

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: STREETWORKS

Report Number: P256701

Luminaire Tested: **CST-8-6-D-U-T5R-HSS-HM-EX90**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: CST-8-6-D-U-T5R-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 4000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED 90
DEGREE SHIELD - BLACK
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 53411 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B5 - U2 - G5

Input Watts (W): 477
Input Voltage (V): NR
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: 28.75 FT

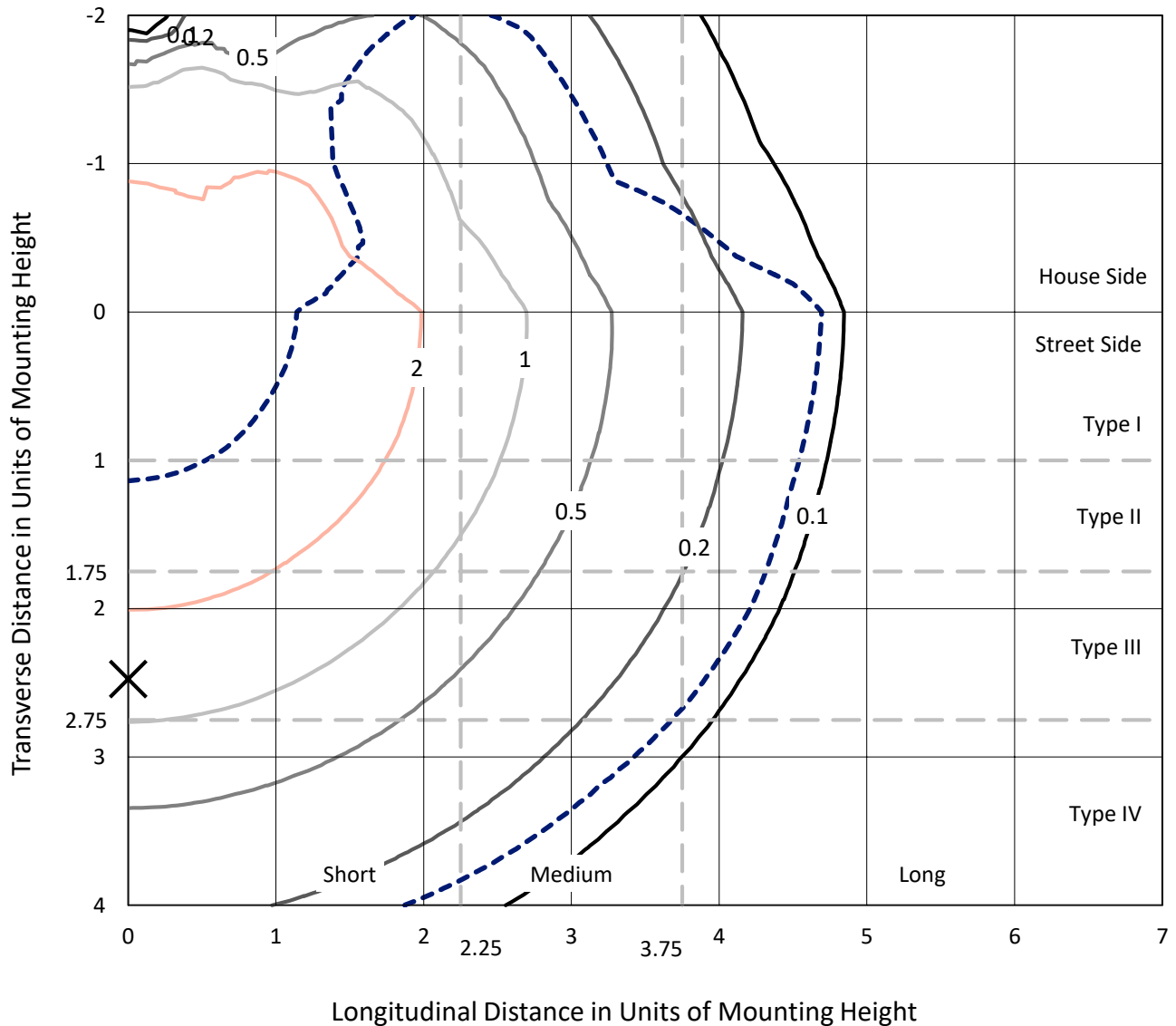




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Iso-Footcandle Lines of Horizontal Illumination

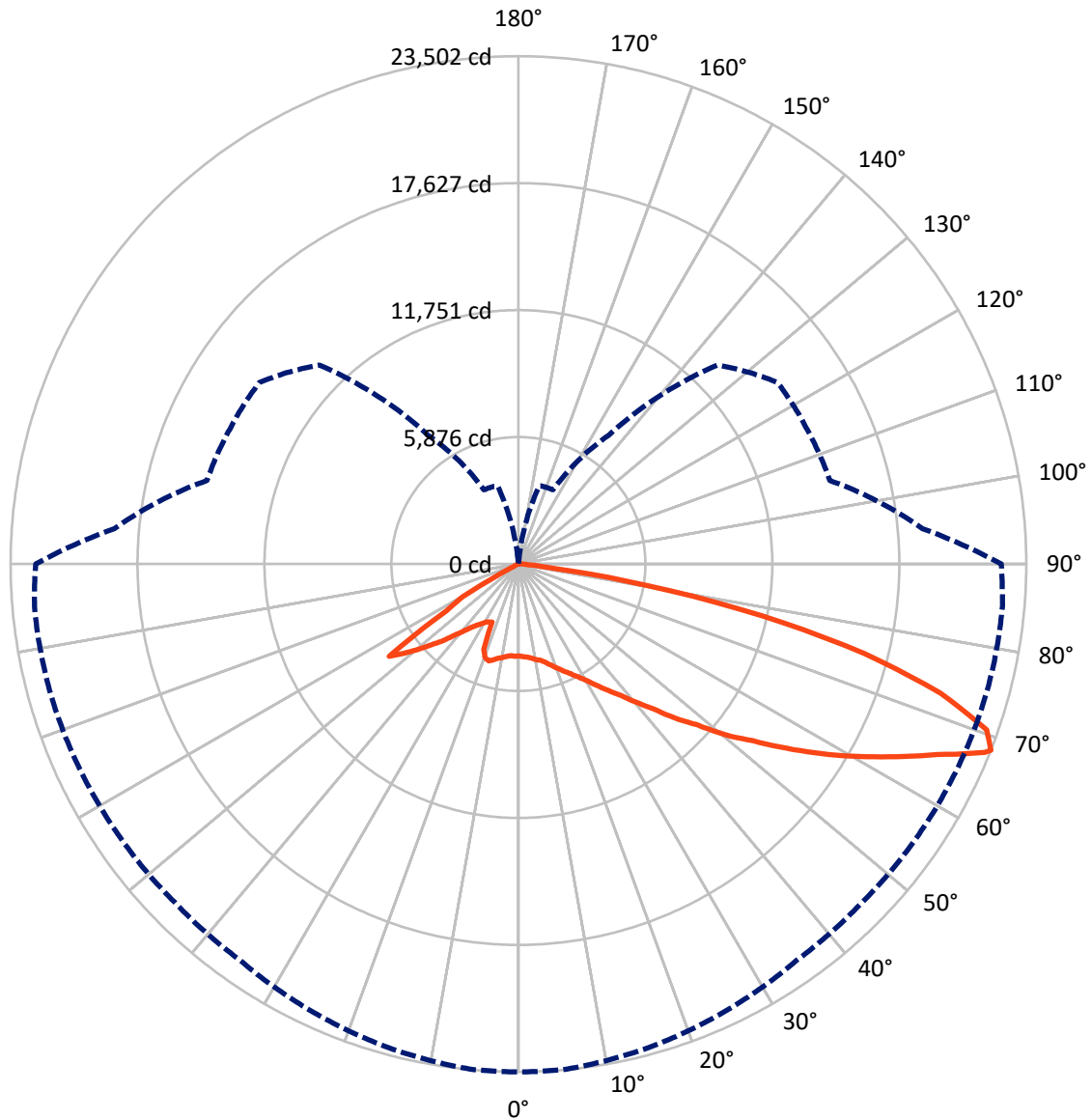
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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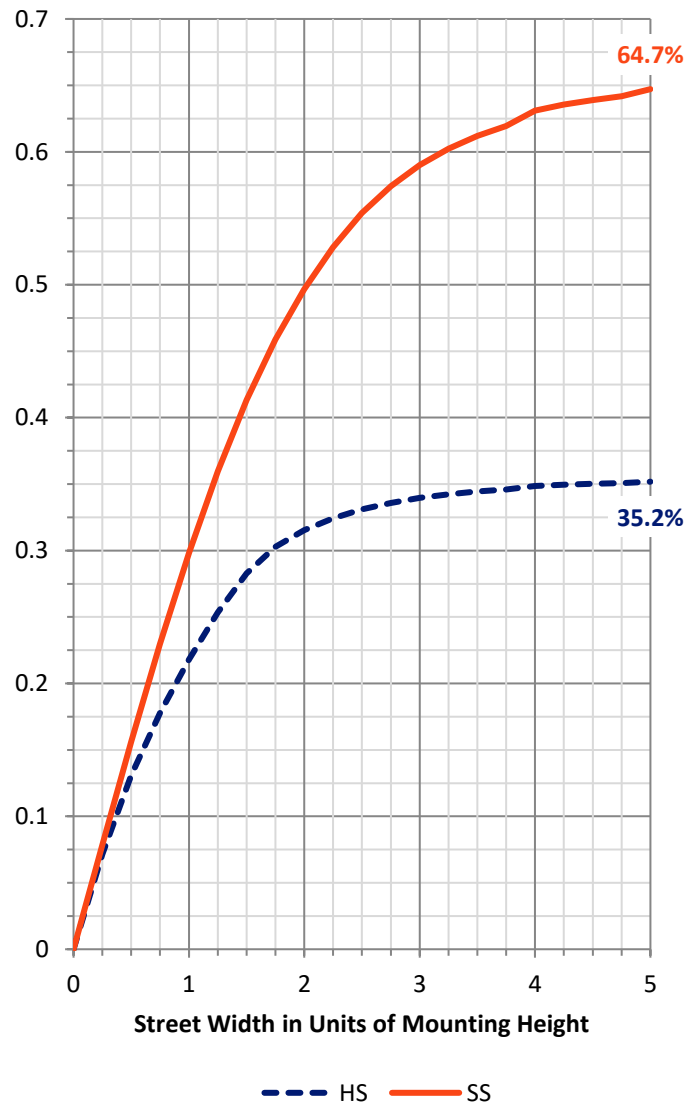
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18797.0	3.2	18800.2
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	34596.7	14.1	34610.7
	% Fixture	64.8	0.0	64.8
Total	Lumens	53393.7	17.3	53411.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	411.2	0.8
10°-20°	1317.5	2.5
20°-30°	2352.0	4.4
30°-40°	3826.1	7.2
40°-50°	6534.0	12.2
50°-60°	10902.2	20.4
60°-70°	15167.2	28.4
70°-80°	11756.9	22.0
80°-90°	1126.6	2.1
90°-100°	13.6	0.0
100°-110°	1.1	0.0
110°-120°	0.6	0.0
120°-130°	0.4	0.0
130°-140°	0.4	0.0
140°-150°	0.5	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	53393.7	100.0
0°-180°	53411.0	100.0

Coefficient of Utilization



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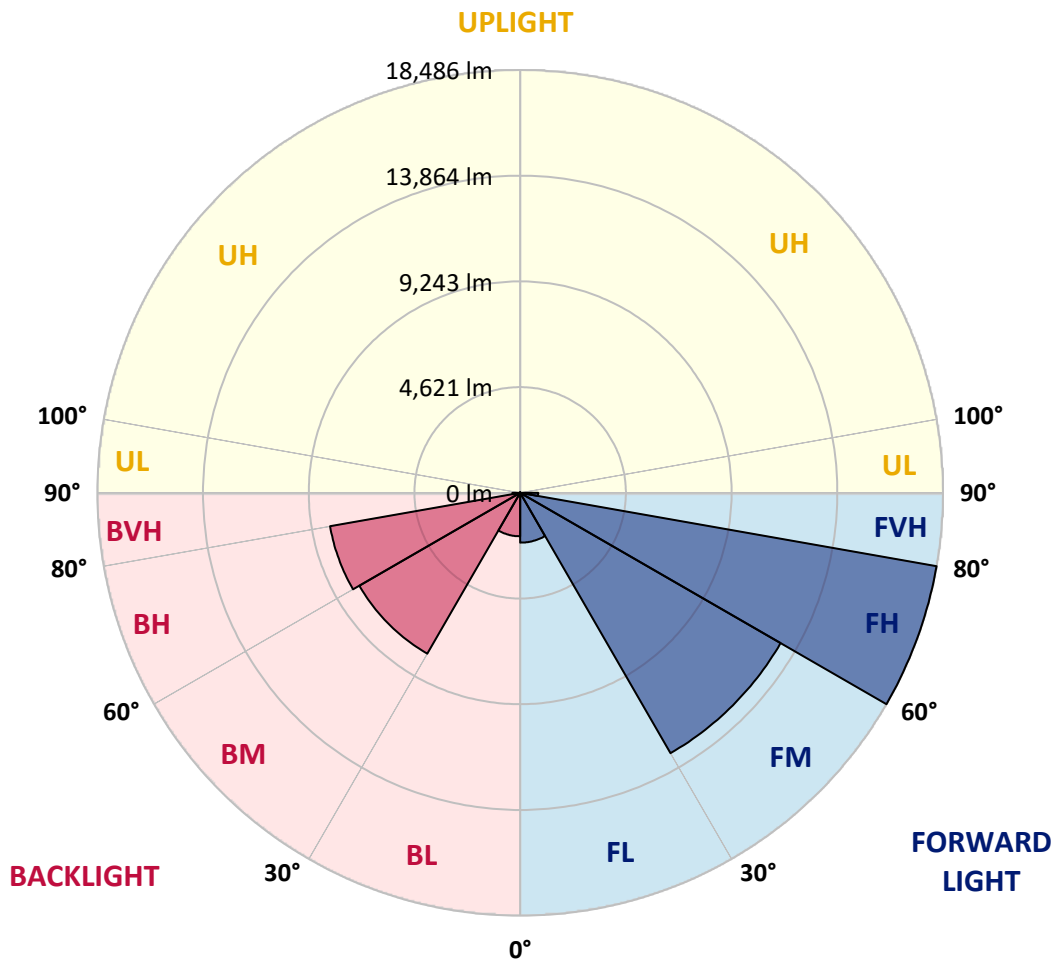
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2179.9	4.1			
FM	(30°-60°)	13142.8	24.6			
FH	(60°-80°)	18485.7	34.6			G5
FVH	(80°-90°)	788.2	1.5			G5
BL	(0°-30°)	1900.8	3.6	B3/2500		
BM	(30°-60°)	8119.5	15.2	B4/8500		
BH	(60°-80°)	8438.4	15.8	B5		G5
BVH	(80°-90°)	338.4	0.6			G3/500
UL	(90°-100°)	13.6	0.0		U2/50	
UH	(100°-180°)	3.2	0.0		U1/10	

BUG Rating: B5-U2-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6
2.5°	4298.9	4292.8	4288.8	4314.9	4240.6	4270.7	4250.6	4276.7	4270.7	4282.8	4284.8
5°	4329.0	4318.9	4304.9	4333.0	4288.8	4308.9	4286.8	4298.9	4260.7	4292.8	4296.8
7.5°	4397.3	4369.2	4367.2	4375.2	4345.1	4359.1	4321.0	4335.0	4314.9	4302.9	4314.9
10°	4499.8	4475.7	4449.6	4465.7	4415.4	4433.5	4393.3	4405.4	4395.3	4369.2	4393.3
12.5°	4570.2	4578.2	4560.1	4572.2	4528.0	4511.9	4497.8	4495.8	4489.8	4451.6	4445.6
15°	4726.9	4730.9	4698.8	4706.8	4696.8	4688.7	4668.6	4652.6	4620.4	4596.3	4580.2
17.5°	4931.9	4909.8	4879.7	4887.7	4915.8	4879.7	4867.6	4837.5	4791.2	4751.0	4743.0
20°	5147.0	5132.9	5104.8	5120.8	5118.8	5094.7	5100.7	5050.5	4984.2	4950.0	4923.9
22.5°	5386.1	5366.0	5345.9	5376.1	5352.0	5335.9	5329.9	5295.7	5213.3	5175.1	5169.1
25°	5625.3	5615.2	5629.3	5619.3	5585.1	5573.0	5581.1	5569.0	5472.5	5426.3	5398.2
27.5°	5924.7	5900.6	5922.7	5910.7	5874.5	5876.5	5878.5	5880.5	5772.0	5711.7	5671.5
30°	6266.4	6258.4	6286.5	6248.3	6214.1	6236.2	6254.3	6214.1	6119.7	6031.3	6017.2
32.5°	6710.5	6660.3	6692.5	6644.2	6592.0	6644.2	6676.4	6596.0	6519.6	6407.1	6427.2
35°	7202.9	7186.9	7186.9	7124.6	7096.4	7178.8	7211.0	7132.6	7014.0	6915.5	6891.4
37.5°	7725.5	7741.5	7791.8	7765.7	7739.5	7789.8	7862.1	7757.6	7604.9	7500.4	7472.2
40°	8418.8	8459.0	8493.2	8459.0	8428.9	8461.0	8543.4	8406.8	8300.3	8244.0	8183.7
42.5°	9164.4	9232.8	9210.7	9214.7	9240.8	9287.0	9369.4	9244.8	9122.2	9120.2	9031.8
45°	10173.3	10173.3	10127.1	10171.3	10167.3	10281.9	10318.0	10249.7	10147.2	10117.1	10040.7
47.5°	11115.9	11214.4	11196.3	11260.6	11210.4	11306.8	11429.4	11371.2	11252.6	11146.1	11130.0
50°	12430.3	12406.2	12382.1	12478.5	12470.5	12536.8	12649.4	12613.2	12448.4	12327.8	12305.7
52.5°	13585.9	13712.5	13682.4	13827.1	13746.7	13841.1	13975.8	13969.8	13768.8	13650.2	13616.0
55°	15045.0	15129.4	15123.4	15272.1	15161.5	15286.1	15398.7	15410.7	15191.7	15022.9	15075.1
57.5°	16564.3	16634.7	16594.5	16717.1	16608.6	16779.4	16847.7	16803.5	16674.9	16461.8	16540.2
60°	18085.7	18146.0	18192.2	18202.3	18140.0	18240.5	18304.8	18343.0	18140.0	17896.8	17991.3
62.5°	19631.2	19699.5	19659.4	19675.4	19502.6	19639.3	19719.6	19729.7	19496.6	19281.5	19347.8
65°	21259.1	21353.6	21208.9	21112.4	20899.4	20897.4	21003.9	21022.0	20857.2	20704.4	20678.3
67.5°	23274.9	23317.1	23007.6	22684.0	22324.3	22245.9	22320.3	22362.5	22456.9	22452.9	22334.3
68°	23502.0	23493.9	23180.4	22794.6	22408.7	22318.2	22354.4	22408.7	22471.0	22483.0	22340.4
70°	22985.5	22887.0	22708.1	22221.8	21839.9	21602.8	21476.2	21576.6	21407.8	21409.8	21142.5
72.5°	20417.0	20405.0	20075.4	19834.2	19494.6	19100.6	18919.8	18917.8	18933.8	18817.3	18541.9
75°	16538.2	16554.3	16170.4	16003.6	15899.1	15824.8	15862.9	15981.5	15993.6	15991.6	15895.1
77.5°	11533.9	11600.3	11497.8	11226.4	11517.9	11767.1	12247.4	12492.6	12414.2	12649.4	12798.1
80°	6045.3	6178.0	6182.0	6372.9	6608.1	6835.2	7249.2	7621.0	7347.6	7227.1	7102.4
82.5°	1589.7	1637.9	1710.3	1599.8	1633.9	1668.1	1989.7	1959.5	1808.8	1889.2	2009.7
85°	454.2	468.3	448.2	406.0	371.8	341.7	349.7	295.4	257.2	255.2	247.2
87.5°	319.5	343.7	303.5	261.3	235.1	219.1	211.0	178.9	144.7	126.6	100.5
90°	148.7	146.7	126.6	98.5	86.4	82.4	82.4	64.3	36.2	22.1	20.1
92.5°	62.3	64.3	52.3	42.2	36.2	28.1	22.1	14.1	8.0	4.0	2.0
95°	22.1	24.1	20.1	16.1	14.1	12.1	10.0	8.0	4.0	2.0	2.0
97.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	4.0	2.0	2.0
100°	0.0	0.0	0.0	2.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0
102.5°	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
105°	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0



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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	2.0	2.0	2.0	2.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
165°	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
167.5°	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
170°	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
172.5°	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
175°	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
177.5°	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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°	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6	4250.6
2.5°	4280.8	4270.7	4266.7	4216.5	4230.5	4200.4	4270.7	4250.6	4246.6	4274.7
5°	4290.8	4244.6	4272.7	4240.6	4248.6	4204.4	4260.7	4236.5	4238.6	4252.6
7.5°	4296.8	4270.7	4298.9	4242.6	4264.7	4248.6	4288.8	4264.7	4288.8	4300.9
10°	4357.1	4345.1	4325.0	4308.9	4325.0	4286.8	4337.0	4333.0	4347.1	4383.3
12.5°	4439.5	4425.5	4405.4	4377.2	4389.3	4375.2	4413.4	4417.4	4443.6	4461.6
15°	4562.1	4544.0	4534.0	4505.9	4509.9	4499.8	4521.9	4526.0	4578.2	4572.2
17.5°	4735.0	4714.9	4722.9	4696.8	4686.7	4662.6	4622.4	4608.4	4670.7	4688.7
20°	4923.9	4901.8	4911.8	4889.7	4702.8	4323.0	4578.2	4753.1	4620.4	4610.4
22.5°	5138.9	5114.8	5122.8	5088.7	4857.6	4146.1	3607.5	3563.3	4069.7	4274.7
25°	5376.1	5343.9	5339.9	5295.7	4536.0	3754.2	3693.9	3615.5	3245.7	2952.3
27.5°	5669.5	5621.3	5597.1	4929.9	4503.8	3900.9	3810.5	3531.1	2994.5	3012.6
30°	5987.0	5916.7	5464.5	5024.4	4739.0	4073.8	3953.2	3095.0	3099.0	3091.0
32.5°	6348.8	6192.0	5354.0	5313.8	5020.3	4258.7	3281.9	3245.7	3249.8	3261.8
35°	6823.1	5747.9	5725.8	5727.8	5364.0	4120.0	3476.9	3442.7	3446.7	3454.8
37.5°	6923.6	6196.1	6200.1	6153.8	5729.8	3764.3	3714.0	3712.0	3704.0	3695.9
40°	7004.0	6760.8	6702.5	6628.1	5311.8	4053.7	4037.6	4025.5	4031.6	4047.6
42.5°	7633.0	7450.1	7393.9	7305.4	5448.4	4491.8	4439.5	4425.5	4441.5	4433.5
45°	8469.1	8316.3	8205.8	6754.8	6019.2	4968.1	4925.9	4907.8	4913.8	4964.1
47.5°	9353.4	9262.9	8925.3	7297.4	6684.4	5530.8	5488.6	5460.5	5470.5	5458.5
50°	10316.0	10233.6	8262.1	8115.4	7420.0	6137.8	6075.5	6065.4	6069.4	6067.4
52.5°	11361.1	9638.7	9156.4	9003.7	8195.8	6772.8	6750.7	6696.5	6708.5	6696.5
55°	12587.0	10153.2	10141.2	9962.3	9068.0	7510.4	7484.3	7407.9	6927.6	7347.6
57.5°	13750.7	11136.0	11136.0	10963.2	9960.3	8244.0	8201.8	8145.5	4923.9	3971.3
60°	15024.9	12120.8	12092.7	11950.0	10820.5	8943.4	7269.3	7253.2	2974.4	2984.5
62.5°	16126.2	12999.0	13049.3	12916.6	11648.5	6696.5	3368.3	3300.0	293.4	452.2
65°	17360.2	13969.8	14030.0	13893.4	12544.8	7102.4	3655.7	3621.6	66.3	60.3
67.5°	18759.0	14938.5	14801.8	14651.1	13069.4	7313.5	3798.4	3768.3	18.1	12.1
68°	18771.0	14918.4	14741.5	14639.0	13019.1	7273.3	3786.4	3758.2	18.1	12.1
70°	17806.4	14166.7	13989.9	14016.0	12396.1	6955.7	3629.6	3577.4	18.1	12.1
72.5°	15621.8	12607.1	12408.2	12267.5	10993.3	6184.0	3253.8	3155.3	18.1	12.1
75°	13366.8	10683.8	10354.2	10044.7	8844.9	5060.5	2668.9	2558.4	18.1	12.1
77.5°	10535.1	8143.5	7675.2	7472.2	6646.2	3738.1	1983.6	1863.0	18.1	10.0
80°	5822.2	4672.7	4274.7	4150.1	3800.4	2196.7	1137.5	1065.2	16.1	10.0
82.5°	1505.3	1129.5	984.8	950.6	892.3	520.5	277.3	263.3	14.1	8.0
85°	215.0	158.8	174.8	207.0	199.0	134.7	96.5	82.4	12.1	6.0
87.5°	112.5	94.5	110.5	124.6	126.6	78.4	40.2	22.1	6.0	0.0
90°	18.1	18.1	20.1	22.1	22.1	10.0	8.0	0.0	0.0	0.0
92.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	2.0	4.0	2.0	2.0	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°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	2.0	2.0	2.0	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)