

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: P301614

Luminaire Tested: **GLNA-AF-10-LED-E1-T2R-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301614
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-7027
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 53139.2 lumens
Efficiency: N/A
Efficacy: 95.2 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 - 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

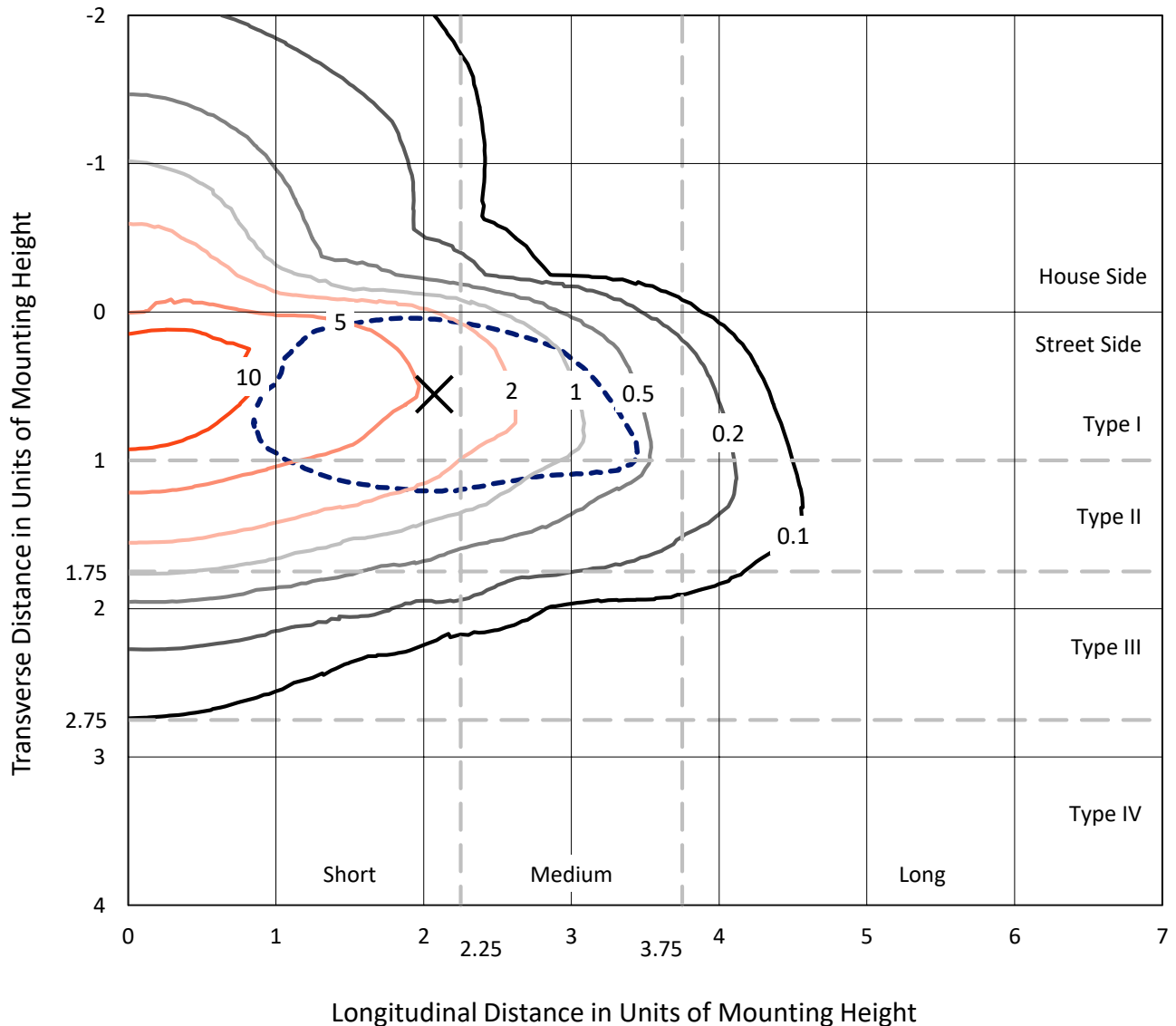


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Iso-Footcandle Lines of Horizontal Illumination

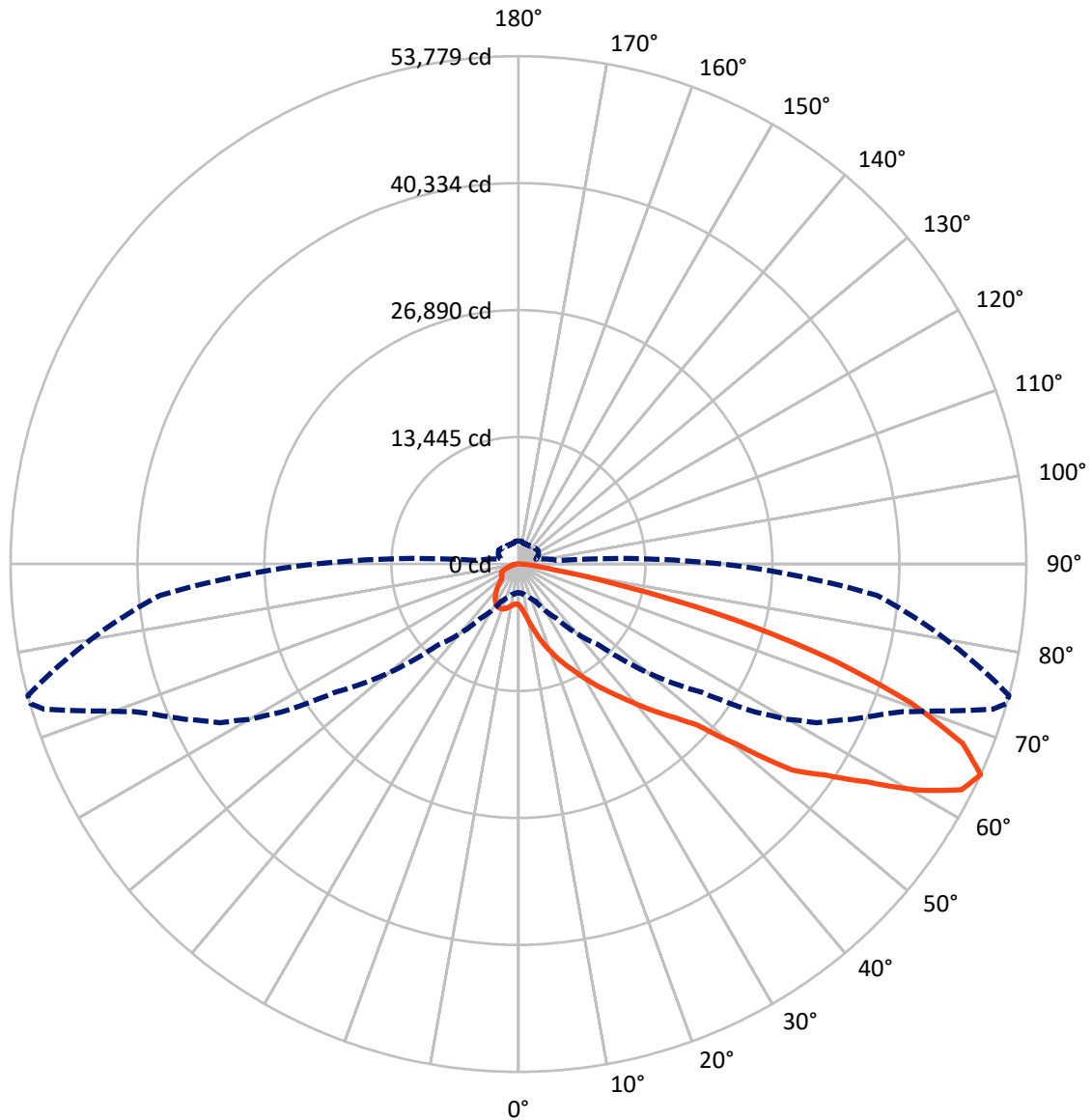
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 14.9 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	8192.8	0.0	8192.8
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	44946.3	0.0	44946.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	53139.2	0.0	53139.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	533.8	1.0
10°-20°	2085.6	3.9
20°-30°	4279.0	8.1
30°-40°	7199.3	13.5
40°-50°	9947.4	18.7
50°-60°	12417.3	23.4
60°-70°	11174.2	21.0
70°-80°	4684.1	8.8
80°-90°	818.3	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°	53139.2	100.0
0°-180°	53139.2	100.0



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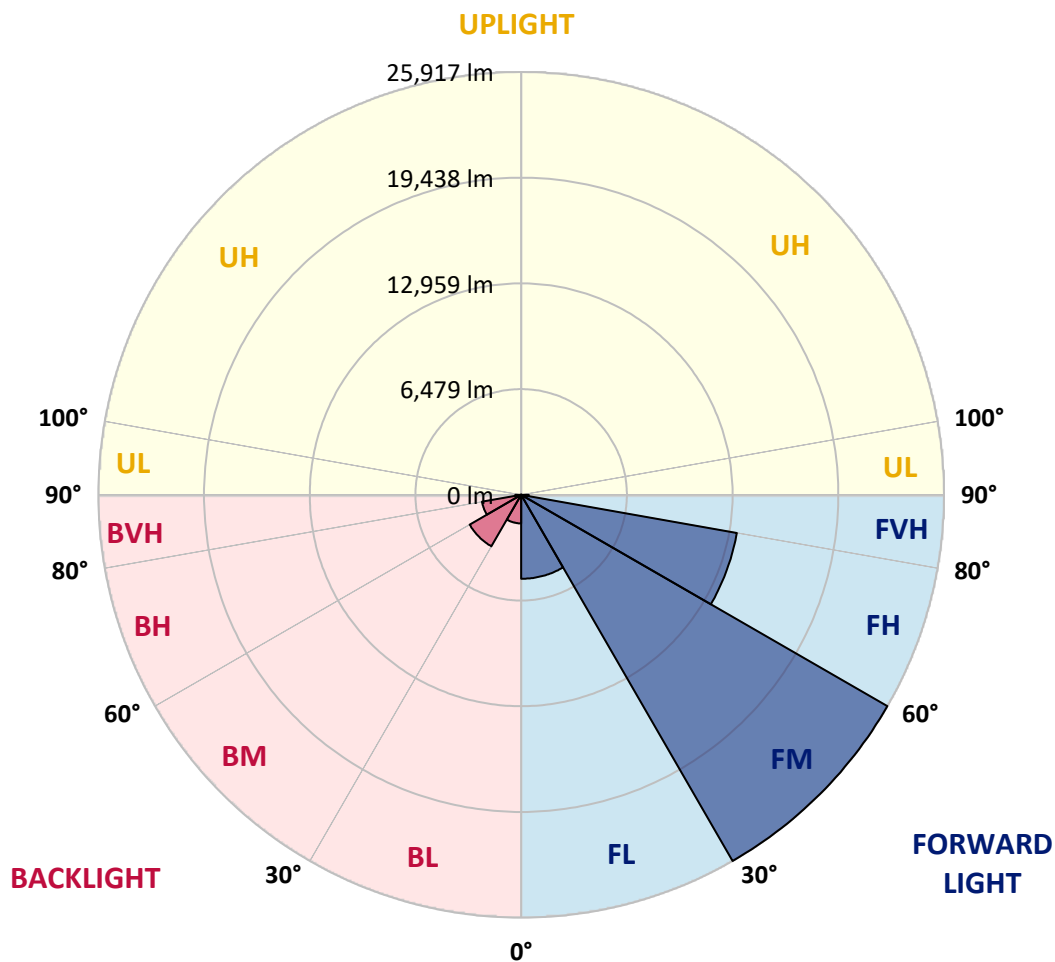
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5146.4	9.7			
FM	(30°-60°)	25917.2	48.8			
FH	(60°-80°)	13422.8	25.3			G5
FVH	(80°-90°)	460.0	0.9			G3/500
BL	(0°-30°)	1752.1	3.3	B3/2500		
BM	(30°-60°)	3646.7	6.9	B3/5000		
BH	(60°-80°)	2435.6	4.6	B3/2500		G3/2500
BVH	(80°-90°)	358.4	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-G5

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6
2.5°	5483.3	5422.8	5437.8	5337.0	5213.9	5052.8	4874.4	4872.2	4874.4	4856.5	4791.6
5°	7603.0	7530.7	7503.0	7276.2	6944.2	6471.9	5958.6	5903.4	5880.2	5822.8	5689.2
7.5°	9150.5	9110.2	9066.9	8896.1	8594.6	8066.4	7376.9	7259.1	7145.7	7118.0	6967.3
10°	10148.8	10138.4	10048.1	10002.6	9814.5	9356.4	8684.9	8571.5	8448.4	8405.9	8246.9
12.5°	10938.2	10936.0	10893.4	10906.1	10742.0	10410.7	9831.7	9728.7	9638.5	9507.1	9394.5
15°	11484.4	11486.6	11550.0	11620.2	11594.8	11371.0	10827.8	10782.3	10704.7	10614.4	10480.8
17.5°	11932.0	11944.7	12009.6	12138.0	12276.8	12258.9	11829.1	11791.0	11723.1	11600.0	11529.9
20°	12943.1	12990.8	12865.5	12865.5	12880.4	12948.3	12741.6	12711.8	12616.2	12550.6	12495.4
22.5°	14650.9	14706.1	14421.9	14133.1	13848.8	13642.2	13436.2	13473.5	13408.6	13363.1	13330.3
25°	16869.2	16912.4	16452.1	15964.1	15385.1	14630.8	14120.4	14097.3	14062.2	14034.6	14019.7
27.5°	18956.8	18974.7	18539.7	17825.0	17153.4	16069.3	14814.3	14786.7	14744.2	14691.2	14645.7
30°	20743.1	20737.8	20290.2	19608.2	18888.9	17689.2	15868.6	15782.8	15656.7	15513.5	15403.0
32.5°	22289.8	22282.3	21791.4	21084.8	20330.4	19294.1	17312.4	17136.3	16940.0	16660.3	16492.4
35°	23506.7	23502.2	23038.9	22302.5	21437.0	20805.7	18967.3	18750.9	18501.7	18127.1	17868.2
37.5°	23967.1	23967.1	23708.2	23205.3	22440.5	22007.7	20805.7	20543.8	20277.5	19852.2	19560.4
40°	23697.7	23702.9	23758.1	23665.6	23293.3	22961.3	22521.1	22365.1	22136.1	21754.1	21449.6
42.5°	22794.9	22822.5	23190.3	23640.3	23826.0	23773.8	24042.4	23972.3	23811.1	23517.2	23275.4
45°	21650.3	21736.1	22138.3	22988.9	23974.5	24475.2	25317.6	25325.0	25295.2	25137.0	24950.5
47.5°	20079.0	20199.1	20730.4	21879.4	23627.6	25157.1	26612.8	26680.7	26744.1	26641.2	26555.4
50°	17991.3	18134.6	18929.2	20453.6	22921.0	25863.7	29060.1	29367.5	29654.0	29619.0	29676.4
52.5°	15755.2	15923.8	16896.8	18595.0	21706.3	26027.1	30624.7	31125.4	31626.1	32035.7	32470.7
55°	13737.7	13647.4	14621.1	16408.8	19708.9	25289.9	32031.2	32634.8	33192.9	33695.8	34214.4
57.5°	11003.9	11152.3	12128.3	13896.6	17065.4	23209.7	32998.9	33882.3	34684.4	35517.1	36251.3
60°	8043.2	8191.7	9250.5	11046.4	14195.8	20055.9	32259.5	33598.1	34882.9	36158.0	37154.1
62.5°	4856.5	4967.7	5900.4	7611.2	10946.4	16316.3	28964.6	30720.3	32611.7	34136.0	35662.6
65°	3023.3	3086.0	3430.7	4371.6	7030.0	12181.3	23665.6	25579.4	27616.4	29551.1	31138.1
67.5°	2474.9	2497.3	2560.7	2761.4	3860.5	7943.3	17613.8	19309.0	21147.5	23018.7	24784.8
70°	2225.7	2210.8	2210.8	2223.5	2474.9	4270.8	11532.1	12636.4	14168.2	15795.5	17410.1
72.5°	2009.3	1994.4	1966.8	1929.5	2019.8	2605.5	5960.8	6793.5	7897.7	9343.7	10890.5
75°	1805.6	1785.5	1753.4	1705.6	1768.3	1966.8	2862.1	3212.1	3750.0	4520.0	5382.6
77.5°	1594.5	1569.1	1539.3	1504.2	1584.8	1529.6	1677.3	1803.4	2009.3	2256.3	2580.9
80°	1355.7	1333.3	1322.9	1305.7	1401.2	1164.7	1184.8	1262.4	1383.3	1516.9	1667.6
82.5°	1061.7	1061.7	1101.3	1109.5	1214.7	837.9	885.7	953.5	1016.2	1086.4	1157.2
85°	699.1	704.3	840.1	893.1	958.0	563.3	664.1	686.4	737.2	777.5	807.3
87.5°	218.6	236.5	513.3	568.5	550.6	319.3	407.4	417.8	452.9	480.5	505.9
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°	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6
2.5°	4791.6	4761.0	4733.4	4731.2	4711.0	4683.4	4693.1	4650.6	4652.8	4630.5	4605.1
5°	5634.0	5613.9	5513.1	5485.5	5410.2	5362.4	5354.9	5254.2	5241.5	5184.1	5120.7
7.5°	6846.5	6780.8	6639.8	6571.9	6443.5	6348.0	6303.3	6169.7	6104.1	5953.3	5885.4
10°	8116.4	8033.5	7859.7	7764.2	7641.1	7487.4	7404.6	7211.3	7135.2	6997.2	6831.5
12.5°	9293.7	9210.9	9031.9	8958.7	8795.3	8631.9	8541.7	8323.0	8224.5	8002.9	7872.4
15°	10382.3	10299.5	10143.6	10068.2	9904.8	9771.3	9650.4	9434.8	9319.1	9112.4	8941.6
17.5°	11438.9	11350.8	11215.0	11147.1	10988.9	10853.2	10722.6	10518.1	10400.3	10194.3	10040.6
20°	12420.0	12354.4	12256.6	12165.6	12007.4	11884.3	11728.4	11552.3	11381.4	11229.9	11084.5
22.5°	13275.1	13249.7	13144.5	13104.2	12968.4	12862.5	12726.7	12553.6	12429.7	12238.7	12102.9
25°	14012.2	14004.8	13954.1	13941.4	13845.9	13745.1	13715.3	13572.0	13458.6	13290.0	13149.7
27.5°	14645.7	14653.2	14641.2	14676.3	14650.9	14605.4	14608.4	14560.7	14495.0	14354.0	14230.9
30°	15350.1	15309.8	15332.9	15382.9	15397.8	15403.0	15485.8	15513.5	15509.0	15415.7	15355.3
32.5°	16346.1	16250.6	16162.6	16155.1	16205.1	16225.3	16366.3	16439.4	16502.1	16524.5	16534.9
35°	17616.0	17425.0	17241.5	17143.7	17057.9	17080.3	17181.0	17299.7	17437.7	17533.2	17646.6
37.5°	19215.7	18982.2	18657.6	18426.3	18368.1	18242.8	18307.7	18401.0	18536.8	18685.2	18881.5
40°	21154.9	20800.5	20435.6	20129.0	19963.4	19731.3	19729.1	19711.2	19794.7	19932.8	20209.6
42.5°	23021.7	22706.9	22319.6	21998.0	21781.7	21472.0	21409.3	21245.9	21283.2	21404.1	21673.5
45°	24769.2	24510.2	24273.7	23902.2	23717.9	23383.6	23277.6	23084.4	22976.2	23031.4	23300.8
47.5°	26462.1	26296.5	26049.5	25808.5	25667.5	25368.3	25232.5	25093.7	24955.7	24950.5	25232.5
50°	29762.2	29674.2	29382.4	29131.0	29198.9	28831.8	28854.2	28481.9	28650.5	28670.6	29261.6
52.5°	32863.1	33170.5	33386.9	33650.3	33821.9	33854.7	33967.4	34136.0	34339.7	34741.9	35290.3
55°	34638.9	35023.9	35247.7	35449.2	35781.2	35851.4	36040.1	36264.0	36442.3	36895.2	37360.8
57.5°	36749.7	37463.7	37810.7	38130.0	38577.7	38748.6	39063.4	39307.4	39538.7	40074.4	40637.8
60°	38049.5	38920.2	39626.8	40131.9	40693.0	41095.9	41571.2	41953.2	42496.4	43138.0	43978.2
62.5°	37016.1	38293.4	39232.1	40099.8	40861.6	41631.6	42312.8	43027.6	43852.1	44822.8	46126.3
65°	32898.9	34198.7	35805.8	36706.4	37715.2	38902.3	39938.6	41095.9	42219.5	43633.5	45560.0
67.5°	26485.2	27996.1	29802.5	30710.6	31870.0	33195.2	34357.6	35770.8	37084.0	38796.3	41178.7
70°	19090.4	21044.5	22563.6	23511.9	24865.4	26230.8	27353.0	28997.4	30083.8	31839.4	34302.4
72.5°	12088.0	13629.5	15491.1	16685.6	17887.6	19271.7	20418.5	21836.9	22850.1	24449.8	26680.7
75°	6499.5	7635.9	9270.6	10405.5	11693.3	12875.2	14218.2	15168.7	15918.6	17184.0	18994.9
77.5°	3045.7	3737.3	4564.8	5437.8	6310.7	7221.0	8106.7	8875.9	9198.2	9922.7	10991.2
80°	1848.9	2072.7	2313.7	2583.1	2947.9	3241.9	3632.1	3913.4	3933.6	4162.6	4489.4
82.5°	1234.8	1317.7	1390.8	1458.7	1551.9	1625.1	1707.9	1805.6	1845.9	1898.9	2004.8
85°	842.4	882.7	897.6	940.9	930.4	955.8	988.6	1021.4	1038.6	1036.4	1084.1
87.5°	517.8	538.0	548.4	558.1	550.6	540.9	555.9	573.8	578.2	563.3	568.5
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6
2.5°	4610.3	4587.9	4564.8	4549.9	4544.7	4411.8	4353.6	4316.3	4235.8	4170.1	4117.1
5°	5085.6	5037.8	5000.5	4955.0	4929.7	4592.4	4469.3	4384.2	4243.2	4160.4	4084.3
7.5°	5850.4	5716.8	5639.2	5551.2	5475.8	4867.0	4663.3	4529.7	4333.5	4223.1	4137.3
10°	6718.1	6580.1	6456.2	6320.4	6202.5	5231.8	4934.9	4728.2	4469.3	4326.0	4212.6
12.5°	7686.6	7550.8	7394.9	7221.0	7070.3	5694.4	5281.8	4987.9	4632.7	4441.7	4283.5
15°	8831.1	8591.6	8402.9	8202.2	8026.1	6248.1	5687.0	5279.6	4806.5	4547.6	4336.5
17.5°	9894.4	9642.9	9387.0	9210.9	9007.2	6868.8	6094.4	5575.8	4949.8	4615.5	4346.2
20°	10933.7	10659.2	10438.3	10201.8	9987.6	7512.7	6529.4	5837.7	5043.1	4617.8	4283.5
22.5°	11849.2	11677.6	11431.4	11174.7	10958.4	8156.7	6936.7	6059.3	5078.1	4560.3	4172.3
25°	12890.1	12709.5	12407.3	12191.0	11950.0	8813.2	7336.7	6230.2	5058.0	4452.1	4001.5
27.5°	14001.8	13801.1	13491.5	13265.4	12973.6	9494.5	7703.8	6353.3	4982.6	4276.0	3772.4
30°	15161.3	14977.7	14673.3	14445.0	14150.3	10216.7	8114.1	6436.1	4831.9	4032.1	3506.0
32.5°	16406.6	16252.9	15951.4	15712.7	15397.8	10998.6	8496.1	6461.5	4602.9	3742.6	3224.8
35°	17588.4	17483.2	17228.8	17005.0	16678.2	11738.1	8901.3	6448.8	4331.3	3425.5	2968.1
37.5°	18919.5	18856.1	18730.8	18446.5	18046.6	12741.6	9387.0	6395.8	3999.2	3111.3	2771.9
40°	20337.9	20343.1	20207.3	20013.3	19641.0	13959.3	9965.3	6292.8	3636.6	2834.5	2592.8
42.5°	21839.1	21917.5	21851.8	21713.8	21356.4	15186.7	10656.9	6167.5	3285.2	2565.2	2417.4
45°	23559.7	23655.2	23755.9	23552.2	23205.3	16806.5	11567.2	6004.1	2904.7	2341.3	2296.6
47.5°	25544.4	25695.1	25785.4	25788.4	25441.4	18813.6	13046.0	5905.6	2568.2	2190.6	2238.4
50°	29731.6	29780.1	29993.5	30365.8	30099.5	23459.0	15629.1	5845.2	2339.1	2097.4	2195.8
52.5°	35765.6	36291.6	36661.7	36636.3	36273.7	26409.1	17052.7	5533.3	2203.3	2062.3	2175.7
55°	38223.3	38879.9	39564.1	39744.6	39463.4	28927.3	18398.7	5221.4	2137.7	2087.7	2183.2
57.5°	41498.0	42604.6	43543.2	43937.9	43530.5	32149.1	20169.3	5058.0	2117.5	2155.6	2230.9
60°	45323.4	46691.8	47924.4	48633.3	48633.3	35851.4	22005.5	4990.1	2089.9	2256.3	2311.5
62.5°	47781.2	49790.5	51652.1	52690.7	52660.1	38429.2	22820.3	4758.8	2027.2	2326.4	2421.9
65°	47790.9	50180.7	52551.9	53719.6	53779.3	38112.9	21475.0	4202.9	1911.6	2336.9	2533.1
67.5°	43807.3	46354.6	49119.0	50424.7	50726.1	35084.3	18589.7	3456.1	1722.8	2236.1	2573.4
70°	36998.2	39485.7	42307.6	43590.9	44126.6	29907.7	14972.5	2663.7	1481.8	2014.5	2489.8
72.5°	29148.2	31588.0	33552.5	34490.4	34908.3	22860.6	10903.1	2012.3	1214.7	1697.4	2266.0
75°	20637.1	22468.1	23511.9	23720.8	23785.8	13781.0	6624.9	1496.7	1001.3	1320.6	1913.8
77.5°	11647.8	12432.7	12346.9	12440.2	11665.7	5319.9	2885.3	1071.4	825.2	1003.5	1484.0
80°	4547.6	4688.7	4404.4	4316.3	3958.9	1979.5	1272.9	746.9	658.8	759.6	1038.6
82.5°	2004.8	2069.8	2009.3	2025.0	1936.9	1021.4	761.8	540.9	502.9	555.9	689.4
85°	1104.3	1124.4	1119.2	1152.0	1104.3	407.4	361.9	332.0	352.2	377.5	442.5
87.5°	538.0	543.2	526.0	553.6	535.7	205.9	178.3	188.8	205.9	211.2	211.2
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°	4318.6	4318.6	4318.6	4318.6	4318.6	4318.6
2.5°	4079.8	4059.7	4061.9	4056.7	4047.0	4047.0
5°	4044.8	4024.6	4024.6	4019.4	4006.7	4008.9
7.5°	4079.8	4047.0	4034.3	4016.4	3999.2	3999.2
10°	4120.1	4061.9	4026.8	3997.0	3973.9	3973.9
12.5°	4150.0	4059.7	4001.5	3961.2	3938.8	3938.8
15°	4160.4	4041.8	3961.2	3913.4	3893.3	3891.0
17.5°	4127.6	3973.9	3876.1	3820.9	3795.5	3788.1
20°	4026.8	3850.8	3732.9	3669.4	3634.4	3621.7
22.5°	3876.1	3674.7	3536.6	3471.0	3425.5	3418.0
25°	3665.0	3448.6	3312.8	3249.4	3224.8	3216.5
27.5°	3418.0	3216.5	3100.9	3060.6	3038.2	3036.0
30°	3184.5	3012.9	2927.8	2897.2	2869.6	2865.1
32.5°	2965.1	2856.9	2824.8	2781.6	2716.6	2709.2
35°	2809.2	2799.5	2777.1	2680.8	2601.0	2577.9
37.5°	2713.7	2806.9	2691.3	2502.5	2445.1	2439.8
40°	2658.4	2729.3	2530.1	2465.2	2469.7	2465.2
42.5°	2533.1	2605.5	2535.3	2505.5	2524.9	2530.1
45°	2407.0	2487.6	2573.4	2553.2	2601.0	2601.0
47.5°	2336.9	2457.0	2570.4	2570.4	2641.3	2665.9
50°	2256.3	2432.4	2530.1	2565.2	2621.1	2601.0
52.5°	2251.1	2389.1	2472.7	2535.3	2560.7	2537.6
55°	2258.5	2354.0	2414.5	2485.3	2515.2	2517.4
57.5°	2269.0	2333.9	2374.2	2407.0	2497.3	2497.3
60°	2293.6	2316.7	2339.1	2357.0	2474.9	2477.1
62.5°	2333.9	2298.8	2293.6	2311.5	2462.2	2452.5
65°	2397.3	2273.4	2236.1	2253.3	2449.5	2419.7
67.5°	2482.4	2236.1	2163.0	2175.7	2439.8	2374.2
70°	2560.7	2175.7	2072.7	2060.1	2344.3	2228.7
72.5°	2568.2	2105.6	1946.6	1909.3	2037.7	1926.5
75°	2442.1	2057.1	1808.6	1697.4	1682.5	1667.6
77.5°	2201.1	2029.5	1647.4	1473.6	1443.8	1453.5
80°	1841.4	1926.5	1453.5	1247.5	1410.9	1393.8
82.5°	1375.9	1700.4	1234.8	1104.3	1101.3	973.7
85°	764.8	1325.9	1005.8	827.5	576.0	558.1
87.5°	214.1	737.2	704.3	467.8	319.3	332.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)