

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: P301619

Luminaire Tested: **GLNA-AF-10-LED-E1-T2R-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301619
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-10-LED-E1-T2R-7060
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 5700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 61161.1 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B4 - U0 - G5

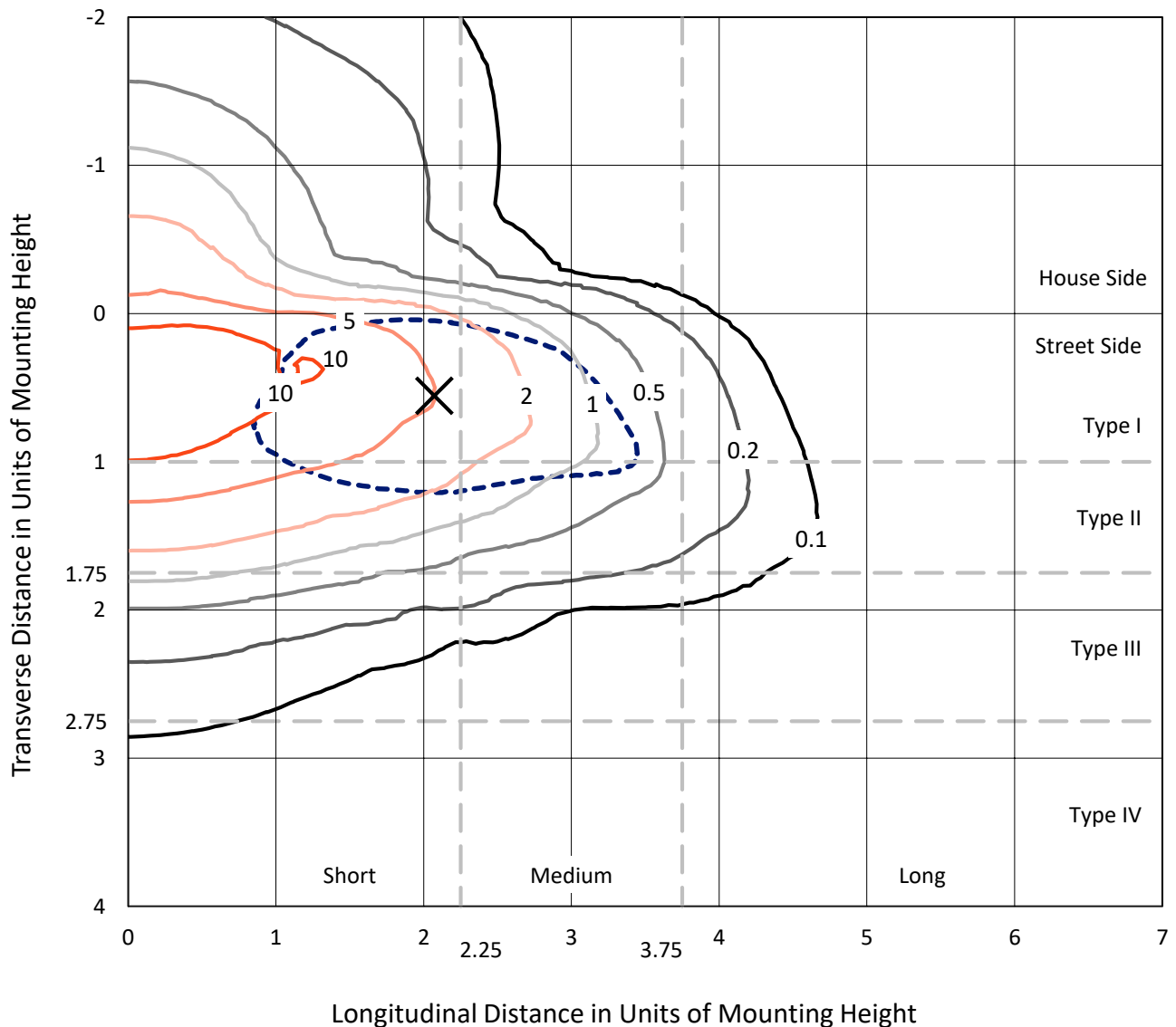
Input Watts (W): 558
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

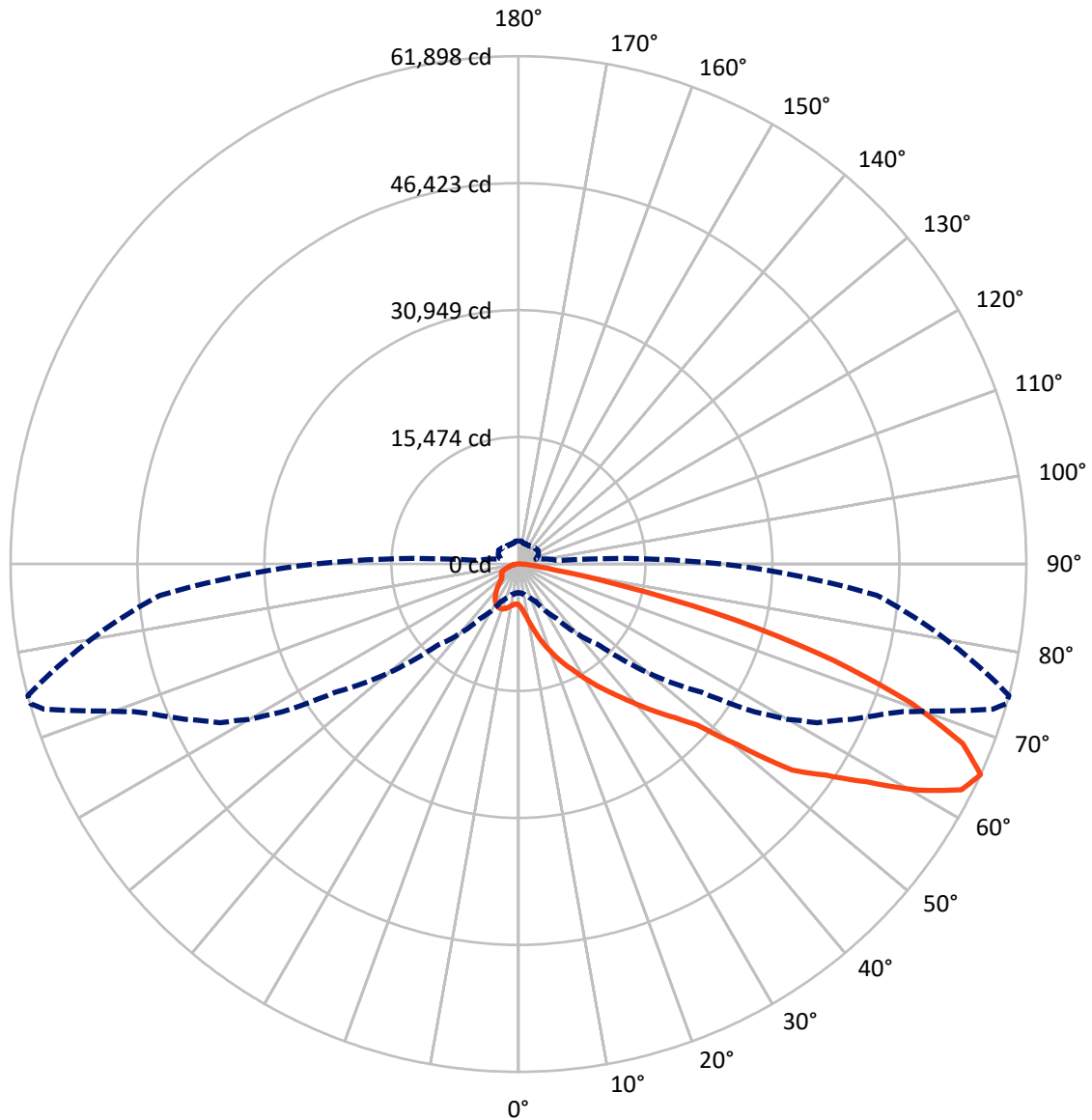
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 17.1 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	9429.6	0.0	9429.6
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	51731.5	0.0	51731.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	61161.1	0.0	61161.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	614.4	1.0
10°-20°	2400.5	3.9
20°-30°	4925.0	8.1
30°-40°	8286.1	13.5
40°-50°	11449.0	18.7
50°-60°	14291.8	23.4
60°-70°	12861.1	21.0
70°-80°	5391.3	8.8
80°-90°	941.9	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°	61161.1	100.0
0°-180°	61161.1	100.0



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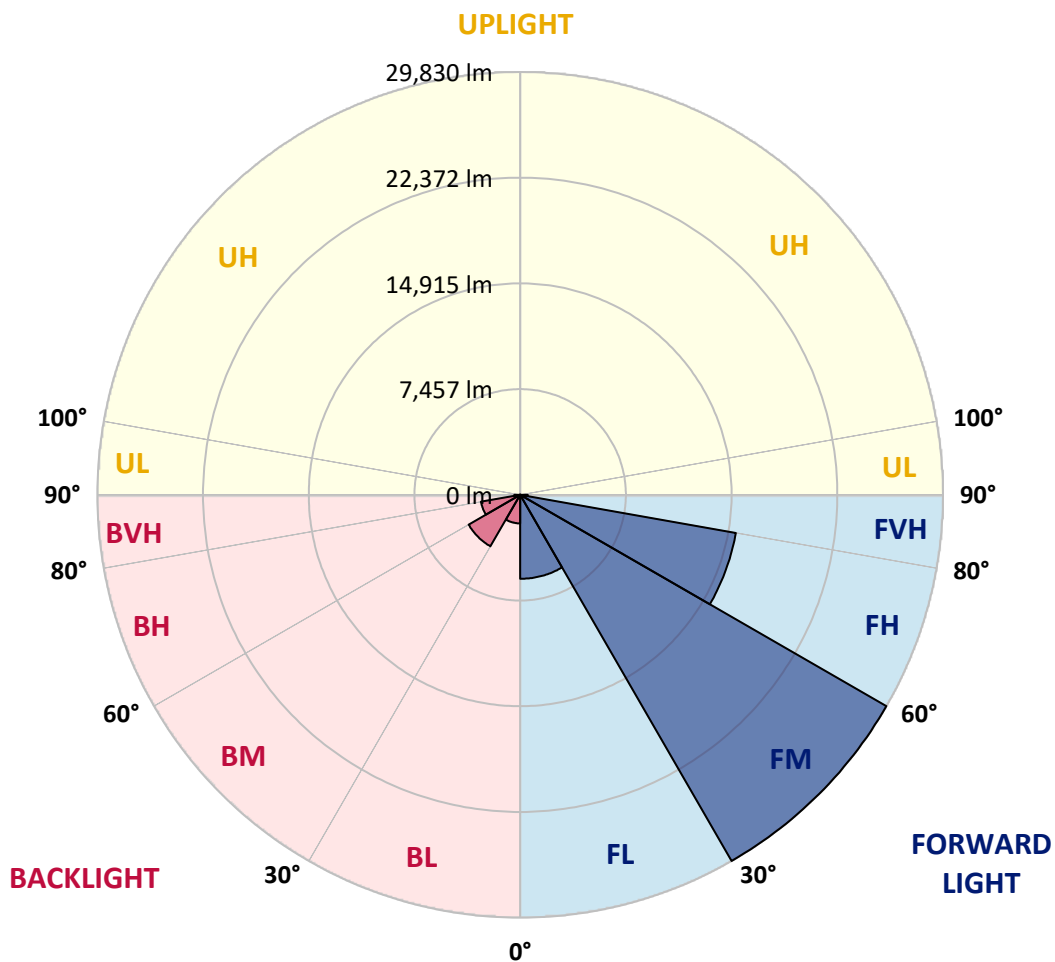
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	5923.3	9.7			
FM (30°-60°)	29829.7	48.8			
FH (60°-80°)	15449.1	25.3			G5
FVH (80°-90°)	529.4	0.9			G4/750
BL (0°-30°)	2016.6	3.3	B3/2500		
BM (30°-60°)	4197.2	6.9	B3/5000		
BH (60°-80°)	2803.3	4.6	B4/5000		G4/5000
BVH (80°-90°)	412.5	0.7			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5
2.5°	6311.0	6241.5	6258.7	6142.7	6001.0	5815.5	5610.3	5607.7	5610.3	5589.7	5515.0
5°	8750.8	8667.5	8635.7	8374.7	7992.5	7448.9	6858.1	6794.5	6767.9	6701.8	6548.1
7.5°	10531.9	10485.5	10435.7	10239.0	9892.1	9284.1	8490.6	8354.9	8224.4	8192.6	8019.1
10°	11680.9	11668.9	11565.0	11512.6	11296.2	10768.9	9996.0	9865.5	9723.8	9674.8	9491.9
12.5°	12589.5	12586.9	12537.9	12552.5	12363.6	11982.3	11315.9	11197.4	11093.5	10942.4	10812.7
15°	13218.1	13220.6	13293.6	13374.4	13345.2	13087.5	12462.4	12410.0	12320.7	12216.8	12063.0
17.5°	13733.3	13747.9	13822.6	13970.3	14130.1	14109.5	13614.8	13571.0	13492.9	13351.2	13270.5
20°	14897.0	14951.9	14807.6	14807.6	14824.8	14903.0	14665.1	14630.7	14520.8	14445.2	14381.7
22.5°	16862.7	16926.2	16599.0	16266.7	15939.5	15701.6	15464.6	15507.5	15432.8	15380.4	15342.7
25°	19415.8	19465.6	18935.7	18374.1	17707.7	16839.5	16252.1	16225.5	16185.1	16153.3	16136.1
27.5°	21818.6	21839.2	21338.5	20515.8	19743.0	18495.2	17050.7	17019.0	16970.0	16909.0	16856.6
30°	23874.5	23868.4	23353.2	22568.3	21740.4	20359.5	18264.2	18165.4	18020.3	17855.4	17728.3
32.5°	25654.7	25646.1	25081.0	24267.8	23399.6	22206.7	19925.9	19723.2	19497.3	19175.3	18982.1
35°	27055.3	27050.2	26516.9	25669.3	24673.1	23946.6	21830.6	21581.6	21294.7	20863.6	20565.6
37.5°	27585.2	27585.2	27287.2	26708.4	25828.1	25330.1	23946.6	23645.2	23338.6	22849.1	22513.3
40°	27275.2	27281.2	27344.7	27238.2	26809.7	26427.6	25920.9	25741.4	25477.8	25038.1	24687.7
42.5°	26236.1	26267.8	26691.2	27209.0	27422.9	27362.8	27671.9	27591.2	27405.7	27067.3	26789.1
45°	24918.7	25017.5	25480.3	26459.3	27593.8	28170.0	29139.5	29148.1	29113.8	28931.7	28717.0
47.5°	23110.2	23248.4	23859.9	25182.4	27194.4	28954.9	30630.3	30708.5	30781.5	30663.0	30564.2
50°	20707.3	20872.2	21786.8	23541.3	26381.2	29768.1	33447.1	33800.9	34130.7	34090.3	34156.4
52.5°	18133.6	18327.7	19447.5	21402.1	24983.1	29956.2	35247.9	35824.1	36400.4	36871.8	37372.5
55°	15811.5	15707.6	16828.3	18885.9	22684.2	29107.8	36866.7	37561.4	38203.8	38782.6	39379.4
57.5°	12665.0	12835.9	13959.2	15994.5	19641.6	26713.5	37980.5	38997.3	39920.4	40878.8	41723.8
60°	9257.5	9428.4	10646.9	12714.0	16338.8	23083.5	37129.5	38670.1	40148.9	41616.5	42762.9
62.5°	5589.7	5717.6	6791.1	8760.2	12598.9	18779.4	33337.2	35357.8	37534.8	39289.2	41046.3
65°	3479.7	3551.8	3948.6	5031.5	8091.3	14020.2	27238.2	29441.0	31785.4	34012.1	35838.7
67.5°	2848.5	2874.3	2947.3	3178.3	4443.2	9142.4	20272.8	22223.9	24339.9	26493.7	28526.4
70°	2561.7	2544.5	2544.5	2559.1	2848.5	4915.6	13273.0	14544.0	16307.0	18180.0	20038.4
72.5°	2312.6	2295.5	2263.7	2220.8	2324.7	2998.8	6860.7	7819.0	9090.0	10754.3	12534.5
75°	2078.2	2055.0	2018.1	1963.1	2035.3	2263.7	3294.2	3697.0	4316.1	5202.4	6195.1
77.5°	1835.2	1806.0	1771.6	1731.3	1824.0	1760.5	1930.5	2075.6	2312.6	2596.9	2970.5
80°	1560.4	1534.6	1522.6	1502.8	1612.8	1340.5	1363.7	1453.0	1592.1	1745.9	1919.3
82.5°	1222.0	1222.0	1267.5	1277.0	1398.1	964.4	1019.4	1097.5	1169.6	1250.4	1331.9
85°	804.7	810.7	967.0	1027.9	1102.7	648.4	764.3	790.1	848.5	894.8	929.2
87.5°	251.6	272.2	590.8	654.4	633.8	367.6	468.9	480.9	521.3	553.0	582.2
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5
2.5°	5515.0	5479.8	5448.0	5445.4	5422.2	5390.5	5401.6	5352.7	5355.2	5329.5	5300.3
5°	6484.5	6461.3	6345.4	6313.6	6226.9	6171.9	6163.3	6047.4	6032.8	5966.7	5893.7
7.5°	7880.0	7804.4	7642.1	7564.0	7416.3	7306.4	7254.8	7101.1	7025.5	6852.1	6773.9
10°	9341.6	9246.3	9046.2	8936.3	8794.6	8617.7	8522.4	8299.9	8212.3	8053.5	7862.8
12.5°	10696.7	10601.4	10395.3	10311.2	10123.1	9935.0	9831.1	9579.5	9466.1	9211.1	9060.8
15°	11949.7	11854.4	11674.9	11588.1	11400.1	11246.4	11107.2	10859.1	10725.9	10488.1	10291.4
17.5°	13165.7	13064.4	12908.1	12829.9	12647.9	12491.6	12341.3	12106.0	11970.3	11733.3	11556.4
20°	14295.0	14219.4	14106.9	14002.1	13820.1	13678.4	13498.9	13296.2	13099.6	12925.2	12757.8
22.5°	15279.1	15249.9	15128.8	15082.4	14926.2	14804.2	14647.9	14448.7	14306.1	14086.3	13930.0
25°	16127.6	16119.0	16060.6	16046.0	15936.1	15820.1	15785.8	15620.9	15490.4	15296.3	15134.8
27.5°	16856.6	16865.2	16851.5	16891.9	16862.7	16810.3	16813.7	16758.8	16683.2	16520.9	16379.2
30°	17667.3	17620.9	17647.6	17705.1	17722.3	17728.3	17823.6	17855.4	17850.2	17742.9	17673.3
32.5°	18813.8	18703.8	18602.5	18593.9	18651.5	18674.7	18837.0	18921.1	18993.3	19019.0	19031.0
35°	20275.4	20055.5	19844.3	19731.8	19633.0	19658.8	19774.7	19911.3	20070.1	20180.1	20310.6
37.5°	22116.6	21847.8	21474.2	21208.0	21141.0	20996.7	21071.5	21178.8	21335.1	21506.0	21731.8
40°	24348.5	23940.6	23520.6	23167.7	22977.1	22710.0	22707.4	22686.8	22783.0	22941.8	23260.4
42.5°	26497.1	26134.7	25689.0	25318.9	25069.9	24713.5	24641.3	24453.3	24496.2	24635.3	24945.3
45°	28508.3	28210.3	27938.1	27510.5	27298.3	26913.6	26791.7	26569.3	26444.7	26508.3	26818.3
47.5°	30456.9	30266.2	29982.0	29704.6	29542.3	29197.9	29041.6	28881.9	28723.0	28717.0	29041.6
50°	34255.2	34153.8	33818.1	33528.7	33606.8	33184.3	33210.1	32781.5	32975.6	32998.8	33678.9
52.5°	37824.2	38178.0	38427.0	38730.2	38927.7	38965.5	39095.2	39289.2	39523.7	39986.6	40617.8
55°	39868.1	40311.2	40568.8	40800.7	41182.8	41263.5	41480.8	41738.4	41943.7	42464.9	43000.8
57.5°	42297.5	43119.3	43518.7	43886.2	44401.5	44598.1	44960.5	45241.3	45507.5	46124.1	46772.5
60°	43793.5	44795.6	45608.9	46190.3	46836.0	47299.8	47846.8	48286.5	48911.7	49650.2	50617.2
62.5°	42604.1	44074.3	45154.6	46153.3	47030.1	47916.4	48700.4	49523.1	50472.1	51589.3	53089.6
65°	37865.4	39361.4	41211.2	42247.7	43408.7	44775.0	45967.8	47299.8	48593.1	50220.4	52437.8
67.5°	30483.5	32222.5	34301.6	35346.7	36681.2	38206.3	39544.3	41170.8	42682.2	44653.1	47395.1
70°	21972.3	24221.4	25969.8	27061.3	28619.1	30190.7	31482.2	33374.9	34625.3	36646.0	39480.7
72.5°	13912.8	15687.0	17829.6	19204.5	20588.0	22181.0	23500.9	25133.4	26299.6	28140.8	30708.5
75°	7480.7	8788.6	10670.1	11976.3	13458.5	14818.8	16364.6	17458.6	18321.7	19778.2	21862.4
77.5°	3505.5	4301.5	5253.9	6258.7	7263.4	8311.1	9330.5	10215.8	10586.8	11420.7	12650.4
80°	2128.0	2385.6	2663.0	2973.0	3393.0	3731.3	4180.5	4504.2	4527.4	4791.0	5167.2
82.5°	1421.3	1516.6	1600.7	1678.9	1786.2	1870.4	1965.7	2078.2	2124.6	2185.6	2307.5
85°	969.5	1015.9	1033.1	1082.9	1070.9	1100.1	1137.9	1175.6	1195.4	1192.8	1247.8
87.5°	596.0	619.2	631.2	642.4	633.8	622.6	639.8	660.4	665.5	648.4	654.4
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5
2.5°	5306.3	5280.5	5253.9	5236.7	5230.7	5077.9	5010.9	4967.9	4875.2	4799.6	4738.7
5°	5853.3	5798.4	5755.4	5703.0	5673.8	5285.7	5144.0	5046.1	4883.8	4788.5	4700.9
7.5°	6733.6	6579.8	6490.5	6389.2	6302.5	5601.7	5367.3	5213.5	4987.7	4860.6	4761.8
10°	7732.3	7573.4	7430.9	7274.6	7138.9	6021.6	5679.9	5442.0	5144.0	4979.1	4848.6
12.5°	8847.0	8690.7	8511.2	8311.1	8137.6	6554.1	6079.2	5740.8	5332.1	5112.2	4930.2
15°	10164.3	9888.7	9671.4	9440.4	9237.7	7191.3	6545.5	6076.6	5532.1	5234.2	4991.1
17.5°	11388.0	11098.6	10804.1	10601.4	10367.0	7905.8	7014.4	6417.5	5697.0	5312.3	5002.3
20°	12584.3	12268.3	12014.1	11741.9	11495.4	8646.9	7515.0	6719.0	5804.4	5314.9	4930.2
22.5°	13638.0	13440.5	13157.1	12861.7	12612.6	9388.0	7983.9	6974.0	5844.7	5248.8	4802.2
25°	14836.0	14628.2	14280.4	14031.3	13753.9	10143.7	8444.2	7170.7	5821.6	5124.2	4605.5
27.5°	16115.5	15884.5	15528.1	15267.9	14932.2	10927.8	8866.7	7312.4	5734.8	4921.6	4341.9
30°	17450.1	17238.8	16888.4	16625.6	16286.4	11759.0	9339.0	7407.7	5561.3	4640.8	4035.3
32.5°	18883.3	18706.4	18359.5	18084.7	17722.3	12659.0	9778.7	7436.9	5297.7	4307.6	3711.6
35°	20243.6	20122.5	19829.7	19572.1	19195.9	13510.1	10245.0	7422.3	4985.1	3942.6	3416.2
37.5°	21775.6	21702.6	21558.4	21231.2	20770.9	14665.1	10804.1	7361.3	4603.0	3581.0	3190.3
40°	23408.1	23414.2	23257.9	23034.6	22606.1	16066.6	11469.6	7242.8	4185.6	3262.4	2984.2
42.5°	25136.0	25226.1	25150.6	24991.7	24580.4	17479.3	12265.7	7098.5	3781.1	2952.4	2782.4
45°	27116.3	27226.2	27342.1	27107.7	26708.4	19343.6	13313.4	6910.5	3343.2	2694.8	2643.3
47.5°	29400.6	29574.1	29678.0	29681.4	29282.1	21653.7	15015.5	6797.1	2955.9	2521.3	2576.3
50°	34220.0	34275.8	34521.4	34949.9	34643.3	27000.4	17988.5	6727.5	2692.2	2414.0	2527.3
52.5°	41164.8	41770.2	42196.2	42167.0	41749.6	30395.9	19627.0	6368.6	2535.9	2373.6	2504.2
55°	43993.5	44749.3	45536.7	45744.6	45420.8	33294.2	21176.2	6009.6	2460.4	2402.8	2512.7
57.5°	47762.7	49036.2	50116.5	50570.8	50101.9	37002.4	23214.1	5821.6	2437.2	2481.0	2567.7
60°	52165.5	53740.5	55159.2	55975.0	55975.0	41263.5	25327.5	5743.4	2405.4	2596.9	2660.4
62.5°	54994.3	57306.9	59449.6	60645.0	60609.7	44230.6	26265.3	5477.2	2333.3	2677.6	2787.5
65°	55005.5	57756.1	60485.2	61829.2	61897.9	43866.4	24716.9	4837.4	2200.1	2689.6	2915.5
67.5°	50420.5	53352.3	56534.1	58036.9	58383.8	40380.7	21396.1	3977.8	1982.9	2573.7	2961.9
70°	42583.5	45446.6	48694.4	50171.5	50788.1	34422.6	17232.8	3065.8	1705.5	2318.7	2865.7
72.5°	33548.4	36356.6	38617.7	39697.2	40178.1	26311.6	12549.1	2316.1	1398.1	1953.7	2608.1
75°	23752.5	25859.9	27061.3	27301.8	27376.5	15861.3	7625.0	1722.7	1152.5	1520.0	2202.7
77.5°	13406.1	14309.6	14210.8	14318.1	13426.8	6123.0	3320.8	1233.2	949.8	1155.0	1708.1
80°	5234.2	5396.5	5069.3	4967.9	4556.6	2278.3	1465.0	859.6	758.3	874.2	1195.4
82.5°	2307.5	2382.2	2312.6	2330.7	2229.3	1175.6	876.8	622.6	578.8	639.8	793.5
85°	1271.0	1294.2	1288.1	1325.9	1271.0	468.9	416.5	382.1	405.3	434.5	509.2
87.5°	619.2	625.2	605.4	637.2	616.6	237.0	205.2	217.3	237.0	243.0	243.0
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):

	135°	145°	155°	165°	175°	180°
0°	4970.5	4970.5	4970.5	4970.5	4970.5	4970.5
2.5°	4695.7	4672.5	4675.1	4669.1	4657.9	4657.9
5°	4655.4	4632.2	4632.2	4626.2	4611.6	4614.1
7.5°	4695.7	4657.9	4643.3	4622.7	4603.0	4603.0
10°	4742.1	4675.1	4634.7	4600.4	4573.8	4573.8
12.5°	4776.4	4672.5	4605.5	4559.2	4533.4	4533.4
15°	4788.5	4651.9	4559.2	4504.2	4481.0	4478.4
17.5°	4750.7	4573.8	4461.3	4397.7	4368.5	4359.9
20°	4634.7	4432.1	4296.4	4223.4	4183.0	4168.4
22.5°	4461.3	4229.4	4070.5	3995.0	3942.6	3934.0
25°	4218.2	3969.2	3812.9	3739.9	3711.6	3702.1
27.5°	3934.0	3702.1	3569.0	3522.6	3496.9	3494.3
30°	3665.2	3467.7	3369.8	3334.6	3302.8	3297.6
32.5°	3412.7	3288.2	3251.3	3201.5	3126.8	3118.2
35°	3233.2	3222.1	3196.3	3085.5	2993.6	2967.0
37.5°	3123.3	3230.7	3097.6	2880.3	2814.2	2808.2
40°	3059.8	3141.4	2912.1	2837.4	2842.5	2837.4
42.5°	2915.5	2998.8	2918.1	2883.7	2906.1	2912.1
45°	2770.4	2863.1	2961.9	2938.7	2993.6	2993.6
47.5°	2689.6	2827.9	2958.4	2958.4	3040.0	3068.4
50°	2596.9	2799.6	2912.1	2952.4	3016.8	2993.6
52.5°	2590.9	2749.8	2845.9	2918.1	2947.3	2920.7
55°	2599.5	2709.4	2779.0	2860.5	2894.9	2897.5
57.5°	2611.5	2686.2	2732.6	2770.4	2874.3	2874.3
60°	2639.8	2666.5	2692.2	2712.8	2848.5	2851.1
62.5°	2686.2	2645.8	2639.8	2660.4	2833.9	2822.8
65°	2759.2	2616.6	2573.7	2593.5	2819.3	2785.0
67.5°	2857.1	2573.7	2489.6	2504.2	2808.2	2732.6
70°	2947.3	2504.2	2385.6	2371.0	2698.2	2565.1
72.5°	2955.9	2423.4	2240.5	2197.6	2345.3	2217.3
75°	2810.7	2367.6	2081.6	1953.7	1936.5	1919.3
77.5°	2533.3	2335.8	1896.1	1696.1	1661.7	1672.9
80°	2119.4	2217.3	1672.9	1435.9	1623.9	1604.2
82.5°	1583.6	1957.1	1421.3	1271.0	1267.5	1120.7
85°	880.2	1526.0	1157.6	952.4	663.0	642.4
87.5°	246.5	848.5	810.7	538.4	367.6	382.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)