

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: LUMARK

Report Number: P184290

Luminaire Tested: **LDWP-FC-4B-ED-7040**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P184290
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDWP-FC-4B-ED-7040
Description: LUMARK WALPAK CUTOFF 4LED 4000K
Light Source: (4) 4000K COB LEDS
Ballast/Driver: [1] ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2239.2 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.75' x L: 1.17' x H: 0.1')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 31.9
Input Voltage (V): NR
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

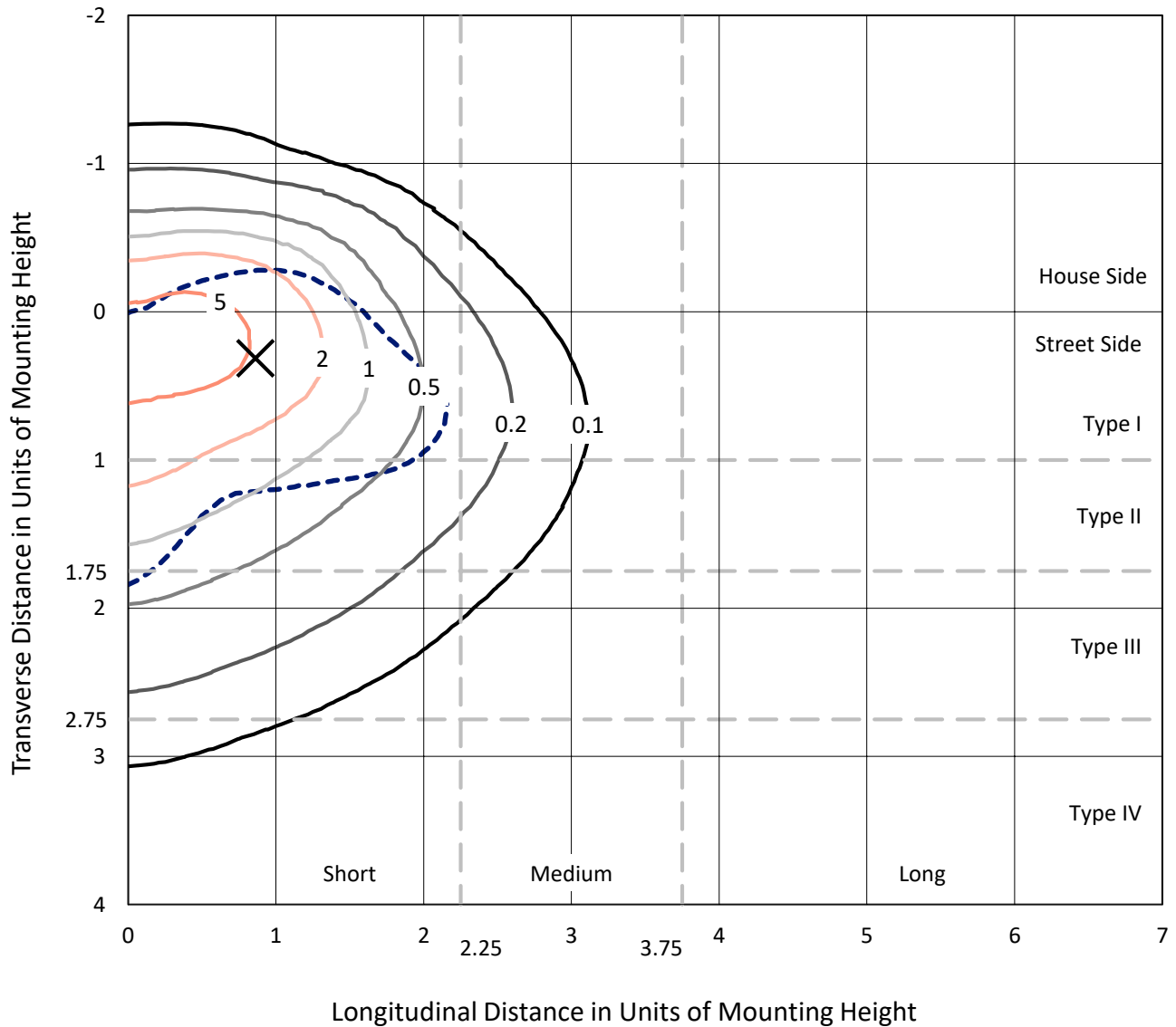


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

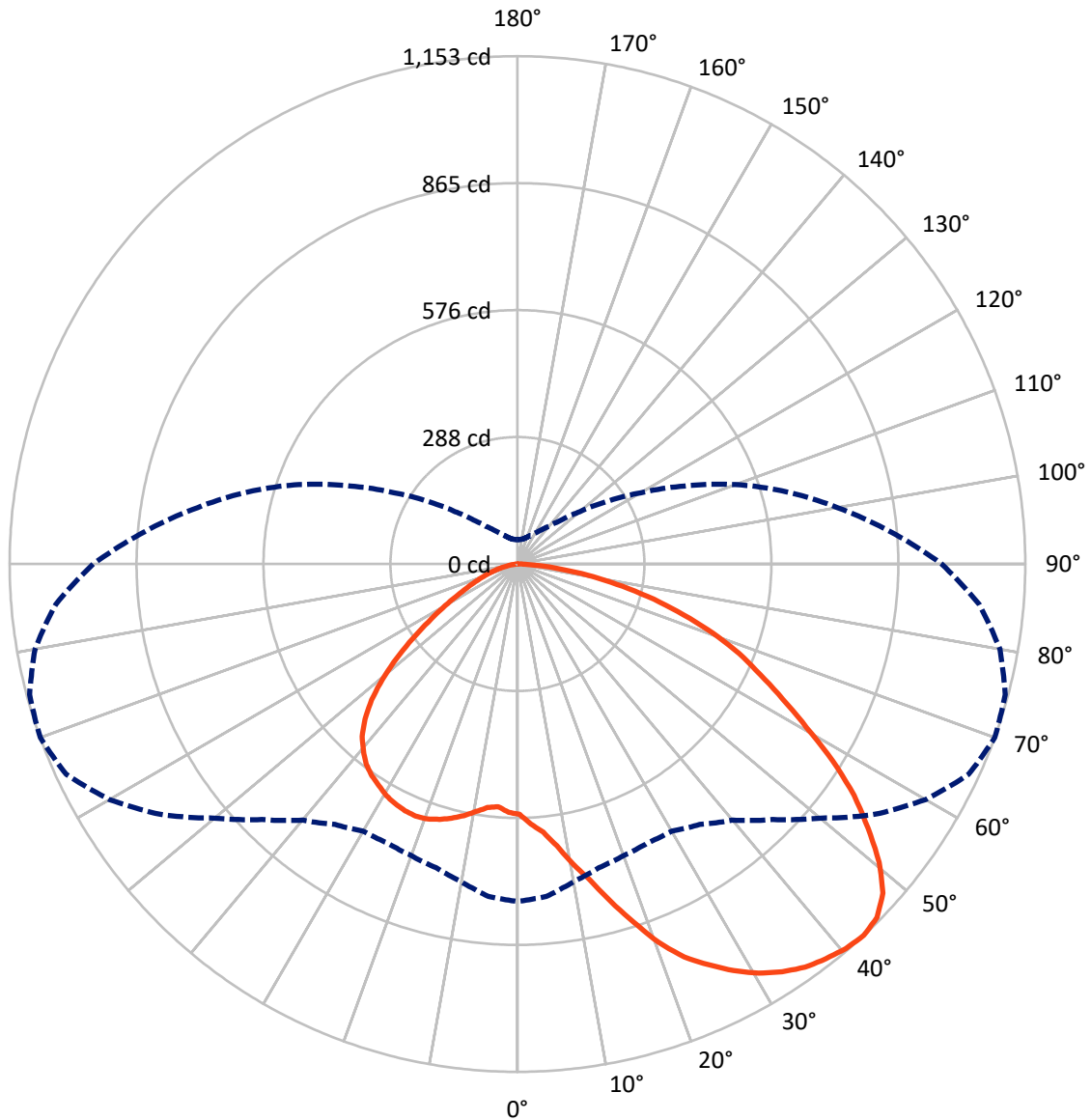


Based on 10 foot mounting height. Maximum calculated value = 7.6 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 42.5-Deg Vertical

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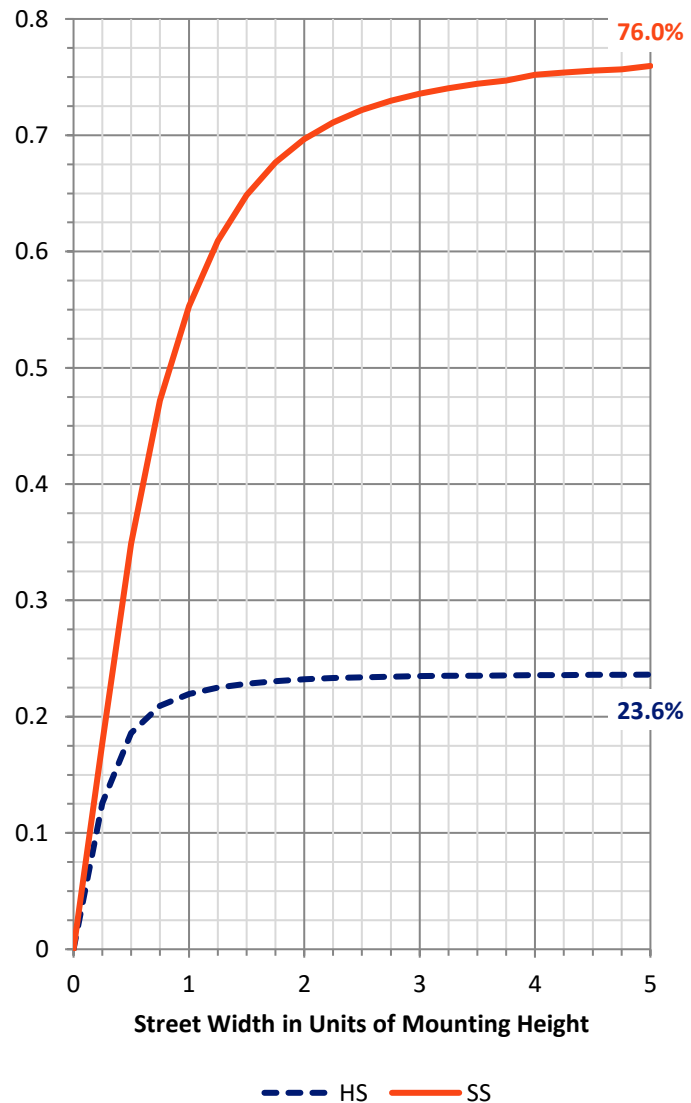
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	533.7	0.0	533.7
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	1705.5	0.0	1705.5
	% Fixture	76.2	0.0	76.2
Total	Lumens	2239.2	0.0	2239.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	2.4
10°-20°	173.8	7.8
20°-30°	306.1	13.7
30°-40°	400.8	17.9
40°-50°	435.7	19.5
50°-60°	390.7	17.4
60°-70°	287.2	12.8
70°-80°	157.5	7.0
80°-90°	32.7	1.5
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°	2239.2	100.0
0°-180°	2239.2	100.0



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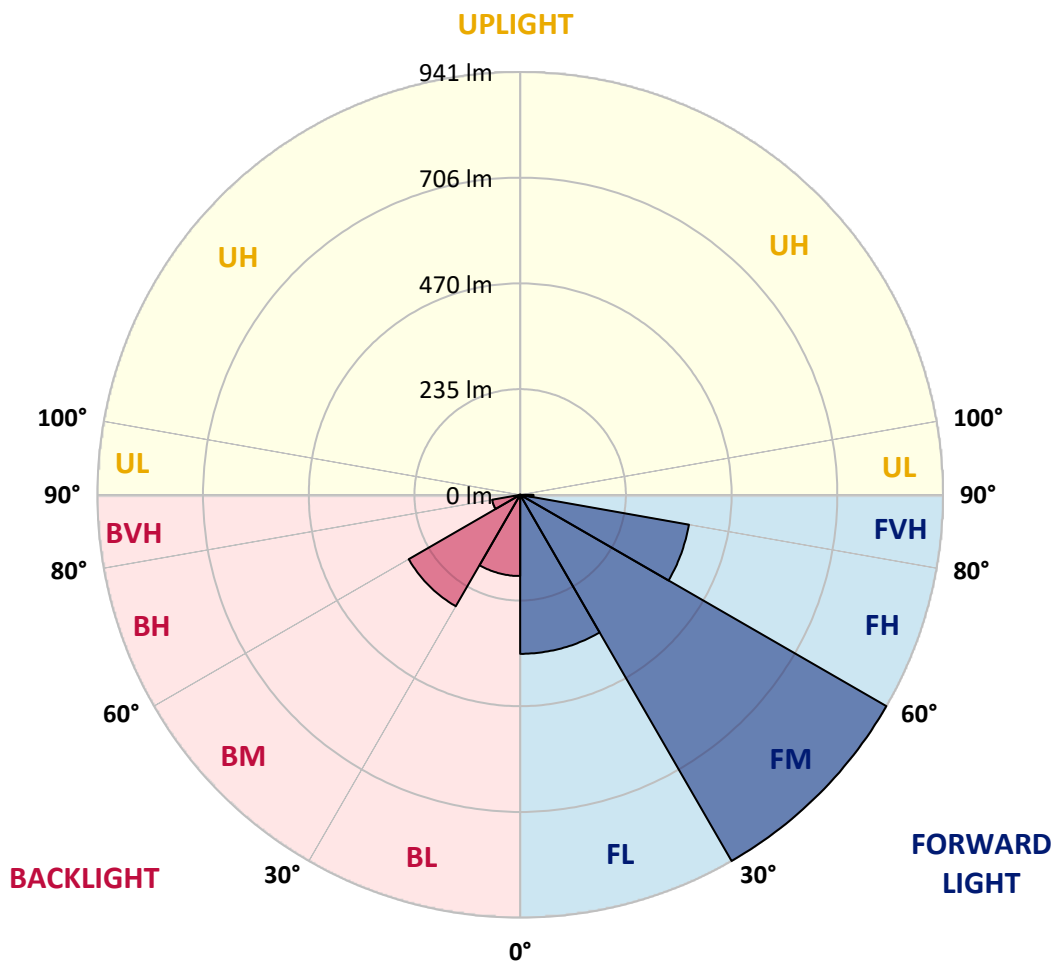
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	353.8	15.8			
FM	(30°-60°)	940.9	42.0			
FH	(60°-80°)	381.4	17.0			G0/660
FVH	(80°-90°)	29.4	1.3			G1/100
BL	(0°-30°)	180.7	8.1	B1/500		
BM	(30°-60°)	286.4	12.8	B1/1000		
BH	(60°-80°)	63.3	2.8	B0/110		G0/110
BVH	(80°-90°)	3.3	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2
2.5°	608.9	606.0	609.6	607.4	608.2	603.9	606.0	604.6	602.4	598.9	596.7
5°	641.7	641.7	641.7	640.3	640.3	635.3	636.7	635.3	631.7	628.1	622.4
7.5°	666.7	666.0	666.0	666.0	663.8	661.0	661.7	663.1	660.3	660.3	655.3
10°	686.7	684.5	683.8	685.2	686.7	687.4	691.0	692.4	693.1	693.8	692.4
12.5°	702.4	704.5	703.8	711.7	716.7	718.1	723.1	725.2	727.4	729.5	731.6
15°	724.5	727.4	730.2	743.8	753.1	755.9	761.6	763.8	767.3	770.2	773.8
17.5°	750.2	754.5	762.3	780.9	793.0	801.6	814.4	817.3	820.9	821.6	825.1
20°	773.8	776.6	788.0	805.2	823.0	838.0	857.3	864.4	871.5	875.1	884.4
22.5°	788.7	792.3	804.4	820.2	838.7	862.3	885.1	902.2	916.5	925.8	937.9
25°	807.3	807.3	813.7	824.4	845.8	870.1	900.8	926.5	945.8	960.8	977.2
27.5°	819.4	817.3	816.6	820.2	836.6	863.7	898.7	937.9	966.5	989.3	1006.5
30°	820.2	817.3	813.7	811.6	815.9	840.9	878.0	929.4	969.3	1001.5	1030.0
32.5°	810.9	808.7	800.2	796.6	798.0	812.3	845.1	890.1	945.1	996.5	1043.6
35°	796.6	793.7	784.5	777.3	776.6	785.2	808.7	840.1	894.4	961.5	1032.1
37.5°	785.2	780.9	766.6	755.9	753.1	758.1	771.6	798.0	840.1	912.9	995.0
40°	773.0	769.5	750.2	734.5	727.4	729.5	735.9	758.8	799.5	864.4	950.8
42.5°	765.9	757.3	732.4	713.8	704.5	698.8	700.2	721.6	758.8	820.2	897.2
45°	759.5	744.5	718.1	698.1	683.8	668.1	668.1	688.8	723.1	778.8	845.8
47.5°	745.9	729.5	699.5	678.8	662.4	641.7	637.4	656.7	691.7	738.8	801.6
50°	731.6	709.5	679.5	656.7	637.4	619.6	614.6	629.6	658.1	700.9	758.8
52.5°	709.5	685.2	654.6	629.6	609.6	598.2	593.9	606.0	625.3	663.1	713.8
55°	679.5	654.6	625.3	601.0	581.0	571.7	571.0	583.2	598.2	627.4	669.5
57.5°	644.6	622.4	592.4	567.5	551.8	544.6	546.8	558.2	571.7	592.4	628.9
60°	602.4	580.3	554.6	532.5	518.2	514.6	518.2	528.2	541.8	556.0	584.6
62.5°	553.9	536.1	511.8	493.2	481.1	481.1	483.2	491.8	503.9	518.9	539.6
65°	501.8	486.8	466.1	446.8	437.6	439.0	441.1	450.4	464.0	476.8	492.5
67.5°	445.4	431.8	414.0	395.4	390.4	389.7	391.2	400.4	414.0	425.4	440.4
70°	384.0	374.0	357.6	341.2	335.5	338.3	339.8	349.8	361.2	369.0	384.7
72.5°	320.5	311.9	296.2	284.1	283.4	286.2	289.8	297.7	306.9	315.5	327.6
75°	255.5	249.1	236.3	227.7	228.4	232.0	236.3	242.7	251.3	258.4	269.1
77.5°	193.4	188.4	179.2	173.5	174.9	179.2	182.7	188.4	194.9	202.0	209.9
80°	134.2	131.3	122.8	122.1	123.5	127.1	129.9	134.2	139.9	144.9	151.3
82.5°	82.1	79.9	75.7	74.9	76.4	78.5	82.1	86.4	89.2	92.8	97.1
85°	39.3	37.8	35.7	36.4	37.8	40.0	41.4	44.3	46.4	47.8	50.0
87.5°	9.3	8.6	7.9	9.3	10.0	11.4	11.4	12.8	14.3	15.0	15.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2
2.5°	593.9	591.0	592.4	591.0	588.9	586.0	582.5	578.9	576.7	572.5	569.6
5°	618.1	614.6	616.0	611.7	606.0	600.3	593.2	586.0	578.9	570.3	562.5
7.5°	651.7	648.8	651.0	646.0	637.4	633.8	621.7	610.3	598.2	584.6	571.0
10°	690.2	691.0	693.8	692.4	683.8	676.0	661.0	646.0	629.6	611.7	590.3
12.5°	733.1	735.2	742.3	736.6	730.9	722.4	703.1	684.5	663.8	638.8	611.7
15°	780.2	785.9	797.3	795.2	786.6	773.8	748.1	724.5	696.0	664.5	631.0
17.5°	833.7	842.3	858.7	855.1	851.6	830.1	805.9	772.3	735.2	694.5	651.0
20°	897.2	906.5	920.8	917.2	910.8	887.2	855.8	817.3	772.3	723.1	671.0
22.5°	946.5	955.8	968.6	969.3	961.5	934.4	898.7	852.3	799.5	742.3	680.2
25°	989.3	995.0	1008.6	1007.9	1001.5	976.5	940.1	885.8	823.0	758.1	687.4
27.5°	1025.0	1036.4	1046.4	1045.0	1038.6	1011.4	969.3	909.4	844.4	768.8	688.1
30°	1055.0	1067.8	1077.8	1077.8	1067.8	1037.1	995.7	929.4	857.3	773.8	687.4
32.5°	1075.7	1095.0	1105.7	1103.5	1089.3	1061.4	1016.4	945.1	867.3	773.0	680.2
35°	1082.8	1106.4	1125.7	1124.2	1112.1	1082.1	1032.9	959.3	872.3	769.5	673.1
37.5°	1067.8	1114.9	1134.9	1137.1	1127.8	1098.5	1042.1	964.3	870.8	762.3	664.5
40°	1031.4	1102.8	1137.8	1147.8	1141.4	1110.7	1051.4	967.9	865.8	753.8	653.1
42.5°	990.7	1069.3	1129.9	1152.8	1146.4	1112.1	1052.1	962.9	848.7	737.4	633.1
45°	934.4	1028.6	1101.4	1144.2	1142.1	1105.0	1041.4	946.5	828.7	713.8	605.3
47.5°	876.5	975.8	1056.4	1116.4	1124.9	1080.7	1007.9	915.1	791.6	676.0	568.2
50°	826.6	913.7	1005.0	1064.3	1077.1	1024.3	948.6	860.1	735.2	624.6	520.4
52.5°	775.9	848.0	940.8	996.5	1008.6	956.5	880.1	785.9	661.7	556.8	459.0
55°	725.2	791.6	870.1	927.2	925.1	869.4	779.5	696.0	576.0	482.5	392.6
57.5°	676.0	733.1	794.5	844.4	828.0	758.1	674.5	586.7	479.7	400.4	325.5
60°	626.0	678.1	724.5	754.5	735.9	663.1	575.3	489.7	393.3	323.3	260.5
62.5°	577.5	620.3	656.0	676.0	661.7	590.3	506.1	421.9	330.5	263.4	207.0
65°	527.5	564.6	595.3	605.3	597.4	530.3	447.5	363.3	279.8	217.7	167.7
67.5°	471.8	504.7	528.9	543.2	533.2	473.2	394.0	312.6	234.8	179.9	136.3
70°	409.7	439.0	462.5	471.1	466.1	414.0	339.8	263.4	194.2	146.3	110.6
72.5°	347.6	369.0	389.7	394.7	396.2	351.2	288.4	217.0	155.6	116.3	87.1
75°	283.4	299.1	313.4	319.8	319.8	283.4	229.8	172.0	121.3	89.2	66.4
77.5°	219.8	230.6	241.3	243.4	242.0	214.1	175.6	129.2	89.9	64.2	48.5
80°	157.7	164.9	170.6	174.2	166.3	149.2	122.8	89.9	62.1	43.5	32.8
82.5°	100.6	105.6	107.1	106.4	103.5	93.5	76.4	55.0	37.1	25.7	18.6
85°	52.1	52.8	54.2	53.5	51.4	46.4	38.5	26.4	17.1	10.7	7.1
87.5°	16.4	17.1	17.1	16.4	15.0	13.6	10.7	7.1	3.6	2.1	0.7
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°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2	568.2
2.5°	563.9	560.3	555.3	550.3	544.6	540.3	535.3	529.6	527.5	523.9	523.2
5°	552.5	541.8	533.9	522.5	513.9	503.2	495.4	488.2	483.2	477.5	476.1
7.5°	556.8	540.3	523.9	506.8	490.4	474.7	462.5	449.7	441.8	432.6	429.7
10°	569.6	546.8	521.8	497.5	475.4	451.8	433.3	416.1	399.7	389.0	383.3
12.5°	583.9	551.0	521.1	488.9	460.4	431.8	407.6	385.4	366.9	352.6	344.0
15°	596.0	555.3	518.9	480.4	444.7	411.9	385.4	360.5	339.1	321.2	310.5
17.5°	606.0	557.5	514.6	471.1	432.6	396.9	365.5	337.6	314.1	294.1	279.1
20°	613.9	558.2	508.2	459.7	417.6	379.0	345.5	315.5	288.4	267.0	249.1
22.5°	617.4	554.6	497.5	446.8	400.4	359.0	322.6	289.1	261.2	236.3	217.0
25°	615.3	547.5	487.5	433.3	382.6	336.9	296.2	260.5	232.0	206.3	188.4
27.5°	611.0	538.9	476.1	416.1	359.8	310.5	269.1	234.1	204.9	179.9	162.7
30°	603.9	527.5	461.1	394.7	334.1	282.7	240.5	207.0	177.0	152.8	137.0
32.5°	593.2	513.2	440.4	369.0	305.5	253.4	212.0	177.7	149.9	128.5	115.6
35°	583.2	496.8	415.4	339.1	276.2	223.4	182.7	149.9	126.3	108.5	97.8
37.5°	569.6	476.1	386.2	311.2	246.3	192.7	154.2	127.1	107.1	92.8	84.2
40°	549.6	449.0	355.5	279.8	214.9	164.2	130.6	108.5	93.5	80.7	73.5
42.5°	526.8	418.3	322.6	247.0	184.9	140.6	112.1	94.2	81.4	71.4	65.0
45°	493.2	380.5	289.1	216.3	158.5	120.6	97.1	82.1	71.4	64.2	59.2
47.5°	452.5	339.8	253.4	185.6	135.6	103.5	84.2	72.8	65.0	59.2	55.0
50°	403.3	297.7	218.4	158.5	115.6	89.9	74.2	65.7	60.0	55.0	51.4
52.5°	348.3	257.0	185.6	133.5	98.5	78.5	67.1	60.7	55.7	51.4	47.8
55°	291.9	215.6	156.3	112.1	84.9	68.5	60.7	55.7	51.4	47.8	45.0
57.5°	241.3	177.0	129.2	93.5	72.8	60.7	55.0	50.7	47.1	43.5	41.4
60°	197.0	146.3	106.4	79.2	62.8	54.2	49.3	45.7	42.8	40.0	37.8
62.5°	158.5	120.6	87.1	66.4	54.2	47.8	44.3	41.4	38.5	36.4	34.3
65°	128.5	98.5	72.1	55.7	46.4	42.1	39.3	36.4	34.3	31.4	30.0
67.5°	104.2	79.9	59.2	47.1	40.0	36.4	33.5	31.4	29.3	27.1	25.7
70°	84.2	64.2	48.5	39.3	33.5	30.0	27.8	25.7	24.3	22.8	21.4
72.5°	67.1	50.7	39.3	32.1	26.4	23.6	22.1	20.7	19.3	18.6	17.1
75°	51.4	39.3	29.3	24.3	20.0	17.8	17.1	15.7	15.0	14.3	12.8
77.5°	37.1	27.1	20.7	16.4	14.3	12.8	12.1	11.4	10.0	10.0	9.3
80°	24.3	17.1	12.8	10.7	9.3	7.9	7.9	7.1	6.4	6.4	6.4
82.5°	12.8	9.3	7.1	5.7	5.0	4.3	4.3	3.6	3.6	3.6	3.6
85°	5.0	3.6	2.9	2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	568.2	568.2	568.2	568.2
2.5°	522.5	520.4	523.2	521.1
5°	474.0	471.1	471.8	471.1
7.5°	426.1	421.1	421.9	419.7
10°	376.2	374.0	372.6	371.2
12.5°	338.3	332.6	331.9	329.8
15°	302.6	295.5	294.1	291.9
17.5°	268.4	260.5	259.1	257.0
20°	235.6	225.6	223.4	221.3
22.5°	203.4	192.7	189.9	187.7
25°	174.2	164.2	159.9	159.2
27.5°	148.5	138.5	136.3	133.5
30°	124.9	115.6	114.2	112.1
32.5°	104.9	97.8	95.6	94.9
35°	89.2	83.5	81.4	80.7
37.5°	77.1	72.1	70.7	69.2
40°	67.8	63.5	62.1	60.7
42.5°	60.0	57.1	55.7	55.0
45°	55.7	52.8	51.4	50.0
47.5°	51.4	49.3	47.1	46.4
50°	48.5	45.7	44.3	43.5
52.5°	45.0	42.8	41.4	40.7
55°	42.1	40.0	38.5	37.8
57.5°	39.3	37.1	35.7	35.7
60°	35.7	34.3	32.8	32.8
62.5°	32.1	30.7	30.0	29.3
65°	28.6	27.1	26.4	25.7
67.5°	24.3	22.8	22.1	22.1
70°	20.0	19.3	18.6	18.6
72.5°	16.4	15.7	15.0	15.0
75°	12.8	12.1	12.1	11.4
77.5°	9.3	8.6	8.6	8.6
80°	5.7	5.7	5.7	5.7
82.5°	3.6	2.9	3.6	2.9
85°	1.4	1.4	1.4	1.4
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)