

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: P301968

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301968
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-SL4-7027-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22460.3 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 290
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

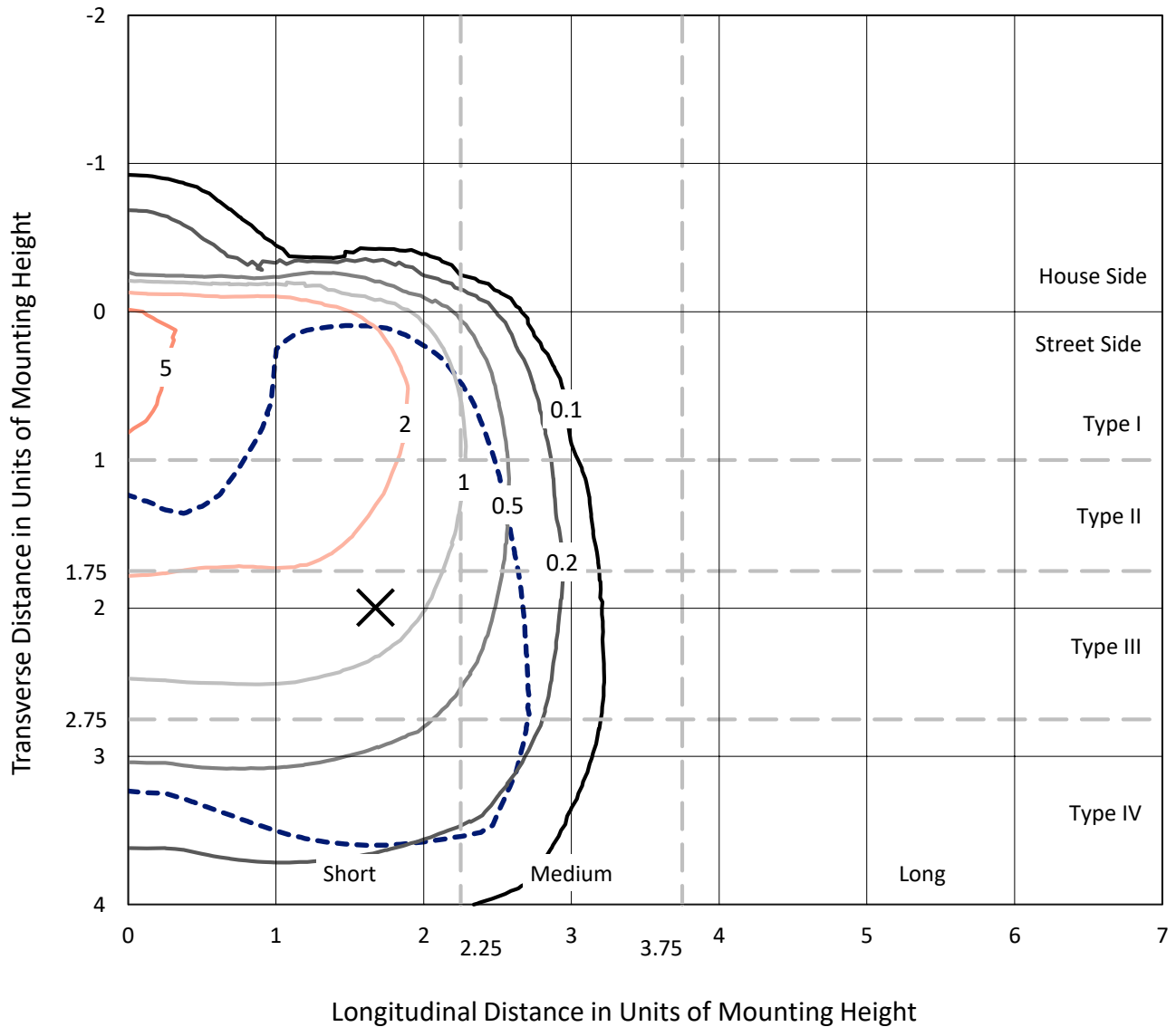


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

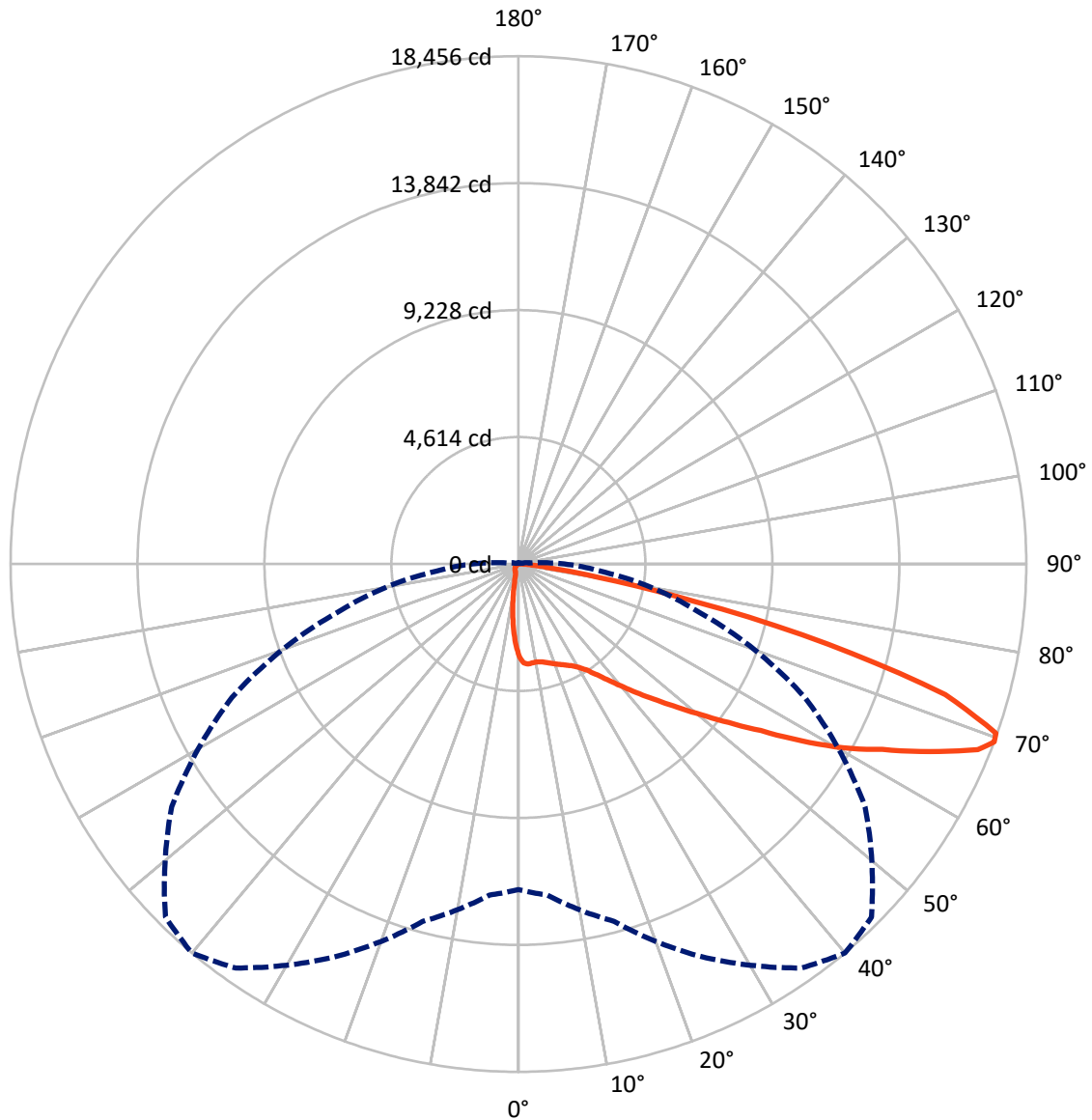


Based on 25 foot mounting height. Maximum calculated value = 5.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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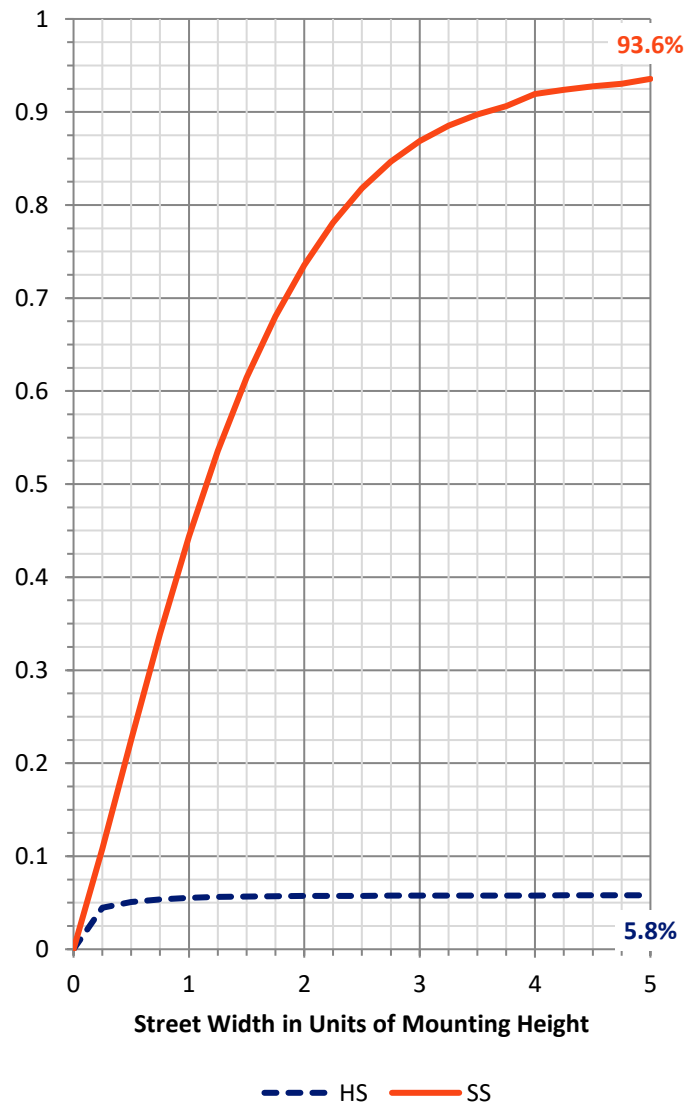
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1314.0	0.0	1314.0
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	21146.2	0.0	21146.2
	% Fixture	94.1	0.0	94.1
Total	Lumens	22460.3	0.0	22460.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.1	1.2
10°-20°	669.1	3.0
20°-30°	1127.0	5.0
30°-40°	1844.9	8.2
40°-50°	3194.4	14.2
50°-60°	5031.5	22.4
60°-70°	6570.9	29.3
70°-80°	3384.3	15.1
80°-90°	366.1	1.6
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°	22460.3	100.0
0°-180°	22460.3	100.0



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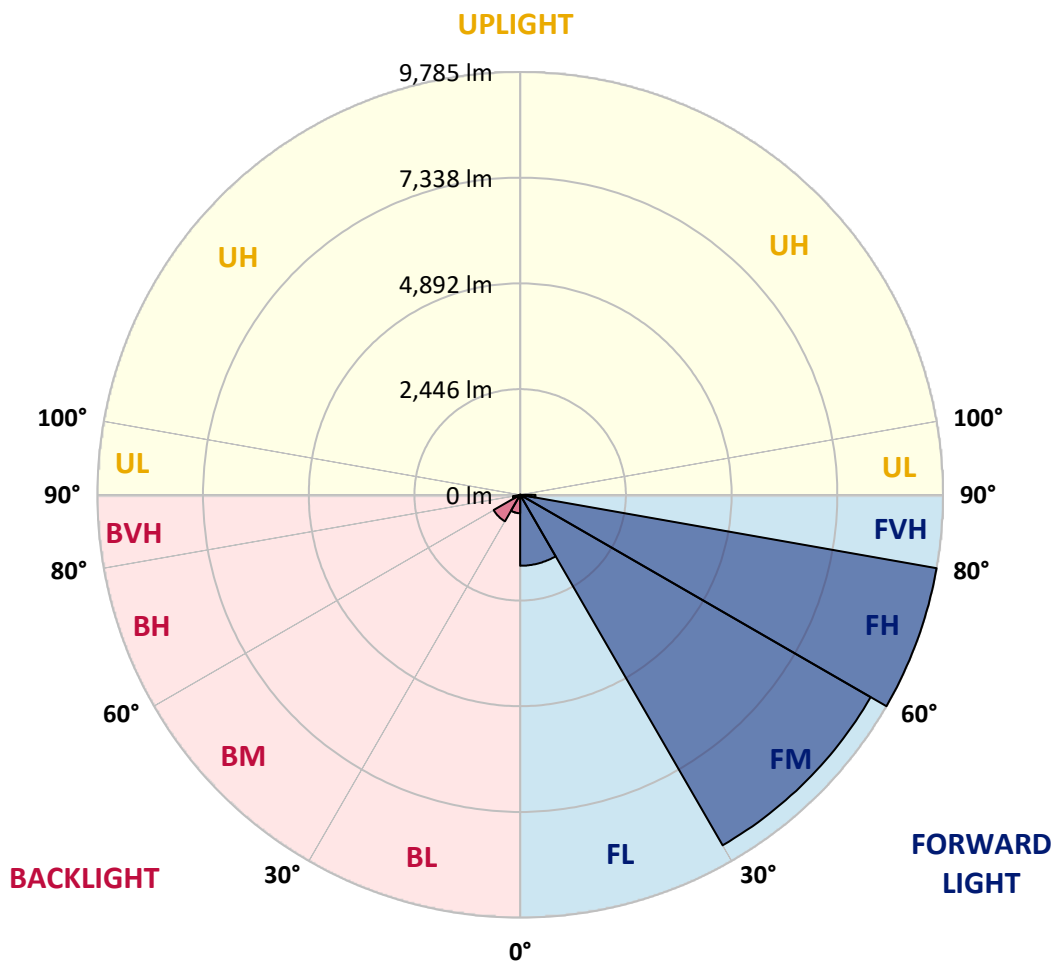
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1642.5	7.3			
FM	(30°-60°)	9364.5	41.7			
FH	(60°-80°)	9784.6	43.6			G4/12000
FVH	(80°-90°)	354.6	1.6			G3/500
BL	(0°-30°)	425.7	1.9	B1/500		
BM	(30°-60°)	706.3	3.1	B1/1000		
BH	(60°-80°)	170.6	0.8	B1/500		G1/500
BVH	(80°-90°)	11.5	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7
2.5°	3684.6	3664.5	3652.5	3636.4	3616.4	3599.0	3592.3	3542.8	3496.1	3431.9	3358.4
5°	3752.7	3746.1	3724.7	3703.3	3679.2	3652.5	3637.8	3578.9	3512.1	3418.5	3290.2
7.5°	3759.4	3751.4	3724.7	3695.3	3661.8	3629.7	3604.3	3545.5	3484.0	3389.1	3232.7
10°	3748.7	3739.4	3719.3	3687.2	3645.8	3615.0	3589.6	3533.5	3481.3	3395.8	3222.0
12.5°	3736.7	3727.3	3718.0	3701.9	3665.8	3644.5	3623.1	3569.6	3522.8	3450.6	3260.8
15°	3748.7	3743.4	3754.1	3747.4	3727.3	3708.6	3687.2	3639.1	3596.3	3536.2	3331.6
17.5°	3799.5	3799.5	3833.0	3837.0	3818.3	3791.5	3760.8	3712.6	3676.5	3625.7	3415.8
20°	3918.5	3914.5	3957.3	3965.3	3919.9	3878.4	3833.0	3774.1	3746.1	3714.0	3498.7
22.5°	4123.1	4104.4	4129.8	4121.7	4032.2	3968.0	3911.8	3839.6	3824.9	3810.2	3591.0
25°	4389.1	4378.4	4395.8	4316.9	4159.2	4072.3	4005.4	3923.9	3923.9	3938.6	3695.3
27.5°	4775.5	4735.4	4676.6	4537.5	4300.9	4189.9	4117.7	4030.8	4053.6	4108.4	3833.0
30°	5171.2	5127.1	4992.1	4778.2	4473.3	4357.0	4272.8	4181.9	4235.4	4335.6	4017.5
32.5°	5561.6	5512.1	5321.0	5050.9	4720.7	4604.4	4522.8	4422.5	4512.1	4680.6	4287.5
35°	5940.0	5895.8	5675.2	5357.1	5049.6	4953.3	4878.4	4791.5	4906.5	5141.8	4668.5
37.5°	6365.1	6317.0	6048.2	5703.3	5449.3	5379.8	5325.0	5238.1	5438.6	5783.5	5199.3
40°	6887.8	6806.3	6444.0	6100.4	5911.9	5878.5	5841.0	5829.0	6140.5	6617.8	5906.5
42.5°	7486.8	7353.1	6858.4	6518.8	6419.9	6444.0	6434.6	6488.1	7018.9	7655.2	6767.5
45°	8085.7	7913.3	7319.7	6965.4	6978.7	7063.0	7115.1	7329.0	8119.1	8845.1	7694.0
47.5°	8593.7	8424.0	7762.2	7448.0	7608.4	7774.2	7915.9	8321.0	9250.2	10016.2	8414.6
50°	9028.2	8867.8	8231.4	7978.8	8339.7	8607.1	8837.1	9437.3	10466.8	10908.0	8920.0
52.5°	9383.9	9276.9	8718.1	8587.1	9175.3	9567.0	9903.9	10623.2	11544.3	11632.6	9313.0
55°	9730.1	9653.9	9240.8	9310.3	10156.6	10690.0	11116.5	11881.2	12472.2	12236.9	9690.0
57.5°	10128.5	10059.0	9837.1	10227.5	11446.7	12117.9	12583.1	12996.2	13289.0	12854.5	10045.6
60°	10535.0	10494.9	10500.2	11246.2	12928.1	13572.5	13829.1	13936.1	14091.2	13436.1	10065.7
62.5°	10922.7	10998.9	11258.2	12379.9	14346.5	14841.2	14970.9	15076.5	14894.7	13528.3	9299.6
65°	11579.1	11703.4	12322.4	13897.3	15906.7	16436.1	16569.8	16207.5	15021.7	12335.8	7564.3
67.5°	11900.0	12127.2	13231.5	15311.8	17420.1	18008.4	17958.9	16281.1	13480.2	9406.6	4854.4
69°	11833.1	12075.1	13441.4	15745.0	17922.8	18456.2	18142.1	15381.3	11484.2	6814.3	2980.0
70°	11568.4	11813.1	13333.1	15728.9	17987.0	18409.4	17802.5	14270.3	9710.1	4982.7	1863.7
72.5°	9660.6	9871.8	11837.1	14216.8	16569.8	16226.2	14893.3	9886.6	4731.4	1357.0	419.8
75°	5946.6	6064.3	8493.5	10710.1	12514.9	11632.6	9922.6	4918.5	1410.5	383.7	232.6
77.5°	3141.8	3195.2	4649.8	6313.0	7933.3	6564.3	5085.7	1918.5	649.7	240.6	168.5
80°	1857.0	1897.1	2504.1	2886.4	3433.2	2867.7	2033.5	1177.8	465.2	151.1	149.7
82.5°	1062.9	1088.3	1815.5	1604.3	1353.0	1155.1	1012.1	1116.3	279.4	101.6	155.1
85°	390.4	395.7	1021.4	1220.6	804.8	478.6	502.7	925.2	74.9	64.2	121.7
87.5°	181.8	177.8	525.4	747.3	470.6	303.5	391.7	203.2	29.4	41.4	33.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7	3355.7
2.5°	3315.6	3266.1	3176.5	3084.3	2990.7	2918.5	2847.6	2791.5	2772.8	2738.0	2740.7
5°	3214.0	3123.1	2935.9	2746.0	2548.2	2385.1	2231.3	2107.0	2046.8	1985.3	1985.3
7.5°	3125.7	2993.4	2700.6	2391.8	2072.2	1803.5	1561.5	1379.7	1279.4	1199.2	1197.9
10°	3092.3	2913.2	2504.1	2061.5	1616.3	1250.0	962.6	778.1	683.2	621.7	619.0
12.5°	3107.0	2885.1	2353.0	1756.7	1197.9	803.5	557.5	438.5	398.4	379.7	379.7
15°	3149.8	2877.1	2201.9	1458.6	846.3	502.7	370.3	338.2	335.6	335.6	335.6
17.5°	3201.9	2879.7	2046.8	1168.5	576.2	359.6	319.5	315.5	318.2	318.2	318.2
20°	3255.4	2881.1	1879.7	899.7	406.4	312.8	300.8	299.5	302.1	302.1	303.5
22.5°	3320.9	2887.8	1712.6	672.5	335.6	295.5	286.1	286.1	287.4	287.4	286.1
25°	3395.8	2901.1	1538.8	498.7	306.2	283.4	275.4	274.1	275.4	274.1	272.7
27.5°	3489.4	2919.8	1344.9	390.4	292.8	271.4	264.7	264.7	263.4	262.0	260.7
30°	3607.0	2941.2	1127.0	331.6	279.4	260.7	254.0	252.7	251.3	248.7	248.7
32.5°	3786.2	2988.0	911.8	300.8	264.7	246.0	240.6	240.6	238.0	235.3	234.0
35°	4061.6	3080.3	719.3	282.1	248.7	230.0	223.3	223.3	220.6	219.3	217.9
37.5°	4442.6	3220.6	558.8	264.7	232.6	212.6	205.9	204.5	201.9	199.2	197.9
40°	4949.3	3394.4	439.8	248.7	216.6	195.2	189.8	187.2	181.8	177.8	177.8
42.5°	5585.7	3592.3	357.0	231.3	197.9	179.1	175.1	171.1	161.8	157.8	156.4
45°	6251.5	3770.1	302.1	211.2	179.1	163.1	160.4	153.7	141.7	137.7	137.7
47.5°	6731.4	3811.6	266.0	192.5	161.8	145.7	144.4	132.4	121.7	119.0	117.6
50°	7030.9	3730.0	236.6	173.8	145.7	129.7	125.7	111.0	104.3	101.6	100.3
52.5°	7232.8	3584.3	212.6	157.8	131.0	115.0	105.6	94.9	89.6	86.9	86.9
55°	7394.5	3378.4	188.5	143.1	119.0	102.9	89.6	81.6	76.2	73.5	73.5
57.5°	7440.0	3099.0	164.4	131.0	107.0	90.9	76.2	70.9	64.2	62.8	62.8
60°	7109.8	2595.0	145.7	116.3	96.3	78.9	66.8	60.2	53.5	52.1	50.8
62.5°	6239.4	2008.1	128.3	102.9	84.2	68.2	57.5	49.5	44.1	44.1	44.1
65°	4759.4	1346.3	112.3	89.6	73.5	57.5	49.5	40.1	37.4	37.4	38.8
67.5°	2849.0	732.6	96.3	76.2	62.8	48.1	41.4	34.8	33.4	34.8	34.8
69°	1669.8	430.5	86.9	68.2	54.8	42.8	36.1	30.7	33.4	34.8	34.8
70°	1030.8	290.1	80.2	61.5	49.5	38.8	33.4	29.4	32.1	33.4	33.4
72.5°	287.4	149.7	64.2	48.1	40.1	32.1	26.7	26.7	30.7	32.1	32.1
75°	187.2	111.0	49.5	36.1	30.7	25.4	22.7	25.4	29.4	30.7	30.7
77.5°	155.1	90.9	40.1	29.4	25.4	24.1	21.4	22.7	26.7	28.1	28.1
80°	141.7	64.2	32.1	26.7	22.7	21.4	20.1	18.7	24.1	25.4	25.4
82.5°	135.0	50.8	28.1	24.1	21.4	18.7	17.4	18.7	21.4	22.7	24.1
85°	84.2	33.4	25.4	22.7	18.7	17.4	17.4	17.4	20.1	21.4	21.4
87.5°	30.7	26.7	22.7	18.7	16.0	16.0	16.0	16.0	17.4	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)