

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: P522133

Luminaire Tested: **CTN-CA10-310-730-U-T5R-HSS-HM-EX180**

Issue Date: 5/10/2021

Test Information

Test Method: LM-79-08
Report Number: P522133
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-CA10-310-730-U-T5R-HSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
Light Source: (10) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31465 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U2 - G4

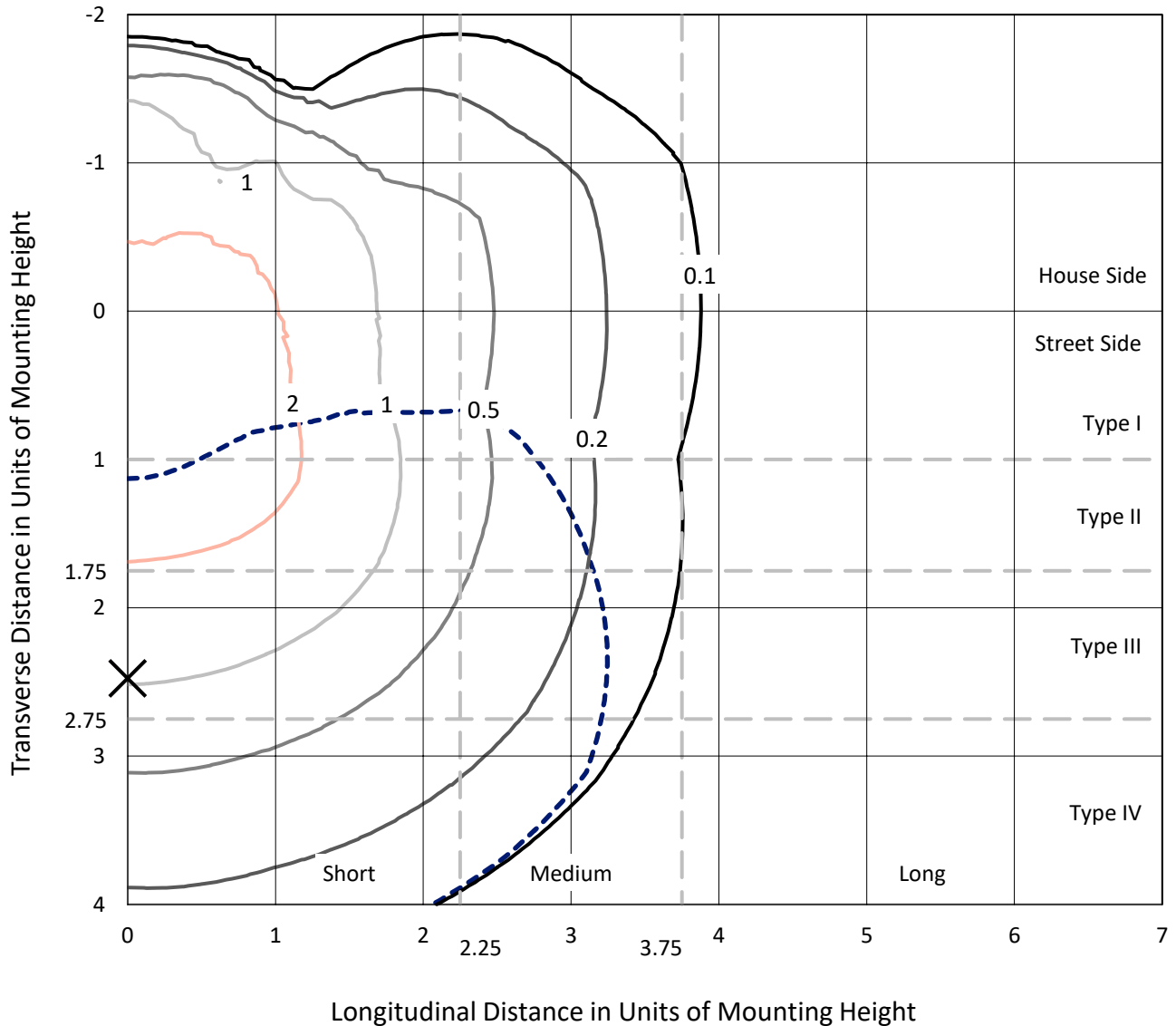
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

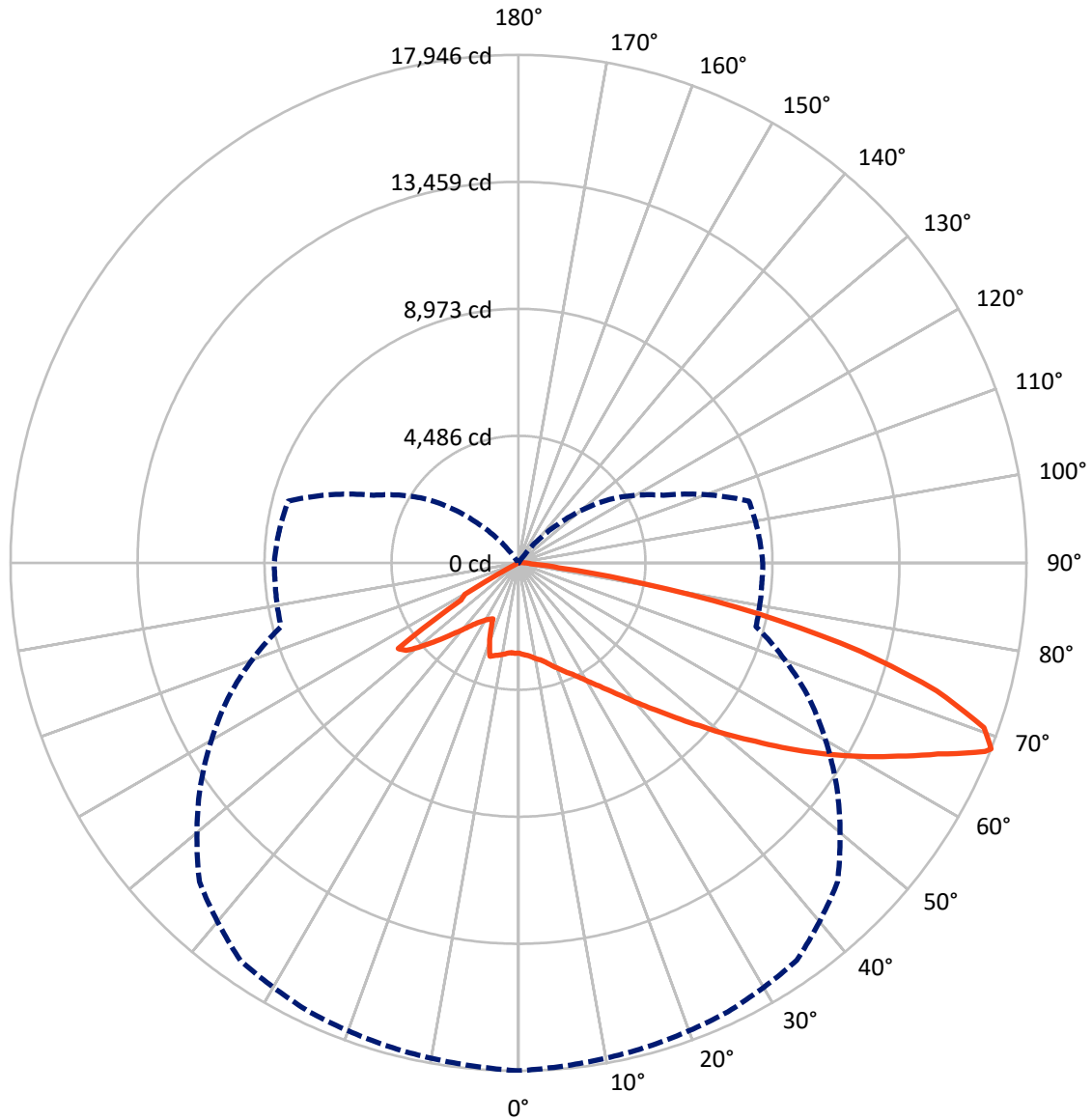
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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

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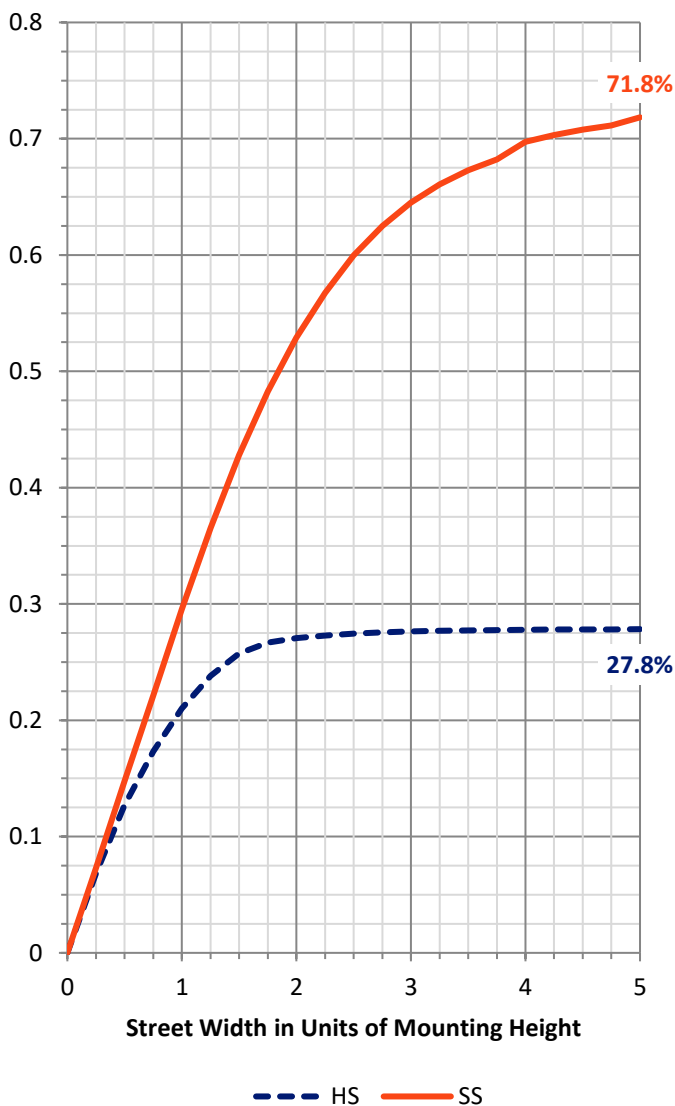
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8788.2	0.2	8788.4
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	22658.6	18.0	22676.6
	% Fixture	72.0	0.1	72.1
Total	Lumens	31446.8	18.2	31465.0
	% Fixture	99.9	0.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.4	1.0
10°-20°	980.4	3.1
20°-30°	1659.8	5.3
30°-40°	2629.4	8.4
40°-50°	4298.9	13.7
50°-60°	6584.9	20.9
60°-70°	8096.6	25.7
70°-80°	6256.2	19.9
80°-90°	631.2	2.0
90°-100°	17.9	0.1
100°-110°	0.3	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°	31446.8	99.9
0°-180°	31465.0	100.0

Coefficient of Utilization

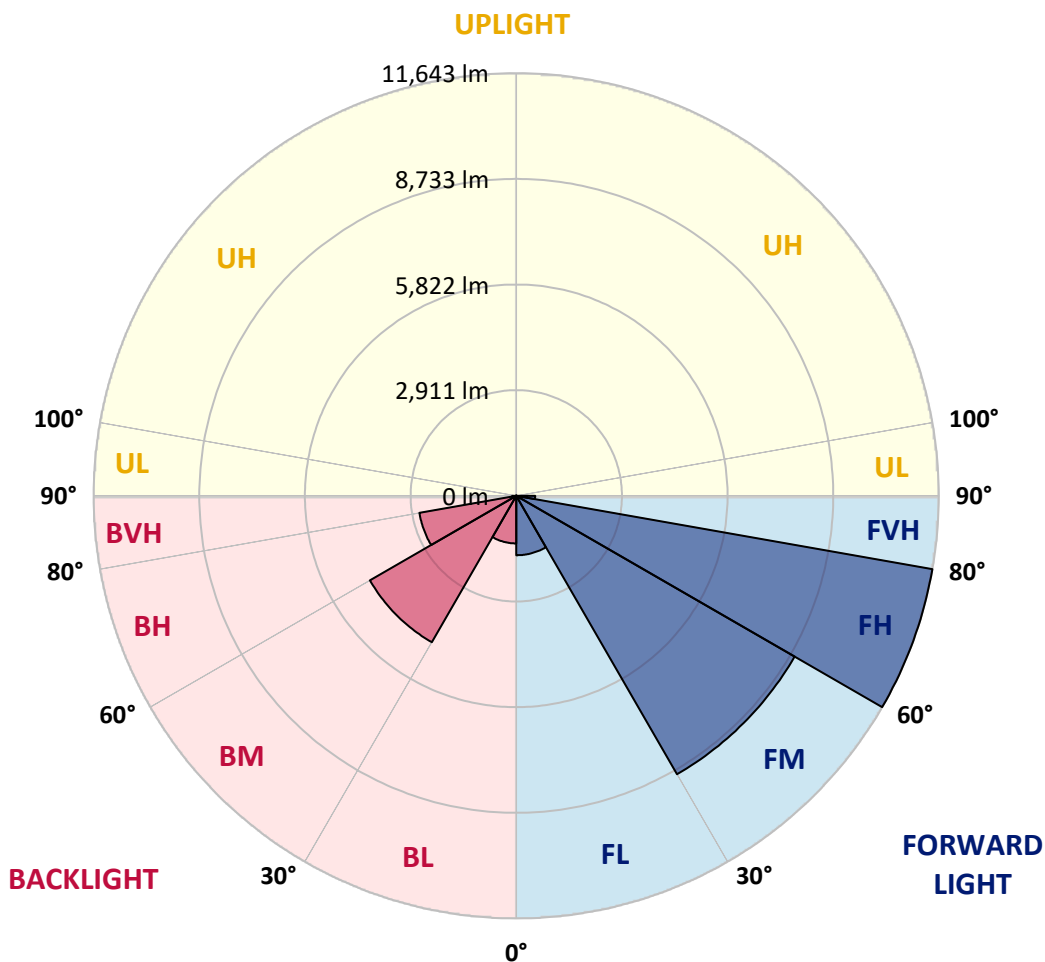


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1637.8	5.2			
FM (30°-60°)	8856.9	28.1			
FH (60°-80°)	11643.4	37.0			G4/12000
FVH (80°-90°)	520.6	1.7			G4/750
BL (0°-30°)	1311.7	4.2	B3/2500		
BM (30°-60°)	4656.4	14.8	B3/5000		
BH (60°-80°)	2709.4	8.6	B4/5000		G4/5000
BVH (80°-90°)	110.7	0.4			G2/225
UL (90°-100°)	17.9	0.1		U2/50	
UH (100°-180°)	0.3	0.0		U1/10	

BUG Rating: B4-U2-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7
2.5°	3245.3	3239.3	3233.2	3246.9	3193.8	3216.5	3198.4	3215.0	3202.9	3216.5	3212.0
5°	3287.8	3281.7	3263.5	3278.7	3243.8	3252.9	3230.2	3236.2	3195.3	3219.6	3218.1
7.5°	3357.5	3340.8	3328.7	3328.7	3298.4	3296.9	3260.5	3262.0	3230.2	3227.2	3233.2
10°	3451.5	3439.4	3406.0	3409.0	3366.6	3360.5	3315.1	3313.6	3287.8	3272.6	3286.3
12.5°	3521.2	3533.3	3503.0	3503.0	3460.6	3430.3	3398.4	3377.2	3357.5	3334.8	3324.2
15°	3648.5	3660.7	3619.7	3618.2	3601.6	3565.2	3530.3	3484.8	3450.0	3439.4	3422.7
17.5°	3813.8	3806.2	3771.3	3772.8	3775.9	3716.8	3681.9	3622.8	3572.8	3536.4	3527.3
20°	3982.0	3982.0	3944.1	3956.3	3941.1	3886.5	3863.8	3781.9	3712.2	3672.8	3641.0
22.5°	4170.0	4162.4	4136.6	4162.4	4132.1	4077.5	4039.6	3957.8	3868.3	3645.5	3554.6
25°	4348.8	4344.3	4354.9	4362.5	4324.6	4256.4	4230.6	4144.2	3895.6	3603.1	3419.7
27.5°	4574.7	4559.5	4583.8	4599.0	4561.1	4501.9	4447.4	4350.4	3824.4	3594.0	3574.3
30°	4864.2	4830.9	4865.7	4873.3	4833.9	4797.5	4715.7	4230.6	3848.6	3781.9	3775.9
32.5°	5173.4	5134.0	5179.5	5185.6	5134.0	5103.7	4897.6	4168.5	4086.6	4009.3	4016.9
35°	5540.3	5540.3	5563.0	5566.0	5528.1	5476.6	4691.4	4471.6	4398.9	4327.6	4326.1
37.5°	5987.4	5973.8	6034.4	6070.8	6029.9	5882.8	4991.5	4888.5	4776.3	4685.4	4497.4
40°	6527.1	6551.3	6568.0	6604.4	6565.0	6234.5	5429.6	5312.9	5225.0	4920.3	4445.9
42.5°	7109.1	7115.2	7151.6	7197.0	7197.0	6848.4	5942.0	5841.9	5728.2	4811.2	4597.4
45°	7804.9	7791.2	7861.0	7933.7	7914.0	7553.3	6537.7	6463.4	5931.3	5128.0	5129.5
47.5°	8594.6	8577.9	8678.0	8773.5	8675.0	8335.4	7192.5	7134.9	5725.2	5664.6	5652.4
50°	9507.1	9466.2	9581.4	9708.7	9628.4	9208.5	7988.3	6881.8	6299.7	6251.2	6243.6
52.5°	10481.8	10450.0	10519.7	10736.5	10630.3	10122.6	8741.7	7100.0	6965.1	6910.6	6896.9
55°	11582.3	11520.1	11670.2	11835.4	11712.6	11133.6	9484.4	7824.6	7685.1	7591.2	7454.7
57.5°	12738.8	12649.4	12726.7	12934.4	12816.1	12168.9	10442.4	8570.4	8405.1	6956.0	6402.8
60°	13890.8	13849.9	13880.2	14063.6	13918.1	13175.4	11339.7	9317.7	7113.7	6880.2	6907.5
62.5°	15048.9	14959.5	14986.8	15174.7	14988.3	14133.4	12190.1	9996.7	7486.6	7404.7	7433.5
65°	16290.4	16184.3	16208.5	16263.1	16032.7	14992.8	12942.0	10637.9	8047.4	7961.0	7992.8
67.5°	17786.5	17689.5	17557.6	17395.4	17077.1	15905.4	13689.2	11312.5	8678.0	8629.5	8640.1
68°	17945.6	17851.6	17692.5	17500.0	17142.2	15943.2	13721.1	11332.2	8687.1	8626.5	8629.5
70°	17450.0	17506.0	17325.7	17002.8	16704.2	15388.5	13201.2	10895.6	8300.6	8211.1	8188.4
72.5°	15453.6	15576.4	15327.8	15273.3	14906.4	13708.9	11552.0	9454.1	7219.8	7248.6	7166.7
75°	12476.6	12657.0	12355.3	12372.0	12162.8	11435.2	9681.5	7871.6	5928.3	6060.2	6084.4
77.5°	8676.5	8935.7	8803.8	8935.7	8832.6	8570.4	7492.6	6061.7	4523.2	4674.7	4733.9
80°	4524.7	4832.4	5006.7	5061.3	5094.6	5084.0	4562.6	3637.9	2614.8	2670.9	2667.8
82.5°	1430.9	1356.6	1400.6	1388.5	1350.6	1365.7	1230.8	962.5	667.0	735.2	703.3
85°	432.0	435.0	422.9	419.9	388.0	341.1	278.9	160.7	78.8	92.5	86.4
87.5°	318.3	321.4	297.1	281.9	263.8	228.9	177.3	100.0	37.9	36.4	28.8
90°	175.8	169.8	157.6	145.5	137.9	118.2	89.4	37.9	13.6	10.6	9.1
92.5°	95.5	90.9	84.9	80.3	69.7	56.1	36.4	12.1	6.1	1.5	0.0
95°	44.0	40.9	39.4	34.9	30.3	21.2	12.1	7.6	4.5	1.5	0.0
97.5°	19.7	18.2	16.7	13.6	10.6	6.1	6.1	4.5	3.0	1.5	0.0
100°	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.5	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0



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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



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7	3187.7
2.5°	3207.4	3198.4	3193.8	3165.0	3174.1	3148.3	3198.4	3186.2	3178.6	3199.9
5°	3210.5	3178.6	3198.4	3181.7	3187.7	3151.4	3190.8	3174.1	3172.6	3181.7
7.5°	3218.1	3196.8	3216.5	3183.2	3198.4	3183.2	3212.0	3195.3	3209.0	3218.1
10°	3259.0	3246.9	3237.8	3230.2	3240.8	3210.5	3246.9	3248.4	3252.9	3280.2
12.5°	3316.6	3304.5	3289.3	3269.6	3280.2	3268.1	3295.4	3302.9	3319.6	3333.3
15°	3396.9	3374.2	3368.1	3349.9	3360.5	3354.5	3360.5	3356.0	3387.8	3383.3
17.5°	3507.6	3481.8	3395.4	3307.5	3251.4	3268.1	3337.8	3428.8	3451.5	3454.5
20°	3548.5	3366.6	3357.5	3257.5	3212.0	3209.0	3065.0	2849.7	2914.9	3068.0
22.5°	3500.0	3251.4	3225.6	3205.9	3011.9	2693.6	2663.3	2631.4	2623.9	2646.6
25°	3390.9	3362.1	3339.3	3081.6	2775.4	2777.0	2733.0	2523.8	2197.9	2170.6
27.5°	3557.6	3518.2	3298.4	2901.3	2895.2	2892.2	2827.0	2290.4	2220.7	2237.3
30°	3747.1	3681.9	3107.4	3055.9	3054.3	3027.1	2534.4	2310.1	2310.1	2313.1
32.5°	3965.3	3560.6	3216.5	3240.8	3239.3	3110.4	2448.0	2432.9	2426.8	2442.0
35°	4132.1	3463.6	3451.5	3495.4	3465.1	2639.0	2601.1	2587.5	2581.4	2573.8
37.5°	4080.5	3742.5	3742.5	3769.8	3525.8	2810.3	2792.1	2792.1	2780.0	2773.9
40°	4159.4	4089.6	4054.8	4065.4	2561.7	3018.0	3031.6	3028.6	3027.1	3037.7
42.5°	4574.7	4512.6	4480.7	4104.8	2867.9	2999.8	3333.3	3331.7	3336.3	3331.7
45°	5103.7	5046.1	4962.7	3841.1	3256.0	2629.9	3674.3	3691.0	3692.5	3691.0
47.5°	5658.5	5622.1	4768.7	4251.8	3677.3	2822.4	3512.1	4101.8	4094.2	4103.3
50°	6245.1	6081.4	4744.5	4738.4	4126.0	3140.7	3142.3	4461.0	4538.3	4562.6
52.5°	6898.4	5513.0	5258.3	4797.5	4580.8	3468.2	3434.8	3953.2	5008.2	5032.5
55°	6407.3	5823.7	5819.2	4270.0	4765.7	3783.5	3788.0	3751.6	4592.9	5220.4
57.5°	6375.5	6389.1	6378.5	4764.2	3477.3	3547.0	4127.5	4095.7	2974.0	2410.1
60°	6925.7	6945.4	6196.6	5144.6	3759.2	2181.2	2542.0	2160.0	2188.8	2211.6
62.5°	7451.7	7457.8	5040.1	3372.7	1862.9	87.9	42.4	34.9	33.3	33.3
65°	8033.8	8033.8	5402.3	3678.9	1799.3	33.3	6.1	4.5	16.7	16.7
67.5°	8596.1	8471.8	5667.6	3906.2	1831.1	4.5	0.0	0.0	0.0	0.0
68°	8564.3	8427.9	5643.3	3900.2	1826.5	3.0	0.0	0.0	0.0	0.0
70°	8088.3	7956.5	5353.8	3722.8	1758.3	3.0	0.0	0.0	0.0	0.0
72.5°	7139.4	7018.2	4741.4	3281.7	1585.5	1.5	0.0	0.0	0.0	0.0
75°	6043.5	6026.8	4095.7	2769.4	1359.7	1.5	0.0	0.0	0.0	0.0
77.5°	4862.7	4786.9	3201.4	2170.6	1095.9	0.0	0.0	0.0	0.0	0.0
80°	2708.7	2820.9	1873.5	1276.3	689.7	0.0	0.0	0.0	0.0	0.0
82.5°	732.1	685.1	409.3	277.4	131.9	0.0	0.0	0.0	0.0	0.0
85°	94.0	103.1	47.0	37.9	9.1	0.0	0.0	0.0	0.0	0.0
87.5°	48.5	57.6	15.2	12.1	3.0	0.0	0.0	0.0	0.0	0.0
90°	9.1	10.6	4.5	1.5	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



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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)