

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: P522202

Luminaire Tested: **CTN-CA8-230-727-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522202
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-CA8-230-727-U-T5R-HSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (8) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20075 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G3

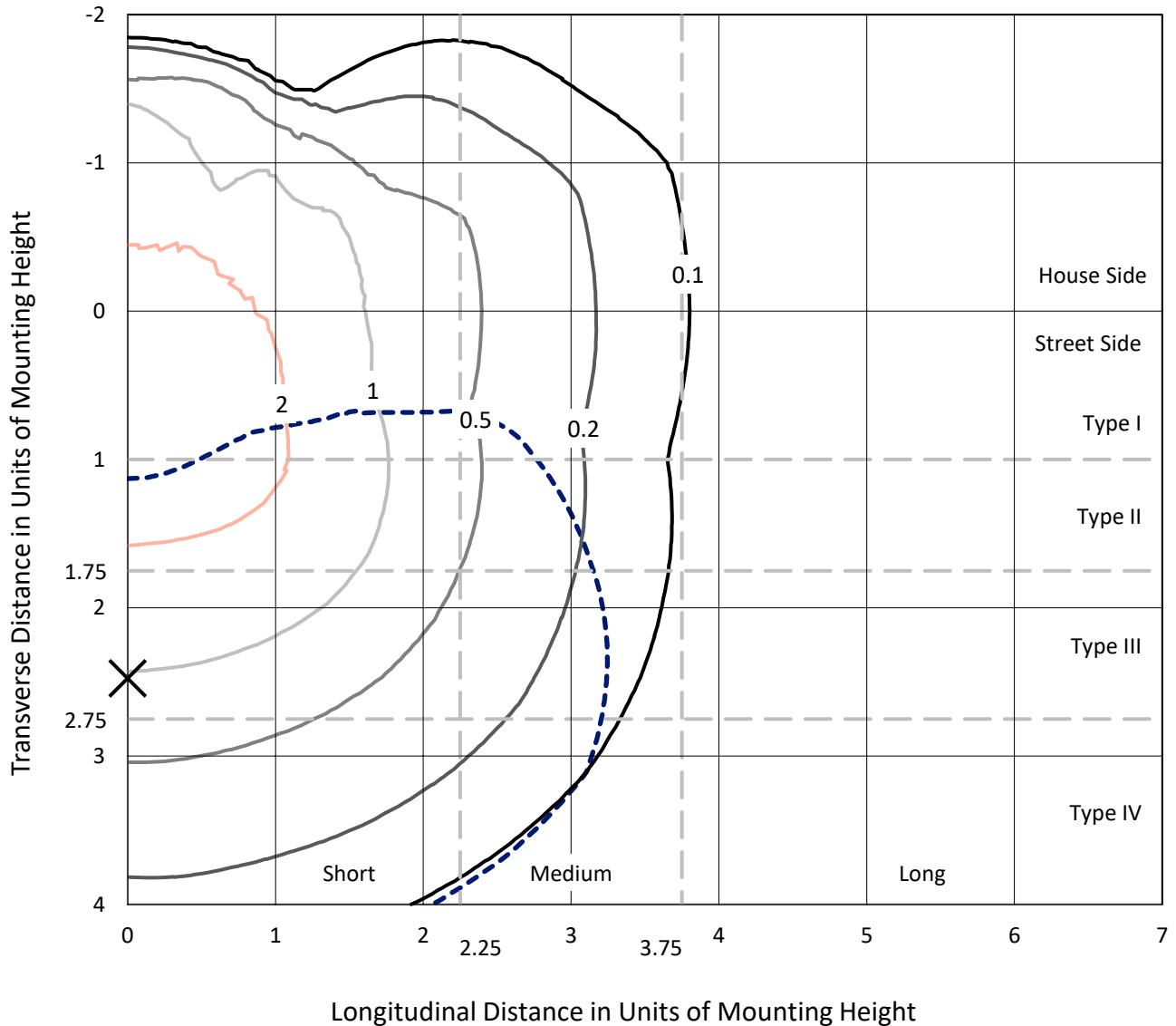
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

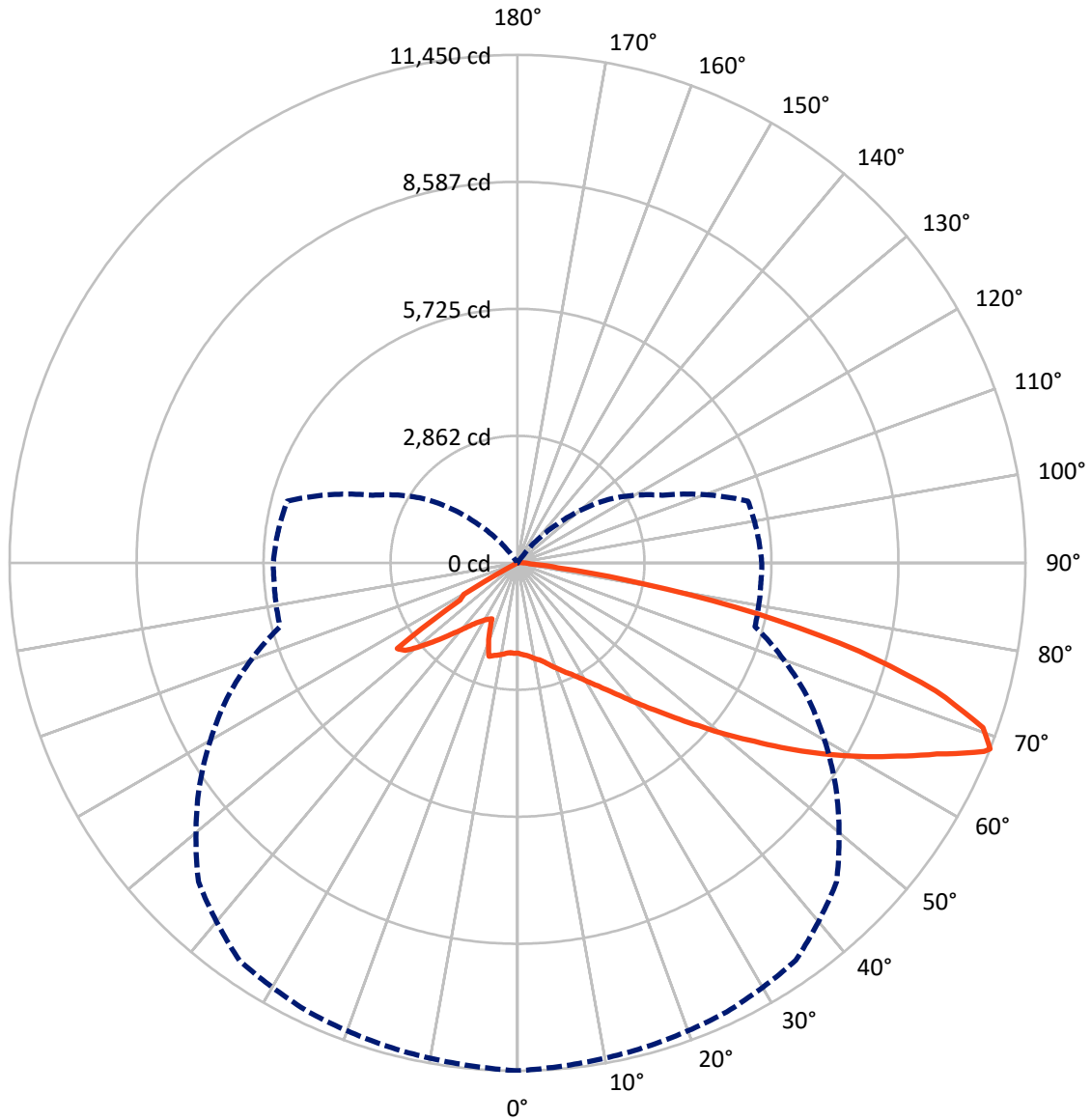
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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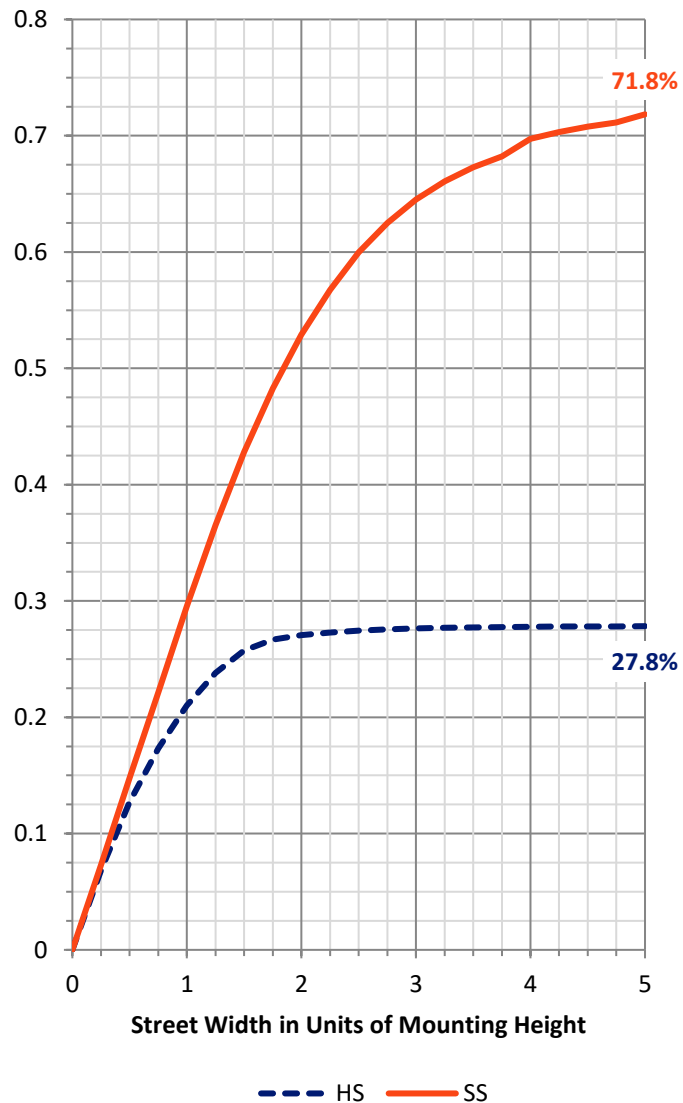
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5607.0	0.1	5607.1
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	14456.4	11.5	14467.9
	% Fixture	72.0	0.1	72.1
Total	Lumens	20063.4	11.6	20075.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.4	1.0
10°-20°	625.5	3.1
20°-30°	1058.9	5.3
30°-40°	1677.6	8.4
40°-50°	2742.8	13.7
50°-60°	4201.2	20.9
60°-70°	5165.7	25.7
70°-80°	3991.5	19.9
80°-90°	402.7	2.0
90°-100°	11.4	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°	20063.4	99.9
0°-180°	20075.0	100.0

Coefficient of Utilization



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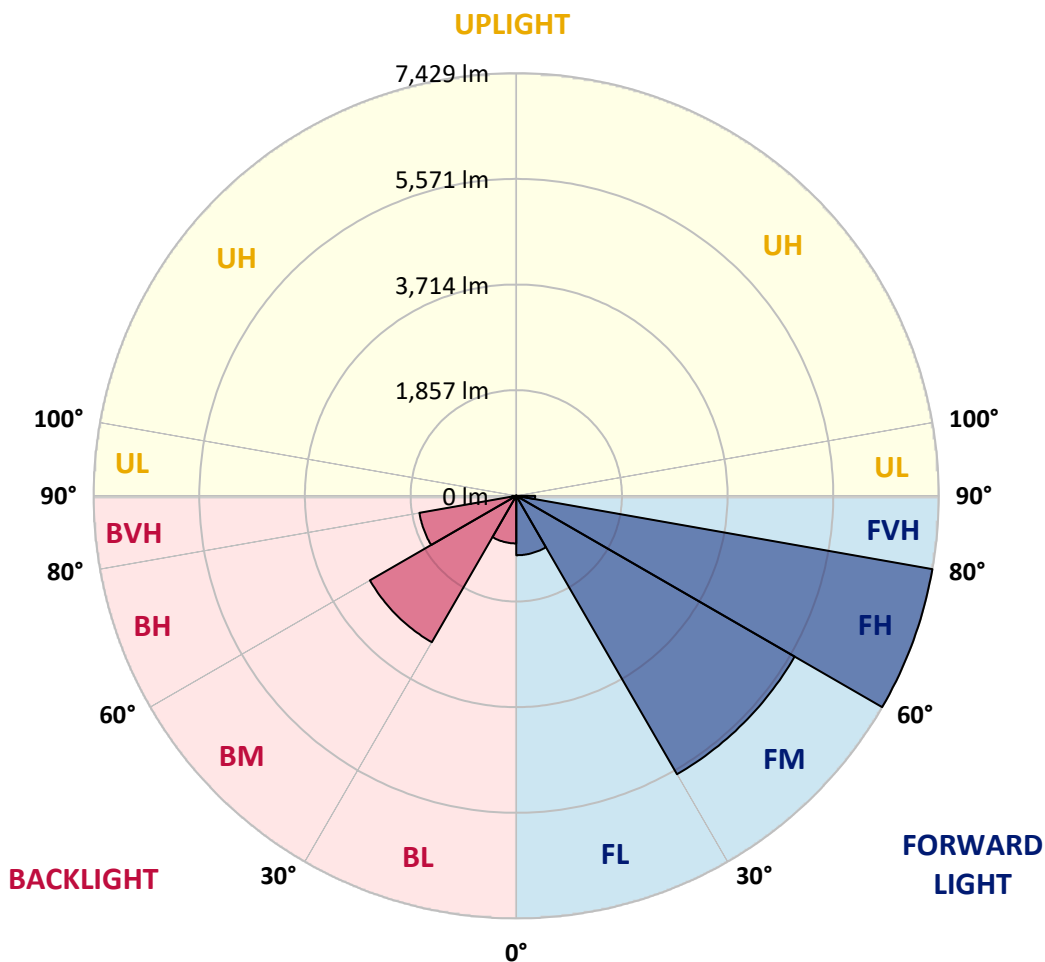
CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX180

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1044.9	5.2			
FM (30°-60°)	5650.8	28.1			
FH (60°-80°)	7428.6	37.0			G3/7500
FVH (80°-90°)	332.1	1.7			G3/500
BL (0°-30°)	836.9	4.2	B2/1000		
BM (30°-60°)	2970.8	14.8	B3/5000		
BH (60°-80°)	1728.6	8.6	B3/2500		G3/2500
BVH (80°-90°)	70.6	0.4			G1/100
UL (90°-100°)	11.4	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°	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8
2.5°	2070.6	2066.7	2062.8	2071.5	2037.7	2052.2	2040.6	2051.2	2043.5	2052.2	2049.3
5°	2097.6	2093.8	2082.2	2091.8	2069.6	2075.4	2060.9	2064.8	2038.6	2054.1	2053.2
7.5°	2142.1	2131.5	2123.8	2123.8	2104.4	2103.4	2080.2	2081.2	2060.9	2059.0	2062.8
10°	2202.1	2194.4	2173.1	2175.0	2147.9	2144.1	2115.0	2114.1	2097.6	2088.0	2096.7
12.5°	2246.6	2254.3	2235.0	2235.0	2207.9	2188.5	2168.2	2154.7	2142.1	2127.6	2120.9
15°	2327.8	2335.5	2309.4	2308.5	2297.8	2274.6	2252.4	2223.4	2201.1	2194.4	2183.7
17.5°	2433.2	2428.4	2406.1	2407.1	2409.0	2371.3	2349.1	2311.4	2279.5	2256.2	2250.4
20°	2540.6	2540.6	2516.4	2524.1	2514.5	2479.6	2465.1	2412.9	2368.4	2343.3	2323.0
22.5°	2660.5	2655.7	2639.2	2655.7	2636.3	2601.5	2577.3	2525.1	2468.0	2325.9	2267.8
25°	2774.6	2771.7	2778.5	2783.3	2759.1	2715.6	2699.2	2644.1	2485.4	2298.8	2181.8
27.5°	2918.7	2909.0	2924.5	2934.2	2910.0	2872.3	2837.5	2775.6	2440.0	2293.0	2280.4
30°	3103.4	3082.1	3104.4	3109.2	3084.1	3060.9	3008.6	2699.2	2455.5	2412.9	2409.0
32.5°	3300.7	3275.6	3304.6	3308.4	3275.6	3256.2	3124.7	2659.5	2607.3	2558.0	2562.8
35°	3534.8	3534.8	3549.3	3551.2	3527.0	3494.1	2993.2	2852.9	2806.5	2761.1	2760.1
37.5°	3820.0	3811.3	3850.0	3873.2	3847.1	3753.3	3184.7	3118.9	3047.3	2989.3	2869.4
40°	4164.3	4179.8	4190.4	4213.7	4188.5	3977.7	3464.2	3389.7	3333.6	3139.2	2836.5
42.5°	4535.7	4539.6	4562.8	4591.8	4591.8	4369.4	3791.0	3727.2	3654.7	3069.6	2933.2
45°	4979.6	4970.9	5015.4	5061.8	5049.2	4819.1	4171.1	4123.7	3784.3	3271.7	3272.7
47.5°	5483.5	5472.8	5536.6	5597.6	5534.7	5318.1	4588.9	4552.1	3652.7	3614.1	3606.3
50°	6065.7	6039.5	6113.0	6194.3	6143.0	5875.1	5096.6	4390.6	4019.3	3988.3	3983.5
52.5°	6687.5	6667.2	6711.7	6850.0	6782.3	6458.3	5577.3	4529.9	4443.8	4409.0	4400.3
55°	7389.6	7350.0	7445.7	7551.1	7472.8	7103.4	6051.1	4992.2	4903.2	4843.2	4756.2
57.5°	8127.5	8070.5	8119.8	8252.3	8176.8	7763.9	6662.4	5468.0	5362.6	4438.0	4085.0
60°	8862.5	8836.4	8855.7	8972.8	8879.9	8406.0	7234.9	5944.8	4538.6	4389.7	4407.1
62.5°	9601.4	9544.3	9561.7	9681.6	9562.7	9017.2	7777.4	6378.0	4776.5	4724.3	4742.7
65°	10393.4	10325.7	10341.2	10376.0	10229.0	9565.6	8257.1	6787.1	5134.3	5079.2	5099.5
67.5°	11348.0	11286.1	11201.9	11098.4	10895.3	10147.8	8733.9	7217.5	5536.6	5505.7	5512.5
68°	11449.5	11389.5	11288.0	11165.2	10936.9	10172.0	8754.2	7230.0	5542.5	5503.8	5505.7
70°	11133.3	11169.0	11054.0	10848.0	10657.4	9818.0	8422.5	6951.5	5295.8	5238.8	5224.3
72.5°	9859.6	9937.9	9779.3	9744.5	9510.5	8746.5	7370.3	6031.8	4606.3	4624.7	4572.4
75°	7960.2	8075.3	7882.8	7893.5	7760.0	7295.8	6176.9	5022.2	3782.3	3866.5	3881.9
77.5°	5535.7	5701.1	5616.9	5701.1	5635.3	5468.0	4780.4	3867.4	2885.8	2982.5	3020.3
80°	2886.8	3083.1	3194.3	3229.1	3250.4	3243.7	2911.0	2321.0	1668.2	1704.0	1702.1
82.5°	912.9	865.6	893.6	885.9	861.7	871.4	785.3	614.1	425.5	469.0	448.7
85°	275.6	277.6	269.8	267.9	247.6	217.6	177.9	102.5	50.3	59.0	55.1
87.5°	203.1	205.0	189.6	179.9	168.3	146.0	113.2	63.8	24.2	23.2	18.4
90°	112.2	108.3	100.6	92.8	88.0	75.4	57.1	24.2	8.7	6.8	5.8
92.5°	60.9	58.0	54.2	51.3	44.5	35.8	23.2	7.7	3.9	1.0	0.0
95°	28.0	26.1	25.1	22.2	19.3	13.5	7.7	4.8	2.9	1.0	0.0
97.5°	12.6	11.6	10.6	8.7	6.8	3.9	3.9	2.9	1.9	1.0	0.0
100°	2.9	2.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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°	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8	2033.8
2.5°	2046.4	2040.6	2037.7	2019.3	2025.1	2008.7	2040.6	2032.8	2028.0	2041.5
5°	2048.3	2028.0	2040.6	2029.9	2033.8	2010.6	2035.7	2025.1	2024.1	2029.9
7.5°	2053.2	2039.6	2052.2	2030.9	2040.6	2030.9	2049.3	2038.6	2047.4	2053.2
10°	2079.3	2071.5	2065.7	2060.9	2067.7	2048.3	2071.5	2072.5	2075.4	2092.8
12.5°	2116.0	2108.3	2098.6	2086.0	2092.8	2085.1	2102.5	2107.3	2117.9	2126.7
15°	2167.3	2152.8	2148.9	2137.3	2144.1	2140.2	2144.1	2141.2	2161.5	2158.6
17.5°	2237.9	2221.4	2166.3	2110.2	2074.4	2085.1	2129.6	2187.6	2202.1	2204.0
20°	2264.0	2147.9	2142.1	2078.3	2049.3	2047.4	1955.5	1818.1	1859.7	1957.4
22.5°	2233.0	2074.4	2058.0	2045.4	1921.6	1718.5	1699.2	1678.9	1674.1	1688.6
25°	2163.4	2145.0	2130.5	1966.1	1770.8	1771.7	1743.7	1610.2	1402.3	1384.9
27.5°	2269.8	2244.6	2104.4	1851.0	1847.2	1845.2	1803.6	1461.3	1416.8	1427.4
30°	2390.7	2349.1	1982.6	1949.7	1948.7	1931.3	1617.0	1473.9	1473.9	1475.8
32.5°	2529.9	2271.7	2052.2	2067.7	2066.7	1984.5	1561.9	1552.2	1548.3	1558.0
35°	2636.3	2209.8	2202.1	2230.1	2210.8	1683.7	1659.5	1650.8	1647.0	1642.1
37.5°	2603.4	2387.8	2387.8	2405.2	2249.5	1793.0	1781.4	1781.4	1773.7	1769.8
40°	2653.7	2609.2	2587.0	2593.8	1634.4	1925.5	1934.2	1932.3	1931.3	1938.1
42.5°	2918.7	2879.1	2858.7	2618.9	1829.8	1913.9	2126.7	2125.7	2128.6	2125.7
45°	3256.2	3219.5	3166.3	2450.6	2077.3	1677.9	2344.3	2354.9	2355.9	2354.9
47.5°	3610.2	3587.0	3042.5	2712.7	2346.2	1800.7	2240.8	2617.0	2612.1	2617.9
50°	3984.5	3880.0	3027.0	3023.2	2632.4	2003.8	2004.8	2846.2	2895.5	2911.0
52.5°	4401.3	3517.3	3354.9	3060.9	2922.6	2212.7	2191.4	2522.2	3195.3	3210.8
55°	4087.9	3715.6	3712.7	2724.3	3040.6	2413.9	2416.8	2393.6	2930.3	3330.7
57.5°	4067.6	4076.3	4069.6	3039.6	2218.5	2263.0	2633.4	2613.1	1897.5	1537.7
60°	4418.7	4431.3	3953.5	3282.3	2398.4	1391.7	1621.8	1378.1	1396.5	1411.0
62.5°	4754.3	4758.1	3215.6	2151.8	1188.6	56.1	27.1	22.2	21.3	21.3
65°	5125.6	5125.6	3446.7	2347.2	1147.9	21.3	3.9	2.9	10.6	10.6
67.5°	5484.4	5405.1	3616.0	2492.2	1168.3	2.9	0.0	0.0	0.0	0.0
68°	5464.1	5377.1	3600.5	2488.3	1165.4	1.9	0.0	0.0	0.0	0.0
70°	5160.4	5076.3	3415.8	2375.2	1121.8	1.9	0.0	0.0	0.0	0.0
72.5°	4555.0	4477.7	3025.1	2093.8	1011.6	1.0	0.0	0.0	0.0	0.0
75°	3855.8	3845.2	2613.1	1766.9	867.5	1.0	0.0	0.0	0.0	0.0
77.5°	3102.5	3054.1	2042.5	1384.9	699.2	0.0	0.0	0.0	0.0	0.0
80°	1728.2	1799.8	1195.3	814.3	440.0	0.0	0.0	0.0	0.0	0.0
82.5°	467.1	437.1	261.1	177.0	84.1	0.0	0.0	0.0	0.0	0.0
85°	60.0	65.8	30.0	24.2	5.8	0.0	0.0	0.0	0.0	0.0
87.5°	30.9	36.7	9.7	7.7	1.9	0.0	0.0	0.0	0.0	0.0
90°	5.8	6.8	2.9	1.0	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)