

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: P522113

Luminaire Tested: **CTN-CA10-210-727-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522113  
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-CA10-210-727-U-T5R-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25024.9 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U1 - G4

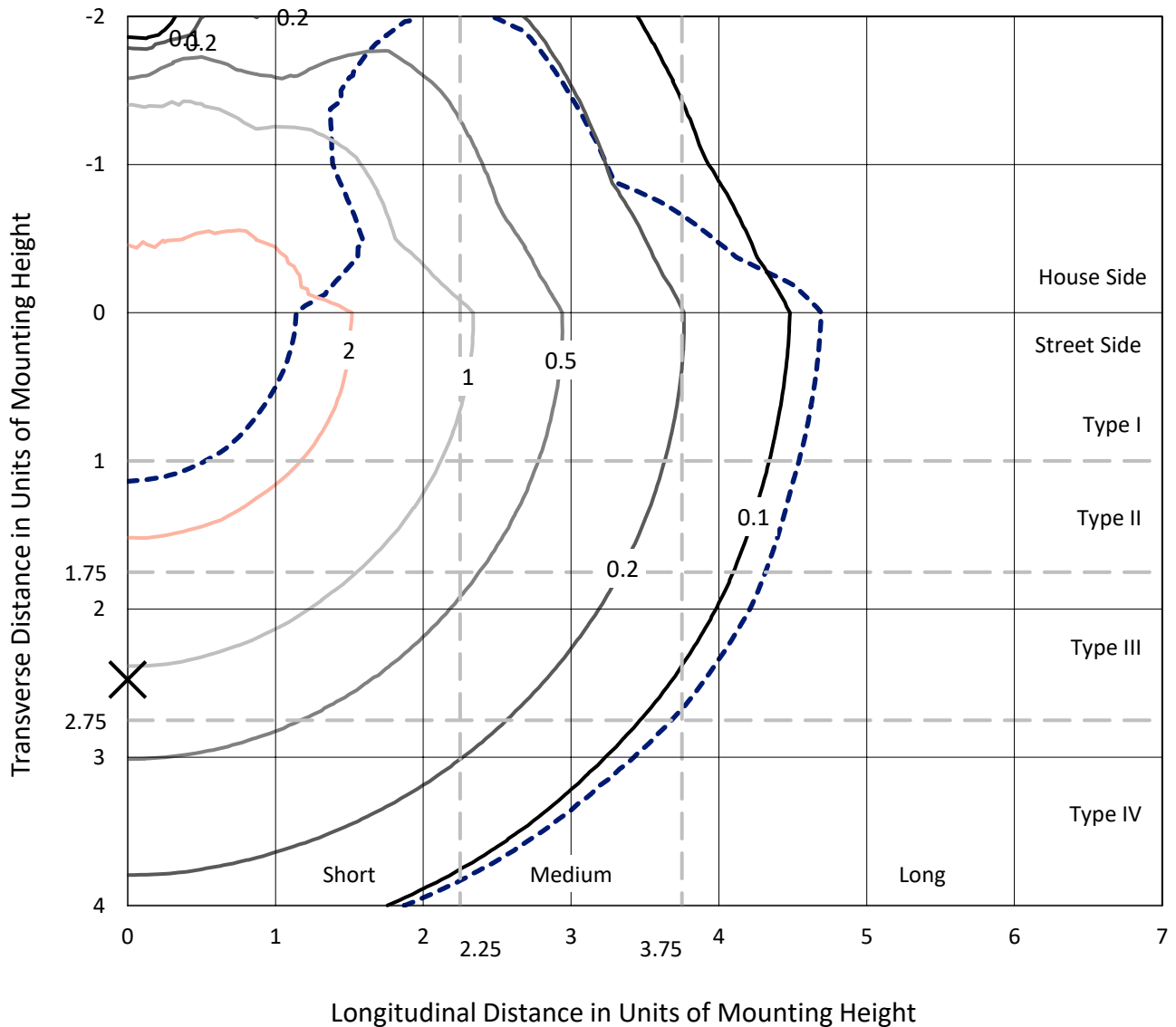
Input Watts (W): 212.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

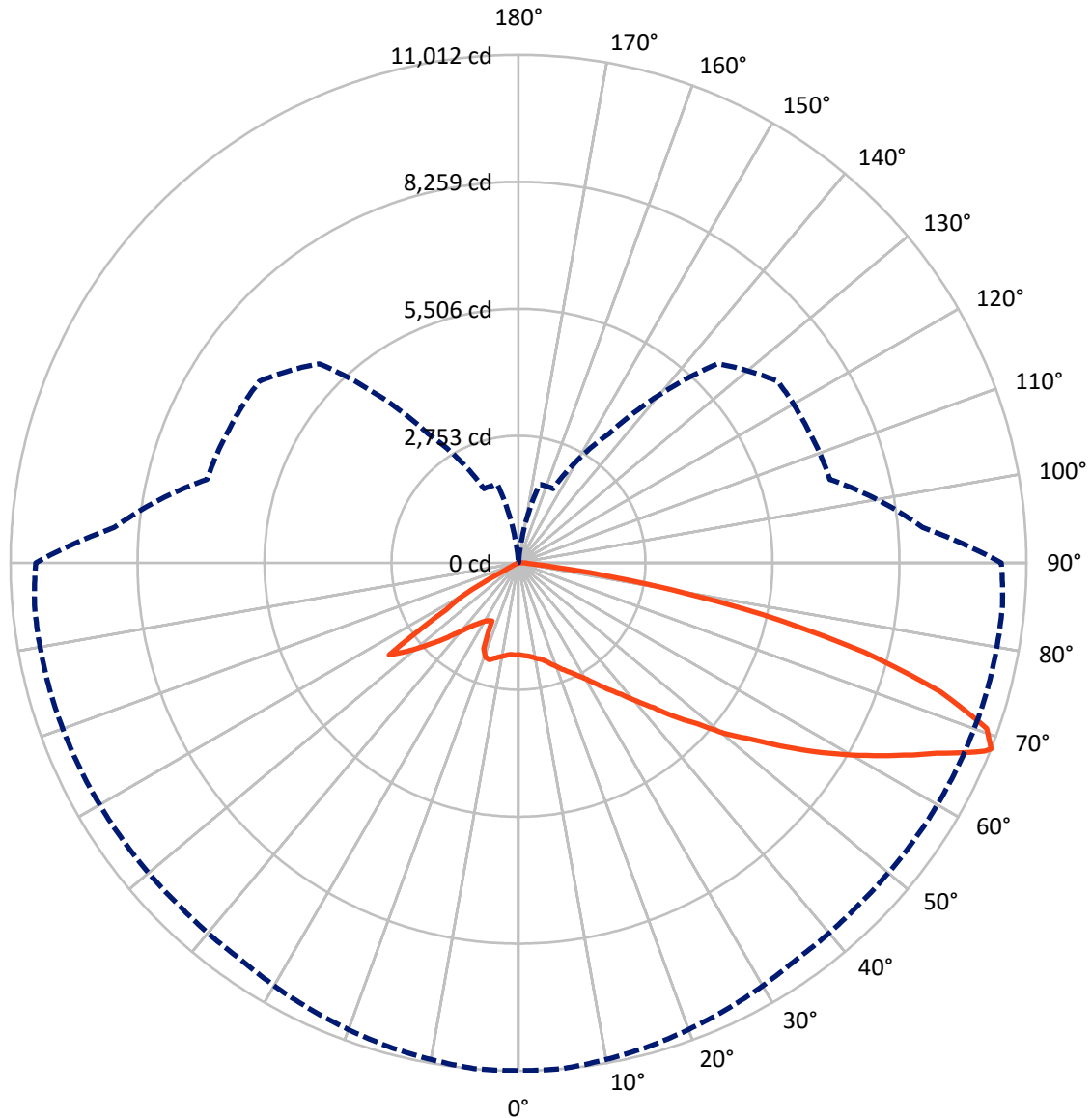
× Max cd  
 - - - 1/2 Max cd



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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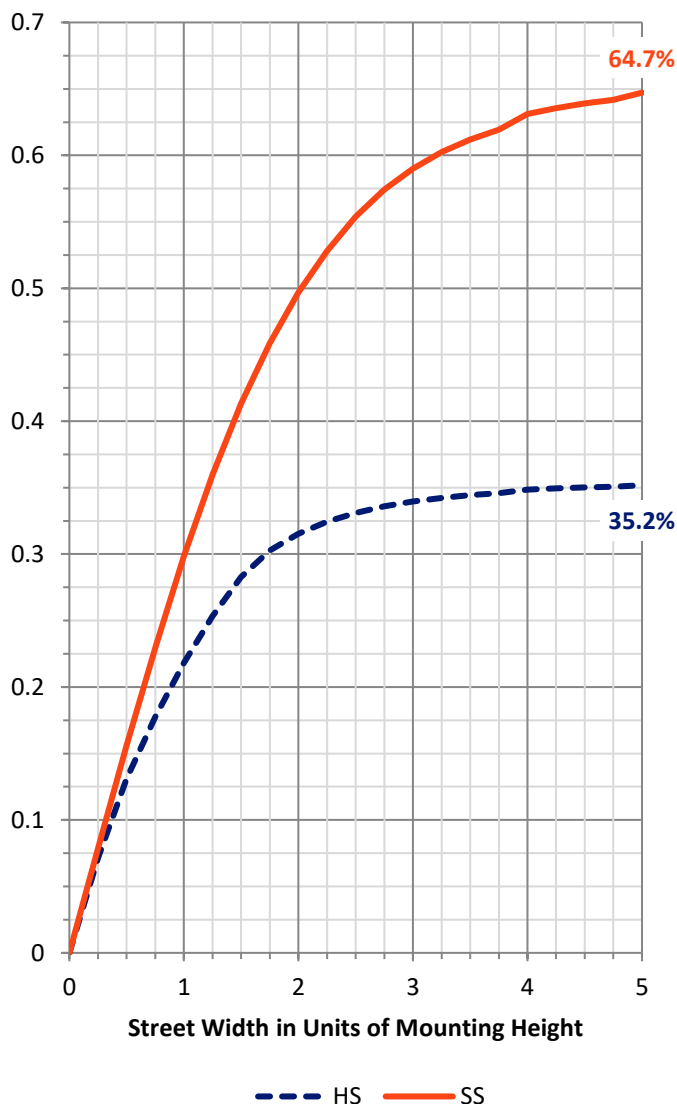
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8807.1	1.5	8808.6
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	16209.8	6.6	16216.4
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	25016.9	8.0	25024.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.7	0.8
10°-20°	617.3	2.5
20°-30°	1102.0	4.4
30°-40°	1792.7	7.2
40°-50°	3061.4	12.2
50°-60°	5108.1	20.4
60°-70°	7106.4	28.4
70°-80°	5508.5	22.0
80°-90°	527.9	2.1
90°-100°	6.4	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°	25016.9	100.0
0°-180°	25024.9	100.0

**Coefficient of Utilization**

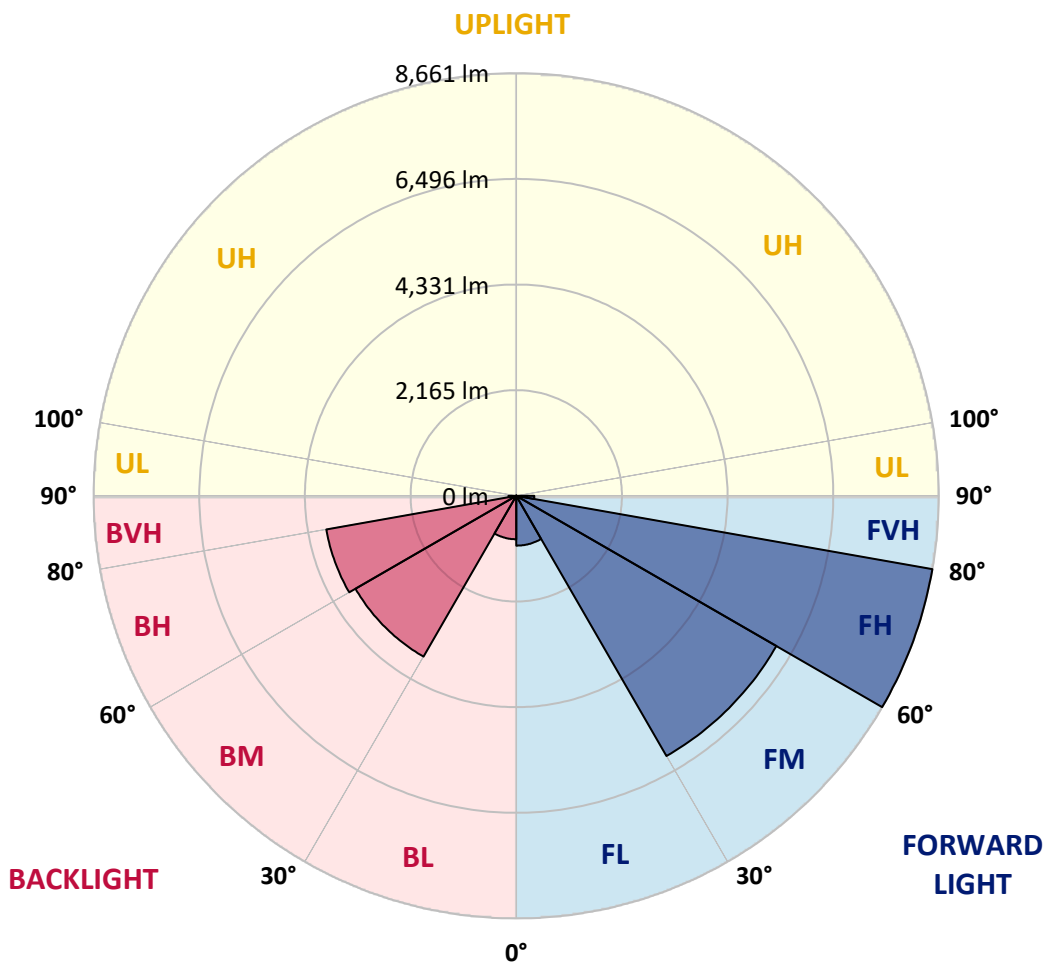


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1021.4	4.1			
FM	(30°-60°)	6157.9	24.6			
FH	(60°-80°)	8661.2	34.6			G4/12000
FVH	(80°-90°)	369.3	1.5			G3/500
BL	(0°-30°)	890.6	3.6	B2/1000		
BM	(30°-60°)	3804.3	15.2	B3/5000		
BH	(60°-80°)	3953.7	15.8	B4/5000		G4/5000
BVH	(80°-90°)	158.6	0.6			G2/225
UL	(90°-100°)	6.4	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°	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6
2.5°	2014.2	2011.3	2009.5	2021.7	1986.9	2001.0	1991.6	2003.8	2001.0	2006.6	2007.6
5°	2028.3	2023.6	2017.0	2030.2	2009.5	2018.9	2008.5	2014.2	1996.3	2011.3	2013.2
7.5°	2060.3	2047.1	2046.2	2050.0	2035.8	2042.4	2024.5	2031.1	2021.7	2016.1	2021.7
10°	2108.3	2097.0	2084.8	2092.3	2068.8	2077.3	2058.4	2064.1	2059.4	2047.1	2058.4
12.5°	2141.3	2145.1	2136.6	2142.2	2121.5	2114.0	2107.4	2106.4	2103.6	2085.7	2082.9
15°	2214.7	2216.6	2201.6	2205.3	2200.6	2196.8	2187.4	2179.9	2164.8	2153.5	2146.0
17.5°	2310.8	2300.4	2286.3	2290.1	2303.3	2286.3	2280.7	2266.5	2244.9	2226.0	2222.3
20°	2411.5	2404.9	2391.8	2399.3	2398.4	2387.1	2389.9	2366.3	2335.3	2319.3	2307.0
22.5°	2523.6	2514.2	2504.8	2518.9	2507.6	2500.1	2497.2	2481.2	2442.6	2424.7	2421.9
25°	2635.7	2630.9	2637.5	2632.8	2616.8	2611.2	2614.9	2609.3	2564.1	2542.4	2529.2
27.5°	2776.0	2764.7	2775.0	2769.4	2752.4	2753.4	2754.3	2755.2	2704.4	2676.1	2657.3
30°	2936.0	2932.3	2945.4	2927.6	2911.6	2921.9	2930.4	2911.6	2867.3	2825.9	2819.3
32.5°	3144.1	3120.6	3135.7	3113.1	3088.6	3113.1	3128.1	3090.5	3054.7	3001.9	3011.4
35°	3374.8	3367.3	3367.3	3338.1	3324.9	3363.5	3378.6	3341.9	3286.3	3240.2	3228.9
37.5°	3619.7	3627.2	3650.7	3638.5	3626.3	3649.8	3683.7	3634.7	3563.2	3514.2	3501.0
40°	3944.5	3963.4	3979.4	3963.4	3949.2	3964.3	4002.9	3938.9	3889.0	3862.6	3834.4
42.5°	4293.9	4325.9	4315.5	4317.4	4329.7	4351.3	4389.9	4331.5	4274.1	4273.2	4231.7
45°	4766.6	4766.6	4744.9	4765.6	4763.8	4817.4	4834.4	4802.4	4754.3	4740.2	4704.4
47.5°	5208.2	5254.4	5245.9	5276.0	5252.5	5297.7	5355.1	5327.8	5272.2	5222.3	5214.8
50°	5824.0	5812.7	5801.4	5846.6	5842.9	5874.0	5926.7	5909.7	5832.5	5776.0	5765.7
52.5°	6365.5	6424.8	6410.7	6478.5	6440.8	6485.1	6548.2	6545.3	6451.2	6395.6	6379.6
55°	7049.1	7088.7	7085.8	7155.5	7103.7	7162.1	7214.8	7220.5	7117.9	7038.8	7063.2
57.5°	7761.0	7794.0	7775.1	7832.6	7781.7	7861.8	7893.8	7873.1	7812.8	7713.0	7749.7
60°	8473.8	8502.1	8523.7	8528.4	8499.2	8546.3	8576.5	8594.3	8499.2	8385.3	8429.6
62.5°	9197.9	9230.0	9211.1	9218.7	9137.7	9201.7	9239.4	9244.1	9134.8	9034.1	9065.2
65°	9960.7	10004.9	9937.1	9891.9	9792.1	9791.2	9841.1	9849.6	9772.3	9700.8	9688.5
67.5°	10905.1	10924.9	10779.9	10628.3	10459.7	10423.0	10457.9	10477.6	10521.9	10520.0	10464.4
68°	11011.5	11007.8	10860.9	10680.1	10499.3	10456.9	10473.9	10499.3	10528.5	10534.1	10467.3
70°	10769.5	10723.4	10639.6	10411.7	10232.8	10121.7	10062.4	10109.4	10030.3	10031.3	9906.1
72.5°	9566.1	9560.5	9406.0	9293.0	9133.9	8949.3	8864.6	8863.7	8871.2	8816.6	8687.6
75°	7748.8	7756.3	7576.4	7498.3	7449.3	7414.5	7432.4	7487.9	7493.6	7492.6	7447.4
77.5°	5404.1	5435.1	5387.1	5260.0	5396.5	5513.3	5738.4	5853.2	5816.5	5926.7	5996.4
80°	2832.5	2894.6	2896.5	2985.9	3096.1	3202.5	3396.5	3570.7	3442.6	3386.1	3327.8
82.5°	744.8	767.4	801.3	749.5	765.6	781.6	932.2	918.1	847.5	885.1	941.6
85°	212.8	219.4	210.0	190.2	174.2	160.1	163.8	138.4	120.5	119.6	115.8
87.5°	149.7	161.0	142.2	122.4	110.2	102.6	98.9	83.8	67.8	59.3	47.1
90°	69.7	68.7	59.3	46.1	40.5	38.6	38.6	30.1	16.9	10.4	9.4
92.5°	29.2	30.1	24.5	19.8	16.9	13.2	10.4	6.6	3.8	1.9	0.9
95°	10.4	11.3	9.4	7.5	6.6	5.6	4.7	3.8	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°	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6	1991.6
2.5°	2005.7	2001.0	1999.1	1975.6	1982.2	1968.0	2001.0	1991.6	1989.7	2002.9
5°	2010.4	1988.7	2001.9	1986.9	1990.6	1969.9	1996.3	1985.0	1985.9	1992.5
7.5°	2013.2	2001.0	2014.2	1987.8	1998.2	1990.6	2009.5	1998.2	2009.5	2015.1
10°	2041.5	2035.8	2026.4	2018.9	2026.4	2008.5	2032.1	2030.2	2036.8	2053.7
12.5°	2080.1	2073.5	2064.1	2050.9	2056.5	2050.0	2067.8	2069.7	2082.0	2090.4
15°	2137.5	2129.0	2124.3	2111.2	2113.0	2108.3	2118.7	2120.6	2145.1	2142.2
17.5°	2218.5	2209.1	2212.9	2200.6	2195.9	2184.6	2165.8	2159.2	2188.4	2196.8
20°	2307.0	2296.7	2301.4	2291.0	2203.4	2025.5	2145.1	2227.0	2164.8	2160.1
22.5°	2407.8	2396.5	2400.2	2384.2	2275.9	1942.6	1690.2	1669.5	1906.8	2002.9
25°	2518.9	2503.8	2501.9	2481.2	2125.3	1759.0	1730.7	1694.0	1520.7	1383.3
27.5°	2656.4	2633.8	2622.5	2309.8	2110.2	1827.7	1785.3	1654.5	1403.0	1411.5
30°	2805.1	2772.2	2560.3	2354.1	2220.4	1908.7	1852.2	1450.1	1452.0	1448.2
32.5°	2974.6	2901.2	2508.5	2489.7	2352.2	1995.3	1537.7	1520.7	1522.6	1528.3
35°	3196.9	2693.1	2682.7	2683.7	2513.2	1930.4	1629.0	1613.0	1614.9	1618.7
37.5°	3243.9	2903.1	2905.0	2883.3	2684.6	1763.7	1740.2	1739.2	1735.4	1731.7
40°	3281.6	3167.7	3140.4	3105.5	2488.8	1899.3	1891.8	1886.1	1888.9	1896.5
42.5°	3576.3	3490.7	3464.3	3422.9	2552.8	2104.6	2080.1	2073.5	2081.0	2077.3
45°	3968.1	3896.5	3844.7	3164.9	2820.2	2327.7	2308.0	2299.5	2302.3	2325.9
47.5°	4382.4	4340.0	4181.8	3419.1	3131.9	2591.4	2571.6	2558.4	2563.1	2557.5
50°	4833.4	4794.8	3871.1	3802.3	3476.5	2875.8	2846.6	2841.9	2843.8	2842.8
52.5°	5323.1	4516.1	4290.1	4218.5	3840.0	3173.3	3163.0	3137.5	3143.2	3137.5
55°	5897.5	4757.2	4751.5	4667.7	4248.7	3518.9	3506.7	3470.9	3245.8	3442.6
57.5°	6442.7	5217.6	5217.6	5136.6	4666.8	3862.6	3842.8	3816.5	2307.0	1860.7
60°	7039.7	5679.0	5665.8	5599.0	5069.8	4190.3	3405.9	3398.4	1393.6	1398.3
62.5°	7555.7	6090.5	6114.1	6051.9	5457.7	3137.5	1578.2	1546.2	137.5	211.9
65°	8133.9	6545.3	6573.6	6509.6	5877.7	3327.8	1712.8	1696.8	31.1	28.2
67.5°	8789.3	6999.2	6935.2	6864.6	6123.5	3426.6	1779.7	1765.6	8.5	5.6
68°	8794.9	6989.8	6906.9	6858.9	6099.9	3407.8	1774.0	1760.9	8.5	5.6
70°	8342.9	6637.6	6554.8	6567.0	5808.0	3259.0	1700.6	1676.1	8.5	5.6
72.5°	7319.4	5906.9	5813.7	5747.8	5150.8	2897.4	1524.5	1478.4	8.5	5.6
75°	6262.8	5005.8	4851.3	4706.3	4144.2	2371.0	1250.5	1198.7	8.5	5.6
77.5°	4936.1	3815.5	3596.1	3501.0	3114.0	1751.5	929.4	872.9	8.5	4.7
80°	2727.9	2189.3	2002.9	1944.5	1780.6	1029.2	533.0	499.1	7.5	4.7
82.5°	705.3	529.2	461.4	445.4	418.1	243.9	129.9	123.4	6.6	3.8
85°	100.8	74.4	81.9	97.0	93.2	63.1	45.2	38.6	5.6	2.8
87.5°	52.7	44.3	51.8	58.4	59.3	36.7	18.8	10.4	2.8	0.0
90°	8.5	8.5	9.4	10.4	10.4	4.7	3.8	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)