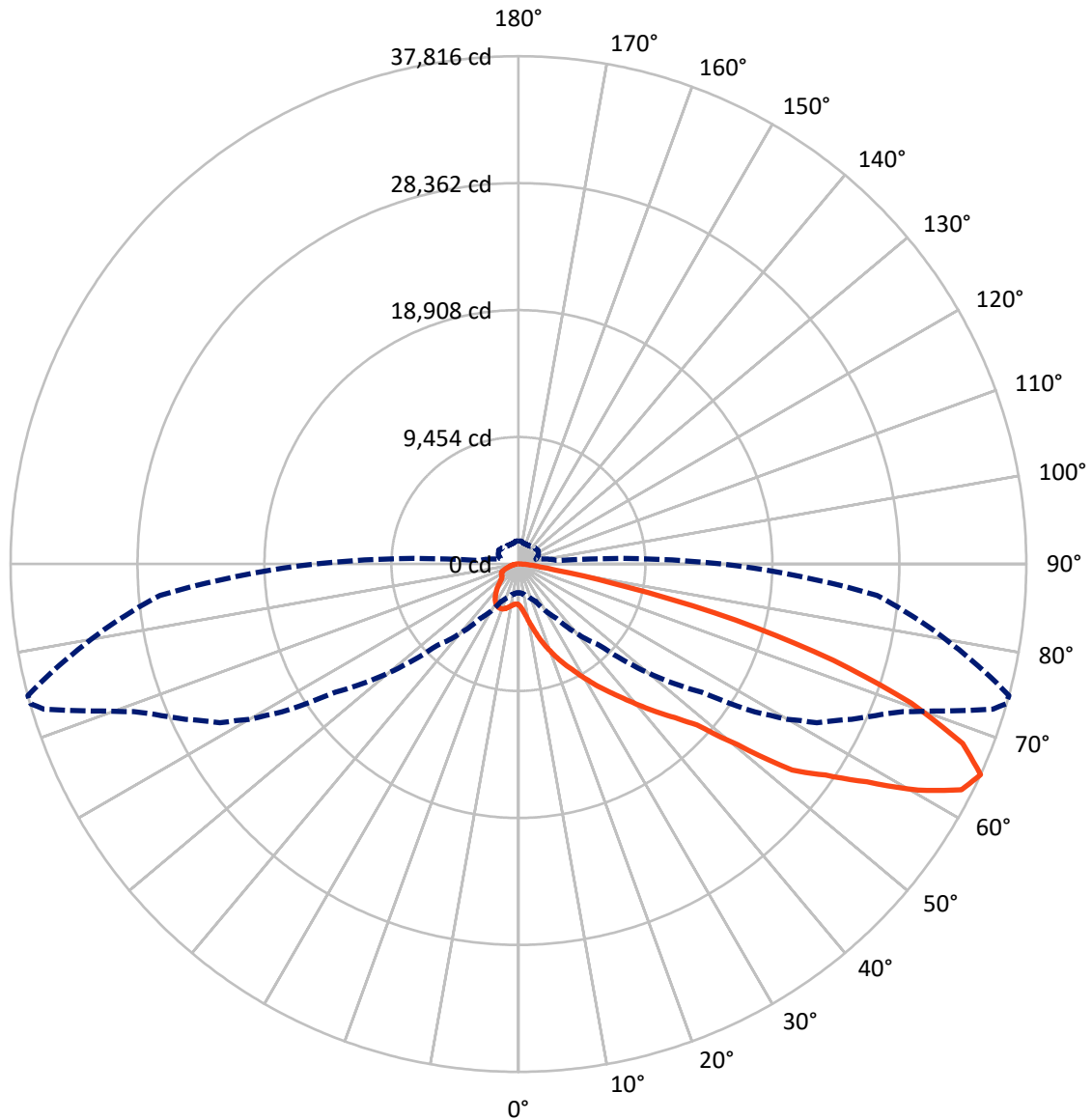
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.5 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	5760.9	0.0	5760.9
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	31604.5	0.0	31604.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	37365.3	0.0	37365.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	375.3	1.0
10°-20°	1466.5	3.9
20°-30°	3008.9	8.1
30°-40°	5062.2	13.5
40°-50°	6994.6	18.7
50°-60°	8731.4	23.4
60°-70°	7857.3	21.0
70°-80°	3293.7	8.8
80°-90°	575.4	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°	37365.3	100.0
0°-180°	37365.3	100.0



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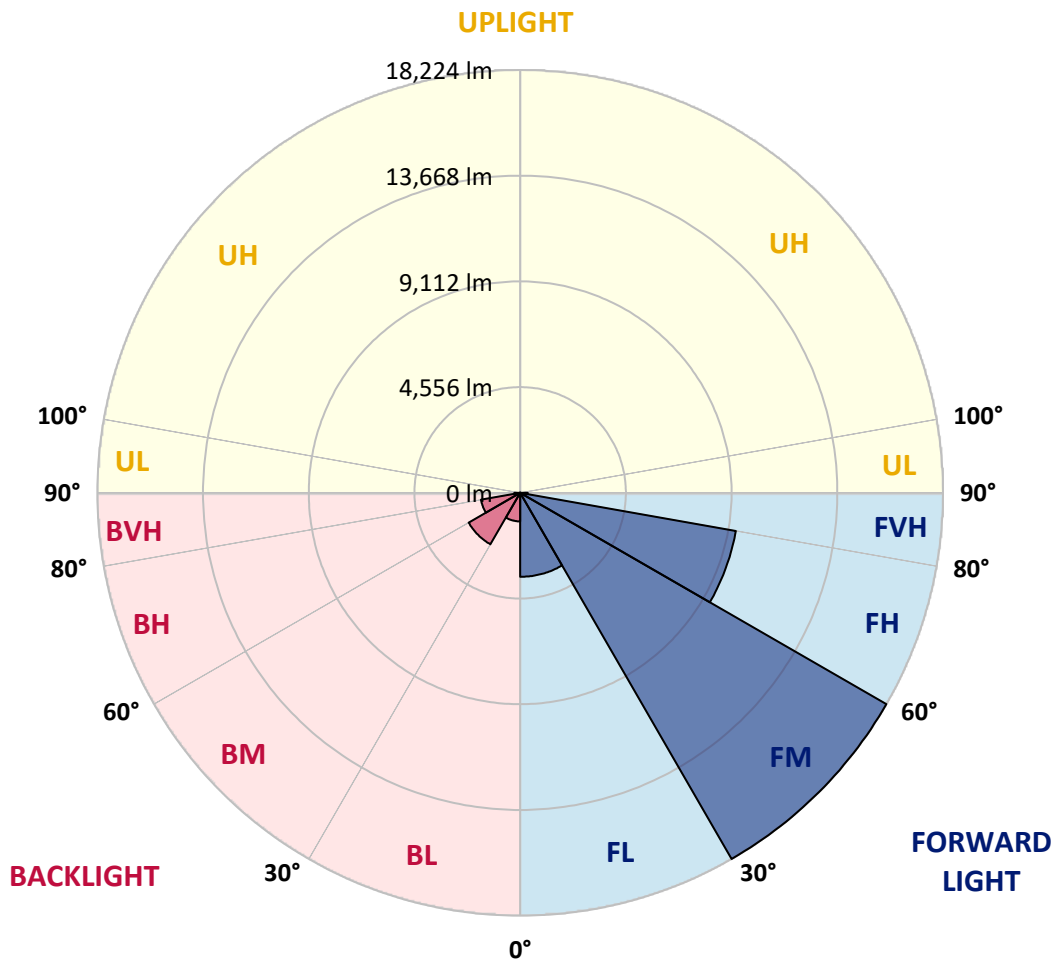
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3618.7	9.7			
FM	(30°-60°)	18224.0	48.8			
FH	(60°-80°)	9438.4	25.3			G4/12000
FVH	(80°-90°)	323.4	0.9			G3/500
BL	(0°-30°)	1232.0	3.3	B3/2500		
BM	(30°-60°)	2564.2	6.9	B3/5000		
BH	(60°-80°)	1712.6	4.6	B3/2500		G3/2500
BVH	(80°-90°)	252.0	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6
2.5°	3855.5	3813.0	3823.7	3752.9	3666.3	3553.1	3427.5	3425.8	3427.5	3415.1	3369.2
5°	5346.5	5295.1	5275.7	5116.5	4883.1	4550.6	4189.8	4150.8	4135.0	4094.3	4000.6
7.5°	6434.1	6405.8	6375.7	6255.4	6043.2	5671.9	5187.3	5104.1	5024.5	5005.1	4898.9
10°	7136.2	7129.1	7065.4	7033.6	6901.0	6579.1	6106.9	6027.3	5940.7	5910.6	5799.2
12.5°	7691.6	7689.7	7659.8	7668.6	7553.6	7320.1	6913.4	6840.9	6777.2	6685.2	6605.6
15°	8075.3	8077.1	8121.3	8170.8	8153.1	7995.7	7613.7	7581.9	7527.1	7463.3	7369.6
17.5°	8390.1	8398.9	8445.0	8535.2	8632.4	8620.0	8317.6	8291.1	8243.3	8156.7	8107.2
20°	9101.1	9134.7	9046.3	9046.3	9056.9	9104.7	8959.6	8938.3	8871.2	8825.2	8786.3
22.5°	10301.9	10340.9	10141.0	9937.7	9737.8	9592.7	9447.8	9474.3	9428.3	9396.4	9373.5
25°	11861.8	11891.9	11568.2	11225.1	10818.4	10287.8	9928.8	9912.9	9888.1	9868.6	9858.1
27.5°	13329.8	13342.1	13036.2	12533.9	12061.7	11299.4	10416.9	10397.5	10367.4	10330.3	10298.5
30°	14585.4	14582.0	14267.1	13787.8	13282.0	12438.4	11157.9	11097.8	11009.4	10908.5	10830.8
32.5°	15673.1	15667.8	15323.0	14825.9	14295.4	13566.8	12173.1	12049.3	11911.3	11715.0	11596.6
35°	16529.1	16525.6	16200.2	15681.9	15073.6	14629.6	13336.8	13184.7	13009.7	12746.2	12564.0
37.5°	16852.8	16852.8	16670.6	16316.9	15779.2	15475.1	14629.6	14445.7	14258.3	13959.4	13754.2
40°	16663.6	16667.0	16706.0	16640.5	16378.8	16145.3	15835.9	15726.2	15565.2	15296.4	15082.4
42.5°	16028.6	16048.1	16306.2	16622.8	16753.7	16716.6	16905.8	16856.3	16743.1	16536.2	16366.4
45°	15224.0	15284.0	15567.1	16164.8	16858.1	17210.0	17802.5	17807.8	17786.6	17675.2	17544.3
47.5°	14118.6	14203.5	14576.6	15384.9	16614.1	17689.3	18713.4	18761.0	18805.3	18732.8	18672.6
50°	12650.6	12751.5	13310.3	14382.1	16117.0	18186.3	20434.2	20649.9	20851.5	20826.8	20867.5
52.5°	11078.4	11196.9	11881.3	13075.1	15262.8	18301.2	21534.2	21886.1	22238.1	22526.4	22832.4
55°	9659.9	9596.3	10280.8	11538.2	13858.5	17783.1	22522.8	22947.2	23340.0	23693.6	24058.0
57.5°	7737.5	7841.8	8528.0	9771.4	11999.8	16320.5	23203.7	23824.5	24388.7	24974.1	25490.5
60°	5655.9	5760.2	6504.8	7767.6	9981.9	14102.6	22683.7	23624.6	24528.4	25425.0	26125.4
62.5°	3415.1	3493.0	4149.1	5351.7	7696.9	11472.8	20367.0	21601.4	22931.4	24003.1	25076.6
65°	2125.8	2170.1	2412.3	3073.8	4943.2	8565.3	16640.5	17986.4	19419.0	20779.0	21895.0
67.5°	1740.2	1756.2	1800.4	1941.9	2714.8	5585.2	12385.4	13577.3	14870.2	16186.0	17427.6
70°	1565.2	1554.6	1554.6	1563.4	1740.2	3003.1	8108.9	8885.4	9962.4	11106.7	12242.1
72.5°	1413.1	1402.5	1383.0	1356.5	1420.2	1832.2	4191.5	4777.0	5553.3	6570.3	7657.9
75°	1269.8	1255.7	1232.7	1199.1	1243.3	1383.0	2012.7	2258.5	2637.0	3178.1	3784.7
77.5°	1121.3	1103.6	1082.4	1057.6	1114.2	1075.3	1179.7	1268.0	1413.1	1586.4	1814.5
80°	953.3	937.3	930.3	917.9	985.1	818.9	833.0	887.8	972.7	1066.4	1172.6
82.5°	746.3	746.3	774.7	779.9	854.3	588.9	622.6	670.3	714.5	764.0	813.6
85°	491.6	495.2	590.8	627.9	673.8	396.2	466.9	482.8	518.2	546.5	567.7
87.5°	153.9	166.2	360.8	399.7	387.3	224.6	286.5	293.6	318.3	337.8	355.5
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°	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6
2.5°	3369.2	3347.9	3328.5	3326.7	3312.5	3293.1	3300.1	3270.1	3271.9	3256.0	3238.3
5°	3961.6	3947.5	3876.7	3857.2	3804.3	3770.6	3765.3	3694.6	3685.7	3645.1	3600.8
7.5°	4814.1	4768.1	4669.1	4621.3	4531.1	4463.9	4432.0	4338.3	4292.3	4186.2	4138.4
10°	5707.2	5648.8	5526.8	5459.6	5372.9	5265.0	5206.7	5070.5	5017.5	4920.2	4803.5
12.5°	6534.9	6476.5	6351.0	6299.6	6184.8	6069.8	6006.1	5852.2	5783.3	5627.7	5535.6
15°	7300.7	7242.3	7132.6	7079.6	6964.7	6871.0	6786.1	6633.9	6552.6	6407.6	6287.3
17.5°	8043.5	7981.6	7886.1	7838.4	7727.0	7631.4	7539.5	7396.2	7313.1	7168.0	7060.2
20°	8733.2	8687.2	8618.3	8554.6	8443.2	8356.5	8246.9	8123.0	8002.9	7896.7	7794.2
22.5°	9334.5	9316.8	9242.6	9214.3	9118.8	9044.5	8949.0	8826.9	8740.3	8605.9	8510.4
25°	9852.8	9847.4	9812.0	9803.2	9736.0	9665.2	9644.1	9543.2	9463.6	9345.2	9246.1
27.5°	10298.5	10303.8	10294.9	10319.6	10301.9	10270.1	10271.9	10238.3	10192.3	10093.3	10006.6
30°	10793.7	10765.3	10781.3	10816.6	10827.2	10830.8	10889.1	10908.5	10905.1	10839.6	10797.1
32.5°	11494.0	11426.8	11364.9	11359.6	11395.0	11409.1	11508.1	11559.4	11603.6	11619.6	11626.7
35°	12387.1	12252.7	12123.6	12054.7	11994.5	12010.4	12081.2	12164.3	12261.5	12328.7	12408.3
37.5°	13512.0	13347.5	13119.3	12956.6	12915.9	12827.5	12873.4	12938.9	13034.4	13138.8	13276.7
40°	14875.5	14626.2	14369.7	14154.0	14037.2	13874.5	13872.7	13860.4	13918.7	14016.0	14210.5
42.5°	16187.8	15966.7	15694.3	15467.9	15315.9	15098.3	15054.2	14939.2	14965.7	15050.6	15239.8
45°	17417.0	17234.8	17068.5	16806.8	16677.7	16442.5	16368.1	16232.0	16156.0	16194.8	16384.1
47.5°	18607.2	18490.4	18317.2	18147.4	18048.3	17837.9	17742.4	17645.1	17547.8	17544.3	17742.4
50°	20927.5	20865.6	20660.5	20483.7	20531.4	20273.2	20289.1	20027.3	20145.9	20160.0	20575.6
52.5°	23108.3	23324.0	23476.1	23661.8	23782.1	23805.1	23884.7	24003.1	24146.3	24429.4	24814.9
55°	24356.9	24627.4	24784.9	24926.3	25159.8	25209.3	25342.0	25499.3	25624.9	25943.3	26270.4
57.5°	25840.7	26342.9	26587.0	26811.6	27126.4	27246.7	27467.8	27639.3	27802.1	28178.7	28574.9
60°	26755.1	27367.0	27864.0	28219.4	28613.8	28896.8	29231.0	29499.9	29881.9	30332.8	30923.6
62.5°	26028.2	26926.6	27586.2	28196.4	28732.3	29273.5	29752.7	30255.1	30835.1	31517.8	32434.0
65°	23133.0	24047.3	25177.5	25810.6	26519.8	27354.6	28083.3	28896.8	29687.4	30681.3	32036.1
67.5°	18623.1	19686.1	20955.9	21594.3	22409.7	23341.7	24158.7	25152.7	26075.9	27280.3	28955.1
70°	13423.5	14797.7	15865.9	16532.6	17484.2	18444.5	19233.3	20390.0	21153.9	22388.4	24119.9
72.5°	8499.8	9583.9	10892.7	11732.7	12578.1	13550.8	14357.3	15354.8	16067.5	17192.3	18761.0
75°	4570.0	5369.4	6519.0	7316.7	8222.1	9053.3	9997.8	10666.3	11193.3	12082.9	13356.3
77.5°	2141.8	2628.1	3209.9	3823.7	4437.4	5077.6	5700.1	6241.3	6467.7	6977.0	7728.7
80°	1299.9	1457.3	1627.1	1816.4	2072.8	2279.6	2553.8	2751.9	2766.1	2927.0	3156.9
82.5°	868.4	926.7	978.0	1025.8	1091.2	1142.5	1200.8	1269.8	1298.1	1335.3	1409.5
85°	592.5	620.7	631.4	661.4	654.4	672.1	695.1	718.0	730.4	728.6	762.3
87.5°	364.4	378.5	385.6	392.6	387.3	380.2	390.9	403.2	406.7	396.2	399.7
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6
2.5°	3241.8	3225.9	3209.9	3199.4	3195.8	3102.1	3061.4	3034.9	2978.3	2932.3	2895.2
5°	3576.0	3542.5	3515.9	3484.1	3466.4	3229.5	3142.8	3082.7	2983.6	2925.2	2872.1
7.5°	4113.7	4020.0	3965.2	3903.3	3850.2	3422.2	3279.0	3185.2	3047.3	2969.4	2909.3
10°	4723.9	4626.6	4540.0	4444.4	4361.4	3678.6	3470.0	3324.9	3142.8	3041.9	2962.4
12.5°	5404.8	5309.3	5199.7	5077.6	4971.4	4004.0	3714.0	3507.1	3257.7	3123.3	3011.9
15°	6209.5	6041.4	5908.8	5767.3	5643.5	4393.2	3998.7	3712.3	3379.7	3197.5	3049.0
17.5°	6957.6	6780.7	6600.3	6476.5	6333.3	4830.0	4285.2	3921.0	3480.6	3245.3	3056.1
20°	7688.0	7495.3	7339.6	7173.3	7023.1	5282.7	4591.2	4104.9	3546.0	3247.2	3011.9
22.5°	8331.7	8211.5	8038.1	7857.8	7705.7	5735.5	4877.7	4260.5	3570.7	3206.4	2934.0
25°	9064.0	8936.6	8724.4	8572.3	8402.5	6197.1	5158.9	4380.8	3556.6	3130.3	2813.8
27.5°	9845.7	9704.2	9486.6	9327.5	9122.4	6676.4	5417.1	4467.4	3503.5	3006.6	2652.8
30°	10661.0	10531.9	10317.9	10157.0	9950.0	7184.0	5705.4	4525.7	3397.4	2835.0	2465.4
32.5°	11536.4	11428.5	11216.3	11048.3	10827.2	7734.0	5974.2	4543.4	3236.5	2631.6	2267.3
35°	12367.7	12293.4	12114.7	11957.4	11727.4	8254.0	6259.0	4534.6	3045.5	2408.8	2086.9
37.5°	13303.3	13259.0	13170.6	12970.7	12689.5	8959.6	6600.3	4497.5	2812.0	2187.7	1948.9
40°	14300.8	14304.2	14208.8	14072.5	13810.9	9815.6	7007.1	4425.0	2557.4	1993.2	1823.4
42.5°	15356.5	15411.4	15365.4	15268.2	15017.0	10678.7	7493.4	4336.6	2309.7	1804.0	1699.6
45°	16566.3	16633.5	16704.2	16561.0	16316.9	11817.6	8133.7	4221.6	2042.7	1646.5	1614.7
47.5°	17961.7	18067.8	18131.5	18133.2	17889.2	13229.0	9173.6	4152.7	1805.7	1540.5	1574.0
50°	20906.4	20939.9	21090.3	21352.1	21164.5	16495.5	10990.0	4110.2	1644.8	1475.0	1543.9
52.5°	25149.1	25518.8	25778.8	25761.1	25506.5	18570.0	11990.9	3890.9	1549.3	1450.2	1529.8
55°	26877.1	27338.7	27819.8	27947.0	27749.0	20340.5	12937.2	3671.6	1503.3	1467.9	1535.1
57.5°	29179.8	29957.9	30617.6	30895.3	30608.7	22606.0	14182.2	3556.6	1489.1	1515.7	1568.7
60°	31869.7	32831.9	33698.5	34197.2	34197.2	25209.3	15473.3	3508.8	1469.7	1586.4	1625.4
62.5°	33597.7	35010.8	36319.5	37049.9	37028.7	27022.1	16046.3	3346.2	1425.5	1635.9	1703.1
65°	33604.8	35284.8	36952.7	37773.3	37815.7	26799.3	15100.1	2955.3	1344.2	1643.0	1781.0
67.5°	30803.3	32594.9	34538.5	35456.4	35668.7	24669.9	13071.6	2430.0	1211.5	1572.3	1809.3
70°	26015.8	27764.9	29749.3	30651.2	31027.9	21030.1	10528.3	1872.9	1041.7	1416.6	1750.9
72.5°	20496.0	22211.5	23592.8	24252.5	24546.1	16074.6	7666.8	1414.8	854.3	1193.8	1593.5
75°	14511.2	15798.7	16532.6	16679.4	16725.5	9690.0	4658.4	1052.3	703.9	928.5	1345.9
77.5°	8190.3	8742.0	8682.0	8747.4	8202.6	3740.5	2028.5	753.4	580.1	705.6	1043.4
80°	3197.5	3296.7	3096.8	3034.9	2783.8	1391.8	894.9	525.3	463.4	534.1	730.4
82.5°	1409.5	1455.6	1413.1	1423.7	1361.9	718.0	535.9	380.2	353.7	390.9	484.6
85°	776.4	790.5	787.1	810.0	776.4	286.5	254.7	233.4	247.6	265.3	311.3
87.5°	378.5	382.0	369.6	389.1	376.8	145.1	125.6	132.7	145.1	148.5	148.5
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°	3036.6	3036.6	3036.6	3036.6	3036.6	3036.6
2.5°	2868.7	2854.4	2856.3	2852.7	2845.6	2845.6
5°	2843.9	2829.7	2829.7	2826.2	2817.3	2819.2
7.5°	2868.7	2845.6	2836.8	2824.4	2812.0	2812.0
10°	2896.9	2856.3	2831.5	2810.3	2794.4	2794.4
12.5°	2918.2	2854.4	2813.8	2785.5	2769.6	2769.6
15°	2925.2	2842.1	2785.5	2751.9	2737.7	2736.0
17.5°	2902.2	2794.4	2725.3	2686.5	2668.8	2663.5
20°	2831.5	2707.6	2624.6	2580.4	2555.6	2546.7
22.5°	2725.3	2583.9	2486.6	2440.7	2408.8	2403.5
25°	2576.8	2424.7	2329.3	2285.0	2267.3	2262.1
27.5°	2403.5	2262.1	2180.6	2152.4	2136.4	2134.7
30°	2239.0	2118.7	2058.6	2037.4	2018.0	2014.4
32.5°	2085.2	2009.1	1986.2	1956.1	1910.1	1904.7
35°	1975.5	1968.5	1952.5	1885.3	1828.7	1812.8
37.5°	1908.3	1973.7	1892.4	1759.8	1719.1	1715.5
40°	1869.3	1919.0	1779.2	1733.2	1736.8	1733.2
42.5°	1781.0	1832.2	1782.7	1761.5	1775.6	1779.2
45°	1692.6	1749.1	1809.3	1795.1	1828.7	1828.7
47.5°	1643.0	1727.9	1807.5	1807.5	1857.0	1874.7
50°	1586.4	1710.2	1779.2	1804.0	1842.8	1828.7
52.5°	1582.9	1680.2	1738.5	1782.7	1800.4	1784.5
55°	1588.2	1655.3	1697.8	1747.4	1768.6	1770.3
57.5°	1595.3	1641.2	1669.6	1692.6	1756.2	1756.2
60°	1613.0	1628.8	1644.8	1657.2	1740.2	1742.1
62.5°	1641.2	1616.5	1613.0	1625.4	1731.4	1724.4
65°	1685.4	1598.8	1572.3	1584.7	1722.5	1701.4
67.5°	1745.6	1572.3	1521.0	1529.8	1715.5	1669.6
70°	1800.4	1529.8	1457.3	1448.5	1648.3	1567.0
72.5°	1805.7	1480.3	1368.9	1342.3	1432.5	1354.7
75°	1717.3	1446.7	1271.6	1193.8	1183.1	1172.6
77.5°	1547.5	1427.2	1158.4	1036.4	1015.2	1022.2
80°	1294.6	1354.7	1022.2	877.2	992.2	979.8
82.5°	967.4	1195.5	868.4	776.4	774.7	684.5
85°	537.7	932.0	707.5	581.9	405.0	392.6
87.5°	150.4	518.2	495.2	329.0	224.6	233.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)