

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: P579480

Luminaire Tested: **CTN-CA10-310-740-U-T5-HSS-HM-EX90**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579480  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-CA10-310-740-U-T5-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (10) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 39116 lumens  
Efficiency: N/A  
Efficacy: 125.2 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B5 - U2 - G5

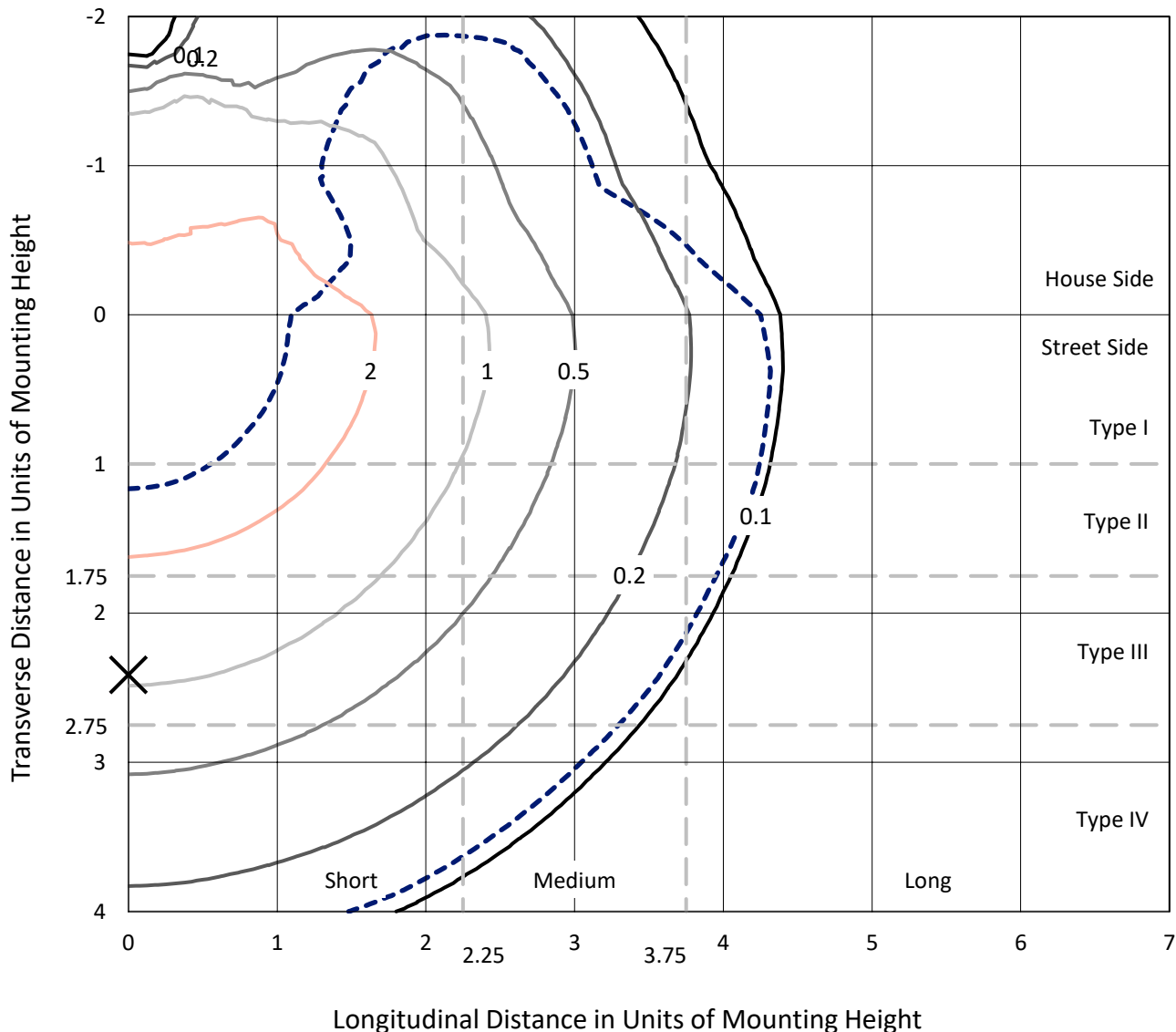
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

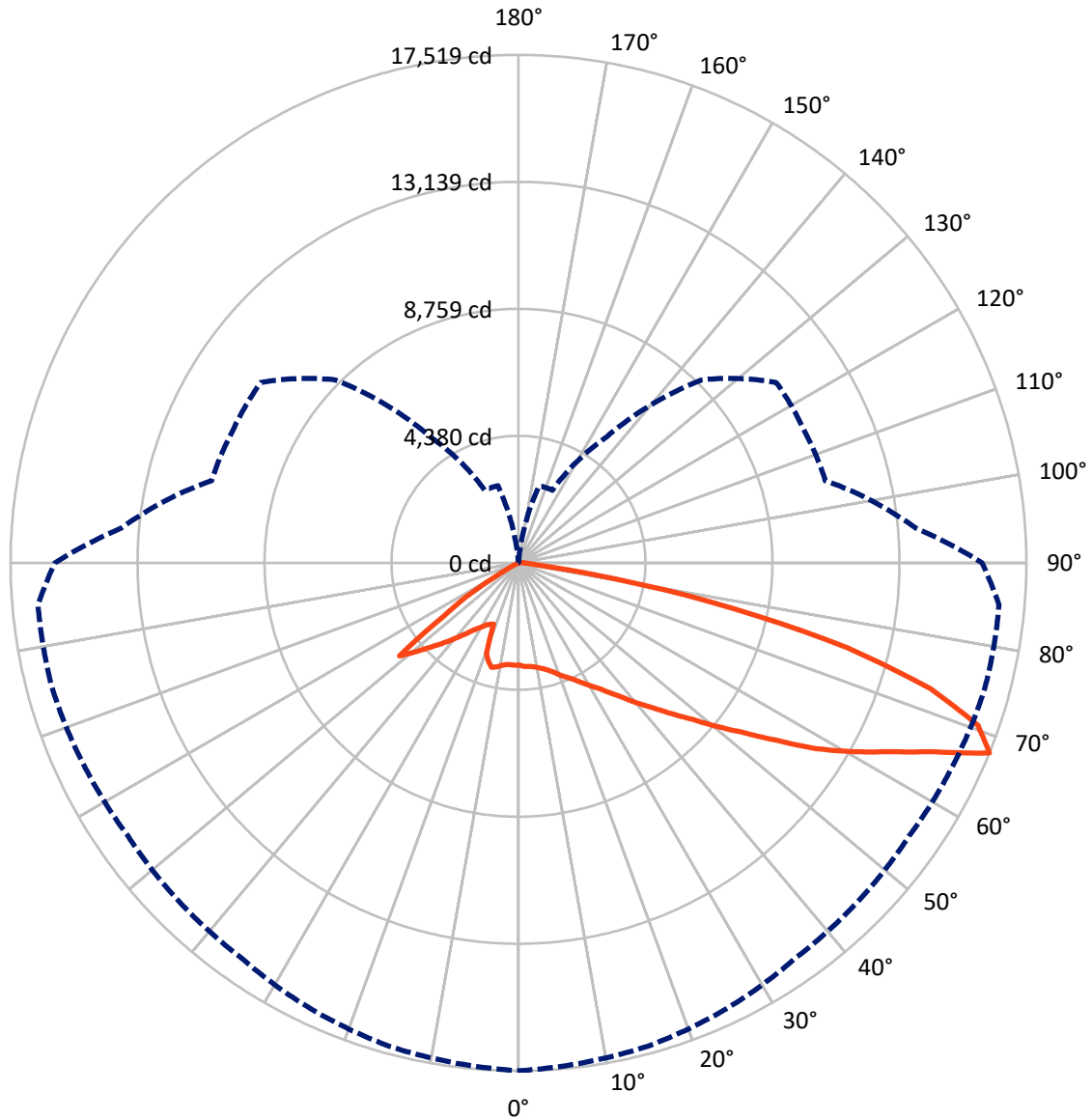
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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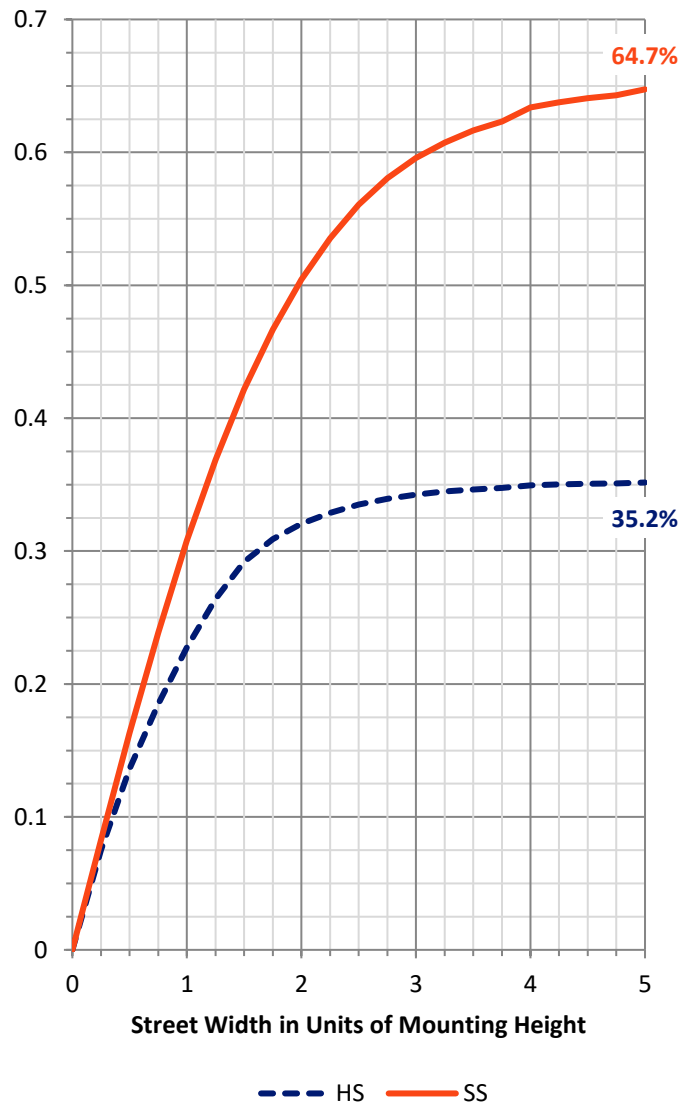
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	13768.8	0.8	13769.6
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	25318.8	27.6	25346.4
	% Fixture	64.7	0.1	64.8
<b>Total</b>	Lumens	39087.6	28.4	39116.0
	% Fixture	99.9	0.1	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	339.1	0.9
10°-20°	1053.5	2.7
20°-30°	1826.5	4.7
30°-40°	2997.0	7.7
40°-50°	4999.0	12.8
50°-60°	8090.3	20.7
60°-70°	11167.2	28.5
70°-80°	8056.6	20.6
80°-90°	558.4	1.4
90°-100°	24.2	0.1
100°-110°	4.1	0.0
110°-120°	0.1	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°	39087.6	99.9
0°-180°	39116.0	100.0

**Coefficient of Utilization**

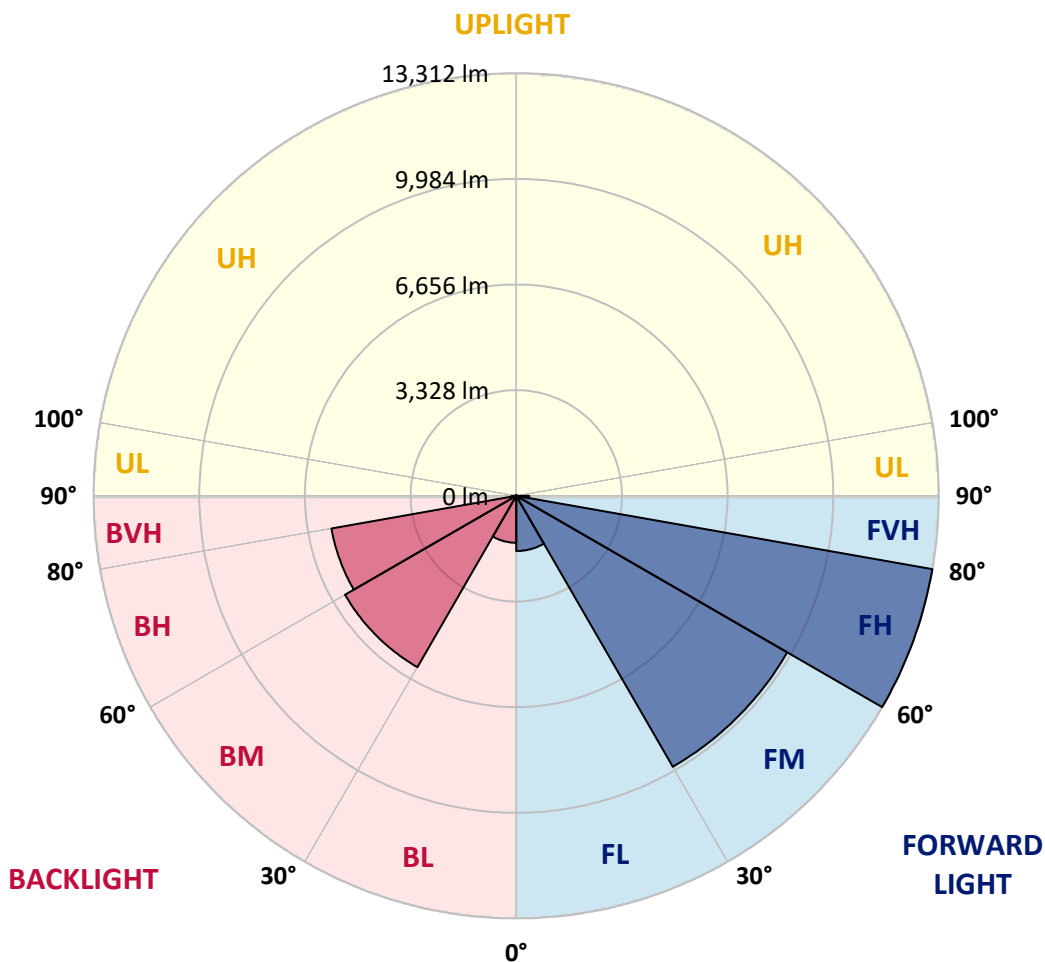


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1739.4	4.4			
FM (30°-60°)	9856.2	25.2			
FH (60°-80°)	13311.7	34.0			G5
FVH (80°-90°)	411.5	1.1			G3/500
BL (0°-30°)	1479.6	3.8	B3/2500		
BM (30°-60°)	6230.0	15.9	B4/8500		
BH (60°-80°)	5912.1	15.1	B5		G5
BVH (80°-90°)	147.0	0.4			G2/225
UL (90°-100°)	24.2	0.1		U2/50	
UH (100°-180°)	4.2	0.0		U1/10	

**BUG Rating: B5-U2-G5**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0
2.5°	3578.9	3558.0	3559.5	3580.4	3523.5	3544.5	3520.5	3541.5	3531.0	3538.5	3547.5
5°	3589.4	3564.0	3567.0	3592.4	3547.5	3564.0	3535.5	3547.5	3538.5	3547.5	3549.0
7.5°	3616.4	3590.9	3592.4	3611.9	3565.5	3577.4	3550.5	3556.5	3541.5	3558.0	3553.5
10°	3673.3	3649.3	3640.3	3656.8	3616.4	3617.9	3586.4	3592.4	3570.0	3592.4	3583.4
12.5°	3749.7	3716.7	3719.7	3728.7	3679.3	3682.3	3644.8	3653.8	3616.4	3647.8	3637.3
15°	3842.5	3802.1	3806.6	3821.5	3773.6	3769.1	3734.7	3734.7	3701.7	3725.7	3715.2
17.5°	3971.3	3926.4	3923.4	3933.8	3894.9	3894.9	3856.0	3851.5	3818.5	3838.0	3835.0
20°	4139.0	4088.1	4079.1	4098.6	4049.1	4055.1	4005.7	4001.2	3965.3	3977.3	3978.8
22.5°	4290.2	4249.8	4248.3	4278.3	4219.9	4227.3	4182.4	4170.4	4140.5	4157.0	4161.5
25°	4463.9	4458.0	4453.5	4463.9	4405.5	4405.5	4374.1	4363.6	4344.1	4356.1	4368.1
27.5°	4682.6	4679.6	4667.6	4669.1	4619.7	4627.2	4592.7	4586.7	4577.8	4576.3	4570.3
30°	4923.7	4910.2	4893.7	4904.2	4881.7	4889.2	4859.3	4839.8	4836.8	4838.3	4829.3
32.5°	5191.7	5173.7	5163.3	5181.2	5190.2	5211.2	5209.7	5155.8	5155.8	5178.2	5137.8
35°	5524.2	5495.7	5504.7	5528.6	5546.6	5600.5	5591.5	5554.1	5566.1	5576.6	5528.6
37.5°	5915.0	5895.5	5936.0	5980.9	5982.4	6058.7	6040.8	6049.8	6048.3	6034.8	6003.3
40°	6383.7	6352.3	6394.2	6428.6	6407.7	6499.0	6496.0	6536.4	6563.4	6609.8	6591.8
42.5°	6849.4	6825.5	6865.9	6940.8	6928.8	7033.6	7048.6	7111.5	7148.9	7220.8	7178.9
45°	7422.9	7409.5	7446.9	7505.3	7545.7	7685.0	7740.4	7767.4	7861.7	7948.6	7851.2
47.5°	8065.4	8083.3	8077.3	8183.7	8273.5	8442.7	8465.2	8552.0	8634.4	8730.2	8635.9
50°	8865.0	8835.1	8862.0	8963.8	9110.6	9233.4	9348.7	9473.0	9553.8	9652.7	9479.0
52.5°	9726.0	9751.5	9811.4	9968.6	10076.5	10221.7	10326.5	10474.8	10554.1	10639.5	10413.4
55°	10811.7	10832.7	10898.6	11060.3	11136.7	11301.4	11373.3	11521.5	11597.9	11635.3	11346.3
57.5°	12084.6	12014.2	12068.1	12151.9	12270.2	12448.4	12467.9	12607.2	12607.2	12655.1	12286.7
60°	13221.1	13173.2	13230.1	13349.9	13396.3	13558.1	13541.6	13655.4	13685.3	13649.4	13209.2
62.5°	14341.2	14350.2	14423.6	14462.5	14444.6	14540.4	14579.3	14699.1	14649.7	14661.7	14154.1
65°	15700.9	15721.9	15714.4	15642.5	15480.8	15669.5	15659.0	15849.2	15861.2	15969.0	15379.0
67.5°	17518.9	17426.0	17256.8	16967.8	16647.3	16536.5	16439.2	16533.5	16654.8	16635.4	15988.4
70°	16812.1	16660.8	16572.5	16320.9	15892.6	15671.0	15468.8	15485.3	15662.0	15678.5	15016.6
72.5°	14862.4	14786.0	14446.1	14225.9	13932.4	13761.7	13517.6	13573.0	13803.6	13842.6	13315.5
75°	11723.7	11653.3	11346.3	11274.4	11129.2	11213.0	11153.1	11175.6	11361.3	11190.6	10874.6
77.5°	7587.7	7604.1	7556.2	7719.4	7713.4	7717.9	7936.6	7959.0	8140.2	8035.4	7729.9
80°	3402.2	3451.7	3568.5	3805.1	3661.3	3739.2	3823.0	3797.6	3980.3	3567.0	3715.2
82.5°	688.8	712.8	672.4	702.3	655.9	679.8	714.3	661.9	655.9	608.0	564.5
85°	354.9	359.4	357.9	350.4	308.5	284.5	274.0	230.6	208.1	203.7	188.7
87.5°	230.6	233.6	226.1	224.6	197.7	181.2	161.7	136.3	113.8	79.4	65.9
90°	140.8	140.8	133.3	125.8	112.3	100.3	80.9	58.4	34.4	13.5	7.5
92.5°	94.3	94.3	91.3	86.9	77.9	67.4	52.4	34.4	16.5	6.0	3.0
95°	59.9	59.9	58.4	56.9	50.9	43.4	32.9	21.0	10.5	4.5	1.5
97.5°	38.9	38.9	38.9	37.4	34.4	29.9	22.5	13.5	7.5	3.0	1.5
100°	24.0	25.5	24.0	24.0	22.5	19.5	15.0	9.0	6.0	3.0	1.5
102.5°	13.5	13.5	15.0	15.0	13.5	12.0	9.0	7.5	4.5	3.0	1.5
105°	6.0	6.0	7.5	7.5	7.5	6.0	6.0	4.5	3.0	3.0	1.5
107.5°	1.5	1.5	1.5	3.0	4.5	4.5	4.5	4.5	3.0	1.5	1.5
110°	0.0	0.0	0.0	1.5	1.5	3.0	3.0	3.0	3.0	1.5	1.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0	3525.0
2.5°	3538.5	3520.5	3534.0	3511.6	3505.6	3486.1	3523.5	3529.5	3526.5	3532.5
5°	3541.5	3519.0	3535.5	3513.1	3511.6	3490.6	3529.5	3531.0	3520.5	3525.0
7.5°	3550.5	3529.5	3541.5	3516.1	3519.0	3493.6	3538.5	3537.0	3531.0	3541.5
10°	3583.4	3559.5	3564.0	3537.0	3544.5	3517.5	3573.0	3575.9	3570.0	3589.4
12.5°	3640.3	3607.4	3617.9	3586.4	3592.4	3565.5	3632.9	3637.3	3637.3	3668.8
15°	3718.2	3683.8	3706.2	3665.8	3667.3	3626.9	3677.8	3677.8	3683.8	3727.2
17.5°	3832.0	3790.1	3820.0	3782.6	3549.0	3460.6	3634.4	3740.7	3564.0	3549.0
20°	3972.8	3953.3	3969.8	3908.4	3529.5	3125.2	2810.7	2794.3	3143.2	3316.9
22.5°	4145.0	4125.5	4133.0	4055.1	3150.7	2866.2	2861.7	2831.7	2395.9	2276.1
25°	4347.1	4336.7	4320.2	3667.3	3257.0	2984.5	2948.5	2557.7	2307.6	2330.1
27.5°	4564.3	4532.8	3977.3	3809.6	3420.2	3102.8	2899.1	2388.5	2379.5	2400.4
30°	4806.9	4640.6	4071.6	4014.7	3610.4	3249.5	2523.2	2493.3	2493.3	2526.2
32.5°	5115.3	4333.7	4333.7	4303.7	3845.5	2852.7	2656.5	2638.5	2659.5	2673.0
35°	5068.9	4661.6	4709.5	4696.1	4164.5	2905.1	2870.6	2840.7	2845.2	2845.2
37.5°	5083.9	5100.4	5157.3	5098.9	3632.9	3132.7	3077.3	3071.3	3075.8	3086.3
40°	5554.1	5563.1	5584.1	5455.3	3903.9	3397.8	3321.4	3306.4	3321.4	3343.8
42.5°	6060.2	6085.7	6109.7	4961.1	4282.8	3698.7	3622.4	3593.9	3620.9	3644.8
45°	6659.2	6698.2	6331.3	5399.9	4711.0	4041.7	3960.8	3926.4	3942.8	3963.8
47.5°	7333.1	7394.5	5970.4	5958.4	5214.2	4447.5	4354.6	4288.7	4314.2	4312.7
50°	8093.8	7066.5	6596.3	6588.9	5775.7	4899.7	4803.9	4744.0	4763.4	4748.5
52.5°	8915.9	7259.7	7274.7	7273.2	6362.7	5386.4	5298.0	5223.2	5068.9	5211.2
55°	9757.5	7927.6	7984.5	7975.5	6978.2	5889.5	5795.2	5724.8	3740.7	3159.7
57.5°	10594.6	8625.4	8643.4	8664.3	7616.1	6374.7	5959.9	5474.7	2133.9	2123.4
60°	11421.2	9290.3	9326.2	9338.2	7960.5	5277.1	2436.4	2481.3	645.4	771.2
62.5°	12277.7	9946.2	9979.1	9968.6	8303.5	4907.2	2559.2	2508.3	59.9	55.4
65°	13370.9	10768.3	10721.9	10687.4	8844.0	5236.6	2749.3	2735.9	19.5	13.5
67.5°	13754.2	10955.5	10861.1	10849.1	8921.9	5307.0	2764.3	2753.8	19.5	13.5
70°	12885.7	10244.2	10082.4	10086.9	8302.0	4964.1	2578.6	2563.7	18.0	13.5
72.5°	11284.9	9047.7	8980.3	8623.9	7189.3	4366.6	2286.6	2229.7	18.0	12.0
75°	9264.8	7309.1	7159.4	6759.6	5721.8	3471.1	1795.5	1722.1	16.5	10.5
77.5°	6431.6	5125.8	4839.8	4432.5	3827.5	2301.6	1207.0	1112.6	15.0	10.5
80°	2915.6	2103.9	2114.4	1620.3	1298.3	780.2	383.4	347.4	13.5	9.0
82.5°	507.6	374.4	351.9	339.9	283.0	191.7	116.8	100.3	12.0	6.0
85°	176.7	142.3	157.2	185.7	164.7	115.3	71.9	68.9	7.5	3.0
87.5°	59.9	62.9	73.4	88.4	77.9	44.9	27.0	19.5	1.5	0.0
90°	6.0	7.5	7.5	7.5	4.5	0.0	0.0	0.0	0.0	0.0
92.5°	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)