

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: P232721

Luminaire Tested: **CST-10-3-D-U-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232721  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-20)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-10-3-D-U-T4  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE IV OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31224 lumens  
Efficiency: N/A  
Efficacy: 147.3 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

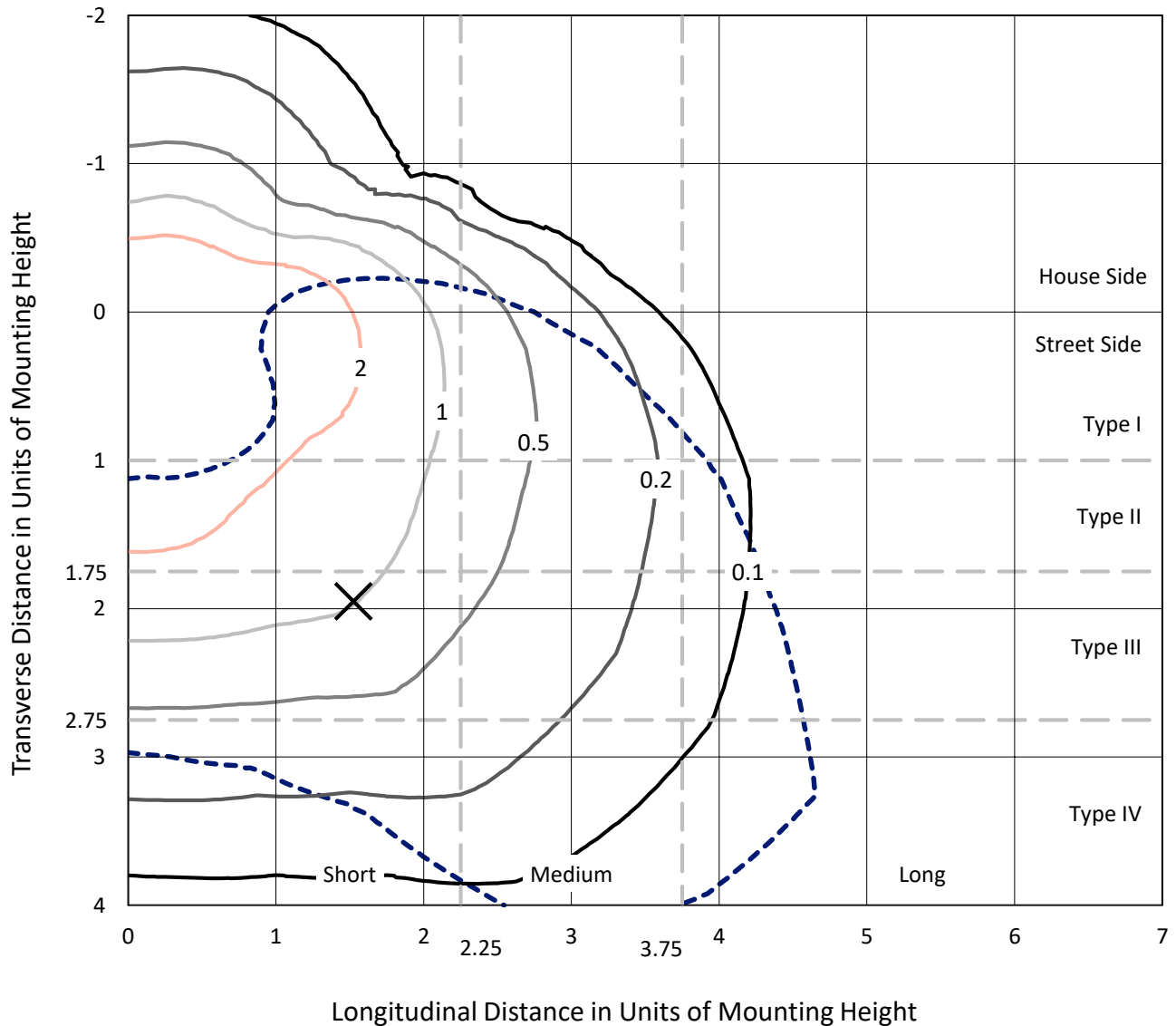
Input Watts (W): 212  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

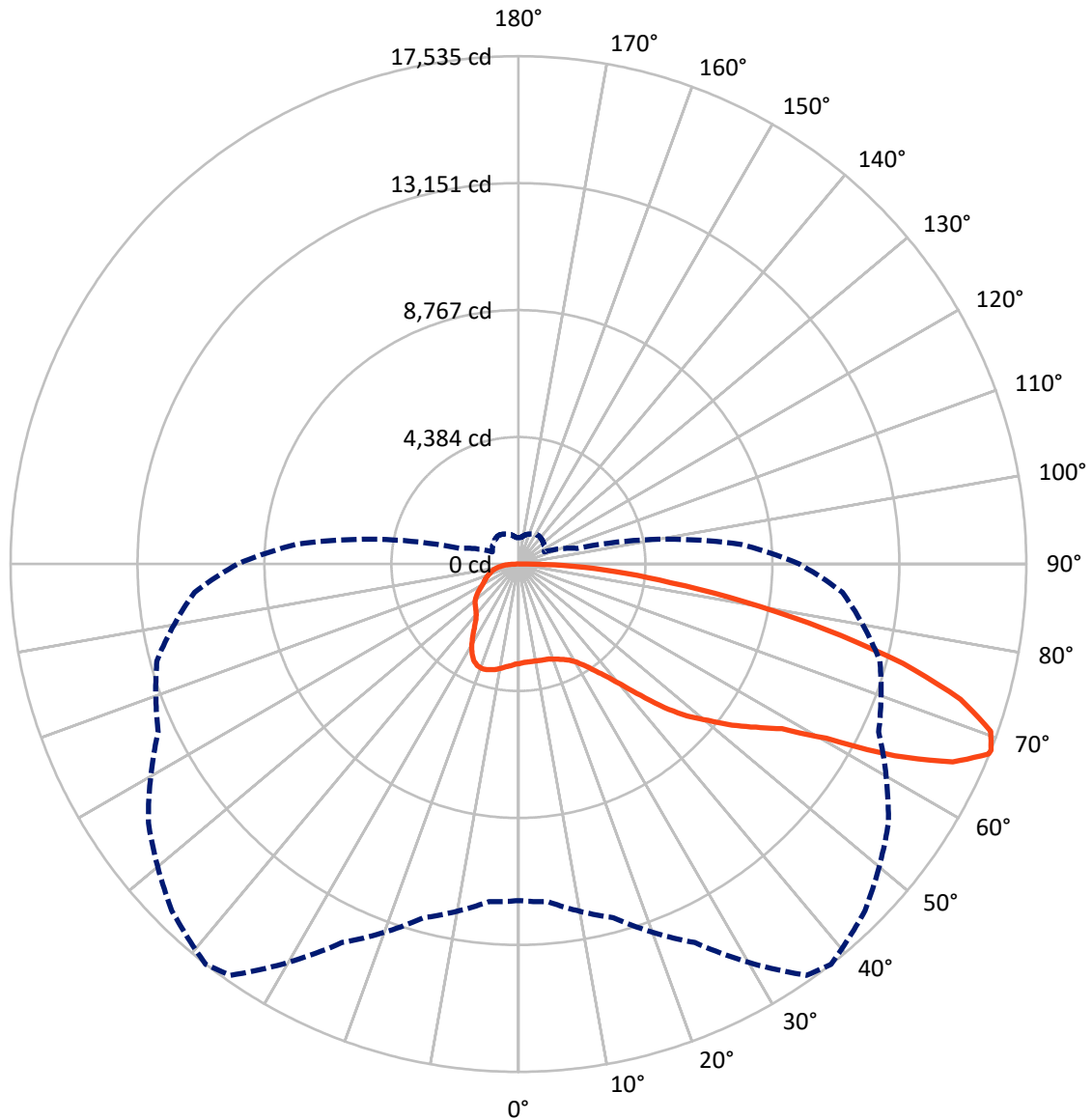
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.9 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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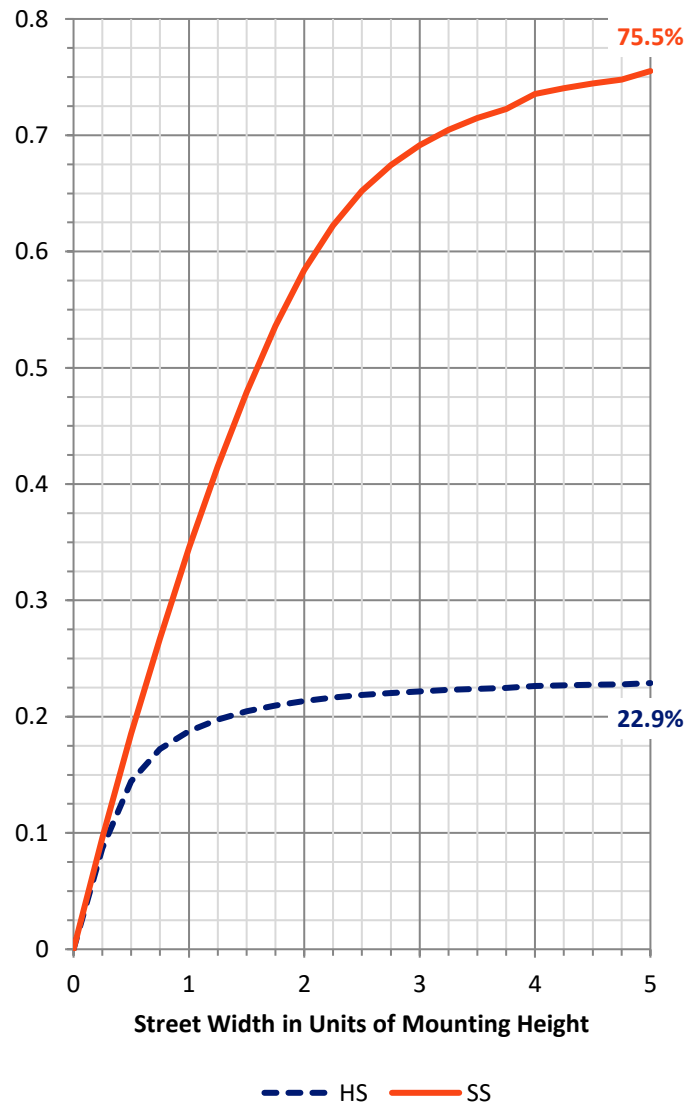
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7287.0	0.0	7287.0
	% Fixture	23.3	0.0	23.3
<b>Street Side</b>	Lumens	23937.0	0.0	23937.0
	% Fixture	76.7	0.0	76.7
<b>Total</b>	Lumens	31224.0	0.0	31224.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	332.7	1.1
10°-20°	1026.9	3.3
20°-30°	1744.6	5.6
30°-40°	2641.9	8.5
40°-50°	4369.7	14.0
50°-60°	6294.3	20.2
60°-70°	7938.0	25.4
70°-80°	5649.6	18.1
80°-90°	1226.3	3.9
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°	31224.0	100.0
0°-180°	31224.0	100.0



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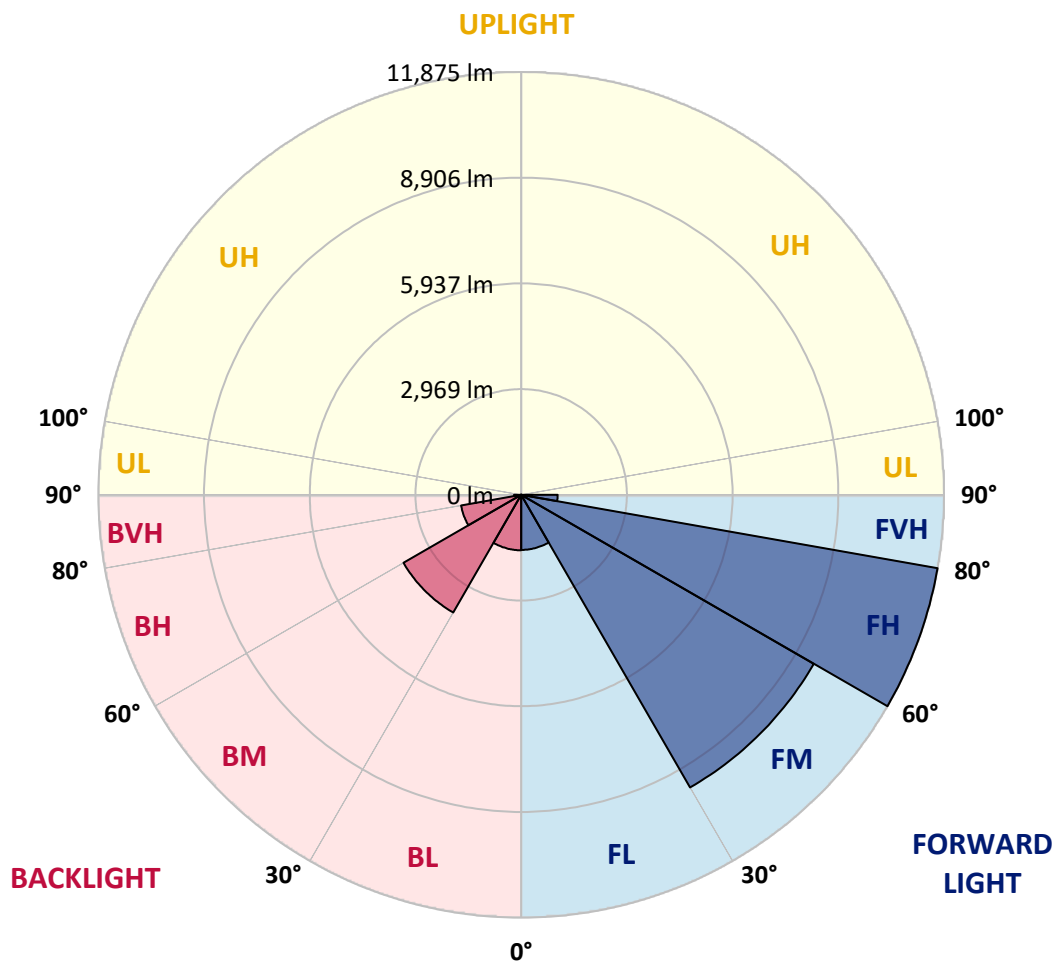
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1547.0	5.0			
FM	(30°-60°)	9490.0	30.4			
FH	(60°-80°)	11875.0	38.0			G4/12000
FVH	(80°-90°)	1025.0	3.3			G5
BL	(0°-30°)	1557.1	5.0	B3/2500		
BM	(30°-60°)	3816.0	12.2	B3/5000		
BH	(60°-80°)	1712.7	5.5	B3/2500		G3/2500
BVH	(80°-90°)	201.2	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8
2.5°	3427.6	3433.7	3429.6	3427.6	3401.2	3407.3	3417.5	3403.3	3437.8	3435.7	3456.0
5°	3395.2	3398.2	3399.2	3408.3	3383.0	3396.2	3408.3	3399.2	3435.7	3425.6	3454.0
7.5°	3386.0	3385.0	3386.0	3403.3	3375.9	3396.2	3410.4	3407.3	3446.9	3438.8	3473.3
10°	3362.7	3363.7	3366.8	3386.0	3371.8	3399.2	3424.6	3437.8	3490.5	3483.4	3523.0
12.5°	3322.1	3330.2	3341.4	3373.9	3376.9	3413.4	3450.9	3477.3	3546.3	3552.4	3602.1
15°	3286.6	3300.8	3320.1	3363.7	3382.0	3423.6	3471.2	3519.9	3610.2	3637.6	3700.5
17.5°	3297.8	3319.1	3344.4	3389.1	3402.3	3445.9	3499.6	3564.6	3676.1	3735.0	3816.1
20°	3366.8	3381.0	3402.3	3443.8	3461.1	3504.7	3548.3	3612.2	3757.3	3852.6	3953.1
22.5°	3453.0	3473.3	3487.5	3512.8	3533.1	3571.7	3617.3	3680.2	3851.6	3971.3	4109.3
25°	3545.3	3555.4	3575.7	3593.0	3618.3	3648.8	3700.5	3777.6	3959.2	4106.2	4299.0
27.5°	3630.5	3635.6	3674.1	3688.3	3738.0	3760.3	3800.9	3903.4	4099.1	4280.7	4518.1
30°	3755.3	3765.4	3794.8	3828.3	3901.3	3923.7	3965.2	4072.8	4285.8	4518.1	4803.1
32.5°	3991.6	4018.0	4013.9	4049.4	4135.7	4165.1	4221.9	4361.9	4594.2	4860.9	5199.8
35°	4470.4	4507.9	4461.3	4413.6	4459.2	4498.8	4586.0	4791.0	5078.0	5518.3	5853.0
37.5°	5254.5	5292.1	5125.7	4973.5	4874.1	4905.6	5024.3	5314.4	5753.6	6518.5	6891.7
40°	6170.5	6211.1	5979.8	5705.9	5481.7	5469.6	5506.1	5875.3	6509.3	7631.2	7922.4
42.5°	6968.8	7075.4	6773.1	6536.7	6246.6	6197.9	6109.7	6483.0	7308.7	8661.9	8826.2
45°	7744.8	7848.3	7609.9	7446.6	7150.4	7071.3	6903.9	7130.1	8092.8	9563.6	9570.7
47.5°	8456.9	8540.1	8263.2	8158.7	7866.6	7832.1	7660.7	7818.9	8819.1	10327.5	10183.4
50°	9253.2	9340.5	8899.2	8770.4	8535.1	8488.4	8432.6	8546.2	9651.9	10985.8	10703.8
52.5°	10227.1	10194.6	9649.9	9354.7	9229.9	9241.1	9178.2	9304.0	10535.4	11543.7	11113.6
55°	11392.6	11226.2	10627.7	10180.4	9893.3	9948.1	9865.9	10050.6	11408.8	12014.4	11409.8
57.5°	12055.0	12100.6	12043.8	11468.7	10738.3	10730.2	10600.3	10777.9	12171.6	12398.9	11590.4
60°	13020.7	13209.4	13281.4	13126.2	12470.9	12212.2	11562.0	11521.4	12815.8	12730.6	11682.7
62.5°	13631.3	13719.6	14152.7	14340.4	14551.4	14596.0	13563.4	12417.1	13291.5	12900.0	11721.2
65°	13339.2	13428.5	14237.9	14973.4	16225.1	16476.7	16148.0	13836.2	13613.1	12937.5	11592.4
67.5°	11842.0	11951.5	13037.9	14545.3	17237.5	17508.3	16977.8	15472.5	13718.6	12915.2	11312.4
68°	11622.9	11704.0	12641.3	14420.5	17338.9	17534.7	16923.0	15596.2	13724.7	12922.3	11226.2
70°	9939.0	10082.0	11069.0	13285.4	17175.6	17300.4	16581.2	15527.2	13586.7	12806.6	10595.3
72.5°	7746.9	7944.7	8695.3	11034.5	15864.0	15965.4	15362.9	14766.4	13169.8	12004.3	9081.8
75°	5612.6	5782.0	6504.3	8515.8	13355.4	13715.5	13614.1	13721.6	11805.4	10171.3	6577.3
77.5°	3876.0	4021.0	4694.6	6354.1	10355.9	10811.3	11337.8	11616.8	9700.6	7546.0	3126.3
80°	2483.2	2594.8	3167.9	4474.5	7467.9	7896.0	8463.0	8752.1	6899.9	3795.8	554.9
82.5°	1459.7	1535.8	1927.3	2886.9	5033.4	5294.1	5568.0	5083.1	2769.3	726.3	350.0
85°	725.3	776.0	1016.4	1633.2	3129.4	3368.8	3460.1	2168.8	585.3	265.8	238.4
87.5°	324.6	338.8	436.2	735.4	1487.1	1567.2	1528.7	674.6	117.7	99.4	85.2
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°	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8	3439.8
2.5°	3458.0	3449.9	3447.9	3461.1	3446.9	3464.1	3459.1	3497.6	3502.7	3488.5	3511.8
5°	3463.1	3459.1	3462.1	3486.4	3481.4	3516.9	3526.0	3564.6	3564.6	3553.4	3577.7
7.5°	3486.4	3486.4	3495.6	3540.2	3540.2	3570.6	3580.8	3623.4	3622.4	3622.4	3644.7
10°	3545.3	3545.3	3564.6	3621.4	3607.2	3646.7	3651.8	3674.1	3669.0	3670.1	3693.4
12.5°	3632.5	3637.6	3671.1	3720.8	3711.6	3725.8	3715.7	3711.6	3675.1	3675.1	3690.3
15°	3732.9	3754.2	3799.9	3845.5	3815.1	3810.0	3752.2	3701.5	3623.4	3589.9	3607.2
17.5°	3863.8	3900.3	3953.1	3985.5	3927.7	3886.1	3781.6	3649.8	3523.0	3448.9	3450.9
20°	4008.9	4057.5	4122.5	4133.6	4048.4	3945.0	3770.5	3563.5	3345.4	3227.8	3219.7
22.5°	4170.1	4231.0	4306.1	4262.5	4123.5	3955.1	3705.6	3430.7	3137.5	2939.7	2936.7
25°	4366.9	4432.9	4480.5	4358.8	4140.7	3903.4	3593.0	3223.7	2861.6	2648.6	2634.4
27.5°	4617.5	4661.1	4625.6	4408.5	4089.0	3779.6	3402.3	2958.0	2574.5	2381.8	2360.5
30°	4914.7	4909.6	4716.9	4394.3	3984.5	3583.8	3142.6	2669.9	2339.2	2173.8	2154.6
32.5°	5275.8	5202.8	4805.2	4326.4	3816.1	3327.2	2834.2	2430.5	2168.8	2001.4	1981.1
35°	5852.0	5646.1	4919.8	4223.9	3581.8	3017.8	2543.1	2245.9	2036.9	1845.2	1805.6
37.5°	6745.7	6311.5	5110.5	4116.4	3313.0	2714.5	2326.0	2112.0	1933.4	1716.3	1669.7
40°	7664.7	7084.5	5400.6	4000.7	3061.4	2485.2	2203.2	2049.1	1870.5	1661.6	1614.9
42.5°	8463.0	7805.7	5748.5	3855.7	2803.8	2304.7	2140.4	2028.8	1850.2	1651.4	1606.8
45°	9168.0	8453.9	6111.7	3687.3	2533.9	2158.6	2086.6	2000.4	1819.8	1628.1	1587.5
47.5°	9755.4	8970.2	6431.2	3500.7	2269.2	2051.1	2033.8	1933.4	1762.0	1577.4	1542.9
50°	10209.8	9337.4	6645.3	3292.7	2043.0	1966.9	1957.8	1831.0	1664.6	1488.1	1453.6
52.5°	10532.4	9583.9	6770.0	3214.6	1865.5	1869.5	1854.3	1719.4	1558.1	1382.6	1355.2
55°	10737.3	9753.3	6739.6	3114.2	1685.9	1732.6	1734.6	1637.2	1495.2	1324.8	1302.5
57.5°	10815.4	9746.2	6560.0	2611.0	1511.4	1568.2	1595.6	1580.4	1454.6	1288.3	1270.0
60°	10772.8	9631.6	6177.6	1913.1	1330.9	1408.0	1474.9	1471.9	1365.4	1208.1	1188.9
62.5°	10701.8	9365.8	5428.0	1369.4	1194.9	1294.4	1375.5	1348.1	1246.7	1108.7	1095.5
65°	10447.2	8897.2	4196.5	1095.5	1138.1	1230.5	1297.4	1250.7	1151.3	1007.3	1000.2
67.5°	9884.2	7959.9	2449.7	999.2	1096.6	1176.7	1224.4	1166.5	1074.2	934.3	922.1
68°	9693.5	7719.5	2083.6	990.0	1088.4	1163.5	1207.1	1146.3	1056.0	920.0	907.9
70°	8730.8	6256.7	994.1	952.5	1052.9	1102.6	1128.0	1072.2	984.0	863.2	855.1
72.5°	6795.4	3774.5	664.4	895.7	984.0	1031.6	1037.7	950.5	867.3	778.0	773.0
75°	4014.9	1252.8	617.8	811.5	888.6	954.5	971.8	884.5	792.2	688.8	686.7
77.5°	977.9	485.9	583.3	724.3	805.4	869.3	882.5	818.6	737.5	620.8	616.7
80°	402.7	403.7	543.7	600.5	690.8	752.7	771.9	715.1	642.1	567.0	558.9
82.5°	334.7	340.8	461.5	443.3	552.8	624.9	644.1	604.6	579.2	498.1	489.9
85°	238.4	302.3	306.3	298.2	387.5	445.3	542.7	523.4	496.0	427.1	386.5
87.5°	111.6	176.5	132.9	127.8	196.8	263.7	310.4	325.6	282.0	219.1	202.9
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)