

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: P228229

Luminaire Tested: **ISS-AF-450-LED-E1-SL3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228229
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29762)
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-SL3-7030
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III W/SPILL CONTROL
Light Source: (16) 3000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2467 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G1

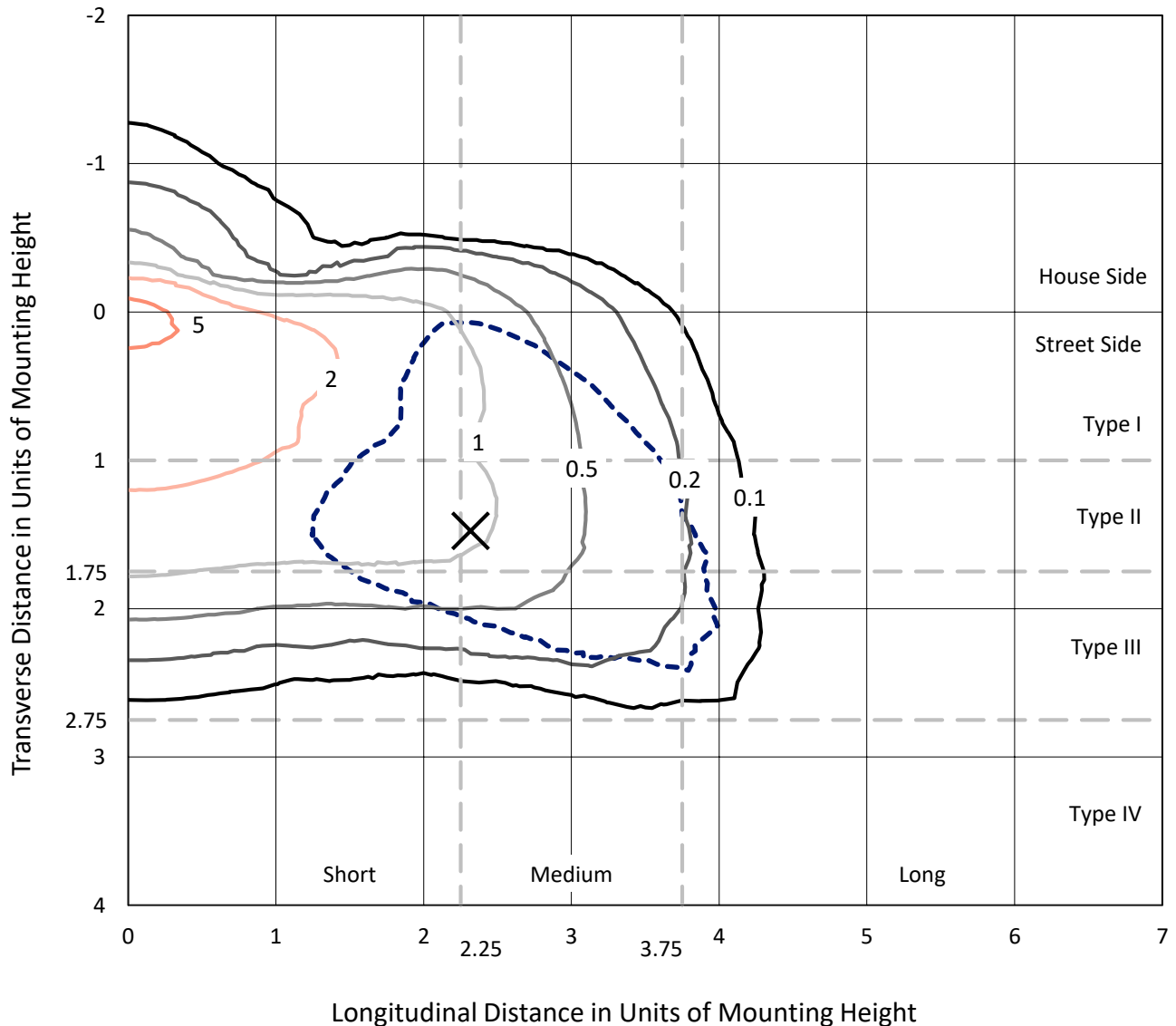
Input Watts (W): 25.31
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

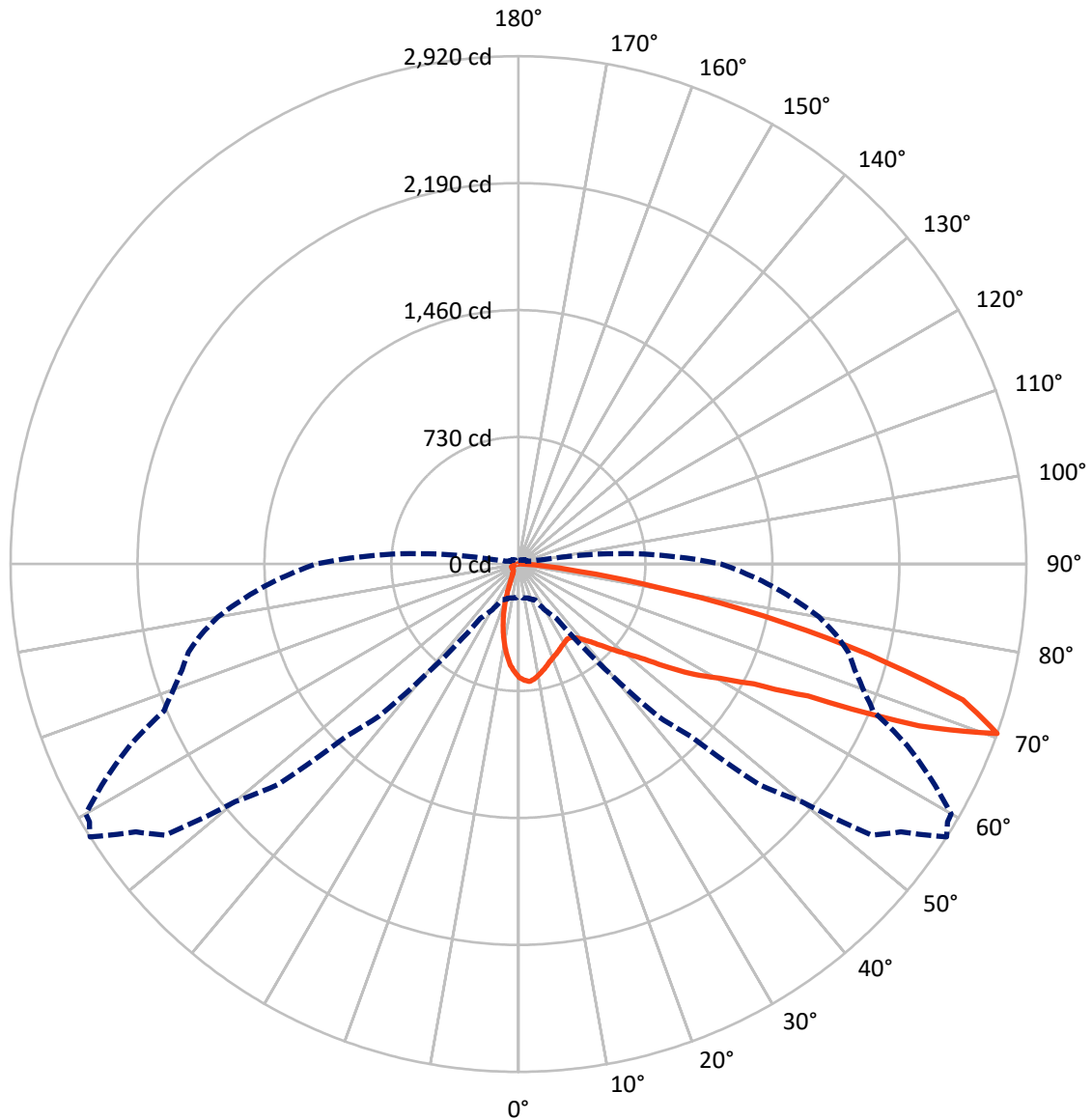
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57.5-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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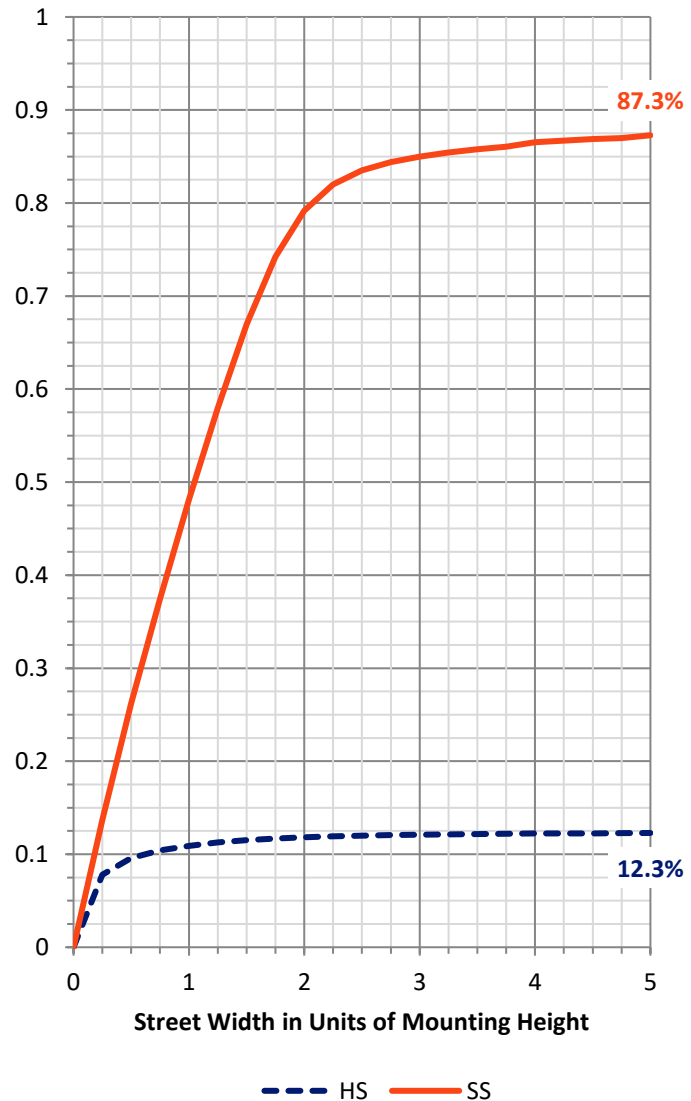
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	305.3	0.0	305.3
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	2161.7	0.0	2161.7
	% Fixture	87.6	0.0	87.6
Total	Lumens	2467.0	0.0	2467.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.4	2.3
10°-20°	122.4	5.0
20°-30°	153.8	6.2
30°-40°	201.0	8.1
40°-50°	301.6	12.2
50°-60°	476.8	19.3
60°-70°	687.3	27.9
70°-80°	425.4	17.2
80°-90°	42.2	1.7
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°	2467.0	100.0
0°-180°	2467.0	100.0



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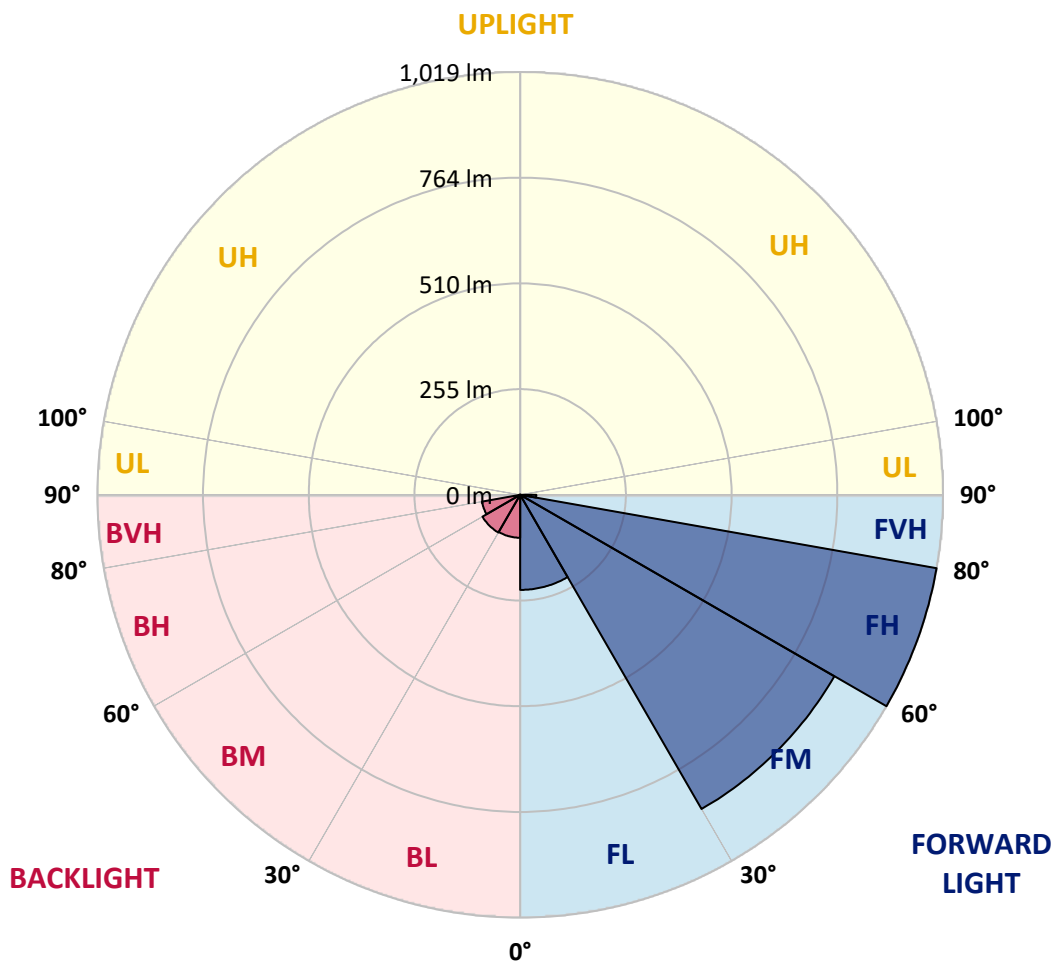
CATALOG NUMBER: ISS-AF-450-LED-E1-SL3-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	229.1	9.3			
FM	(30°-60°)	874.5	35.4			
FH	(60°-80°)	1019.3	41.3			G1/1800
FVH	(80°-90°)	38.8	1.6			G1/100
BL	(0°-30°)	103.5	4.2	B0/110		
BM	(30°-60°)	105.0	4.3	B0/220		
BH	(60°-80°)	93.4	3.8	B0/110		G0/110
BVH	(80°-90°)	3.4	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0
2.5°	685.4	684.5	682.7	679.2	677.5	679.2	677.5	674.9	671.4	674.0	672.2
5°	683.6	685.4	681.9	679.2	683.6	685.4	681.9	681.9	678.4	681.9	680.1
7.5°	649.5	650.3	651.2	650.3	661.7	661.7	660.0	661.7	662.6	664.4	665.2
10°	606.6	607.5	609.2	611.8	625.8	627.6	628.5	630.2	632.8	634.6	639.8
12.5°	563.7	565.4	568.9	577.7	592.6	594.3	597.0	599.6	604.0	606.6	616.2
15°	527.8	528.7	532.2	541.8	563.7	568.1	569.8	573.3	582.1	582.1	592.6
17.5°	494.5	496.3	498.9	510.3	532.2	539.2	544.4	546.2	557.6	560.2	572.4
20°	469.2	470.0	470.9	481.4	501.5	512.0	516.4	523.4	532.2	539.2	549.7
22.5°	455.2	456.0	454.3	458.7	476.2	489.3	494.5	501.5	505.0	517.3	523.4
25°	456.0	456.9	452.5	449.9	458.7	472.7	477.0	484.0	482.3	499.8	499.8
27.5°	464.8	466.5	462.2	454.3	455.2	466.5	469.2	471.8	466.5	484.0	480.5
30°	482.3	484.0	478.8	472.7	463.0	470.0	470.0	470.0	460.4	475.3	469.2
32.5°	500.7	502.4	500.7	496.3	484.0	485.8	482.3	480.5	467.4	479.7	470.0
35°	527.8	528.7	529.6	529.6	512.0	515.6	505.9	500.7	488.4	498.0	484.9
37.5°	560.2	560.2	566.3	568.9	549.7	549.7	539.2	532.2	520.8	524.3	511.2
40°	589.1	591.7	605.7	613.6	596.1	589.1	580.3	574.2	565.4	565.4	552.3
42.5°	622.3	627.6	644.2	659.1	649.5	639.0	630.2	624.1	619.7	618.8	604.8
45°	663.5	669.6	688.0	702.0	704.6	696.7	689.7	683.6	680.1	678.4	666.1
47.5°	709.9	716.0	732.6	749.3	761.5	759.8	751.9	745.8	748.4	746.6	738.8
50°	761.5	765.0	775.5	794.8	822.8	828.9	827.2	822.8	828.0	828.0	821.0
52.5°	802.6	805.3	813.2	835.9	882.3	896.3	907.7	916.4	925.2	930.4	926.1
55°	840.3	840.3	841.2	870.0	939.2	962.0	987.3	1005.7	1017.1	1038.1	1046.9
57.5°	901.6	897.2	896.3	926.9	1007.5	1031.1	1067.9	1094.1	1109.9	1152.8	1151.9
60°	884.1	885.8	917.3	1007.5	1147.5	1168.5	1201.8	1229.8	1259.6	1291.1	1293.7
62.5°	762.4	766.8	814.0	948.8	1236.8	1346.2	1448.6	1526.5	1570.3	1598.3	1559.8
65°	533.9	544.4	608.3	772.9	1138.8	1307.7	1469.6	1649.9	1788.2	2002.7	2064.8
67.5°	266.1	274.0	284.5	405.3	850.8	1088.0	1311.2	1557.2	1741.0	2056.1	2232.0
70°	190.8	194.3	202.2	227.6	380.8	569.8	832.4	1184.3	1400.5	1875.8	2124.4
72.5°	147.9	151.4	161.9	197.8	252.1	278.3	330.9	540.9	804.4	1295.4	1631.6
75°	114.7	119.9	134.8	178.6	242.5	257.3	260.0	279.2	318.6	575.1	914.7
77.5°	80.5	81.4	96.3	154.1	235.5	264.3	260.0	260.0	265.2	293.2	391.3
80°	53.4	54.3	63.9	106.8	206.6	240.7	266.1	253.8	254.7	259.1	266.1
82.5°	28.0	29.8	37.6	64.8	120.8	162.8	221.5	231.1	227.6	232.0	230.2
85°	7.9	7.9	13.1	24.5	59.5	63.0	98.0	133.9	136.5	154.9	165.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.5	7.9	8.8
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°	59°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0
2.5°	674.0	670.5	669.6	667.9	668.7	666.1	665.2	661.7	661.7	660.0	658.2
5°	678.4	674.9	678.4	672.2	673.1	670.5	666.1	666.1	662.6	660.0	654.7
7.5°	666.1	666.1	667.0	663.5	664.4	663.5	658.2	657.3	652.1	652.1	646.0
10°	643.3	643.3	646.8	644.2	645.1	644.2	641.6	640.7	639.0	639.0	629.3
12.5°	617.1	622.3	627.6	625.0	625.0	626.7	626.7	627.6	626.7	625.8	618.0
15°	595.2	603.1	608.3	607.5	608.3	612.7	614.5	615.3	618.0	617.1	610.1
17.5°	575.1	583.8	588.2	591.7	594.3	597.8	603.1	605.7	609.2	608.3	601.3
20°	556.7	564.6	572.4	576.8	577.7	584.7	590.8	598.7	600.5	602.2	593.5
22.5°	537.4	544.4	560.2	557.6	563.7	576.8	580.3	591.7	591.7	597.8	585.6
25°	520.8	521.7	546.2	541.8	547.1	570.7	573.3	593.5	588.2	597.0	582.9
27.5°	504.2	503.3	533.1	527.8	533.9	566.3	568.1	596.1	590.8	601.3	582.9
30°	491.9	489.3	523.4	512.9	521.7	561.9	562.8	598.7	594.3	608.3	589.1
32.5°	489.3	484.9	514.7	506.8	515.6	557.6	562.8	608.3	603.1	620.6	596.1
35°	500.7	493.7	519.1	512.0	519.1	559.3	567.2	623.2	617.1	637.2	612.7
37.5°	521.7	516.4	537.4	530.4	535.7	571.6	578.6	642.5	641.6	666.1	638.1
40°	558.4	553.2	569.8	560.2	564.6	597.8	601.3	669.6	672.2	702.0	674.0
42.5°	608.3	599.6	612.7	601.3	607.5	637.2	633.7	702.9	710.7	751.9	719.5
45°	672.2	660.9	668.7	656.5	660.9	686.2	676.6	747.5	755.4	806.2	777.3
47.5°	742.3	728.2	737.9	722.1	724.7	751.9	734.4	800.9	813.2	877.0	849.0
50°	826.3	807.9	811.4	796.5	798.3	825.4	806.2	866.5	881.4	952.3	927.8
52.5°	933.9	907.7	907.7	887.6	888.4	915.6	891.9	944.4	961.1	1032.9	1016.2
55°	1075.7	1054.7	1050.4	1029.4	1022.3	1027.6	994.3	1031.1	1049.5	1116.9	1103.8
57.5°	1188.7	1186.0	1199.2	1169.4	1162.4	1164.1	1122.1	1124.8	1145.8	1198.3	1202.7
60°	1326.1	1330.5	1332.2	1307.7	1305.1	1280.6	1237.7	1230.7	1256.9	1292.8	1306.8
62.5°	1544.9	1540.5	1518.6	1500.3	1483.6	1418.0	1394.4	1355.8	1392.6	1412.7	1441.6
65°	2014.9	1969.4	1829.4	1841.6	1797.9	1655.2	1635.1	1557.2	1614.9	1615.8	1670.1
67.5°	2480.6	2569.9	2484.1	2485.8	2386.9	2128.7	2066.6	1911.7	1944.0	1906.4	1934.4
70°	2560.2	2685.4	2920.0	2878.0	2872.7	2674.0	2464.8	2206.6	2109.5	2028.9	1964.2
72.5°	2203.1	2328.3	2672.3	2576.9	2612.8	2673.2	2455.2	2261.8	2044.7	1942.3	1802.2
75°	1550.2	1730.5	2079.7	2029.8	2056.1	2155.9	1968.5	1945.8	1694.6	1626.3	1411.0
77.5°	830.7	1053.9	1445.1	1383.8	1395.2	1452.1	1256.9	1216.7	974.2	906.8	662.6
80°	373.8	518.2	811.4	743.1	723.0	690.6	508.5	400.9	245.1	162.8	112.9
82.5°	247.7	257.3	359.7	311.6	291.5	240.7	155.8	91.9	72.6	61.3	58.6
85°	166.3	152.3	151.4	133.9	124.3	98.0	72.6	45.5	37.6	31.5	28.9
87.5°	9.6	6.1	8.8	9.6	7.0	6.1	4.4	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):

	77.5°	80°	85°	90°	95°	100°	102.5°	105°	107.5°	110°	112.5°
0°	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0
2.5°	653.8	653.8	653.0	646.8	643.3	641.6	635.5	634.6	632.0	631.1	631.1
5°	653.0	649.5	645.1	636.3	627.6	619.7	617.1	611.0	606.6	601.3	601.3
7.5°	640.7	637.2	627.6	614.5	603.1	591.7	585.6	576.8	569.8	562.8	561.1
10°	626.7	621.5	608.3	590.8	575.9	555.8	547.9	536.6	528.7	518.2	507.7
12.5°	611.8	608.3	592.6	572.4	549.7	524.3	512.0	496.3	485.8	473.5	457.8
15°	605.7	598.7	578.6	553.2	525.2	494.5	477.0	460.4	444.7	430.6	409.6
17.5°	597.8	589.1	566.3	536.6	501.5	464.8	442.0	423.6	402.6	387.8	364.1
20°	589.1	575.9	551.4	515.6	476.2	432.4	403.5	385.1	357.1	342.2	314.2
22.5°	582.1	565.4	535.7	495.4	448.2	399.1	365.0	344.0	312.5	295.0	260.0
25°	580.3	560.2	524.3	478.8	424.5	366.8	325.6	304.6	265.2	245.1	203.9
27.5°	581.2	557.6	517.3	464.8	403.5	337.9	288.8	264.3	214.4	193.4	146.2
30°	582.1	558.4	510.3	452.5	384.3	308.1	250.3	221.5	161.9	143.5	101.5
32.5°	590.8	561.9	508.5	442.9	366.8	278.3	206.6	180.3	114.7	104.2	75.3
35°	601.3	573.3	512.0	441.2	353.6	248.6	161.9	134.8	82.3	79.7	61.3
37.5°	623.2	590.8	526.1	445.5	345.7	217.9	120.8	103.3	64.8	66.5	53.4
40°	656.5	620.6	548.8	458.7	344.9	187.3	89.3	80.5	56.0	57.8	49.0
42.5°	701.1	661.7	583.8	486.7	349.2	158.4	71.8	69.1	51.6	53.4	47.3
45°	759.8	719.5	632.8	522.6	361.5	134.8	63.0	63.0	49.9	51.6	46.4
47.5°	834.2	789.5	693.2	570.7	380.8	121.7	59.5	60.4	49.0	51.6	46.4
50°	918.2	869.2	770.3	632.8	410.5	118.2	60.4	60.4	49.9	51.6	46.4
52.5°	1005.7	960.2	853.4	703.7	451.7	126.0	62.1	61.3	49.9	51.6	45.5
55°	1095.0	1053.9	945.3	786.9	508.5	154.1	66.5	63.9	49.9	51.6	46.4
57.5°	1184.3	1155.4	1041.6	876.2	579.4	204.8	84.0	74.4	55.1	56.0	47.3
60°	1284.9	1263.9	1150.1	993.5	680.1	283.6	123.4	93.7	65.6	62.1	50.8
62.5°	1415.4	1410.1	1320.0	1162.4	842.0	397.4	175.1	113.8	70.9	64.8	54.3
65°	1645.6	1659.6	1573.8	1360.2	949.7	400.0	170.7	99.8	66.5	61.3	53.4
67.5°	1876.6	1835.5	1614.9	1330.5	856.9	266.1	108.5	77.9	58.6	56.9	49.9
70°	1867.9	1755.8	1464.4	1163.3	676.6	144.4	78.8	64.8	52.5	52.5	47.3
72.5°	1675.3	1509.0	1197.4	920.8	451.7	91.9	66.5	56.9	48.1	47.3	43.8
75°	1261.3	1065.2	769.4	530.4	201.3	59.5	50.8	46.4	42.0	42.0	38.5
77.5°	593.5	334.4	185.6	123.4	67.4	40.3	35.0	35.0	34.1	35.0	31.5
80°	80.5	72.6	62.1	54.3	41.1	28.0	25.4	26.3	25.4	26.3	23.6
82.5°	49.0	43.8	35.9	34.1	25.4	19.3	18.4	19.3	17.5	18.4	14.0
85°	23.6	21.0	16.6	15.8	13.1	11.4	9.6	11.4	8.8	9.6	6.1
87.5°	0.0	1.8	0.9	1.8	1.8	1.8	0.0	1.8	0.0	1.8	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):

	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	155°	165°
0°	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0
2.5°	626.7	624.1	623.2	619.7	618.8	615.3	614.5	611.0	604.8	602.2	597.8
5°	593.5	589.1	585.6	583.8	576.8	573.3	568.1	561.1	547.9	541.8	531.3
7.5°	547.1	546.2	535.7	532.2	523.4	517.3	509.4	498.0	478.8	467.4	450.8
10°	496.3	492.8	480.5	473.5	462.2	453.4	442.9	426.3	396.5	372.9	347.5
12.5°	449.0	438.5	424.5	414.0	400.0	387.8	375.5	350.1	302.9	264.3	229.3
15°	400.0	384.3	369.4	351.9	337.0	317.7	303.7	270.5	208.3	161.1	139.2
17.5°	350.1	328.2	311.6	288.0	271.3	245.1	230.2	189.9	136.5	115.5	108.5
20°	297.6	268.7	250.3	221.5	204.8	171.6	160.2	131.3	105.0	97.2	95.4
22.5°	241.6	206.6	186.4	154.9	143.5	123.4	114.7	100.7	88.4	84.9	86.7
25°	182.9	145.3	132.2	109.4	105.0	94.5	91.0	84.0	77.9	77.9	80.5
27.5°	130.4	101.5	98.0	84.0	83.2	77.9	75.3	71.8	70.0	71.8	75.3
30°	95.4	77.0	77.0	69.1	69.1	65.6	64.8	63.0	63.0	66.5	70.0
32.5°	75.3	63.0	64.8	58.6	59.5	56.9	57.8	56.9	57.8	60.4	63.0
35°	63.0	54.3	56.9	51.6	53.4	50.8	52.5	52.5	54.3	55.1	56.0
37.5°	56.0	49.9	51.6	48.1	49.9	47.3	49.9	49.9	50.8	50.8	50.8
40°	51.6	46.4	49.0	45.5	48.1	45.5	48.1	48.1	47.3	46.4	47.3
42.5°	49.0	45.5	48.1	44.6	47.3	44.6	46.4	45.5	43.8	43.8	43.8
45°	48.1	44.6	46.4	43.8	45.5	42.9	44.6	43.8	41.1	40.3	42.0
47.5°	48.1	43.8	46.4	42.9	44.6	42.0	43.8	41.1	38.5	38.5	41.1
50°	48.1	43.8	46.4	42.9	44.6	41.1	42.0	39.4	35.9	36.8	40.3
52.5°	49.0	45.5	47.3	43.8	44.6	39.4	41.1	37.6	35.0	35.9	38.5
55°	49.9	45.5	47.3	42.0	42.9	39.4	39.4	37.6	35.0	35.0	37.6
57.5°	49.9	44.6	45.5	41.1	42.0	37.6	38.5	36.8	34.1	33.3	35.0
60°	51.6	46.4	46.4	40.3	41.1	36.8	37.6	35.9	33.3	31.5	32.4
62.5°	53.4	47.3	48.1	42.0	42.0	37.6	38.5	35.0	31.5	29.8	30.6
65°	53.4	47.3	48.1	42.9	42.9	38.5	38.5	35.0	29.8	28.0	28.0
67.5°	50.8	46.4	47.3	42.9	42.9	38.5	38.5	34.1	28.9	26.3	25.4
70°	49.0	44.6	45.5	40.3	41.1	36.8	36.8	32.4	27.1	24.5	22.8
72.5°	44.6	41.1	41.1	37.6	36.8	32.4	32.4	29.8	25.4	21.9	20.1
75°	38.5	35.0	34.1	30.6	30.6	28.0	27.1	24.5	21.0	18.4	17.5
77.5°	31.5	27.1	27.1	22.8	22.8	20.1	21.0	18.4	15.8	14.9	14.0
80°	22.8	18.4	18.4	14.9	14.9	12.3	13.1	12.3	11.4	11.4	10.5
82.5°	14.0	9.6	10.5	7.9	9.6	7.0	7.9	7.0	7.0	6.1	6.1
85°	7.0	3.5	5.3	2.6	4.4	0.9	2.6	1.8	1.8	1.8	1.8
87.5°	0.9	0.0	0.9	0.0	0.0	0.0	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

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	175°	180°
0°	653.0	653.0
2.5°	593.5	596.1
5°	527.8	528.7
7.5°	448.2	446.4
10°	342.2	337.9
12.5°	220.6	214.4
15°	133.0	131.3
17.5°	106.8	106.8
20°	95.4	95.4
22.5°	88.4	88.4
25°	83.2	84.0
27.5°	78.8	78.8
30°	73.5	73.5
32.5°	64.8	64.8
35°	57.8	56.9
37.5°	51.6	52.5
40°	47.3	48.1
42.5°	45.5	45.5
45°	43.8	43.8
47.5°	43.8	43.8
50°	42.9	43.8
52.5°	42.0	42.0
55°	39.4	40.3
57.5°	36.8	37.6
60°	34.1	34.1
62.5°	30.6	30.6
65°	28.0	28.0
67.5°	24.5	24.5
70°	21.9	21.9
72.5°	19.3	19.3
75°	16.6	16.6
77.5°	14.0	13.1
80°	10.5	10.5
82.5°	6.1	6.1
85°	1.8	1.8
87.5°	0.0	0.0
90°	0.0	0.0

(END OF REPORT)