

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: P301579

Luminaire Tested: **GLNA-AF-04-LED-E1-T2R-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301579
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-7030
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24110.3 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 225
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

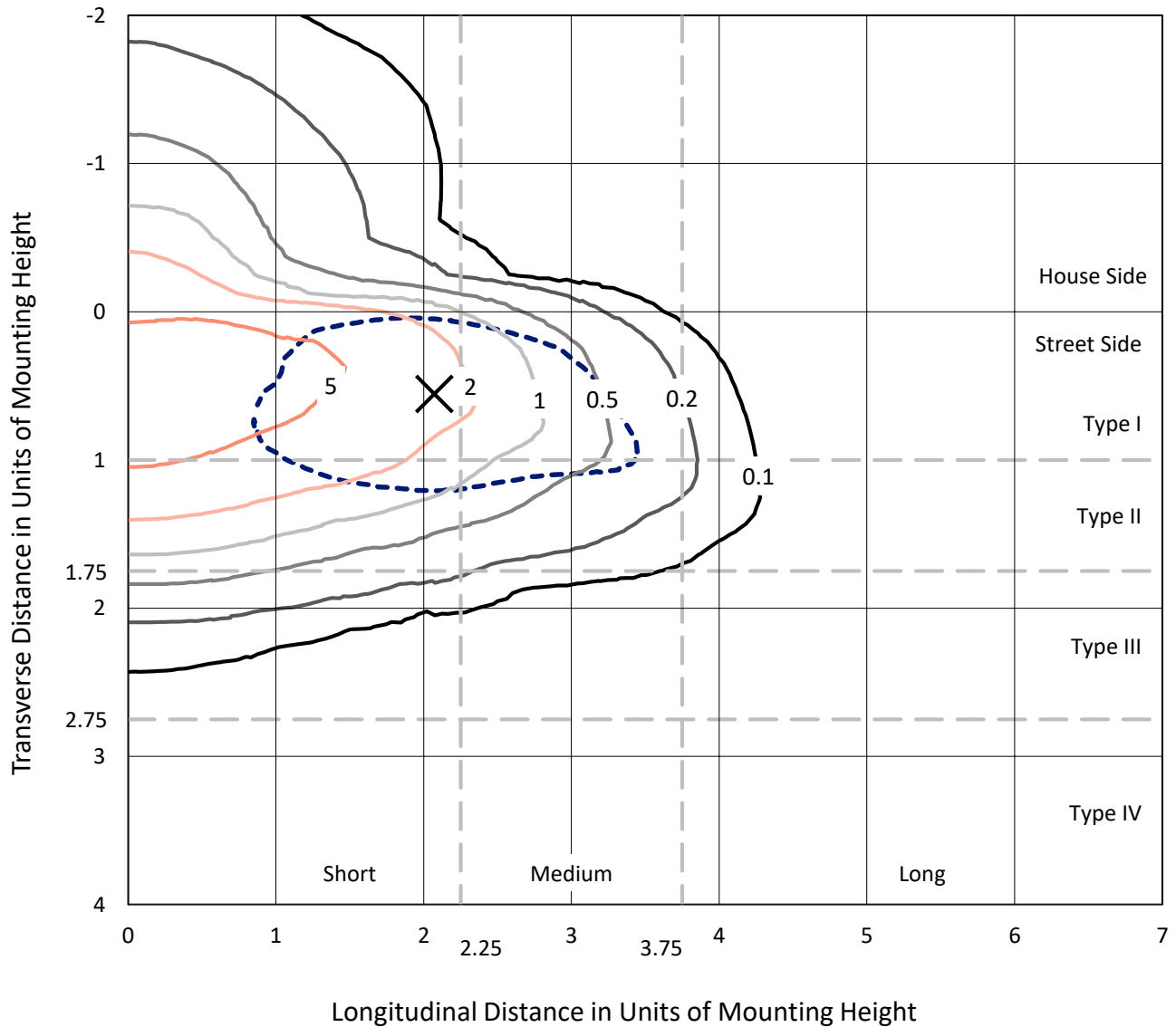


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

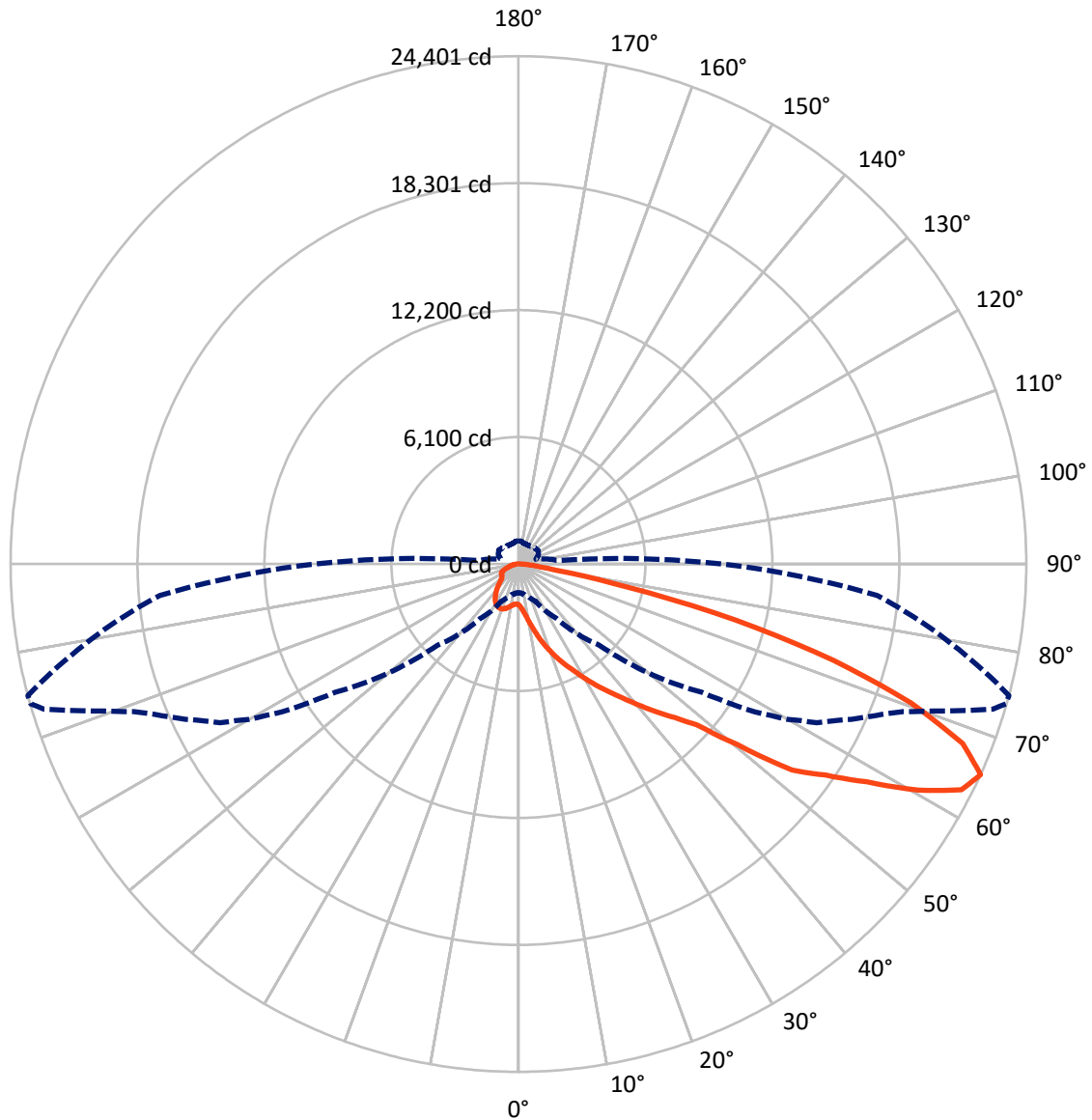


Based on 25 foot mounting height. Maximum calculated value = 9.7 fc
 Type II - Short - Full Cutoff

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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	3717.2	0.0	3717.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	20393.0	0.0	20393.0
	% Fixture	84.6	0.0	84.6
Total	Lumens	24110.3	0.0	24110.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.2	1.0
10°-20°	946.3	3.9
20°-30°	1941.5	8.1
30°-40°	3266.5	13.5
40°-50°	4513.3	18.7
50°-60°	5634.0	23.4
60°-70°	5070.0	21.0
70°-80°	2125.3	8.8
80°-90°	371.3	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°	24110.3	100.0
0°-180°	24110.3	100.0



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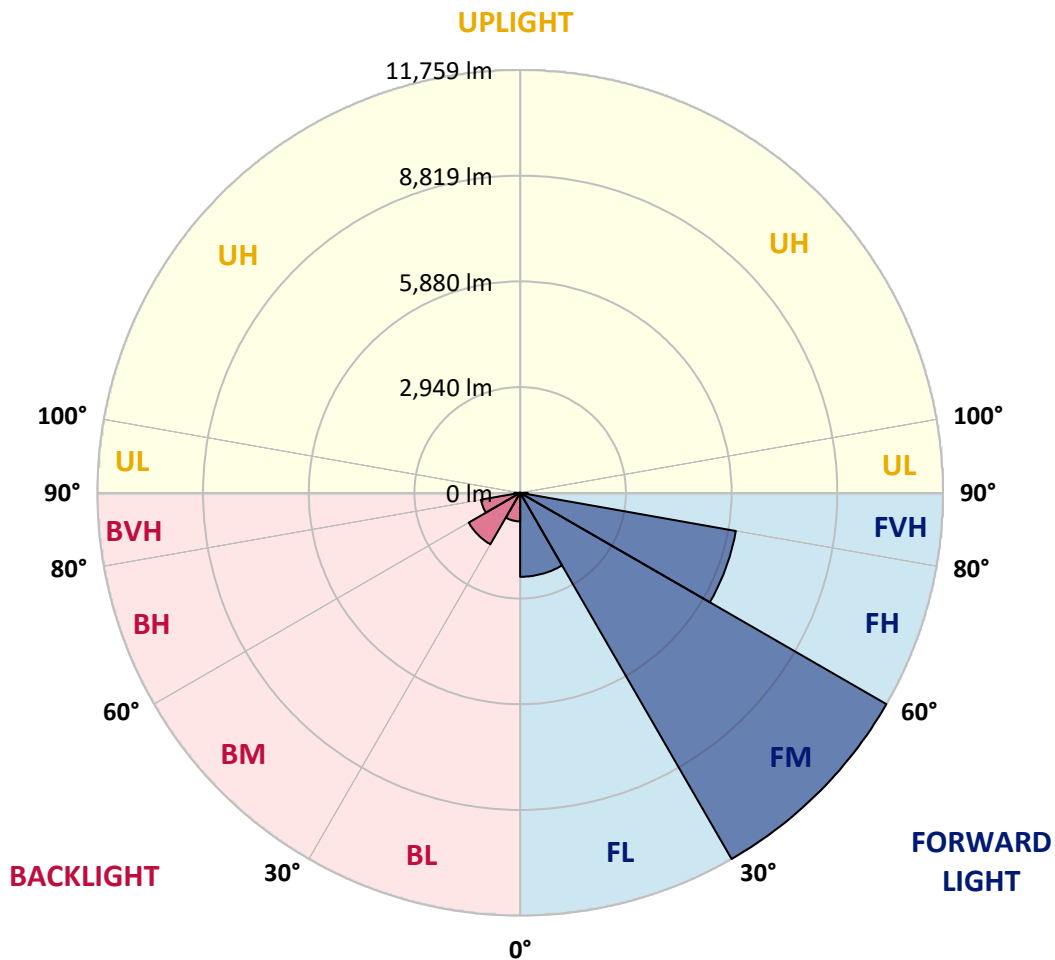
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2335.0	9.7			
FM	(30°-60°)	11759.2	48.8			
FH	(60°-80°)	6090.2	25.3			G3/7500
FVH	(80°-90°)	208.7	0.9			G2/225
BL	(0°-30°)	795.0	3.3	B2/1000		
BM	(30°-60°)	1654.6	6.9	B2/2500		
BH	(60°-80°)	1105.1	4.6	B3/2500		G3/2500
BVH	(80°-90°)	162.6	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4
2.5°	2487.9	2460.5	2467.2	2421.5	2365.7	2292.5	2211.6	2210.6	2211.6	2203.5	2174.1
5°	3449.6	3416.8	3404.3	3301.4	3150.7	2936.4	2703.5	2678.5	2668.0	2641.9	2581.3
7.5°	4151.8	4133.5	4113.8	4036.3	3899.6	3659.9	3347.1	3293.6	3242.1	3229.6	3161.2
10°	4604.7	4600.0	4559.0	4538.4	4453.1	4245.2	3940.5	3889.1	3833.2	3813.9	3741.8
12.5°	4962.9	4961.9	4942.6	4948.3	4873.8	4723.5	4460.8	4414.1	4373.2	4313.6	4262.5
15°	5210.7	5211.7	5240.5	5272.3	5260.8	5159.2	4912.8	4892.1	4856.9	4816.0	4755.4
17.5°	5413.8	5419.6	5449.0	5507.2	5570.2	5562.1	5367.1	5349.8	5319.0	5263.2	5231.3
20°	5872.5	5894.2	5837.3	5837.3	5844.1	5874.9	5781.1	5767.6	5724.2	5694.5	5669.4
22.5°	6647.4	6672.5	6543.5	6412.5	6283.5	6189.7	6096.3	6113.2	6083.8	6063.1	6048.2
25°	7653.9	7673.5	7464.6	7243.2	6980.5	6638.3	6406.7	6396.2	6380.3	6367.8	6361.0
27.5°	8601.1	8609.2	8411.8	8087.5	7782.9	7291.0	6721.6	6709.0	6689.7	6665.7	6645.0
30°	9411.5	9409.2	9206.0	8896.6	8570.3	8025.9	7199.9	7161.0	7103.8	7038.8	6988.7
32.5°	10113.3	10109.9	9887.2	9566.6	9224.3	8754.1	7855.0	7775.1	7686.0	7559.1	7482.9
35°	10665.5	10663.4	10453.2	10119.1	9726.4	9440.0	8605.8	8507.7	8394.6	8224.6	8107.2
37.5°	10874.3	10874.3	10756.9	10528.7	10181.7	9985.3	9440.0	9321.1	9200.3	9007.3	8875.0
40°	10752.1	10754.5	10779.5	10737.6	10568.6	10418.0	10218.3	10147.5	10043.6	9870.2	9732.1
42.5°	10342.5	10355.0	10521.9	10726.1	10810.3	10786.7	10908.5	10876.7	10803.6	10670.2	10560.5
45°	9823.2	9862.1	10044.6	10430.5	10877.7	11104.9	11487.1	11490.5	11476.9	11405.2	11320.5
47.5°	9110.2	9164.7	9405.8	9927.1	10720.3	11414.3	12074.8	12105.6	12134.3	12087.6	12048.7
50°	8163.0	8228.0	8588.6	9280.2	10399.7	11734.9	13185.2	13324.6	13454.6	13438.7	13464.8
52.5°	7148.4	7225.0	7666.4	8436.9	9848.6	11809.0	13895.1	14122.2	14349.4	14535.2	14732.6
55°	6233.1	6192.1	6633.9	7445.0	8942.3	11474.5	14533.2	14807.1	15060.3	15288.5	15523.7
57.5°	4992.7	5060.0	5502.8	6305.2	7742.9	10530.7	14972.3	15373.1	15737.0	16114.8	16447.9
60°	3649.4	3716.7	4197.1	5012.0	6440.9	9099.7	14636.8	15244.1	15827.1	16405.6	16857.6
62.5°	2203.5	2253.9	2677.1	3453.4	4966.6	7403.0	13141.8	13938.4	14796.6	15488.2	16180.8
65°	1371.7	1400.2	1556.6	1983.5	3189.7	5526.9	10737.6	11605.9	12530.1	13407.9	14128.0
67.5°	1122.9	1133.1	1161.8	1252.9	1751.6	3604.0	7991.7	8760.9	9595.0	10444.1	11245.4
70°	1009.8	1003.1	1003.1	1008.8	1122.9	1937.8	5232.4	5733.4	6428.4	7166.7	7899.3
72.5°	911.7	904.9	892.4	875.4	916.4	1182.2	2704.5	3082.3	3583.4	4239.4	4941.2
75°	819.2	810.1	795.6	773.9	802.3	892.4	1298.6	1457.4	1701.5	2050.8	2442.2
77.5°	723.4	711.9	698.4	682.5	719.0	694.0	761.0	818.2	911.7	1023.7	1171.0
80°	615.1	605.0	600.2	592.4	635.8	528.4	537.6	572.8	627.6	688.2	756.6
82.5°	481.7	481.7	499.7	503.4	551.1	380.2	401.8	432.6	461.1	492.9	525.1
85°	317.2	319.6	381.2	405.2	434.7	255.6	301.3	311.4	334.5	352.8	366.3
87.5°	99.2	107.3	232.9	258.0	249.8	144.9	184.8	189.6	205.5	218.0	229.5
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°	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4
2.5°	2174.1	2160.2	2147.6	2146.6	2137.5	2125.0	2129.4	2110.1	2111.1	2100.9	2089.4
5°	2556.3	2547.1	2501.4	2488.9	2454.7	2433.0	2429.6	2383.9	2378.2	2352.1	2323.3
7.5°	3106.4	3076.6	3012.6	2981.8	2923.6	2880.2	2859.9	2799.3	2769.5	2701.1	2670.3
10°	3682.6	3645.0	3566.1	3522.8	3466.9	3397.2	3359.6	3271.9	3237.4	3174.8	3099.6
12.5°	4216.8	4179.2	4097.9	4064.8	3990.6	3916.5	3875.5	3776.3	3731.6	3631.1	3571.9
15°	4710.7	4673.1	4602.3	4568.2	4494.0	4433.4	4378.6	4280.7	4228.3	4134.5	4057.0
17.5°	5190.0	5150.1	5088.5	5057.7	4985.9	4924.3	4865.0	4772.3	4718.8	4625.4	4555.6
20°	5635.2	5605.4	5561.1	5519.8	5448.0	5392.1	5321.4	5241.5	5164.0	5095.2	5029.2
22.5°	6023.2	6011.7	5963.9	5945.6	5884.0	5836.0	5774.3	5695.8	5639.6	5552.9	5491.3
25°	6357.6	6354.2	6331.2	6325.5	6282.1	6236.4	6222.9	6157.9	6106.4	6029.9	5966.3
27.5°	6645.0	6648.4	6643.0	6658.9	6647.4	6626.8	6628.1	6606.5	6576.7	6512.7	6456.8
30°	6964.6	6946.3	6956.8	6979.5	6986.3	6988.7	7026.2	7038.8	7036.7	6994.4	6967.0
32.5°	7416.6	7373.2	7333.3	7329.9	7352.6	7361.7	7425.7	7458.9	7487.3	7497.5	7502.2
35°	7992.7	7906.1	7822.8	7778.5	7739.5	7749.7	7795.4	7849.2	7911.8	7955.2	8006.6
37.5°	8718.6	8612.6	8465.3	8360.4	8334.0	8277.1	8306.6	8348.9	8410.5	8477.9	8566.9
40°	9598.4	9437.6	9272.1	9132.9	9057.8	8952.5	8951.5	8943.3	8981.3	9043.9	9169.5
42.5°	10445.4	10302.6	10126.9	9980.9	9882.8	9742.3	9713.8	9639.7	9656.6	9711.5	9833.7
45°	11238.3	11120.8	11013.5	10844.9	10761.3	10609.6	10561.5	10473.8	10424.8	10449.8	10572.0
47.5°	12006.4	11931.2	11819.2	11709.8	11645.8	11510.1	11448.5	11385.5	11322.9	11320.5	11448.5
50°	13503.7	13463.8	13331.4	13217.3	13248.1	13081.6	13091.7	12922.8	12999.3	13008.4	13276.6
52.5°	14910.7	15050.1	15148.3	15267.8	15345.7	15360.6	15411.7	15488.2	15580.6	15763.1	16011.9
55°	15716.4	15891.0	15992.6	16084.0	16234.7	16266.5	16352.1	16453.7	16534.6	16740.1	16951.3
57.5°	16674.1	16998.0	17155.5	17300.4	17503.5	17581.0	17723.9	17834.6	17939.5	18182.6	18438.2
60°	17263.8	17658.9	17979.4	18208.6	18463.2	18646.0	18861.7	19035.0	19281.4	19572.6	19953.8
62.5°	16794.9	17374.5	17800.4	18194.1	18539.7	18889.1	19198.2	19522.5	19896.6	20337.0	20928.4
65°	14926.9	15516.6	16245.8	16654.4	17112.1	17650.7	18121.0	18646.0	19155.8	19797.4	20671.5
67.5°	12016.9	12702.4	13522.0	13934.0	14460.1	15061.3	15588.7	16229.9	16825.7	17602.7	18683.6
70°	8661.7	9548.3	10237.6	10667.8	11281.9	11901.4	12410.6	13156.7	13649.6	14446.2	15563.7
72.5°	5484.6	6184.0	7028.6	7570.6	8116.0	8743.9	9264.3	9907.8	10367.5	11093.4	12105.6
75°	2949.0	3464.5	4206.3	4721.2	5305.5	5841.7	6451.1	6882.4	7222.6	7796.7	8618.4
77.5°	1381.9	1695.7	2071.1	2467.2	2863.3	3276.3	3678.2	4027.2	4173.4	4502.1	4986.9
80°	838.9	940.4	1049.8	1172.0	1337.5	1470.9	1648.0	1775.6	1784.7	1888.7	2036.9
82.5°	560.3	597.8	631.0	661.8	704.1	737.3	774.9	819.2	837.5	861.6	909.6
85°	382.2	400.5	407.3	426.9	422.1	433.7	448.6	463.5	471.2	470.2	491.9
87.5°	234.9	244.1	248.8	253.2	249.8	245.4	252.2	260.3	262.4	255.6	258.0
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4
2.5°	2091.8	2081.6	2071.1	2064.4	2062.0	2001.7	1975.3	1958.4	1921.8	1892.1	1868.0
5°	2307.4	2285.8	2268.8	2248.2	2236.7	2083.7	2027.8	1989.2	1925.2	1887.7	1853.1
7.5°	2654.4	2593.8	2558.6	2518.7	2484.5	2208.2	2115.8	2055.2	1966.2	1916.1	1877.2
10°	3048.1	2985.5	2929.3	2867.7	2814.2	2373.8	2239.1	2145.3	2027.8	1962.8	1911.4
12.5°	3487.6	3425.9	3355.2	3276.3	3207.9	2583.7	2396.5	2263.1	2101.9	2015.3	1943.5
15°	4006.9	3898.2	3812.5	3721.5	3641.6	2834.9	2580.3	2395.5	2180.8	2063.4	1967.5
17.5°	4489.3	4375.2	4259.1	4179.2	4086.8	3116.5	2765.1	2529.9	2245.8	2094.2	1972.0
20°	4960.9	4836.3	4736.1	4628.8	4531.6	3408.7	2962.5	2648.7	2288.1	2095.2	1943.5
22.5°	5376.2	5298.4	5186.7	5070.2	4972.0	3700.8	3147.3	2749.2	2304.1	2069.1	1893.1
25°	5848.5	5766.6	5629.5	5531.3	5421.9	3998.7	3328.8	2826.7	2294.9	2020.0	1815.5
27.5°	6352.9	6261.8	6121.3	6018.8	5886.4	4307.8	3495.3	2882.6	2260.7	1940.1	1711.6
30°	6879.0	6795.7	6657.6	6554.0	6420.3	4635.5	3681.5	2920.2	2192.3	1829.4	1590.8
32.5°	7444.0	7374.2	7237.5	7129.2	6986.3	4990.3	3854.9	2931.7	2088.4	1698.1	1463.1
35°	7980.2	7932.5	7817.0	7715.5	7567.2	5325.8	4038.7	2925.9	1965.2	1554.2	1346.7
37.5°	8584.2	8555.4	8498.5	8369.5	8188.1	5781.1	4259.1	2901.9	1814.5	1411.7	1257.6
40°	9227.7	9230.1	9168.5	9080.4	8911.5	6333.6	4521.4	2855.2	1650.0	1286.1	1176.4
42.5°	9908.8	9944.4	9914.6	9852.0	9689.8	6890.5	4835.3	2798.3	1490.6	1163.9	1096.8
45°	10689.5	10732.8	10778.5	10686.1	10528.7	7625.4	5248.3	2724.2	1317.9	1062.3	1042.0
47.5°	11590.0	11658.4	11699.3	11700.7	11543.3	8536.1	5919.2	2679.5	1165.2	993.9	1015.6
50°	13489.8	13511.8	13608.7	13777.6	13656.7	10643.8	7091.2	2652.1	1061.3	951.6	996.3
52.5°	16227.5	16466.2	16634.1	16622.6	16458.1	11982.3	7737.2	2510.6	999.7	935.7	987.2
55°	17342.7	17640.6	17951.0	18032.9	17905.3	13124.9	8347.9	2369.0	969.9	947.2	990.5
57.5°	18828.5	19330.5	19756.4	19935.5	19750.6	14586.7	9151.2	2294.9	960.8	978.0	1012.2
60°	20564.1	21185.0	21744.3	22065.9	22065.9	16266.5	9984.3	2264.1	948.2	1023.7	1048.8
62.5°	21679.3	22590.9	23435.6	23906.8	23892.9	17436.1	10354.0	2159.2	919.8	1055.5	1098.9
65°	21683.7	22768.0	23843.8	24373.6	24400.7	17292.6	9743.6	1907.0	867.3	1060.3	1149.3
67.5°	19876.2	21032.0	22286.3	22878.7	23015.5	15918.5	8434.5	1568.1	781.7	1014.6	1167.6
70°	16786.8	17915.5	19195.8	19778.1	20021.1	13569.7	6793.3	1208.6	672.3	914.0	1129.7
72.5°	13225.1	14332.1	15223.5	15649.0	15838.6	10372.3	4947.0	913.0	551.1	770.2	1028.1
75°	9363.5	10194.2	10667.8	10762.6	10792.1	6252.7	3005.8	679.1	454.3	599.2	868.3
77.5°	5284.8	5641.0	5602.0	5644.3	5293.0	2413.7	1309.1	486.1	374.4	455.3	673.3
80°	2063.4	2127.3	1998.4	1958.4	1796.3	898.1	577.5	338.9	298.9	344.6	471.2
82.5°	909.6	939.1	911.7	918.8	878.8	463.5	345.6	245.4	228.2	252.2	312.8
85°	501.0	510.2	507.8	522.7	501.0	184.8	164.2	150.6	159.8	171.3	200.7
87.5°	244.1	246.5	238.7	251.2	243.1	93.4	80.9	85.6	93.4	95.8	95.8
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°	1959.4	1959.4	1959.4	1959.4	1959.4	1959.4
2.5°	1851.1	1842.0	1843.0	1840.6	1836.2	1836.2
5°	1835.2	1826.0	1826.0	1823.7	1817.9	1818.9
7.5°	1851.1	1836.2	1830.4	1822.3	1814.5	1814.5
10°	1869.4	1843.0	1827.1	1813.5	1803.0	1803.0
12.5°	1882.9	1842.0	1815.5	1797.3	1787.1	1787.1
15°	1887.7	1833.8	1797.3	1775.6	1766.5	1765.4
17.5°	1872.8	1803.0	1758.7	1733.6	1722.1	1718.7
20°	1827.1	1747.2	1693.7	1664.9	1649.0	1643.2
22.5°	1758.7	1667.3	1604.6	1574.9	1554.2	1550.8
25°	1662.9	1564.7	1503.1	1474.3	1463.1	1459.4
27.5°	1550.8	1459.4	1406.9	1388.7	1378.5	1377.5
30°	1444.9	1367.0	1328.4	1314.5	1302.0	1300.0
32.5°	1345.3	1296.2	1281.7	1262.0	1232.6	1229.2
35°	1274.6	1270.2	1260.0	1216.3	1180.1	1169.6
37.5°	1231.2	1273.6	1221.1	1135.4	1109.4	1107.0
40°	1206.2	1238.4	1148.0	1118.5	1120.5	1118.5
42.5°	1149.3	1182.2	1150.3	1136.8	1145.6	1148.0
45°	1092.1	1128.7	1167.6	1158.5	1180.1	1180.1
47.5°	1060.3	1114.8	1166.2	1166.2	1198.4	1209.6
50°	1023.7	1103.6	1148.0	1163.9	1189.3	1180.1
52.5°	1021.4	1084.0	1121.9	1150.3	1161.8	1151.3
55°	1024.7	1068.1	1095.5	1127.7	1141.2	1142.2
57.5°	1029.5	1058.9	1077.2	1092.1	1133.1	1133.1
60°	1040.6	1051.1	1061.3	1069.4	1122.9	1123.9
62.5°	1058.9	1043.0	1040.6	1048.8	1117.2	1112.8
65°	1087.7	1031.5	1014.6	1022.4	1111.4	1097.9
67.5°	1126.3	1014.6	981.4	987.2	1107.0	1077.2
70°	1161.8	987.2	940.4	934.7	1063.7	1011.2
72.5°	1165.2	955.3	883.2	866.3	924.5	874.1
75°	1108.0	933.3	820.6	770.2	763.4	756.6
77.5°	998.7	920.8	747.5	668.6	655.1	659.5
80°	835.5	874.1	659.5	566.0	640.2	632.4
82.5°	624.3	771.5	560.3	501.0	499.7	441.8
85°	347.0	601.6	456.3	375.4	261.3	253.2
87.5°	97.2	334.5	319.6	212.3	144.9	150.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)