

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: P256706

Luminaire Tested: **CST-10-3-D-U-T5R-7050-HSS-HM-EX90**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P256706  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)  
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-T5R-7050-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 5000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED 90  
DEGREE SHIELD - BLACK  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27232.9 lumens  
Efficiency: N/A  
Efficacy: 128.5 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B4 - U1 - G4

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

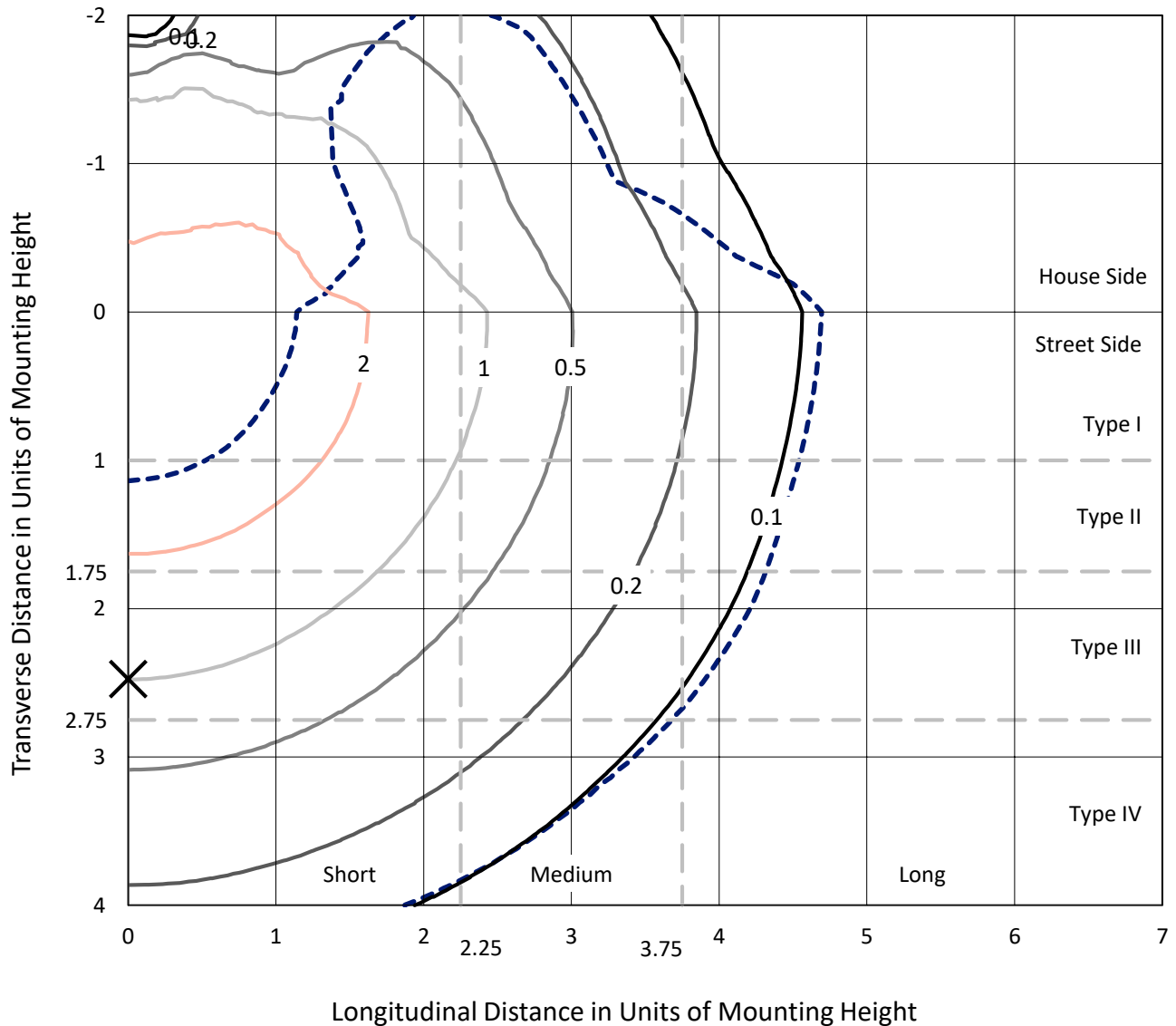


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

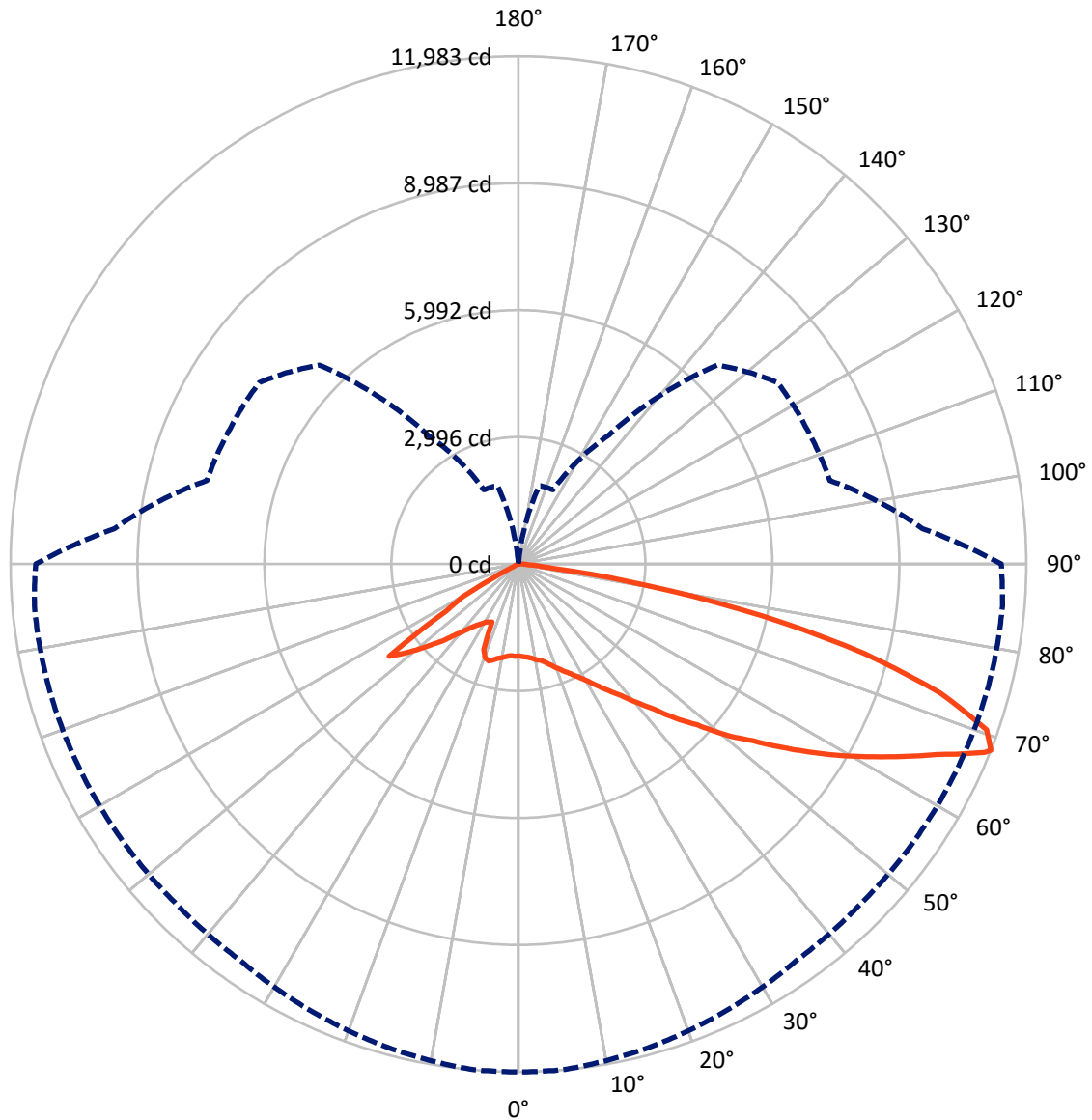


Based on 25 foot mounting height. Maximum calculated value = 3.5 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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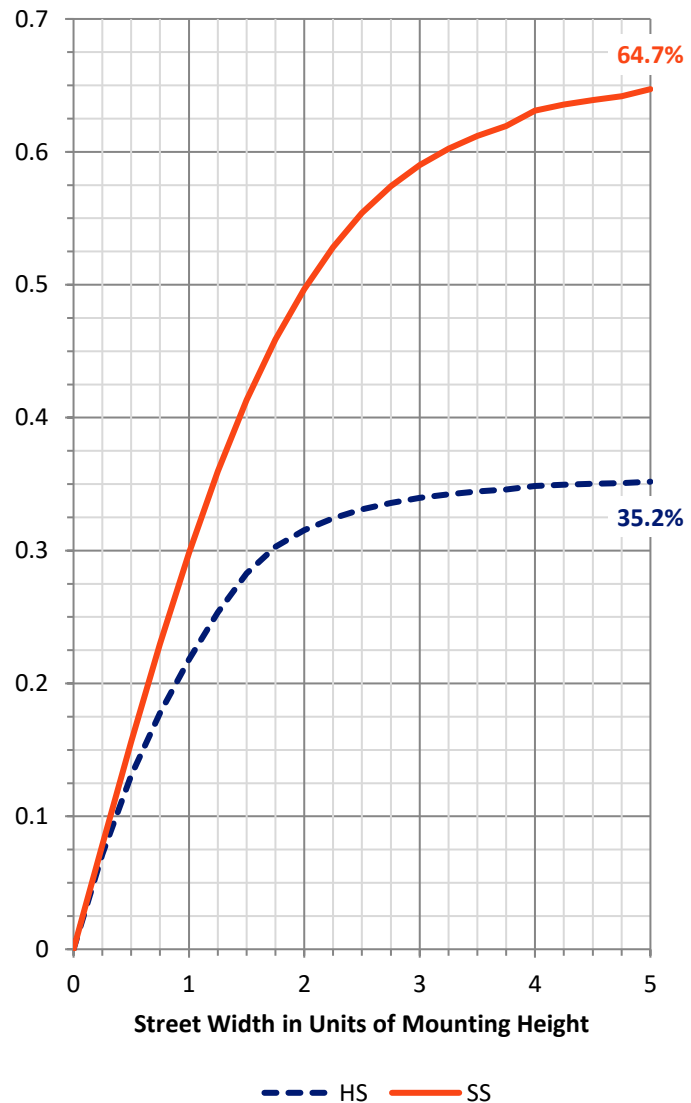
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9584.2	1.6	9585.8
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	17640.0	7.2	17647.2
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	27224.2	8.8	27232.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.7	0.8
10°-20°	671.8	2.5
20°-30°	1199.2	4.4
30°-40°	1950.9	7.2
40°-50°	3331.5	12.2
50°-60°	5558.8	20.4
60°-70°	7733.4	28.4
70°-80°	5994.6	22.0
80°-90°	574.4	2.1
90°-100°	6.9	0.0
100°-110°	0.6	0.0
110°-120°	0.3	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	27224.2	100.0
0°-180°	27232.9	100.0



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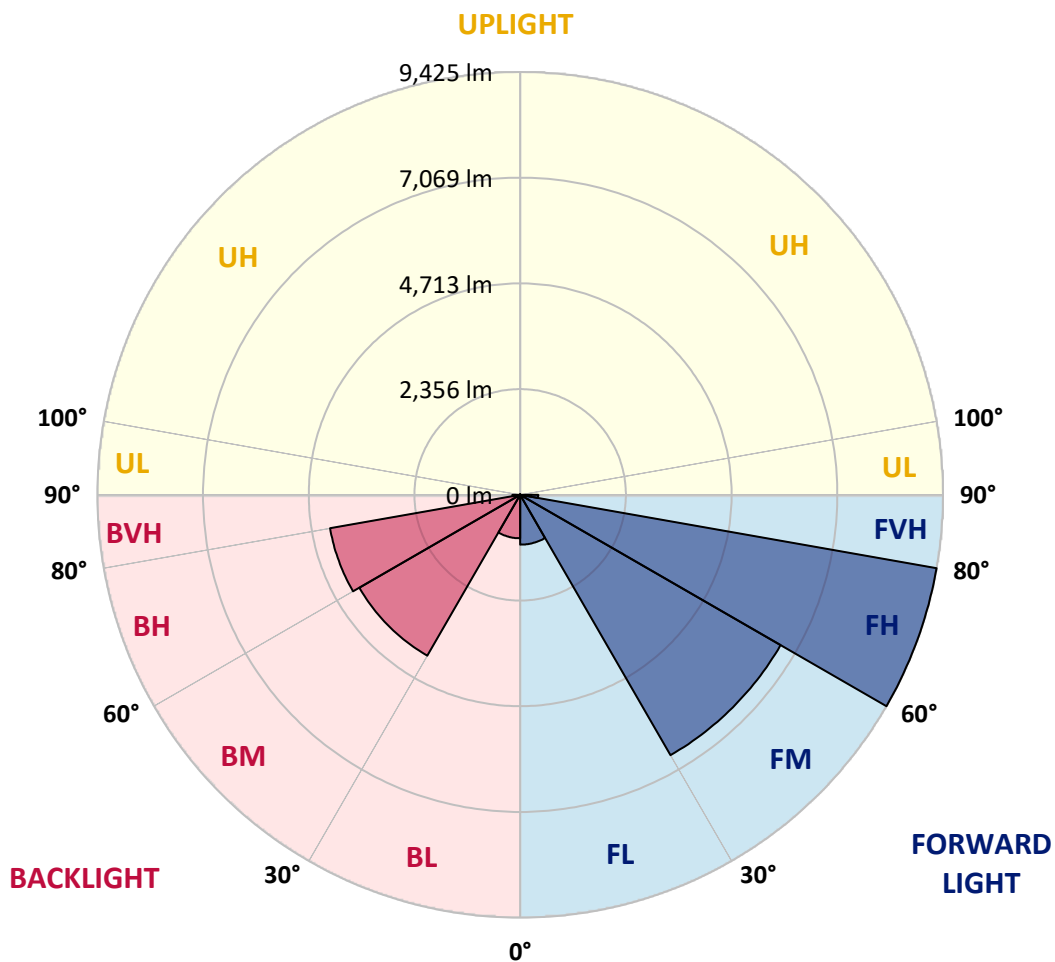
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1111.5	4.1			
FM	(30°-60°)	6701.2	24.6			
FH	(60°-80°)	9425.4	34.6			G4/12000
FVH	(80°-90°)	401.9	1.5			G3/500
BL	(0°-30°)	969.2	3.6	B2/1000		
BM	(30°-60°)	4139.9	15.2	B3/5000		
BH	(60°-80°)	4302.5	15.8	B4/5000		G4/5000
BVH	(80°-90°)	172.6	0.6			G2/225
UL	(90°-100°)	6.9	0.0		U1/10	
UH	(100°-180°)	1.6	0.0		U1/10	

**BUG Rating: B4-U1-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3
2.5°	2191.9	2188.8	2186.8	2200.1	2162.2	2177.5	2167.3	2180.6	2177.5	2183.7	2184.7
5°	2207.3	2202.1	2195.0	2209.3	2186.8	2197.0	2185.7	2191.9	2172.4	2188.8	2190.9
7.5°	2242.1	2227.7	2226.7	2230.8	2215.5	2222.6	2203.2	2210.3	2200.1	2193.9	2200.1
10°	2294.4	2282.1	2268.7	2276.9	2251.3	2260.5	2240.0	2246.2	2241.1	2227.7	2240.0
12.5°	2330.2	2334.3	2325.1	2331.2	2308.7	2300.5	2293.3	2292.3	2289.2	2269.8	2266.7
15°	2410.1	2412.2	2395.8	2399.9	2394.8	2390.7	2380.4	2372.2	2355.8	2343.5	2335.3
17.5°	2514.7	2503.4	2488.0	2492.1	2506.5	2488.0	2481.9	2466.5	2442.9	2422.4	2418.3
20°	2624.3	2617.1	2602.8	2611.0	2610.0	2597.7	2600.7	2575.1	2541.3	2523.9	2510.6
22.5°	2746.3	2736.0	2725.8	2741.1	2728.8	2720.6	2717.6	2700.1	2658.1	2638.7	2635.6
25°	2868.2	2863.1	2870.2	2865.1	2847.7	2841.6	2845.7	2839.5	2790.3	2766.8	2752.4
27.5°	3020.9	3008.6	3019.9	3013.7	2995.3	2996.3	2997.3	2998.3	2943.0	2912.3	2891.8
30°	3195.1	3191.0	3205.3	3185.9	3168.4	3179.7	3188.9	3168.4	3120.3	3075.2	3068.0
32.5°	3421.5	3395.9	3412.3	3387.7	3361.1	3387.7	3404.1	3363.1	3324.2	3266.8	3277.1
35°	3672.6	3664.4	3664.4	3632.6	3618.3	3660.3	3676.7	3636.7	3576.3	3526.1	3513.8
37.5°	3939.0	3947.2	3972.8	3959.5	3946.2	3971.8	4008.7	3955.4	3877.6	3824.3	3809.9
40°	4292.6	4313.1	4330.5	4313.1	4297.7	4314.1	4356.1	4286.4	4232.1	4203.4	4172.7
42.5°	4672.7	4707.6	4696.3	4698.4	4711.7	4735.2	4777.3	4713.7	4651.2	4650.2	4605.1
45°	5187.1	5187.1	5163.6	5186.1	5184.1	5242.5	5260.9	5226.1	5173.8	5158.5	5119.5
47.5°	5667.7	5718.0	5708.7	5741.5	5715.9	5765.1	5827.6	5797.9	5737.4	5683.1	5674.9
50°	6337.9	6325.6	6313.3	6362.5	6358.4	6392.2	6449.6	6431.2	6347.1	6285.6	6274.4
52.5°	6927.1	6991.7	6976.3	7050.1	7009.1	7057.3	7125.9	7122.8	7020.4	6959.9	6942.5
55°	7671.1	7714.1	7711.0	7786.9	7730.5	7794.0	7851.4	7857.6	7745.9	7659.8	7686.4
57.5°	8445.8	8481.6	8461.1	8523.6	8468.3	8555.4	8590.2	8567.7	8502.1	8393.5	8433.5
60°	9221.5	9252.2	9275.8	9280.9	9249.1	9300.4	9333.2	9352.6	9249.1	9125.2	9173.3
62.5°	10009.5	10044.3	10023.8	10032.0	9943.9	10013.6	10054.6	10059.7	9940.8	9831.2	9865.0
65°	10839.5	10887.7	10813.9	10764.7	10656.1	10655.1	10709.4	10718.6	10634.6	10556.7	10543.4
67.5°	11867.3	11888.8	11731.0	11566.0	11382.6	11342.7	11380.6	11402.1	11450.2	11448.2	11387.7
68°	11983.1	11979.0	11819.1	11622.4	11425.7	11379.5	11398.0	11425.7	11457.4	11463.6	11390.8
70°	11719.8	11669.5	11578.3	11330.4	11135.7	11014.7	10950.2	11001.4	10915.3	10916.4	10780.1
72.5°	10410.2	10404.0	10236.0	10113.0	9939.8	9739.0	9646.7	9645.7	9653.9	9594.5	9454.1
75°	8432.4	8440.6	8244.9	8159.9	8106.6	8068.7	8088.1	8148.6	8154.7	8153.7	8104.5
77.5°	5880.9	5914.7	5862.4	5724.1	5872.7	5999.8	6244.7	6369.7	6329.7	6449.6	6525.4
80°	3082.4	3150.0	3152.0	3249.4	3369.3	3485.1	3696.2	3885.7	3746.4	3684.9	3621.4
82.5°	810.6	835.1	872.0	815.7	833.1	850.5	1014.5	999.1	922.3	963.2	1024.7
85°	231.6	238.8	228.5	207.0	189.6	174.2	178.3	150.6	131.2	130.1	126.0
87.5°	162.9	175.2	154.7	133.2	119.9	111.7	107.6	91.2	73.8	64.6	51.2
90°	75.8	74.8	64.6	50.2	44.1	42.0	42.0	32.8	18.4	11.3	10.2
92.5°	31.8	32.8	26.6	21.5	18.4	14.3	11.3	7.2	4.1	2.0	1.0
95°	11.3	12.3	10.2	8.2	7.2	6.1	5.1	4.1	2.0	1.0	1.0
97.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.0	2.0	1.0	1.0
100°	0.0	0.0	0.0	1.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
102.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
105°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0



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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	1.0	1.0	1.0	1.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
165°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3	2167.3
2.5°	2182.7	2177.5	2175.5	2149.9	2157.0	2141.7	2177.5	2167.3	2165.2	2179.6
5°	2187.8	2164.2	2178.6	2162.2	2166.3	2143.7	2172.4	2160.1	2161.1	2168.3
7.5°	2190.9	2177.5	2191.9	2163.2	2174.5	2166.3	2186.8	2174.5	2186.8	2192.9
10°	2221.6	2215.5	2205.2	2197.0	2205.2	2185.7	2211.4	2209.3	2216.5	2234.9
12.5°	2263.6	2256.4	2246.2	2231.8	2238.0	2230.8	2250.3	2252.3	2265.7	2274.9
15°	2326.1	2316.9	2311.8	2297.4	2299.5	2294.4	2305.6	2307.7	2334.3	2331.2
17.5°	2414.2	2404.0	2408.1	2394.8	2389.7	2377.4	2356.9	2349.7	2381.5	2390.7
20°	2510.6	2499.3	2504.4	2493.1	2397.9	2204.2	2334.3	2423.5	2355.8	2350.7
22.5°	2620.2	2607.9	2612.0	2594.6	2476.8	2114.0	1839.4	1816.8	2075.1	2179.6
25°	2741.1	2724.7	2722.7	2700.1	2312.8	1914.2	1883.4	1843.5	1654.9	1505.3
27.5°	2890.7	2866.1	2853.9	2513.6	2296.4	1989.0	1942.9	1800.4	1526.8	1536.1
30°	3052.6	3016.8	2786.2	2561.8	2416.3	2077.1	2015.6	1578.1	1580.1	1576.0
32.5°	3237.1	3157.2	2729.9	2709.4	2559.8	2171.4	1673.4	1654.9	1657.0	1663.1
35°	3478.9	2930.7	2919.4	2920.5	2735.0	2100.7	1772.8	1755.3	1757.4	1761.5
37.5°	3530.2	3159.2	3161.3	3137.7	2921.5	1919.3	1893.7	1892.7	1888.6	1884.5
40°	3571.2	3447.2	3417.4	3379.5	2708.3	2066.9	2058.7	2052.5	2055.6	2063.8
42.5°	3891.9	3798.6	3770.0	3724.9	2778.0	2290.3	2263.6	2256.4	2264.6	2260.5
45°	4318.2	4240.3	4183.9	3444.1	3069.0	2533.1	2511.6	2502.4	2505.4	2531.1
47.5°	4769.1	4722.9	4550.8	3720.8	3408.2	2820.0	2798.5	2784.2	2789.3	2783.1
50°	5259.9	5217.9	4212.6	4137.8	3783.3	3129.5	3097.7	3092.6	3094.7	3093.6
52.5°	5792.8	4914.6	4668.6	4590.8	4178.8	3453.3	3442.0	3414.4	3420.5	3414.4
55°	6417.8	5176.9	5170.7	5079.5	4623.5	3829.4	3816.1	3777.1	3532.2	3746.4
57.5°	7011.2	5678.0	5678.0	5589.9	5078.5	4203.4	4181.9	4153.2	2510.6	2024.9
60°	7660.8	6180.1	6165.8	6093.0	5517.1	4560.0	3706.4	3698.2	1516.6	1521.7
62.5°	8222.4	6627.9	6653.5	6585.9	5939.3	3414.4	1717.4	1682.6	149.6	230.6
65°	8851.6	7122.8	7153.6	7083.9	6396.3	3621.4	1864.0	1846.6	33.8	30.7
67.5°	9564.8	7616.8	7547.1	7470.2	6663.8	3729.0	1936.7	1921.4	9.2	6.1
68°	9570.9	7606.5	7516.3	7464.1	6638.2	3708.5	1930.6	1916.2	9.2	6.1
70°	9079.0	7223.3	7133.1	7146.4	6320.5	3546.6	1850.6	1824.0	9.2	6.1
72.5°	7965.2	6428.1	6326.6	6254.9	5605.2	3153.1	1659.0	1608.8	9.2	6.1
75°	6815.4	5447.4	5279.4	5121.6	4509.8	2580.3	1360.8	1304.5	9.2	6.1
77.5°	5371.6	4152.2	3913.4	3809.9	3388.8	1906.0	1011.4	949.9	9.2	5.1
80°	2968.6	2382.5	2179.6	2116.1	1937.8	1120.0	580.0	543.1	8.2	5.1
82.5°	767.5	575.9	502.1	484.7	455.0	265.4	141.4	134.2	7.2	4.1
85°	109.6	81.0	89.2	105.5	101.4	68.7	49.2	42.0	6.1	3.1
87.5°	57.4	48.2	56.4	63.5	64.6	40.0	20.5	11.3	3.1	0.0
90°	9.2	9.2	10.2	11.3	11.3	5.1	4.1	0.0	0.0	0.0
92.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.0	2.0	1.0	1.0	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°
110°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	1.0	1.0	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)