

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: P256697

Luminaire Tested: **CST-8-3-D-U-T5R-HSS-HM-EX90**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256697
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-8-3-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: 26661 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B4 - U1 - G4

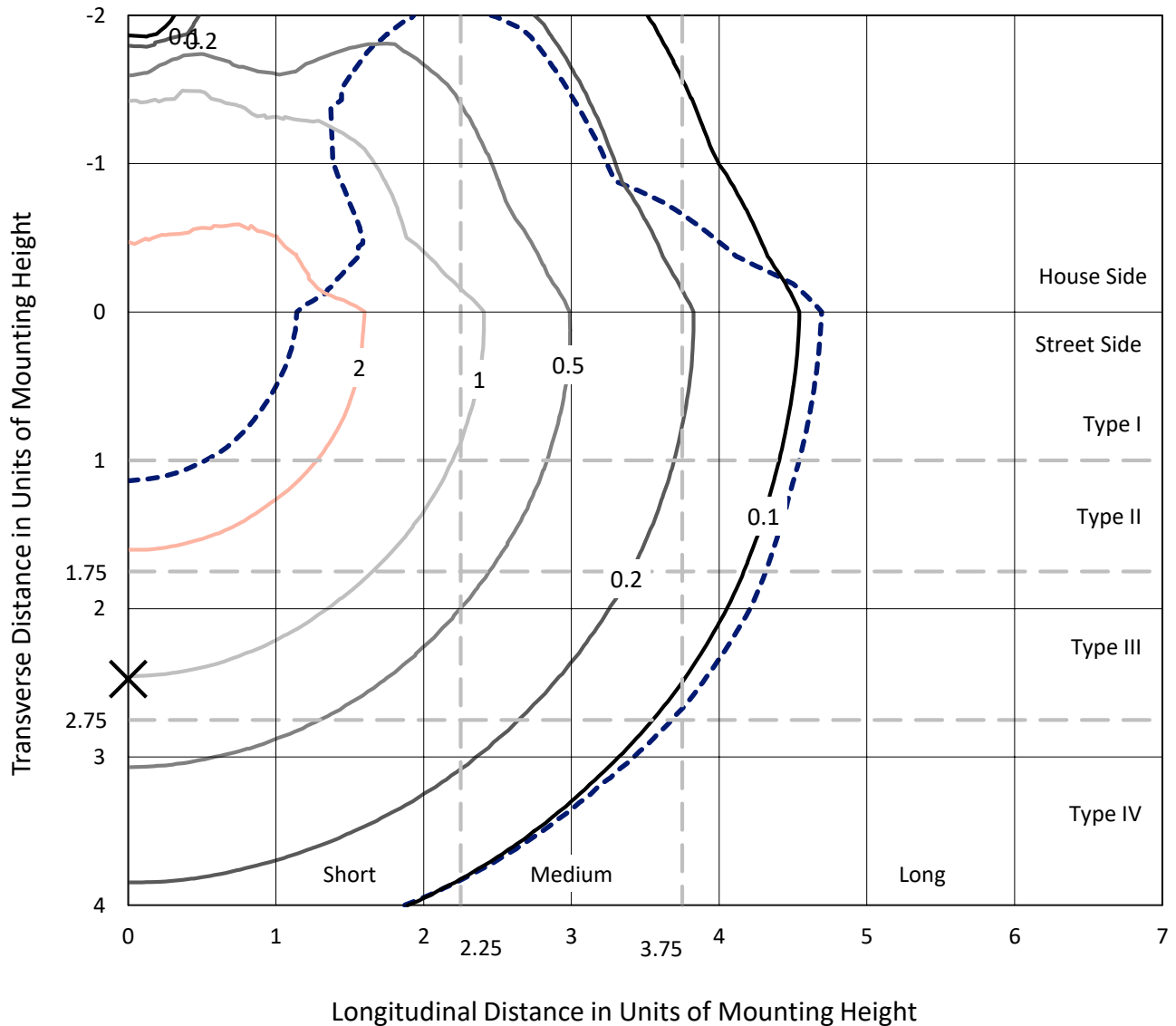
Input Watts (W): 226
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

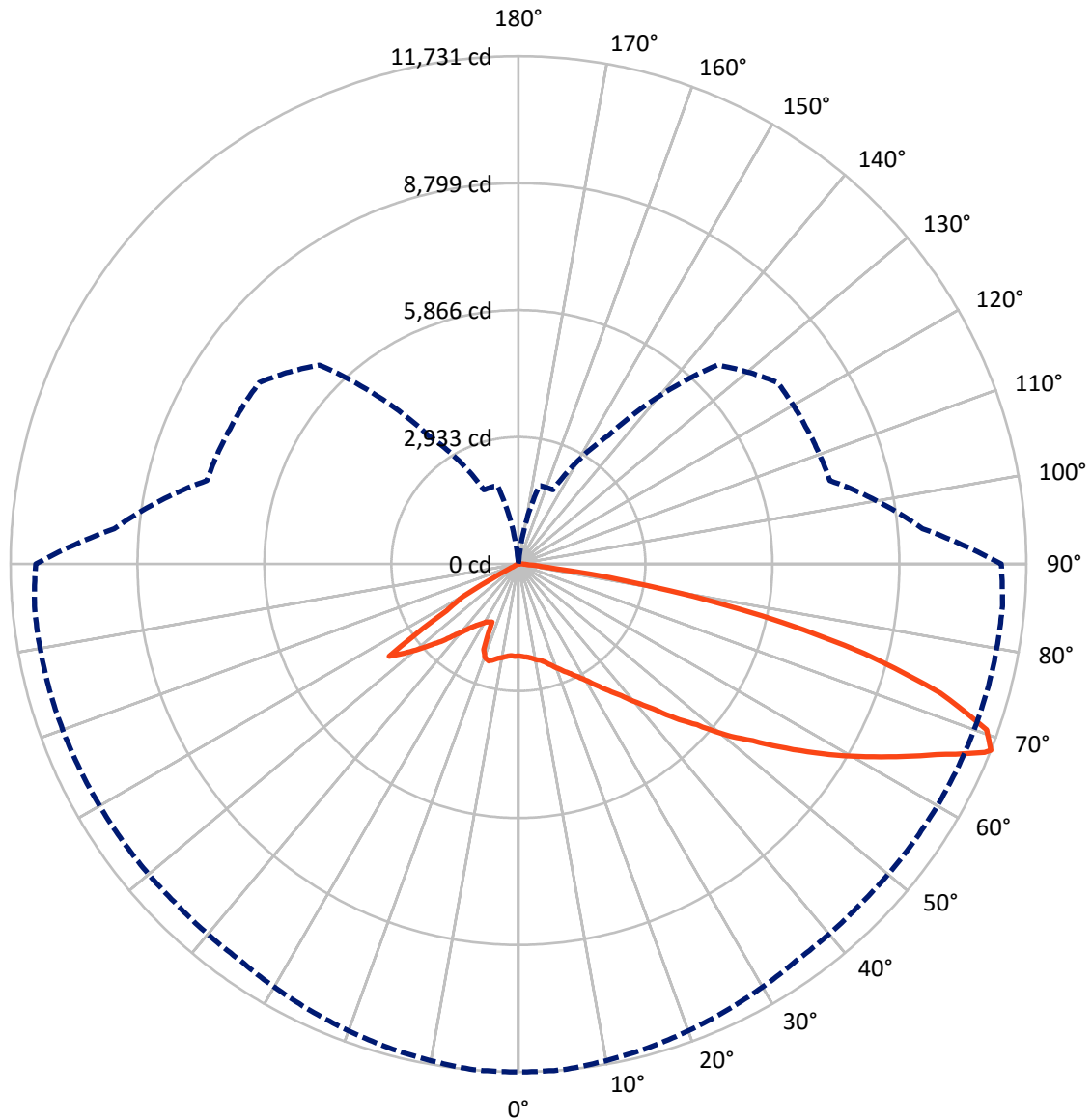
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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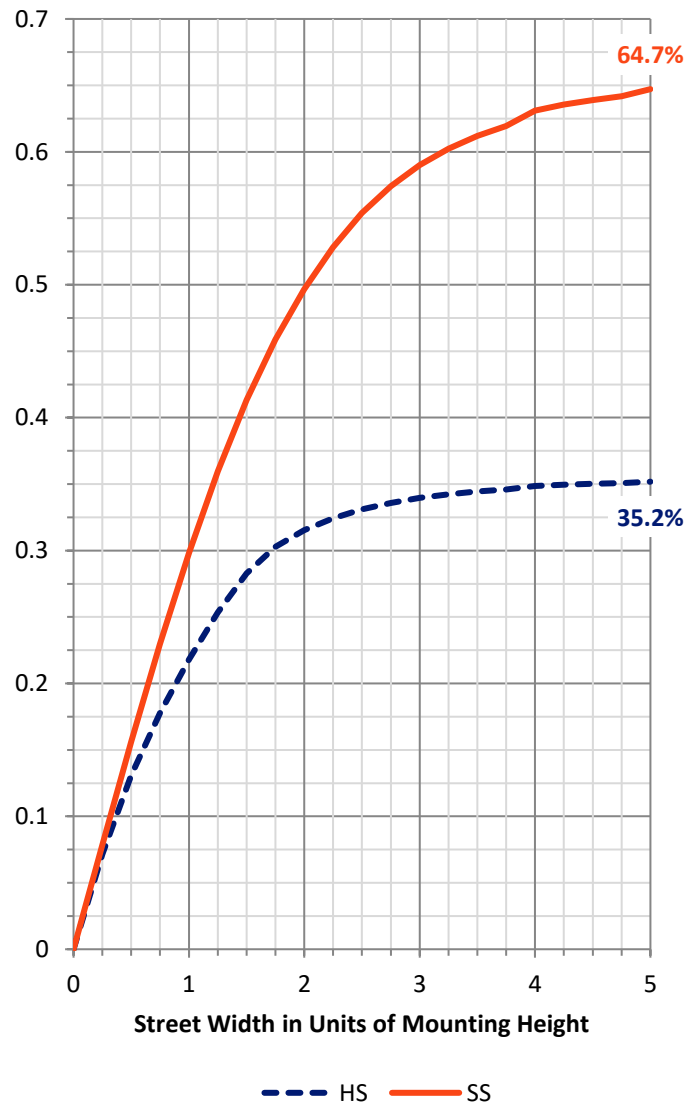
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9382.9	1.6	9384.5
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	17269.5	7.0	17276.5
	% Fixture	64.8	0.0	64.8
Total	Lumens	26652.4	8.6	26661.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.3	0.8
10°-20°	657.6	2.5
20°-30°	1174.0	4.4
30°-40°	1909.9	7.2
40°-50°	3261.5	12.2
50°-60°	5442.0	20.4
60°-70°	7571.0	28.4
70°-80°	5868.7	22.0
80°-90°	562.4	2.1
90°-100°	6.8	0.0
100°-110°	0.6	0.0
110°-120°	0.3	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	26652.4	100.0
0°-180°	26661.0	100.0



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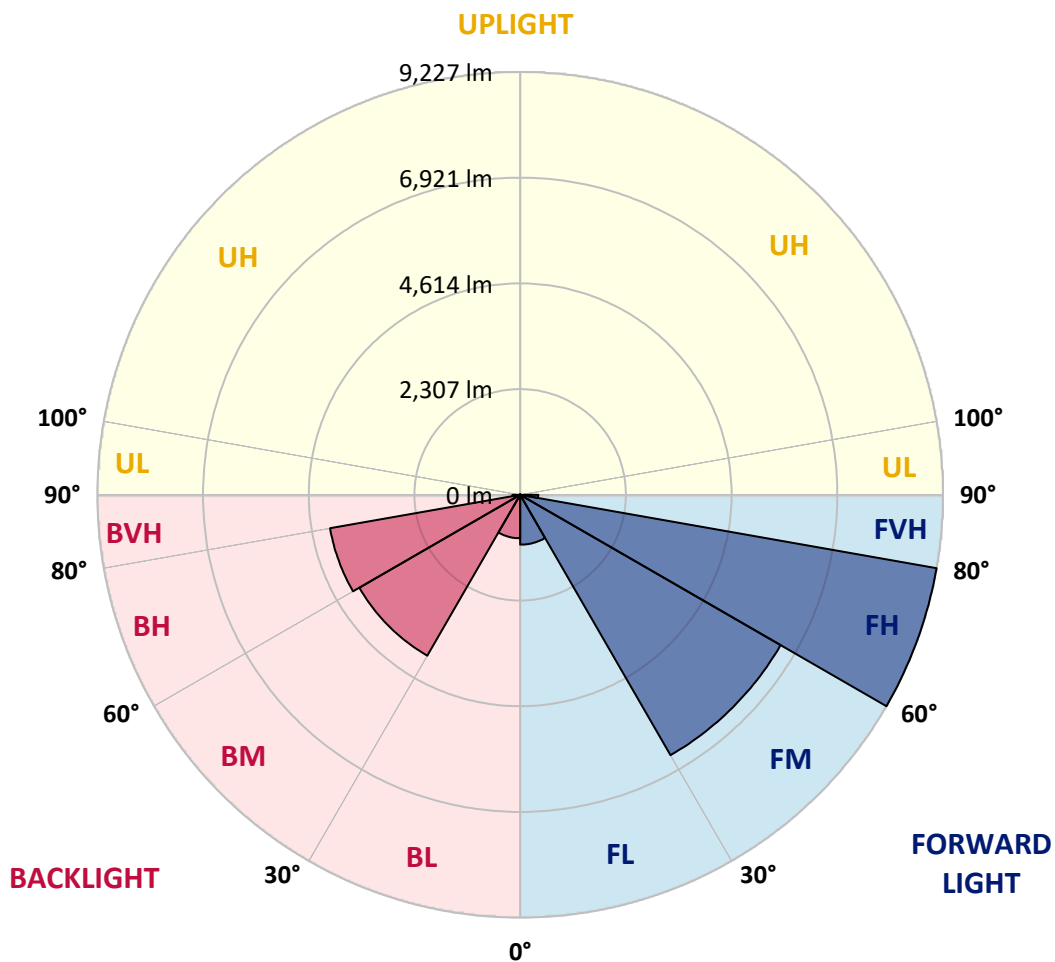
CATALOG NUMBER: CST-8-3-D-U-T5R-HSS-HM-EX90

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1088.1	4.1			
FM	(30°-60°)	6560.5	24.6			
FH	(60°-80°)	9227.5	34.6			G4/12000
FVH	(80°-90°)	393.4	1.5			G3/500
BL	(0°-30°)	948.8	3.6	B2/1000		
BM	(30°-60°)	4053.0	15.2	B3/5000		
BH	(60°-80°)	4212.2	15.8	B4/5000		G4/5000
BVH	(80°-90°)	168.9	0.6			G2/225
UL	(90°-100°)	6.8	0.0		U1/10	
UH	(100°-180°)	1.6	0.0		U1/10	

BUG Rating: B4-U1-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8
2.5°	2145.8	2142.8	2140.8	2153.9	2116.8	2131.8	2121.8	2134.8	2131.8	2137.8	2138.8
5°	2160.9	2155.9	2148.9	2162.9	2140.8	2150.9	2139.8	2145.8	2126.8	2142.8	2144.8
7.5°	2195.0	2181.0	2180.0	2184.0	2168.9	2175.9	2156.9	2163.9	2153.9	2147.8	2153.9
10°	2246.2	2234.1	2221.1	2229.1	2204.0	2213.1	2193.0	2199.0	2194.0	2181.0	2193.0
12.5°	2281.3	2285.3	2276.3	2282.3	2260.2	2252.2	2245.2	2244.2	2241.1	2222.1	2219.1
15°	2359.5	2361.5	2345.5	2349.5	2344.5	2340.5	2330.4	2322.4	2306.4	2294.3	2286.3
17.5°	2461.9	2450.8	2435.8	2439.8	2453.8	2435.8	2429.7	2414.7	2391.6	2371.6	2367.6
20°	2569.2	2562.2	2548.1	2556.2	2555.1	2543.1	2546.1	2521.0	2487.9	2470.9	2457.8
22.5°	2688.6	2678.5	2668.5	2683.6	2671.5	2663.5	2660.5	2643.4	2602.3	2583.2	2580.2
25°	2808.0	2802.9	2810.0	2804.9	2787.9	2781.9	2785.9	2779.9	2731.7	2708.6	2694.6
27.5°	2957.4	2945.4	2956.4	2950.4	2932.4	2933.4	2934.4	2935.4	2881.2	2851.1	2831.0
30°	3128.0	3124.0	3138.0	3118.9	3101.9	3112.9	3122.0	3101.9	3054.7	3010.6	3003.6
32.5°	3349.7	3324.6	3340.7	3316.6	3290.5	3316.6	3332.6	3292.5	3254.4	3198.2	3208.2
35°	3595.5	3587.4	3587.4	3556.3	3542.3	3583.4	3599.5	3560.4	3501.2	3452.0	3440.0
37.5°	3856.3	3864.3	3889.4	3876.4	3863.3	3888.4	3924.5	3872.3	3796.1	3743.9	3729.9
40°	4202.4	4222.5	4239.5	4222.5	4207.4	4223.5	4264.6	4196.4	4143.2	4115.1	4085.0
42.5°	4574.6	4608.7	4597.7	4599.7	4612.7	4635.8	4676.9	4614.7	4553.5	4552.5	4508.4
45°	5078.2	5078.2	5055.1	5077.2	5075.2	5132.4	5150.4	5116.3	5065.2	5050.1	5012.0
47.5°	5548.7	5597.9	5588.8	5620.9	5595.8	5644.0	5705.2	5676.1	5616.9	5563.7	5555.7
50°	6204.8	6192.7	6180.7	6228.9	6224.9	6258.0	6314.1	6296.1	6213.8	6153.6	6142.6
52.5°	6781.6	6844.8	6829.8	6902.0	6861.9	6909.0	6976.2	6973.2	6872.9	6813.7	6796.7
55°	7510.0	7552.1	7549.1	7623.3	7568.1	7630.3	7686.5	7692.5	7583.2	7498.9	7525.0
57.5°	8268.4	8303.5	8283.4	8344.6	8290.4	8375.7	8409.8	8387.7	8323.5	8217.2	8256.3
60°	9027.8	9057.9	9081.0	9086.0	9054.9	9105.0	9137.1	9156.2	9054.9	8933.5	8980.6
62.5°	9799.3	9833.4	9813.3	9821.3	9735.0	9803.3	9843.4	9848.4	9732.0	9624.7	9657.8
65°	10611.8	10659.0	10586.8	10538.6	10432.3	10431.3	10484.4	10493.5	10411.2	10335.0	10321.9
67.5°	11618.1	11639.1	11484.6	11323.1	11143.5	11104.4	11141.5	11162.6	11209.7	11207.7	11148.6
68°	11731.4	11727.4	11570.9	11378.3	11185.7	11140.5	11158.6	11185.7	11216.8	11222.8	11151.6
70°	11473.6	11424.4	11335.1	11092.4	10901.8	10783.4	10720.2	10770.3	10686.1	10687.1	10553.7
72.5°	10191.5	10185.5	10021.0	9900.6	9731.0	9534.4	9444.1	9443.1	9451.1	9393.0	9255.5
75°	8255.3	8263.4	8071.7	7988.5	7936.3	7899.2	7918.3	7977.4	7983.5	7982.5	7934.3
77.5°	5757.4	5790.5	5739.3	5603.9	5749.3	5873.7	6113.5	6235.9	6196.8	6314.1	6388.4
80°	3017.6	3083.8	3085.8	3181.1	3298.5	3411.9	3618.5	3804.1	3667.7	3607.5	3545.3
82.5°	793.5	817.6	853.7	798.5	815.6	832.7	993.2	978.1	902.9	943.0	1003.2
85°	226.7	233.7	223.7	202.6	185.6	170.5	174.6	147.5	128.4	127.4	123.4
87.5°	159.5	171.5	151.5	130.4	117.4	109.3	105.3	89.3	72.2	63.2	50.2
90°	74.2	73.2	63.2	49.2	43.1	41.1	41.1	32.1	18.1	11.0	10.0
92.5°	31.1	32.1	26.1	21.1	18.1	14.0	11.0	7.0	4.0	2.0	1.0
95°	11.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	2.0	1.0	1.0
97.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	1.0	1.0
100°	0.0	0.0	0.0	1.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
102.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	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



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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	1.0	1.0	1.0	1.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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	0.0	1.0	1.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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	1.0	1.0	1.0	1.0	1.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
165°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	1.0	1.0	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



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8	2121.8
2.5°	2136.8	2131.8	2129.8	2104.7	2111.7	2096.7	2131.8	2121.8	2119.8	2133.8
5°	2141.8	2118.8	2132.8	2116.8	2120.8	2098.7	2126.8	2114.7	2115.7	2122.8
7.5°	2144.8	2131.8	2145.8	2117.8	2128.8	2120.8	2140.8	2128.8	2140.8	2146.8
10°	2174.9	2168.9	2158.9	2150.9	2158.9	2139.8	2164.9	2162.9	2169.9	2188.0
12.5°	2216.1	2209.0	2199.0	2185.0	2191.0	2184.0	2203.0	2205.0	2218.1	2227.1
15°	2277.3	2268.2	2263.2	2249.2	2251.2	2246.2	2257.2	2259.2	2285.3	2282.3
17.5°	2363.5	2353.5	2357.5	2344.5	2339.5	2327.4	2307.4	2300.3	2331.4	2340.5
20°	2457.8	2446.8	2451.8	2440.8	2347.5	2157.9	2285.3	2372.6	2306.4	2301.3
22.5°	2565.2	2553.1	2557.2	2540.1	2424.7	2069.6	1800.7	1778.7	2031.5	2133.8
25°	2683.6	2667.5	2665.5	2643.4	2264.2	1874.0	1843.9	1804.8	1620.2	1473.7
27.5°	2830.0	2805.9	2793.9	2460.8	2248.2	1947.2	1902.1	1762.6	1494.8	1503.8
30°	2988.5	2953.4	2727.7	2508.0	2365.5	2033.5	1973.3	1544.9	1546.9	1542.9
32.5°	3169.1	3090.9	2672.5	2652.5	2506.0	2125.8	1638.2	1620.2	1622.2	1628.2
35°	3405.9	2869.2	2858.1	2859.1	2677.5	2056.6	1735.5	1718.5	1720.5	1724.5
37.5°	3456.0	3092.9	3094.9	3071.8	2860.1	1879.0	1853.9	1852.9	1848.9	1844.9
40°	3496.1	3374.8	3345.7	3308.6	2651.5	2023.5	2015.4	2009.4	2012.4	2020.4
42.5°	3810.2	3718.9	3690.8	3646.6	2719.7	2242.2	2216.1	2209.0	2217.1	2213.1
45°	4227.5	4151.2	4096.1	3371.8	3004.6	2479.9	2458.8	2449.8	2452.8	2477.9
47.5°	4668.9	4623.7	4455.2	3642.6	3336.6	2760.8	2739.7	2725.7	2730.7	2724.7
50°	5149.4	5108.3	4124.2	4050.9	3703.8	3063.8	3032.7	3027.7	3029.7	3028.7
52.5°	5671.1	4811.3	4570.6	4494.3	4091.0	3380.8	3369.7	3342.7	3348.7	3342.7
55°	6283.0	5068.2	5062.1	4972.9	4526.4	3749.0	3735.9	3697.8	3458.0	3667.7
57.5°	6863.9	5558.7	5558.7	5472.5	4971.9	4115.1	4094.1	4066.0	2457.8	1982.3
60°	7499.9	6050.3	6036.3	5965.0	5401.2	4464.2	3628.6	3620.5	1484.7	1489.8
62.5°	8049.7	6488.7	6513.8	6447.6	5814.5	3342.7	1681.4	1647.3	146.5	225.7
65°	8665.6	6973.2	7003.3	6935.1	6262.0	3545.3	1824.8	1807.8	33.1	30.1
67.5°	9363.9	7456.8	7388.6	7313.3	6523.8	3650.6	1896.0	1881.0	9.0	6.0
68°	9369.9	7446.7	7358.5	7307.3	6498.7	3630.6	1890.0	1876.0	9.0	6.0
70°	8888.3	7071.6	6983.3	6996.3	6187.7	3472.1	1811.8	1785.7	9.0	6.0
72.5°	7797.9	6293.1	6193.8	6123.5	5487.5	3086.8	1624.2	1575.0	9.0	6.0
75°	6672.3	5333.0	5168.5	5014.0	4415.1	2526.1	1332.2	1277.1	9.0	6.0
77.5°	5258.8	4065.0	3831.2	3729.9	3317.6	1866.0	990.2	930.0	9.0	5.0
80°	2906.3	2332.4	2133.8	2071.6	1897.0	1096.5	567.8	531.7	8.0	5.0
82.5°	751.4	563.8	491.6	474.5	445.4	259.8	138.4	131.4	7.0	4.0
85°	107.3	79.3	87.3	103.3	99.3	67.2	48.2	41.1	6.0	3.0
87.5°	56.2	47.2	55.2	62.2	63.2	39.1	20.1	11.0	3.0	0.0
90°	9.0	9.0	10.0	11.0	11.0	5.0	4.0	0.0	0.0	0.0
92.5°	1.0	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	1.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.0	2.0	1.0	1.0	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°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	1.0	1.0	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)