

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: P163506

Luminaire Tested: **LDRL-SL3-E01-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163506
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL3-E01-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (21) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1536.1 lumens
Efficiency: N/A
Efficacy: 62.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

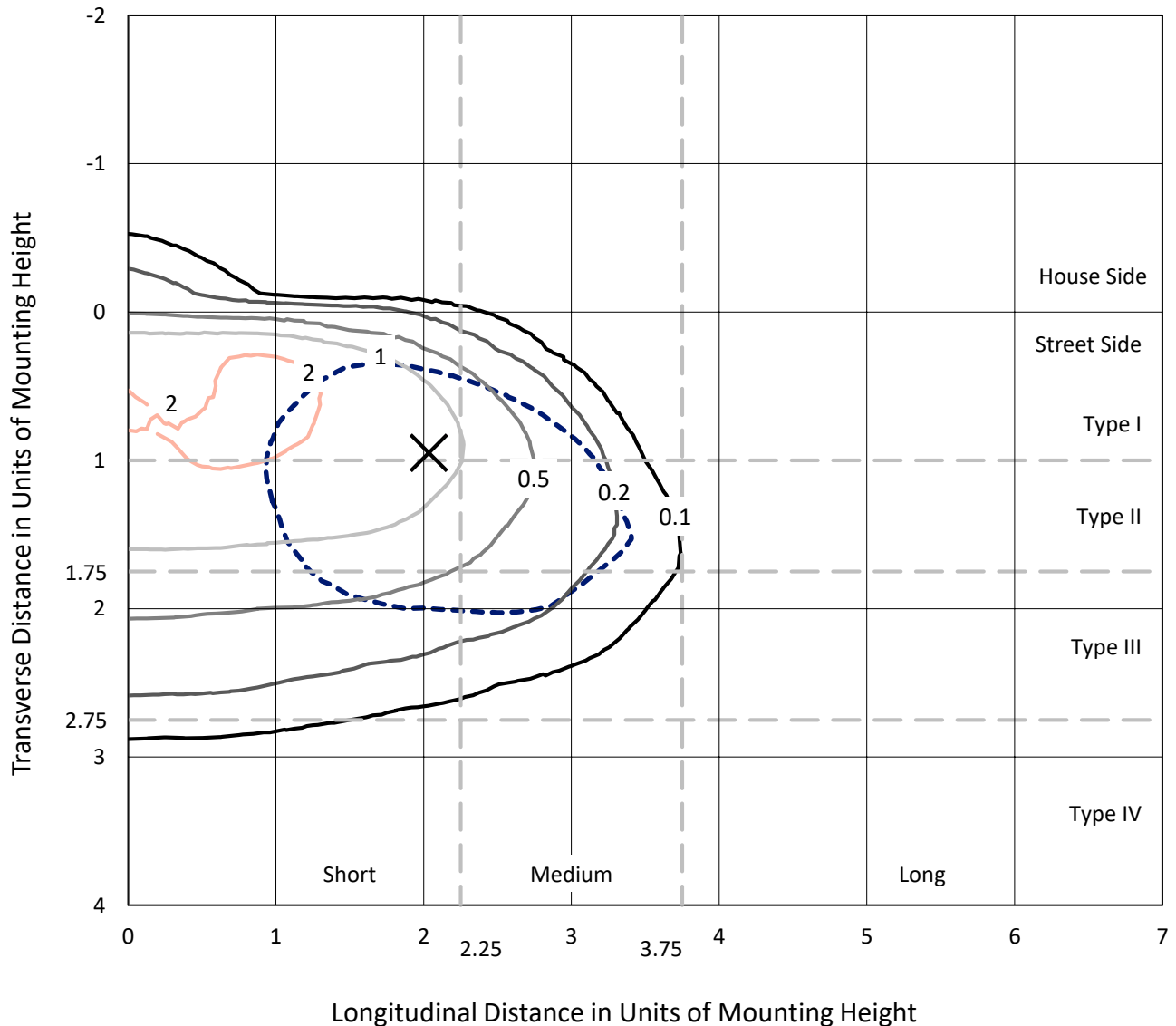
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

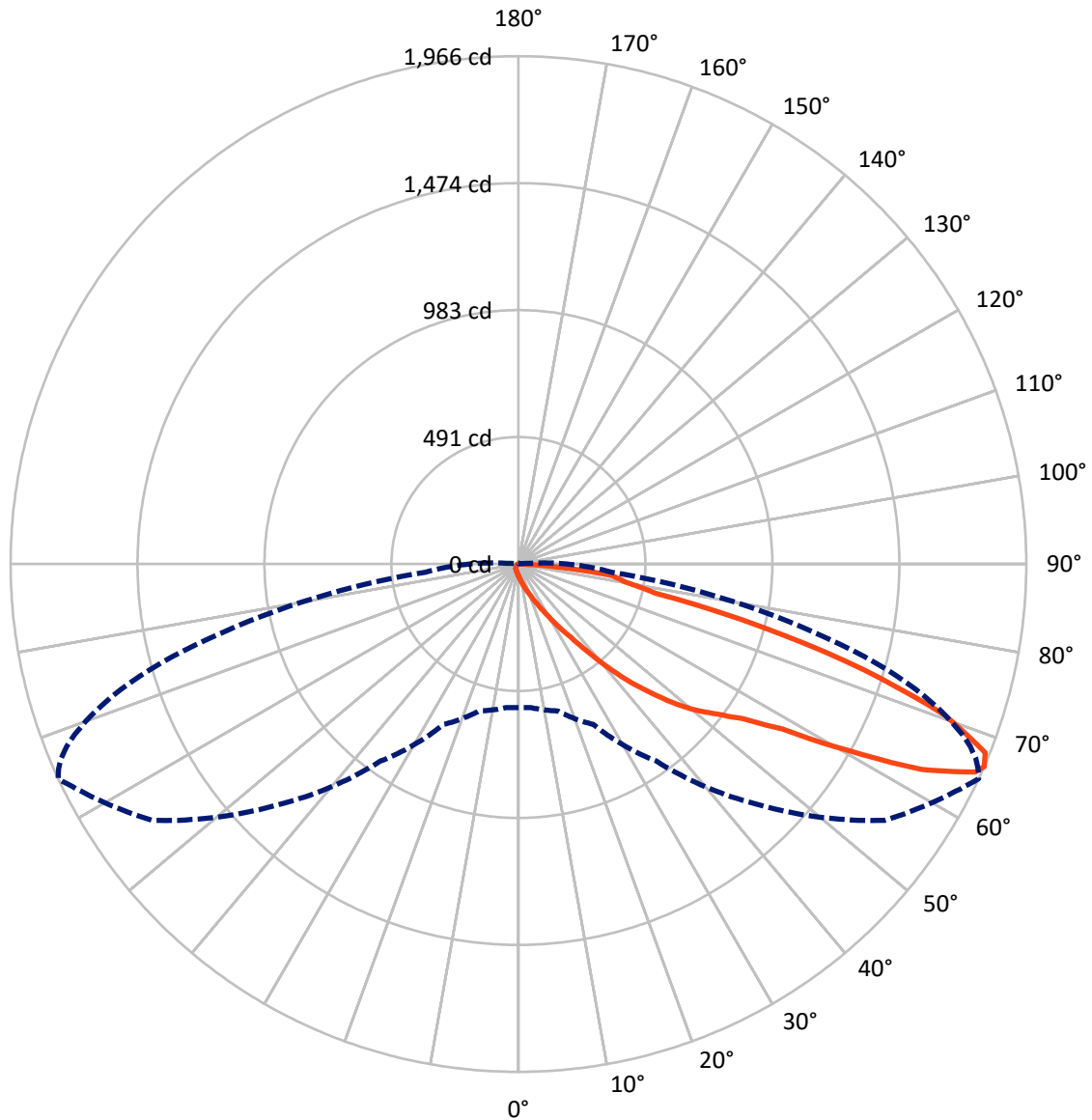
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.5 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	33.3	0.0	33.3
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	1502.8	0.0	1502.8
	% Fixture	97.8	0.0	97.8
Total	Lumens	1536.1	0.0	1536.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.2	0.3
10°-20°	22.0	1.4
20°-30°	47.5	3.1
30°-40°	101.4	6.6
40°-50°	224.2	14.6
50°-60°	379.9	24.7
60°-70°	506.9	33.0
70°-80°	223.3	14.5
80°-90°	25.7	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°	1536.1	100.0
0°-180°	1536.1	100.0



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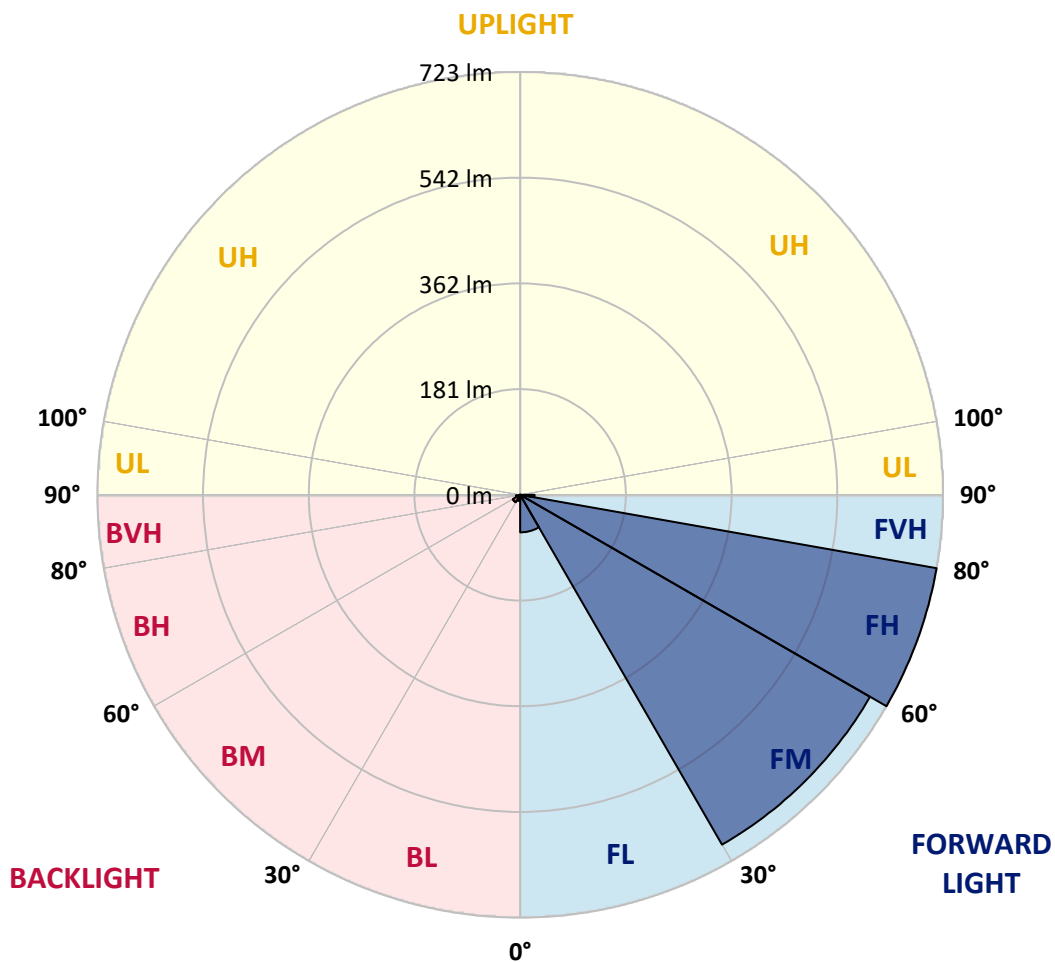
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	64.2	4.2			
FM	(30°-60°)	690.8	45.0			
FH	(60°-80°)	723.1	47.1			G1/1800
FVH	(80°-90°)	24.7	1.6			G1/100
BL	(0°-30°)	10.5	0.7	B0/110		
BM	(30°-60°)	14.6	1.0	B0/220		
BH	(60°-80°)	7.1	0.5	B0/110		G0/110
BVH	(80°-90°)	1.0	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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
2.5°	58.5	58.2	57.0	57.0	55.2	54.0	52.6	51.1	51.1	50.8	50.5
5°	77.4	75.6	75.3	72.1	69.4	65.6	62.0	57.3	56.7	56.1	55.8
7.5°	98.3	98.0	95.4	91.6	86.2	79.2	72.1	64.4	63.2	62.6	61.4
10°	125.5	124.0	120.5	114.0	106.0	96.6	85.1	72.9	71.5	70.3	69.7
12.5°	151.5	148.8	146.8	138.5	128.5	114.6	100.7	83.3	82.1	80.6	78.3
15°	175.7	173.4	169.8	162.7	151.5	134.1	117.8	96.6	93.6	91.6	89.8
17.5°	194.6	193.1	189.0	181.0	168.9	153.6	134.1	110.2	107.8	105.1	101.9
20°	212.6	210.6	204.1	193.1	180.1	168.3	153.3	127.9	124.6	121.4	117.8
22.5°	229.8	227.7	217.0	199.0	185.2	180.1	174.8	147.9	142.9	140.3	136.7
25°	253.7	249.3	232.7	204.1	185.5	189.3	198.5	173.9	169.2	165.4	159.8
27.5°	285.9	280.0	254.0	211.4	186.6	199.3	225.6	205.5	200.5	196.1	189.9
30°	322.2	318.3	287.3	229.2	195.2	214.1	256.0	245.7	239.8	234.5	227.1
32.5°	358.8	353.5	322.8	262.8	218.2	242.8	294.1	292.4	284.7	279.7	271.7
35°	391.0	388.3	365.6	318.0	270.8	292.9	344.9	347.0	340.2	334.9	326.0
37.5°	412.9	412.9	408.4	377.4	354.4	370.9	419.6	419.9	413.1	401.0	396.6
40°	424.1	427.3	443.3	449.2	448.0	469.3	517.7	512.4	506.8	500.6	485.8
42.5°	447.1	450.1	484.0	524.8	551.4	579.4	612.8	611.0	604.2	593.0	579.4
45°	486.1	489.9	530.4	595.0	649.7	689.6	710.8	702.5	695.8	685.1	678.0
47.5°	535.7	543.1	588.9	668.9	734.7	800.6	822.7	800.9	795.0	786.7	775.2
50°	588.6	595.7	644.4	735.9	810.3	888.9	925.8	888.9	880.3	877.7	864.7
52.5°	634.3	640.2	687.2	787.6	868.2	960.4	1014.1	965.4	959.2	950.3	940.9
55°	661.5	666.2	710.2	812.4	907.5	1024.7	1099.5	1056.6	1047.5	1043.9	1030.4
57.5°	670.7	675.4	715.0	815.7	928.8	1083.5	1203.1	1204.6	1193.7	1181.0	1176.8
60°	670.7	676.0	709.3	807.7	949.4	1146.1	1341.3	1464.5	1440.8	1438.5	1423.4
62.5°	642.9	647.9	681.6	783.2	977.2	1230.6	1533.9	1751.2	1744.4	1729.1	1704.3
65°	582.7	585.6	618.7	720.6	966.6	1308.2	1700.7	1942.0	1931.1	1900.9	1869.0
66°	555.5	557.9	588.9	684.8	931.7	1318.9	1730.3	1965.9	1947.9	1922.5	1886.5
67.5°	516.2	520.3	542.2	618.4	848.1	1282.0	1711.6	1949.1	1933.4	1902.7	1866.7
70°	344.6	341.7	418.8	474.6	646.1	1044.5	1535.6	1750.0	1750.3	1735.9	1721.4
72.5°	163.6	165.4	187.8	292.1	422.9	697.8	1222.3	1396.8	1416.9	1390.9	1372.9
75°	117.5	120.2	133.8	178.7	252.2	418.8	792.3	976.9	977.5	931.4	890.4
77.5°	34.3	35.7	50.2	110.2	189.0	282.6	455.1	543.1	530.4	497.3	466.3
80°	14.2	14.2	14.8	35.1	75.9	191.9	318.3	418.2	416.7	404.0	385.7
82.5°	5.3	5.6	7.1	14.5	18.0	47.3	212.3	362.9	362.1	344.0	331.1
85°	0.6	0.6	1.8	6.2	6.8	8.9	42.5	160.1	159.2	160.1	140.3
87.5°	0.0	0.0	0.3	0.6	0.9	1.2	1.8	6.2	6.8	6.5	5.9
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
2.5°	50.5	49.9	49.9	49.6	49.6	49.6	49.3	49.0	49.0	48.7	48.4
5°	55.2	54.6	54.3	53.7	53.4	53.2	52.6	52.3	51.7	51.4	51.1
7.5°	60.8	59.7	59.3	58.5	57.6	57.0	56.4	55.5	54.9	53.7	53.4
10°	67.9	66.4	65.3	64.1	63.2	61.7	60.8	59.7	58.5	57.6	56.7
12.5°	77.1	75.0	73.2	72.1	70.0	68.2	66.4	65.6	63.2	62.0	60.5
15°	87.1	84.8	82.7	80.3	78.8	75.9	73.5	70.9	69.7	67.6	65.3
17.5°	100.1	96.3	93.0	90.7	87.7	84.8	82.1	79.4	75.9	73.5	70.6
20°	114.0	110.7	106.3	102.2	98.6	95.1	91.2	87.7	84.5	80.6	77.1
22.5°	131.7	127.0	121.7	117.5	112.8	109.0	103.6	98.9	93.6	88.6	84.5
25°	154.2	147.9	142.9	137.0	131.4	125.5	119.0	113.1	106.3	101.6	94.5
27.5°	181.9	176.0	169.2	161.5	155.9	147.1	138.5	131.1	123.1	115.8	107.8
30°	217.4	208.8	201.7	194.3	183.1	174.5	164.5	154.4	143.5	136.1	124.0
32.5°	259.9	250.7	240.1	229.5	219.1	207.0	194.6	182.2	170.1	156.5	144.1
35°	311.9	300.9	288.8	277.3	261.3	248.4	232.7	215.6	202.0	186.3	170.7
37.5°	380.7	362.6	352.0	339.9	318.3	300.6	283.2	266.1	242.2	225.6	203.5
40°	466.9	456.3	438.8	419.3	399.8	376.5	352.9	330.2	302.4	279.4	253.7
42.5°	568.2	552.5	534.8	506.8	487.0	459.5	432.6	402.5	368.6	339.0	308.9
45°	663.3	644.7	631.1	603.0	582.4	549.9	517.4	485.5	446.2	408.1	373.3
47.5°	766.0	750.7	728.3	705.5	684.5	647.9	612.8	574.1	532.7	487.6	442.4
50°	856.4	844.3	828.9	801.5	778.2	747.4	706.1	663.9	611.6	566.7	515.3
52.5°	933.2	923.7	902.2	882.7	861.7	832.8	795.9	755.4	699.0	649.7	591.2
55°	1023.8	1017.1	998.2	986.1	967.4	939.7	905.1	867.6	808.0	754.2	688.1
57.5°	1172.4	1167.1	1150.5	1145.5	1127.2	1103.0	1060.5	1020.3	950.6	883.9	808.3
60°	1418.4	1407.8	1383.5	1371.1	1332.5	1300.0	1244.8	1189.5	1105.4	1020.3	929.4
62.5°	1681.8	1652.0	1605.9	1566.3	1511.4	1455.0	1381.2	1296.7	1198.1	1097.1	992.6
65°	1823.9	1773.1	1714.9	1652.0	1580.8	1497.8	1404.8	1303.5	1197.5	1090.9	980.4
66°	1840.1	1782.8	1721.1	1651.1	1571.9	1483.6	1389.2	1282.8	1172.7	1068.7	958.3
67.5°	1819.7	1759.8	1694.5	1616.8	1531.2	1439.7	1340.4	1230.0	1124.0	1018.5	911.0
70°	1677.1	1617.4	1559.3	1477.5	1386.2	1294.1	1200.2	1076.7	976.3	879.4	783.8
72.5°	1339.2	1298.8	1241.2	1171.2	1082.3	974.2	896.0	785.5	698.4	604.5	530.4
75°	836.9	779.9	708.8	619.6	551.6	463.9	418.2	334.3	284.7	241.3	199.3
77.5°	427.9	385.1	335.2	285.0	236.9	189.0	146.2	103.4	69.7	48.4	36.0
80°	353.5	315.7	274.4	228.6	186.0	144.4	104.0	70.9	45.2	29.5	23.0
82.5°	292.1	260.2	223.3	180.7	143.8	113.4	78.8	51.4	31.9	20.7	16.2
85°	124.3	112.8	87.1	69.1	52.0	38.4	26.9	18.0	12.7	10.3	9.4
87.5°	5.3	5.9	5.6	4.4	3.3	3.3	3.0	2.4	2.4	2.4	2.4
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°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
2.5°	48.4	48.1	47.8	47.8	47.5	47.3	45.5	44.0	42.2	41.0	39.9
5°	50.5	50.2	49.6	49.3	48.7	48.4	44.6	41.3	38.7	36.6	35.1
7.5°	52.6	52.3	51.4	50.5	50.2	49.6	43.4	39.3	35.7	33.4	31.9
10°	55.2	54.3	53.4	52.3	51.4	50.5	42.2	36.9	33.1	31.0	29.5
12.5°	59.1	57.6	56.1	54.6	53.4	52.0	41.6	34.9	31.0	28.6	27.2
15°	63.5	61.4	59.7	57.9	55.8	54.3	40.5	33.1	29.2	26.9	25.1
17.5°	67.6	65.3	62.6	60.0	57.9	55.8	39.3	31.3	27.5	25.1	23.3
20°	73.5	70.0	66.7	63.5	60.5	57.9	37.5	29.5	26.0	23.3	21.6
22.5°	80.0	75.9	71.8	67.3	63.5	60.0	36.0	28.1	24.5	21.8	19.8
25°	88.3	83.3	77.7	72.1	67.6	62.9	34.5	26.6	23.0	20.4	18.3
27.5°	99.8	92.7	86.5	79.4	72.6	67.3	33.4	25.4	21.6	18.9	16.8
30°	115.5	105.1	95.4	87.7	79.7	72.1	32.2	23.9	20.4	17.4	15.1
32.5°	132.9	120.8	109.6	98.0	88.0	79.2	31.0	22.7	18.9	15.9	13.9
35°	154.4	139.1	124.0	110.7	98.6	86.8	29.8	21.6	17.7	14.5	12.4
37.5°	185.5	166.3	146.5	129.3	113.7	98.0	28.9	20.4	16.2	13.0	10.9
40°	228.0	203.2	179.0	155.6	135.2	115.8	27.8	19.2	15.1	11.8	9.7
42.5°	274.1	243.9	212.0	185.8	157.7	133.2	26.6	18.0	13.9	10.6	8.6
45°	331.3	293.8	255.2	219.4	185.2	153.6	25.4	16.8	12.4	9.4	7.4
47.5°	393.9	346.1	302.4	257.5	216.8	179.0	23.9	15.9	11.2	8.3	6.5
50°	458.3	407.8	352.6	301.5	253.1	204.4	22.5	14.5	10.0	7.4	5.3
52.5°	527.7	468.1	411.7	348.2	291.8	237.7	21.0	13.3	9.2	6.5	4.4
55°	616.0	549.3	483.1	412.0	344.0	276.4	19.5	11.8	8.0	5.6	3.5
57.5°	727.1	647.9	566.7	486.4	404.0	327.2	18.3	10.3	6.8	4.7	3.0
60°	831.9	739.5	641.1	548.7	455.7	366.2	16.5	9.2	5.9	3.8	3.0
62.5°	886.2	780.8	674.8	572.9	473.7	380.1	14.8	7.7	5.0	3.3	2.6
65°	872.9	765.5	662.7	559.9	462.8	371.2	13.0	6.8	4.4	3.0	2.6
66°	853.7	747.4	644.1	546.3	453.6	361.8	12.1	6.5	4.1	3.0	2.4
67.5°	811.8	709.1	610.4	519.5	428.5	343.7	10.9	5.9	3.8	2.6	2.4
70°	693.4	600.1	521.2	440.3	366.2	289.7	8.9	5.0	3.3	2.4	2.4
72.5°	458.9	395.4	342.9	295.0	246.6	191.4	7.4	4.1	2.6	2.4	2.1
75°	173.1	156.5	134.4	120.8	105.4	92.4	5.9	2.6	2.1	2.1	2.1
77.5°	30.7	28.4	25.1	23.0	21.3	19.5	4.7	1.8	1.8	2.1	2.1
80°	20.7	19.2	17.4	15.9	14.8	13.3	3.3	1.5	1.8	1.8	2.1
82.5°	14.8	13.9	13.0	11.8	10.9	9.7	2.1	1.5	1.8	1.8	1.8
85°	8.9	8.3	7.7	7.1	6.2	5.9	1.5	1.5	1.5	1.8	1.8
87.5°	2.4	2.1	2.4	2.4	1.8	2.1	1.2	1.2	1.2	1.5	1.5
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):

	145°	155°	165°	175°	180°
0°	46.4	46.4	46.4	46.4	46.4
2.5°	39.3	39.3	38.7	39.6	39.6
5°	34.0	34.0	33.7	34.0	34.0
7.5°	31.0	30.7	30.7	30.7	31.0
10°	28.4	28.1	28.1	28.1	28.1
12.5°	26.0	25.7	25.4	25.7	25.7
15°	23.9	23.3	23.3	23.3	23.3
17.5°	22.1	21.6	21.3	21.3	21.3
20°	20.4	19.5	19.5	19.5	19.5
22.5°	18.6	17.7	17.7	17.7	17.7
25°	16.8	15.9	15.9	15.9	15.9
27.5°	15.4	14.5	14.5	14.5	14.5
30°	13.6	13.0	13.0	13.3	13.0
32.5°	12.4	11.5	11.5	11.8	11.8
35°	10.9	10.3	10.3	10.3	10.3
37.5°	9.4	8.9	8.9	8.9	8.9
40°	8.3	7.7	7.4	7.7	7.7
42.5°	7.1	6.5	6.2	6.2	6.2
45°	6.2	5.3	5.0	5.3	5.3
47.5°	5.0	4.4	4.4	4.7	4.7
50°	3.8	3.8	4.1	4.7	4.7
52.5°	3.5	3.5	4.1	4.7	4.7
55°	3.3	3.5	4.1	4.4	4.7
57.5°	3.0	3.5	4.1	4.4	4.4
60°	3.0	3.3	3.8	4.4	4.4
62.5°	2.6	3.0	3.5	4.1	4.1
65°	2.6	3.0	3.5	4.1	4.1
66°	2.6	3.0	3.5	4.1	4.1
67.5°	2.6	3.0	3.5	4.1	4.1
70°	2.6	3.0	3.5	3.8	3.8
72.5°	2.4	2.6	3.3	3.8	3.8
75°	2.4	2.6	3.3	3.8	3.8
77.5°	2.4	2.6	3.3	3.8	3.8
80°	2.4	2.6	3.3	3.5	3.8
82.5°	2.1	2.6	3.0	3.5	3.5
85°	2.1	2.4	3.0	3.3	3.5
87.5°	1.8	2.1	2.4	3.0	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)