

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: STREETWORKS

Report Number: P191417

Luminaire Tested: **GAN-AF-09-LED-U-T2R**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P191417
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: STREETWORKS
Catalog Number: GAN-AF-09-LED-U-T2R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 56711.4 lumens
Efficiency: N/A
Efficacy: 113.2 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

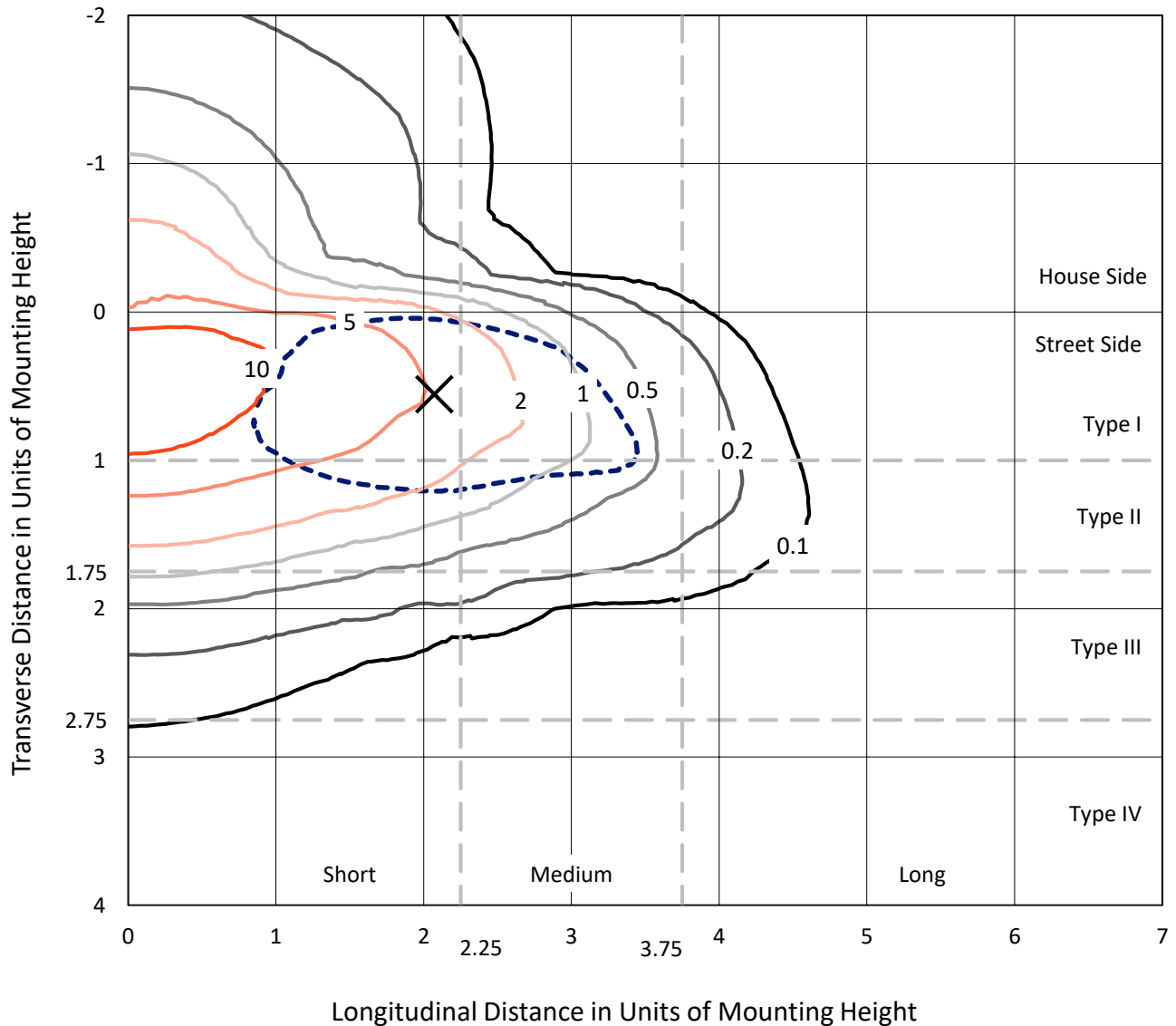
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

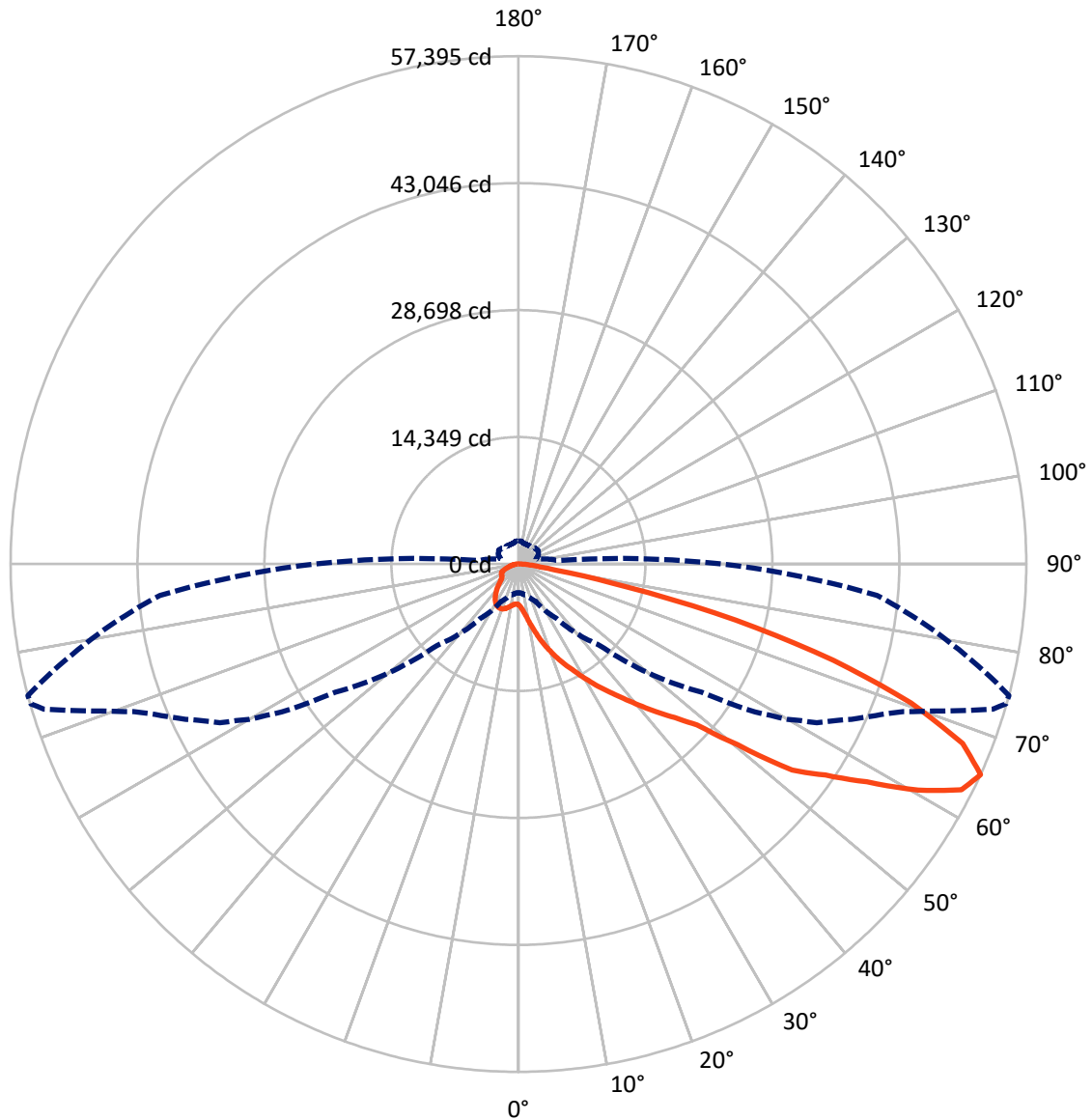
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15.9 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	8743.6	0.0	8743.6
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	47967.8	0.0	47967.8
	% Fixture	84.6	0.0	84.6
Total	Lumens	56711.4	0.0	56711.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.7	1.0
10°-20°	2225.8	3.9
20°-30°	4566.7	8.1
30°-40°	7683.2	13.5
40°-50°	10616.1	18.7
50°-60°	13252.0	23.4
60°-70°	11925.4	21.0
70°-80°	4999.0	8.8
80°-90°	873.3	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°	56711.4	100.0
0°-180°	56711.4	100.0

Coefficient of Utilization



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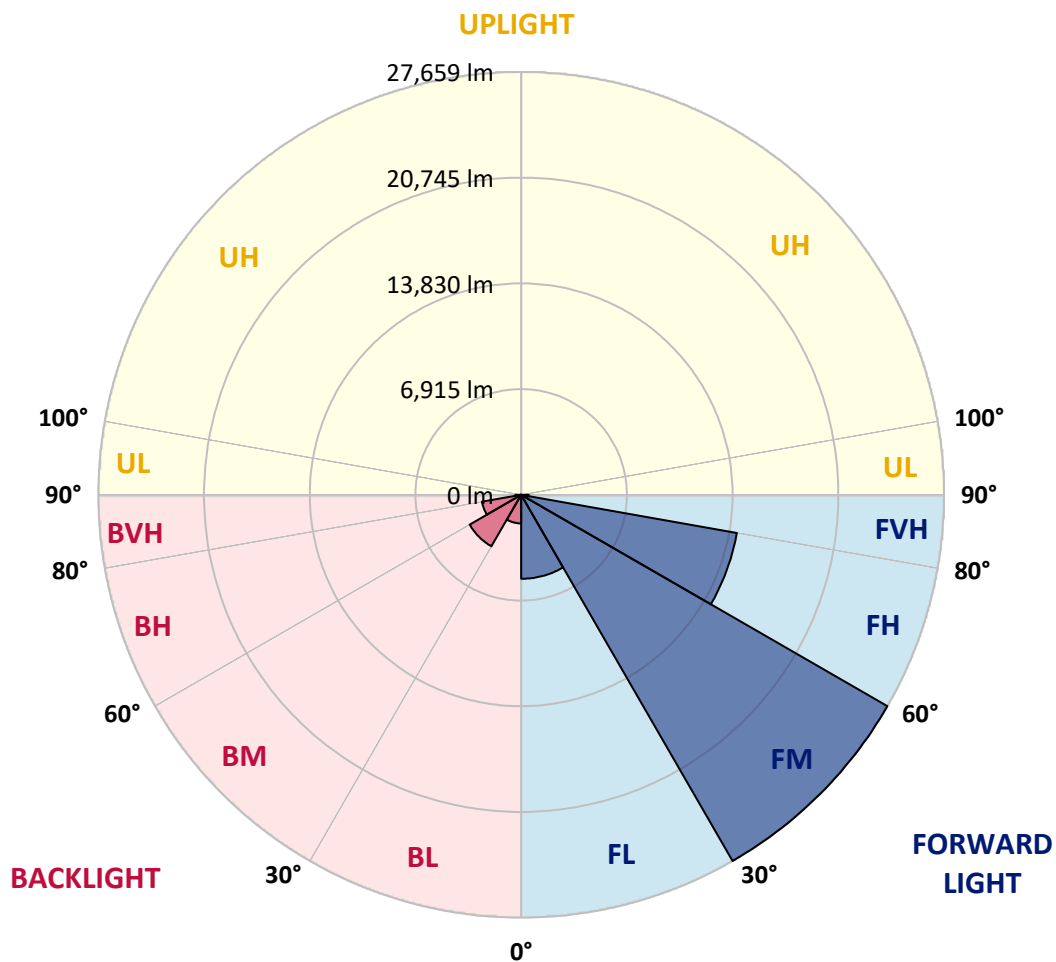
CATALOG NUMBER: GAN-AF-09-LED-U-T2R

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5492.3	9.7			
FM	(30°-60°)	27659.5	48.8			
FH	(60°-80°)	14325.1	25.3			G5
FVH	(80°-90°)	490.9	0.9			G3/500
BL	(0°-30°)	1869.9	3.3	B3/2500		
BM	(30°-60°)	3891.9	6.9	B3/5000		
BH	(60°-80°)	2599.3	4.6	B4/5000		G4/5000
BVH	(80°-90°)	382.5	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°	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9
2.5°	5851.7	5787.2	5803.4	5696.0	5564.4	5392.7	5202.1	5199.5	5202.1	5183.3	5113.5
5°	8114.6	8036.7	8007.1	7765.6	7411.3	6906.7	6359.1	6299.9	6275.8	6214.1	6071.8
7.5°	9765.4	9722.4	9676.8	9494.2	9172.1	8608.4	7872.9	7746.8	7626.0	7596.4	7435.4
10°	10831.0	10820.3	10723.6	10675.3	10474.0	9985.4	9268.8	9147.9	9016.5	8970.8	8801.7
12.5°	11673.9	11671.2	11625.5	11638.9	11464.5	11110.2	10492.8	10382.7	10286.1	10146.5	10025.7
15°	12256.4	12259.0	12326.1	12401.3	12374.4	12135.6	11555.8	11507.5	11424.2	11327.6	11185.4
17.5°	12734.2	12747.6	12817.4	12954.2	13101.9	13083.1	12624.1	12583.8	12511.4	12379.9	12304.7
20°	13813.2	13864.3	13730.0	13730.0	13746.1	13818.6	13598.5	13566.3	13464.3	13394.5	13335.4
22.5°	15635.8	15694.9	15391.6	15082.9	14779.6	14559.5	14339.3	14379.6	14309.9	14261.5	14226.6
25°	18003.3	18049.0	17557.8	17037.0	16419.7	15614.3	15069.5	15045.4	15007.7	14978.3	14962.1
27.5°	20231.3	20250.1	19785.7	19023.4	18306.7	17149.8	15810.3	15780.8	15735.1	15678.8	15630.5
30°	22137.2	22131.7	21653.9	20926.5	20158.9	18878.5	16935.1	16843.8	16709.6	16556.6	16438.4
32.5°	23788.0	23779.9	23256.5	22502.2	21696.9	20591.0	18475.8	18287.9	18078.5	17780.6	17600.7
35°	25087.2	25081.7	24587.9	23801.4	22878.0	22204.3	20242.0	20011.2	19745.4	19345.5	19069.0
37.5°	25578.4	25578.4	25301.9	24765.0	23949.0	23487.4	22204.3	21925.1	21640.5	21186.9	20875.6
40°	25291.1	25296.6	25355.6	25256.2	24858.9	24504.7	24034.9	23868.5	23624.2	23216.2	22891.4
42.5°	24327.5	24357.1	24749.0	25229.4	25428.0	25371.6	25658.9	25583.7	25411.9	25097.9	24840.2
45°	23106.1	23197.5	23626.9	24534.1	25586.5	26120.5	27019.8	27027.9	26995.7	26826.6	26627.9
47.5°	21428.5	21557.4	22123.7	23350.4	25215.9	26848.1	28402.2	28474.7	28541.8	28431.7	28340.4
50°	19200.6	19353.5	20201.7	21828.4	24461.7	27602.3	31014.0	31341.5	31647.4	31609.9	31671.7
52.5°	16814.2	16994.1	18032.9	19844.7	23165.2	27776.8	32683.6	33217.8	33752.0	34189.5	34653.9
55°	14661.4	14564.8	15603.7	17512.1	21033.9	26990.3	34184.2	34828.3	35424.3	35961.1	36514.0
57.5°	11743.7	11902.0	12943.5	14830.5	18212.7	24770.4	35217.5	36159.8	37016.0	37904.5	38688.3
60°	8584.3	8742.6	9872.7	11789.3	15150.0	21404.3	34428.4	35856.4	37228.0	38589.0	39651.9
62.5°	5183.3	5301.4	6297.3	8122.5	11681.9	17412.9	30912.0	32785.6	34804.2	36430.9	38060.2
65°	3226.5	3293.6	3661.3	4665.3	7502.5	12999.9	25256.2	27299.0	29473.3	31537.5	33231.2
67.5°	2641.4	2665.5	2732.6	2947.3	4120.3	8476.9	18797.9	20607.1	22569.3	24566.4	26450.7
70°	2375.6	2359.4	2359.4	2372.9	2641.4	4557.9	12307.3	13485.8	15120.4	16857.2	18580.5
72.5°	2144.7	2128.7	2099.1	2058.8	2155.5	2780.9	6361.7	7250.2	8428.6	9972.0	11622.9
75°	1927.3	1905.9	1871.0	1819.9	1887.0	2099.1	3054.7	3427.8	4002.2	4823.6	5744.3
77.5°	1701.8	1675.0	1642.8	1605.2	1691.0	1632.0	1790.4	1924.6	2144.7	2407.8	2754.1
80°	1446.9	1422.6	1411.9	1393.2	1495.1	1242.8	1264.3	1347.5	1476.3	1618.6	1779.6
82.5°	1132.7	1132.7	1175.7	1183.8	1296.5	893.9	944.9	1017.3	1084.4	1159.6	1234.8
85°	746.2	751.6	896.5	952.9	1022.7	601.3	708.6	732.8	786.4	829.4	861.6
87.5°	233.5	252.4	547.6	606.6	587.9	340.9	434.9	445.6	483.1	512.7	539.5
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°	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9
2.5°	5113.5	5081.3	5051.7	5049.1	5027.6	4998.1	5008.9	4963.3	4965.9	4941.8	4914.9
5°	6012.8	5991.3	5883.9	5854.3	5773.8	5722.9	5714.8	5607.4	5594.0	5532.2	5465.1
7.5°	7306.5	7236.8	7086.5	7014.0	6877.1	6775.1	6726.7	6584.5	6514.7	6353.6	6281.2
10°	8662.1	8573.6	8388.3	8286.3	8154.8	7991.1	7902.5	7695.8	7615.3	7467.6	7290.5
12.5°	9918.3	9829.7	9639.2	9561.3	9386.9	9212.4	9115.7	8882.3	8777.5	8541.3	8401.7
15°	11080.6	10992.0	10825.7	10745.1	10570.7	10428.4	10299.5	10068.7	9945.2	9725.1	9542.6
17.5°	12208.0	12114.1	11969.1	11896.7	11727.5	11582.6	11443.0	11225.6	11099.4	10879.3	10715.6
20°	13254.9	13185.1	13080.5	12983.8	12814.7	12683.2	12516.7	12328.8	12146.3	11985.2	11829.6
22.5°	14167.6	14140.8	14027.9	13985.1	13840.1	13727.3	13582.3	13397.2	13265.6	13061.6	12916.7
25°	14954.0	14946.0	14892.3	14878.9	14776.8	14669.5	14637.3	14484.3	14363.5	14183.6	14033.4
27.5°	15630.5	15638.6	15625.1	15662.7	15635.8	15587.5	15590.2	15539.2	15469.5	15319.1	15187.5
30°	16382.0	16339.1	16363.3	16416.9	16433.1	16438.4	16527.0	16556.6	16551.1	16451.9	16387.5
32.5°	17445.0	17343.0	17249.1	17241.0	17294.7	17316.2	17466.5	17544.3	17611.4	17635.7	17646.3
35°	18800.6	18596.6	18400.6	18296.0	18204.6	18228.9	18336.2	18462.4	18610.0	18712.0	18832.8
37.5°	20507.8	20258.1	19911.8	19664.9	19603.2	19469.0	19538.8	19638.1	19783.1	19941.4	20150.8
40°	22577.3	22198.9	21809.6	21482.2	21305.0	21058.1	21055.4	21036.6	21125.2	21272.8	21568.1
42.5°	24569.1	24233.5	23820.1	23476.6	23245.7	22915.5	22848.4	22674.0	22714.2	22843.1	23130.4
45°	26434.7	26158.2	25905.8	25508.6	25312.6	24955.6	24842.9	24636.2	24520.7	24579.8	24867.0
47.5°	28241.1	28064.0	27800.9	27543.3	27392.9	27073.5	26928.6	26781.0	26633.2	26627.9	26928.6
50°	31762.9	31668.9	31357.6	31089.1	31161.6	30769.7	30793.9	30396.6	30576.5	30597.9	31228.7
52.5°	35072.6	35400.1	35630.9	35912.8	36095.3	36130.2	36251.0	36430.9	36648.2	37077.8	37662.9
55°	36967.7	37378.4	37617.3	37832.0	38186.3	38261.5	38462.8	38701.7	38892.3	39375.5	39872.1
57.5°	39219.8	39982.1	40352.5	40693.5	41171.2	41353.8	41689.3	41949.7	42196.6	42768.4	43369.6
60°	40607.6	41536.3	42290.6	42830.1	43428.8	43858.2	44365.6	44773.5	45353.3	46037.8	46934.4
62.5°	39504.3	40867.9	41869.2	42795.2	43608.6	44429.9	45157.3	45919.8	46800.2	47836.2	49226.7
65°	35110.2	36498.0	38213.2	39174.2	40250.6	41517.5	42623.5	43858.2	45058.1	46566.7	48622.8
67.5°	28265.4	29878.6	31805.9	32774.8	34012.3	35426.9	36667.1	38175.6	39576.8	41404.8	43946.8
70°	20373.6	22459.3	24080.6	25092.5	26536.7	27994.2	29191.4	30946.9	32106.5	33980.1	36608.0
72.5°	12900.5	14546.1	16532.4	17807.4	19090.5	20566.8	21790.9	23304.8	24386.5	26093.7	28474.7
75°	6936.1	8149.4	9894.2	11104.8	12479.2	13740.8	15174.1	16188.8	16988.8	18339.0	20271.6
77.5°	3250.6	3988.8	4871.9	5803.4	6734.8	7706.5	8651.4	9472.7	9816.3	10589.4	11730.3
80°	1973.0	2211.8	2469.5	2756.8	3146.0	3460.0	3876.1	4176.7	4198.2	4442.5	4791.4
82.5°	1318.0	1406.6	1484.4	1556.8	1656.2	1734.0	1822.6	1927.3	1970.2	2026.7	2139.4
85°	899.3	942.1	958.3	1003.9	993.2	1020.0	1054.9	1089.9	1108.6	1105.9	1157.0
87.5°	553.0	574.4	585.1	595.9	587.9	577.1	593.2	612.0	617.4	601.3	606.6
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9
2.5°	4920.3	4896.1	4871.9	4855.8	4850.4	4708.2	4646.4	4606.2	4520.3	4450.6	4394.2
5°	5427.6	5376.6	5336.3	5288.0	5261.1	4901.5	4769.9	4678.7	4528.4	4439.8	4359.2
7.5°	6243.6	6101.3	6018.1	5924.2	5843.6	5194.0	4976.7	4834.4	4625.0	4506.9	4415.6
10°	7169.7	7022.0	6890.5	6745.5	6619.4	5583.3	5266.6	5046.4	4769.9	4617.0	4496.2
12.5°	8203.1	8058.2	7891.8	7706.5	7545.5	6077.1	5637.0	5322.9	4944.4	4740.5	4571.3
15°	9424.4	9169.4	8968.1	8753.4	8565.5	6667.7	6069.2	5634.3	5129.6	4853.2	4627.6
17.5°	10559.9	10291.5	10017.7	9829.7	9612.4	7330.8	6504.0	5951.0	5282.6	4925.6	4638.4
20°	11668.5	11375.9	11139.7	10887.4	10659.2	8017.9	6968.3	6230.2	5381.9	4928.3	4571.3
22.5°	12645.6	12463.0	12200.0	11926.2	11695.3	8705.1	7403.2	6466.4	5419.5	4866.6	4453.2
25°	13756.8	13563.6	13241.5	13010.6	12752.9	9405.6	7830.0	6649.0	5398.0	4751.2	4270.6
27.5°	14943.3	14728.5	14398.4	14156.8	13845.4	10133.1	8221.9	6780.4	5317.5	4563.3	4026.4
30°	16180.7	15984.8	15660.0	15415.8	15101.7	10903.5	8659.5	6869.0	5156.5	4302.8	3741.9
32.5°	17509.4	17345.8	17023.6	16768.6	16433.1	11738.3	9067.4	6895.9	4912.2	3994.2	3441.2
35°	18771.0	18658.3	18387.2	18148.3	17799.3	12527.5	9499.6	6882.4	4622.3	3655.9	3167.5
37.5°	20191.0	20123.9	19989.7	19686.4	19259.6	13598.5	10017.7	6826.0	4268.0	3320.4	2958.1
40°	21705.0	21710.3	21565.3	21358.7	20961.4	14897.6	10635.1	6716.1	3881.5	3025.2	2767.5
42.5°	23307.5	23390.7	23320.9	23173.3	22792.1	16207.6	11373.3	6581.8	3505.7	2737.9	2579.6
45°	25143.5	25245.5	25352.9	25135.4	24765.0	17936.2	12345.0	6407.4	3100.4	2499.1	2450.7
47.5°	27261.4	27422.4	27519.1	27521.8	27151.4	20078.3	13923.3	6302.6	2740.6	2338.0	2389.0
50°	31730.7	31781.8	32009.9	32407.2	32122.6	25036.1	16680.0	6238.3	2496.4	2238.7	2343.4
52.5°	38170.3	38731.3	39125.8	39099.0	38712.4	28184.8	18199.3	5905.4	2351.5	2201.1	2321.9
55°	40792.8	41493.3	42223.5	42416.8	42116.1	30871.7	19635.4	5572.5	2281.6	2228.0	2330.0
57.5°	44287.7	45468.7	46470.0	46891.5	46456.6	34310.3	21525.1	5398.0	2260.1	2300.4	2380.9
60°	48370.4	49830.7	51146.0	51903.0	51903.0	38261.5	23484.6	5325.6	2230.6	2407.8	2466.8
62.5°	50993.0	53137.7	55124.1	56232.6	56200.5	41012.9	24354.3	5078.6	2163.5	2482.9	2585.0
65°	51003.7	53553.8	56085.0	57330.6	57395.0	40674.7	22918.3	4485.4	2040.1	2493.6	2703.0
67.5°	46751.8	49471.0	52421.0	53814.2	54136.3	37442.9	19839.4	3688.1	1838.8	2386.3	2746.0
70°	39485.6	42140.3	45152.0	46521.0	47092.8	31918.6	15979.4	2842.7	1581.1	2150.1	2657.4
72.5°	31107.9	33711.7	35808.1	36809.4	37254.9	24397.3	11636.3	2147.4	1296.5	1811.9	2418.6
75°	22024.4	23978.6	25092.5	25315.3	25385.1	14707.1	7070.3	1597.1	1068.4	1409.2	2042.7
77.5°	12430.8	13268.3	13177.0	13276.4	12449.6	5677.2	3078.9	1143.5	880.5	1071.0	1583.7
80°	4853.2	5003.5	4700.2	4606.2	4225.0	2112.5	1358.3	797.2	703.3	810.7	1108.6
82.5°	2139.4	2209.2	2144.7	2160.9	2066.9	1089.9	813.3	577.1	536.8	593.2	735.5
85°	1178.4	1199.8	1194.5	1229.4	1178.4	434.9	386.6	354.4	375.8	402.6	472.4
87.5°	574.4	579.8	561.0	590.5	571.7	220.1	190.6	201.3	220.1	225.5	225.5
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°	4608.9	4608.9	4608.9	4608.9	4608.9	4608.9
2.5°	4353.9	4332.4	4335.1	4329.7	4319.0	4319.0
5°	4316.3	4294.9	4294.9	4289.4	4276.0	4278.7
7.5°	4353.9	4319.0	4305.6	4286.8	4268.0	4268.0
10°	4396.8	4335.1	4297.5	4265.3	4241.2	4241.2
12.5°	4429.1	4332.4	4270.6	4227.8	4203.5	4203.5
15°	4439.8	4313.6	4227.8	4176.7	4155.2	4152.6
17.5°	4404.9	4241.2	4136.4	4077.4	4050.6	4042.5
20°	4297.5	4109.6	3983.5	3916.4	3878.7	3865.3
22.5°	4136.4	3921.7	3774.1	3704.3	3655.9	3647.9
25°	3910.9	3680.2	3535.2	3468.1	3441.2	3433.1
27.5°	3647.9	3433.1	3309.7	3266.8	3242.5	3239.9
30°	3398.2	3215.7	3124.5	3092.3	3062.7	3057.4
32.5°	3164.7	3049.3	3014.4	2968.8	2899.0	2891.0
35°	2998.4	2987.6	2963.4	2861.4	2775.6	2751.3
37.5°	2896.3	2995.6	2872.1	2670.8	2609.1	2603.7
40°	2837.3	2912.4	2700.4	2630.6	2635.9	2630.6
42.5°	2703.0	2780.9	2705.7	2673.5	2695.0	2700.4
45°	2568.8	2654.8	2746.0	2724.5	2775.6	2775.6
47.5°	2493.6	2622.5	2743.3	2743.3	2818.4	2845.3
50°	2407.8	2595.6	2700.4	2737.9	2797.1	2775.6
52.5°	2402.4	2550.0	2638.6	2705.7	2732.6	2708.5
55°	2410.5	2512.5	2576.9	2652.1	2684.2	2687.0
57.5°	2421.2	2491.0	2534.0	2568.8	2665.5	2665.5
60°	2448.0	2472.2	2496.4	2515.1	2641.4	2644.0
62.5°	2491.0	2453.4	2448.0	2466.8	2627.9	2617.1
65°	2558.1	2426.5	2386.3	2405.1	2614.5	2582.2
67.5°	2649.3	2386.3	2308.5	2321.9	2603.7	2534.0
70°	2732.6	2321.9	2211.8	2198.4	2501.7	2378.3
72.5°	2740.6	2246.7	2077.6	2037.3	2174.3	2056.1
75°	2606.4	2195.8	1930.0	1811.9	1795.8	1779.6
77.5°	2348.7	2166.2	1758.1	1573.0	1540.8	1551.5
80°	1964.9	2056.1	1551.5	1331.4	1505.9	1487.1
82.5°	1468.3	1814.6	1318.0	1178.4	1175.7	1038.8
85°	816.0	1414.6	1073.7	883.1	614.7	595.9
87.5°	228.1	786.4	751.6	499.3	340.9	354.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)