

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: P522112

Luminaire Tested: **CTN-CA10-210-727-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522112
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-CA10-210-727-U-T5R-HSS-HM-EX180
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: 19546 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G3

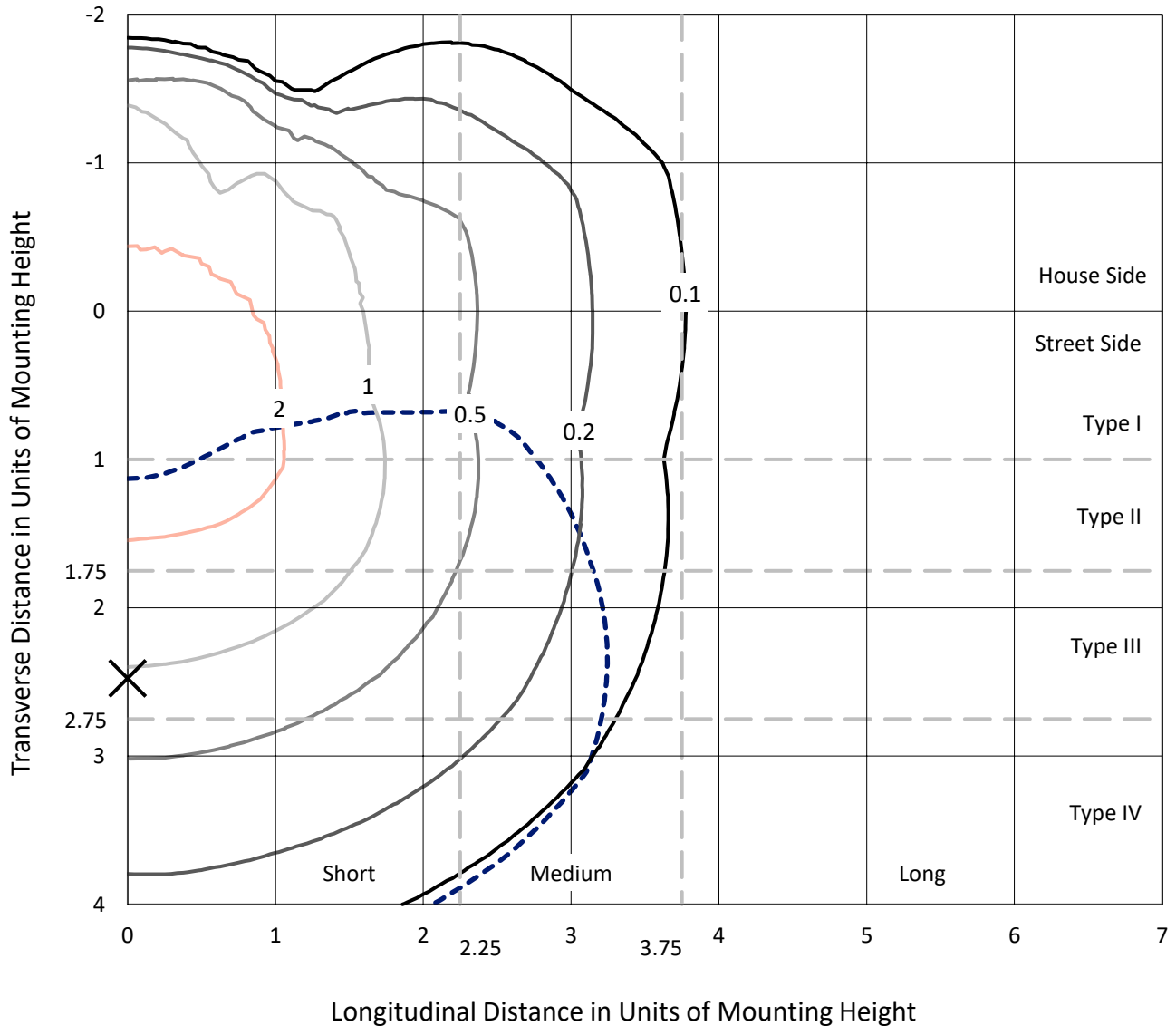
Input Watts (W): 212.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P522112
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Iso-Footcandle Lines of Horizontal Illumination

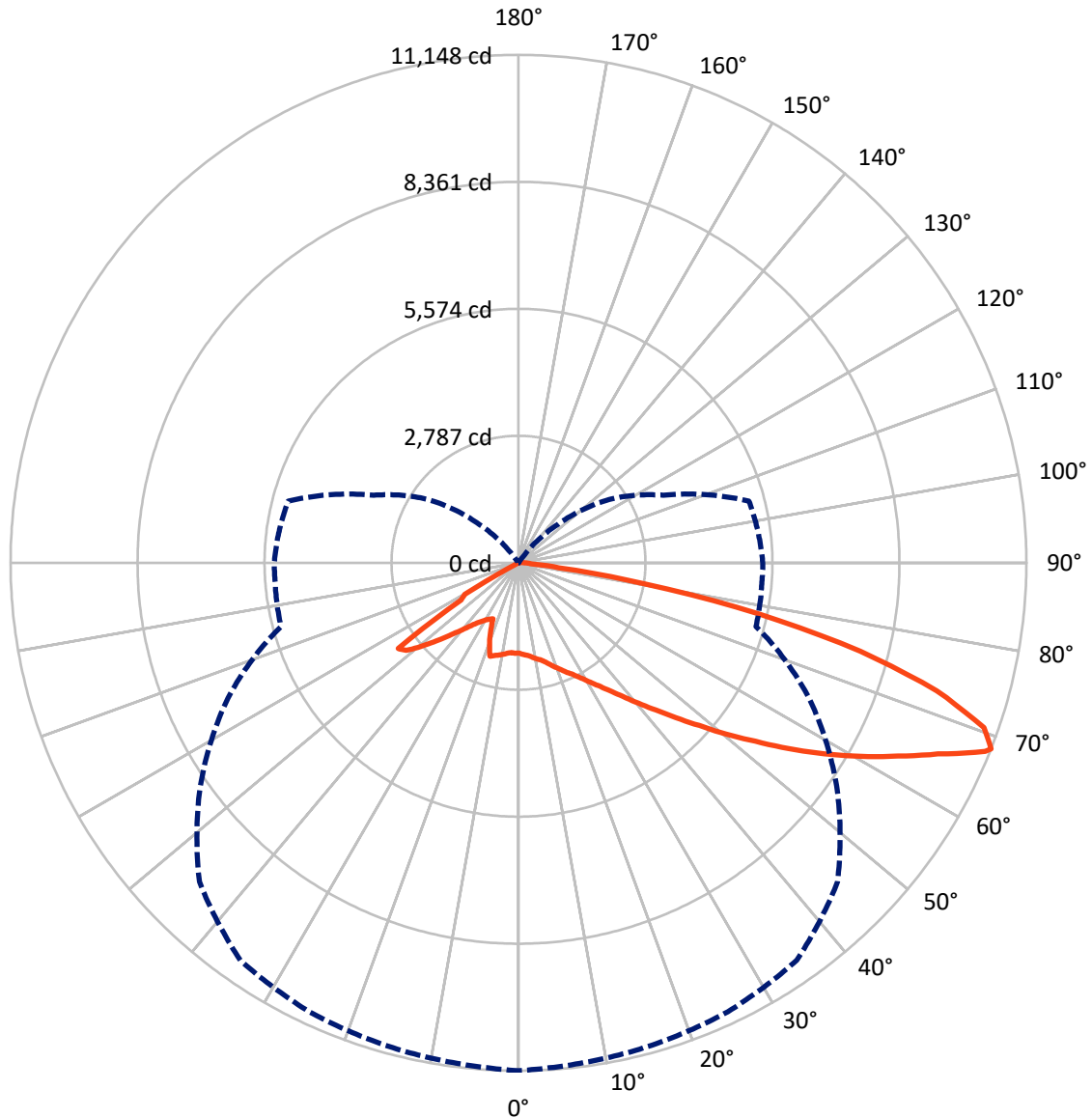
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type IV - Short - N/A

REPORT NUMBER: P522112
CATALOG NUMBER: CTN-CA10-210-727-U-T5R-HSS-HM-EX180

Luminous Intensity Polar Plot



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



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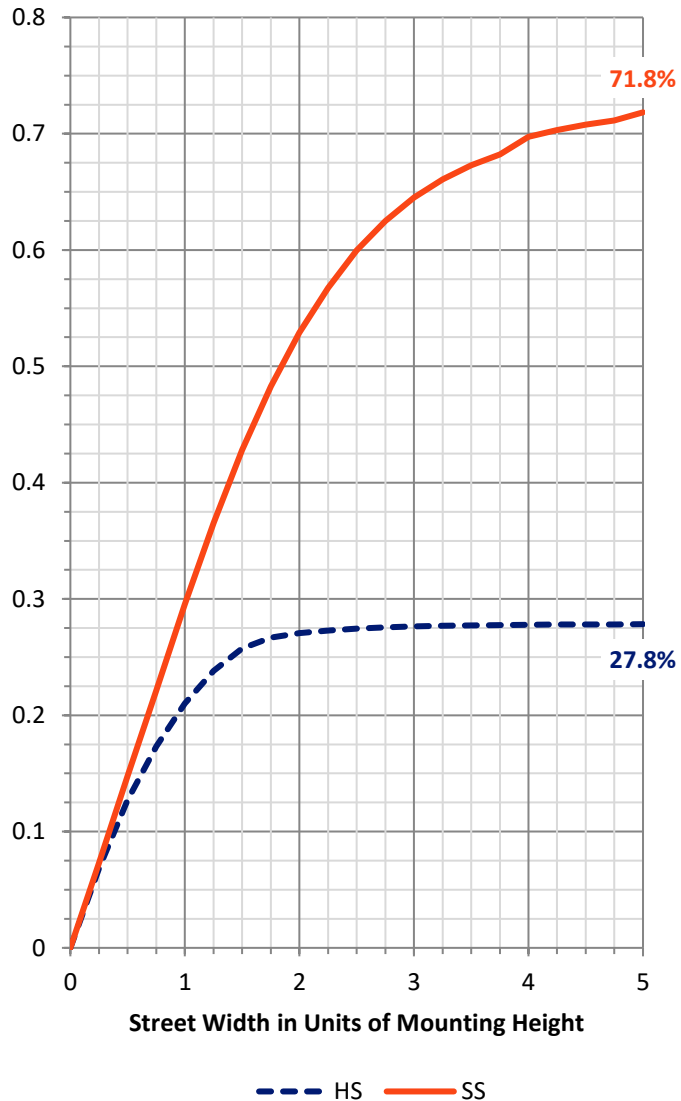
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5459.2	0.1	5459.3
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	14075.5	11.2	14086.7
	% Fixture	72.0	0.1	72.1
Total	Lumens	19534.7	11.3	19546.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.2	1.0
10°-20°	609.0	3.1
20°-30°	1031.0	5.3
30°-40°	1633.4	8.4
40°-50°	2670.5	13.7
50°-60°	4090.5	20.9
60°-70°	5029.6	25.7
70°-80°	3886.3	19.9
80°-90°	392.1	2.0
90°-100°	11.1	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°	19534.7	99.9
0°-180°	19546.0	100.0

Coefficient of Utilization



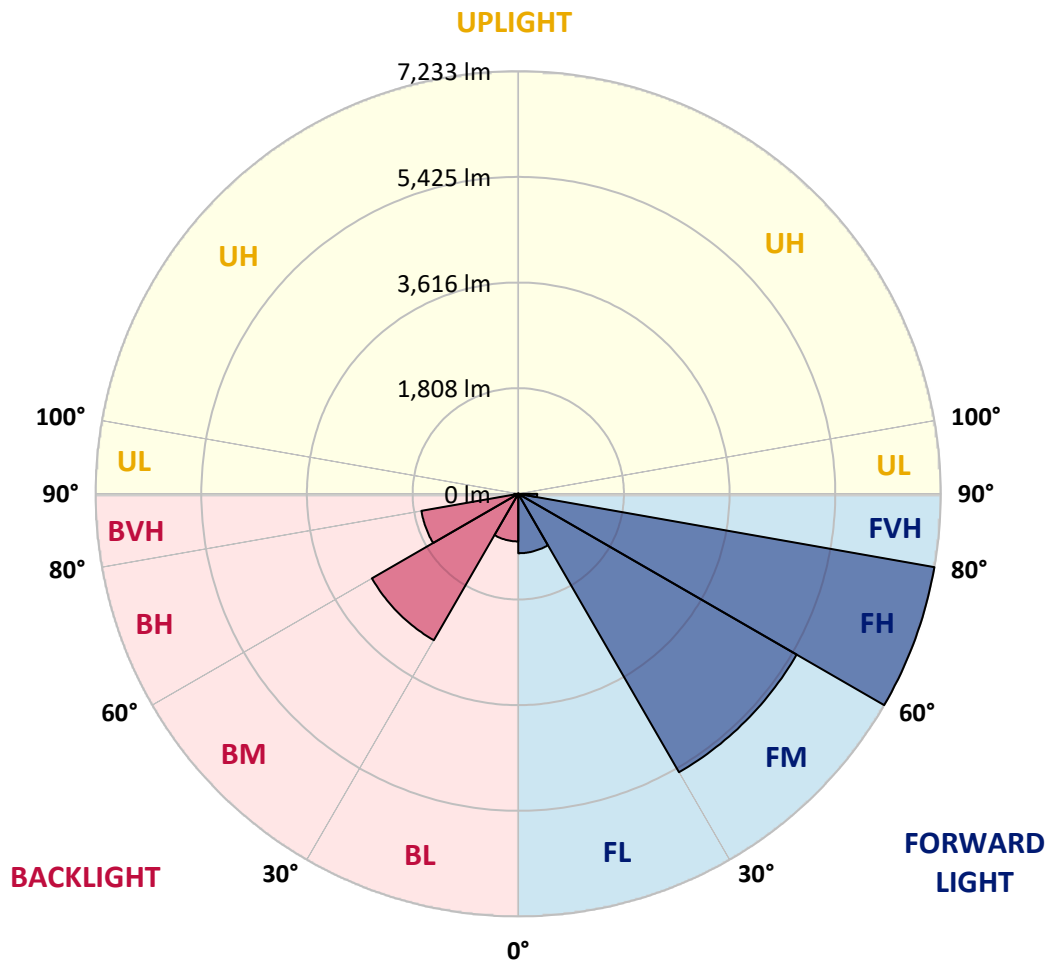
REPORT NUMBER: P522112
 CATALOG NUMBER: CTN-CA10-210-727-U-T5R-HSS-HM-EX180

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1017.4	5.2			
FM (30°-60°)	5501.9	28.1			
FH (60°-80°)	7232.8	37.0			G3/7500
FVH (80°-90°)	323.4	1.7			G3/500
BL (0°-30°)	814.8	4.2	B2/1000		
BM (30°-60°)	2892.5	14.8	B3/5000		
BH (60°-80°)	1683.1	8.6	B3/2500		G3/2500
BVH (80°-90°)	68.7	0.4			G1/100
UL (90°-100°)	11.1	0.1		U2/50	
UH (100°-180°)	0.2	0.0		U1/10	

BUG Rating: B3-U2-G3

Type IV Short





REPORT NUMBER: P522112

CATALOG NUMBER: CTN-CA10-210-727-U-T5R-HSS-HM-EX180

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2
2.5°	2016.0	2012.2	2008.5	2016.9	1984.0	1998.1	1986.8	1997.2	1989.6	1998.1	1995.3
5°	2042.4	2038.6	2027.3	2036.7	2015.1	2020.7	2006.6	2010.3	1984.9	2000.0	1999.1
7.5°	2085.7	2075.3	2067.8	2067.8	2049.0	2048.0	2025.4	2026.4	2006.6	2004.7	2008.5
10°	2144.1	2136.5	2115.8	2117.7	2091.3	2087.6	2059.3	2058.4	2042.4	2032.9	2041.4
12.5°	2187.4	2194.9	2176.1	2176.1	2149.7	2130.9	2111.1	2097.9	2085.7	2071.6	2065.0
15°	2266.5	2274.0	2248.6	2247.6	2237.3	2214.7	2193.0	2164.8	2143.1	2136.5	2126.2
17.5°	2369.1	2364.4	2342.7	2343.7	2345.6	2308.8	2287.2	2250.5	2219.4	2196.8	2191.1
20°	2473.6	2473.6	2450.1	2457.6	2448.2	2414.3	2400.2	2349.3	2306.0	2281.5	2261.8
22.5°	2590.4	2585.7	2569.7	2585.7	2566.8	2532.9	2509.4	2458.6	2403.0	2264.6	2208.1
25°	2701.5	2698.7	2705.3	2710.0	2686.4	2644.1	2628.0	2574.4	2420.0	2238.2	2124.3
27.5°	2841.8	2832.4	2847.4	2856.9	2833.3	2796.6	2762.7	2702.4	2375.7	2232.6	2220.3
30°	3021.6	3000.9	3022.6	3027.3	3002.8	2980.2	2929.4	2628.0	2390.8	2349.3	2345.6
32.5°	3213.7	3189.3	3217.5	3221.3	3189.3	3170.4	3042.4	2589.4	2538.6	2490.6	2495.3
35°	3441.6	3441.6	3455.7	3457.6	3434.1	3402.1	2914.3	2777.8	2732.6	2688.3	2687.4
37.5°	3719.4	3710.9	3748.6	3771.2	3745.7	3654.4	3100.7	3036.7	2967.0	2910.5	2793.8
40°	4054.6	4069.7	4080.0	4102.6	4078.1	3872.9	3372.9	3300.4	3245.7	3056.5	2761.8
42.5°	4416.2	4419.9	4442.5	4470.8	4470.8	4254.2	3691.1	3629.0	3558.4	2988.7	2855.9
45°	4848.4	4839.9	4883.2	4928.4	4916.2	4692.1	4061.2	4015.1	3684.5	3185.5	3186.4
47.5°	5339.0	5328.6	5390.8	5450.1	5388.9	5177.9	4468.0	4432.2	3556.5	3518.8	3511.3
50°	5905.8	5880.4	5952.0	6031.0	5981.1	5720.3	4962.3	4274.9	3913.4	3883.2	3878.5
52.5°	6511.3	6491.5	6534.8	6669.5	6603.6	6288.1	5430.3	4410.5	4326.7	4292.8	4284.4
55°	7194.9	7156.3	7249.5	7352.1	7275.9	6916.2	5891.7	4860.6	4774.0	4715.6	4630.9
57.5°	7913.3	7857.8	7905.8	8034.8	7961.4	7559.3	6486.8	5323.9	5221.3	4321.1	3977.4
60°	8629.0	8603.5	8622.4	8736.3	8645.9	8184.5	7044.2	5788.1	4419.0	4274.0	4290.9
62.5°	9348.4	9292.8	9309.8	9426.5	9310.7	8779.6	7572.5	6210.0	4650.6	4599.8	4617.7
65°	10119.5	10053.6	10068.7	10102.6	9959.5	9313.5	8039.5	6608.3	4999.0	4945.4	4965.1
67.5°	11048.9	10988.7	10906.7	10806.0	10608.2	9880.4	8503.7	7027.3	5390.8	5360.6	5367.2
68°	11147.8	11089.4	10990.5	10871.0	10648.7	9903.9	8523.5	7039.5	5396.4	5358.7	5360.6
70°	10839.9	10874.7	10762.7	10562.1	10376.6	9559.3	8200.5	6768.3	5156.3	5100.7	5086.6
72.5°	9599.8	9676.0	9521.6	9487.7	9259.9	8516.0	7176.1	5872.9	4484.9	4502.8	4452.0
75°	7750.4	7862.5	7675.1	7685.5	7555.5	7103.6	6014.1	4889.8	3682.7	3764.6	3779.6
77.5°	5389.8	5550.8	5468.9	5550.8	5486.8	5323.9	4654.4	3765.5	2809.8	2903.9	2940.7
80°	2810.7	3001.9	3110.2	3144.1	3164.8	3158.2	2834.3	2259.9	1624.3	1659.1	1657.2
82.5°	888.9	842.7	870.1	862.5	839.0	848.4	764.6	597.9	414.3	456.7	436.9
85°	268.4	270.2	262.7	260.8	241.1	211.9	173.3	99.8	49.0	57.4	53.7
87.5°	197.7	199.6	184.6	175.1	163.8	142.2	110.2	62.1	23.5	22.6	17.9
90°	109.2	105.5	97.9	90.4	85.7	73.4	55.6	23.5	8.5	6.6	5.6
92.5°	59.3	56.5	52.7	49.9	43.3	34.8	22.6	7.5	3.8	0.9	0.0
95°	27.3	25.4	24.5	21.7	18.8	13.2	7.5	4.7	2.8	0.9	0.0
97.5°	12.2	11.3	10.4	8.5	6.6	3.8	3.8	2.8	1.9	0.9	0.0
100°	2.8	2.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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



REPORT NUMBER: P522112
 CATALOG NUMBER: CTN-CA10-210-727-U-T5R-HSS-HM-EX180

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



REPORT NUMBER: P522112

CATALOG NUMBER: CTN-CA10-210-727-U-T5R-HSS-HM-EX180

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2	1980.2
2.5°	1992.5	1986.8	1984.0	1966.1	1971.7	1955.7	1986.8	1979.3	1974.6	1987.8
5°	1994.3	1974.6	1986.8	1976.5	1980.2	1957.6	1982.1	1971.7	1970.8	1976.5
7.5°	1999.1	1985.9	1998.1	1977.4	1986.8	1977.4	1995.3	1984.9	1993.4	1999.1
10°	2024.5	2016.9	2011.3	2006.6	2013.2	1994.3	2016.9	2017.9	2020.7	2037.7
12.5°	2060.3	2052.7	2043.3	2031.1	2037.7	2030.1	2047.1	2051.8	2062.1	2070.6
15°	2110.2	2096.0	2092.3	2081.0	2087.6	2083.8	2087.6	2084.7	2104.5	2101.7
17.5°	2178.9	2162.9	2109.2	2054.6	2019.8	2030.1	2073.4	2129.9	2144.1	2145.9
20°	2204.3	2091.3	2085.7	2023.5	1995.3	1993.4	1903.9	1770.2	1810.7	1905.8
22.5°	2174.2	2019.8	2003.8	1991.5	1871.0	1673.3	1654.4	1634.6	1629.9	1644.1
25°	2106.4	2088.5	2074.4	1914.3	1724.1	1725.0	1697.7	1567.8	1365.3	1348.4
27.5°	2210.0	2185.5	2049.0	1802.3	1798.5	1796.6	1756.1	1422.8	1379.5	1389.8
30°	2327.7	2287.2	1930.3	1898.3	1897.4	1880.4	1574.4	1435.0	1435.0	1436.9
32.5°	2463.3	2211.9	1998.1	2013.2	2012.2	1932.2	1520.7	1511.3	1507.5	1516.9
35°	2566.8	2151.6	2144.1	2171.4	2152.5	1639.4	1615.8	1607.3	1603.6	1598.9
37.5°	2534.8	2324.8	2324.8	2341.8	2190.2	1745.8	1734.5	1734.5	1726.9	1723.2
40°	2583.8	2540.5	2518.8	2525.4	1591.3	1874.8	1883.2	1881.3	1880.4	1887.0
42.5°	2841.8	2803.2	2783.4	2549.9	1781.5	1863.5	2070.6	2069.7	2072.5	2069.7
45°	3170.4	3134.6	3082.9	2386.1	2022.6	1633.7	2282.5	2292.8	2293.8	2292.8
47.5°	3515.1	3492.5	2962.3	2641.2	2284.4	1753.3	2181.7	2548.0	2543.3	2549.0
50°	3879.5	3777.8	2947.3	2943.5	2563.1	1951.0	1952.0	2771.2	2819.2	2834.3
52.5°	4285.3	3424.7	3266.5	2980.2	2845.6	2154.4	2133.7	2455.7	3111.1	3126.2
55°	3980.2	3617.7	3614.9	2652.5	2960.4	2350.3	2353.1	2330.5	2853.1	3242.9
57.5°	3960.4	3968.9	3962.3	2959.5	2160.1	2203.4	2564.0	2544.2	1847.5	1497.2
60°	4302.2	4314.5	3849.3	3195.8	2335.2	1355.0	1579.1	1341.8	1359.7	1373.8
62.5°	4629.0	4632.8	3130.9	2095.1	1157.2	54.6	26.4	21.7	20.7	20.7
65°	4990.6	4990.6	3355.9	2285.3	1117.7	20.7	3.8	2.8	10.4	10.4
67.5°	5339.9	5262.7	3520.7	2426.5	1137.5	2.8	0.0	0.0	0.0	0.0
68°	5320.1	5235.4	3505.6	2422.8	1134.6	1.9	0.0	0.0	0.0	0.0
70°	5024.5	4942.5	3325.8	2312.6	1092.3	1.9	0.0	0.0	0.0	0.0
72.5°	4435.0	4359.7	2945.4	2038.6	984.9	0.9	0.0	0.0	0.0	0.0
75°	3754.2	3743.9	2544.2	1720.3	844.6	0.9	0.0	0.0	0.0	0.0
77.5°	3020.7	2973.6	1988.7	1348.4	680.8	0.0	0.0	0.0	0.0	0.0
80°	1682.7	1752.3	1163.8	792.8	428.4	0.0	0.0	0.0	0.0	0.0
82.5°	454.8	425.6	254.2	172.3	81.9	0.0	0.0	0.0	0.0	0.0
85°	58.4	64.0	29.2	23.5	5.6	0.0	0.0	0.0	0.0	0.0
87.5°	30.1	35.8	9.4	7.5	1.9	0.0	0.0	0.0	0.0	0.0
90°	5.6	6.6	2.8	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



REPORT NUMBER: P522112
 CATALOG NUMBER: CTN-CA10-210-727-U-T5R-HSS-HM-EX180

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)