

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: P301727

Luminaire Tested: **GLNA-AF-08-LED-E1-T2R-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301727
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-08-LED-E1-T2R-7060-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 5700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32623.1 lumens
Efficiency: N/A
Efficacy: 126.9 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 257
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

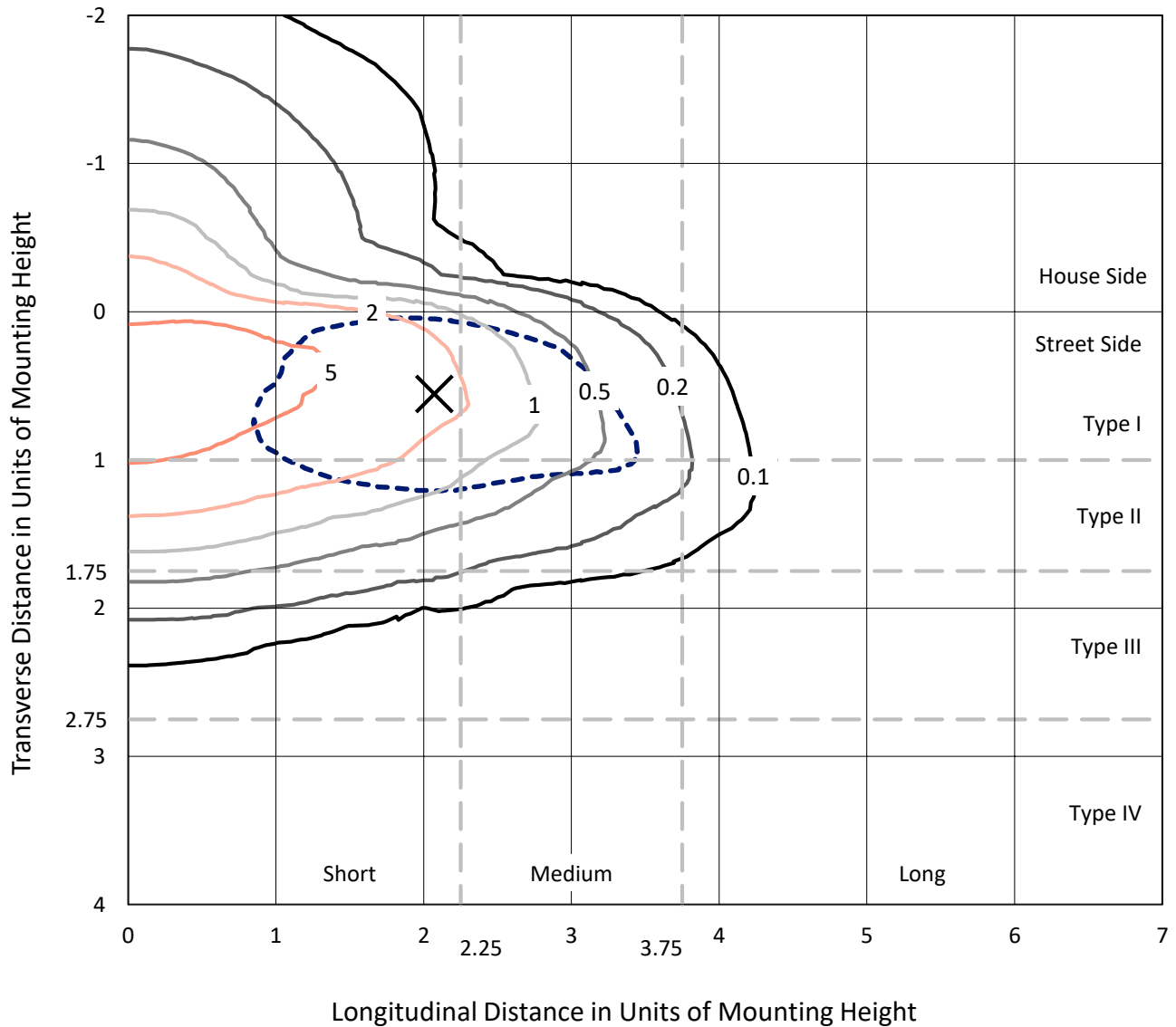


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Iso-Footcandle Lines of Horizontal Illumination

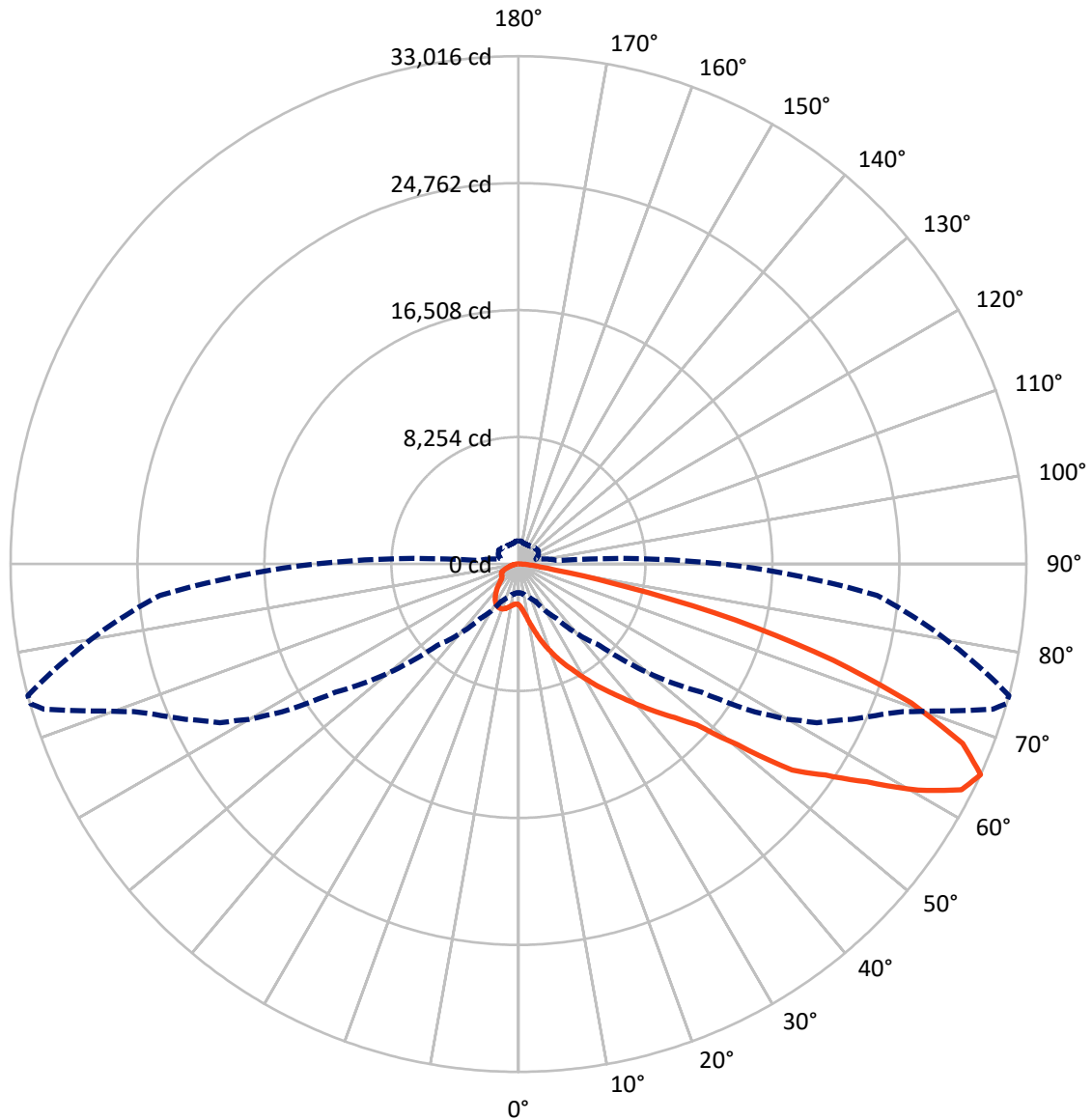
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.1 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	5029.7	0.0	5029.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	27593.4	0.0	27593.4
	% Fixture	84.6	0.0	84.6
Total	Lumens	32623.1	0.0	32623.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.7	1.0
10°-20°	1280.4	3.9
20°-30°	2627.0	8.1
30°-40°	4419.8	13.5
40°-50°	6106.9	18.7
50°-60°	7623.2	23.4
60°-70°	6860.1	21.0
70°-80°	2875.7	8.8
80°-90°	502.4	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°	32623.1	100.0
0°-180°	32623.1	100.0

Coefficient of Utilization



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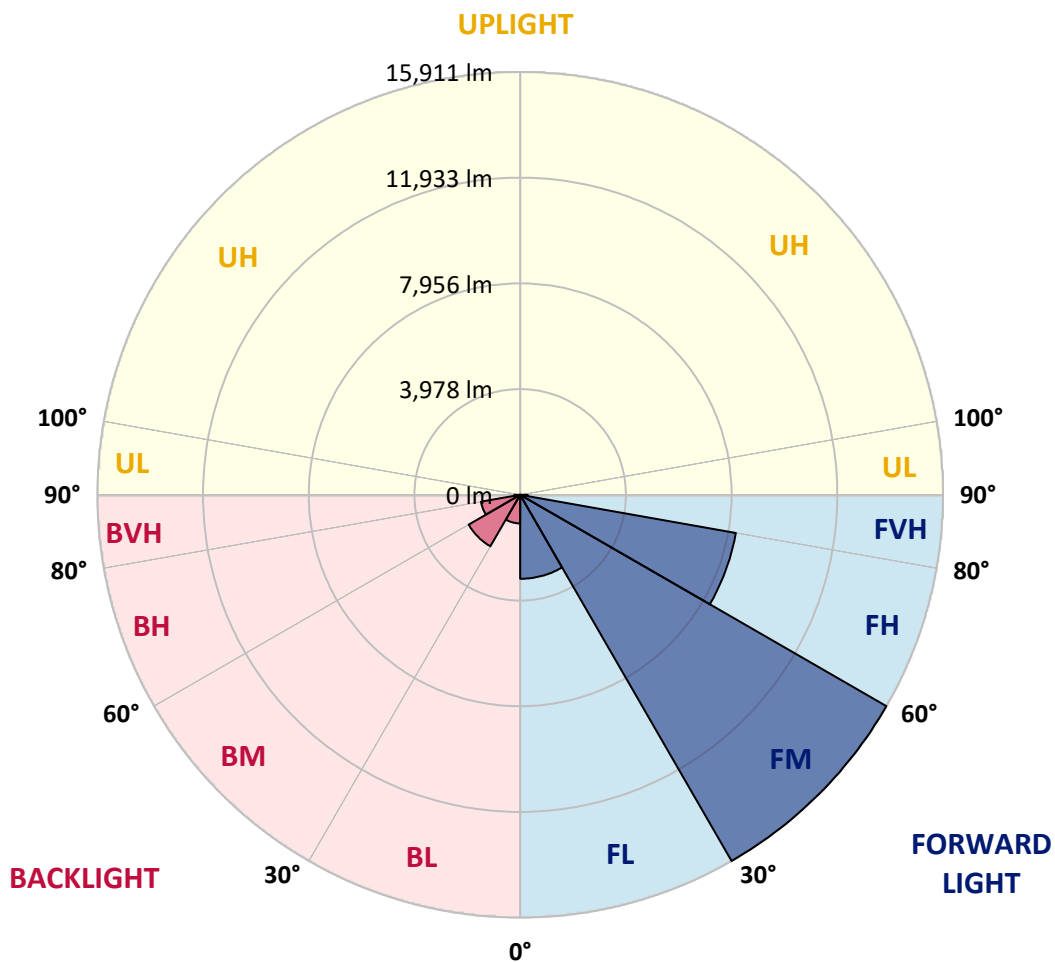
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3159.5	9.7			
FM	(30°-60°)	15911.1	48.8			
FH	(60°-80°)	8240.5	25.3			G4/12000
FVH	(80°-90°)	282.4	0.9			G3/500
BL	(0°-30°)	1075.6	3.3	B3/2500		
BM	(30°-60°)	2238.8	6.9	B2/2500		
BH	(60°-80°)	1495.3	4.6	B3/2500		G3/2500
BVH	(80°-90°)	220.0	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-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3
2.5°	3366.3	3329.2	3338.3	3276.5	3200.9	3102.0	2992.5	2991.1	2992.5	2981.5	2941.7
5°	4667.6	4623.2	4606.3	4467.0	4263.2	3973.2	3658.1	3624.2	3610.0	3574.7	3492.7
7.5°	5617.7	5592.9	5566.4	5461.5	5276.4	4952.1	4528.8	4456.5	4386.8	4369.9	4277.4
10°	6230.5	6224.1	6168.7	6140.8	6025.3	5744.1	5331.8	5262.2	5186.6	5160.5	5062.9
12.5°	6715.2	6713.8	6687.7	6695.5	6594.7	6391.3	6035.9	5972.7	5917.2	5836.6	5767.4
15°	7050.5	7051.8	7090.8	7133.8	7118.3	6980.8	6647.4	6619.4	6571.8	6516.4	6434.4
17.5°	7325.3	7333.1	7372.9	7451.7	7536.9	7525.9	7262.1	7238.7	7197.1	7121.5	7078.4
20°	7946.0	7975.3	7898.3	7898.3	7907.5	7949.2	7822.3	7804.0	7745.3	7705.0	7671.1
22.5°	8994.5	9028.4	8853.9	8676.6	8502.1	8375.2	8248.8	8271.7	8231.8	8203.9	8183.7
25°	10356.3	10382.9	10100.2	9800.7	9445.2	8982.1	8668.8	8654.6	8633.1	8616.1	8607.0
27.5°	11637.9	11648.9	11381.9	10943.1	10530.8	9865.3	9094.8	9077.8	9051.7	9019.2	8991.3
30°	12734.5	12731.3	12456.5	12037.8	11596.3	10859.7	9742.0	9689.4	9611.9	9524.0	9456.2
32.5°	13684.1	13679.5	13378.1	12944.3	12481.2	11845.0	10628.4	10520.3	10399.8	10228.0	10125.0
35°	14431.2	14428.5	14144.0	13691.9	13160.5	12773.0	11644.4	11511.5	11358.5	11128.6	10969.6
37.5°	14713.8	14713.8	14554.9	14246.1	13776.6	13511.0	12773.0	12612.2	12448.7	12187.6	12008.5
40°	14548.5	14551.7	14585.6	14528.8	14300.2	14096.4	13826.1	13730.4	13589.7	13355.2	13168.3
42.5°	13994.2	14011.2	14237.0	14513.2	14627.3	14595.2	14760.1	14717.0	14618.1	14437.6	14289.2
45°	13291.5	13344.2	13591.1	14113.3	14718.4	15025.8	15542.9	15547.5	15529.2	15432.1	15317.6
47.5°	12326.9	12400.6	12726.8	13432.2	14505.4	15444.4	16338.1	16379.8	16418.7	16355.5	16302.8
50°	11045.2	11133.2	11621.0	12556.8	14071.6	15878.2	17840.6	18029.3	18205.2	18183.6	18218.9
52.5°	9672.4	9775.9	10373.2	11415.8	13325.9	15978.5	18801.1	19108.5	19415.8	19667.3	19934.3
55°	8433.8	8378.4	8976.2	10073.7	12099.7	15526.0	19664.5	20035.1	20377.7	20686.5	21004.8
57.5°	6755.5	6846.6	7445.8	8531.4	10476.8	14248.9	20258.7	20801.0	21293.4	21804.6	22255.3
60°	4937.9	5029.0	5679.0	6781.6	8715.1	12312.7	19804.7	20626.5	21415.3	22198.1	22809.6
62.5°	2981.5	3049.8	3622.3	4672.7	6720.2	10016.9	17781.9	18859.7	20020.9	20956.7	21893.9
65°	1856.1	1894.5	2106.2	2683.8	4315.8	7478.3	14528.8	15703.7	16954.2	18142.0	19116.2
67.5°	1519.4	1533.1	1572.1	1695.3	2370.0	4876.5	10813.4	11854.2	12982.8	14131.6	15215.9
70°	1366.4	1357.2	1357.2	1365.0	1519.4	2621.9	7079.8	7757.7	8698.1	9697.1	10688.4
72.5°	1233.6	1224.4	1207.4	1184.5	1240.0	1599.5	3659.4	4170.6	4848.6	5736.3	6685.9
75°	1108.5	1096.1	1076.4	1047.1	1085.6	1207.4	1757.1	1972.0	2302.2	2774.9	3304.5
77.5°	978.9	963.3	945.0	923.5	972.9	939.0	1029.7	1107.1	1233.6	1385.2	1584.4
80°	832.3	818.6	812.1	801.6	860.2	715.0	727.4	775.0	849.2	931.2	1023.8
82.5°	651.8	651.8	676.1	681.1	745.7	514.4	543.7	585.4	623.9	666.9	710.5
85°	429.2	432.4	515.8	548.3	588.2	345.8	407.7	421.4	452.6	477.3	495.6
87.5°	134.2	145.2	315.1	349.0	338.0	196.1	250.1	256.5	278.0	295.0	310.6
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°	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3
2.5°	2941.7	2922.9	2905.9	2904.6	2892.2	2875.2	2881.2	2855.1	2856.5	2842.7	2827.2
5°	3458.8	3446.4	3384.6	3367.7	3321.4	3292.1	3287.5	3225.7	3217.9	3182.6	3143.7
7.5°	4203.2	4162.9	4076.3	4034.6	3955.8	3897.2	3869.7	3787.7	3747.4	3654.9	3613.2
10°	4982.8	4931.9	4825.2	4766.6	4691.0	4596.6	4545.8	4427.2	4380.4	4295.7	4194.0
12.5°	5705.6	5654.8	5544.8	5499.9	5399.6	5299.3	5243.9	5109.7	5049.2	4913.2	4833.0
15°	6373.9	6323.1	6227.3	6181.1	6080.8	5998.8	5924.6	5792.2	5721.2	5594.3	5489.4
17.5°	7022.5	6968.5	6885.1	6843.4	6746.3	6663.0	6582.8	6457.3	6384.9	6258.5	6164.1
20°	7624.9	7584.6	7524.6	7468.7	7371.6	7296.0	7200.3	7092.2	6987.3	6894.3	6805.0
22.5°	8149.8	8134.2	8069.7	8044.9	7961.6	7896.5	7813.1	7706.9	7630.8	7513.6	7430.2
25°	8602.4	8597.8	8566.7	8558.9	8500.2	8438.4	8420.1	8332.1	8262.5	8159.0	8072.9
27.5°	8991.3	8995.9	8988.5	9010.1	8994.5	8966.5	8968.4	8939.1	8898.7	8812.2	8736.6
30°	9423.7	9398.9	9413.1	9443.8	9453.0	9456.2	9507.1	9524.0	9521.3	9464.0	9426.9
32.5°	10035.2	9976.6	9922.5	9917.9	9948.6	9961.0	10047.6	10092.5	10130.9	10144.7	10151.1
35°	10814.8	10697.6	10584.9	10524.9	10472.2	10485.9	10547.8	10620.6	10705.3	10764.0	10833.6
37.5°	11796.9	11653.5	11454.3	11312.3	11276.5	11199.6	11239.4	11296.7	11380.1	11471.2	11591.7
40°	12987.4	12769.8	12545.8	12357.6	12255.9	12113.4	12112.0	12101.0	12152.4	12237.1	12407.0
42.5°	14133.5	13940.2	13702.4	13505.0	13372.2	13182.1	13143.6	13043.3	13066.2	13140.4	13305.7
45°	15206.2	15047.3	14902.1	14674.0	14560.8	14355.6	14290.6	14171.9	14105.5	14139.4	14304.8
47.5°	16245.6	16143.9	15992.3	15844.3	15757.7	15574.1	15490.7	15405.5	15320.8	15317.6	15490.7
50°	18271.6	18217.5	18038.4	17884.1	17925.7	17700.4	17714.1	17485.6	17589.1	17601.4	17964.2
52.5°	20175.3	20364.0	20496.8	20658.5	20763.9	20784.0	20853.2	20956.7	21081.8	21328.7	21665.4
55°	21265.5	21501.8	21639.2	21762.9	21966.8	22009.8	22125.7	22263.1	22372.6	22650.6	22936.5
57.5°	22561.3	22999.7	23212.7	23408.7	23683.6	23788.5	23981.8	24131.6	24273.6	24602.4	24948.3
60°	23359.3	23893.8	24327.6	24637.7	24982.2	25229.5	25521.3	25755.8	26089.3	26483.2	26999.0
62.5°	22724.9	23509.1	24085.3	24618.0	25085.7	25558.4	25976.6	26415.4	26921.6	27517.5	28317.8
65°	20197.3	20995.2	21981.9	22534.8	23154.1	23882.8	24519.1	25229.5	25919.4	26787.4	27970.1
67.5°	16259.8	17187.4	18296.3	18853.8	19565.6	20379.1	21092.8	21960.3	22766.5	23817.8	25280.4
70°	11719.9	12919.6	13852.2	14434.4	15265.3	16103.6	16792.5	17802.1	18469.0	19546.8	21058.9
72.5°	7421.0	8367.4	9510.3	10243.6	10981.5	11831.3	12535.3	13406.1	14028.1	15010.2	16379.8
75°	3990.2	4687.8	5691.4	6388.1	7178.7	7904.3	8728.8	9312.4	9772.7	10549.6	11661.3
77.5°	1869.8	2294.4	2802.4	3338.3	3874.3	4433.1	4976.8	5449.1	5647.0	6091.7	6747.7
80°	1135.1	1272.5	1420.4	1585.8	1809.8	1990.3	2229.8	2402.5	2414.9	2555.5	2756.2
82.5°	758.1	808.9	853.8	895.5	952.8	997.7	1048.5	1108.5	1133.2	1165.8	1230.8
85°	517.2	541.9	551.0	577.6	571.2	586.8	606.9	627.1	637.6	636.2	665.6
87.5°	317.9	330.3	336.7	342.6	338.0	332.1	341.3	352.2	355.0	345.8	349.0
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°	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3
2.5°	2830.4	2816.6	2802.4	2793.3	2790.0	2708.5	2672.8	2649.9	2600.4	2560.1	2527.6
5°	3122.1	3092.8	3069.9	3042.0	3026.4	2819.4	2743.8	2691.6	2605.0	2554.1	2507.4
7.5°	3591.7	3509.7	3462.0	3408.0	3361.7	2987.9	2862.9	2780.9	2660.4	2592.6	2539.9
10°	4124.4	4039.6	3963.6	3880.2	3807.9	3211.9	3029.6	2902.7	2743.8	2655.8	2586.2
12.5°	4718.9	4635.6	4539.8	4433.1	4340.6	3495.9	3242.6	3062.1	2844.1	2726.8	2629.7
15°	5421.6	5274.6	5158.7	5035.5	4927.4	3835.8	3491.3	3241.2	2950.8	2791.9	2662.2
17.5°	6074.3	5920.0	5762.9	5654.8	5529.7	4216.9	3741.4	3423.1	3038.8	2833.6	2668.2
20°	6712.4	6543.9	6408.3	6263.1	6131.6	4612.2	4008.5	3583.9	3096.0	2834.9	2629.7
22.5°	7274.5	7169.1	7017.9	6860.4	6727.5	5007.5	4258.6	3719.9	3117.6	2799.7	2561.5
25°	7913.5	7802.6	7617.1	7484.3	7336.3	5410.6	4504.1	3824.8	3105.2	2733.2	2456.6
27.5°	8596.0	8472.7	8282.7	8143.9	7964.8	5828.8	4729.5	3900.4	3058.9	2625.1	2316.0
30°	9307.8	9195.1	9008.2	8868.1	8687.1	6272.2	4981.4	3951.2	2966.4	2475.4	2152.4
32.5°	10072.3	9977.9	9792.9	9646.3	9453.0	6752.3	5215.9	3966.8	2825.8	2297.6	1979.7
35°	10797.9	10733.3	10577.1	10439.7	10239.0	7206.2	5464.7	3959.0	2659.0	2103.0	1822.2
37.5°	11615.0	11576.1	11499.2	11324.6	11079.1	7822.3	5762.9	3926.5	2455.2	1910.1	1701.7
40°	12485.8	12489.0	12405.7	12286.6	12058.0	8569.9	6117.9	3863.3	2232.6	1740.2	1591.8
42.5°	13407.4	13455.5	13415.2	13330.5	13111.1	9323.4	6542.5	3786.3	2016.8	1574.8	1484.1
45°	14463.7	14522.4	14584.2	14459.1	14246.1	10317.8	7101.3	3686.0	1783.2	1437.4	1409.9
47.5°	15682.2	15774.7	15830.1	15832.0	15619.0	11550.0	8009.2	3625.6	1576.6	1344.9	1374.2
50°	18252.8	18282.6	18413.6	18642.2	18478.6	14401.9	9595.0	3588.4	1436.0	1287.6	1348.1
52.5°	21957.1	22280.1	22507.3	22491.7	22269.1	16213.1	10469.0	3397.0	1352.7	1266.1	1335.7
55°	23466.0	23869.1	24289.1	24400.0	24227.3	17759.0	11295.3	3205.5	1312.3	1281.7	1340.3
57.5°	25476.4	26155.7	26732.0	26974.3	26724.2	19736.9	12382.3	3105.2	1300.0	1323.3	1369.6
60°	27824.9	28665.0	29421.7	29856.9	29856.9	22009.8	13509.6	3063.5	1283.0	1385.2	1419.1
62.5°	29333.8	30567.3	31710.2	32347.8	32329.0	23592.4	14009.8	2921.5	1244.6	1428.2	1486.9
65°	29339.7	30806.9	32262.6	32979.5	33016.1	23398.2	13183.9	2580.3	1173.6	1434.6	1555.1
67.5°	26894.1	28457.9	30155.1	30956.7	31141.7	21538.9	11412.6	2121.7	1057.7	1372.8	1579.9
70°	22713.9	24241.0	25973.4	26761.3	27090.2	18360.9	9191.9	1635.3	909.7	1236.8	1528.5
72.5°	17894.6	19392.5	20598.5	21174.3	21430.8	14034.5	6693.6	1235.4	745.7	1042.1	1391.1
75°	12669.5	13793.6	14434.4	14562.7	14602.5	8460.4	4067.1	918.9	614.7	810.8	1174.9
77.5°	7150.8	7632.7	7580.0	7637.2	7161.8	3266.0	1771.3	657.8	506.6	616.1	911.1
80°	2791.9	2878.5	2703.9	2649.9	2430.5	1215.2	781.5	458.5	404.5	466.3	637.6
82.5°	1230.8	1270.7	1233.6	1243.2	1189.1	627.1	467.7	332.1	308.7	341.3	423.2
85°	677.9	690.3	687.1	707.2	677.9	250.1	222.2	203.8	216.2	231.8	271.6
87.5°	330.3	333.5	322.9	339.9	328.9	126.4	109.5	115.9	126.4	129.6	129.6
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°	2651.3	2651.3	2651.3	2651.3	2651.3	2651.3
2.5°	2504.7	2492.3	2493.7	2490.5	2484.5	2484.5
5°	2483.1	2470.8	2470.8	2467.6	2459.8	2461.2
7.5°	2504.7	2484.5	2476.7	2465.7	2455.2	2455.2
10°	2529.4	2493.7	2472.2	2453.8	2439.6	2439.6
12.5°	2547.7	2492.3	2456.6	2431.8	2418.1	2418.1
15°	2554.1	2481.3	2431.8	2402.5	2390.2	2388.8
17.5°	2534.0	2439.6	2379.6	2345.7	2330.2	2325.6
20°	2472.2	2364.1	2291.7	2252.7	2231.2	2223.4
22.5°	2379.6	2255.9	2171.2	2130.9	2103.0	2098.4
25°	2250.0	2117.2	2033.8	1994.9	1979.7	1974.7
27.5°	2098.4	1974.7	1903.7	1879.0	1865.2	1863.8
30°	1955.0	1849.6	1797.4	1778.6	1761.7	1759.0
32.5°	1820.3	1753.9	1734.2	1707.7	1667.8	1663.2
35°	1724.6	1718.6	1704.9	1645.8	1596.8	1582.6
37.5°	1666.0	1723.2	1652.2	1536.3	1501.1	1497.9
40°	1632.1	1675.6	1553.3	1513.4	1516.2	1513.4
42.5°	1555.1	1599.5	1556.5	1538.2	1550.1	1553.3
45°	1477.7	1527.2	1579.9	1567.5	1596.8	1596.8
47.5°	1434.6	1508.4	1578.0	1578.0	1621.5	1636.7
50°	1385.2	1493.3	1553.3	1574.8	1609.2	1596.8
52.5°	1382.0	1466.7	1518.0	1556.5	1572.1	1557.9
55°	1386.5	1445.2	1482.3	1525.8	1544.1	1545.5
57.5°	1393.0	1432.8	1457.5	1477.7	1533.1	1533.1
60°	1408.1	1422.3	1436.0	1447.0	1519.4	1520.8
62.5°	1432.8	1411.3	1408.1	1419.1	1511.6	1505.6
65°	1471.7	1395.7	1372.8	1383.3	1503.8	1485.5
67.5°	1524.0	1372.8	1327.9	1335.7	1497.9	1457.5
70°	1572.1	1335.7	1272.5	1264.7	1439.2	1368.2
72.5°	1576.6	1292.6	1195.1	1172.2	1251.0	1182.7
75°	1499.2	1262.9	1110.3	1042.1	1032.9	1023.8
77.5°	1351.3	1245.9	1011.4	904.7	886.3	892.3
80°	1130.5	1182.7	892.3	765.9	866.2	855.7
82.5°	844.7	1043.9	758.1	677.9	676.1	597.8
85°	469.5	814.0	617.5	508.0	353.6	342.6
87.5°	131.5	452.6	432.4	287.2	196.1	203.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)