

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: P522199

Luminaire Tested: **CTN-CA8-230-722-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522199
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-CA8-230-722-U-T5R-HSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (8) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19321 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U2 - G3

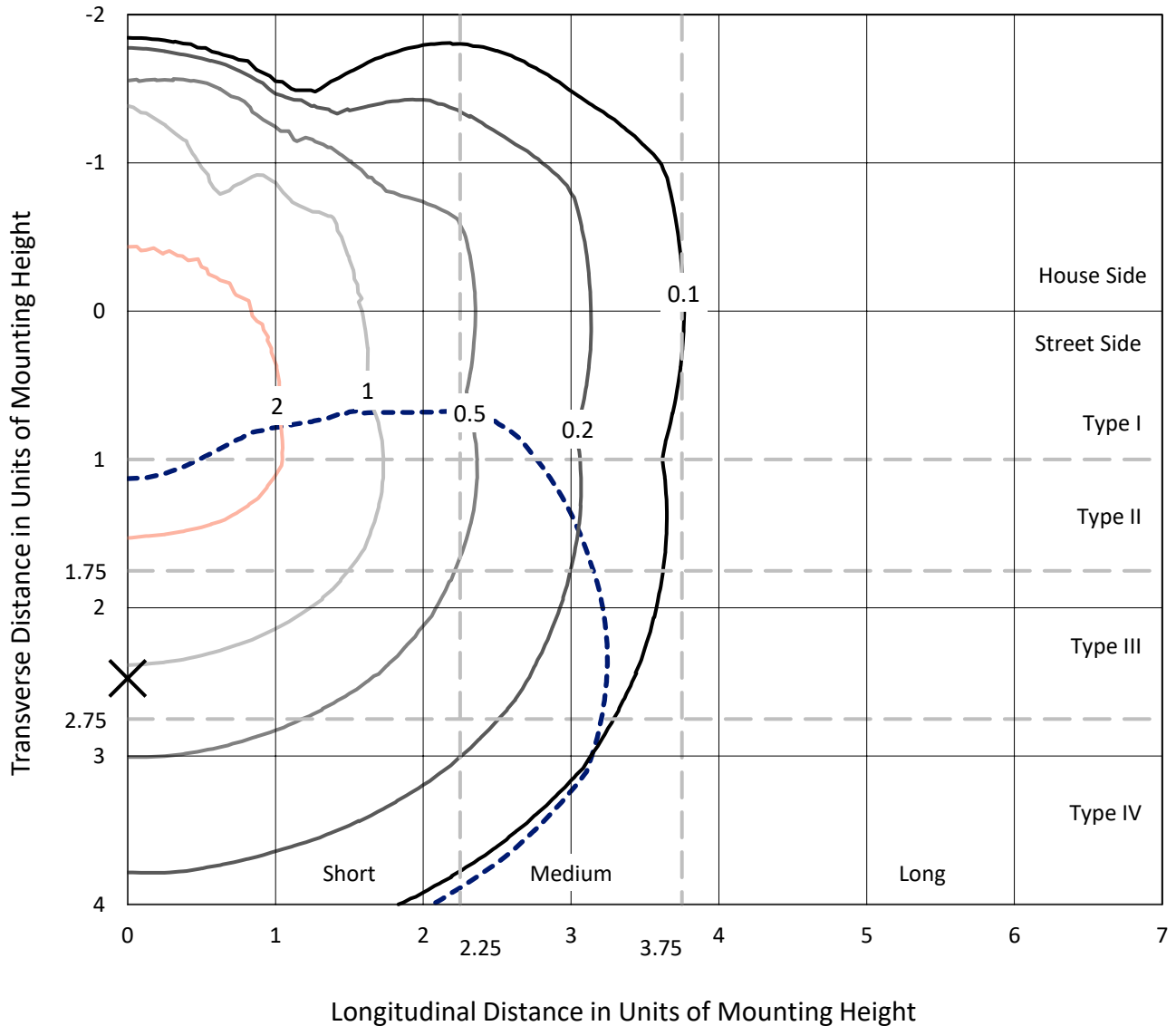
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P522199
 CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX180

Iso-Footcandle Lines of Horizontal Illumination

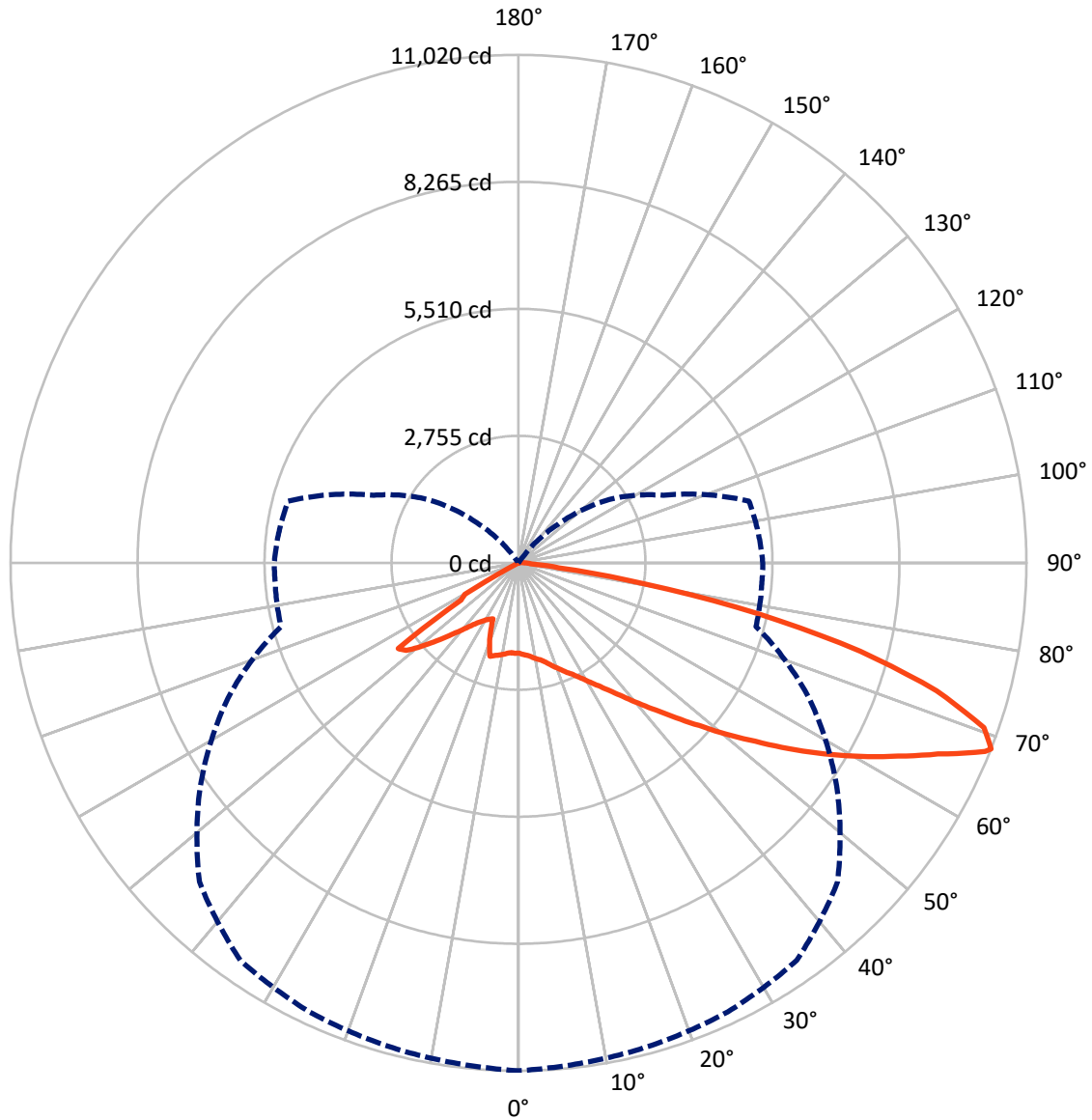
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type IV - Short - N/A

REPORT NUMBER: P522199
CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX180

Luminous Intensity Polar Plot



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

REPORT NUMBER: P522199
 CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX180

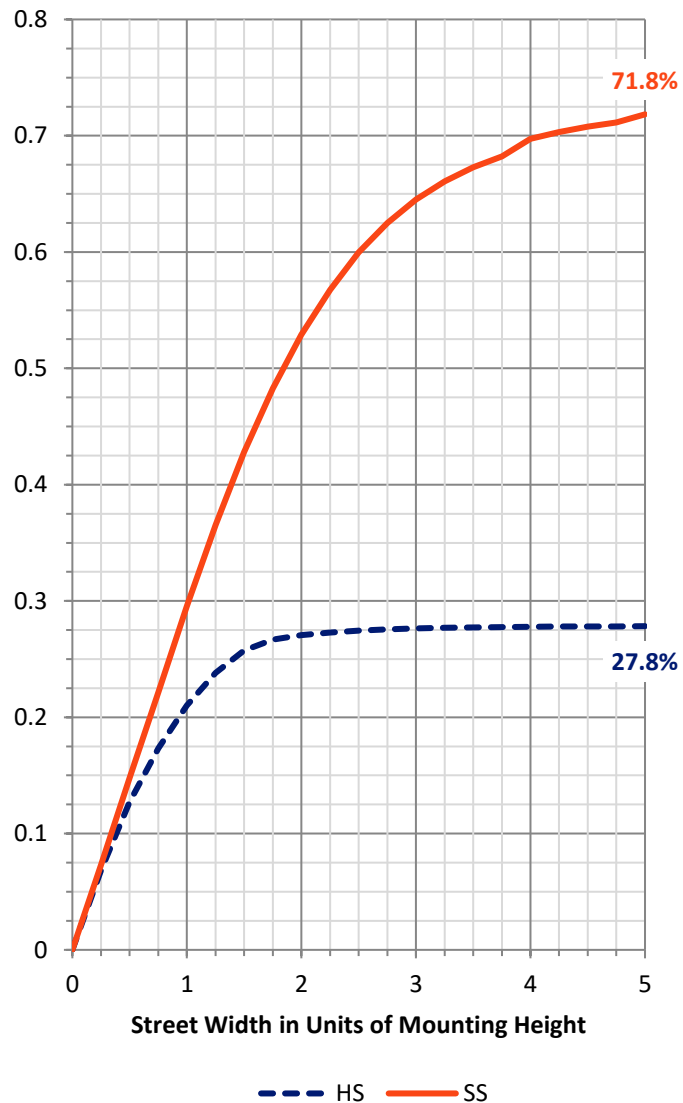
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5396.4	0.1	5396.5
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	13913.4	11.1	13924.5
	% Fixture	72.0	0.1	72.1
Total	Lumens	19309.8	11.2	19321.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.0	1.0
10°-20°	602.0	3.1
20°-30°	1019.2	5.3
30°-40°	1614.6	8.4
40°-50°	2639.8	13.7
50°-60°	4043.4	20.9
60°-70°	4971.7	25.7
70°-80°	3841.6	19.9
80°-90°	387.6	2.0
90°-100°	11.0	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°	19309.8	99.9
0°-180°	19321.0	100.0

Coefficient of Utilization

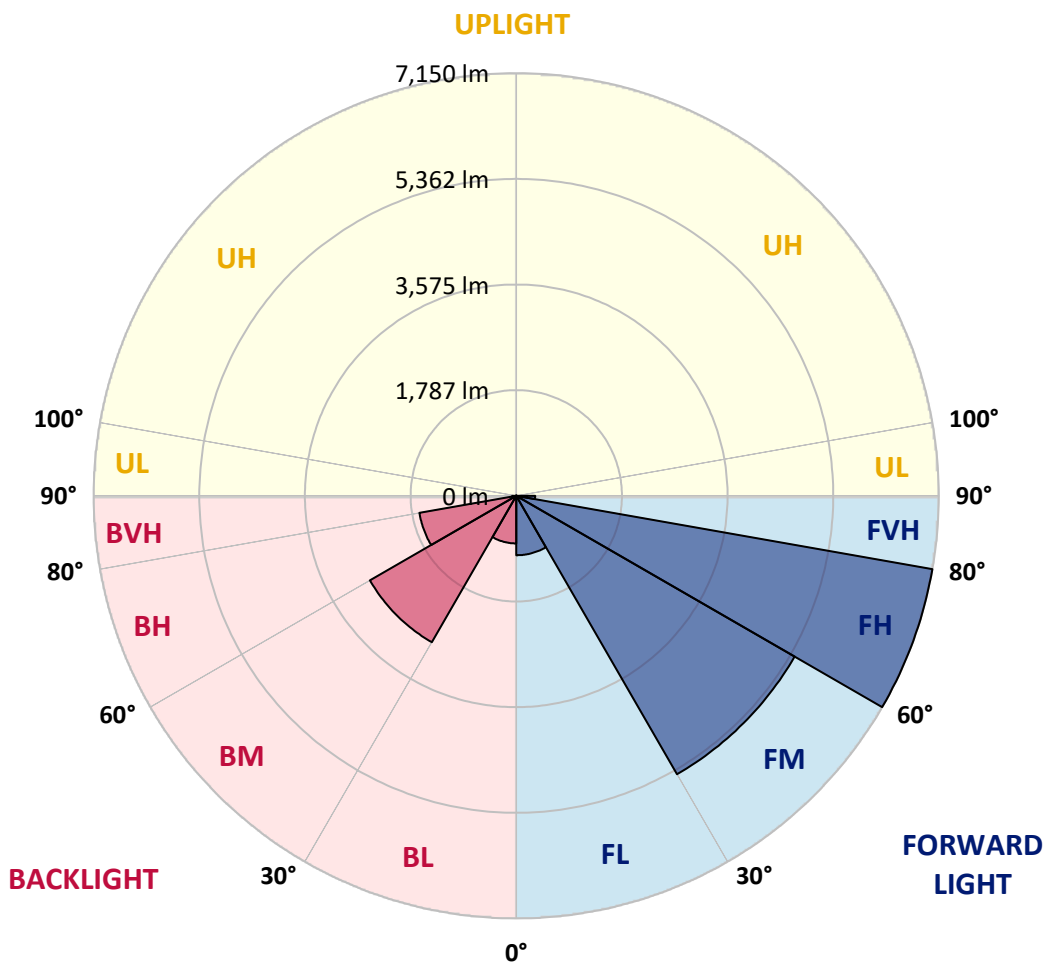


REPORT NUMBER: P522199
 CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX180

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1005.7	5.2			
FM	(30°-60°)	5438.5	28.1			
FH	(60°-80°)	7149.6	37.0			G3/7500
FVH	(80°-90°)	319.7	1.7			G3/500
BL	(0°-30°)	805.5	4.2	B2/1000		
BM	(30°-60°)	2859.2	14.8	B3/5000		
BH	(60°-80°)	1663.7	8.6	B3/2500		G3/2500
BVH	(80°-90°)	68.0	0.4			G1/100
UL	(90°-100°)	11.0	0.1		U2/50	
UH	(100°-180°)	0.2	0.0		U1/10	

BUG Rating: B3-U2-G3
 Type IV Short





REPORT NUMBER: P522199

CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX180

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4
2.5°	1992.8	1989.1	1985.3	1993.7	1961.1	1975.1	1963.9	1974.2	1966.7	1975.1	1972.3
5°	2018.9	2015.1	2004.0	2013.3	1991.9	1997.4	1983.5	1987.2	1962.1	1977.0	1976.0
7.5°	2061.7	2051.4	2044.0	2044.0	2025.4	2024.4	2002.1	2003.0	1983.5	1981.6	1985.3
10°	2119.4	2111.9	2091.5	2093.3	2067.3	2063.5	2035.6	2034.7	2018.9	2009.5	2017.9
12.5°	2162.2	2169.6	2151.0	2151.0	2125.0	2106.3	2086.8	2073.8	2061.7	2047.7	2041.2
15°	2240.4	2247.8	2222.7	2221.8	2211.5	2189.2	2167.8	2139.9	2118.4	2111.9	2101.7
17.5°	2341.8	2337.2	2315.8	2316.7	2318.6	2282.3	2260.9	2224.6	2193.8	2171.5	2165.9
20°	2445.2	2445.2	2421.9	2429.3	2420.0	2386.5	2372.5	2322.3	2279.5	2255.3	2235.7
22.5°	2560.6	2555.9	2540.1	2555.9	2537.3	2503.8	2480.5	2430.3	2375.3	2238.5	2182.7
25°	2670.4	2667.6	2674.1	2678.8	2655.5	2613.6	2597.8	2544.7	2392.1	2212.5	2099.8
27.5°	2809.1	2799.8	2814.7	2824.0	2800.7	2764.4	2730.9	2671.3	2348.3	2206.9	2194.8
30°	2986.9	2966.4	2987.8	2992.4	2968.2	2945.9	2895.6	2597.8	2363.2	2322.3	2318.6
32.5°	3176.7	3152.5	3180.5	3184.2	3152.5	3133.9	3007.3	2559.6	2509.4	2461.9	2466.6
35°	3402.0	3402.0	3416.0	3417.8	3394.5	3362.9	2880.8	2745.8	2701.1	2657.4	2656.4
37.5°	3676.6	3668.2	3705.4	3727.8	3702.6	3612.3	3065.0	3001.8	2932.9	2877.0	2761.6
40°	4007.9	4022.8	4033.1	4055.4	4031.2	3828.3	3334.0	3262.4	3208.4	3021.3	2730.0
42.5°	4365.3	4369.1	4391.4	4419.3	4419.3	4205.2	3648.6	3587.2	3517.4	2954.3	2823.0
45°	4792.6	4784.2	4827.0	4871.7	4859.6	4638.1	4014.4	3968.8	3642.1	3148.8	3149.7
47.5°	5277.5	5267.3	5328.7	5387.3	5326.8	5118.3	4416.5	4381.2	3515.5	3478.3	3470.9
50°	5837.8	5812.7	5883.4	5961.6	5912.3	5654.5	4905.2	4225.7	3868.3	3838.5	3833.9
52.5°	6436.3	6416.8	6459.6	6592.7	6527.5	6215.7	5367.8	4359.8	4276.9	4243.4	4235.0
55°	7112.1	7073.9	7166.0	7267.5	7192.1	6836.6	5823.9	4804.7	4719.0	4661.3	4577.6
57.5°	7822.2	7767.3	7814.8	7942.3	7869.7	7472.3	6412.1	5262.6	5161.2	4271.3	3931.6
60°	8529.6	8504.5	8523.1	8635.7	8546.4	8090.3	6963.1	5721.5	4368.1	4224.8	4241.5
62.5°	9240.8	9185.8	9202.6	9318.0	9203.5	8678.6	7485.3	6138.5	4597.1	4546.8	4564.5
65°	10003.1	9937.9	9952.8	9986.3	9844.8	9206.3	7947.0	6532.2	4941.5	4888.4	4908.0
67.5°	10921.7	10862.2	10781.2	10681.6	10486.1	9766.6	8405.8	6946.4	5328.7	5298.9	5305.4
68°	11019.5	10961.8	10864.0	10745.8	10526.2	9789.9	8425.4	6958.5	5334.3	5297.0	5298.9
70°	10715.1	10749.5	10638.8	10440.5	10257.2	9449.2	8106.1	6690.4	5096.9	5042.0	5028.1
72.5°	9489.3	9564.7	9412.0	9378.5	9153.3	8417.9	7093.4	5805.3	4433.3	4451.0	4400.7
75°	7661.2	7772.0	7586.8	7597.0	7468.6	7021.8	5944.9	4833.5	3640.3	3721.2	3736.1
77.5°	5327.8	5486.9	5406.0	5486.9	5423.6	5262.6	4600.8	3722.2	2777.4	2870.5	2906.8
80°	2778.4	2967.3	3074.4	3107.9	3128.3	3121.8	2801.6	2233.9	1605.6	1640.0	1638.2
82.5°	878.7	833.0	860.0	852.6	829.3	838.6	755.8	591.0	409.5	451.4	431.9
85°	265.3	267.1	259.7	257.8	238.3	209.4	171.3	98.7	48.4	56.8	53.1
87.5°	195.5	197.3	182.4	173.1	162.0	140.5	108.9	61.4	23.3	22.3	17.7
90°	108.0	104.2	96.8	89.4	84.7	72.6	54.9	23.3	8.4	6.5	5.6
92.5°	58.6	55.8	52.1	49.3	42.8	34.4	22.3	7.4	3.7	0.9	0.0
95°	27.0	25.1	24.2	21.4	18.6	13.0	7.4	4.7	2.8	0.9	0.0
97.5°	12.1	11.2	10.2	8.4	6.5	3.7	3.7	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: P522199
 CATALOG NUMBER: CTN-CA8-230-722-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: P522199

CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX180

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4	1957.4
2.5°	1969.5	1963.9	1961.1	1943.5	1949.0	1933.2	1963.9	1956.5	1951.8	1964.9
5°	1971.4	1951.8	1963.9	1953.7	1957.4	1935.1	1959.3	1949.0	1948.1	1953.7
7.5°	1976.0	1963.0	1975.1	1954.6	1963.9	1954.6	1972.3	1962.1	1970.5	1976.0
10°	2001.2	1993.7	1988.1	1983.5	1990.0	1971.4	1993.7	1994.7	1997.4	2014.2
12.5°	2036.5	2029.1	2019.8	2007.7	2014.2	2006.8	2023.5	2028.2	2038.4	2046.8
15°	2085.9	2071.9	2068.2	2057.0	2063.5	2059.8	2063.5	2060.7	2080.3	2077.5
17.5°	2153.8	2138.0	2084.9	2031.0	1996.5	2006.8	2049.6	2105.4	2119.4	2121.2
20°	2178.9	2067.3	2061.7	2000.2	1972.3	1970.5	1882.0	1749.9	1789.9	1883.9
22.5°	2149.2	1996.5	1980.7	1968.6	1849.5	1654.0	1635.4	1615.8	1611.2	1625.1
25°	2082.1	2064.5	2050.5	1892.3	1704.3	1705.2	1678.2	1549.7	1349.6	1332.9
27.5°	2184.5	2160.3	2025.4	1781.5	1777.8	1775.9	1735.9	1406.4	1363.6	1373.8
30°	2300.9	2260.9	1908.1	1876.4	1875.5	1858.8	1556.3	1418.5	1418.5	1420.4
32.5°	2434.9	2186.4	1975.1	1990.0	1989.1	1910.0	1503.2	1493.9	1490.2	1499.5
35°	2537.3	2126.8	2119.4	2146.4	2127.8	1620.5	1597.2	1588.8	1585.1	1580.5
37.5°	2505.7	2298.1	2298.1	2314.8	2165.0	1725.7	1714.5	1714.5	1707.0	1703.3
40°	2554.1	2511.2	2489.8	2496.3	1573.0	1853.2	1861.6	1859.7	1858.8	1865.3
42.5°	2809.1	2770.9	2751.4	2520.5	1761.0	1842.0	2046.8	2045.8	2048.6	2045.8
45°	3133.9	3098.6	3047.4	2358.6	1999.3	1614.9	2256.2	2266.4	2267.4	2266.4
47.5°	3474.6	3452.3	2928.2	2610.8	2258.1	1733.1	2156.6	2518.7	2514.0	2519.6
50°	3834.8	3734.3	2913.3	2909.6	2533.6	1928.6	1929.5	2739.3	2786.7	2801.6
52.5°	4236.0	3385.2	3228.9	2945.9	2812.8	2129.6	2109.1	2427.5	3075.3	3090.2
55°	3934.4	3576.0	3573.3	2622.0	2926.4	2323.2	2326.0	2303.7	2820.3	3205.6
57.5°	3914.8	3923.2	3916.7	2925.4	2135.2	2178.0	2534.5	2515.0	1826.2	1479.9
60°	4252.7	4264.8	3805.0	3159.1	2308.3	1339.4	1560.9	1326.4	1344.0	1358.0
62.5°	4575.7	4579.4	3094.8	2071.0	1143.9	54.0	26.1	21.4	20.5	20.5
65°	4933.1	4933.1	3317.3	2259.0	1104.8	20.5	3.7	2.8	10.2	10.2
67.5°	5278.4	5202.1	3480.2	2398.6	1124.4	2.8	0.0	0.0	0.0	0.0
68°	5258.9	5175.1	3465.3	2394.9	1121.6	1.9	0.0	0.0	0.0	0.0
70°	4966.6	4885.6	3287.5	2286.0	1079.7	1.9	0.0	0.0	0.0	0.0
72.5°	4384.0	4309.5	2911.5	2015.1	973.6	0.9	0.0	0.0	0.0	0.0
75°	3711.0	3700.8	2515.0	1700.5	834.9	0.9	0.0	0.0	0.0	0.0
77.5°	2985.9	2939.4	1965.8	1332.9	673.0	0.0	0.0	0.0	0.0	0.0
80°	1663.3	1732.2	1150.4	783.7	423.5	0.0	0.0	0.0	0.0	0.0
82.5°	449.6	420.7	251.3	170.3	81.0	0.0	0.0	0.0	0.0	0.0
85°	57.7	63.3	28.9	23.3	5.6	0.0	0.0	0.0	0.0	0.0
87.5°	29.8	35.4	9.3	7.4	1.9	0.0	0.0	0.0	0.0	0.0
90°	5.6	6.5	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: P522199
 CATALOG NUMBER: CTN-CA8-230-722-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)