

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: P579647

Luminaire Tested: **CTN-CA8-230-727-U-T5-HSS-HM-EX180**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579647  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-727-U-T5-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (8) 2700K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18719 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U2 - G3

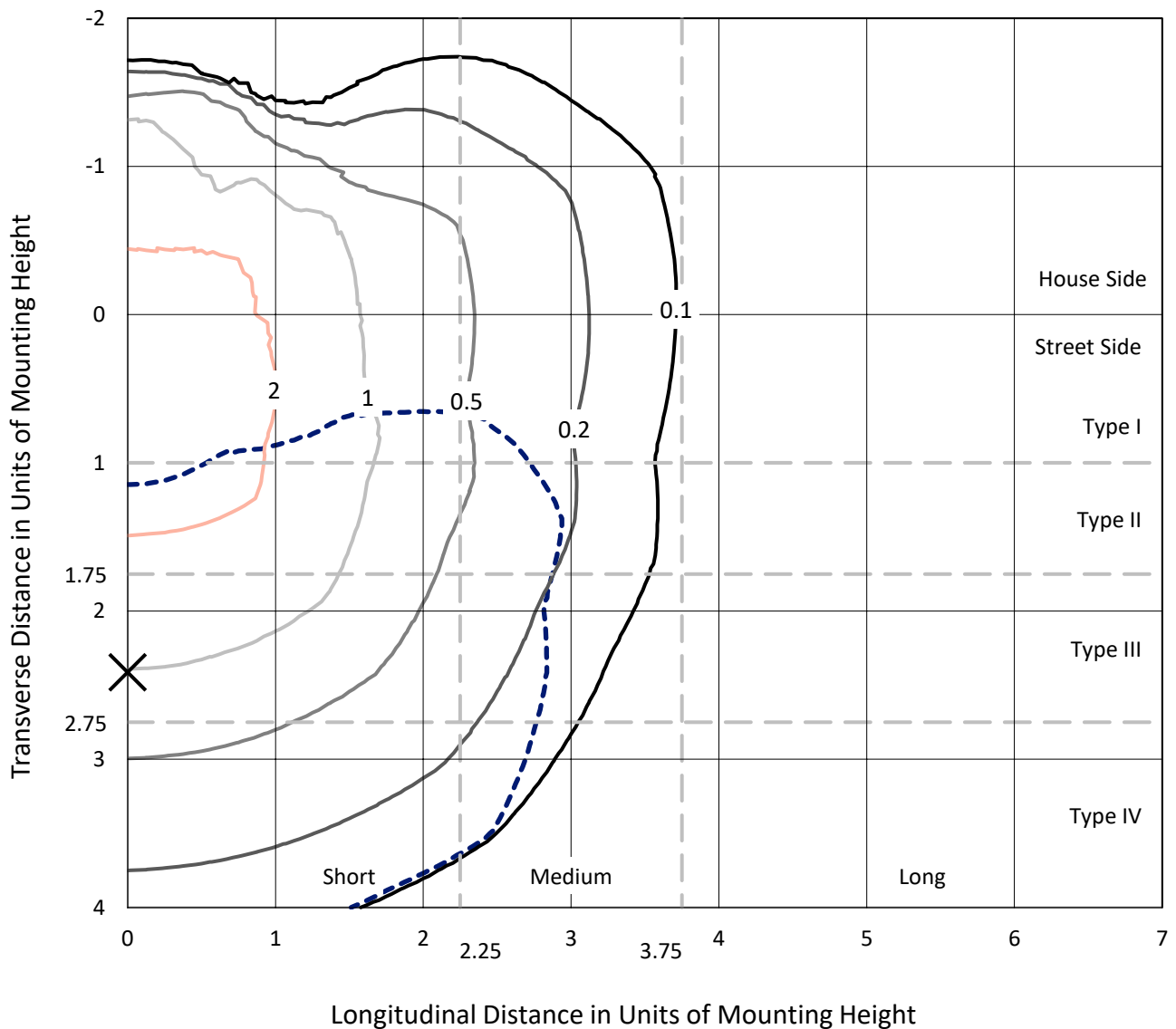
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

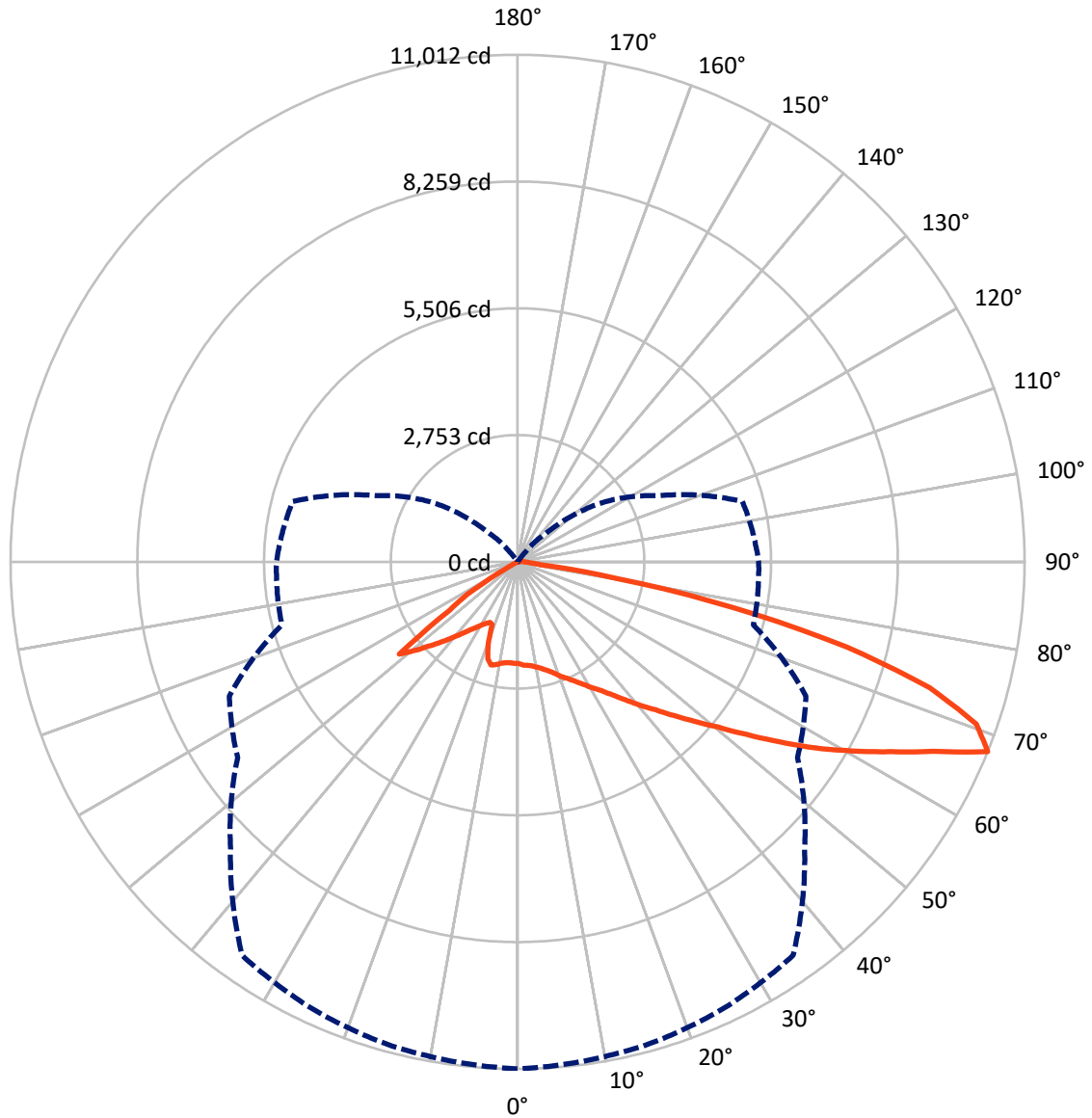
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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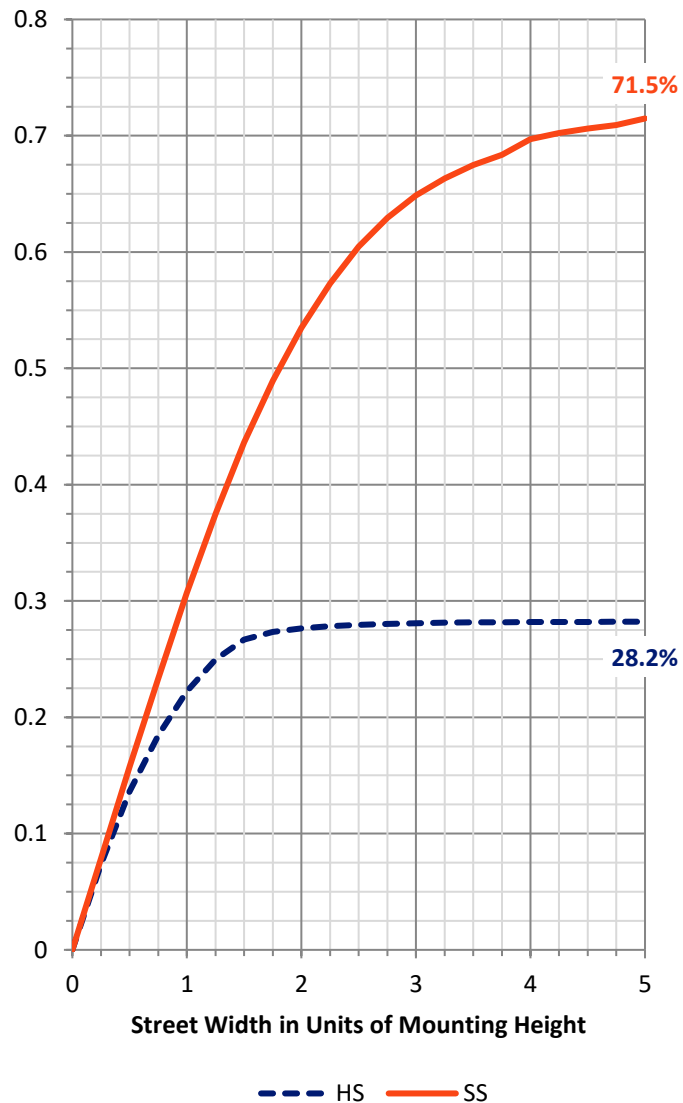
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5305.3	0.1	5305.4
	% Fixture	28.3	0.0	28.3
<b>Street Side</b>	Lumens	13389.8	23.8	13413.6
	% Fixture	71.5	0.1	71.7
<b>Total</b>	Lumens	18695.1	23.9	18719.0
	% Fixture	99.9	0.1	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.6	1.1
10°-20°	654.5	3.5
20°-30°	1083.8	5.8
30°-40°	1706.0	9.1
40°-50°	2669.9	14.3
50°-60°	3854.9	20.6
60°-70°	4775.6	25.5
70°-80°	3478.0	18.6
80°-90°	259.8	1.4
90°-100°	20.4	0.1
100°-110°	3.4	0.0
110°-120°	0.1	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°	18695.1	99.9
0°-180°	18719.0	100.0

**Coefficient of Utilization**



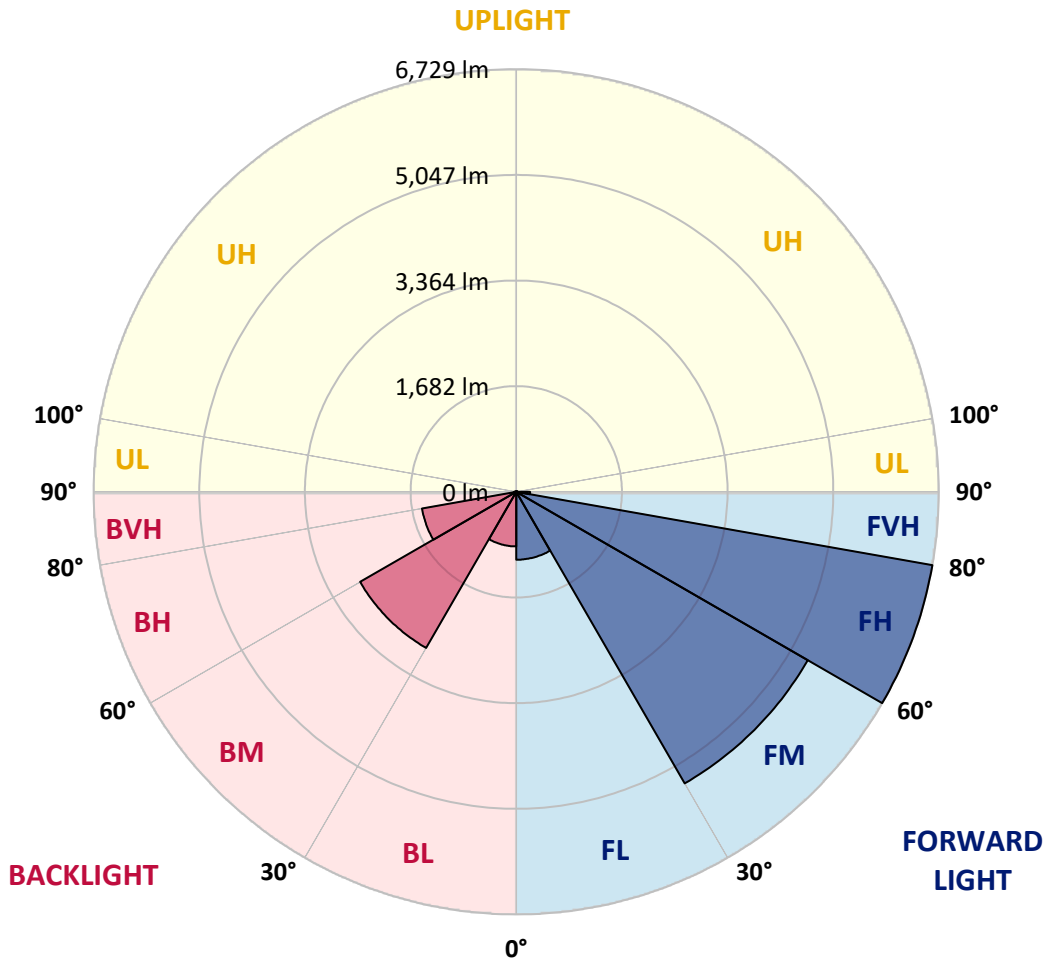
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1081.2	5.8			
FM (30°-60°)	5360.6	28.6			
FH (60°-80°)	6728.9	35.9			G3/7500
FVH (80°-90°)	219.2	1.2			G2/225
BL (0°-30°)	869.7	4.6	B2/1000		
BM (30°-60°)	2870.3	15.3	B3/5000		
BH (60°-80°)	1524.7	8.1	B3/2500		G3/2500
BVH (80°-90°)	40.7	0.2			G1/100
UL (90°-100°)	20.4	0.1		U2/50	
UH (100°-180°)	3.5	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°	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6
2.5°	2245.0	2232.8	2232.8	2245.9	2209.3	2220.6	2205.6	2218.7	2211.2	2214.9	2219.6
5°	2258.1	2244.0	2245.0	2260.9	2228.1	2237.5	2219.6	2226.2	2219.6	2222.4	2222.4
7.5°	2282.5	2270.3	2270.3	2279.7	2246.8	2249.6	2233.7	2233.7	2225.3	2231.8	2226.2
10°	2328.5	2315.3	2308.7	2313.4	2284.4	2280.6	2259.0	2259.0	2245.9	2256.2	2247.8
12.5°	2383.8	2365.0	2363.2	2364.1	2331.3	2324.7	2300.3	2301.2	2276.9	2290.9	2280.6
15°	2450.4	2427.0	2425.1	2428.8	2394.1	2381.9	2354.7	2354.7	2327.5	2335.0	2320.9
17.5°	2535.8	2508.6	2503.9	2510.4	2475.7	2464.5	2432.6	2427.0	2396.9	2391.3	2379.1
20°	2648.4	2617.4	2608.0	2622.1	2578.0	2567.7	2529.2	2517.0	2476.7	2410.1	2322.8
22.5°	2749.7	2725.3	2719.7	2729.0	2688.7	2678.4	2640.8	2615.5	2518.0	2383.8	2303.1
25°	2865.1	2855.7	2852.9	2847.2	2810.7	2792.8	2757.2	2721.5	2500.1	2316.3	2314.4
27.5°	3007.7	3003.0	2989.8	2985.1	2944.8	2933.5	2886.6	2656.8	2436.3	2423.2	2415.7
30°	3163.4	3154.0	3140.9	3141.8	3114.6	3094.0	2982.3	2599.6	2559.2	2559.2	2539.5
32.5°	3336.0	3325.7	3312.6	3315.4	3304.1	3286.3	2950.4	2750.6	2719.7	2728.1	2703.7
35°	3549.9	3533.0	3528.3	3539.6	3540.5	3425.1	3006.7	2956.1	2931.7	2926.0	2834.1
37.5°	3799.4	3785.4	3802.3	3828.5	3798.5	3460.8	3230.9	3215.0	3190.6	3054.6	2836.9
40°	4098.7	4073.4	4094.0	4110.9	4091.2	3672.8	3466.4	3472.0	3450.5	3047.1	2806.0
42.5°	4395.2	4370.8	4388.6	4430.8	4423.3	3935.5	3753.5	3765.7	3548.0	3064.9	3046.1
45°	4762.0	4753.5	4747.9	4782.6	4811.7	4249.7	4094.0	4093.1	3478.6	3348.2	3331.3
47.5°	5177.6	5166.3	5169.1	5213.2	5257.3	4625.0	4496.5	4119.3	3657.8	3670.9	3655.9
50°	5641.0	5628.8	5665.4	5729.2	5751.7	5046.2	4888.6	4048.1	4031.2	4045.2	4019.9
52.5°	6229.2	6202.0	6258.3	6326.8	6355.9	5544.4	4910.2	4469.3	4441.1	4443.9	4363.3
55°	6898.1	6876.5	6927.2	7004.1	7047.3	6100.7	5358.6	4879.2	4862.4	4383.9	3947.7
57.5°	7625.2	7600.8	7668.3	7690.8	7702.1	6675.8	5809.9	5323.9	4542.4	4003.0	3978.6
60°	8338.1	8311.9	8397.2	8401.0	8433.8	7249.9	6238.6	5752.6	4376.4	4305.1	4284.5
62.5°	9086.8	9053.9	9129.0	9126.2	9061.4	7775.3	6663.6	6164.5	4672.8	4616.6	4584.7
65°	9918.0	9893.6	9946.1	9861.7	9733.1	8318.4	7104.5	6612.9	5018.1	5007.8	5000.3
67.5°	11011.8	10964.0	10858.0	10677.8	10432.1	8816.6	7419.7	6908.4	5298.6	5250.7	5235.7
70°	10571.8	10515.6	10434.9	10236.9	9986.4	8348.5	6913.1	6461.9	4954.3	4956.2	4920.5
72.5°	9360.7	9263.1	9187.2	8909.5	8771.6	7291.2	6023.8	5608.2	4285.4	4365.1	4348.3
75°	7384.1	7284.6	7159.8	7051.0	7036.0	5914.0	4856.7	4557.5	3416.7	3474.9	3517.1
77.5°	4786.4	4749.8	4907.4	4804.2	4897.1	4072.4	3469.2	3212.2	2354.7	2502.0	2482.3
80°	2190.5	2148.3	2401.6	2330.3	2365.0	2000.1	1695.2	1628.6	1065.7	1073.2	1095.7
82.5°	495.3	478.4	496.3	455.9	444.7	376.2	331.2	300.2	188.6	199.8	210.1
85°	271.1	271.1	267.4	248.6	213.0	175.4	138.8	106.9	58.2	63.8	62.9
87.5°	190.4	185.8	184.8	165.1	141.7	120.1	95.7	68.5	32.8	22.5	20.6
90°	130.4	128.5	122.0	109.8	94.8	77.9	58.2	33.8	14.1	6.6	4.7
92.5°	94.8	92.9	88.2	77.9	64.7	52.5	38.5	22.5	11.3	4.7	0.9
95°	62.9	61.9	59.1	50.7	42.2	33.8	24.4	14.1	9.4	3.8	0.9
97.5°	43.2	42.2	39.4	33.8	27.2	21.6	15.0	10.3	7.5	2.8	0.9
100°	29.1	28.1	26.3	21.6	16.9	13.1	9.4	7.5	5.6	2.8	0.9
102.5°	18.8	17.8	15.9	13.1	9.4	7.5	6.6	5.6	3.8	1.9	0.9
105°	11.3	10.3	8.4	6.6	5.6	4.7	4.7	3.8	2.8	0.9	0.9
107.5°	5.6	4.7	3.8	3.8	3.8	2.8	2.8	2.8	1.9	0.9	0.0
110°	0.9	0.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.9	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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°	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6	2204.6
2.5°	2214.9	2199.9	2208.4	2195.2	2192.4	2178.3	2200.9	2203.7	2201.8	2205.6
5°	2217.8	2201.8	2211.2	2195.2	2195.2	2180.2	2201.8	2201.8	2196.2	2198.0
7.5°	2225.3	2209.3	2215.9	2198.0	2199.0	2181.2	2207.4	2204.6	2199.9	2206.5
10°	2246.8	2229.0	2228.1	2211.2	2214.9	2196.2	2229.0	2229.0	2224.3	2236.5
12.5°	2281.5	2255.3	2250.6	2229.9	2237.5	2221.5	2261.8	2263.7	2264.7	2284.4
15°	2318.1	2286.2	2290.9	2266.5	2263.7	2255.3	2291.9	2290.0	2289.0	2316.3
17.5°	2369.7	2219.6	2195.2	2178.3	2174.6	2154.0	2187.7	2252.5	2218.7	2199.9
20°	2288.1	2209.3	2112.7	2079.8	2073.3	1894.1	1752.4	1816.2	1902.5	1910.0
22.5°	2214.0	2185.9	2178.3	2126.8	1840.6	1780.6	1786.2	1762.8	1558.2	1469.1
25°	2305.9	2281.5	2249.6	1934.4	1866.9	1845.3	1838.7	1598.6	1437.2	1447.5
27.5°	2408.2	2381.0	2103.3	1939.1	1954.1	1924.1	1775.9	1491.6	1482.3	1500.1
30°	2535.8	2318.1	2052.6	2043.3	2057.3	2018.9	1577.9	1557.3	1554.5	1573.3
32.5°	2681.2	2235.6	2187.7	2187.7	2181.2	1765.6	1662.4	1648.3	1655.8	1675.5
35°	2626.8	2365.0	2359.4	2382.9	2225.3	1811.5	1797.5	1773.1	1778.7	1785.3
37.5°	2566.7	2578.0	2580.8	2568.6	1623.0	1942.9	1931.6	1926.9	1921.3	1923.2
40°	2790.0	2797.5	2794.7	2683.1	1751.5	1968.2	2083.6	2075.2	2074.2	2085.5
42.5°	3050.8	3071.5	3055.5	2366.9	1923.2	1654.9	2259.0	2254.3	2252.5	2275.9
45°	3344.4	3364.2	3029.2	2534.8	2106.1	1713.0	2271.2	2445.7	2459.8	2480.4
47.5°	3662.5	3658.7	2795.6	2792.8	2320.9	1874.4	1888.5	2674.6	2698.1	2705.6
50°	4028.3	3427.0	3061.1	2957.9	2563.9	2055.5	2002.0	2454.2	2972.0	2979.5
52.5°	3950.5	3390.4	3366.0	2594.9	2781.6	2255.3	2202.7	2188.7	3080.8	3261.9
55°	3682.2	3710.3	3675.6	2847.2	2039.5	2433.5	2400.7	2386.6	2291.9	1814.4
57.5°	3980.5	3988.9	3958.9	3079.0	2074.2	1517.0	2363.2	2027.3	1317.1	1310.6
60°	4290.1	4304.2	2948.6	2261.8	1329.3	507.5	121.0	127.6	364.0	319.9
62.5°	4585.6	4599.7	3121.2	2066.7	839.6	37.5	24.4	16.9	18.8	18.8
65°	4971.2	4976.8	3340.7	2187.7	872.5	9.4	2.8	0.0	0.0	0.0
67.5°	5171.0	5055.6	3396.0	2243.1	895.9	5.6	1.9	0.0	0.0	0.0
70°	4868.9	4745.1	3161.5	2102.4	834.9	4.7	0.9	0.0	0.0	0.0
72.5°	4290.1	4230.0	2837.9	1864.1	739.3	2.8	0.9	0.0	0.0	0.0
75°	3555.5	3475.8	2352.8	1553.6	611.7	1.9	0.0	0.0	0.0	0.0
77.5°	2529.2	2538.6	1639.9	1132.3	416.5	1.9	0.0	0.0	0.0	0.0
80°	1107.0	1132.3	718.6	519.7	147.3	0.9	0.0	0.0	0.0	0.0
82.5°	211.1	194.2	93.8	74.1	18.8	0.0	0.0	0.0	0.0	0.0
85°	69.4	76.0	34.7	28.1	8.4	0.0	0.0	0.0	0.0	0.0
87.5°	24.4	31.0	10.3	8.4	1.9	0.0	0.0	0.0	0.0	0.0
90°	3.8	3.8	0.0	0.0	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
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P579647  
 CATALOG NUMBER: CTN-CA8-230-727-U-T5-HSS-HM-EX180

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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)