

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: P227571

Luminaire Tested: **ISS-AF-450-LED-E1-T2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P227571  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29758)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-AF-450-LED-E1-T2-7030  
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE  
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II  
Light Source: (16) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

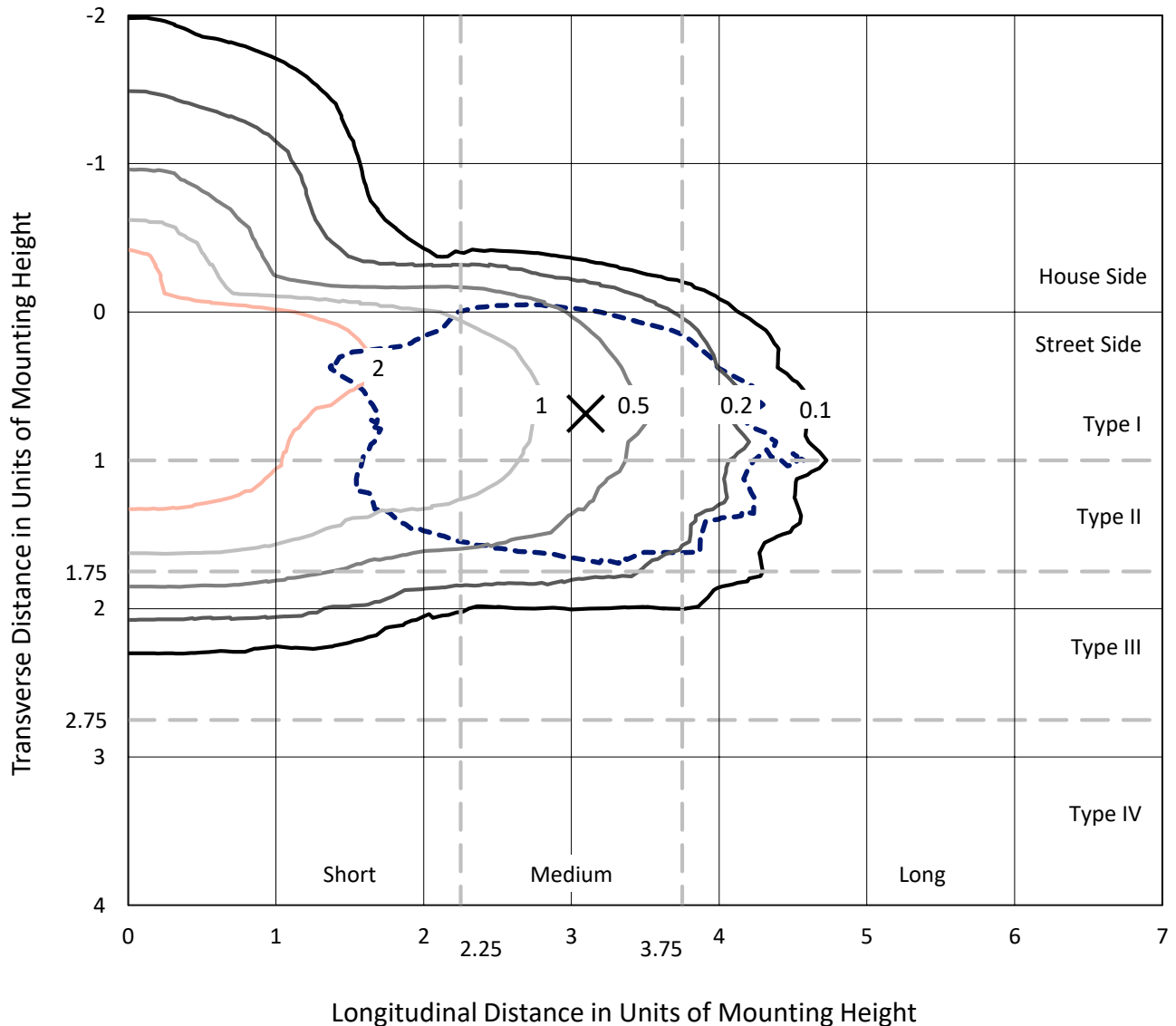
Lumens per Lamp: N/A  
Luminaire Lumens: 2597 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 25.31  
Input Voltage (V): 120  
Input Current (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

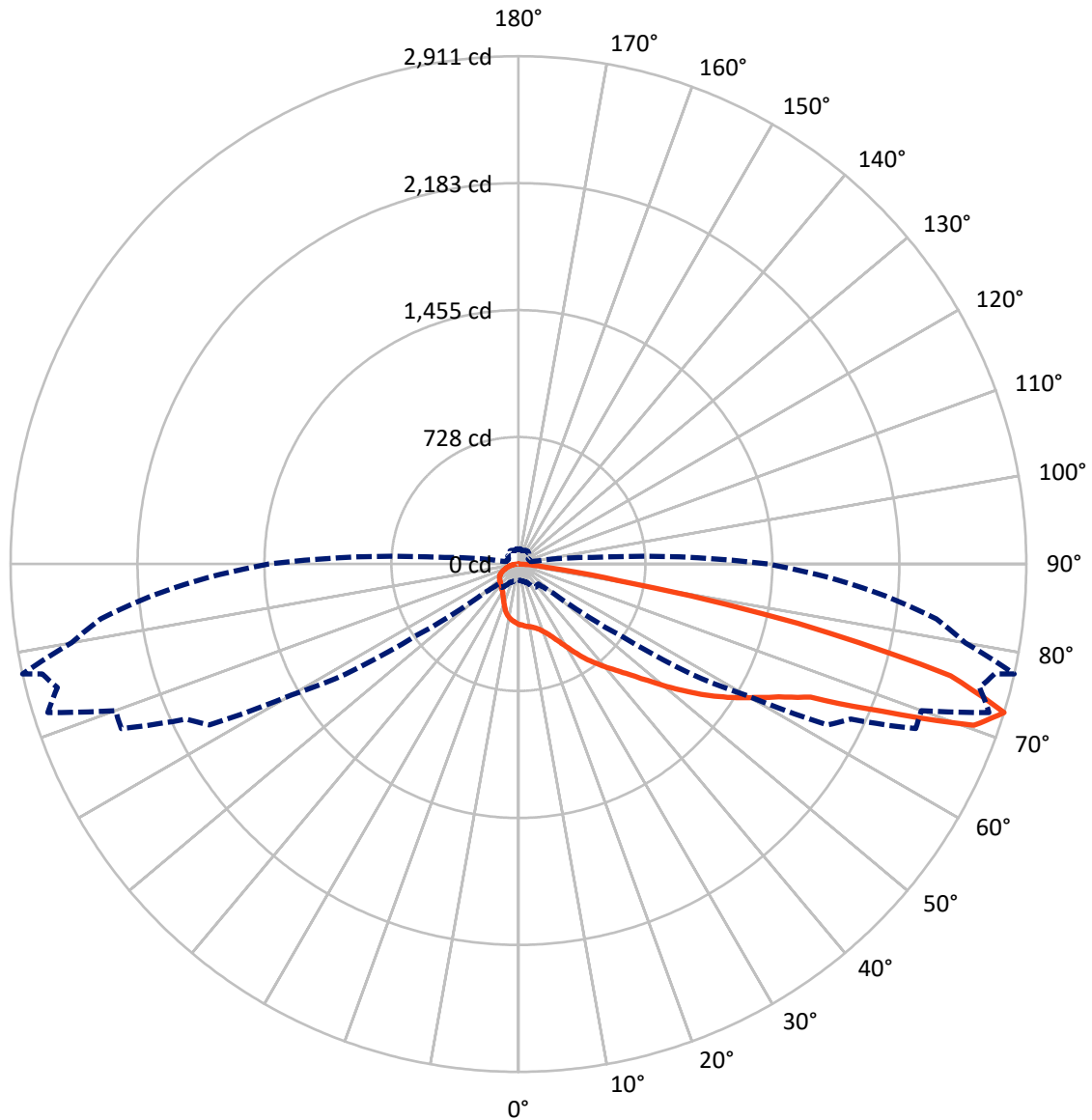
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 fc  
 Type II - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	430.3	0.0	430.3
	% Fixture	16.6	0.0	16.6
<b>Street Side</b>	Lumens	2166.7	0.0	2166.7
	% Fixture	83.4	0.0	83.4
<b>Total</b>	Lumens	2597.0	0.0	2597.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.2	1.2
10°-20°	98.8	3.8
20°-30°	175.3	6.8
30°-40°	277.8	10.7
40°-50°	416.7	16.0
50°-60°	540.0	20.8
60°-70°	613.5	23.6
70°-80°	407.1	15.7
80°-90°	35.6	1.4
90°-100°	0.0	0.0
100°-110°	0.0	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°	2597.0	100.0
0°-180°	2597.0	100.0



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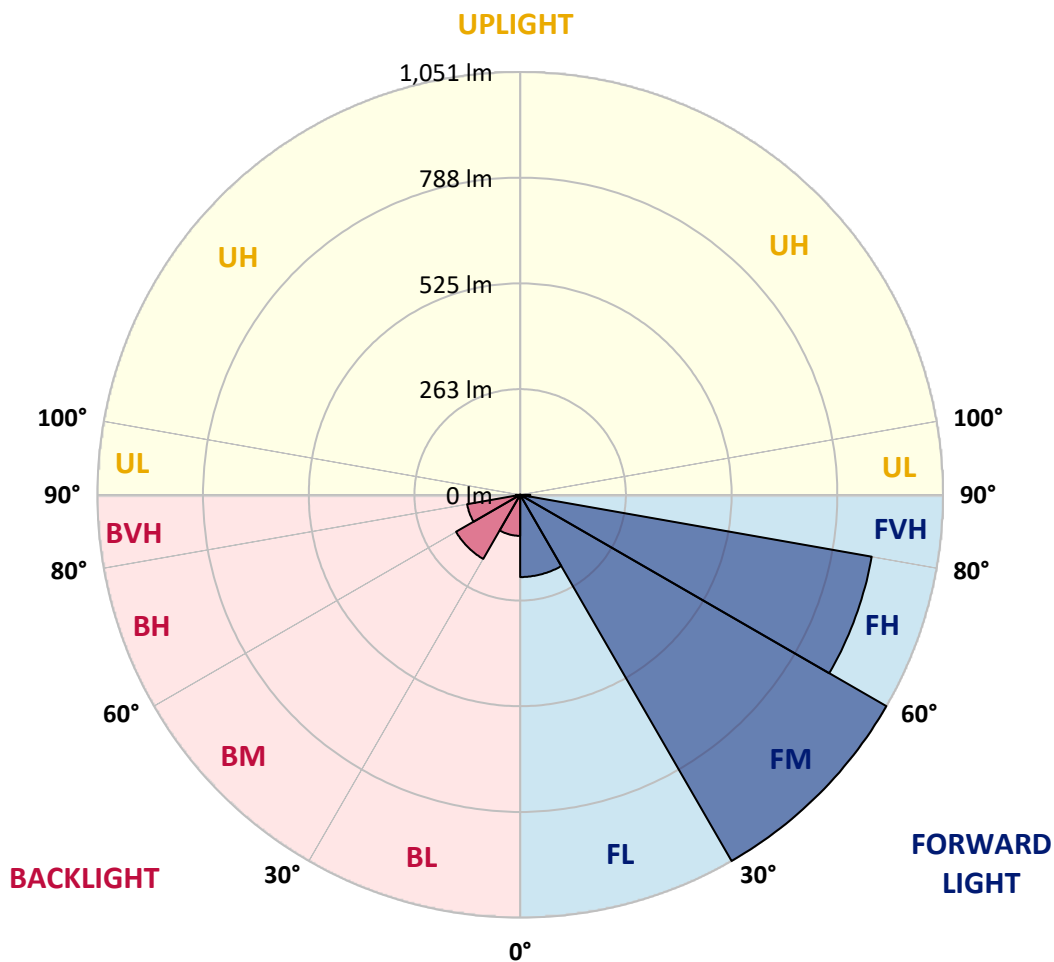
CATALOG NUMBER: ISS-AF-450-LED-E1-T2-7030

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	204.3	7.9			
FM (30°-60°)	1050.6	40.5			
FH (60°-80°)	886.9	34.1			G1/1800
FVH (80°-90°)	24.9	1.0			G1/100
BL (0°-30°)	101.9	3.9	B0/110		
BM (30°-60°)	183.8	7.1	B0/220		
BH (60°-80°)	133.8	5.2	B1/500		G1/500
BVH (80°-90°)	10.7	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7
2.5°	375.6	373.9	373.0	371.3	369.5	368.6	366.0	364.3	366.9	366.0	366.0
5°	403.7	401.9	399.3	396.7	393.2	390.5	387.9	385.3	387.0	385.3	383.5
7.5°	426.4	424.7	421.2	418.5	415.0	411.5	408.0	407.2	405.4	402.8	401.9
10°	439.6	437.8	436.1	434.3	429.1	426.4	422.0	419.4	420.3	416.8	416.8
12.5°	451.8	450.1	449.2	449.2	444.8	442.2	440.4	437.8	439.6	434.3	432.6
15°	463.2	461.5	458.8	461.5	460.6	459.7	458.8	457.9	460.6	455.3	456.2
17.5°	481.6	480.7	475.5	472.0	472.8	475.5	477.2	476.3	476.3	473.7	474.6
20°	510.5	510.5	503.5	497.4	487.7	487.7	488.6	487.7	489.5	491.2	493.8
22.5°	532.4	530.6	528.0	522.7	512.2	503.5	503.5	500.0	502.6	503.5	508.7
25°	560.4	558.6	552.5	552.5	542.0	530.6	528.9	523.6	529.7	518.4	527.1
27.5°	594.5	592.8	584.9	581.4	576.2	562.1	558.6	559.5	565.6	549.0	557.8
30°	637.5	635.7	626.1	616.4	607.7	592.8	591.0	590.2	604.2	584.9	596.3
32.5°	691.7	691.7	681.2	668.1	650.6	630.4	623.4	624.3	643.6	622.6	641.8
35°	774.0	763.5	744.3	724.1	705.7	682.1	672.5	670.7	688.2	667.2	689.1
37.5°	826.6	819.6	802.1	787.2	767.0	744.3	737.3	739.9	754.8	724.1	755.7
40°	873.9	873.0	861.6	852.0	831.8	809.1	817.8	852.9	892.3	832.7	833.6
42.5°	905.4	907.1	906.3	907.1	895.8	872.1	887.0	936.0	1003.5	968.4	936.0
45°	910.6	916.8	919.4	936.9	948.3	934.3	942.2	993.8	1128.7	1183.0	1036.7
47.5°	923.8	929.9	924.7	945.7	998.2	997.3	1028.9	1048.1	1066.5	1075.3	1185.6
50°	941.3	952.7	947.4	964.9	1007.8	1032.4	1059.5	1084.0	1069.1	1014.0	1043.7
52.5°	942.2	955.3	984.2	1001.7	1043.7	1038.5	1056.9	1043.7	1066.5	1009.6	1038.5
55°	865.1	867.7	951.8	1040.2	1113.8	1098.9	1087.5	1057.7	1086.6	1015.7	1052.5
57.5°	743.4	752.2	839.7	988.6	1146.2	1159.3	1155.8	1153.2	1176.0	1081.4	1121.7
60°	609.4	619.9	703.1	878.2	1078.8	1112.9	1160.2	1189.1	1247.8	1210.1	1276.7
62.5°	380.0	387.9	479.8	698.7	951.8	1019.2	1088.4	1122.5	1207.5	1225.0	1337.9
65°	181.3	183.9	219.8	380.0	691.7	818.7	921.2	993.8	1098.0	1176.8	1329.2
67.5°	141.0	141.9	155.0	202.3	354.6	439.6	556.0	652.3	763.5	978.9	1168.1
70°	113.0	113.0	123.5	148.9	219.8	231.2	260.9	293.3	340.6	514.0	667.2
72.5°	94.6	94.6	101.6	117.3	162.9	165.5	163.7	161.1	161.1	203.1	259.2
75°	79.7	78.8	83.2	93.7	120.8	124.3	122.6	116.5	109.5	109.5	123.5
77.5°	64.8	64.8	68.3	73.6	87.6	89.3	89.3	84.1	77.9	78.8	84.9
80°	50.8	50.8	53.4	56.9	61.3	60.4	60.4	55.2	50.8	49.9	53.4
82.5°	36.8	37.7	43.8	41.2	39.4	36.8	36.8	35.9	32.4	29.8	31.5
85°	11.4	12.3	21.0	24.5	20.1	16.6	15.8	13.1	14.0	11.4	13.1
87.5°	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.9
90°	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):**

	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77°
0°	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7
2.5°	361.6	363.4	359.9	359.9	355.5	358.1	353.8	354.6	350.2	352.0	352.0
5°	379.1	380.0	375.6	373.9	369.5	369.5	365.1	365.1	359.0	360.8	359.0
7.5°	395.8	395.8	391.4	387.9	383.5	381.8	376.5	373.9	368.6	367.8	365.1
10°	409.8	409.8	403.7	400.2	394.9	392.3	385.3	382.6	376.5	372.1	369.5
12.5°	427.3	425.6	418.5	415.0	406.3	405.4	394.9	393.2	384.4	381.8	377.4
15°	448.3	450.1	438.7	437.8	425.6	424.7	410.7	409.8	396.7	395.8	389.7
17.5°	471.1	474.6	465.0	464.1	449.2	449.2	432.6	431.7	414.2	413.3	405.4
20°	491.2	495.6	489.5	491.2	478.1	479.0	460.6	460.6	436.1	434.3	427.3
22.5°	509.6	518.4	513.1	522.7	509.6	515.7	491.2	495.6	466.7	463.2	452.7
25°	528.0	539.4	537.6	553.4	543.8	554.3	528.9	537.6	500.0	502.6	488.6
27.5°	546.4	561.3	559.5	582.3	578.8	599.8	577.9	587.5	546.4	549.0	533.3
30°	577.0	593.7	587.5	611.2	611.2	645.3	628.7	643.6	598.0	603.3	584.9
32.5°	618.2	637.5	619.1	649.7	648.0	692.6	679.5	704.9	660.2	667.2	644.5
35°	662.8	693.5	663.7	697.9	692.6	739.0	730.3	771.4	724.1	732.0	709.3
37.5°	721.5	758.3	718.9	748.7	725.0	778.4	773.2	829.2	781.1	801.2	774.0
40°	790.7	819.6	770.5	795.9	756.5	811.7	802.9	880.0	835.3	867.7	843.2
42.5°	854.6	874.7	809.9	841.5	794.2	850.2	834.5	927.3	888.8	938.7	911.5
45°	912.4	935.2	849.4	884.4	831.8	893.1	866.0	972.8	946.5	1021.8	994.7
47.5°	994.7	961.4	885.3	930.8	872.1	939.5	903.6	1026.2	1016.6	1123.4	1091.9
50°	967.6	989.4	915.0	962.3	908.9	991.2	951.8	1090.1	1092.8	1233.7	1215.4
52.5°	970.2	1007.0	937.8	1003.5	951.8	1063.0	1021.8	1167.2	1179.5	1340.6	1315.2
55°	985.9	1040.2	971.9	1060.4	1012.2	1142.7	1113.8	1250.4	1271.4	1441.3	1426.4
57.5°	1025.4	1100.7	1030.6	1146.2	1096.3	1233.7	1207.5	1336.2	1365.1	1542.0	1537.6
60°	1176.8	1266.1	1143.6	1271.4	1204.9	1337.1	1302.0	1426.4	1455.3	1638.3	1649.7
62.5°	1345.8	1500.8	1428.1	1561.2	1385.2	1519.2	1415.9	1537.6	1539.3	1741.6	1777.5
65°	1389.6	1627.8	1689.9	1937.7	1845.8	1983.3	1707.5	1788.9	1683.8	1929.9	1981.5
67.5°	1373.0	1664.6	1837.0	2116.4	2220.6	2460.5	2414.1	2386.1	2142.6	2319.5	2381.7
70°	1007.8	1316.9	1739.0	2022.7	2323.0	2480.6	2730.2	2755.6	2745.1	2720.5	2761.7
72.5°	458.8	719.8	1176.8	1500.8	1996.4	2102.4	2464.0	2457.0	2828.2	2736.3	2801.1
75°	180.4	277.6	560.4	838.0	1380.9	1511.3	1921.1	1819.5	2282.7	2147.9	2286.2
77.5°	98.9	124.3	210.1	359.9	753.9	823.1	1176.0	1006.1	1415.9	1182.1	1228.5
80°	59.5	74.4	96.3	136.6	320.5	338.9	501.7	404.5	578.8	439.6	426.4
82.5°	32.4	40.3	48.2	67.4	119.1	132.2	173.4	155.9	185.6	158.5	155.0
85°	13.1	17.5	18.4	27.1	39.4	45.5	55.2	59.5	72.7	66.5	64.8
87.5°	0.0	0.9	0.0	1.8	0.0	1.8	0.0	2.6	2.6	4.4	5.3
90°	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):**

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°
0°	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7
2.5°	349.4	352.0	348.5	348.5	344.1	346.7	344.1	341.5	337.1	338.0	331.9
5°	355.5	357.3	352.9	351.1	348.5	347.6	342.4	337.1	331.0	331.0	324.0
7.5°	361.6	361.6	355.5	355.5	349.4	347.6	339.7	331.0	322.2	321.4	310.8
10°	365.1	364.3	356.4	356.4	347.6	346.7	337.1	324.0	311.7	308.2	293.3
12.5°	372.1	371.3	361.6	359.9	348.5	348.5	334.5	317.0	299.5	293.3	272.3
15°	380.9	381.8	370.4	367.8	354.6	353.8	334.5	308.2	284.6	274.9	249.6
17.5°	394.9	395.8	380.0	377.4	361.6	359.0	335.4	297.7	264.4	253.9	231.2
20°	413.3	410.7	389.7	388.8	367.8	365.1	334.5	281.9	244.3	233.8	213.7
22.5°	436.1	433.4	406.3	403.7	379.1	374.8	333.6	265.3	225.9	214.5	201.4
25°	467.6	464.1	430.8	427.3	396.7	389.7	332.7	247.8	210.1	201.4	193.5
27.5°	507.0	500.0	459.7	456.2	415.0	406.3	329.2	227.7	194.4	188.3	184.8
30°	554.3	548.1	496.5	491.2	439.6	428.2	325.7	209.3	183.0	180.4	177.8
32.5°	610.3	604.2	541.1	535.0	471.1	454.4	319.6	194.4	176.0	176.0	172.5
35°	669.0	663.7	589.3	584.9	506.1	484.2	311.7	181.3	169.9	169.9	166.4
37.5°	721.5	725.9	641.8	638.3	541.1	514.0	303.0	172.5	164.6	162.9	159.4
40°	778.4	788.9	690.9	693.5	577.9	545.5	292.5	165.5	158.5	156.7	155.9
42.5°	836.2	856.4	742.5	752.2	614.7	577.9	284.6	161.1	155.9	152.4	151.5
45°	908.0	936.9	806.4	824.8	657.6	617.3	281.9	155.9	148.0	143.6	141.0
47.5°	997.3	1035.9	885.3	906.3	714.5	664.6	287.2	154.1	142.7	137.5	132.2
50°	1103.3	1140.1	978.9	987.7	778.4	716.3	298.6	156.7	141.0	133.1	125.2
52.5°	1215.4	1243.4	1077.9	1068.3	845.0	767.0	311.7	157.6	136.6	128.7	119.1
55°	1330.9	1346.7	1169.8	1144.4	905.4	817.8	329.2	156.7	133.1	124.3	112.1
57.5°	1443.9	1449.1	1251.3	1226.7	964.9	878.2	351.1	154.1	127.8	119.1	105.9
60°	1554.2	1563.0	1341.4	1318.7	1029.7	956.2	382.6	149.7	120.8	114.7	100.7
62.5°	1675.1	1704.0	1449.1	1452.7	1119.0	1077.9	442.2	144.5	113.8	106.8	92.8
65°	1839.7	1950.0	1626.9	1709.2	1290.7	1307.3	556.0	129.6	104.2	95.4	85.8
67.5°	2252.1	2372.9	2058.6	2091.9	1692.6	1593.6	627.8	110.3	91.9	85.8	79.7
70°	2768.7	2682.0	2458.7	2257.3	1927.2	1638.3	552.5	92.8	81.4	77.9	74.4
72.5°	2910.6	2599.7	2415.8	2113.7	1781.9	1429.0	422.9	79.7	72.7	70.9	68.3
75°	2557.7	2107.6	2118.1	1679.4	1477.2	1089.3	289.0	68.3	63.0	62.2	61.3
77.5°	1635.7	1083.1	1318.7	830.1	852.9	504.4	141.0	56.9	54.3	54.3	52.5
80°	581.4	360.8	408.0	261.8	238.2	160.2	76.2	45.5	43.8	44.7	43.8
82.5°	174.2	138.3	135.7	105.9	82.3	67.4	42.0	35.0	33.3	34.1	32.4
85°	70.0	54.3	45.5	35.0	28.9	26.3	22.8	23.6	21.0	22.8	20.1
87.5°	4.4	3.5	2.6	3.5	0.0	1.8	4.4	3.5	0.9	3.5	2.6
90°	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):**

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°
0°	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7	346.7
2.5°	336.2	330.1	332.7	330.1	331.9	326.6	328.4	324.0	324.0	323.1	318.7
5°	324.9	318.7	317.8	311.7	312.6	305.6	304.7	296.8	296.8	289.8	276.7
7.5°	309.1	299.5	298.6	286.3	285.5	275.8	272.3	263.6	262.7	254.8	246.9
10°	289.0	274.1	271.4	255.7	256.6	246.0	245.2	239.0	239.0	235.5	235.5
12.5°	266.2	249.6	247.8	235.5	236.4	229.4	230.3	226.8	228.5	230.3	236.4
15°	245.2	232.0	230.3	222.4	223.3	221.5	224.2	224.2	226.8	231.2	241.7
17.5°	227.7	216.3	217.2	213.7	217.2	216.3	221.5	220.7	225.9	231.2	244.3
20°	211.9	205.8	208.4	207.5	211.9	211.9	216.3	217.2	221.5	228.5	243.4
22.5°	201.4	199.6	202.3	202.3	205.8	206.6	211.0	213.7	216.3	223.3	236.4
25°	195.3	194.4	197.0	197.9	200.5	201.4	205.8	205.8	210.1	214.5	221.5
27.5°	186.5	184.8	188.3	188.3	191.8	190.9	196.1	194.4	198.8	200.5	202.3
30°	180.4	177.8	180.4	179.5	182.1	179.5	182.1	179.5	182.1	182.1	179.5
32.5°	174.2	171.6	172.5	169.0	171.6	168.1	169.0	165.5	167.2	165.5	166.4
35°	168.1	164.6	164.6	160.2	160.2	155.9	157.6	154.1	157.6	160.2	159.4
37.5°	159.4	156.7	156.7	153.2	155.0	153.2	156.7	155.0	155.9	152.4	146.2
40°	154.1	155.9	155.0	157.6	155.9	153.2	150.6	145.4	144.5	142.7	139.2
42.5°	146.2	148.0	143.6	147.1	144.5	145.4	143.6	141.0	139.2	137.5	134.0
45°	134.8	134.8	131.3	136.6	134.0	139.2	137.5	137.5	135.7	133.1	130.5
47.5°	125.2	126.1	122.6	127.0	125.2	132.2	131.3	134.0	134.0	132.2	125.2
50°	119.1	117.3	114.7	119.1	118.2	124.3	125.2	130.5	129.6	130.5	124.3
52.5°	113.8	110.3	107.7	110.3	110.3	115.6	117.3	123.5	124.3	126.1	122.6
55°	107.7	103.3	101.6	103.3	103.3	108.6	111.2	115.6	118.2	123.5	121.7
57.5°	102.4	96.3	94.6	96.3	97.2	102.4	105.1	109.5	113.0	120.0	119.1
60°	96.3	91.1	89.3	91.9	92.8	98.1	100.7	105.1	107.7	115.6	115.6
62.5°	89.3	84.9	84.9	85.8	87.6	92.8	94.6	100.7	101.6	111.2	112.1
65°	83.2	80.6	80.6	81.4	83.2	87.6	88.4	94.6	95.4	105.1	107.7
67.5°	77.9	76.2	76.2	77.1	77.9	81.4	82.3	88.4	90.2	98.9	103.3
70°	72.7	70.9	70.0	70.0	72.7	75.3	77.1	83.2	84.1	91.9	97.2
72.5°	66.5	64.8	64.8	63.9	66.5	68.3	71.8	75.3	77.1	84.9	88.4
75°	60.4	58.7	58.7	57.8	59.5	63.0	63.9	67.4	68.3	75.3	78.8
77.5°	52.5	50.8	50.8	50.8	52.5	53.4	54.3	57.8	59.5	65.7	69.2
80°	43.8	42.0	42.9	42.0	44.7	41.2	43.8	47.3	49.0	52.5	50.8
82.5°	33.3	30.6	31.5	31.5	32.4	29.8	31.5	33.3	35.0	37.7	36.8
85°	21.0	18.4	20.1	18.4	20.1	17.5	19.3	19.3	21.0	19.3	18.4
87.5°	4.4	1.8	4.4	1.8	5.3	0.0	2.6	0.0	1.8	0.9	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



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**CANDELA DISTRIBUTION (continued):**

	155°	165°	175°	180°
0°	346.7	346.7	346.7	346.7
2.5°	314.3	310.8	309.1	308.2
5°	269.7	263.6	261.8	260.1
7.5°	242.5	240.8	240.8	239.9
10°	237.3	239.9	240.8	240.8
12.5°	243.4	247.8	251.3	251.3
15°	251.3	259.2	263.6	263.6
17.5°	257.4	267.9	272.3	273.2
20°	258.3	268.8	274.9	275.8
22.5°	250.4	257.4	261.8	261.8
25°	230.3	233.8	236.4	236.4
27.5°	204.9	204.0	203.1	206.6
30°	178.6	176.9	173.4	176.9
32.5°	169.0	162.9	154.1	156.7
35°	154.1	152.4	148.0	148.9
37.5°	148.9	163.7	162.9	163.7
40°	142.7	161.1	160.2	162.0
42.5°	137.5	148.0	137.5	138.3
45°	127.8	132.2	123.5	123.5
47.5°	123.5	121.7	118.2	117.3
50°	120.0	120.0	118.2	116.5
52.5°	117.3	115.6	121.7	120.8
55°	113.8	112.1	116.5	116.5
57.5°	111.2	106.8	113.8	113.8
60°	108.6	104.2	111.2	111.2
62.5°	106.8	101.6	110.3	109.5
65°	104.2	98.9	110.3	108.6
67.5°	100.7	93.7	108.6	105.9
70°	93.7	87.6	102.4	95.4
72.5°	86.7	79.7	87.6	81.4
75°	76.2	70.0	70.9	70.0
77.5°	63.9	56.9	55.2	56.0
80°	48.2	43.8	42.0	42.0
82.5°	35.0	29.8	30.6	25.4
85°	15.8	11.4	8.8	8.8
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)