

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: P522201

Luminaire Tested: **CTN-CA8-230-727-U-T5R-HSS-HM-EX120**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522201
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-6)
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-EX120
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: 23384 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U1 - G4

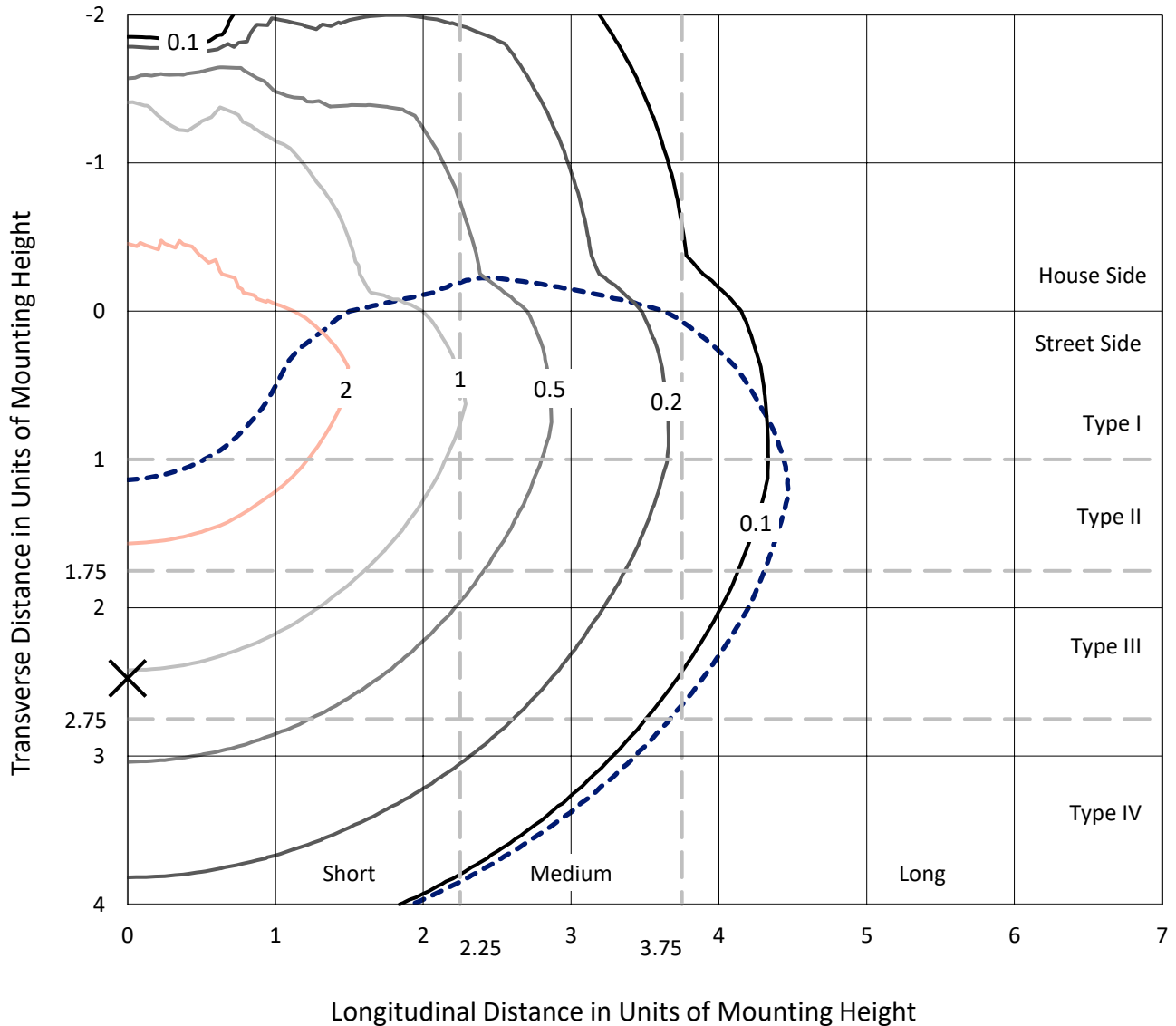
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P522201
 CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

Iso-Footcandle Lines of Horizontal Illumination

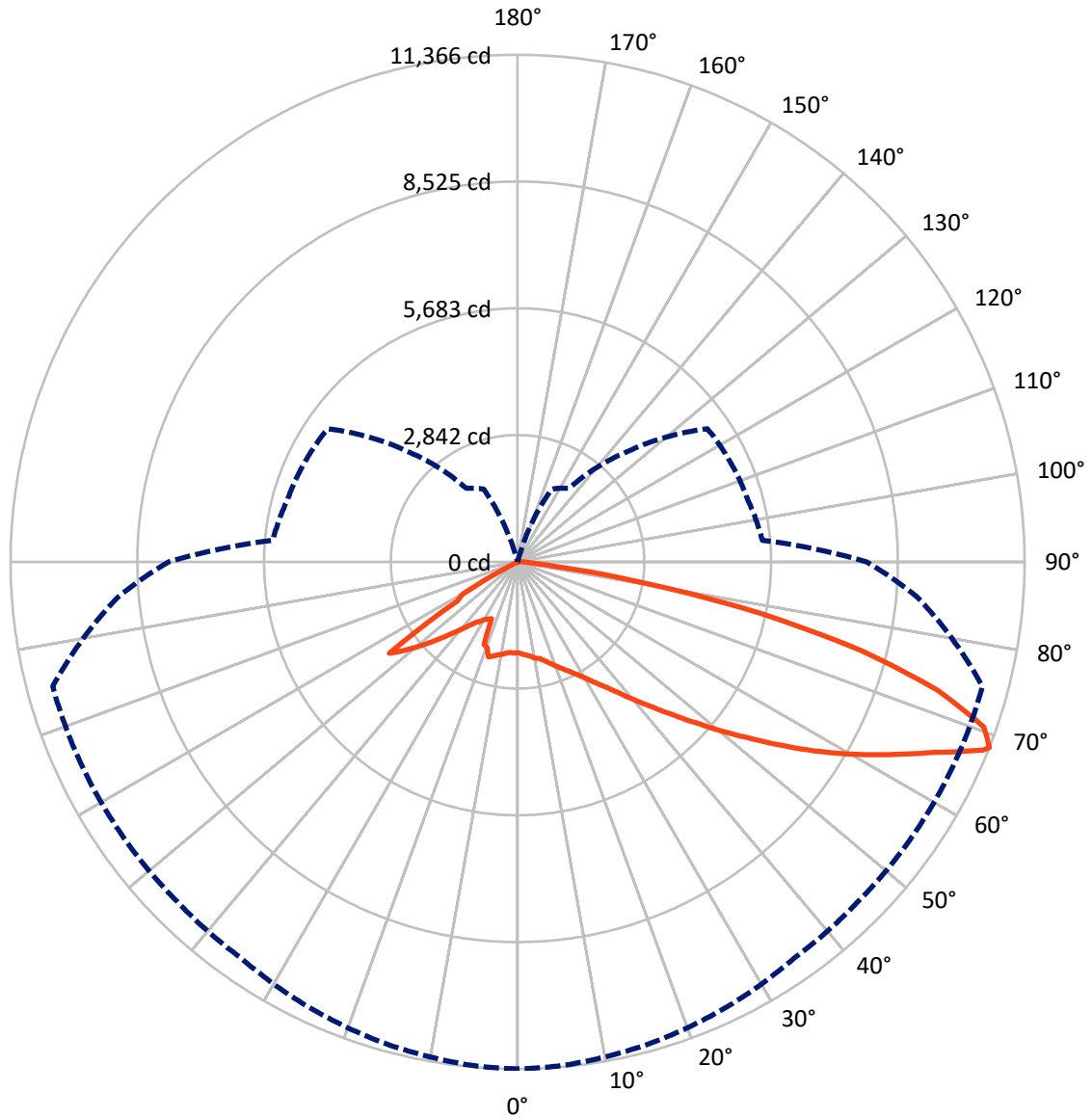
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P522201
CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

Luminous Intensity Polar Plot



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

REPORT NUMBER: P522201
 CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

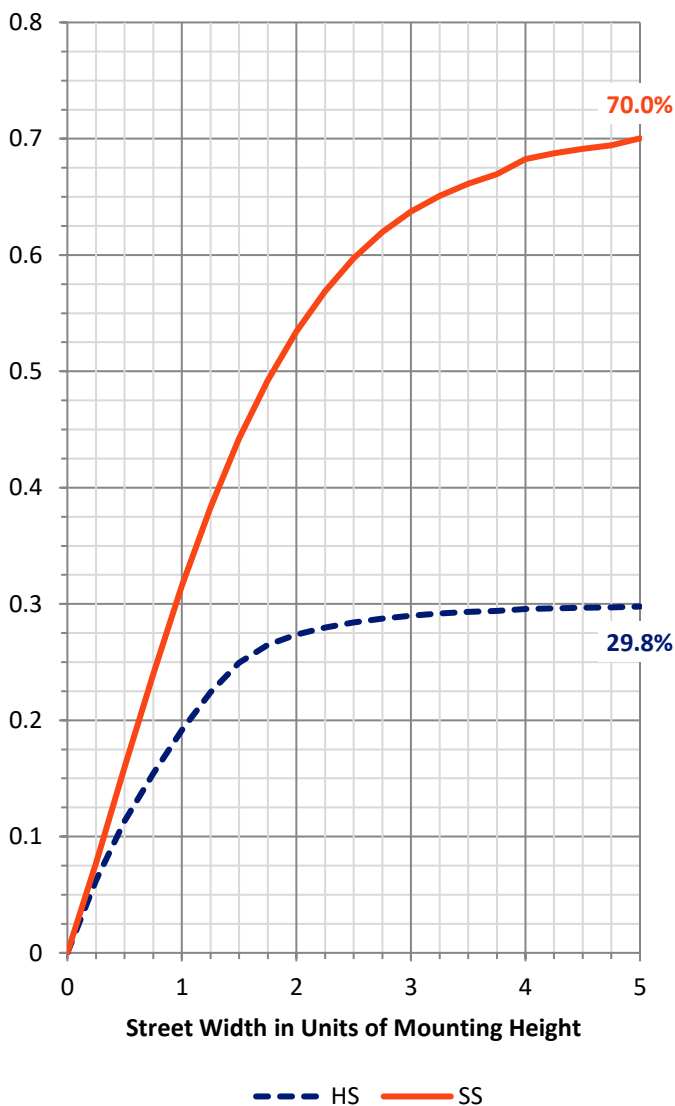
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6970.5	1.1	6971.6
	% Fixture	29.8	0.0	29.8
Street Side	Lumens	16402.8	9.6	16412.4
	% Fixture	70.1	0.0	70.2
Total	Lumens	23373.3	10.7	23384.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.9	0.8
10°-20°	629.7	2.7
20°-30°	1078.7	4.6
30°-40°	1749.8	7.5
40°-50°	2951.0	12.6
50°-60°	4810.3	20.6
60°-70°	6451.4	27.6
70°-80°	5011.0	21.4
80°-90°	493.5	2.1
90°-100°	9.4	0.0
100°-110°	0.5	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.1	0.0
140°-150°	0.1	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	23373.3	100.0
0°-180°	23384.0	100.0

Coefficient of Utilization



REPORT NUMBER: P522201

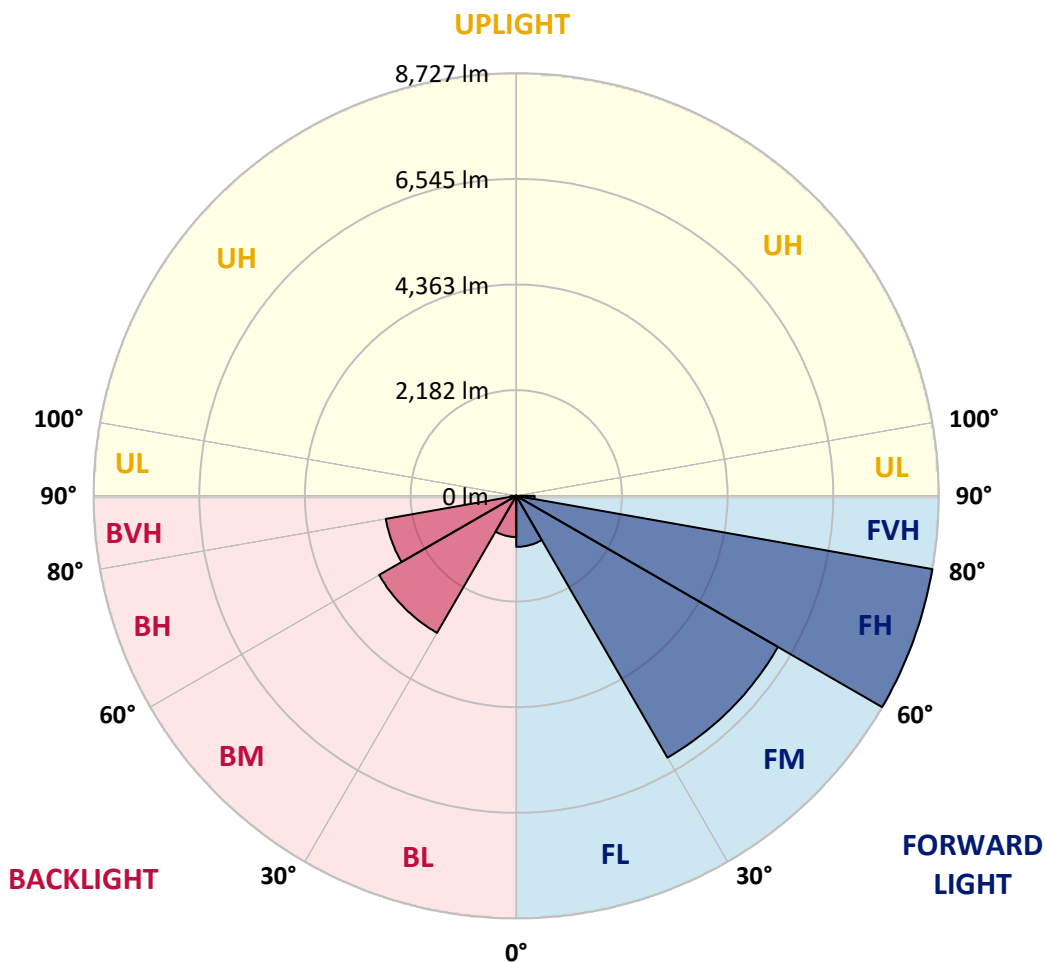
CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1054.7	4.5			
FM (30°-60°)	6242.0	26.7			
FH (60°-80°)	8726.6	37.3			G4/12000
FVH (80°-90°)	379.4	1.6			G3/500
BL (0°-30°)	851.5	3.6	B2/1000		
BM (30°-60°)	3269.1	14.0	B3/5000		
BH (60°-80°)	2735.8	11.7	B4/5000		G4/5000
BVH (80°-90°)	114.1	0.5			G2/225
UL (90°-100°)	9.4	0.0		U1/10	
UH (100°-180°)	1.3	0.0		U1/10	

BUG Rating: B4-U1-G4

Type IV Short





REPORT NUMBER: P522201

CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7
2.5°	2072.5	2066.7	2065.7	2077.3	2040.6	2059.0	2042.5	2056.1	2047.4	2054.1	2055.1
5°	2100.5	2089.9	2083.1	2096.7	2073.5	2082.2	2063.8	2069.6	2045.4	2059.0	2060.9
7.5°	2141.2	2123.8	2121.8	2125.7	2105.4	2112.2	2082.2	2088.9	2071.5	2063.8	2070.6
10°	2196.3	2179.8	2167.3	2176.0	2148.9	2152.8	2120.9	2121.8	2109.3	2094.7	2106.3
12.5°	2227.2	2229.2	2223.4	2230.1	2207.9	2195.3	2173.1	2165.3	2152.8	2135.4	2129.6
15°	2304.6	2300.7	2289.1	2299.8	2296.9	2285.3	2258.2	2240.8	2213.7	2204.0	2194.4
17.5°	2399.4	2386.8	2377.1	2390.7	2405.2	2381.0	2354.9	2330.7	2294.9	2275.6	2264.0
20°	2499.0	2490.3	2480.6	2501.9	2506.7	2488.4	2469.0	2433.2	2391.6	2366.5	2342.3
22.5°	2610.2	2592.8	2595.7	2623.7	2615.0	2606.3	2581.2	2552.2	2501.9	2470.0	2400.3
25°	2725.3	2715.6	2729.2	2741.7	2735.0	2716.6	2704.0	2682.7	2626.7	2588.0	2486.4
27.5°	2868.4	2853.0	2870.4	2875.2	2869.4	2864.6	2847.2	2830.7	2769.8	2726.3	2599.6
30°	3036.7	3018.3	3046.4	3039.6	3033.8	3037.7	3027.0	2991.2	2937.1	2878.1	2751.4
32.5°	3236.9	3212.7	3244.6	3230.1	3216.6	3243.7	3218.5	3184.7	3120.8	3052.2	2928.4
35°	3469.0	3470.0	3486.4	3462.2	3457.4	3486.4	3470.0	3428.4	3369.4	3297.8	3121.8
37.5°	3750.4	3742.7	3784.3	3772.7	3755.3	3793.9	3798.8	3746.6	3640.2	3569.6	3361.6
40°	4092.8	4090.8	4104.4	4106.3	4101.5	4119.9	4128.6	4058.9	3990.3	3883.9	3172.1
42.5°	4458.3	4466.1	4490.3	4472.9	4496.1	4520.2	4523.1	4465.1	4366.5	3726.2	3369.4
45°	4897.4	4921.6	4938.0	4934.2	4944.8	4979.6	4982.5	4951.6	4854.9	4036.7	3727.2
47.5°	5401.3	5424.5	5429.3	5460.3	5450.6	5499.9	5493.1	5494.1	5390.6	4469.0	4117.0
50°	5980.6	5991.2	6030.9	6048.3	6024.1	6090.8	6073.4	6094.7	5967.0	4964.1	4535.7
52.5°	6595.6	6614.0	6630.5	6696.2	6665.3	6723.3	6700.1	6749.4	6601.4	5468.0	5000.9
55°	7294.9	7297.8	7325.8	7392.5	7351.9	7421.5	7387.7	7406.1	7288.1	6025.1	5485.4
57.5°	8035.7	8026.0	8036.6	8089.8	8053.1	8105.3	8091.7	8109.2	7998.9	6611.1	5839.4
60°	8768.7	8754.2	8769.7	8805.5	8755.2	8845.1	8796.8	8813.2	8694.3	7209.8	6344.2
62.5°	9505.7	9495.0	9477.6	9513.4	9439.9	9486.3	9506.6	9479.5	9375.1	7751.3	6783.3
65°	10296.7	10286.1	10222.3	10244.5	10113.0	10090.8	10098.5	10107.2	10037.6	8288.1	7264.9
67.5°	11258.0	11242.6	11122.6	10971.8	10782.2	10740.6	10744.5	10767.7	10777.4	8978.6	7828.7
68°	11366.4	11338.3	11204.9	11029.8	10831.6	10783.2	10778.4	10783.2	10788.0	8984.4	7822.9
70°	11089.8	11079.1	10977.6	10765.8	10562.7	10446.6	10346.1	10342.2	10295.8	8525.0	7390.6
72.5°	9841.2	9827.7	9706.8	9556.9	9431.2	9249.4	9118.8	9126.5	9050.1	7534.7	6469.0
75°	7964.1	7963.1	7818.1	7692.3	7694.3	7680.7	7637.2	7713.6	7634.3	6390.6	5517.3
77.5°	5550.2	5569.5	5559.9	5486.4	5589.9	5733.0	5888.7	6035.7	5990.2	5048.3	4399.4
80°	2899.4	2953.5	3145.0	3153.7	3226.3	3365.5	3471.9	3570.5	3577.3	2864.6	2541.5
82.5°	770.8	787.2	852.0	833.6	827.8	855.9	879.1	882.0	883.9	746.6	697.3
85°	239.8	246.6	238.9	228.2	211.8	193.4	188.6	153.8	121.9	100.6	88.0
87.5°	170.2	181.8	164.4	154.7	137.3	130.6	117.0	91.9	71.6	50.3	33.8
90°	88.0	89.9	80.3	68.7	63.8	60.0	51.3	36.7	18.4	9.7	8.7
92.5°	44.5	45.5	39.7	33.8	29.0	25.1	19.3	10.6	5.8	2.9	1.0
95°	17.4	18.4	16.4	14.5	11.6	8.7	7.7	5.8	3.9	1.9	1.0
97.5°	5.8	5.8	5.8	4.8	4.8	4.8	4.8	3.9	2.9	1.9	1.0
100°	0.0	0.0	0.0	1.0	1.9	2.9	2.9	2.9	1.9	1.0	1.0
102.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.9	1.9	1.9	1.0	1.0
105°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0



REPORT NUMBER: P522201
 CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

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	1.0	1.0	1.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
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	1.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
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: P522201

CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7
2.5°	2050.3	2044.5	2047.4	2023.2	2029.0	2013.5	2046.4	2037.7	2033.8	2047.4
5°	2055.1	2033.8	2051.2	2034.8	2037.7	2015.4	2042.5	2031.9	2030.9	2038.7
7.5°	2057.0	2046.4	2062.8	2035.8	2044.5	2035.8	2056.1	2045.4	2055.1	2061.9
10°	2084.1	2078.3	2076.4	2066.7	2073.5	2054.1	2079.3	2079.3	2084.1	2102.5
12.5°	2123.8	2116.0	2111.2	2093.8	2100.5	2094.7	2115.1	2118.9	2127.6	2135.4
15°	2177.9	2164.4	2159.5	2144.1	2148.9	2147.9	2162.4	2163.4	2182.8	2181.8
17.5°	2247.5	2228.2	2234.0	2222.4	2223.4	2215.6	2207.9	2207.9	2225.3	2229.2
20°	2330.7	2220.5	2075.4	1994.2	1979.7	1990.3	2031.9	2100.5	2014.5	2038.7
22.5°	2180.8	2081.2	2074.4	2056.1	2044.5	1785.3	1718.5	1697.3	1808.5	2000.0
25°	2200.2	2157.6	2145.0	2121.8	1779.5	1776.6	1757.2	1725.3	1410.0	1403.3
27.5°	2302.7	2261.1	2240.8	1858.8	1851.0	1850.1	1821.1	1500.9	1428.4	1438.1
30°	2422.6	2374.2	2010.6	1952.6	1945.8	1930.3	1764.0	1482.6	1481.6	1482.6
32.5°	2560.9	2400.3	2068.6	2065.7	2069.6	2022.2	1562.8	1557.0	1556.1	1565.7
35°	2750.4	2227.2	2213.7	2228.2	2207.9	1748.5	1656.6	1653.7	1654.7	1649.9
37.5°	2624.7	2401.3	2398.4	2398.4	2351.0	1789.1	1770.8	1784.3	1782.4	1775.6
40°	2677.9	2612.1	2594.7	2588.9	1987.4	1930.3	1919.7	1937.1	1940.0	1944.8
42.5°	2936.1	2876.2	2867.5	2798.8	2162.4	2144.1	2111.2	2129.6	2127.6	2133.4
45°	3253.3	3212.7	3175.0	2426.5	2398.4	2375.2	2341.4	2362.6	2368.4	2364.6
47.5°	3622.8	3578.3	3305.6	2668.2	2667.3	2648.9	2611.2	2628.6	2625.7	2625.7
50°	3994.1	3945.8	3002.9	2975.8	2966.1	2937.1	2906.1	2909.0	2910.0	2919.7
52.5°	4409.0	3524.1	3323.9	3269.8	3277.5	3258.2	3228.2	2443.9	3213.7	3222.4
55°	4120.8	3688.5	3676.9	3605.4	3623.7	3598.6	3579.2	2411.0	3196.3	3531.9
57.5°	4074.4	4043.5	4033.8	3960.3	3983.5	3744.6	3923.5	2638.3	2210.8	1615.1
60°	4429.3	4396.4	4390.6	4325.9	4323.9	2975.8	3566.7	1809.4	1413.9	1423.6
62.5°	4773.6	4720.4	4734.9	4658.5	3284.3	1813.3	1598.6	40.6	64.8	68.7
65°	5157.6	5068.6	5083.1	5012.5	3387.8	1912.0	1728.2	21.3	18.4	17.4
67.5°	5527.0	5371.3	5296.8	5222.4	3518.3	2013.5	1800.7	5.8	0.0	0.0
68°	5508.6	5344.2	5267.8	5197.2	3504.8	2010.6	1796.9	5.8	0.0	0.0
70°	5198.2	5050.2	4977.7	4923.5	3346.2	1941.9	1724.3	5.8	0.0	0.0
72.5°	4544.4	4462.2	4415.8	4368.4	2972.9	1736.9	1546.4	5.8	0.0	0.0
75°	3861.6	3838.4	3809.4	3705.0	2477.7	1421.6	1270.8	5.8	0.0	0.0
77.5°	3059.9	3058.9	2988.3	2865.5	1865.5	1043.5	937.1	4.8	0.0	0.0
80°	1654.7	1803.6	1749.5	1686.6	1058.0	567.7	540.6	3.9	0.0	0.0
82.5°	465.2	440.0	422.6	395.5	222.4	123.8	120.9	3.9	0.0	0.0
85°	64.8	71.6	79.3	89.9	51.3	32.9	29.0	1.9	0.0	0.0
87.5°	36.7	41.6	51.3	53.2	19.3	15.5	4.8	0.0	0.0	0.0
90°	7.7	8.7	9.7	9.7	3.9	3.9	0.0	0.0	0.0	0.0
92.5°	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P522201
 CATALOG NUMBER: CTN-CA8-230-727-U-T5R-HSS-HM-EX120

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	1.0	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)