

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: P522137

Luminaire Tested: **CTN-CA10-310-740-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522137
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-740-U-T5R-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (10) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 41026.9 lumens
Efficiency: N/A
Efficacy: 131.3 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B5 - U2 - G5

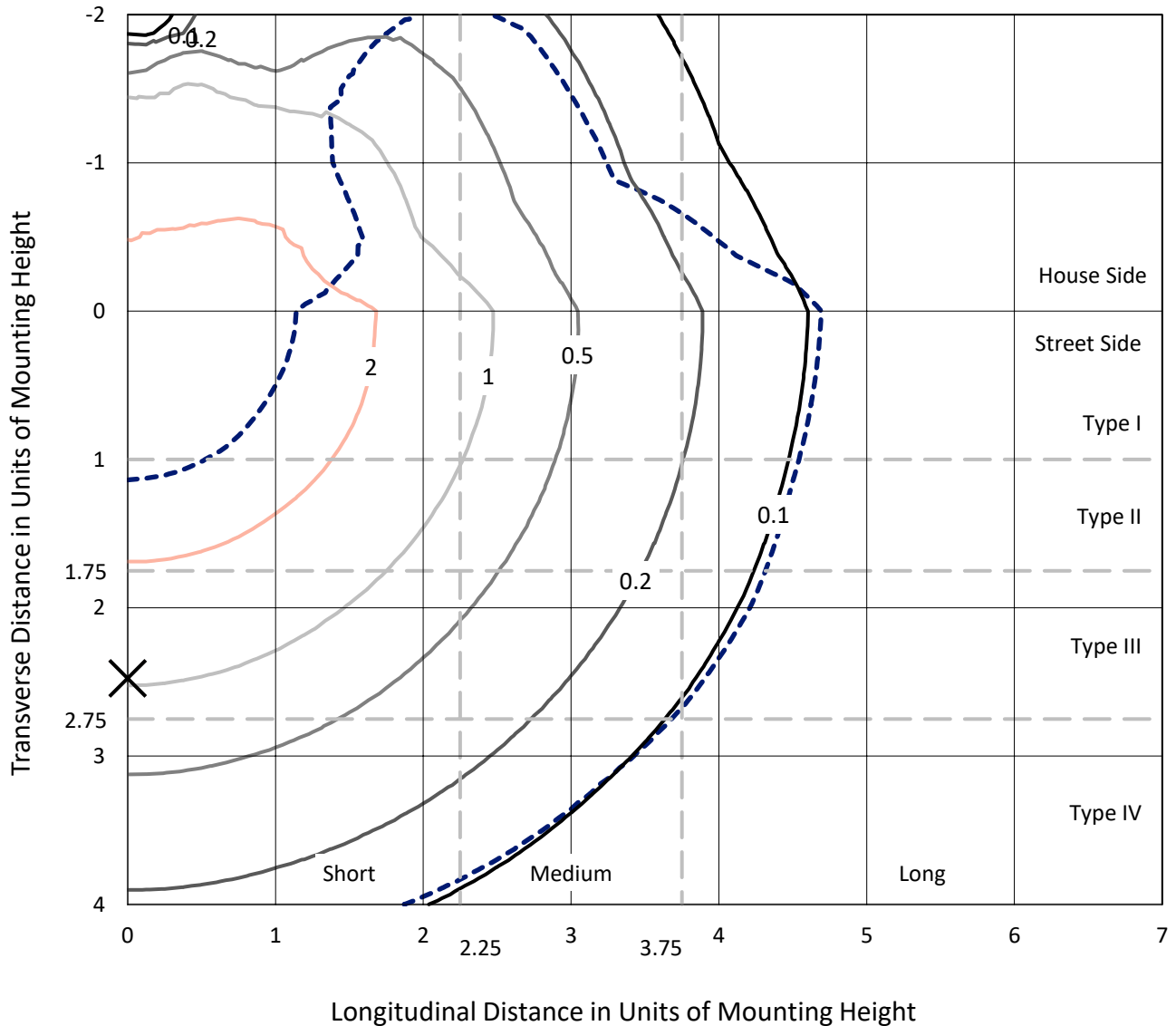
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P522137
 CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

Iso-Footcandle Lines of Horizontal Illumination

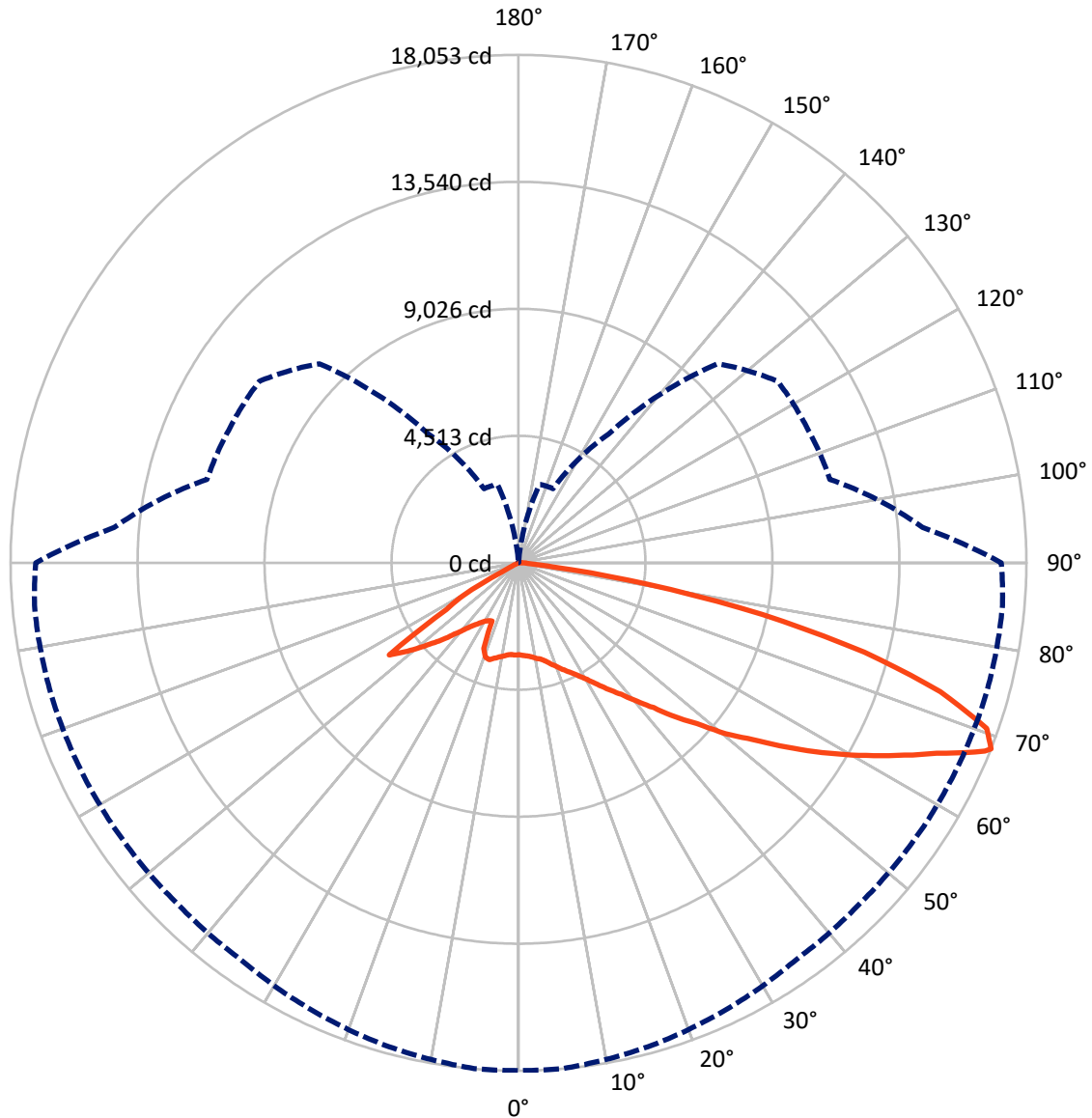
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P522137
CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

Luminous Intensity Polar Plot



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

REPORT NUMBER: P522137
 CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

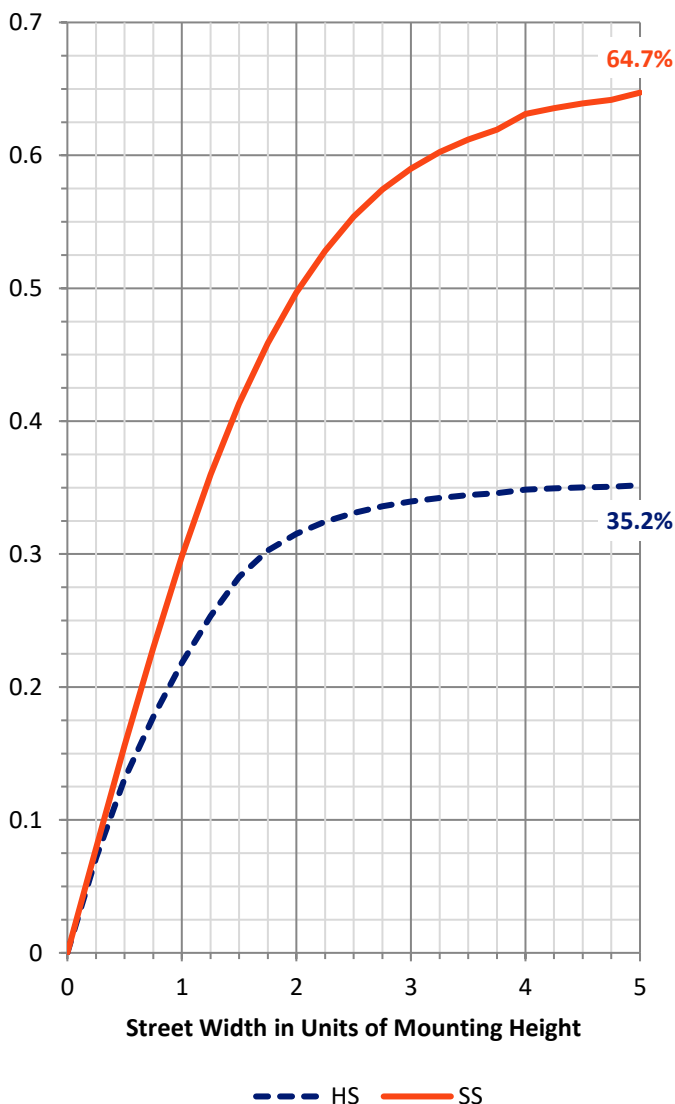
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	14438.7	2.4	14441.1
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	26575.0	10.8	26585.8
	% Fixture	64.8	0.0	64.8
Total	Lumens	41013.7	13.2	41026.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.9	0.8
10°-20°	1012.0	2.5
20°-30°	1806.6	4.4
30°-40°	2939.0	7.2
40°-50°	5019.0	12.2
50°-60°	8374.4	20.4
60°-70°	11650.5	28.4
70°-80°	9030.9	22.0
80°-90°	865.4	2.1
90°-100°	10.5	0.0
100°-110°	0.9	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	41013.7	100.0
0°-180°	41026.9	100.0

Coefficient of Utilization



REPORT NUMBER: P522137

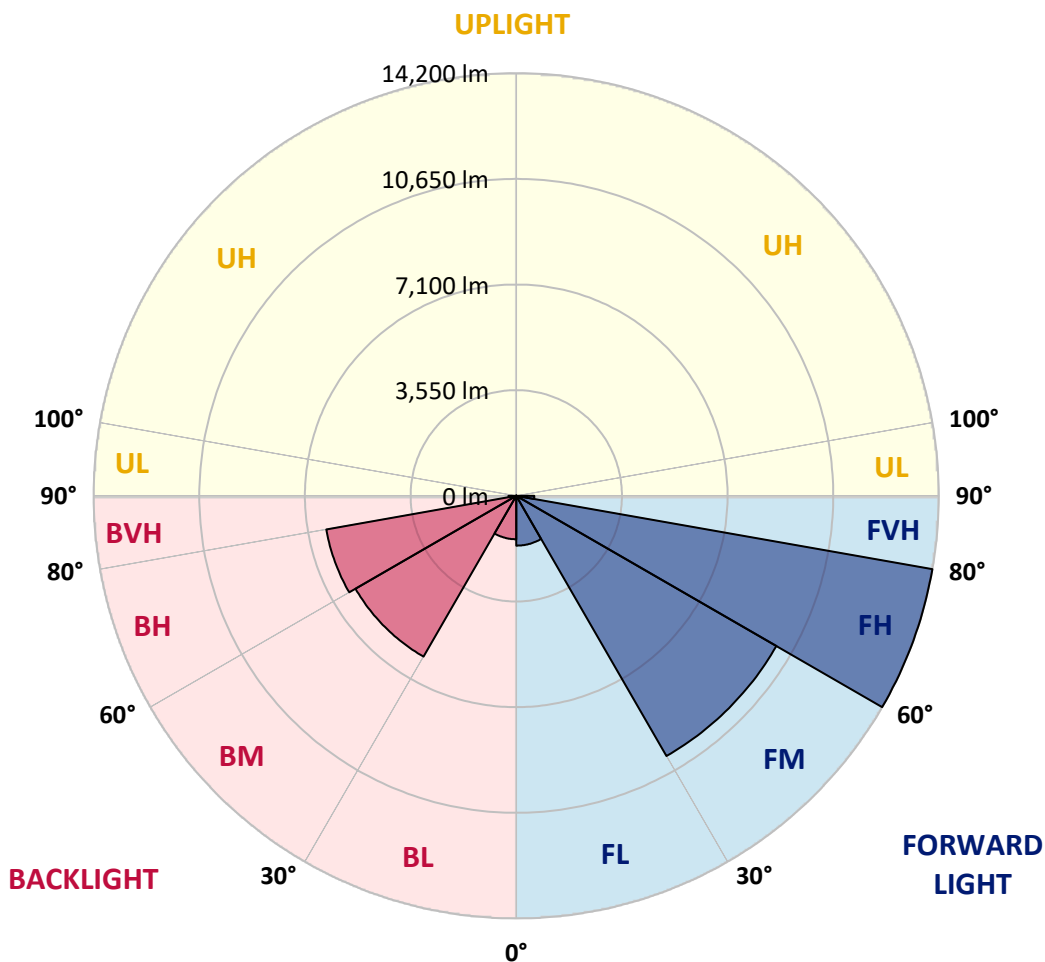
CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1674.5	4.1			
FM (30°-60°)	10095.5	24.6			
FH (60°-80°)	14199.6	34.6			G5
FVH (80°-90°)	605.4	1.5			G4/750
BL (0°-30°)	1460.0	3.6	B3/2500		
BM (30°-60°)	6236.9	15.2	B4/8500		
BH (60°-80°)	6481.8	15.8	B5		G5
BVH (80°-90°)	260.0	0.6			G3/500
UL (90°-100°)	10.5	0.0		U2/50	
UH (100°-180°)	2.8	0.0		U1/10	

BUG Rating: B5-U2-G5

Type IV Short





REPORT NUMBER: P522137

CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1
2.5°	3302.1	3297.5	3294.4	3314.5	3257.3	3280.5	3265.1	3285.1	3280.5	3289.8	3291.3
5°	3325.3	3317.5	3306.7	3328.4	3294.4	3309.8	3292.8	3302.1	3272.8	3297.5	3300.6
7.5°	3377.8	3356.1	3354.6	3360.8	3337.6	3348.4	3319.1	3329.9	3314.5	3305.2	3314.5
10°	3456.5	3438.0	3417.9	3430.2	3391.6	3405.5	3374.7	3383.9	3376.2	3356.1	3374.7
12.5°	3510.5	3516.7	3502.8	3512.1	3478.1	3465.7	3454.9	3453.4	3448.8	3419.4	3414.8
15°	3630.9	3634.0	3609.3	3615.5	3607.8	3601.6	3586.2	3573.8	3549.1	3530.6	3518.2
17.5°	3788.4	3771.4	3748.3	3754.4	3776.0	3748.3	3739.0	3715.8	3680.3	3649.5	3643.3
20°	3953.6	3942.8	3921.2	3933.5	3932.0	3913.4	3918.1	3879.5	3828.5	3802.3	3782.2
22.5°	4137.3	4121.8	4106.4	4129.6	4111.0	4098.7	4094.1	4067.8	4004.5	3975.2	3970.6
25°	4321.0	4313.3	4324.1	4316.4	4290.1	4280.9	4287.0	4277.8	4203.7	4168.2	4146.5
27.5°	4551.0	4532.5	4549.5	4540.2	4512.4	4514.0	4515.5	4517.0	4433.7	4387.4	4356.5
30°	4813.5	4807.3	4828.9	4799.6	4773.3	4790.3	4804.2	4773.3	4700.8	4632.8	4622.0
32.5°	5154.6	5116.0	5140.7	5103.7	5063.5	5103.7	5128.4	5066.6	5008.0	4921.5	4937.0
35°	5532.8	5520.5	5520.5	5472.6	5451.0	5514.3	5539.0	5478.8	5387.7	5312.1	5293.6
37.5°	5934.2	5946.6	5985.2	5965.1	5945.0	5983.6	6039.2	5958.9	5841.6	5761.3	5739.7
40°	6466.8	6497.7	6523.9	6497.7	6474.5	6499.2	6562.5	6457.6	6375.7	6332.5	6286.2
42.5°	7039.6	7092.0	7075.1	7078.2	7098.2	7133.7	7197.0	7101.3	7007.1	7005.6	6937.7
45°	7814.5	7814.5	7779.0	7813.0	7809.9	7897.9	7925.7	7873.2	7794.5	7771.3	7712.6
47.5°	8538.6	8614.2	8600.3	8649.7	8611.1	8685.2	8779.4	8734.6	8643.5	8561.7	8549.4
50°	9548.2	9529.6	9511.1	9585.2	9579.0	9630.0	9716.4	9688.7	9562.1	9469.4	9452.5
52.5°	10435.8	10533.1	10509.9	10621.1	10559.3	10631.9	10735.3	10730.7	10576.3	10485.2	10459.0
55°	11556.6	11621.4	11616.8	11731.1	11646.1	11741.9	11828.3	11837.6	11669.3	11539.6	11579.8
57.5°	12723.7	12777.7	12746.8	12841.0	12757.7	12888.9	12941.4	12907.4	12808.6	12645.0	12705.2
60°	13892.3	13938.6	13974.1	13981.9	13934.0	14011.2	14060.6	14089.9	13934.0	13747.2	13819.8
62.5°	15079.5	15132.0	15101.1	15113.4	14980.7	15085.6	15147.4	15155.1	14976.0	14810.9	14861.8
65°	16329.9	16402.5	16291.3	16217.2	16053.6	16052.0	16133.9	16147.8	16021.2	15903.8	15883.8
67.5°	17878.3	17910.7	17673.0	17424.5	17148.1	17087.9	17145.0	17177.4	17250.0	17246.9	17155.8
68°	18052.8	18046.6	17805.8	17509.4	17213.0	17143.5	17171.3	17213.0	17260.8	17270.1	17160.5
70°	17656.0	17580.4	17443.0	17069.4	16776.1	16593.9	16496.6	16573.8	16444.2	16445.7	16240.4
72.5°	15683.1	15673.8	15420.6	15235.4	14974.5	14671.9	14533.0	14531.4	14543.8	14454.3	14242.8
75°	12703.6	12716.0	12421.1	12293.0	12212.7	12155.6	12184.9	12276.0	12285.3	12283.7	12209.6
77.5°	8859.7	8910.6	8831.9	8623.5	8847.3	9038.7	9407.7	9596.0	9535.8	9716.4	9830.7
80°	4643.6	4745.5	4748.6	4895.3	5075.9	5250.3	5568.4	5853.9	5644.0	5551.4	5455.7
82.5°	1221.1	1258.2	1313.7	1228.8	1255.1	1281.3	1528.3	1505.2	1389.4	1451.1	1543.8
85°	348.9	359.7	344.3	311.8	285.6	262.4	268.6	226.9	197.6	196.1	189.9
87.5°	245.5	264.0	233.1	200.7	180.6	168.3	162.1	137.4	111.2	97.3	77.2
90°	114.2	112.7	97.3	75.6	66.4	63.3	63.3	49.4	27.8	17.0	15.4
92.5°	47.9	49.4	40.1	32.4	27.8	21.6	17.0	10.8	6.2	3.1	1.5
95°	17.0	18.5	15.4	12.4	10.8	9.3	7.7	6.2	3.1	1.5	1.5
97.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.1	3.1	1.5	1.5
100°	0.0	0.0	0.0	1.5	3.1	3.1	3.1	3.1	1.5	1.5	1.5
102.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
105°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5



REPORT NUMBER: P522137
 CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

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	1.5	1.5	1.5	1.5
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
165°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
167.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
170°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
172.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
175°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
177.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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: P522137

CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1	3265.1
2.5°	3288.2	3280.5	3277.4	3238.8	3249.6	3226.5	3280.5	3265.1	3262.0	3283.6
5°	3295.9	3260.4	3282.0	3257.3	3263.5	3229.6	3272.8	3254.3	3255.8	3266.6
7.5°	3300.6	3280.5	3302.1	3258.9	3275.9	3263.5	3294.4	3275.9	3294.4	3303.7
10°	3346.9	3337.6	3322.2	3309.8	3322.2	3292.8	3331.4	3328.4	3339.2	3366.9
12.5°	3410.2	3399.4	3383.9	3362.3	3371.6	3360.8	3390.1	3393.2	3413.3	3427.2
15°	3504.3	3490.4	3482.7	3461.1	3464.2	3456.5	3473.5	3476.6	3516.7	3512.1
17.5°	3637.1	3621.7	3627.8	3607.8	3600.1	3581.5	3550.7	3539.8	3587.7	3601.6
20°	3782.2	3765.2	3773.0	3756.0	3612.4	3320.6	3516.7	3651.0	3549.1	3541.4
22.5°	3947.4	3928.9	3935.1	3908.8	3731.3	3184.8	2771.1	2737.1	3126.1	3283.6
25°	4129.6	4104.9	4101.8	4067.8	3484.3	2883.7	2837.4	2777.2	2493.2	2267.8
27.5°	4355.0	4317.9	4299.4	3786.9	3459.6	2996.4	2927.0	2712.4	2300.2	2314.1
30°	4598.9	4544.8	4197.5	3859.4	3640.2	3129.2	3036.6	2377.4	2380.5	2374.3
32.5°	4876.7	4756.3	4112.6	4081.7	3856.3	3271.2	2521.0	2493.2	2496.3	2505.5
35°	5241.1	4415.2	4398.2	4399.7	4120.3	3164.7	2670.7	2644.5	2647.6	2653.7
37.5°	5318.3	4759.4	4762.5	4727.0	4401.3	2891.5	2852.9	2851.3	2845.2	2839.0
40°	5380.0	5193.2	5148.4	5091.3	4080.2	3113.8	3101.4	3092.2	3096.8	3109.1
42.5°	5863.2	5722.7	5679.5	5611.6	4185.1	3450.3	3410.2	3399.4	3411.7	3405.5
45°	6505.4	6388.1	6303.2	5188.6	4623.6	3816.2	3783.8	3769.9	3774.5	3813.1
47.5°	7184.7	7115.2	6855.9	5605.4	5134.6	4248.4	4216.0	4194.4	4202.1	4192.9
50°	7924.1	7860.8	6346.4	6233.7	5699.6	4714.7	4666.8	4659.1	4662.2	4660.6
52.5°	8726.9	7403.9	7033.4	6916.1	6295.5	5202.5	5185.5	5143.8	5153.1	5143.8
55°	9668.6	7799.1	7789.8	7652.4	6965.5	5769.0	5749.0	5690.3	5321.4	5644.0
57.5°	10562.4	8554.0	8554.0	8421.2	7650.9	6332.5	6300.1	6256.9	3782.2	3050.5
60°	11541.2	9310.4	9288.8	9179.2	8311.6	6869.7	5583.8	5571.4	2284.8	2292.5
62.5°	12387.2	9985.1	10023.7	9921.8	8947.6	5143.8	2587.3	2534.9	225.4	347.3
65°	13335.0	10730.7	10777.0	10672.0	9636.2	5455.7	2808.1	2781.9	50.9	46.3
67.5°	14409.5	11474.8	11369.8	11254.0	10039.1	5617.8	2917.7	2894.6	13.9	9.3
68°	14418.7	11459.4	11323.5	11244.8	10000.5	5586.9	2908.4	2886.8	13.9	9.3
70°	13677.7	10882.0	10746.1	10766.2	9521.9	5343.0	2788.0	2747.9	13.9	9.3
72.5°	11999.7	9684.0	9531.2	9423.1	8444.4	4750.2	2499.4	2423.7	13.9	9.3
75°	10267.6	8206.6	7953.5	7715.7	6794.1	3887.2	2050.1	1965.2	13.9	9.3
77.5°	8092.4	6255.3	5895.6	5739.7	5105.2	2871.4	1523.7	1431.1	13.9	7.7
80°	4472.3	3589.2	3283.6	3187.9	2919.3	1687.3	873.8	818.2	12.4	7.7
82.5°	1156.3	867.6	756.4	730.2	685.4	399.8	213.0	202.2	10.8	6.2
85°	165.2	122.0	134.3	159.0	152.8	103.4	74.1	63.3	9.3	4.6
87.5°	86.5	72.6	84.9	95.7	97.3	60.2	30.9	17.0	4.6	0.0
90°	13.9	13.9	15.4	17.0	17.0	7.7	6.2	0.0	0.0	0.0
92.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.5	3.1	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P522137
 CATALOG NUMBER: CTN-CA10-310-740-U-T5R-HSS-HM-EX90

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.5	1.5	1.5	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)