

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: P522198

Luminaire Tested: **CTN-CA8-230-722-U-T5R-HSS-HM-EX120**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522198
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-CA8-230-722-U-T5R-HSS-HM-EX120
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: 22506 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U1 - G4

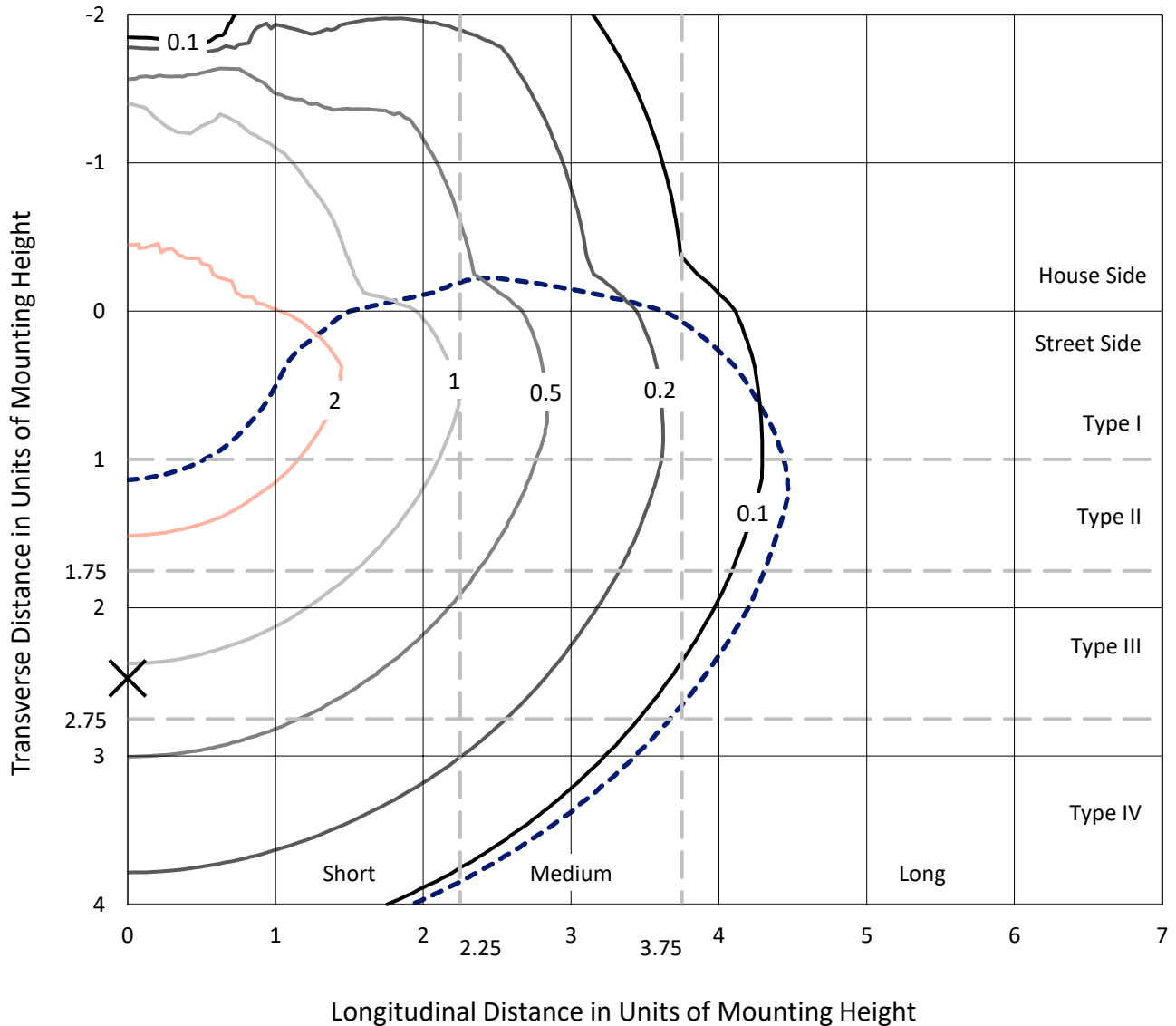
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

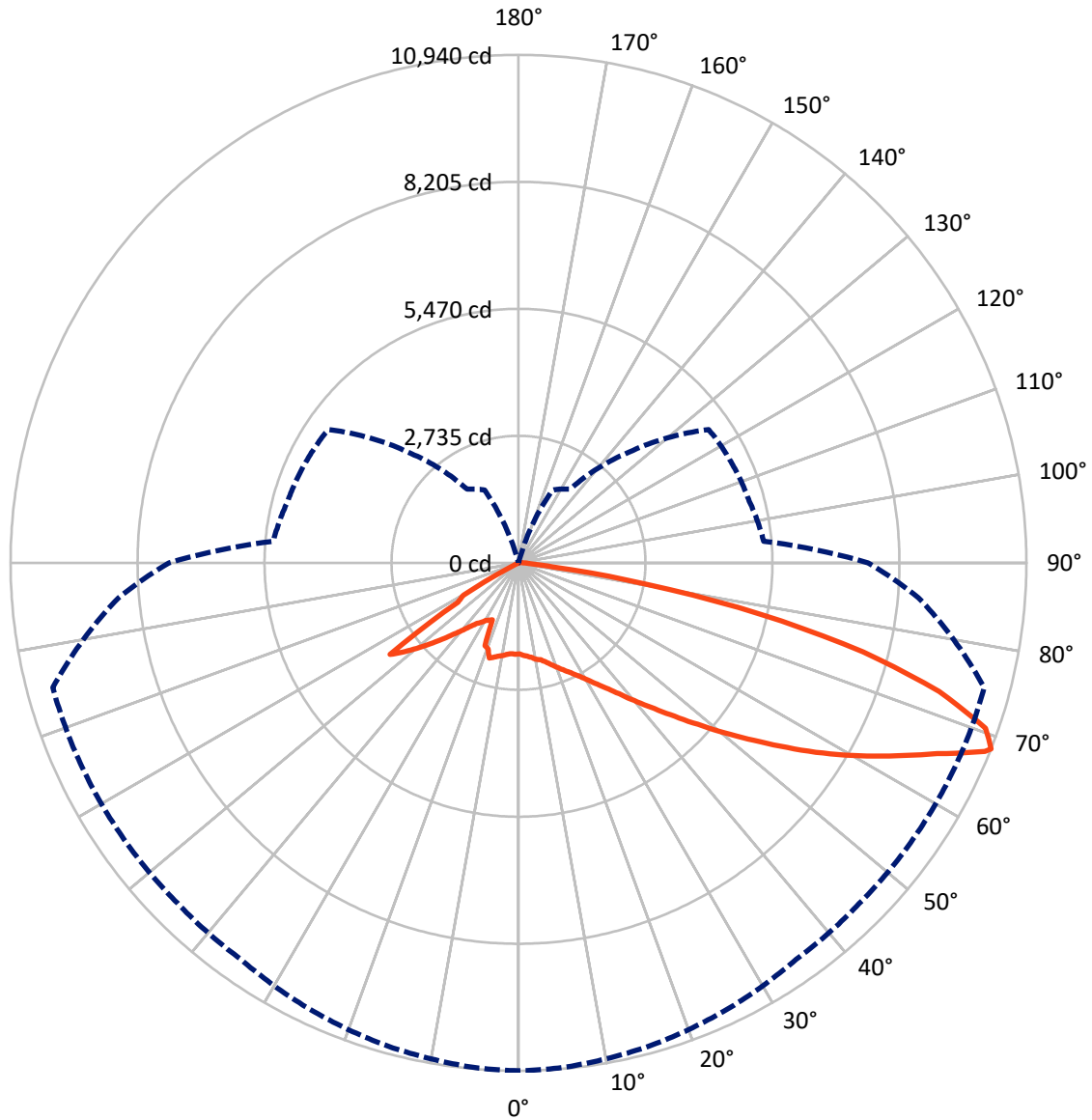
× Max cd
 - - - 1/2 Max cd



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

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CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX120

Luminous Intensity Polar Plot



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



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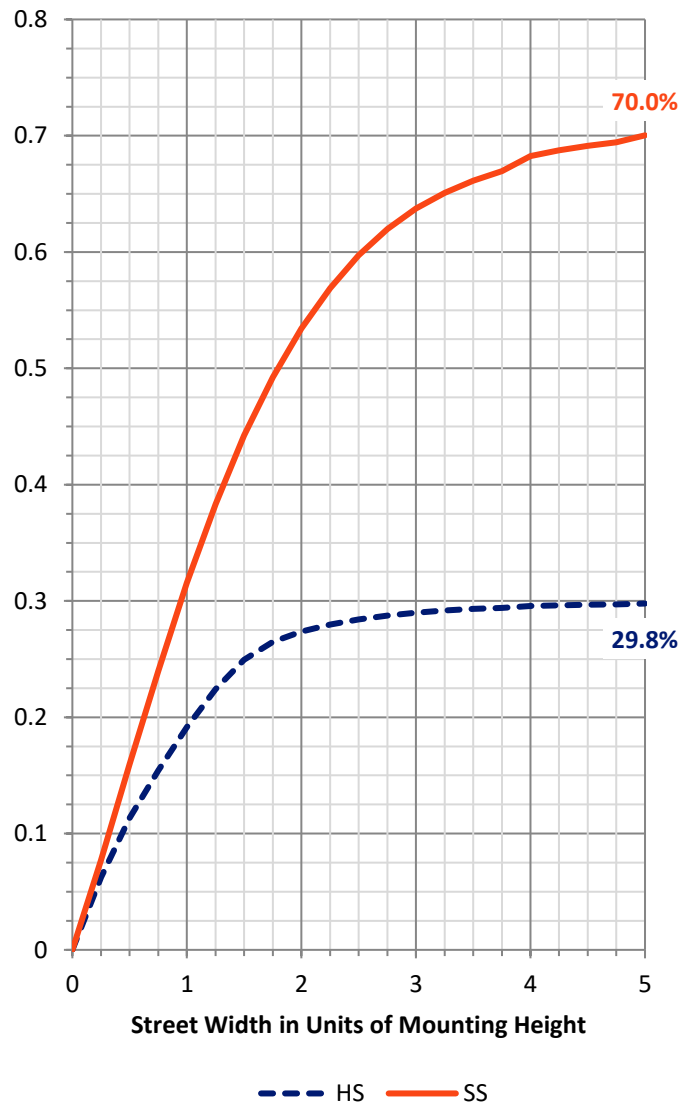
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6708.8	1.0	6709.8
	% Fixture	29.8	0.0	29.8
Street Side	Lumens	15787.0	9.2	15796.2
	% Fixture	70.1	0.0	70.2
Total	Lumens	22495.8	10.2	22506.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.4	0.8
10°-20°	606.1	2.7
20°-30°	1038.2	4.6
30°-40°	1684.2	7.5
40°-50°	2840.2	12.6
50°-60°	4629.7	20.6
60°-70°	6209.1	27.6
70°-80°	4822.9	21.4
80°-90°	475.0	2.1
90°-100°	9.0	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°	22495.8	100.0
0°-180°	22506.0	100.0

Coefficient of Utilization

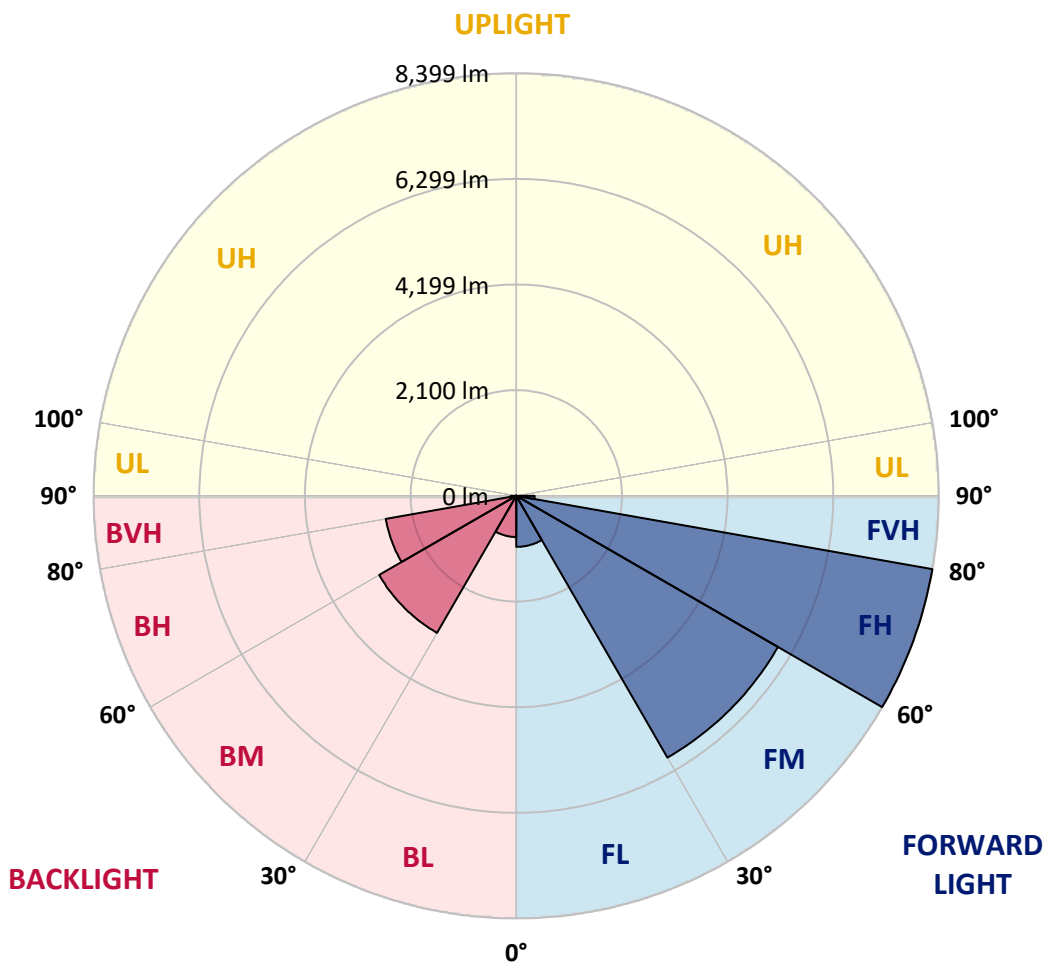


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 CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX120

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1015.1	4.5			
FM	(30°-60°)	6007.6	26.7			
FH	(60°-80°)	8399.0	37.3			G4/12000
FVH	(80°-90°)	365.2	1.6			G3/500
BL	(0°-30°)	819.6	3.6	B2/1000		
BM	(30°-60°)	3146.4	14.0	B3/5000		
BH	(60°-80°)	2633.0	11.7	B4/5000		G4/5000
BVH	(80°-90°)	109.8	0.5			G2/225
UL	(90°-100°)	9.0	0.0		U1/10	
UH	(100°-180°)	1.2	0.0		U1/10	

BUG Rating: B4-U1-G4
 Type IV Short





REPORT NUMBER: P522198

CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX120

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1
2.5°	1994.7	1989.1	1988.2	1999.3	1964.0	1981.7	1965.8	1978.9	1970.5	1977.0	1977.9
5°	2021.7	2011.4	2004.9	2018.0	1995.6	2004.0	1986.3	1991.9	1968.6	1981.7	1983.5
7.5°	2060.8	2044.0	2042.2	2045.9	2026.3	2032.8	2004.0	2010.5	1993.8	1986.3	1992.8
10°	2113.8	2098.0	2085.9	2094.3	2068.2	2071.9	2041.2	2042.2	2030.1	2016.1	2027.3
12.5°	2143.6	2145.5	2139.9	2146.4	2125.0	2112.9	2091.5	2084.0	2071.9	2055.2	2049.6
15°	2218.1	2214.4	2203.2	2213.4	2210.6	2199.5	2173.4	2156.6	2130.6	2121.3	2112.0
17.5°	2309.3	2297.2	2287.9	2300.9	2314.9	2291.6	2266.5	2243.2	2208.8	2190.2	2179.0
20°	2405.2	2396.8	2387.5	2408.0	2412.6	2394.9	2376.3	2341.9	2301.8	2277.6	2254.4
22.5°	2512.2	2495.5	2498.2	2525.2	2516.9	2508.5	2484.3	2456.4	2408.0	2377.2	2310.2
25°	2623.0	2613.7	2626.7	2638.8	2632.3	2614.6	2602.5	2582.0	2528.0	2490.8	2393.1
27.5°	2760.7	2745.8	2762.6	2767.2	2761.7	2757.0	2740.2	2724.4	2665.8	2623.9	2502.0
30°	2922.7	2905.0	2932.0	2925.5	2919.9	2923.6	2913.4	2878.9	2826.8	2770.0	2648.1
32.5°	3115.4	3092.1	3122.8	3108.8	3095.8	3121.9	3097.7	3065.1	3003.7	2937.6	2818.4
35°	3338.7	3339.7	3355.5	3332.2	3327.6	3355.5	3339.7	3299.7	3242.9	3174.0	3004.6
37.5°	3609.6	3602.2	3642.2	3631.0	3614.3	3651.5	3656.1	3605.9	3503.5	3435.5	3235.4
40°	3939.1	3937.2	3950.3	3952.1	3947.5	3965.2	3973.5	3906.5	3840.4	3738.1	3053.0
42.5°	4290.9	4298.4	4321.7	4304.9	4327.2	4350.5	4353.3	4297.5	4202.5	3586.3	3242.9
45°	4713.5	4736.8	4752.6	4748.9	4759.1	4792.6	4795.4	4765.6	4672.6	3885.1	3587.3
47.5°	5198.5	5220.8	5225.5	5255.2	5245.9	5293.4	5286.9	5287.8	5188.2	4301.2	3962.4
50°	5756.0	5766.2	5804.4	5821.2	5797.9	5862.1	5845.4	5865.8	5743.0	4777.7	4365.4
52.5°	6348.0	6365.7	6381.5	6444.8	6415.0	6470.9	6448.5	6496.0	6353.6	5262.7	4813.1
55°	7021.0	7023.7	7050.7	7115.0	7075.9	7142.9	7110.3	7128.0	7014.4	5798.8	5279.4
57.5°	7733.9	7724.6	7734.9	7786.1	7750.7	7801.0	7787.9	7804.7	7698.6	6362.9	5620.1
60°	8439.5	8425.5	8440.4	8474.9	8426.5	8513.0	8466.5	8482.3	8367.8	6939.0	6106.0
62.5°	9148.7	9138.5	9121.8	9156.2	9085.5	9130.1	9149.7	9123.6	9023.1	7460.3	6528.6
65°	9910.1	9899.9	9838.5	9859.9	9733.3	9711.9	9719.3	9727.7	9660.7	7976.9	6992.1
67.5°	10835.3	10820.4	10705.0	10559.8	10377.4	10337.4	10341.1	10363.4	10372.7	8641.5	7534.8
68°	10939.6	10912.6	10784.1	10615.7	10424.9	10378.3	10373.7	10378.3	10383.0	8647.0	7529.2
70°	10673.4	10663.1	10565.4	10361.6	10166.1	10054.4	9957.6	9953.9	9909.2	8204.9	7113.1
72.5°	9471.7	9458.7	9342.3	9198.1	9077.1	8902.1	8776.4	8783.9	8710.3	7251.8	6226.1
75°	7665.1	7664.1	7524.5	7403.5	7405.4	7392.3	7350.5	7424.0	7347.7	6150.7	5310.2
77.5°	5341.8	5360.4	5351.1	5280.4	5380.0	5517.7	5667.6	5809.1	5765.3	4858.7	4234.2
80°	2790.5	2842.6	3026.9	3035.3	3105.1	3239.2	3341.5	3436.5	3443.0	2757.0	2446.1
82.5°	741.8	757.7	820.0	802.3	796.8	823.7	846.1	848.9	850.7	718.6	671.1
85°	230.8	237.4	229.9	219.7	203.8	186.2	181.5	148.0	117.3	96.8	84.7
87.5°	163.8	175.0	158.2	148.9	132.2	125.7	112.6	88.4	68.9	48.4	32.6
90°	84.7	86.6	77.3	66.1	61.4	57.7	49.3	35.4	17.7	9.3	8.4
92.5°	42.8	43.7	38.2	32.6	27.9	24.2	18.6	10.2	5.6	2.8	0.9
95°	16.8	17.7	15.8	14.0	11.2	8.4	7.4	5.6	3.7	1.9	0.9
97.5°	5.6	5.6	5.6	4.7	4.7	4.7	4.7	3.7	2.8	1.9	0.9
100°	0.0	0.0	0.0	0.9	1.9	2.8	2.8	2.8	1.9	0.9	0.9
102.5°	0.0	0.0	0.0	0.0	0.0	0.9	1.9	1.9	1.9	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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 CATALOG NUMBER: CTN-CA8-230-722-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	0.9	0.9	0.9
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
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	0.9
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	0.9	0.9	0.9
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.9	0.9	0.9	0.9
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	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



REPORT NUMBER: P522198

CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX120

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1	1962.1
2.5°	1973.3	1967.7	1970.5	1947.2	1952.8	1937.9	1969.6	1961.2	1957.5	1970.5
5°	1977.9	1957.5	1974.2	1958.4	1961.2	1939.8	1965.8	1955.6	1954.7	1962.1
7.5°	1979.8	1969.6	1985.4	1959.3	1967.7	1959.3	1978.9	1968.6	1977.9	1984.4
10°	2005.9	2000.3	1998.4	1989.1	1995.6	1977.0	2001.2	2001.2	2005.9	2023.5
12.5°	2044.0	2036.6	2031.9	2015.2	2021.7	2016.1	2035.6	2039.4	2047.7	2055.2
15°	2096.1	2083.1	2078.5	2063.6	2068.2	2067.3	2081.2	2082.2	2100.8	2099.9
17.5°	2163.2	2144.5	2150.1	2139.0	2139.9	2132.4	2125.0	2125.0	2141.7	2145.5
20°	2243.2	2137.1	1997.5	1919.3	1905.3	1915.6	1955.6	2021.7	1938.8	1962.1
22.5°	2098.9	2003.1	1996.5	1978.9	1967.7	1718.2	1654.0	1633.5	1740.6	1924.9
25°	2117.5	2076.6	2064.5	2042.2	1712.7	1709.9	1691.2	1660.5	1357.1	1350.6
27.5°	2216.2	2176.2	2156.6	1789.0	1781.5	1780.6	1752.7	1444.6	1374.8	1384.1
30°	2331.6	2285.1	1935.1	1879.3	1872.8	1857.9	1697.8	1426.9	1426.0	1426.9
32.5°	2464.7	2310.2	1991.0	1988.2	1991.9	1946.3	1504.2	1498.6	1497.6	1507.0
35°	2647.2	2143.6	2130.6	2144.5	2125.0	1682.9	1594.4	1591.7	1592.6	1587.9
37.5°	2526.2	2311.2	2308.4	2308.4	2262.8	1722.0	1704.3	1717.3	1715.4	1708.9
40°	2577.4	2514.1	2497.3	2491.7	1912.8	1857.9	1847.6	1864.4	1867.2	1871.8
42.5°	2825.9	2768.2	2759.8	2693.7	2081.2	2063.6	2031.9	2049.6	2047.7	2053.3
45°	3131.2	3092.1	3055.8	2335.4	2308.4	2286.0	2253.4	2273.9	2279.5	2275.8
47.5°	3486.7	3443.9	3181.4	2568.1	2567.1	2549.4	2513.1	2529.9	2527.1	2527.1
50°	3844.2	3797.6	2890.1	2864.0	2854.7	2826.8	2797.0	2799.8	2800.7	2810.1
52.5°	4243.5	3391.8	3199.1	3147.0	3154.5	3135.8	3107.0	2352.1	3093.0	3101.4
55°	3966.1	3550.0	3538.9	3470.0	3487.7	3463.5	3444.9	2320.5	3076.3	3399.2
57.5°	3921.4	3891.6	3882.3	3811.6	3833.9	3604.0	3776.2	2539.2	2127.8	1554.4
60°	4263.0	4231.4	4225.8	4163.4	4161.6	2864.0	3432.8	1741.5	1360.8	1370.1
62.5°	4594.4	4543.2	4557.2	4483.6	3161.0	1745.2	1538.6	39.1	62.4	66.1
65°	4963.9	4878.3	4892.2	4824.3	3260.6	1840.2	1663.3	20.5	17.7	16.8
67.5°	5319.5	5169.6	5097.9	5026.3	3386.2	1937.9	1733.1	5.6	0.0	0.0
68°	5301.8	5143.6	5070.0	5002.1	3373.2	1935.1	1729.4	5.6	0.0	0.0
70°	5003.0	4860.6	4790.8	4738.7	3220.5	1869.0	1659.6	5.6	0.0	0.0
72.5°	4373.8	4294.7	4250.0	4204.4	2861.3	1671.7	1488.3	5.6	0.0	0.0
75°	3716.6	3694.3	3666.4	3565.9	2384.7	1368.3	1223.1	5.6	0.0	0.0
77.5°	2945.0	2944.1	2876.1	2757.9	1795.5	1004.3	901.9	4.7	0.0	0.0
80°	1592.6	1735.9	1683.8	1623.3	1018.3	546.4	520.3	3.7	0.0	0.0
82.5°	447.7	423.5	406.8	380.7	214.1	119.1	116.3	3.7	0.0	0.0
85°	62.4	68.9	76.3	86.6	49.3	31.6	27.9	1.9	0.0	0.0
87.5°	35.4	40.0	49.3	51.2	18.6	14.9	4.7	0.0	0.0	0.0
90°	7.4	8.4	9.3	9.3	3.7	3.7	0.0	0.0	0.0	0.0
92.5°	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P522198
 CATALOG NUMBER: CTN-CA8-230-722-U-T5R-HSS-HM-EX120

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.9	0.9	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)