

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: ITL49959_320MP

Luminaire Tested: **GSM-XX-320-MP-XX-4S-FG-XX-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: ITL49959_320MP
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GSM-XX-320-MP-XX-4S-FG-XX-X
Description: MEDIUM ARCHITECTURAL AREA LUMINAIRE - TYPE IV DISTRIBUTION
Light Source: 320 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 30000 (1 lamp)
Luminaire Lumens: 22370.5 lumens
Efficiency: 74.6%
Efficacy: 63.9 lumens/watt
Luminous Opening: Rectangular (W 1.09' x L: 1.06' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B4 - U0 - G3

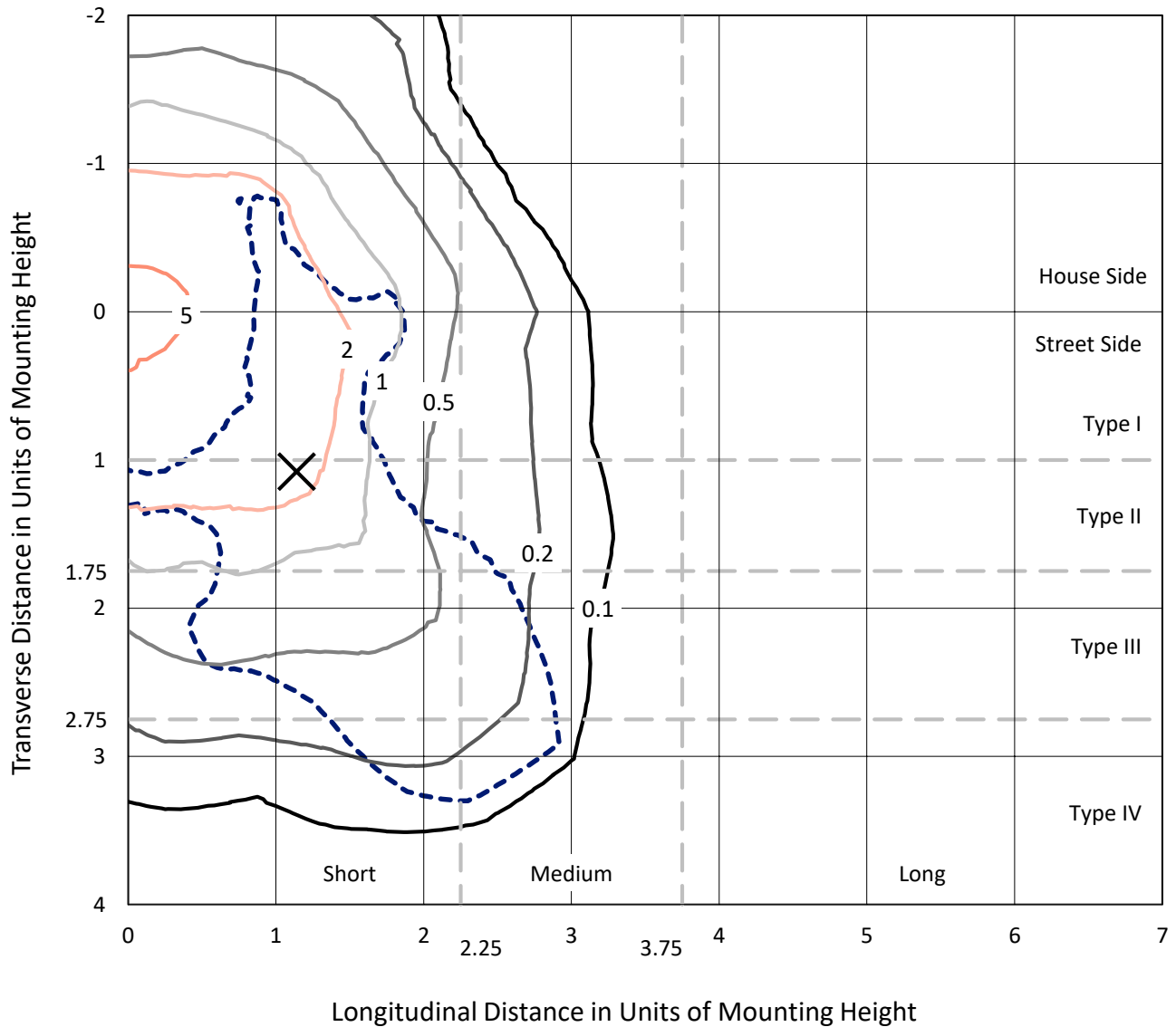
Input Watts (W): 350
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

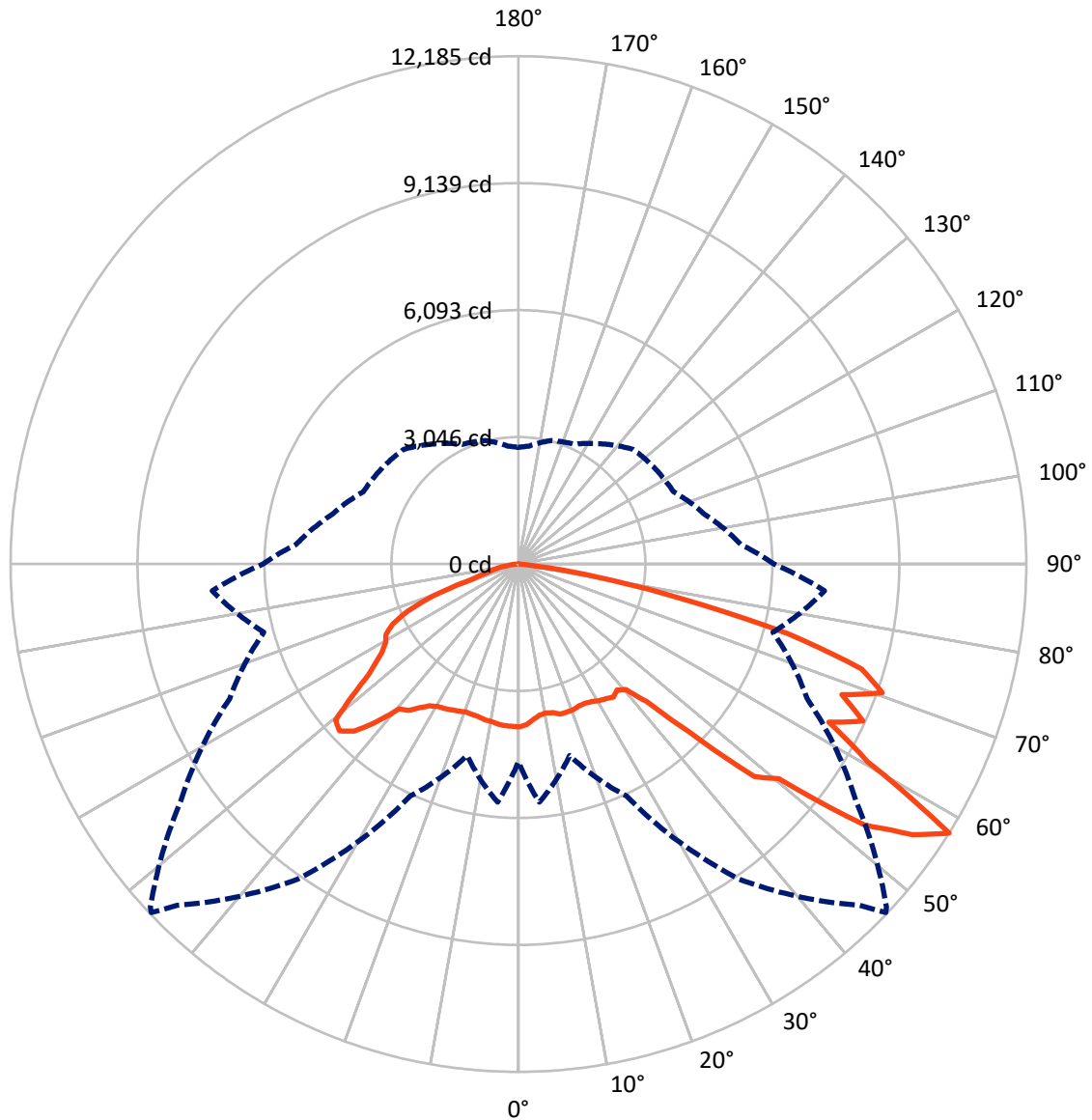
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 46.6-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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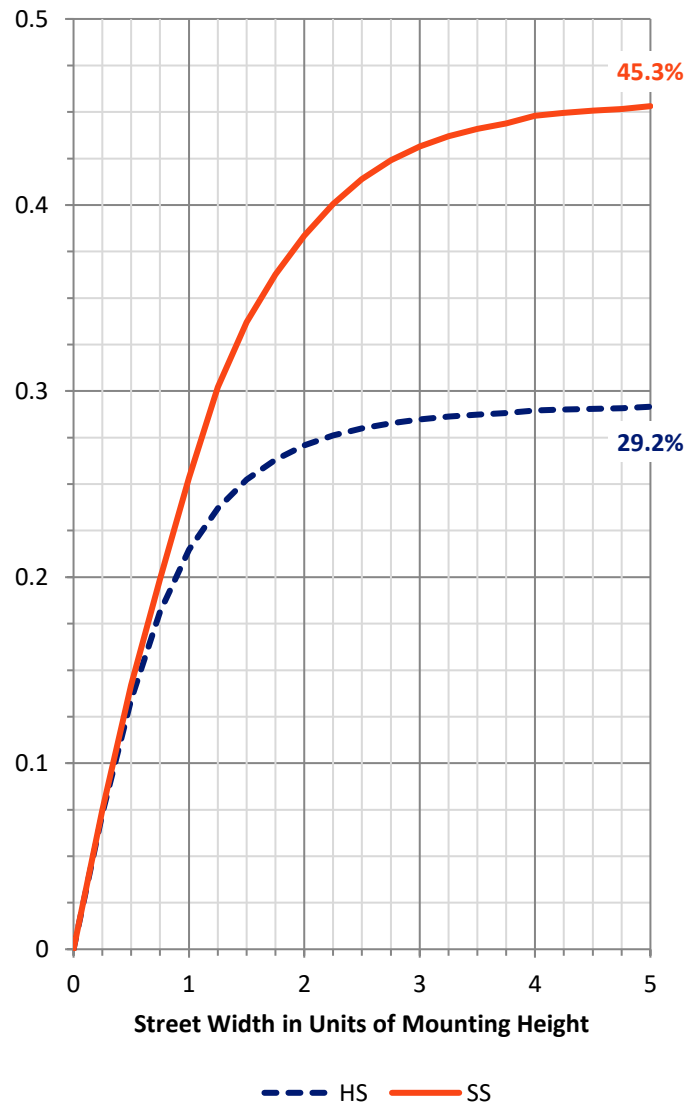
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8789.2	0.0	8789.2
	% Lamp	29.3	0.0	29.3
Street Side	Lumens	13581.3	0.0	13581.3
	% Lamp	45.3	0.0	45.3
Total	Lumens	22370.5	0.0	22370.5
	% Lamp	74.6	0.0	74.6

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	362.7	1.6	1.2
10°-20°	1061.1	4.7	3.5
20°-30°	1767.3	7.9	5.9
30°-40°	2624.9	11.7	8.7
40°-50°	4165.1	18.6	13.9
50°-60°	5283.2	23.6	17.6
60°-70°	4437.8	19.8	14.8
70°-80°	2413.3	10.8	8.0
80°-90°	255.2	1.1	0.9
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	22370.5	100.0	74.6
0°-180°	22370.5	100.0	74.6

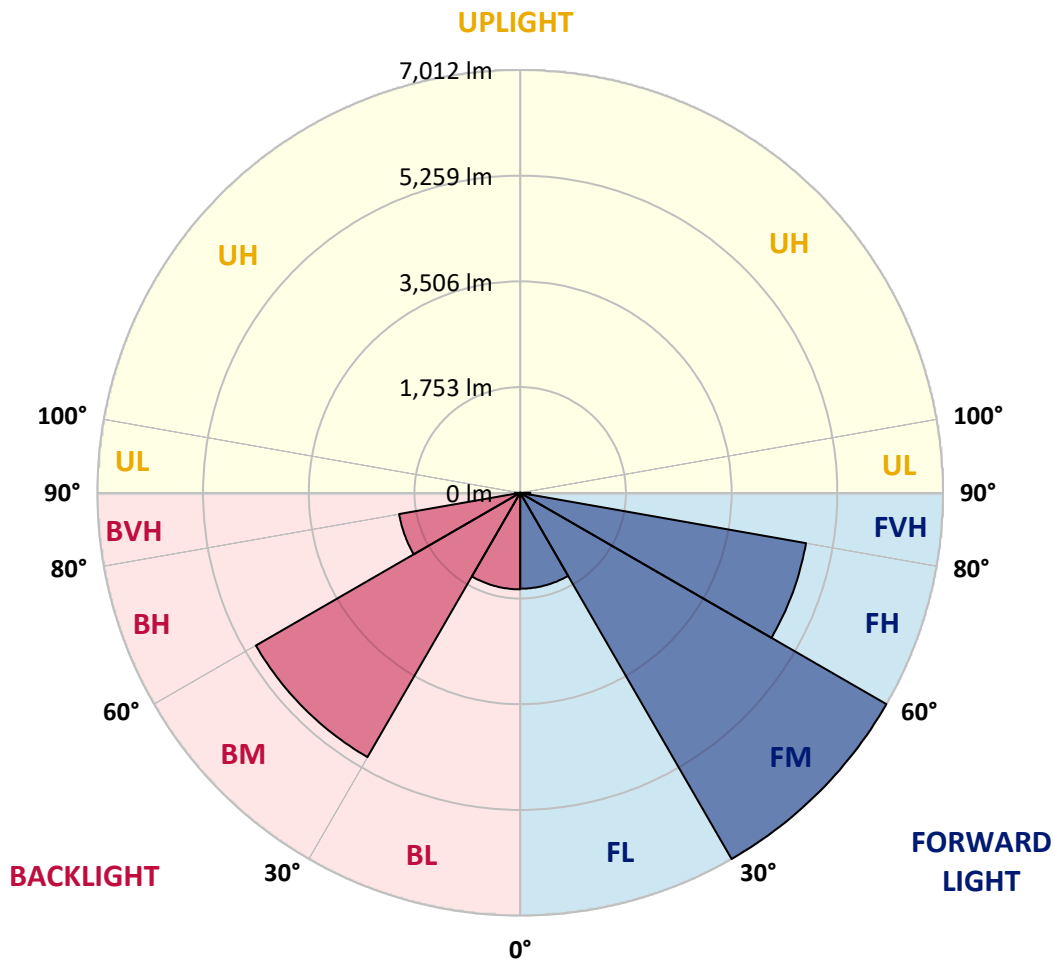


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1590.0	5.3			
FM (30°-60°)	7011.8	23.4			
FH (60°-80°)	4812.7	16.0			G2/5000
FVH (80°-90°)	166.8	0.6			G2/225
BL (0°-30°)	1601.1	5.3	B3/2500		
BM (30°-60°)	5061.3	16.9	B4/8500		
BH (60°-80°)	2038.4	6.8	B3/2500		G3/2500
BVH (80°-90°)	88.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	
Trapped Light	7629.5	25.4			

BUG Rating: B4-U0-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46.6°	55°	65°	75°	85°
0°	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2
2.5°	3813.3	3830.0	3830.0	3855.8	3880.8	3880.8	3855.8	3880.8	3898.3	3889.2	3898.3
5°	3660.8	3677.5	3685.8	3711.7	3728.3	3754.2	3745.8	3770.8	3796.7	3813.3	3838.3
7.5°	3593.3	3618.3	3618.3	3635.0	3644.2	3669.2	3660.8	3685.8	3728.3	3762.5	3805.0
10°	3593.3	3593.3	3610.0	3618.3	3635.0	3644.2	3635.0	3669.2	3703.3	3736.7	3779.2
12.5°	3593.3	3601.7	3618.3	3652.5	3652.5	3660.8	3660.8	3695.0	3720.0	3720.0	3745.8
15°	3677.5	3660.8	3669.2	3660.8	3703.3	3720.0	3736.7	3711.7	3703.3	3711.7	3736.7
17.5°	3898.3	3864.2	3957.5	3872.5	3745.8	3736.7	3736.7	3736.7	3728.3	3728.3	3770.8
20°	3982.5	3990.8	3745.8	3770.8	3754.2	3728.3	3736.7	3762.5	3779.2	3796.7	3847.5
22.5°	3779.2	3779.2	3677.5	3720.0	3685.8	3703.3	3703.3	3779.2	3855.8	3889.2	3949.2
25°	3745.8	3695.0	3593.3	3660.8	3652.5	3703.3	3703.3	3805.0	3957.5	3974.2	4059.2
27.5°	3593.3	3635.0	3610.0	3618.3	3610.0	3703.3	3736.7	3906.7	4101.7	4118.3	4185.8
30°	3677.5	3610.0	3575.8	3685.8	3618.3	3736.7	3805.0	4033.3	4313.3	4185.8	4236.7
32.5°	3931.7	3957.5	3575.8	3762.5	3685.8	3813.3	3855.8	4440.0	4364.2	4126.7	4321.7
35°	3982.5	4033.3	3906.7	3779.2	3745.8	3830.0	3923.3	4305.0	4592.5	4525.0	4652.5
37.5°	3898.3	4008.3	4185.8	3982.5	3855.8	3787.5	3838.3	4321.7	5041.7	5305.0	5194.2
40°	4152.5	4338.3	4508.3	4245.0	4152.5	3898.3	3957.5	4533.3	5643.3	5685.8	5550.0
42.5°	4610.0	4736.7	4813.3	4541.7	4398.3	4355.8	4508.3	4923.3	6092.5	6059.2	6059.2
45°	5423.3	5169.2	5016.7	4795.8	5355.8	5745.0	5736.7	5516.7	6618.3	6525.0	6846.7
47.5°	5610.0	5838.3	5651.7	6110.0	6600.8	7431.7	7618.3	6160.8	7075.8	7135.0	7372.5
50°	6694.2	5990.8	6313.3	7584.2	7304.2	7923.3	8100.8	7685.8	7600.8	7253.3	7033.3
52.5°	5880.8	6050.0	5948.3	8330.0	8041.7	9931.7	10405.8	8846.7	8084.2	7600.8	7584.2
54°	5084.2	5677.5	5660.8	7635.0	8423.3	10575.0	10982.5	9558.3	8507.5	7923.3	7846.7
55°	4880.8	5465.8	5516.7	6948.3	8440.0	10838.3	11465.0	9855.0	8812.5	8270.8	7516.7
57.5°	4745.0	5736.7	4754.2	6143.3	9228.3	11584.2	12185.0	9880.8	7643.3	6321.7	7372.5
60°	4541.7	5380.8	4846.7	6262.5	7990.8	9812.5	9626.7	7897.5	5508.3	5135.0	6397.5
62.5°	4355.8	4889.2	5364.2	6643.3	6889.2	8710.8	8363.3	7007.5	4965.8	4974.2	5541.7
65°	4185.8	4999.2	6245.0	6397.5	6600.8	8685.8	9084.2	5923.3	4541.7	4398.3	4431.7
67.5°	3779.2	4745.0	6126.7	6423.3	7575.8	9304.2	8372.5	5516.7	4500.0	3880.8	3745.8
70°	3287.5	4025.0	4626.7	6033.3	8210.8	9617.5	9261.7	5880.8	4355.8	3550.8	2813.3
72.5°	2796.7	3110.0	3025.0	5016.7	9025.0	9100.8	8609.2	5550.0	4075.8	2508.3	2211.7
75°	1931.7	2135.0	2347.5	4305.0	7135.0	7228.3	6685.8	3931.7	3152.5	1805.0	1745.8
77.5°	1186.7	1406.7	1380.8	2305.0	3830.0	4490.8	3965.8	2550.8	2406.7	1644.2	1465.8
80°	644.2	652.5	686.7	991.7	1254.2	2220.0	1931.7	1491.7	1669.2	1067.5	1169.2
82.5°	186.7	195.0	262.5	296.7	423.3	762.5	585.0	729.2	677.5	457.5	635.8
85°	34.2	42.5	67.5	50.8	76.7	127.5	59.2	296.7	211.7	127.5	203.3
87.5°	0.0	0.0	0.0	0.0	0.0	8.3	0.0	8.3	8.3	16.7	16.7
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°	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2	3904.2
2.5°	3906.7	3898.3	3898.3	3889.2	3898.3	3898.3	3889.2	3880.8	3872.5	3880.8	3880.8
5°	3847.5	3864.2	3889.2	3898.3	3898.3	3889.2	3889.2	3915.0	3915.0	3906.7	3915.0
7.5°	3821.7	3838.3	3880.8	3880.8	3880.8	3872.5	3855.8	3880.8	3889.2	3880.8	3880.8
10°	3787.5	3813.3	3847.5	3880.8	3864.2	3830.0	3813.3	3821.7	3821.7	3805.0	3796.7
12.5°	3762.5	3779.2	3813.3	3847.5	3830.0	3821.7	3770.8	3745.8	3711.7	3677.5	3660.8
15°	3754.2	3745.8	3770.8	3779.2	3787.5	3787.5	3754.2	3677.5	3626.7	3618.3	3610.0
17.5°	3787.5	3787.5	3821.7	3838.3	3805.0	3770.8	3745.8	3652.5	3601.7	3601.7	3575.8
20°	3838.3	3847.5	3872.5	3872.5	3838.3	3754.2	3728.3	3635.0	3584.2	3567.5	3559.2
22.5°	3949.2	3965.8	4000.0	3931.7	3864.2	3796.7	3711.7	3626.7	3567.5	3550.8	3541.7
25°	4084.2	4084.2	4084.2	4008.3	3931.7	3830.0	3695.0	3618.3	3567.5	3541.7	3508.3
27.5°	4220.0	4203.3	4203.3	4126.7	3990.8	3872.5	3703.3	3601.7	3525.0	3482.5	3490.8
30°	4270.8	4262.5	4236.7	4245.0	4118.3	3889.2	3728.3	3567.5	3482.5	3457.5	3457.5
32.5°	4415.0	4440.0	4313.3	4364.2	4254.2	3965.8	3736.7	3550.8	3465.8	3423.3	3423.3
35°	4694.2	4669.2	4508.3	4703.3	4660.8	4084.2	3745.8	3550.8	3423.3	3372.5	3372.5
37.5°	5228.3	5177.5	4982.5	4889.2	5126.7	4262.5	3762.5	3550.8	3380.8	3330.0	3321.7
40°	5610.0	5584.2	5346.7	5262.5	5059.2	4398.3	3838.3	3541.7	3355.8	3296.7	3287.5
42.5°	6151.7	6126.7	5694.2	5720.0	5305.0	5059.2	3949.2	3550.8	3338.3	3279.2	3270.8
45°	7041.7	6999.2	6143.3	6118.3	5745.0	5592.5	4185.8	3550.8	3305.0	3262.5	3287.5
47.5°	7448.3	7194.2	6228.3	6126.7	5906.7	5864.2	4228.3	3533.3	3279.2	3262.5	3321.7
50°	6864.2	6669.2	6008.3	5736.7	5982.5	5728.3	4126.7	3474.2	3254.2	3228.3	3254.2
52.5°	7007.5	6423.3	5372.5	4635.0	5779.2	4770.8	3847.5	3398.3	3211.7	3321.7	3185.8
54°	6838.3	5965.8	4948.3	4287.5	5177.5	4355.8	3745.8	3338.3	3195.0	3415.0	3135.0
55°	6364.2	5567.5	4787.5	4211.7	4795.8	4203.3	3660.8	3305.0	3203.3	3321.7	3050.8
57.5°	6126.7	5355.8	4618.3	4101.7	4000.0	3889.2	3516.7	3169.2	3067.5	2838.3	2796.7
60°	6194.2	5736.7	4550.8	3965.8	3762.5	3677.5	3398.3	3008.3	2906.7	2457.5	2423.3
62.5°	5516.7	5389.2	4389.2	3736.7	3584.2	3601.7	3305.0	2855.8	2890.0	2262.5	2270.8
65°	4601.7	4948.3	3847.5	3245.8	3050.8	3389.2	3152.5	2685.8	2364.2	2084.2	2101.7
67.5°	4236.7	4126.7	2745.8	2101.7	1915.0	3059.2	2880.8	2482.5	2067.5	2008.3	1965.8
70°	3236.7	2601.7	1508.3	1211.7	1203.3	2380.8	2491.7	2169.2	1805.0	1872.5	1779.2
72.5°	2042.5	1474.2	1008.3	813.3	890.0	1169.2	1686.7	1677.5	1449.2	1474.2	1559.2
75°	1449.2	1085.0	762.5	635.8	695.0	813.3	890.0	957.5	983.3	1152.5	1355.8
77.5°	1228.3	881.7	593.3	483.3	525.0	644.2	585.0	610.0	644.2	695.0	796.7
80°	965.8	652.5	432.5	347.5	390.0	483.3	432.5	423.3	440.8	465.8	491.7
82.5°	516.7	355.8	262.5	220.0	245.8	288.3	262.5	262.5	280.0	270.8	305.0
85°	178.3	144.2	118.3	101.7	101.7	118.3	118.3	118.3	127.5	127.5	152.5
87.5°	16.7	16.7	25.8	16.7	16.7	16.7	25.8	25.8	25.8	16.7	34.2
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)