

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: P522224

Luminaire Tested: **CTN-CA8-330-730-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522224  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-330-730-U-T5R-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (8) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 40696.9 lumens  
Efficiency: N/A  
Efficacy: 122.8 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B5 - U2 - G5

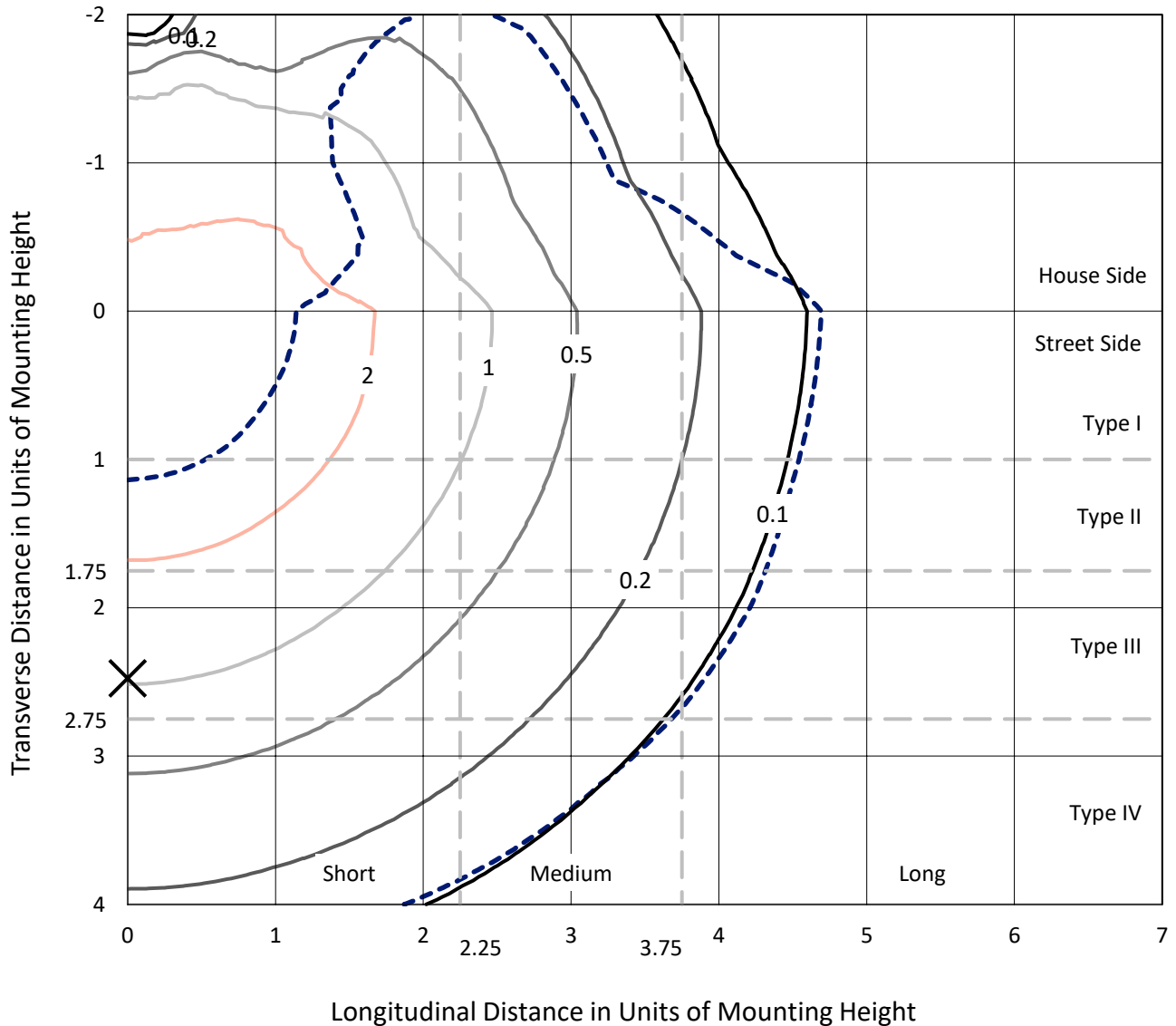
Input Watts (W): 331.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

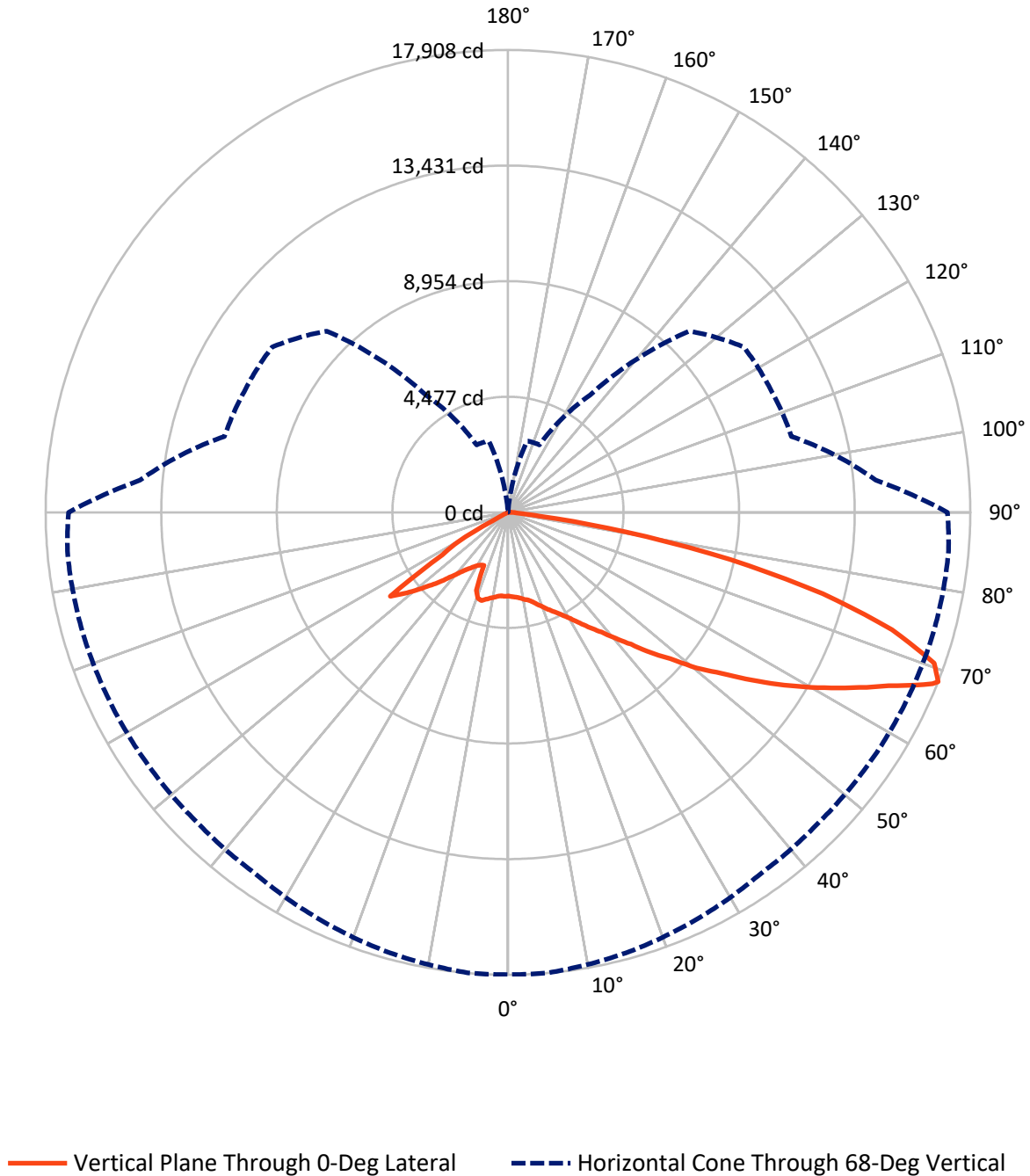
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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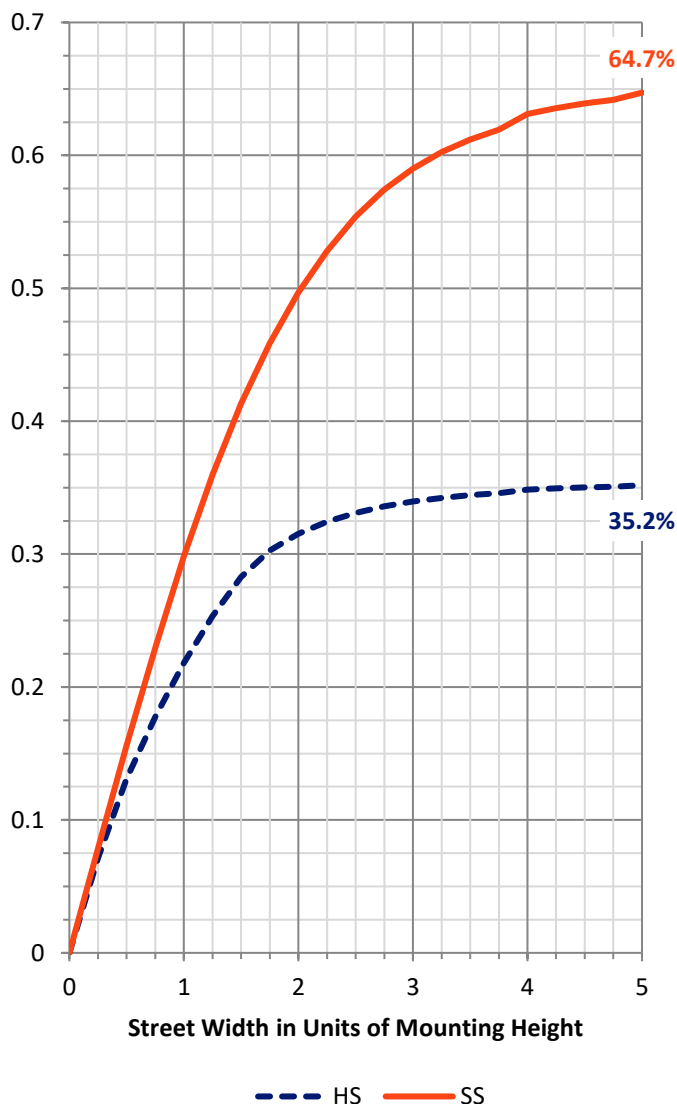
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	14322.6	2.4	14325.0
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	26361.2	10.7	26371.9
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	40683.8	13.1	40696.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	313.3	0.8
10°-20°	1003.9	2.5
20°-30°	1792.1	4.4
30°-40°	2915.4	7.2
40°-50°	4978.6	12.2
50°-60°	8307.0	20.4
60°-70°	11556.8	28.4
70°-80°	8958.3	22.0
80°-90°	858.4	2.1
90°-100°	10.4	0.0
100°-110°	0.9	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	40683.8	100.0
0°-180°	40696.9	100.0

**Coefficient of Utilization**

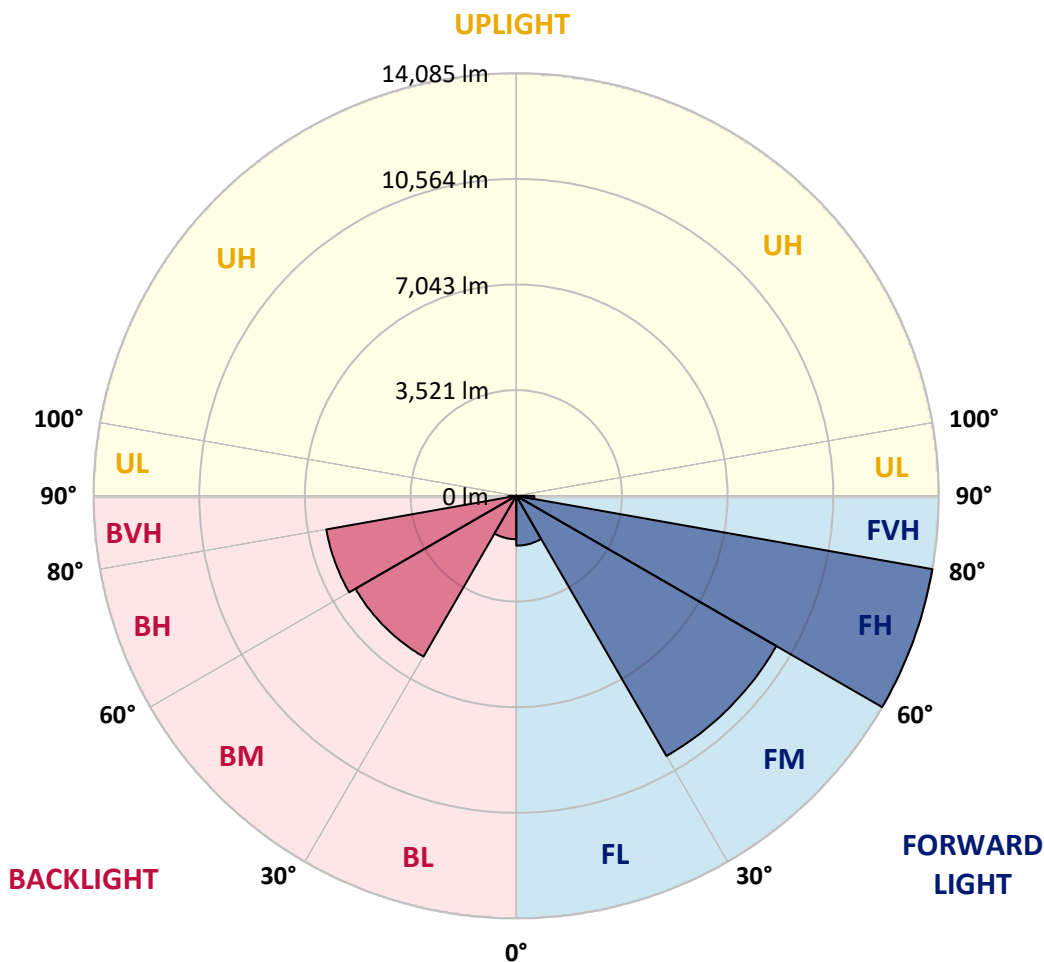


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1661.0	4.1			
FM (30°-60°)	10014.3	24.6			
FH (60°-80°)	14085.4	34.6			G5
FVH (80°-90°)	600.6	1.5			G4/750
BL (0°-30°)	1448.3	3.6	B3/2500		
BM (30°-60°)	6186.7	15.2	B4/8500		
BH (60°-80°)	6429.7	15.8	B5		G5
BVH (80°-90°)	257.9	0.6			G3/500
UL (90°-100°)	10.4	0.0		U2/50	
UH (100°-180°)	2.8	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°	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8
2.5°	3275.5	3271.0	3267.9	3287.8	3231.1	3254.1	3238.8	3258.7	3254.1	3263.3	3264.8
5°	3298.5	3290.9	3280.1	3301.6	3267.9	3283.2	3266.4	3275.5	3246.5	3271.0	3274.0
7.5°	3350.6	3329.1	3327.6	3333.7	3310.8	3321.5	3292.4	3303.1	3287.8	3278.6	3287.8
10°	3428.7	3410.3	3390.4	3402.6	3364.4	3378.1	3347.5	3356.7	3349.1	3329.1	3347.5
12.5°	3482.3	3488.4	3474.6	3483.8	3450.1	3437.9	3427.2	3425.6	3421.0	3391.9	3387.3
15°	3601.7	3604.8	3580.3	3586.4	3578.8	3572.6	3557.3	3545.1	3520.6	3502.2	3489.9
17.5°	3757.9	3741.1	3718.1	3724.2	3745.7	3718.1	3708.9	3685.9	3650.7	3620.1	3614.0
20°	3921.8	3911.1	3889.6	3901.9	3900.3	3882.0	3886.6	3848.3	3797.7	3771.7	3751.8
22.5°	4104.0	4088.7	4073.4	4096.3	4078.0	4065.7	4061.1	4035.1	3972.3	3943.2	3938.6
25°	4286.2	4278.6	4289.3	4281.6	4255.6	4246.4	4252.5	4243.4	4169.9	4134.6	4113.2
27.5°	4514.4	4496.0	4512.9	4503.7	4476.1	4477.7	4479.2	4480.7	4398.0	4352.1	4321.5
30°	4774.7	4768.6	4790.0	4761.0	4734.9	4751.8	4765.5	4734.9	4662.9	4595.6	4584.8
32.5°	5113.2	5074.9	5099.4	5062.6	5022.8	5062.6	5087.1	5025.9	4967.7	4881.9	4897.2
35°	5488.3	5476.1	5476.1	5428.6	5407.2	5470.0	5494.5	5434.7	5344.4	5269.4	5251.0
37.5°	5886.5	5898.7	5937.0	5917.1	5897.2	5935.5	5990.6	5911.0	5794.6	5715.0	5693.5
40°	6414.8	6445.4	6471.5	6445.4	6422.5	6447.0	6509.7	6405.6	6324.5	6281.6	6235.6
42.5°	6982.9	7035.0	7018.2	7021.2	7041.1	7076.3	7139.1	7044.2	6950.8	6949.2	6881.9
45°	7751.7	7751.7	7716.5	7750.1	7747.1	7834.4	7861.9	7809.9	7731.8	7708.8	7650.6
47.5°	8469.9	8544.9	8531.1	8580.1	8541.8	8615.4	8708.8	8664.4	8574.0	8492.8	8480.6
50°	9471.4	9453.0	9434.6	9508.1	9502.0	9552.5	9638.3	9610.7	9485.2	9393.3	9376.4
52.5°	10351.9	10448.4	10425.4	10535.7	10474.4	10546.4	10649.0	10644.4	10491.2	10400.9	10374.9
55°	11463.7	11528.0	11523.4	11636.7	11552.5	11647.4	11733.2	11742.4	11575.4	11446.8	11486.6
57.5°	12621.3	12674.9	12644.3	12737.7	12655.0	12785.2	12837.3	12803.6	12705.6	12543.3	12603.0
60°	13780.6	13826.5	13861.7	13869.4	13821.9	13898.5	13947.5	13976.6	13821.9	13636.6	13708.6
62.5°	14958.2	15010.2	14979.6	14991.9	14860.2	14964.3	15025.6	15033.2	14855.6	14691.7	14742.3
65°	16198.6	16270.5	16160.3	16086.8	15924.5	15922.9	16004.1	16017.9	15892.3	15775.9	15756.0
67.5°	17734.5	17766.7	17530.8	17284.3	17010.2	16950.5	17007.1	17039.3	17111.3	17108.2	17017.8
68°	17907.6	17901.4	17662.5	17368.5	17074.5	17005.6	17033.2	17074.5	17122.0	17131.2	17022.4
70°	17514.0	17439.0	17302.7	16932.1	16641.1	16460.4	16364.0	16440.5	16311.9	16313.4	16109.8
72.5°	15556.9	15547.8	15296.6	15112.8	14854.1	14553.9	14416.1	14414.6	14426.8	14338.0	14128.2
75°	12601.4	12613.7	12321.2	12194.1	12114.5	12057.8	12086.9	12177.3	12186.4	12184.9	12111.4
77.5°	8788.4	8838.9	8760.8	8554.1	8776.1	8966.0	9332.0	9518.8	9459.1	9638.3	9751.6
80°	4606.3	4707.4	4710.4	4855.9	5035.1	5208.1	5523.6	5806.9	5598.6	5506.7	5411.8
82.5°	1211.3	1248.0	1303.2	1219.0	1245.0	1271.0	1516.0	1493.1	1378.2	1439.5	1531.3
85°	346.1	356.8	341.5	309.3	283.3	260.3	266.5	225.1	196.0	194.5	188.4
87.5°	243.5	261.9	231.2	199.1	179.2	166.9	160.8	136.3	110.3	96.5	76.6
90°	113.3	111.8	96.5	75.0	65.8	62.8	62.8	49.0	27.6	16.8	15.3
92.5°	47.5	49.0	39.8	32.2	27.6	21.4	16.8	10.7	6.1	3.1	1.5
95°	16.8	18.4	15.3	12.3	10.7	9.2	7.7	6.1	3.1	1.5	1.5
97.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.1	3.1	1.5	1.5
100°	0.0	0.0	0.0	1.5	3.1	3.1	3.1	3.1	1.5	1.5	1.5
102.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
105°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
165°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
167.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
170°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
172.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
175°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
177.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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°	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8	3238.8
2.5°	3261.8	3254.1	3251.0	3212.8	3223.5	3200.5	3254.1	3238.8	3235.7	3257.2
5°	3269.4	3234.2	3255.6	3231.1	3237.3	3203.6	3246.5	3228.1	3229.6	3240.3
7.5°	3274.0	3254.1	3275.5	3232.7	3249.5	3237.3	3267.9	3249.5	3267.9	3277.1
10°	3320.0	3310.8	3295.5	3283.2	3295.5	3266.4	3304.6	3301.6	3312.3	3339.9
12.5°	3382.7	3372.0	3356.7	3335.3	3344.5	3333.7	3362.8	3365.9	3385.8	3399.6
15°	3476.2	3462.4	3454.7	3433.3	3436.3	3428.7	3445.5	3448.6	3488.4	3483.8
17.5°	3607.9	3592.5	3598.7	3578.8	3571.1	3552.7	3522.1	3511.4	3558.8	3572.6
20°	3751.8	3735.0	3742.6	3725.8	3583.3	3293.9	3488.4	3621.6	3520.6	3512.9
22.5°	3915.7	3897.3	3903.4	3877.4	3701.3	3159.2	2748.8	2715.1	3101.0	3257.2
25°	4096.3	4071.8	4068.8	4035.1	3456.2	2860.6	2814.6	2754.9	2473.1	2249.5
27.5°	4319.9	4283.2	4264.8	3756.4	3431.7	2972.3	2903.4	2690.6	2281.7	2295.5
30°	4561.9	4508.3	4163.7	3828.4	3610.9	3104.0	3012.2	2358.3	2361.3	2355.2
32.5°	4837.5	4718.1	4079.5	4048.9	3825.3	3244.9	2500.7	2473.1	2476.2	2485.4
35°	5198.9	4379.6	4362.8	4364.3	4087.2	3139.3	2649.2	2623.2	2626.3	2632.4
37.5°	5275.5	4721.1	4724.2	4689.0	4365.9	2868.2	2829.9	2828.4	2822.3	2816.1
40°	5336.7	5151.4	5107.0	5050.4	4047.3	3088.7	3076.5	3067.3	3071.9	3084.1
42.5°	5816.1	5676.7	5633.8	5566.4	4151.5	3422.6	3382.7	3372.0	3384.3	3378.1
45°	6453.1	6336.7	6252.5	5146.9	4586.4	3785.5	3753.3	3739.5	3744.1	3782.4
47.5°	7126.9	7058.0	6800.7	5560.3	5093.3	4214.3	4182.1	4160.7	4168.3	4159.1
50°	7860.4	7797.6	6295.4	6183.6	5653.7	4676.7	4629.3	4621.6	4624.7	4623.1
52.5°	8656.7	7344.3	6976.8	6860.4	6244.8	5160.6	5143.8	5102.4	5111.6	5102.4
55°	9590.8	7736.4	7727.2	7590.9	6909.4	5722.6	5702.7	5644.5	5278.5	5598.6
57.5°	10477.5	8485.2	8485.2	8353.5	7589.3	6281.6	6249.4	6206.5	3751.8	3025.9
60°	11448.3	9235.5	9214.1	9105.4	8244.8	6814.5	5538.9	5526.6	2266.4	2274.0
62.5°	12287.5	9904.7	9943.0	9842.0	8875.7	5102.4	2566.5	2514.5	223.6	344.6
65°	13227.8	10644.4	10690.3	10586.2	9558.7	5411.8	2785.5	2759.5	50.5	45.9
67.5°	14293.6	11382.5	11278.4	11163.5	9958.3	5572.6	2894.2	2871.3	13.8	9.2
68°	14302.8	11367.2	11232.4	11154.3	9920.1	5541.9	2885.1	2863.6	13.8	9.2
70°	13567.7	10794.5	10659.7	10679.6	9445.3	5300.0	2765.6	2725.8	13.8	9.2
72.5°	11903.1	9606.1	9454.5	9347.3	8376.5	4712.0	2479.2	2404.2	13.8	9.2
75°	10185.0	8140.6	7889.5	7653.7	6739.5	3855.9	2033.6	1949.4	13.8	9.2
77.5°	8027.3	6205.0	5848.2	5693.5	5064.2	2848.3	1511.4	1419.6	13.8	7.7
80°	4436.3	3560.4	3257.2	3162.2	2895.8	1673.8	866.7	811.6	12.3	7.7
82.5°	1147.0	860.6	750.4	724.3	679.9	396.6	211.3	200.6	10.7	6.1
85°	163.9	121.0	133.2	157.7	151.6	102.6	73.5	62.8	9.2	4.6
87.5°	85.8	72.0	84.2	94.9	96.5	59.7	30.6	16.8	4.6	0.0
90°	13.8	13.8	15.3	16.8	16.8	7.7	6.1	0.0	0.0	0.0
92.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.5	1.5	1.5	1.5	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	1.5	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	3.1	1.5	1.5	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°
110°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.5	1.5	1.5	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)