

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: P227810

Luminaire Tested: **ISS-AF-1200-LED-E1-T4FT-ULG**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P227810  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29760)-DOWNLIGHT AND  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-AF-1200-LED-E1-T4FT-ULG  
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE IV FORWARD THROW, WITH UPLIGHT GLOW  
Light Source: (16) 4000K CCT, 70 CRI LEDs and (1) UPLIGHT LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

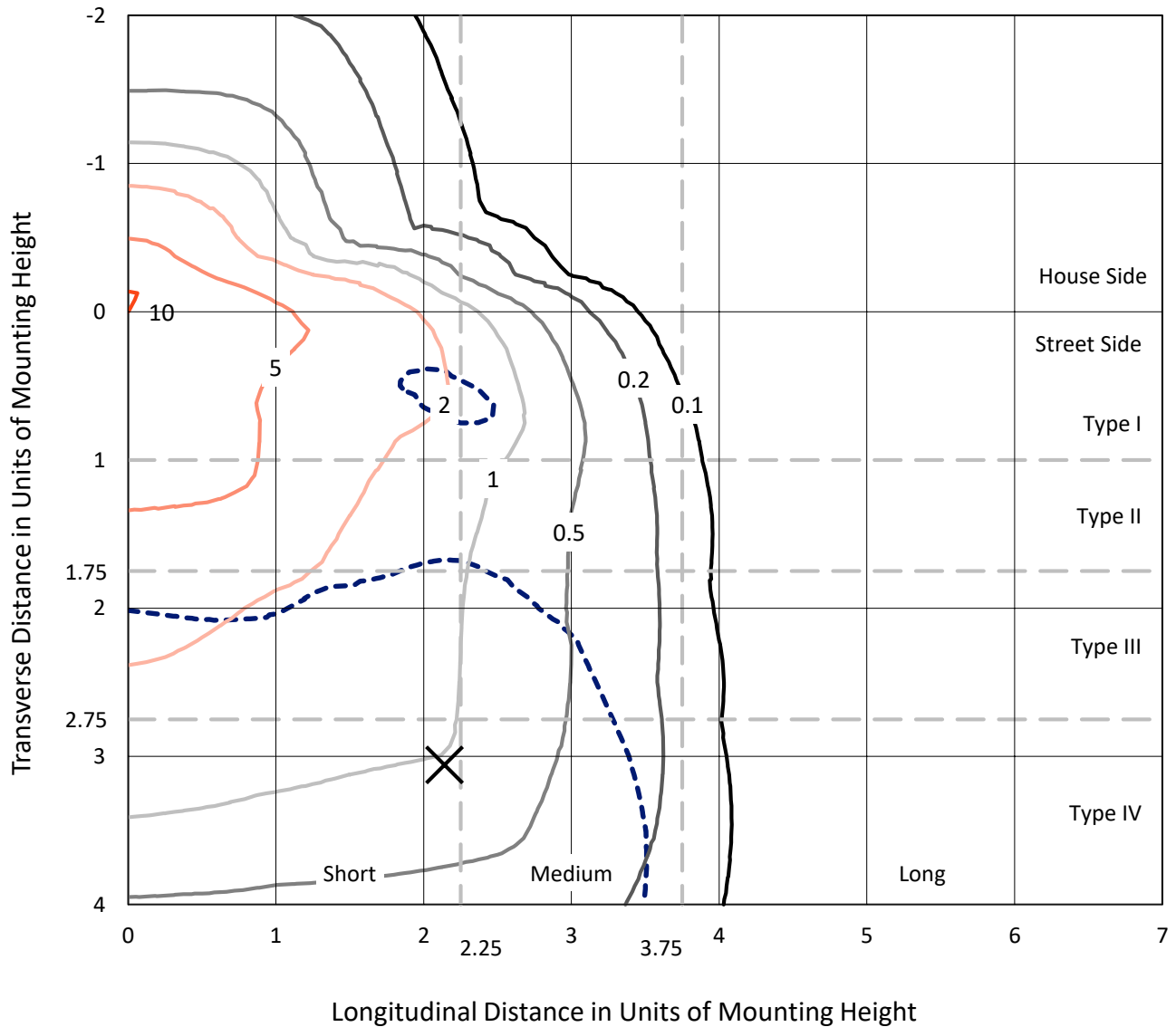
Lumens per Lamp: N/A  
Luminaire Lumens: 8117.3 lumens  
Efficiency: N/A  
Efficacy: 98.2 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U5 - G2  
  
Input Watts (W): 82.7  
Input Voltage (V): 120  
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: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

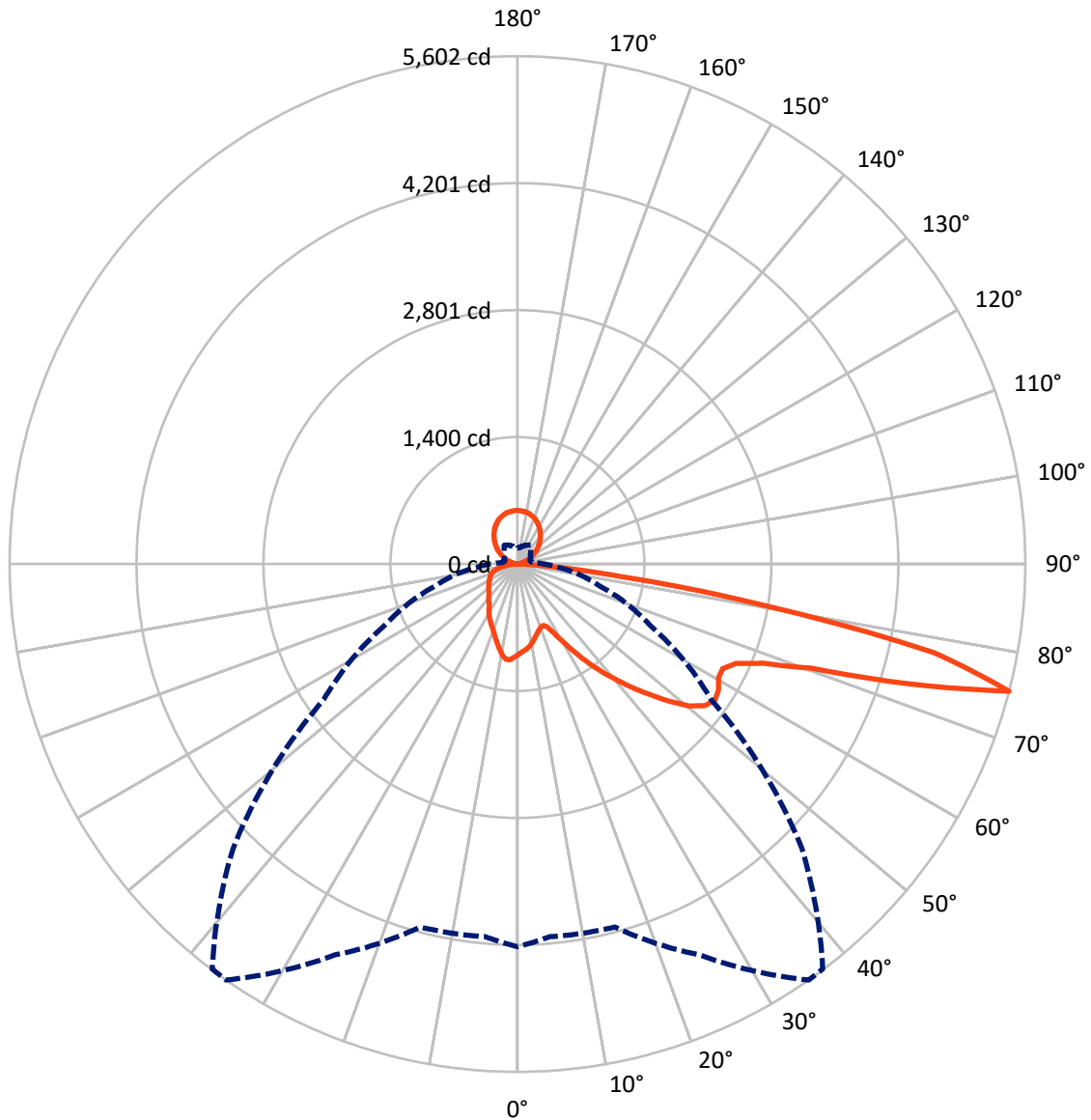
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical

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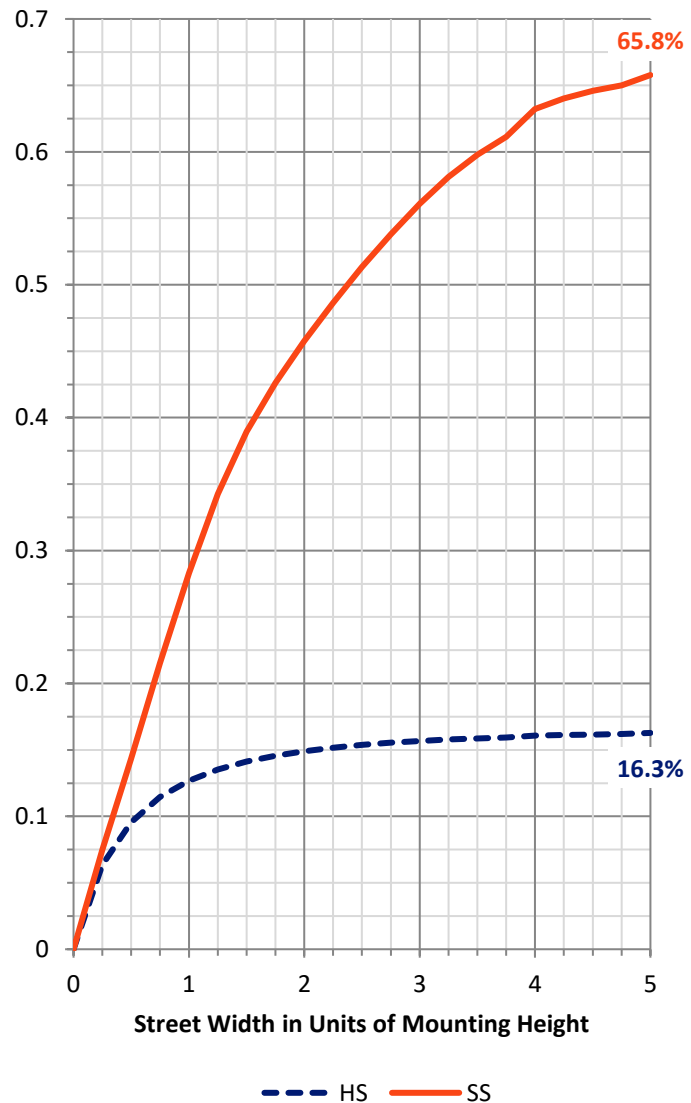
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1336.4	729.4	2065.8
	% Fixture	16.5	9.0	25.4
<b>Street Side</b>	Lumens	5322.0	729.4	6051.5
	% Fixture	65.6	9.0	74.6
<b>Total</b>	Lumens	6658.4	1458.9	8117.3
	% Fixture	82.0	18.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.9	1.2
10°-20°	247.8	3.1
20°-30°	392.0	4.8
30°-40°	632.7	7.8
40°-50°	936.1	11.5
50°-60°	1203.6	14.8
60°-70°	1490.2	18.4
70°-80°	1501.7	18.5
80°-90°	160.3	2.0
90°-100°	4.8	0.1
100°-110°	70.6	0.9
110°-120°	156.6	1.9
120°-130°	229.0	2.8
130°-140°	271.7	3.3
140°-150°	275.5	3.4
150°-160°	236.4	2.9
160°-170°	158.7	2.0
170°-180°	55.6	0.7
0°-90°	6658.4	82.0
0°-180°	8117.3	100.0



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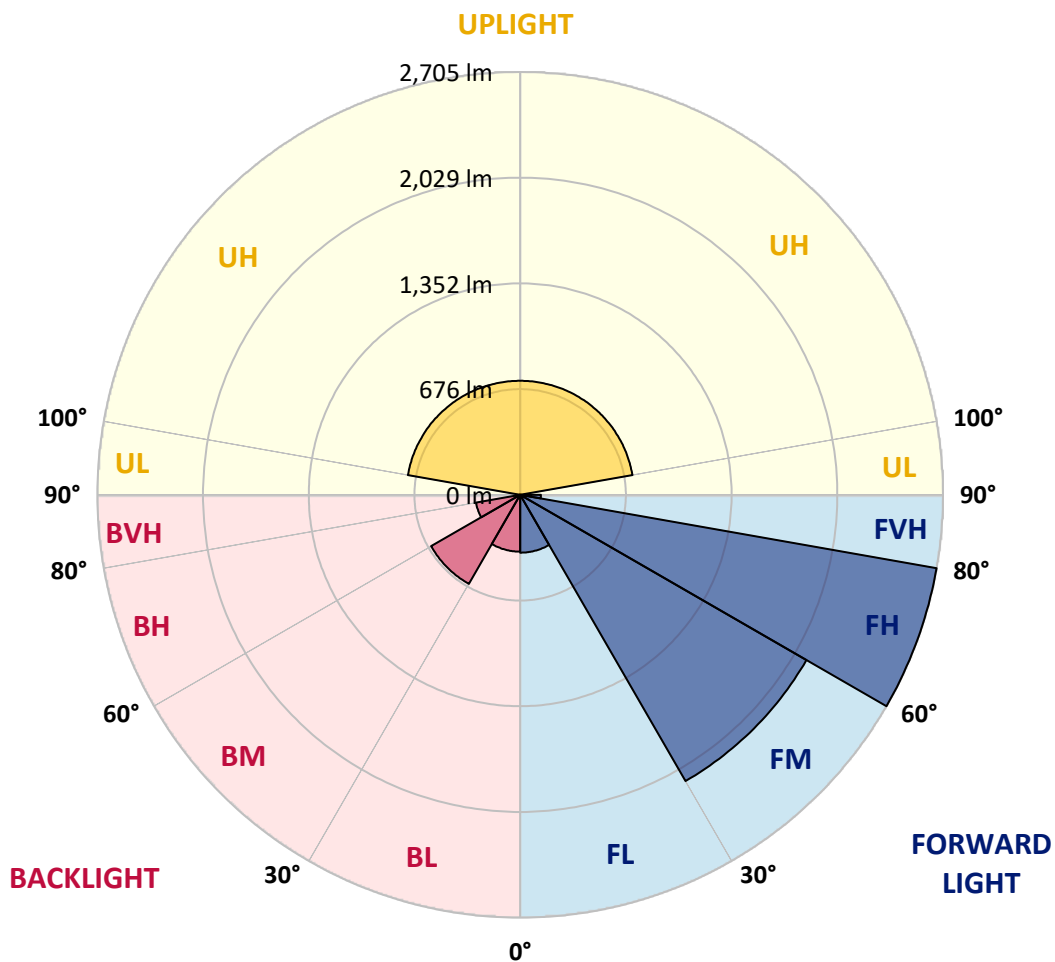
CATALOG NUMBER: ISS-AF-1200-LED-E1-T4FT-ULG

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	370.2	4.6			
FM	(30°-60°)	2114.3	26.0			
FH	(60°-80°)	2704.9	33.3			G2/5000
FVH	(80°-90°)	132.6	1.6			G2/225
BL	(0°-30°)	363.5	4.5	B1/500		
BM	(30°-60°)	658.1	8.1	B1/1000		
BH	(60°-80°)	287.1	3.5	B1/500		G1/500
BVH	(80°-90°)	27.7	0.3			G1/100
UL	(90°-100°)	4.8	0.1		U1/10	
UH	(100°-180°)	729.4	9.0		U4/1000	

**BUG Rating: B1-U5-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
0°	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2
2.5°	971.4	969.1	966.9	966.9	971.4	971.4	973.5	975.8	978.0	984.7	993.6
5°	944.7	942.4	940.2	942.4	949.1	949.1	955.8	960.2	964.6	975.8	986.9
7.5°	909.1	909.1	906.9	915.7	922.5	920.2	929.1	933.5	944.7	955.8	973.5
10°	862.4	862.4	862.4	873.6	884.6	884.6	891.3	902.4	911.3	926.9	949.1
12.5°	822.5	820.2	820.2	829.1	842.4	844.7	855.8	871.3	882.5	902.4	926.9
15°	809.1	804.7	793.5	793.5	800.3	800.3	818.0	840.3	857.9	878.0	906.9
17.5°	811.3	804.7	775.8	766.9	766.9	769.1	786.9	811.3	833.5	857.9	895.8
20°	831.4	820.2	766.9	746.9	742.5	744.6	760.2	784.6	811.3	844.7	886.9
22.5°	918.0	900.2	800.3	755.8	735.7	735.7	744.6	771.3	804.7	849.2	902.4
25°	1118.1	1089.1	911.3	831.4	771.3	764.7	749.1	775.8	815.8	869.1	946.9
27.5°	1322.6	1293.6	1049.1	962.5	869.1	849.2	791.4	798.0	842.4	913.6	1013.6
30°	1493.7	1469.3	1222.5	1122.5	998.0	975.8	886.9	844.7	889.1	975.8	1113.6
32.5°	1507.0	1496.0	1409.2	1307.0	1155.8	1124.7	1006.9	940.2	962.5	1060.3	1222.5
35°	1631.5	1622.6	1576.0	1478.2	1327.0	1291.5	1167.0	1064.7	1058.0	1153.6	1347.0
37.5°	1753.7	1742.7	1711.6	1644.9	1504.9	1475.9	1378.1	1213.6	1167.0	1262.5	1469.3
40°	1869.3	1853.8	1813.8	1776.0	1673.8	1673.8	1569.3	1355.9	1271.4	1358.2	1571.6
42.5°	2082.7	2033.8	1927.1	1898.3	1869.3	1869.3	1716.0	1453.7	1355.9	1462.6	1669.4
45°	2287.2	2240.6	2096.1	2038.3	2053.9	2045.0	1833.8	1509.3	1431.5	1560.4	1762.6
47.5°	2449.6	2407.3	2260.6	2220.6	2265.0	2229.4	1931.6	1553.8	1527.1	1664.9	1840.5
50°	2594.0	2494.0	2351.8	2405.1	2460.6	2400.7	2018.3	1620.5	1622.6	1776.0	1953.8
52.5°	2396.2	2385.0	2416.2	2540.7	2594.0	2527.3	2096.1	1704.8	1724.9	1918.2	2082.7
55°	2158.3	2156.1	2338.4	2580.7	2645.1	2582.8	2147.2	1807.1	1831.6	2093.9	2245.1
57.5°	2111.7	2089.4	2213.9	2496.2	2614.0	2569.6	2173.9	1902.7	1933.8	2316.2	2405.1
60°	2262.8	2220.6	2200.6	2405.1	2547.4	2525.1	2207.2	2016.0	2058.3	2569.6	2554.0
62.5°	2591.7	2534.0	2391.8	2411.7	2540.7	2522.9	2287.2	2149.4	2198.3	2822.9	2638.5
65°	3027.4	2985.2	2758.5	2596.2	2645.1	2620.7	2431.8	2318.4	2345.0	3005.2	2542.9
67.5°	3505.3	3447.5	3200.8	2978.5	2916.3	2869.6	2660.7	2518.4	2422.9	2978.5	2287.2
70°	4045.5	3983.3	3769.9	3540.9	3434.3	3383.1	3060.8	2691.8	2393.9	2685.1	1804.9
72.5°	4710.1	4625.7	4507.8	4532.3	4514.5	4372.2	3698.7	2749.6	2182.8	1998.3	1078.1
75°	4221.1	4125.5	4145.5	4756.8	5601.5	5594.8	4436.7	2607.3	1627.1	942.4	466.8
77.5°	1513.8	1673.8	2469.5	3563.1	4696.8	4690.1	3434.3	1631.5	698.0	402.3	282.3
80°	380.1	386.8	613.5	1462.6	2742.9	2720.7	1947.2	615.7	291.2	244.5	193.3
82.5°	122.2	131.1	224.5	504.6	1173.6	1146.9	604.6	202.2	182.3	157.8	117.8
85°	40.0	40.0	80.0	173.4	386.8	371.2	122.2	73.3	100.0	82.2	53.4
87.5°	0.0	0.0	2.3	4.4	8.9	4.4	0.0	4.4	13.3	15.5	11.2
90°	0.0	0.0	0.0	0.0	0.0	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	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	2.0	2.0	2.0	3.1	4.1	5.1	9.2	13.3	7.2	5.1	4.1
100°	8.2	8.2	10.2	14.3	22.5	24.1	30.7	32.7	30.7	27.6	26.6
102.5°	28.6	28.6	32.7	38.9	46.0	47.1	51.1	52.2	51.1	49.1	50.1
105°	55.2	55.2	57.3	62.4	67.5	68.3	71.6	72.6	72.6	70.6	72.6
107.5°	79.8	78.8	81.8	85.9	90.0	90.6	93.1	95.1	94.1	93.1	94.1
110°	103.3	104.3	105.4	108.4	112.5	112.9	114.6	116.6	116.6	115.6	116.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
112.5°	126.8	126.8	128.9	132.0	135.0	135.4	137.1	139.1	139.1	138.1	140.1
115°	149.4	150.4	152.4	154.5	157.5	157.9	159.6	161.6	161.6	161.6	163.7
117.5°	172.9	173.9	175.9	178.0	181.1	181.5	183.1	184.1	185.2	184.1	186.2
120°	197.4	199.5	200.5	202.5	205.6	205.8	206.6	208.7	208.7	208.7	210.7
122.5°	224.0	225.0	226.1	228.1	231.2	231.4	232.2	233.2	233.2	234.3	238.3
125°	249.6	251.6	252.7	253.7	256.8	257.0	257.8	258.8	259.8	259.8	262.9
127.5°	273.1	275.2	276.2	278.2	280.3	280.7	282.3	284.4	283.4	284.4	287.4
130°	296.7	298.7	299.7	300.7	304.8	305.0	305.9	307.9	307.9	308.9	312.0
132.5°	320.2	321.2	324.3	325.3	328.4	328.6	329.4	332.5	332.5	333.5	336.6
135°	343.7	344.7	346.8	348.8	352.9	352.9	352.9	356.0	356.0	357.0	359.1
137.5°	367.2	368.3	371.3	372.4	375.4	375.4	375.4	377.5	377.5	378.5	382.6
140°	390.8	391.8	393.8	394.9	396.9	397.1	397.9	399.0	399.0	401.0	405.1
142.5°	413.3	415.3	417.4	416.3	419.4	419.4	419.4	421.5	421.5	422.5	425.5
145°	434.8	435.8	437.8	437.8	440.9	441.1	441.9	444.0	442.9	444.0	447.0
147.5°	454.2	454.2	457.3	458.3	462.4	462.6	463.4	464.4	462.4	463.4	466.5
150°	471.6	472.6	474.6	475.7	479.8	480.0	480.8	481.8	479.8	479.8	483.9
152.5°	490.0	491.0	494.1	493.1	496.1	496.3	497.2	498.2	497.2	497.2	500.2
155°	510.5	511.5	513.5	512.5	514.5	514.5	514.5	515.6	514.5	515.6	518.6
157.5°	524.8	526.8	528.9	527.8	530.9	530.9	530.9	530.9	528.9	529.9	535.0
160°	537.0	539.1	541.1	541.1	544.2	544.2	544.2	544.2	542.2	542.2	545.2
162.5°	547.3	548.3	551.4	550.3	553.4	553.4	553.4	554.4	552.4	550.3	552.4
165°	558.5	559.6	561.6	560.6	564.7	564.7	564.7	565.7	562.6	560.6	562.6
167.5°	567.7	568.8	571.8	570.8	573.9	573.7	572.9	572.9	570.8	571.8	575.9
170°	574.9	575.9	579.0	578.0	580.0	579.8	579.0	578.0	576.9	579.0	584.1
172.5°	578.0	579.0	582.1	580.0	582.1	581.9	581.0	582.1	580.0	581.0	584.1
175°	580.0	582.1	583.1	582.1	585.1	585.1	585.1	586.2	583.1	581.0	584.1
177.5°	585.1	586.2	588.2	587.2	591.3	591.1	590.2	590.2	587.2	587.2	590.2
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2	1000.2
2.5°	1000.2	998.0	1006.9	1013.6	1015.8	1022.4	1029.2	1033.6	1031.3	1029.2	1029.2
5°	998.0	1000.2	1015.8	1029.2	1040.2	1051.4	1060.3	1064.7	1062.5	1062.5	1062.5
7.5°	984.7	993.6	1011.4	1033.6	1049.1	1055.8	1058.0	1051.4	1046.9	1040.2	1040.2
10°	962.5	975.8	1004.7	1029.2	1035.8	1026.9	1013.6	1000.2	982.4	971.4	971.4
12.5°	944.7	960.2	995.8	1015.8	1006.9	984.7	955.8	933.5	915.7	902.4	900.2
15°	929.1	949.1	986.9	991.3	971.4	933.5	895.8	871.3	851.3	842.4	842.4
17.5°	918.0	944.7	978.0	964.6	924.6	875.7	840.3	820.2	804.7	795.8	793.5
20°	920.2	953.6	969.1	931.4	873.6	822.5	789.1	778.0	766.9	762.4	762.4
22.5°	944.7	975.8	966.9	902.4	826.9	769.1	746.9	744.6	740.2	735.7	733.6
25°	998.0	1020.3	973.5	873.6	778.0	720.2	709.1	715.8	713.5	709.1	709.1
27.5°	1071.3	1075.8	984.7	844.7	724.7	673.5	673.5	684.7	680.2	673.5	677.9
30°	1160.3	1135.9	989.2	798.0	662.4	629.0	635.8	642.4	637.9	629.0	629.0
32.5°	1255.9	1198.1	989.2	738.0	602.4	589.0	591.3	593.5	584.6	573.5	573.5
35°	1349.3	1258.1	978.0	666.9	555.7	549.0	546.8	555.7	549.0	533.5	533.5
37.5°	1438.2	1304.8	949.1	593.5	520.2	517.9	524.6	520.2	511.3	489.0	484.6
40°	1500.4	1335.9	891.3	533.5	491.2	504.6	500.1	475.7	462.4	446.8	446.8
42.5°	1555.9	1351.4	820.2	486.8	471.3	489.0	471.3	440.1	422.4	420.1	422.4
45°	1607.1	1364.8	751.3	449.0	446.8	471.3	449.0	415.6	395.7	395.7	397.9
47.5°	1656.0	1378.1	682.4	413.5	417.9	444.6	431.2	397.9	377.9	364.6	364.6
50°	1733.8	1409.2	582.4	375.6	384.5	422.4	417.9	380.1	357.8	337.9	333.4
52.5°	1827.1	1462.6	473.4	335.6	360.1	402.3	402.3	364.6	340.1	313.4	308.9
55°	1951.6	1520.4	380.1	306.8	335.6	380.1	386.8	357.8	322.3	297.9	293.4
57.5°	2076.1	1540.4	306.8	277.8	304.5	357.8	375.6	344.5	302.3	284.5	282.3
60°	2162.8	1475.9	257.9	253.4	282.3	331.2	360.1	329.0	289.0	271.2	271.2
62.5°	2149.4	1280.3	231.2	237.8	264.5	311.2	346.8	315.7	280.1	268.9	266.8
65°	1960.5	966.9	209.0	224.5	249.0	291.2	333.4	308.9	275.6	264.5	260.0
67.5°	1651.6	642.4	193.3	211.1	233.4	275.6	322.3	300.0	262.3	255.6	251.1
70°	1195.8	375.6	177.8	197.8	217.8	257.9	306.8	282.3	246.7	242.2	231.2
72.5°	646.8	235.6	160.1	180.0	197.8	235.6	282.3	260.0	226.7	209.0	202.2
75°	295.6	171.1	142.3	160.1	173.4	206.7	253.4	228.9	202.2	180.0	175.6
77.5°	197.8	128.9	120.0	137.8	144.4	173.4	224.5	182.3	157.8	142.3	137.8
80°	135.5	95.5	97.8	113.3	111.1	137.8	168.9	146.7	124.5	128.9	117.8
82.5°	86.6	66.7	75.6	80.0	77.8	104.4	131.1	111.1	93.4	77.8	66.7
85°	37.7	35.6	44.5	46.6	46.6	57.8	68.9	55.5	42.2	31.1	31.1
87.5°	2.3	4.4	4.4	6.6	4.4	2.3	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	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	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	4.1	4.1	5.1	7.2	13.3	9.2	4.1	3.1	2.0	2.0	2.0
100°	25.6	26.6	27.6	30.7	32.7	30.7	22.5	14.3	10.2	8.2	8.2
102.5°	49.1	50.1	49.1	51.1	52.2	51.1	46.0	38.9	32.7	28.6	28.6
105°	70.6	72.6	70.6	72.6	72.6	71.6	67.5	62.4	57.3	55.2	55.2
107.5°	93.1	94.1	93.1	94.1	95.1	93.1	90.0	85.9	81.8	78.8	79.8
110°	115.6	116.6	115.6	116.6	116.6	114.6	112.5	108.4	105.4	104.3	103.3



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	138.1	140.1	138.1	139.1	139.1	137.1	135.0	132.0	128.9	126.8	126.8
115°	162.6	163.7	161.6	161.6	161.6	159.6	157.5	154.5	152.4	150.4	149.4
117.5°	184.1	186.2	184.1	185.2	184.1	183.1	181.1	178.0	175.9	173.9	172.9
120°	208.7	210.7	208.7	208.7	208.7	206.6	205.6	202.5	200.5	199.5	197.4
122.5°	237.3	238.3	234.3	233.2	233.2	232.2	231.2	228.1	226.1	225.0	224.0
125°	261.9	262.9	259.8	259.8	258.8	257.8	256.8	253.7	252.7	251.6	249.6
127.5°	284.4	287.4	284.4	283.4	284.4	282.3	280.3	278.2	276.2	275.2	273.1
130°	310.0	312.0	308.9	307.9	307.9	305.9	304.8	300.7	299.7	298.7	296.7
132.5°	334.5	336.6	333.5	332.5	332.5	329.4	328.4	325.3	324.3	321.2	320.2
135°	358.0	359.1	357.0	356.0	356.0	352.9	352.9	348.8	346.8	344.7	343.7
137.5°	380.5	382.6	378.5	377.5	377.5	375.4	375.4	372.4	371.3	368.3	367.2
140°	403.0	405.1	401.0	399.0	399.0	397.9	396.9	394.9	393.8	391.8	390.8
142.5°	424.5	425.5	422.5	421.5	421.5	419.4	419.4	416.3	417.4	415.3	413.3
145°	445.0	447.0	444.0	442.9	444.0	441.9	440.9	437.8	437.8	435.8	434.8
147.5°	463.4	466.5	463.4	462.4	464.4	463.4	462.4	458.3	457.3	454.2	454.2
150°	480.8	483.9	479.8	479.8	481.8	480.8	479.8	475.7	474.6	472.6	471.6
152.5°	497.2	500.2	497.2	497.2	498.2	497.2	496.1	493.1	494.1	491.0	490.0
155°	516.6	518.6	515.6	514.5	515.6	514.5	514.5	512.5	513.5	511.5	510.5
157.5°	531.9	535.0	529.9	528.9	530.9	530.9	530.9	527.8	528.9	526.8	524.8
160°	543.2	545.2	542.2	542.2	544.2	544.2	544.2	541.1	541.1	539.1	537.0
162.5°	549.3	552.4	550.3	552.4	554.4	553.4	553.4	550.3	551.4	548.3	547.3
165°	560.6	562.6	560.6	562.6	565.7	564.7	564.7	560.6	561.6	559.6	558.5
167.5°	573.9	575.9	571.8	570.8	572.9	572.9	573.9	570.8	571.8	568.8	567.7
170°	582.1	584.1	579.0	576.9	578.0	579.0	580.0	578.0	579.0	575.9	574.9
172.5°	581.0	584.1	581.0	580.0	582.1	581.0	582.1	580.0	582.1	579.0	578.0
175°	581.0	584.1	581.0	583.1	586.2	585.1	585.1	582.1	583.1	582.1	580.0
177.5°	587.2	590.2	587.2	587.2	590.2	590.2	591.3	587.2	588.2	586.2	585.1
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2

(END OF REPORT)