

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: P271507

Luminaire Tested: **ISS-AF-450-LED-E1-T2-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P271507
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-T2-7027
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE II
Light Source: (16) 2700K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2548.9 lumens
Efficiency: N/A
Efficacy: 100.7 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

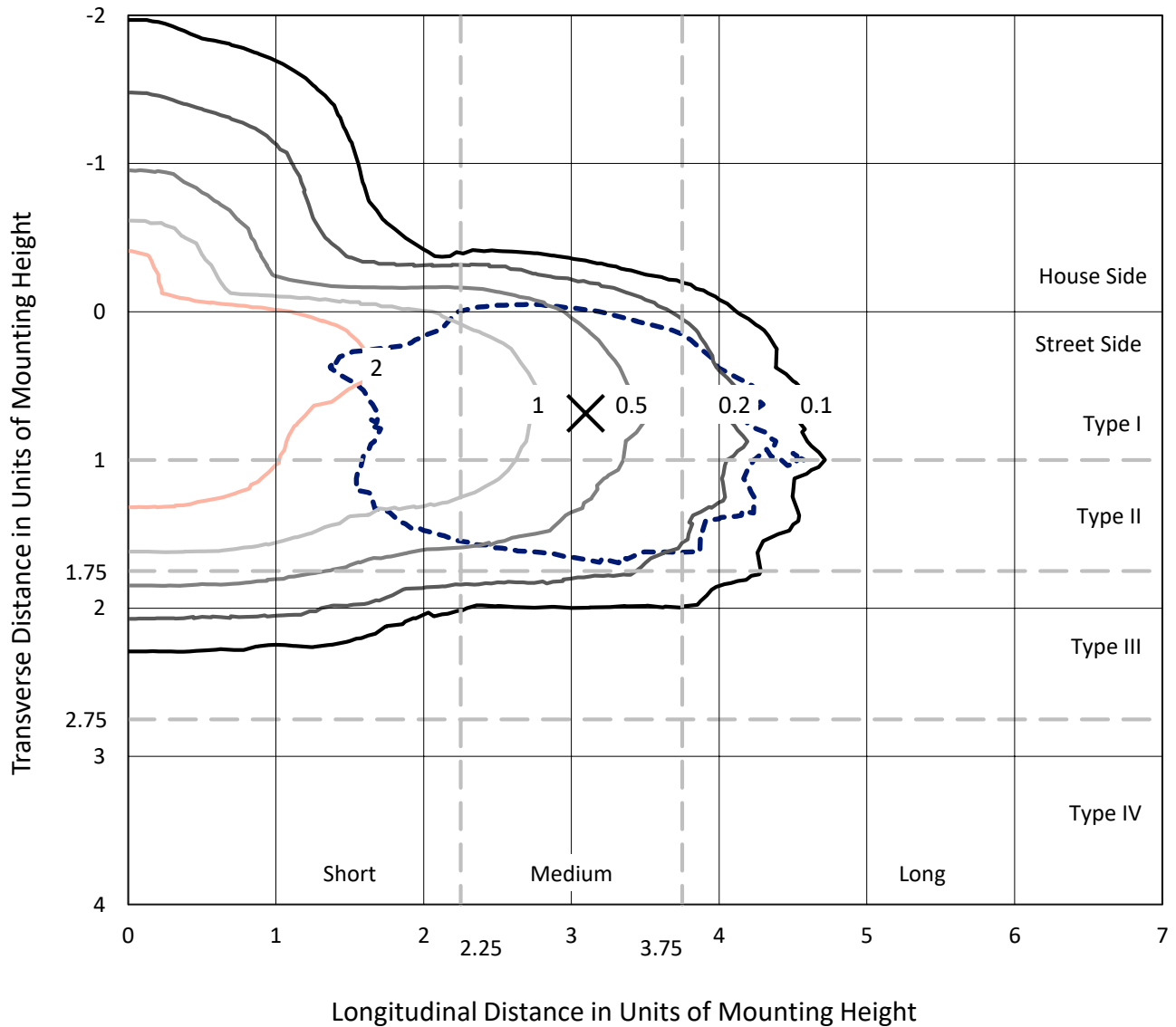
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

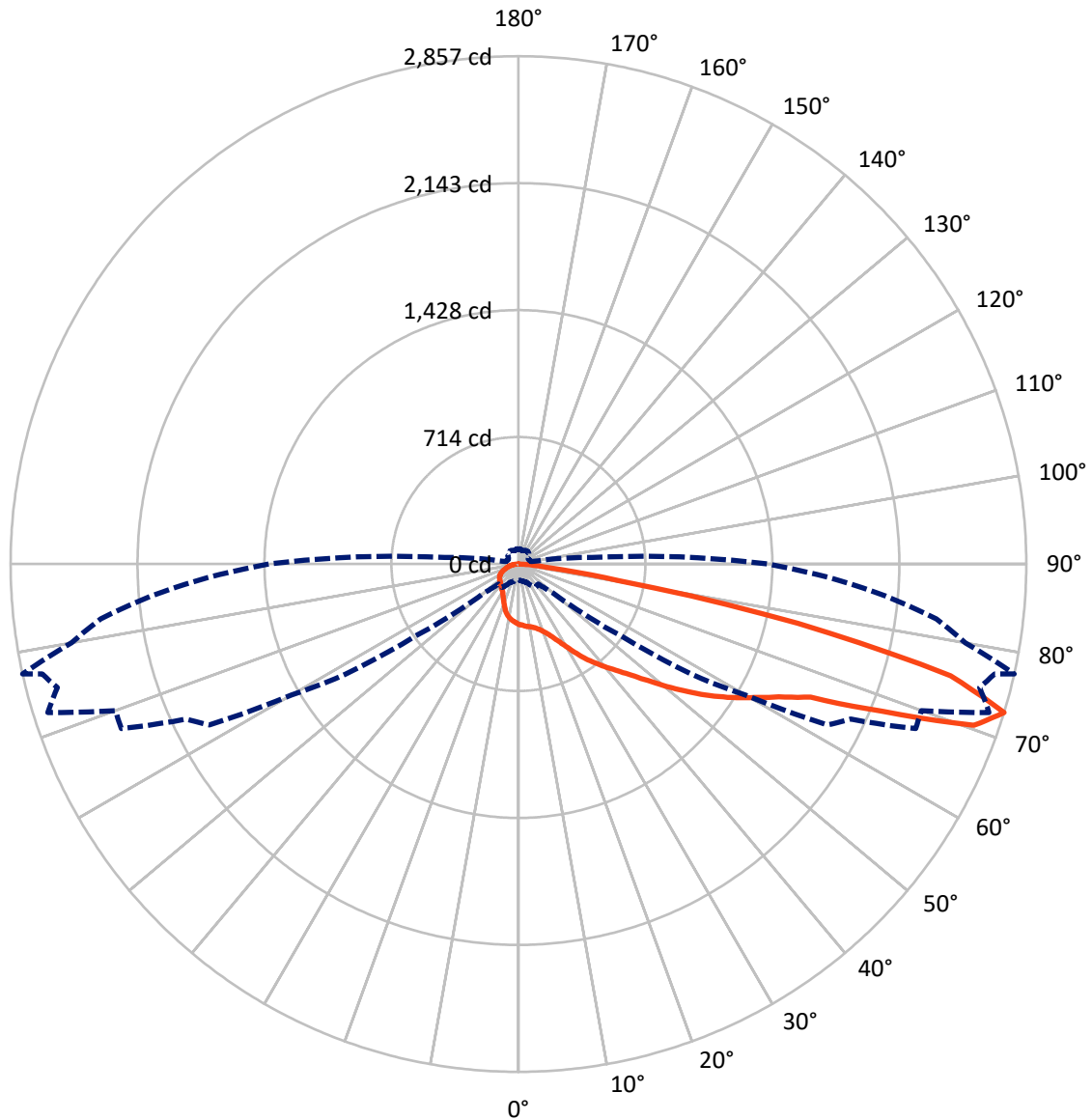
× Max cd
 - - - 1/2 Max cd



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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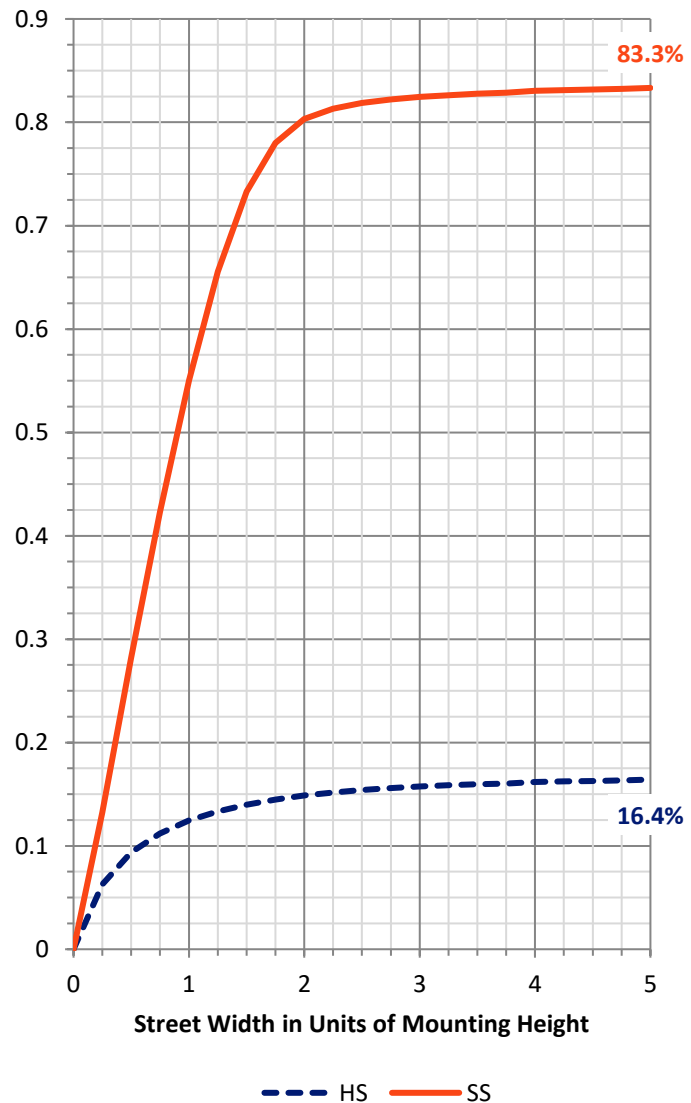
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	422.4	0.0	422.4
	% Fixture	16.6	0.0	16.6
Street Side	Lumens	2126.5	0.0	2126.5
	% Fixture	83.4	0.0	83.4
Total	Lumens	2548.9	0.0	2548.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.6	1.2
10°-20°	96.9	3.8
20°-30°	172.1	6.8
30°-40°	272.6	10.7
40°-50°	409.0	16.0
50°-60°	530.0	20.8
60°-70°	602.2	23.6
70°-80°	399.6	15.7
80°-90°	35.0	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°	2548.9	100.0
0°-180°	2548.9	100.0



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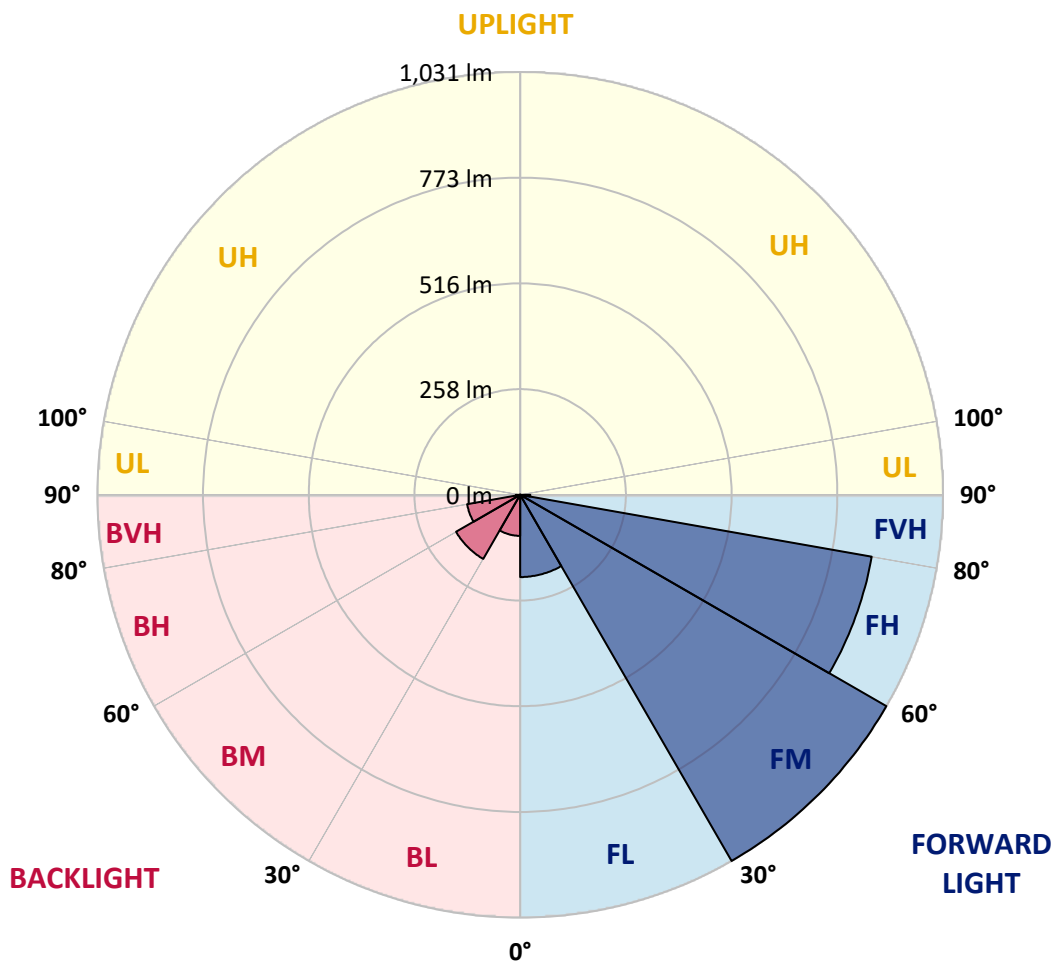
CATALOG NUMBER: ISS-AF-450-LED-E1-T2-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	200.5	7.9			
FM	(30°-60°)	1031.1	40.5			
FH	(60°-80°)	870.5	34.2			G1/1800
FVH	(80°-90°)	24.4	1.0			G1/100
BL	(0°-30°)	100.1	3.9	B0/110		
BM	(30°-60°)	180.4	7.1	B0/220		
BH	(60°-80°)	131.3	5.2	B1/500		G1/500
BVH	(80°-90°)	10.5	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°	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3
2.5°	368.7	367.0	366.1	364.4	362.6	361.7	359.2	357.5	360.1	359.2	359.2
5°	396.2	394.4	391.9	389.3	385.9	383.3	380.7	378.2	379.8	378.2	376.4
7.5°	418.5	416.8	413.4	410.7	407.3	403.9	400.5	399.7	397.9	395.3	394.4
10°	431.5	429.7	428.0	426.2	421.1	418.5	414.2	411.6	412.5	409.1	409.1
12.5°	443.4	441.8	440.9	440.9	436.6	434.0	432.3	429.7	431.5	426.2	424.6
15°	454.6	452.9	450.3	452.9	452.0	451.2	450.3	449.4	452.0	446.9	447.7
17.5°	472.7	471.8	466.7	463.3	464.1	466.7	468.4	467.5	467.5	465.0	465.8
20°	501.1	501.1	494.2	488.2	478.7	478.7	479.5	478.7	480.4	482.1	484.6
22.5°	522.5	520.7	518.2	513.0	502.7	494.2	494.2	490.7	493.3	494.2	499.3
25°	550.0	548.2	542.3	542.3	532.0	520.7	519.1	513.9	519.8	508.8	517.3
27.5°	583.4	581.8	574.1	570.6	565.6	551.6	548.2	549.1	555.2	538.8	547.4
30°	625.7	624.0	614.5	605.0	596.5	581.8	580.0	579.2	593.0	574.1	585.2
32.5°	678.8	678.8	668.6	655.8	638.5	618.8	611.8	612.7	631.7	611.0	629.9
35°	759.7	749.4	730.5	710.6	692.6	669.5	660.1	658.3	675.4	654.9	676.3
37.5°	811.3	804.4	787.3	772.6	752.8	730.5	723.7	726.2	740.8	710.6	741.7
40°	857.7	856.8	845.7	836.2	816.4	794.1	802.6	837.1	875.8	817.3	818.2
42.5°	888.6	890.3	889.5	890.3	879.2	855.9	870.5	918.7	984.9	950.5	918.7
45°	893.7	899.8	902.3	919.5	930.7	917.0	924.7	975.4	1107.8	1161.1	1017.5
47.5°	906.7	912.7	907.6	928.2	979.7	978.8	1009.9	1028.6	1046.7	1055.4	1163.7
50°	923.9	935.0	929.8	947.0	989.1	1013.3	1039.9	1064.0	1049.3	995.2	1024.3
52.5°	924.7	937.7	965.9	983.1	1024.3	1019.3	1037.4	1024.3	1046.7	990.9	1019.3
55°	849.1	851.6	934.1	1020.9	1093.1	1078.5	1067.4	1038.1	1066.5	996.8	1033.1
57.5°	729.6	738.2	824.1	970.3	1124.9	1137.8	1134.4	1131.9	1154.2	1061.3	1101.0
60°	598.1	608.4	690.1	861.9	1058.8	1092.2	1138.7	1167.1	1224.7	1187.6	1253.0
62.5°	373.0	380.7	470.9	685.8	934.1	1000.4	1068.3	1101.7	1185.1	1202.3	1313.1
65°	178.0	180.5	215.8	373.0	678.8	803.5	904.1	975.4	1077.7	1155.0	1304.6
67.5°	138.4	139.2	152.2	198.5	348.0	431.5	545.7	640.2	749.4	960.7	1146.5
70°	110.9	110.9	121.2	146.2	215.8	226.9	256.1	287.9	334.3	504.5	654.9
72.5°	92.9	92.9	99.7	115.2	159.9	162.4	160.7	158.1	158.1	199.3	254.4
75°	78.2	77.3	81.7	92.0	118.6	122.0	120.4	114.4	107.4	107.4	121.2
77.5°	63.6	63.6	67.0	72.2	86.0	87.7	87.7	82.6	76.4	77.3	83.4
80°	49.9	49.9	52.4	55.9	60.2	59.3	59.3	54.2	49.9	49.0	52.4
82.5°	36.1	37.0	43.0	40.4	38.6	36.1	36.1	35.2	31.8	29.3	30.9
85°	11.2	12.0	20.6	24.1	19.8	16.3	15.5	12.8	13.7	11.2	12.8
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°	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3
2.5°	354.9	356.6	353.2	353.2	348.9	351.5	347.3	348.0	343.7	345.5	345.5
5°	372.1	373.0	368.7	367.0	362.6	362.6	358.3	358.3	352.3	354.1	352.3
7.5°	388.4	388.4	384.1	380.7	376.4	374.8	369.6	367.0	361.7	361.0	358.3
10°	402.2	402.2	396.2	392.8	387.6	385.0	378.2	375.5	369.6	365.3	362.6
12.5°	419.4	417.7	410.7	407.3	398.8	397.9	387.6	385.9	377.3	374.8	370.4
15°	440.0	441.8	430.6	429.7	417.7	416.8	403.1	402.2	389.3	388.4	382.5
17.5°	462.4	465.8	456.4	455.5	440.9	440.9	424.6	423.7	406.6	405.7	397.9
20°	482.1	486.4	480.4	482.1	469.3	470.2	452.0	452.0	428.0	426.2	419.4
22.5°	500.2	508.8	503.6	513.0	500.2	506.1	482.1	486.4	458.0	454.6	444.3
25°	518.2	529.4	527.7	543.1	533.8	544.0	519.1	527.7	490.7	493.3	479.5
27.5°	536.3	550.9	549.1	571.5	568.1	588.7	567.2	576.6	536.3	538.8	523.4
30°	566.3	582.7	576.6	599.9	599.9	633.3	617.0	631.7	587.0	592.2	574.1
32.5°	606.7	625.7	607.6	637.7	636.0	679.7	666.9	691.9	647.9	654.9	632.6
35°	650.6	680.6	651.5	685.0	679.7	725.3	716.8	757.1	710.6	718.5	696.2
37.5°	708.1	744.2	705.6	734.8	711.5	764.0	758.9	813.9	766.6	786.4	759.7
40°	776.0	804.4	756.2	781.2	742.4	796.7	788.0	863.7	819.8	851.6	827.6
42.5°	838.7	858.5	794.9	825.9	779.5	834.4	819.1	910.2	872.3	921.3	894.6
45°	895.5	917.9	833.6	868.0	816.4	876.6	850.0	954.8	928.9	1002.9	976.3
47.5°	976.3	943.6	868.9	913.6	855.9	922.1	886.9	1007.2	997.7	1102.6	1071.7
50°	949.7	971.1	898.0	944.5	892.1	972.9	934.1	1069.9	1072.6	1210.8	1192.9
52.5°	952.2	988.3	920.4	984.9	934.1	1043.3	1002.9	1145.6	1157.6	1315.7	1290.9
55°	967.7	1020.9	953.9	1040.8	993.4	1121.5	1093.1	1227.3	1247.8	1414.7	1400.0
57.5°	1006.4	1080.3	1011.5	1124.9	1076.0	1210.8	1185.1	1311.4	1339.8	1513.5	1509.2
60°	1155.0	1242.6	1122.4	1247.8	1182.6	1312.3	1277.9	1400.0	1428.3	1608.0	1619.1
62.5°	1320.9	1473.0	1401.6	1532.3	1359.6	1491.1	1389.7	1509.2	1510.8	1709.4	1744.6
65°	1363.9	1597.6	1658.6	1901.8	1811.6	1946.5	1675.9	1755.7	1652.6	1894.2	1944.8
67.5°	1347.5	1633.7	1803.0	2077.2	2179.5	2414.9	2369.4	2341.9	2102.9	2276.6	2337.6
70°	989.1	1292.5	1706.8	1985.3	2280.0	2434.7	2679.6	2704.5	2694.3	2670.1	2710.5
72.5°	450.3	706.4	1155.0	1473.0	1959.5	2063.5	2418.3	2411.5	2775.9	2685.7	2749.3
75°	177.1	272.5	550.0	822.5	1355.4	1483.3	1885.5	1785.8	2240.5	2108.1	2243.9
77.5°	97.1	122.0	206.3	353.2	739.9	807.8	1154.2	987.5	1389.7	1160.3	1205.7
80°	58.4	73.0	94.5	134.0	314.6	332.6	492.5	397.1	568.1	431.5	418.5
82.5°	31.8	39.5	47.3	66.1	116.9	129.7	170.2	153.0	182.2	155.6	152.2
85°	12.8	17.2	18.1	26.6	38.6	44.6	54.2	58.4	71.3	65.3	63.6
87.5°	0.0	0.9	0.0	1.8	0.0	1.8	0.0	2.5	2.5	4.3	5.2
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°	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3
2.5°	343.0	345.5	342.1	342.1	337.8	340.3	337.8	335.2	330.8	331.7	325.7
5°	348.9	350.7	346.4	344.6	342.1	341.2	336.1	330.8	324.8	324.8	318.0
7.5°	354.9	354.9	348.9	348.9	343.0	341.2	333.5	324.8	316.2	315.5	305.1
10°	358.3	357.5	349.8	349.8	341.2	340.3	330.8	318.0	306.0	302.5	287.9
12.5°	365.3	364.4	354.9	353.2	342.1	342.1	328.3	311.2	293.9	287.9	267.2
15°	373.9	374.8	363.5	361.0	348.0	347.3	328.3	302.5	279.4	269.9	245.0
17.5°	387.6	388.4	373.0	370.4	354.9	352.3	329.2	292.2	259.5	249.2	226.9
20°	405.7	403.1	382.5	381.6	361.0	358.3	328.3	276.7	239.8	229.4	209.8
22.5°	428.0	425.3	398.8	396.2	372.1	367.9	327.4	260.4	221.7	210.6	197.6
25°	458.9	455.5	422.8	419.4	389.3	382.5	326.5	243.2	206.3	197.6	189.9
27.5°	497.6	490.7	451.2	447.7	407.3	398.8	323.1	223.5	190.8	184.8	181.4
30°	544.0	537.9	487.3	482.1	431.5	420.2	319.7	205.4	179.6	177.1	174.5
32.5°	599.0	593.0	531.1	525.1	462.4	446.0	313.7	190.8	172.7	172.7	169.3
35°	656.6	651.5	578.4	574.1	496.8	475.2	306.0	178.0	166.7	166.7	163.3
37.5°	708.1	712.4	629.9	626.5	531.1	504.5	297.4	169.3	161.5	159.9	156.5
40°	764.0	774.2	678.1	680.6	567.2	535.4	287.1	162.4	155.6	153.8	153.0
42.5°	820.7	840.5	728.7	738.2	603.3	567.2	279.4	158.1	153.0	149.6	148.7
45°	891.2	919.5	791.5	809.6	645.4	605.9	276.7	153.0	145.3	140.9	138.4
47.5°	978.8	1016.7	868.9	889.5	701.3	652.3	281.9	151.3	140.0	134.9	129.7
50°	1082.9	1119.0	960.7	969.5	764.0	703.0	293.0	153.8	138.4	130.6	122.9
52.5°	1192.9	1220.3	1057.9	1048.5	829.3	752.8	306.0	154.7	134.0	126.3	116.9
55°	1306.2	1321.8	1148.1	1123.2	888.6	802.6	323.1	153.8	130.6	122.0	110.0
57.5°	1417.2	1422.3	1228.2	1204.0	947.0	861.9	344.6	151.3	125.4	116.9	103.9
60°	1525.4	1534.0	1316.6	1294.3	1010.6	938.5	375.5	147.0	118.6	112.6	98.8
62.5°	1644.1	1672.5	1422.3	1425.8	1098.3	1057.9	434.0	141.8	111.7	104.8	91.1
65°	1805.6	1913.9	1596.7	1677.6	1266.8	1283.0	545.7	127.2	102.2	93.6	84.2
67.5°	2210.4	2328.9	2020.5	2053.2	1661.2	1564.1	616.1	108.2	90.2	84.2	78.2
70°	2717.5	2632.3	2413.2	2215.5	1891.5	1608.0	542.3	91.1	79.9	76.4	73.0
72.5°	2856.7	2551.5	2371.1	2074.5	1748.9	1402.5	415.1	78.2	71.3	69.6	67.0
75°	2510.3	2068.5	2078.9	1648.3	1449.9	1069.2	283.7	67.0	61.8	61.1	60.2
77.5°	1605.5	1063.1	1294.3	814.8	837.1	495.1	138.4	55.9	53.3	53.3	51.6
80°	570.6	354.1	400.5	256.9	233.8	157.2	74.8	44.6	43.0	43.8	43.0
82.5°	170.9	135.7	133.2	103.9	80.8	66.1	41.2	34.3	32.7	33.5	31.8
85°	68.7	53.3	44.6	34.3	28.4	25.8	22.4	23.2	20.6	22.4	19.8
87.5°	4.3	3.4	2.5	3.4	0.0	1.8	4.3	3.4	0.9	3.4	2.5
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°	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3	340.3
2.5°	329.9	324.0	326.5	324.0	325.7	320.5	322.3	318.0	318.0	317.1	312.8
5°	318.9	312.8	311.9	306.0	306.8	299.9	299.0	291.3	291.3	284.4	271.6
7.5°	303.4	293.9	293.0	281.0	280.2	270.7	267.2	258.7	257.8	250.1	242.4
10°	283.7	269.0	266.3	251.0	251.9	241.5	240.7	234.5	234.5	231.1	231.1
12.5°	261.2	245.0	243.2	231.1	232.0	225.1	226.0	222.6	224.3	226.0	232.0
15°	240.7	227.7	226.0	218.3	219.2	217.4	220.1	220.1	222.6	226.9	237.2
17.5°	223.5	212.3	213.2	209.8	213.2	212.3	217.4	216.6	221.7	226.9	239.8
20°	208.0	202.0	204.5	203.6	208.0	208.0	212.3	213.2	217.4	224.3	238.9
22.5°	197.6	195.9	198.5	198.5	202.0	202.7	207.1	209.8	212.3	219.2	232.0
25°	191.7	190.8	193.3	194.2	196.8	197.6	202.0	202.0	206.3	210.6	217.4
27.5°	183.1	181.4	184.8	184.8	188.3	187.4	192.5	190.8	195.1	196.8	198.5
30°	177.1	174.5	177.1	176.2	178.8	176.2	178.8	176.2	178.8	178.8	176.2
32.5°	170.9	168.4	169.3	165.8	168.4	165.0	165.8	162.4	164.1	162.4	163.3
35°	165.0	161.5	161.5	157.2	157.2	153.0	154.7	151.3	154.7	157.2	156.5
37.5°	156.5	153.8	153.8	150.4	152.2	150.4	153.8	152.2	153.0	149.6	143.5
40°	151.3	153.0	152.2	154.7	153.0	150.4	147.8	142.7	141.8	140.0	136.6
42.5°	143.5	145.3	140.9	144.4	141.8	142.7	140.9	138.4	136.6	134.9	131.5
45°	132.3	132.3	128.9	134.0	131.5	136.6	134.9	134.9	133.2	130.6	128.1
47.5°	122.9	123.8	120.4	124.7	122.9	129.7	128.9	131.5	131.5	129.7	122.9
50°	116.9	115.2	112.6	116.9	116.0	122.0	122.9	128.1	127.2	128.1	122.0
52.5°	111.7	108.2	105.7	108.2	108.2	113.5	115.2	121.2	122.0	123.8	120.4
55°	105.7	101.4	99.7	101.4	101.4	106.6	109.1	113.5	116.0	121.2	119.5
57.5°	100.5	94.5	92.9	94.5	95.4	100.5	103.1	107.4	110.9	117.8	116.9
60°	94.5	89.4	87.7	90.2	91.1	96.3	98.8	103.1	105.7	113.5	113.5
62.5°	87.7	83.4	83.4	84.2	86.0	91.1	92.9	98.8	99.7	109.1	110.0
65°	81.7	79.1	79.1	79.9	81.7	86.0	86.8	92.9	93.6	103.1	105.7
67.5°	76.4	74.8	74.8	75.6	76.4	79.9	80.8	86.8	88.6	97.1	101.4
70°	71.3	69.6	68.7	68.7	71.3	73.9	75.6	81.7	82.6	90.2	95.4
72.5°	65.3	63.6	63.6	62.7	65.3	67.0	70.4	73.9	75.6	83.4	86.8
75°	59.3	57.6	57.6	56.8	58.4	61.8	62.7	66.1	67.0	73.9	77.3
77.5°	51.6	49.9	49.9	49.9	51.6	52.4	53.3	56.8	58.4	64.5	67.9
80°	43.0	41.2	42.1	41.2	43.8	40.4	43.0	46.4	48.1	51.6	49.9
82.5°	32.7	30.0	30.9	30.9	31.8	29.3	30.9	32.7	34.3	37.0	36.1
85°	20.6	18.1	19.8	18.1	19.8	17.2	19.0	19.0	20.6	19.0	18.1
87.5°	4.3	1.8	4.3	1.8	5.2	0.0	2.5	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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	155°	165°	175°	180°
0°	340.3	340.3	340.3	340.3
2.5°	308.5	305.1	303.4	302.5
5°	264.7	258.7	256.9	255.3
7.5°	238.1	236.3	236.3	235.4
10°	232.9	235.4	236.3	236.3
12.5°	238.9	243.2	246.7	246.7
15°	246.7	254.4	258.7	258.7
17.5°	252.6	262.9	267.2	268.1
20°	253.5	263.8	269.9	270.7
22.5°	245.8	252.6	256.9	256.9
25°	226.0	229.4	232.0	232.0
27.5°	201.1	200.2	199.3	202.7
30°	175.3	173.6	170.2	173.6
32.5°	165.8	159.9	151.3	153.8
35°	151.3	149.6	145.3	146.2
37.5°	146.2	160.7	159.9	160.7
40°	140.0	158.1	157.2	159.0
42.5°	134.9	145.3	134.9	135.7
45°	125.4	129.7	121.2	121.2
47.5°	121.2	119.5	116.0	115.2
50°	117.8	117.8	116.0	114.4
52.5°	115.2	113.5	119.5	118.6
55°	111.7	110.0	114.4	114.4
57.5°	109.1	104.8	111.7	111.7
60°	106.6	102.2	109.1	109.1
62.5°	104.8	99.7	108.2	107.4
65°	102.2	97.1	108.2	106.6
67.5°	98.8	92.0	106.6	103.9
70°	92.0	86.0	100.5	93.6
72.5°	85.1	78.2	86.0	79.9
75°	74.8	68.7	69.6	68.7
77.5°	62.7	55.9	54.2	55.0
80°	47.3	43.0	41.2	41.2
82.5°	34.3	29.3	30.0	25.0
85°	15.5	11.2	8.6	8.6
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)