

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: P522181

Luminaire Tested: **CTN-CA6-230-722-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522181  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-7)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA6-230-722-U-T5R-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (6) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18572 lumens  
Efficiency: N/A  
Efficacy: 81.5 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U2 - G3

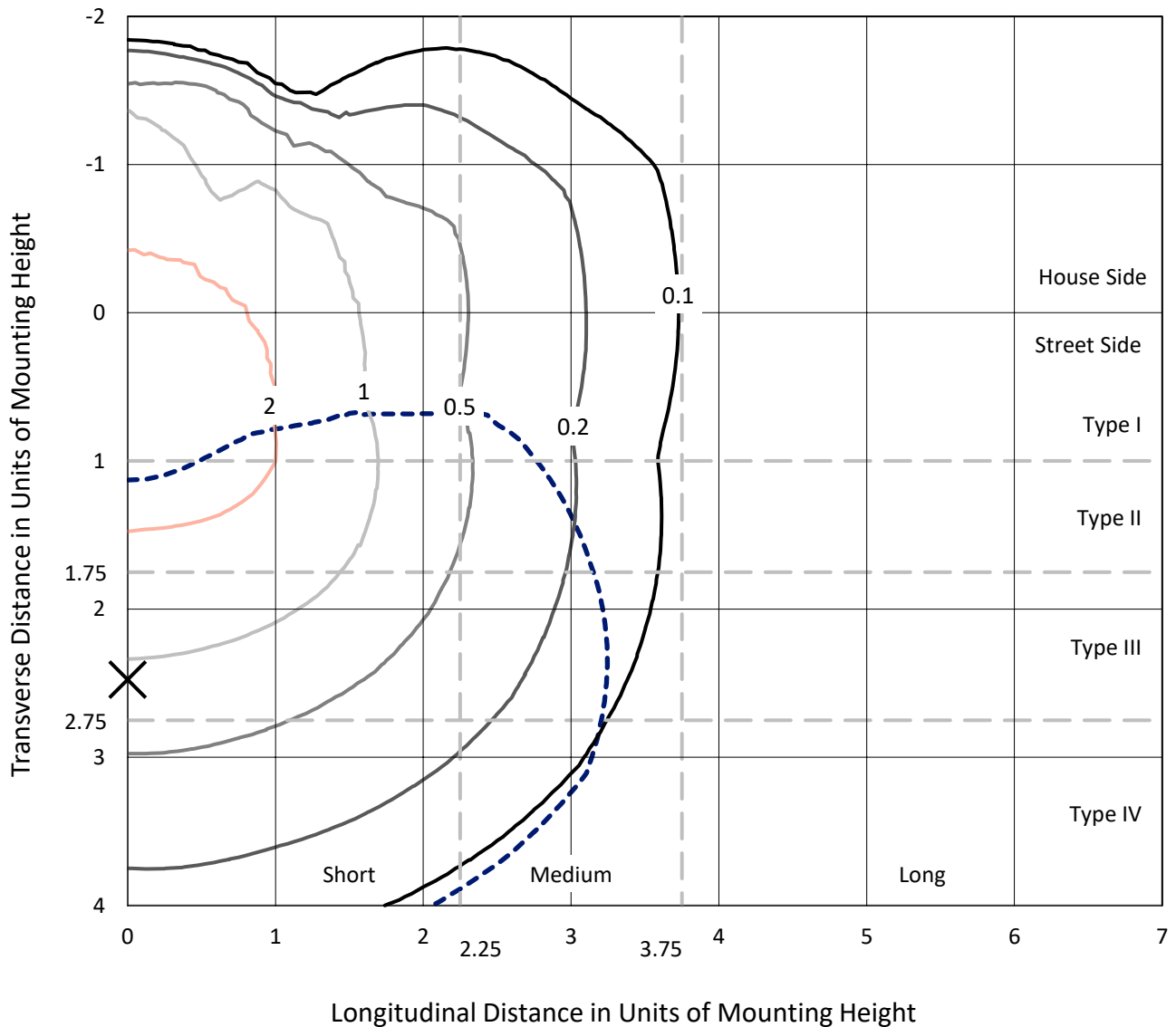
Input Watts (W): 227.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

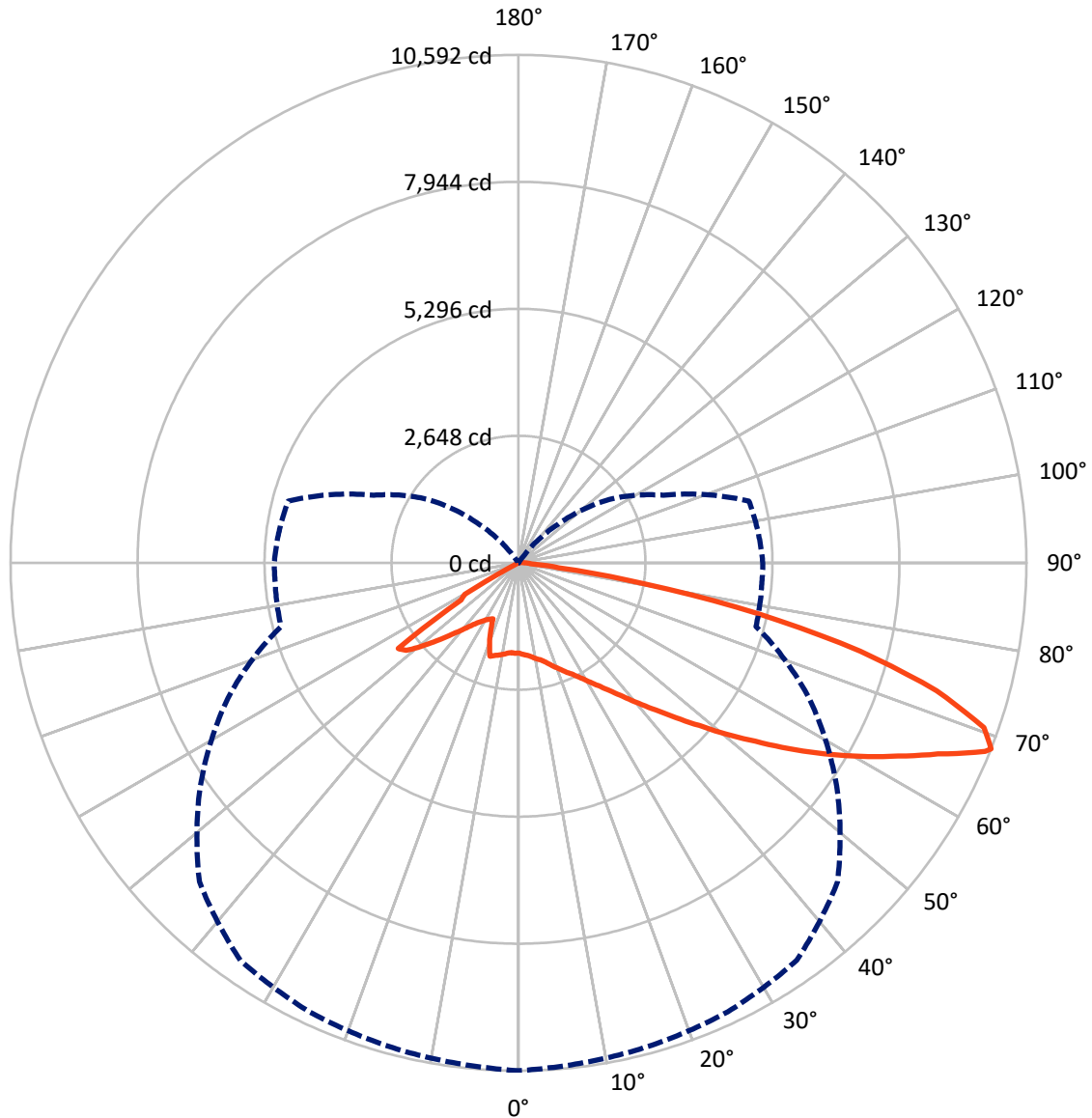
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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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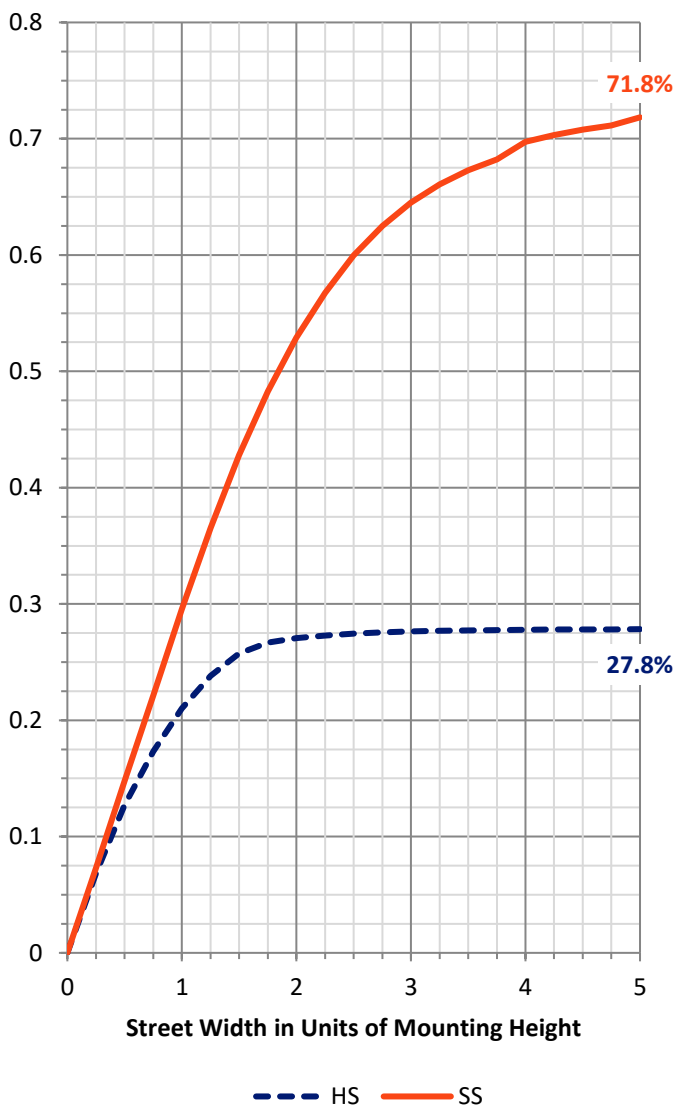
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5187.2	0.1	5187.3
	% Fixture	27.9	0.0	27.9
<b>Street Side</b>	Lumens	13374.1	10.6	13384.7
	% Fixture	72.0	0.1	72.1
<b>Total</b>	Lumens	18561.2	10.8	18572.0
	% Fixture	99.9	0.1	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.6	1.0
10°-20°	578.7	3.1
20°-30°	979.7	5.3
30°-40°	1552.0	8.4
40°-50°	2537.4	13.7
50°-60°	3886.7	20.9
60°-70°	4779.0	25.7
70°-80°	3692.7	19.9
80°-90°	372.6	2.0
90°-100°	10.6	0.1
100°-110°	0.2	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°	18561.2	99.9
0°-180°	18572.0	100.0

**Coefficient of Utilization**

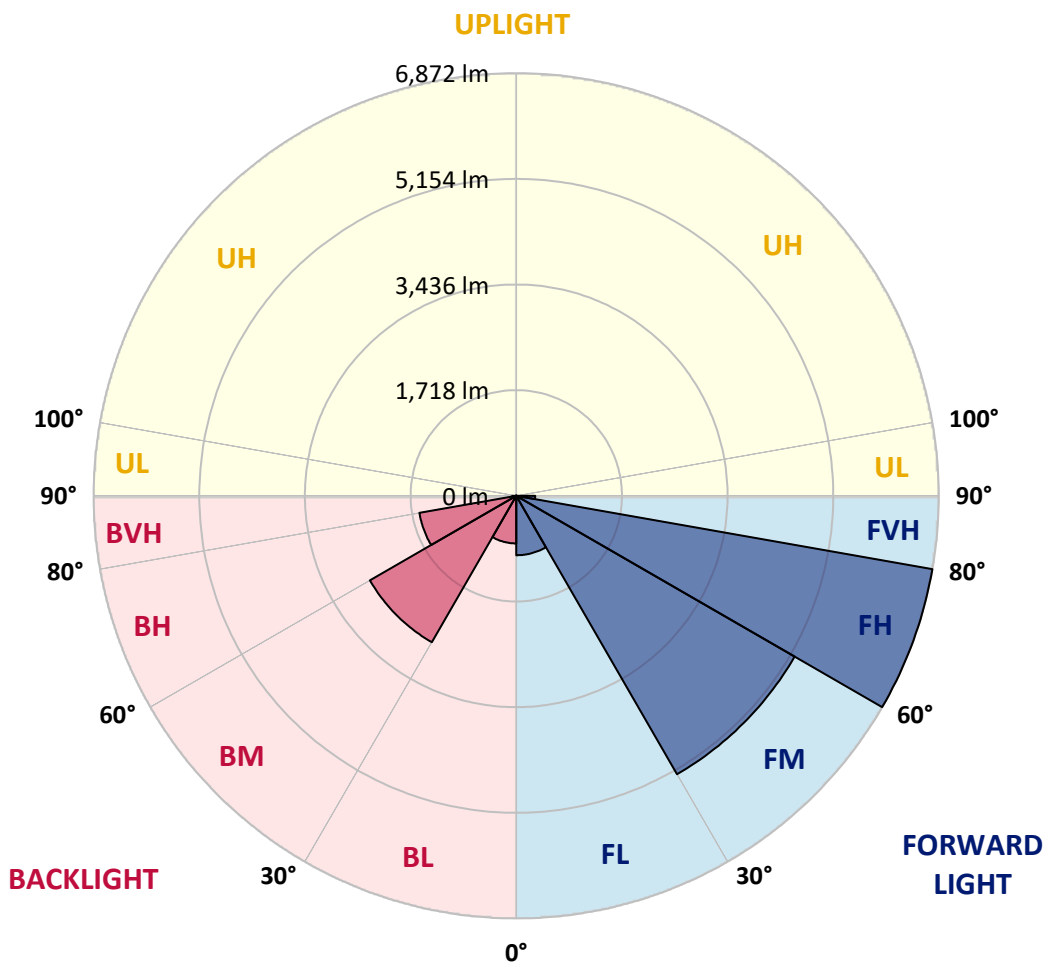


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	966.7	5.2			
FM (30°-60°)	5227.7	28.1			
FH (60°-80°)	6872.4	37.0			G3/7500
FVH (80°-90°)	307.3	1.7			G3/500
BL (0°-30°)	774.2	4.2	B2/1000		
BM (30°-60°)	2748.4	14.8	B3/5000		
BH (60°-80°)	1599.2	8.6	B3/2500		G3/2500
BVH (80°-90°)	65.3	0.4			G1/100
UL (90°-100°)	10.6	0.1		U2/50	
UH (100°-180°)	0.2	0.0		U1/10	

**BUG Rating: B3-U2-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5
2.5°	1915.5	1912.0	1908.4	1916.4	1885.1	1898.5	1887.8	1897.6	1890.5	1898.5	1895.9
5°	1940.6	1937.0	1926.3	1935.2	1914.6	1920.0	1906.6	1910.2	1886.0	1900.3	1899.4
7.5°	1981.7	1971.9	1964.7	1964.7	1946.9	1946.0	1924.5	1925.4	1906.6	1904.8	1908.4
10°	2037.2	2030.1	2010.4	2012.2	1987.1	1983.5	1956.7	1955.8	1940.6	1931.6	1939.7
12.5°	2078.4	2085.5	2067.6	2067.6	2042.6	2024.7	2005.9	1993.4	1981.7	1968.3	1962.1
15°	2153.5	2160.7	2136.5	2135.6	2125.8	2104.3	2083.7	2056.9	2036.3	2030.1	2020.2
17.5°	2251.1	2246.6	2226.0	2226.9	2228.7	2193.8	2173.2	2138.3	2108.8	2087.3	2082.0
20°	2350.4	2350.4	2328.0	2335.2	2326.2	2294.0	2280.6	2232.3	2191.1	2167.8	2149.1
22.5°	2461.3	2456.8	2441.6	2456.8	2438.9	2406.7	2384.4	2336.0	2283.3	2151.7	2098.1
25°	2566.9	2564.2	2570.5	2574.9	2552.6	2512.3	2497.1	2446.1	2299.4	2126.7	2018.4
27.5°	2700.2	2691.2	2705.6	2714.5	2692.1	2657.2	2625.0	2567.8	2257.3	2121.3	2109.7
30°	2871.1	2851.4	2872.0	2876.4	2853.2	2831.7	2783.4	2497.1	2271.6	2232.3	2228.7
32.5°	3053.6	3030.3	3057.2	3060.7	3030.3	3012.4	2890.8	2460.4	2412.1	2366.5	2370.9
35°	3270.1	3270.1	3283.5	3285.3	3262.9	3232.5	2769.1	2639.3	2596.4	2554.4	2553.5
37.5°	3534.0	3526.0	3561.8	3583.2	3559.1	3472.3	2946.2	2885.4	2819.2	2765.5	2654.6
40°	3852.6	3866.9	3876.7	3898.2	3874.9	3679.9	3204.8	3135.9	3084.0	2904.2	2624.1
42.5°	4196.1	4199.7	4221.2	4248.0	4248.0	4042.2	3507.2	3448.2	3381.0	2839.8	2713.6
45°	4606.8	4598.7	4639.9	4682.8	4671.2	4458.3	3858.8	3815.0	3500.9	3026.7	3027.6
47.5°	5072.9	5063.1	5122.1	5178.5	5120.3	4919.9	4245.3	4211.3	3379.3	3343.5	3336.3
50°	5611.5	5587.4	5655.4	5730.5	5683.1	5435.3	4715.0	4061.9	3718.3	3689.7	3685.2
52.5°	6186.8	6168.0	6209.2	6337.1	6274.5	5974.8	5159.7	4190.7	4111.1	4078.9	4070.9
55°	6836.4	6799.7	6888.2	6985.8	6913.3	6571.5	5598.1	4618.4	4536.1	4480.6	4400.1
57.5°	7519.0	7466.2	7511.9	7634.4	7564.6	7182.6	6163.5	5058.6	4961.1	4105.8	3779.2
60°	8199.0	8174.8	8192.7	8301.0	8215.1	7776.7	6693.2	5499.7	4198.8	4061.0	4077.1
62.5°	8882.5	8829.7	8845.8	8956.8	8846.7	8342.1	7195.1	5900.5	4418.9	4370.6	4387.6
65°	9615.3	9552.6	9567.0	9599.2	9463.2	8849.4	7638.9	6279.0	4749.9	4698.9	4717.7
67.5°	10498.3	10441.1	10363.2	10267.5	10079.6	9388.0	8080.0	6677.1	5122.1	5093.5	5099.8
68°	10592.3	10536.8	10442.9	10329.2	10118.1	9410.4	8098.8	6688.7	5127.5	5091.7	5093.5
70°	10299.7	10332.8	10226.4	10035.8	9859.5	9082.9	7791.9	6431.1	4899.3	4846.6	4833.1
72.5°	9121.4	9193.9	9047.1	9014.9	8798.4	8091.6	6818.5	5580.2	4261.4	4278.4	4230.1
75°	7364.2	7470.7	7292.7	7302.5	7179.0	6749.6	5714.4	4646.1	3499.1	3577.0	3591.3
77.5°	5121.2	5274.2	5196.4	5274.2	5213.4	5058.6	4422.5	3577.9	2669.8	2759.2	2794.1
80°	2670.7	2852.3	2955.2	2987.4	3007.1	3000.8	2693.0	2147.3	1543.3	1576.5	1574.7
82.5°	844.6	800.8	826.7	819.5	797.2	806.1	726.5	568.1	393.7	433.9	415.1
85°	255.0	256.8	249.6	247.8	229.0	201.3	164.6	94.8	46.5	54.6	51.0
87.5°	187.9	189.7	175.4	166.4	155.7	135.1	104.7	59.0	22.4	21.5	17.0
90°	103.8	100.2	93.0	85.9	81.4	69.8	52.8	22.4	8.1	6.3	5.4
92.5°	56.4	53.7	50.1	47.4	41.2	33.1	21.5	7.2	3.6	0.9	0.0
95°	25.9	24.2	23.3	20.6	17.9	12.5	7.2	4.5	2.7	0.9	0.0
97.5°	11.6	10.7	9.8	8.1	6.3	3.6	3.6	2.7	1.8	0.9	0.0
100°	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0



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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	0.0	0.0	0.0	0.0
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°	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5	1881.5
2.5°	1893.2	1887.8	1885.1	1868.1	1873.5	1858.3	1887.8	1880.6	1876.2	1888.7
5°	1895.0	1876.2	1887.8	1878.0	1881.5	1860.1	1883.3	1873.5	1872.6	1878.0
7.5°	1899.4	1886.9	1898.5	1878.9	1887.8	1878.9	1895.9	1886.0	1894.1	1899.4
10°	1923.6	1916.4	1911.1	1906.6	1912.9	1895.0	1916.4	1917.3	1920.0	1936.1
12.5°	1957.6	1950.4	1941.5	1929.9	1936.1	1929.0	1945.1	1949.5	1959.4	1967.4
15°	2005.0	1991.6	1988.0	1977.3	1983.5	1980.0	1983.5	1980.9	1999.6	1997.0
17.5°	2070.3	2055.1	2004.1	1952.2	1919.1	1929.0	1970.1	2023.8	2037.2	2039.0
20°	2094.5	1987.1	1981.7	1922.7	1895.9	1894.1	1809.1	1682.0	1720.5	1810.9
22.5°	2065.8	1919.1	1903.9	1892.3	1777.8	1589.9	1572.0	1553.2	1548.7	1562.1
25°	2001.4	1984.4	1971.0	1818.9	1638.2	1639.1	1613.1	1489.7	1297.3	1281.2
27.5°	2099.8	2076.6	1946.9	1712.4	1708.9	1707.1	1668.6	1351.9	1310.7	1320.6
30°	2211.7	2173.2	1834.1	1803.7	1802.8	1786.7	1495.9	1363.5	1363.5	1365.3
32.5°	2340.5	2101.6	1898.5	1912.9	1912.0	1835.9	1444.9	1436.0	1432.4	1441.4
35°	2438.9	2044.4	2037.2	2063.2	2045.3	1557.7	1535.3	1527.2	1523.7	1519.2
37.5°	2408.5	2209.0	2209.0	2225.1	2081.1	1658.8	1648.0	1648.0	1640.9	1637.3
40°	2455.0	2413.9	2393.3	2399.6	1512.0	1781.3	1789.4	1787.6	1786.7	1793.0
42.5°	2700.2	2663.5	2644.7	2422.8	1692.8	1770.6	1967.4	1966.5	1969.2	1966.5
45°	3012.4	2978.4	2929.2	2267.2	1921.8	1552.3	2168.7	2178.6	2179.5	2178.6
47.5°	3339.9	3318.4	2814.7	2509.6	2170.5	1665.9	2073.0	2421.0	2416.6	2421.9
50°	3686.1	3589.5	2800.4	2796.8	2435.4	1853.8	1854.7	2633.1	2678.7	2693.0
52.5°	4071.8	3254.0	3103.7	2831.7	2703.8	2047.1	2027.4	2333.4	2956.1	2970.4
55°	3781.9	3437.4	3434.7	2520.4	2812.9	2233.2	2235.8	2214.4	2710.9	3081.3
57.5°	3763.1	3771.1	3764.9	2812.0	2052.4	2093.6	2436.3	2417.5	1755.4	1422.6
60°	4087.9	4099.5	3657.5	3036.6	2218.8	1287.5	1500.4	1274.9	1291.9	1305.4
62.5°	4398.3	4401.9	2974.9	1990.7	1099.6	51.9	25.1	20.6	19.7	19.7
65°	4741.9	4741.9	3188.7	2171.4	1062.0	19.7	3.6	2.7	9.8	9.8
67.5°	5073.8	5000.4	3345.3	2305.6	1080.8	2.7	0.0	0.0	0.0	0.0
68°	5055.0	4974.5	3330.9	2302.0	1078.1	1.8	0.0	0.0	0.0	0.0
70°	4774.1	4696.2	3160.1	2197.4	1037.8	1.8	0.0	0.0	0.0	0.0
72.5°	4214.0	4142.4	2798.6	1937.0	935.8	0.9	0.0	0.0	0.0	0.0
75°	3567.1	3557.3	2417.5	1634.6	802.5	0.9	0.0	0.0	0.0	0.0
77.5°	2870.2	2825.4	1889.6	1281.2	646.9	0.0	0.0	0.0	0.0	0.0
80°	1598.8	1665.0	1105.8	753.3	407.1	0.0	0.0	0.0	0.0	0.0
82.5°	432.1	404.4	241.6	163.7	77.8	0.0	0.0	0.0	0.0	0.0
85°	55.5	60.8	27.7	22.4	5.4	0.0	0.0	0.0	0.0	0.0
87.5°	28.6	34.0	8.9	7.2	1.8	0.0	0.0	0.0	0.0	0.0
90°	5.4	6.3	2.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	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°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)