

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: P228745

Luminaire Tested: **ISS-AF-450-LED-E1-RW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P228745
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29765)
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-RW
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-RECTANGULAR WIDE TYPE I
Light Source: (16) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3056.6 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

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

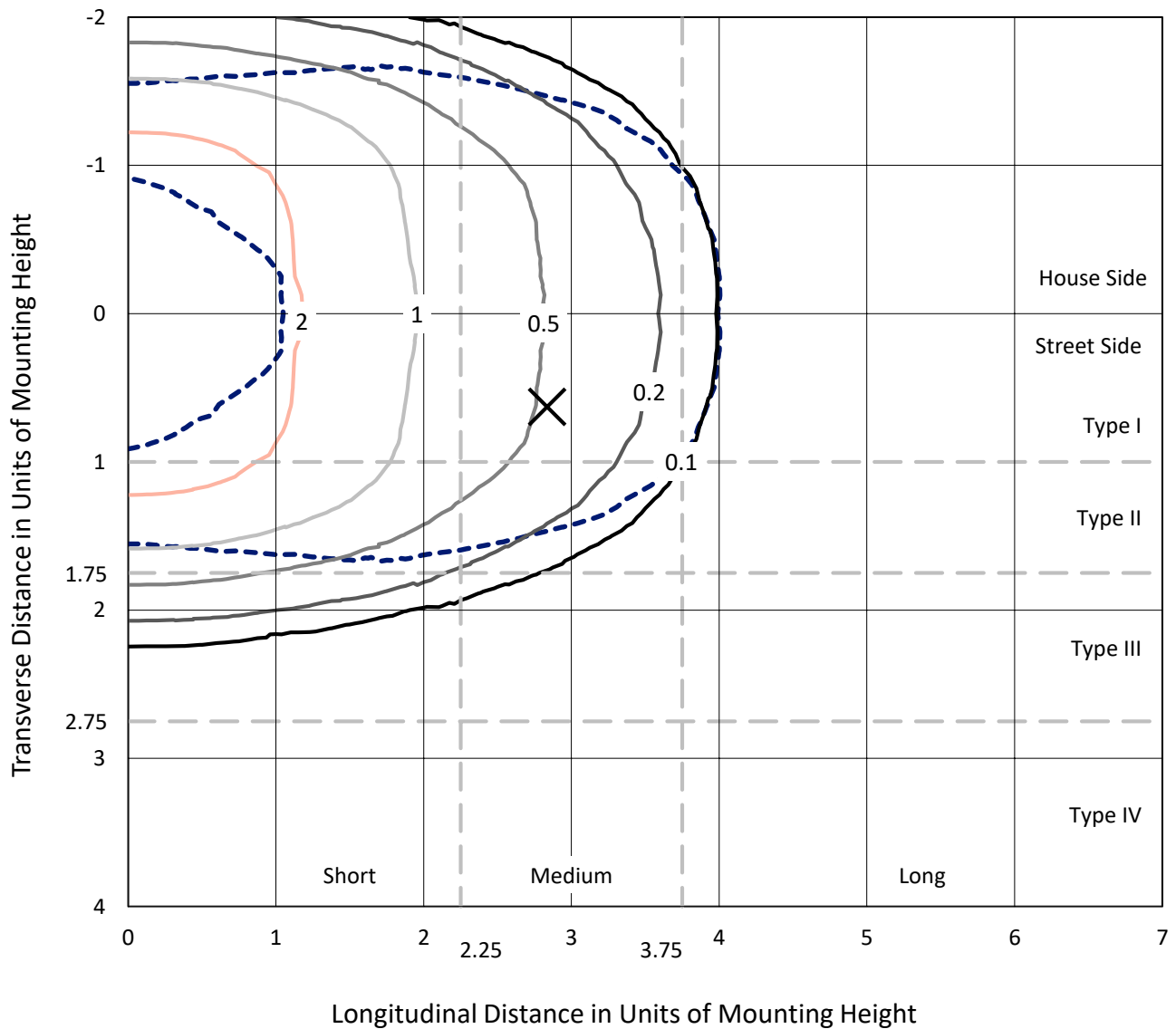


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

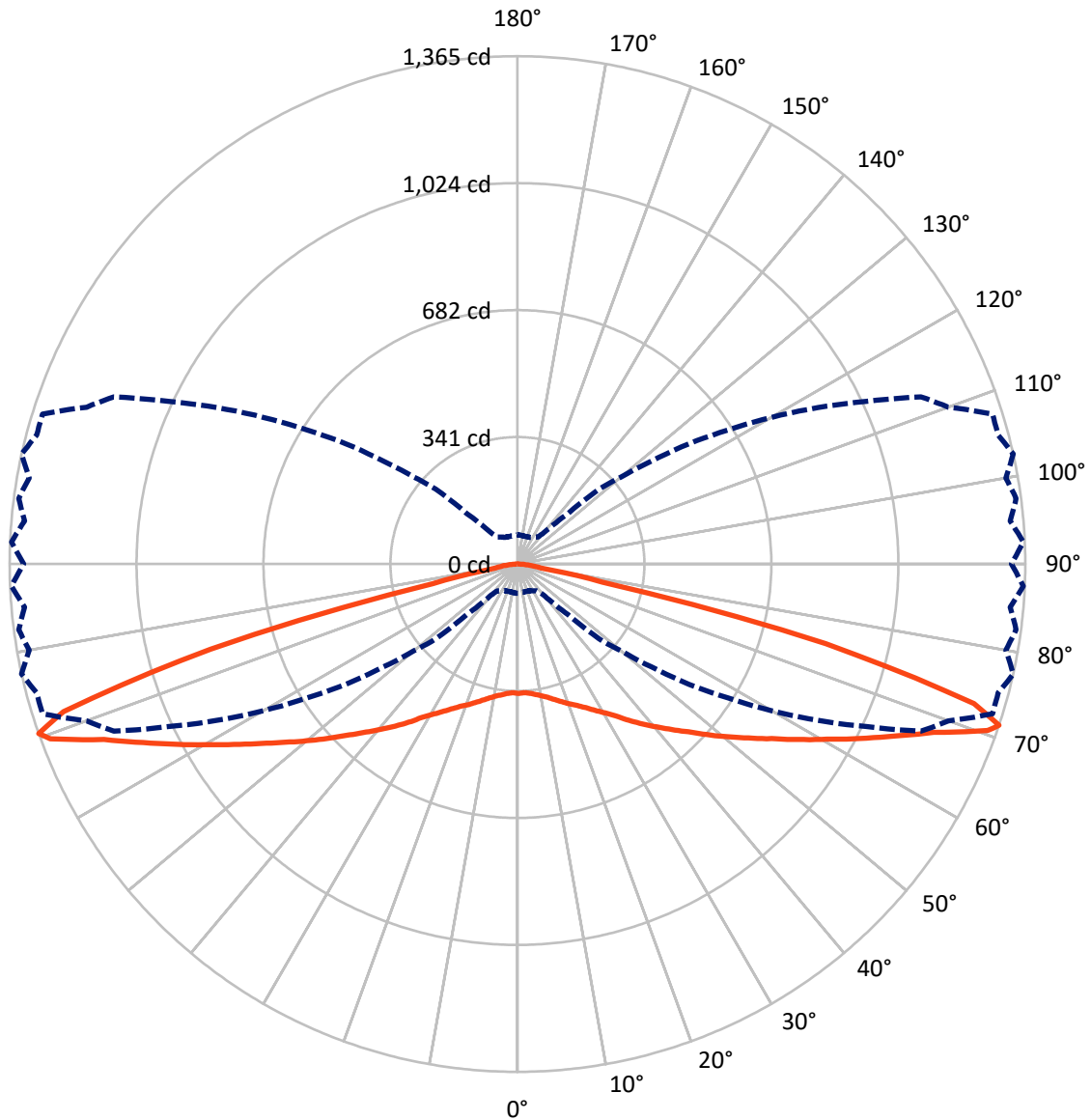


Based on 10 foot mounting height. Maximum calculated value = 3.6 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1528.3	0.0	1528.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	1528.3	0.0	1528.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	3056.6	0.0	3056.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.6	1.1
10°-20°	105.1	3.4
20°-30°	196.6	6.4
30°-40°	342.2	11.2
40°-50°	558.4	18.3
50°-60°	770.6	25.2
60°-70°	731.0	23.9
70°-80°	300.9	9.8
80°-90°	18.2	0.6
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°	3056.6	100.0
0°-180°	3056.6	100.0



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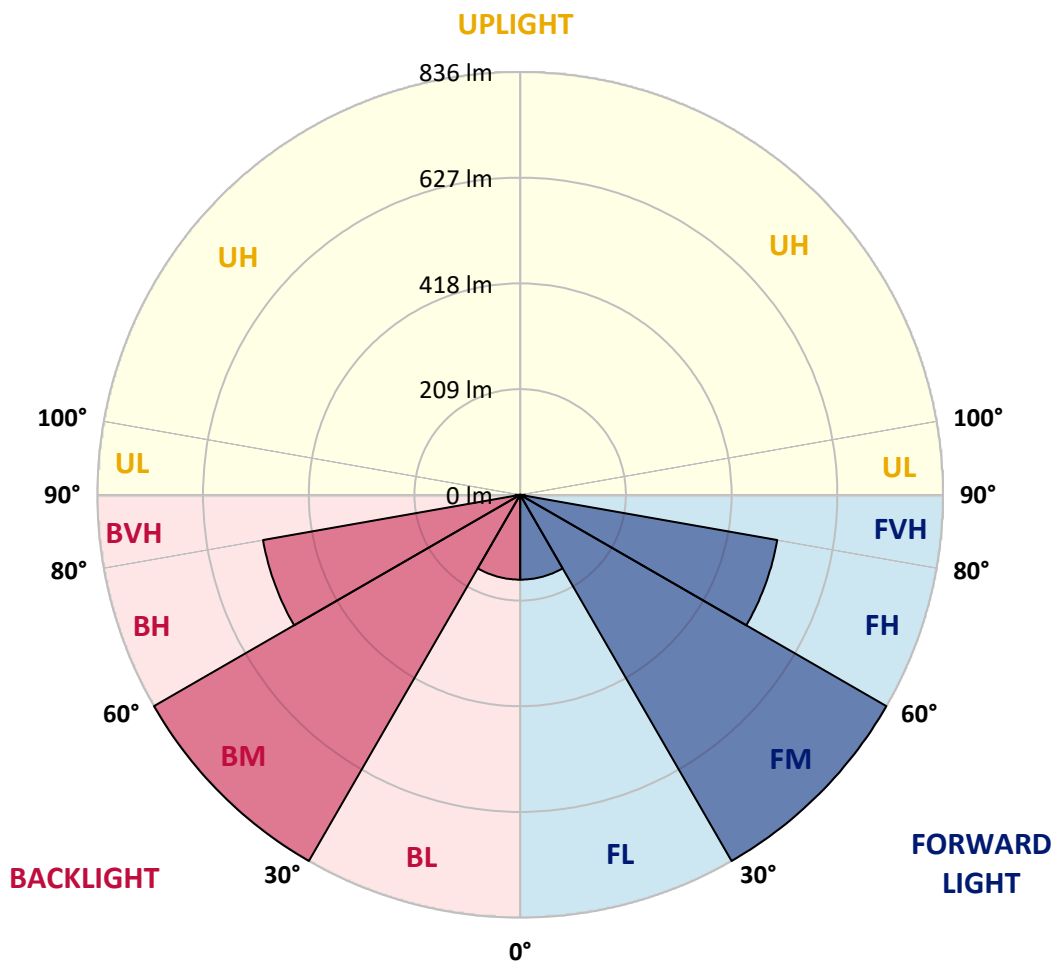
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	167.7	5.5			
FM	(30°-60°)	835.6	27.3			
FH	(60°-80°)	515.9	16.9			G0/660
FVH	(80°-90°)	9.1	0.3			G0/10
BL	(0°-30°)	167.7	5.5	B1/500		
BM	(30°-60°)	835.6	27.3	B1/1000		
BH	(60°-80°)	515.9	16.9	B2/1000		G2/1000
BVH	(80°-90°)	9.1	0.3			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

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°	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0
2.5°	347.0	346.1	347.0	347.0	348.0	348.0	348.0	348.0	347.0	349.0	349.0
5°	347.0	347.0	348.0	348.0	350.1	352.1	349.0	350.1	351.1	350.1	352.1
7.5°	347.0	347.0	347.0	349.0	352.1	354.1	352.1	353.1	355.2	355.2	357.1
10°	344.0	343.0	345.0	349.0	354.1	357.1	356.1	360.2	359.2	360.2	362.2
12.5°	338.9	338.9	343.0	349.0	358.1	360.2	361.2	363.2	366.2	365.3	368.3
15°	339.9	340.9	345.0	353.1	364.3	366.2	367.2	367.2	372.4	370.3	376.3
17.5°	347.0	348.0	352.1	360.2	373.4	373.4	374.4	376.3	383.5	379.4	387.5
20°	358.1	359.2	363.2	372.4	384.4	383.5	385.4	387.5	396.6	392.6	400.7
22.5°	371.3	373.4	378.4	388.5	401.7	395.6	399.7	403.7	412.8	405.7	416.9
25°	389.5	392.6	397.6	408.8	422.9	415.8	419.9	422.9	433.0	422.9	434.0
27.5°	415.8	417.9	421.9	434.0	446.2	441.1	443.1	445.2	457.4	446.2	458.3
30°	447.2	450.2	454.3	465.4	477.5	469.4	473.5	475.6	485.6	474.5	484.7
32.5°	486.6	489.7	494.8	504.8	515.0	502.9	503.9	506.9	517.0	505.8	517.0
35°	533.2	535.2	542.3	554.4	561.5	542.3	543.3	543.3	556.5	541.2	553.4
37.5°	581.8	583.8	591.9	604.1	612.1	590.9	590.9	591.9	604.1	586.9	597.9
40°	632.4	638.4	647.5	659.7	665.7	641.5	643.4	642.5	656.6	636.4	647.5
42.5°	682.9	688.0	701.1	715.3	722.4	698.2	699.1	696.1	710.2	689.0	698.2
45°	726.4	730.5	746.7	766.9	778.1	752.8	752.8	752.8	766.9	740.6	751.8
47.5°	761.9	764.9	782.0	811.4	829.6	804.3	806.4	802.3	823.6	791.2	806.4
50°	787.2	788.2	810.4	843.8	875.1	851.9	855.0	856.9	877.2	848.8	862.0
52.5°	795.2	797.3	822.6	863.1	908.6	893.3	904.5	908.6	926.8	896.4	914.6
55°	766.9	772.0	810.4	870.1	931.8	926.8	939.9	948.0	971.3	946.0	965.3
57.5°	671.8	677.9	731.5	829.6	936.9	945.0	963.2	976.3	1009.8	994.5	1015.8
60°	536.2	541.2	596.0	714.3	873.2	922.7	964.2	1001.7	1036.0	1039.1	1066.4
62.5°	368.3	375.3	428.0	541.2	734.6	800.3	860.0	921.7	979.4	1049.2	1084.6
65°	180.1	184.1	228.6	337.9	539.3	623.3	693.0	780.1	833.7	933.9	991.5
67.5°	99.1	99.1	106.3	140.7	288.4	371.3	446.2	555.5	610.1	733.6	807.4
70°	83.0	83.0	80.9	86.0	109.3	129.5	168.0	230.7	306.6	431.0	497.8
71°	78.9	77.9	76.9	78.9	88.0	92.1	108.2	141.7	192.2	297.5	363.2
72.5°	73.9	71.8	68.8	69.8	74.9	74.9	77.9	83.0	102.2	139.6	187.2
75°	63.7	61.7	58.7	58.7	59.7	60.7	61.7	63.7	64.8	66.8	74.9
77.5°	52.6	50.6	47.6	47.6	46.5	47.6	49.6	50.6	48.6	52.6	53.6
80°	40.5	37.4	36.4	36.4	35.4	34.4	34.4	34.4	35.4	37.4	38.5
82.5°	25.3	23.2	24.2	23.2	22.3	22.3	22.3	22.3	23.2	23.2	25.3
85°	12.2	12.2	13.2	12.2	10.1	10.1	9.1	8.1	9.1	8.1	10.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
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):

	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°
0°	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0
2.5°	346.1	348.0	347.0	348.0	346.1	348.0	345.0	348.0	347.0	348.0	346.1
5°	349.0	352.1	349.0	353.1	349.0	353.1	349.0	353.1	350.1	353.1	349.0
7.5°	352.1	358.1	354.1	359.2	354.1	360.2	354.1	360.2	356.1	361.2	354.1
10°	358.1	365.3	359.2	365.3	359.2	366.2	359.2	367.2	361.2	369.3	360.2
12.5°	363.2	371.3	365.3	373.4	364.3	375.3	366.2	378.4	368.3	380.4	368.3
15°	370.3	380.4	374.4	383.5	374.4	386.5	375.3	389.5	378.4	391.6	378.4
17.5°	380.4	391.6	383.5	394.6	384.4	397.6	385.4	400.7	389.5	402.6	389.5
20°	394.6	403.7	395.6	407.7	396.6	408.8	398.6	410.8	401.7	413.8	401.7
22.5°	410.8	418.9	412.8	419.9	409.8	419.9	409.8	419.9	412.8	422.9	412.8
25°	429.0	435.1	428.0	435.1	426.0	434.0	424.9	433.0	426.0	435.1	428.0
27.5°	453.3	456.3	448.3	454.3	443.1	451.2	441.1	449.2	442.1	450.2	445.2
30°	479.6	482.6	474.5	478.5	466.5	471.5	460.3	467.4	461.4	467.4	464.4
32.5°	508.9	513.0	503.9	505.8	495.7	496.7	487.6	490.7	485.6	487.6	486.6
35°	542.3	547.4	537.3	540.3	529.2	529.2	521.1	520.1	518.0	516.0	516.0
37.5°	584.8	586.9	578.7	578.7	565.6	565.6	555.5	555.5	551.4	547.4	545.3
40°	631.4	632.4	619.2	618.2	605.1	605.1	593.9	590.9	583.8	578.7	575.7
42.5°	680.9	679.9	660.7	662.7	643.4	644.5	630.3	627.3	620.2	614.2	608.0
45°	731.5	727.4	708.2	707.3	685.0	686.0	668.8	666.8	656.6	650.6	643.4
47.5°	783.1	781.1	759.8	754.7	731.5	730.5	708.2	708.2	698.2	692.0	685.0
50°	836.8	835.8	811.4	808.4	784.1	780.1	753.7	753.7	741.6	739.6	729.5
52.5°	895.4	891.4	865.0	864.1	840.8	837.7	809.4	807.4	789.2	788.2	777.0
55°	953.1	946.0	928.8	920.7	897.4	896.4	871.1	866.0	842.8	842.8	828.6
57.5°	1005.7	999.6	985.4	978.4	956.2	953.1	925.8	925.8	905.5	904.5	889.4
60°	1060.3	1062.3	1047.2	1044.1	1022.8	1021.9	994.5	994.5	974.4	973.3	956.2
62.5°	1106.8	1127.1	1121.1	1123.1	1104.9	1101.8	1074.5	1072.5	1049.2	1046.2	1032.0
65°	1061.3	1132.2	1177.7	1208.0	1206.1	1205.0	1178.7	1174.7	1145.3	1137.2	1114.0
67.5°	891.4	983.5	1066.4	1157.5	1224.3	1274.8	1290.0	1283.9	1258.6	1235.3	1207.0
70°	596.9	703.2	808.4	921.7	1036.0	1147.3	1261.7	1311.2	1363.9	1345.6	1340.6
71°	454.3	563.5	668.8	788.2	909.6	1033.0	1173.6	1232.3	1338.5	1337.5	1364.8
72.5°	255.9	353.1	465.4	569.6	683.9	811.4	956.2	1020.9	1173.6	1204.0	1282.9
75°	81.9	112.3	148.7	234.8	305.6	421.9	529.2	593.9	695.1	745.6	855.9
77.5°	54.6	60.7	62.7	72.8	81.9	116.3	157.8	193.2	212.5	222.6	233.7
80°	39.5	42.5	44.5	49.6	50.6	56.7	56.7	62.7	61.7	65.8	62.7
82.5°	25.3	28.3	29.4	31.4	32.3	36.4	38.5	42.5	42.5	44.5	43.5
85°	12.2	14.1	14.1	16.2	16.2	19.2	19.2	22.3	22.3	25.3	24.2
87.5°	1.0	1.0	1.0	2.0	2.0	2.0	3.1	4.1	4.1	4.1	4.1
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):

	80°	82.5°	85°	87.5°	90°
0°	348.0	348.0	348.0	348.0	348.0
2.5°	349.0	348.0	349.0	347.0	349.0
5°	354.1	350.1	355.2	350.1	355.2
7.5°	362.2	357.1	363.2	355.2	362.2
10°	369.3	362.2	370.3	362.2	369.3
12.5°	381.5	370.3	383.5	370.3	383.5
15°	393.5	380.4	396.6	382.5	395.6
17.5°	404.7	392.6	407.7	393.5	406.7
20°	414.8	403.7	416.9	402.6	416.9
22.5°	424.9	417.9	428.0	417.9	428.0
25°	438.1	433.0	440.1	433.0	440.1
27.5°	453.3	451.2	455.3	450.2	456.3
30°	470.5	471.5	472.5	471.5	473.5
32.5°	491.7	496.7	494.8	494.8	494.8
35°	521.1	530.2	524.1	526.1	525.1
37.5°	548.4	561.5	553.4	556.5	554.4
40°	578.7	587.8	585.8	585.8	583.8
42.5°	612.1	623.3	620.2	621.2	619.2
45°	648.6	658.7	654.6	653.6	654.6
47.5°	690.0	701.1	696.1	695.1	696.1
50°	733.6	746.7	742.7	740.6	742.7
52.5°	781.1	797.3	795.2	793.2	796.3
55°	836.8	851.9	849.9	851.9	852.9
57.5°	892.4	909.6	905.5	910.6	912.6
60°	962.2	972.3	973.3	974.4	975.4
62.5°	1033.0	1037.1	1040.1	1043.1	1044.1
65°	1114.9	1115.9	1118.0	1114.9	1118.0
67.5°	1193.9	1186.8	1185.8	1188.8	1190.8
70°	1316.3	1316.3	1306.2	1320.3	1308.3
71°	1332.5	1351.7	1329.4	1360.8	1327.4
72.5°	1253.5	1289.0	1263.7	1292.0	1258.6
75°	872.2	954.1	953.1	993.6	961.2
77.5°	241.8	226.6	241.8	208.4	199.3
80°	65.8	59.7	64.8	54.6	61.7
82.5°	43.5	37.4	36.4	29.4	31.4
85°	25.3	19.2	19.2	15.1	16.2
87.5°	4.1	1.0	4.1	2.0	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)