

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: P522185

Luminaire Tested: **CTN-CA6-230-727-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522185  
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-CA6-230-727-U-T5R-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (6) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24703.9 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U1 - G4

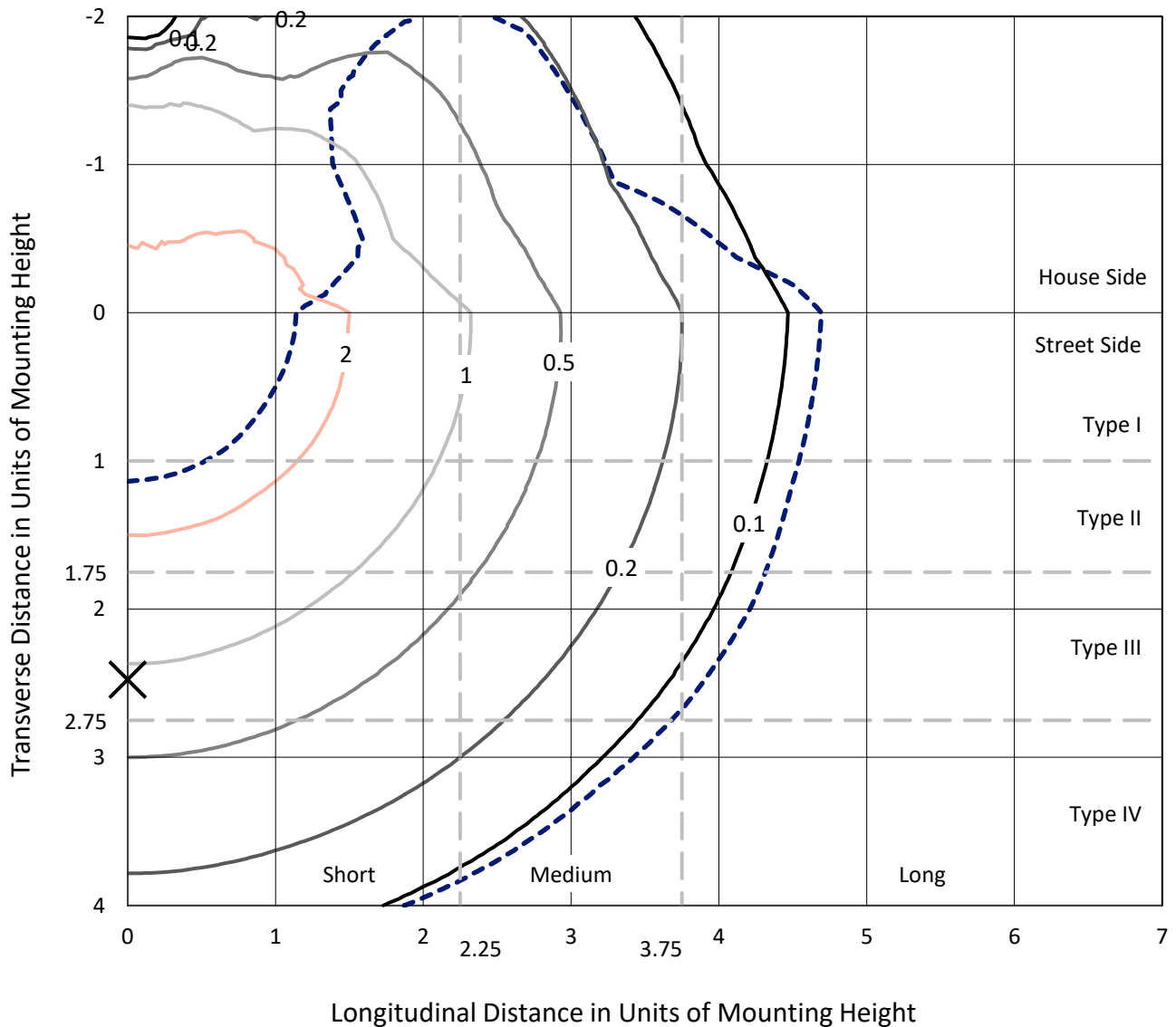
Input Watts (W): 227.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

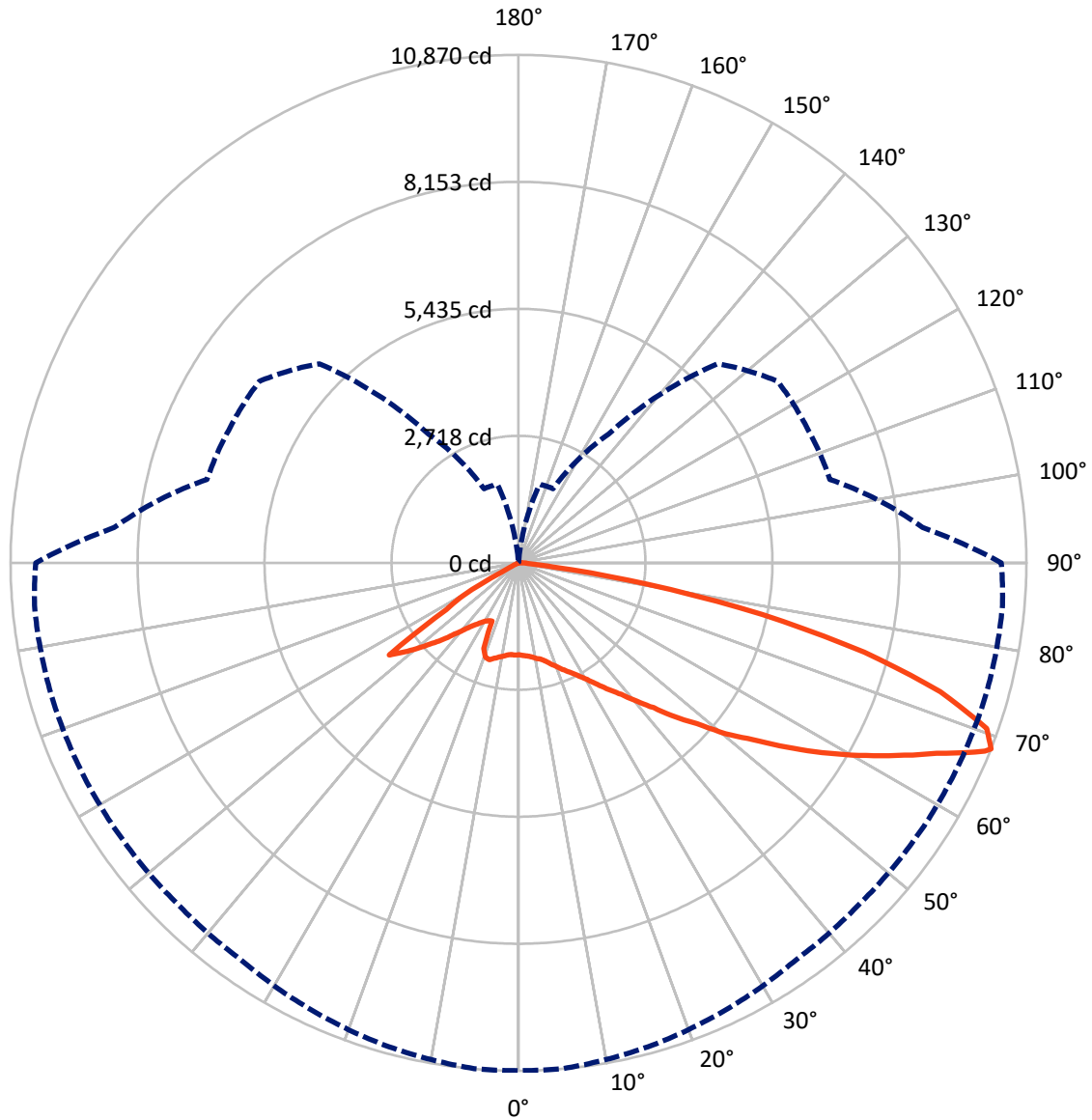
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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

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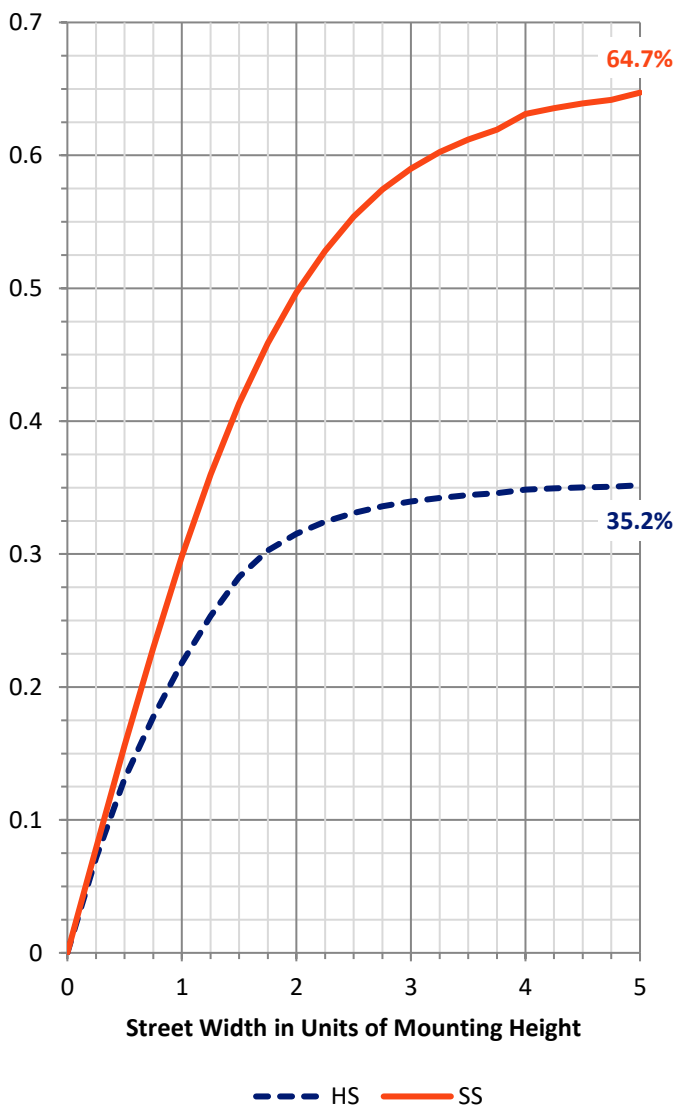
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8694.1	1.5	8695.6
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	16001.9	6.5	16008.4
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	24696.0	8.0	24703.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.2	0.8
10°-20°	609.4	2.5
20°-30°	1087.8	4.4
30°-40°	1769.7	7.2
40°-50°	3022.1	12.2
50°-60°	5042.6	20.4
60°-70°	7015.2	28.4
70°-80°	5437.9	22.0
80°-90°	521.1	2.1
90°-100°	6.3	0.0
100°-110°	0.5	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°	24696.0	100.0
0°-180°	24703.9	100.0

**Coefficient of Utilization**

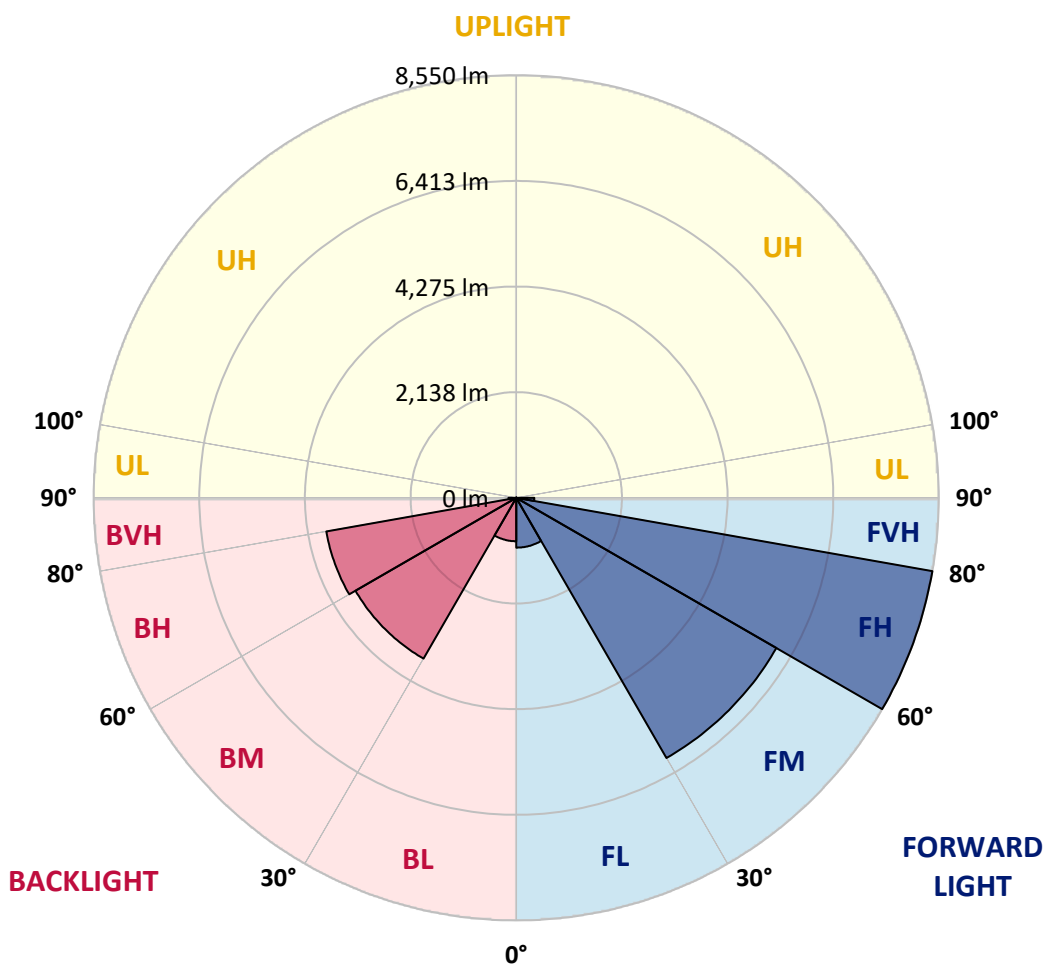


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1008.3	4.1			
FM	(30°-60°)	6078.9	24.6			
FH	(60°-80°)	8550.1	34.6			G4/12000
FVH	(80°-90°)	364.5	1.5			G3/500
BL	(0°-30°)	879.2	3.6	B2/1000		
BM	(30°-60°)	3755.5	15.2	B3/5000		
BH	(60°-80°)	3903.0	15.8	B4/5000		G4/5000
BVH	(80°-90°)	156.5	0.6			G2/225
UL	(90°-100°)	6.3	0.0		U1/10	
UH	(100°-180°)	1.7	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°	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0
2.5°	1988.3	1985.5	1983.7	1995.8	1961.4	1975.3	1966.0	1978.1	1975.3	1980.9	1981.8
5°	2002.3	1997.6	1991.1	2004.1	1983.7	1993.0	1982.8	1988.3	1970.7	1985.5	1987.4
7.5°	2033.9	2020.9	2019.9	2023.7	2009.7	2016.2	1998.6	2005.1	1995.8	1990.2	1995.8
10°	2081.3	2070.1	2058.0	2065.5	2042.2	2050.6	2032.0	2037.6	2033.0	2020.9	2032.0
12.5°	2113.8	2117.5	2109.2	2114.8	2094.3	2086.9	2080.4	2079.4	2076.6	2059.0	2056.2
15°	2186.3	2188.2	2173.3	2177.0	2172.4	2168.7	2159.4	2151.9	2137.1	2125.9	2118.5
17.5°	2281.1	2270.9	2257.0	2260.7	2273.7	2257.0	2251.4	2237.5	2216.1	2197.5	2193.8
20°	2380.6	2374.1	2361.1	2368.5	2367.6	2356.4	2359.2	2336.0	2305.3	2289.5	2277.4
22.5°	2491.2	2481.9	2472.6	2486.6	2475.4	2468.0	2465.2	2449.4	2411.3	2393.6	2390.8
25°	2601.8	2597.2	2603.7	2599.1	2583.3	2577.7	2581.4	2575.8	2531.2	2509.8	2496.8
27.5°	2740.3	2729.2	2739.4	2733.8	2717.1	2718.0	2719.0	2719.9	2669.7	2641.8	2623.2
30°	2898.4	2894.7	2907.7	2890.0	2874.2	2884.4	2892.8	2874.2	2830.5	2789.6	2783.1
32.5°	3103.8	3080.6	3095.4	3073.1	3049.0	3073.1	3088.0	3050.8	3015.5	2963.4	2972.7
35°	3331.5	3324.1	3324.1	3295.3	3282.3	3320.4	3335.3	3299.0	3244.2	3198.6	3187.5
37.5°	3573.2	3580.7	3603.9	3591.8	3579.7	3603.0	3636.4	3588.1	3517.5	3469.1	3456.1
40°	3893.9	3912.5	3928.3	3912.5	3898.6	3913.5	3951.6	3888.4	3839.1	3813.1	3785.2
42.5°	4238.8	4270.4	4260.2	4262.0	4274.1	4295.5	4333.6	4276.0	4219.3	4218.3	4177.4
45°	4705.4	4705.4	4684.1	4704.5	4702.7	4755.6	4772.4	4740.8	4693.4	4679.4	4644.1
47.5°	5141.4	5187.0	5178.6	5208.3	5185.1	5229.7	5286.4	5259.5	5204.6	5155.3	5147.9
50°	5749.3	5738.2	5727.0	5771.6	5767.9	5798.6	5850.7	5833.9	5757.7	5701.9	5691.7
52.5°	6283.8	6342.4	6328.5	6395.4	6358.2	6401.9	6464.2	6461.4	6368.4	6313.6	6297.8
55°	6958.7	6997.7	6994.9	7063.7	7012.6	7070.2	7122.3	7127.9	7026.6	6948.5	6972.6
57.5°	7661.4	7694.0	7675.4	7732.1	7681.9	7760.9	7792.5	7772.1	7712.6	7614.0	7650.3
60°	8365.1	8393.0	8414.4	8419.0	8390.2	8436.7	8466.4	8484.1	8390.2	8277.7	8321.4
62.5°	9080.0	9111.6	9093.0	9100.4	9020.5	9083.7	9120.9	9125.5	9017.7	8918.2	8948.9
65°	9832.9	9876.6	9809.7	9765.0	9666.5	9665.6	9714.8	9723.2	9647.0	9576.3	9564.3
67.5°	10765.3	10784.8	10641.6	10492.0	10325.6	10289.3	10323.7	10343.2	10386.9	10385.1	10330.2
68°	10870.3	10866.6	10721.6	10543.1	10364.6	10322.8	10339.5	10364.6	10393.4	10399.0	10333.0
70°	10631.4	10585.8	10503.1	10278.2	10101.5	9991.9	9933.3	9979.8	9901.7	9902.6	9779.0
72.5°	9443.4	9437.8	9285.4	9173.8	9016.7	8834.6	8750.9	8750.0	8757.4	8703.5	8576.1
75°	7649.4	7656.8	7479.3	7402.1	7353.8	7319.4	7337.0	7391.9	7397.4	7396.5	7351.9
77.5°	5334.8	5365.4	5318.0	5192.5	5327.3	5442.6	5664.7	5778.2	5741.9	5850.7	5919.4
80°	2796.1	2857.5	2859.3	2947.6	3056.4	3161.4	3352.9	3524.9	3398.5	3342.7	3285.1
82.5°	735.3	757.6	791.1	739.9	755.7	771.5	920.3	906.3	836.6	873.8	929.6
85°	210.1	216.6	207.3	187.8	172.0	158.0	161.7	136.6	119.0	118.1	114.3
87.5°	147.8	159.0	140.4	120.8	108.8	101.3	97.6	82.7	66.9	58.6	46.5
90°	68.8	67.9	58.6	45.5	40.0	38.1	38.1	29.7	16.7	10.2	9.3
92.5°	28.8	29.7	24.2	19.5	16.7	13.0	10.2	6.5	3.7	1.9	0.9
95°	10.2	11.2	9.3	7.4	6.5	5.6	4.6	3.7	1.9	0.9	0.9
97.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.9	1.9	0.9	0.9
100°	0.0	0.0	0.0	0.9	1.9	1.9	1.9	1.9	0.9	0.9	0.9
102.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
105°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9



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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	0.9	0.9	0.9	0.9
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
165°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
170°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
172.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
175°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
177.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0	1966.0
2.5°	1980.0	1975.3	1973.5	1950.2	1956.7	1942.8	1975.3	1966.0	1964.2	1977.2
5°	1984.6	1963.2	1976.2	1961.4	1965.1	1944.6	1970.7	1959.5	1960.4	1967.0
7.5°	1987.4	1975.3	1988.3	1962.3	1972.5	1965.1	1983.7	1972.5	1983.7	1989.3
10°	2015.3	2009.7	2000.4	1993.0	2000.4	1982.8	2006.0	2004.1	2010.6	2027.4
12.5°	2053.4	2046.9	2037.6	2024.6	2030.2	2023.7	2041.3	2043.2	2055.3	2063.6
15°	2110.1	2101.7	2097.1	2084.1	2085.9	2081.3	2091.5	2093.4	2117.5	2114.8
17.5°	2190.0	2180.8	2184.5	2172.4	2167.7	2156.6	2138.0	2131.5	2160.3	2168.7
20°	2277.4	2267.2	2271.8	2261.6	2175.2	1999.5	2117.5	2198.4	2137.1	2132.4
22.5°	2376.9	2365.7	2369.5	2353.6	2246.7	1917.7	1668.6	1648.1	1882.4	1977.2
25°	2486.6	2471.7	2469.8	2449.4	2098.0	1736.4	1708.5	1672.3	1501.2	1365.5
27.5°	2622.3	2600.0	2588.8	2280.2	2083.1	1804.3	1762.4	1633.2	1385.0	1393.4
30°	2769.2	2736.6	2527.5	2323.9	2191.9	1884.2	1828.4	1431.5	1433.4	1429.7
32.5°	2936.5	2864.0	2476.4	2457.8	2322.0	1969.7	1518.0	1501.2	1503.1	1508.7
35°	3155.9	2658.5	2648.3	2649.2	2481.0	1905.6	1608.1	1592.3	1594.2	1597.9
37.5°	3202.3	2865.8	2867.7	2846.3	2650.2	1741.1	1717.8	1716.9	1713.2	1709.5
40°	3239.5	3127.0	3100.1	3065.7	2456.8	1874.9	1867.5	1861.9	1864.7	1872.1
42.5°	3530.5	3445.9	3419.9	3379.0	2520.0	2077.6	2053.4	2046.9	2054.3	2050.6
45°	3917.2	3846.5	3795.4	3124.3	2784.0	2297.9	2278.4	2270.0	2272.8	2296.0
47.5°	4326.2	4284.3	4128.2	3375.2	3091.7	2558.2	2538.6	2525.6	2530.3	2524.7
50°	4771.4	4733.3	3821.4	3753.6	3431.9	2838.9	2810.1	2805.4	2807.3	2806.3
52.5°	5254.8	4458.2	4235.1	4164.4	3790.8	3132.6	3122.4	3097.3	3102.9	3097.3
55°	5821.8	4696.1	4690.6	4607.8	4194.2	3473.8	3461.7	3426.4	3204.2	3398.5
57.5°	6360.1	5150.7	5150.7	5070.8	4606.9	3813.1	3793.5	3767.5	2277.4	1836.8
60°	6949.4	5606.2	5593.2	5527.2	5004.8	4136.5	3362.2	3354.8	1375.8	1380.4
62.5°	7458.8	6012.4	6035.6	5974.3	5387.7	3097.3	1557.9	1526.3	135.7	209.2
65°	8029.6	6461.4	6489.3	6426.1	5802.3	3285.1	1690.9	1675.1	30.7	27.9
67.5°	8676.5	6909.4	6846.2	6776.5	6044.9	3382.7	1756.9	1742.9	8.4	5.6
68°	8682.1	6900.1	6818.3	6770.9	6021.7	3364.1	1751.3	1738.3	8.4	5.6
70°	8235.9	6552.5	6470.7	6482.8	5733.5	3217.2	1678.8	1654.6	8.4	5.6
72.5°	7225.5	5831.1	5739.1	5674.0	5084.7	2860.3	1505.0	1459.4	8.4	5.6
75°	6182.5	4941.5	4789.1	4645.9	4091.0	2340.6	1234.5	1183.3	8.4	5.6
77.5°	4872.8	3766.6	3550.0	3456.1	3074.1	1729.0	917.5	861.7	8.4	4.6
80°	2692.9	2161.2	1977.2	1919.5	1757.8	1016.0	526.1	492.7	7.4	4.6
82.5°	696.2	522.4	455.5	439.7	412.7	240.8	128.3	121.8	6.5	3.7
85°	99.5	73.4	80.9	95.7	92.0	62.3	44.6	38.1	5.6	2.8
87.5°	52.1	43.7	51.1	57.6	58.6	36.3	18.6	10.2	2.8	0.0
90°	8.4	8.4	9.3	10.2	10.2	4.6	3.7	0.0	0.0	0.0
92.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.9	1.9	0.9	0.9	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°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.9	0.9	0.9	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)