

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: P163513

Luminaire Tested: **LDRL-SL3-F01-E-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163513
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-F01-E-7050-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: (7) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1424.6 lumens
Efficiency: N/A
Efficacy: 55.0 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

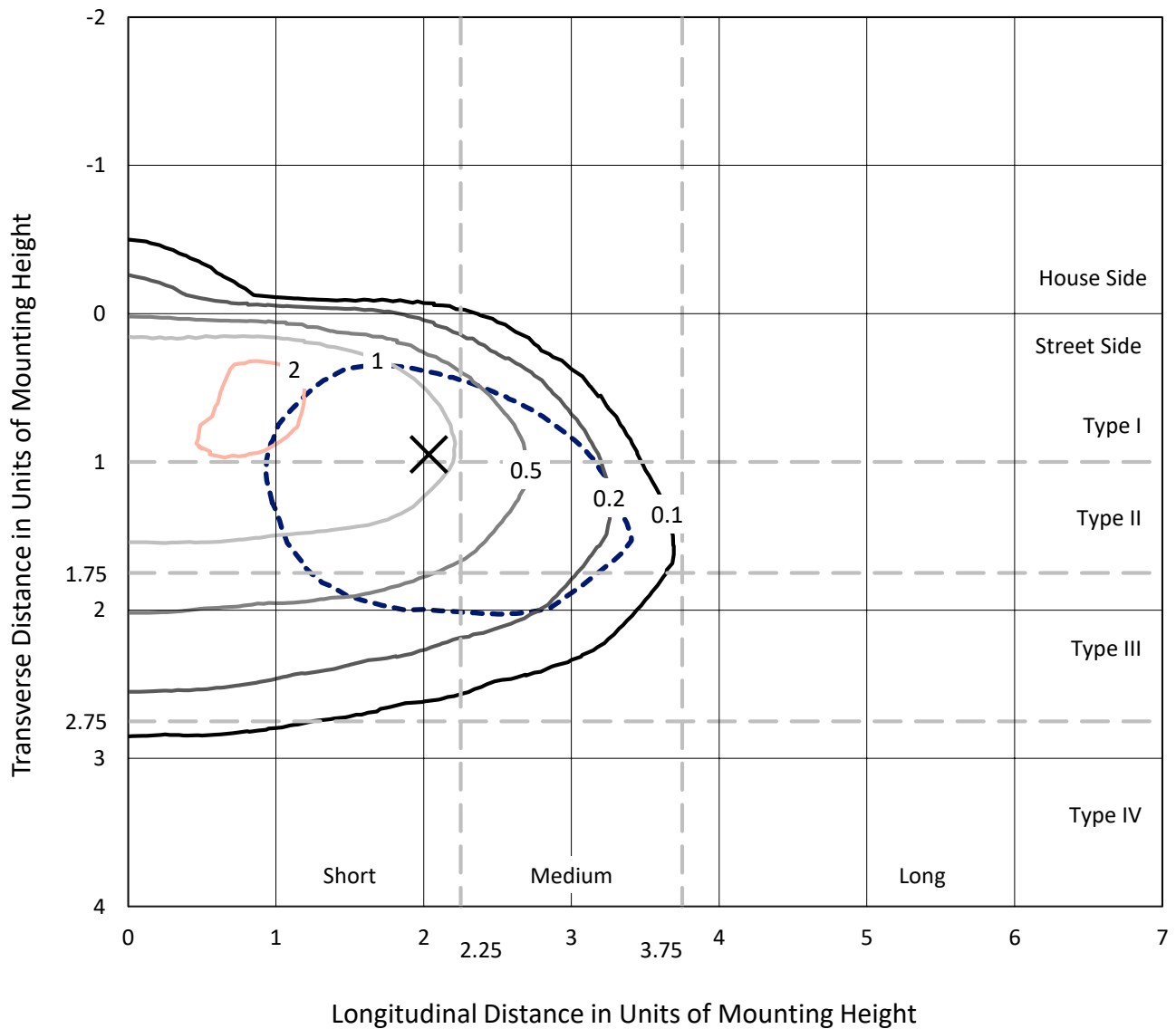
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

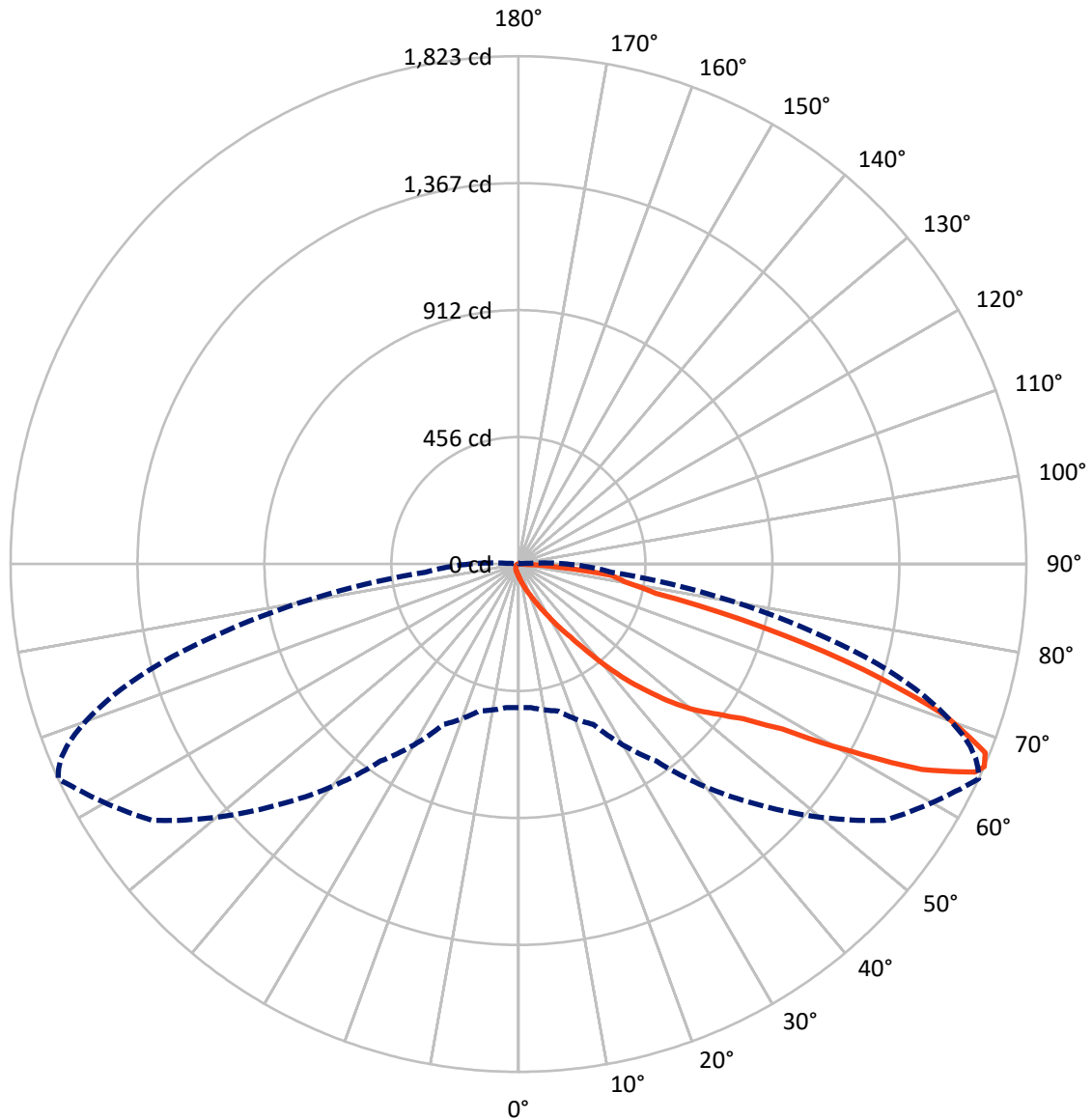
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.4 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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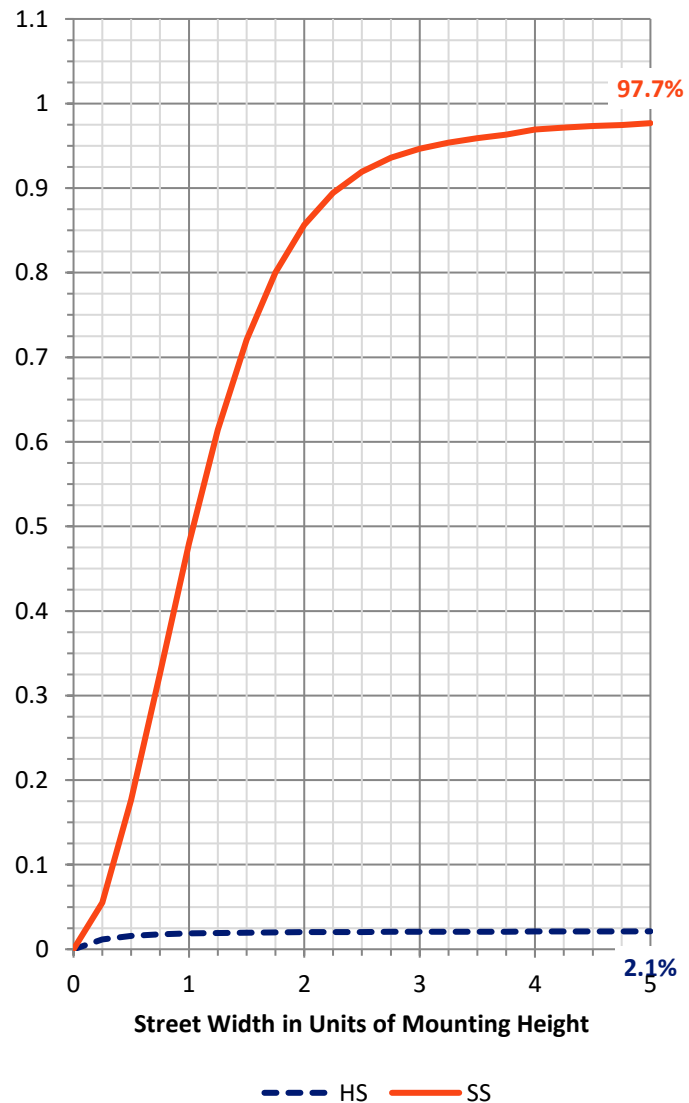
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	30.9	0.0	30.9
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	1393.7	0.0	1393.7
	% Fixture	97.8	0.0	97.8
Total	Lumens	1424.6	0.0	1424.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.8	0.3
10°-20°	20.4	1.4
20°-30°	44.0	3.1
30°-40°	94.0	6.6
40°-50°	207.9	14.6
50°-60°	352.3	24.7
60°-70°	470.2	33.0
70°-80°	207.1	14.5
80°-90°	23.8	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°	1424.6	100.0
0°-180°	1424.6	100.0



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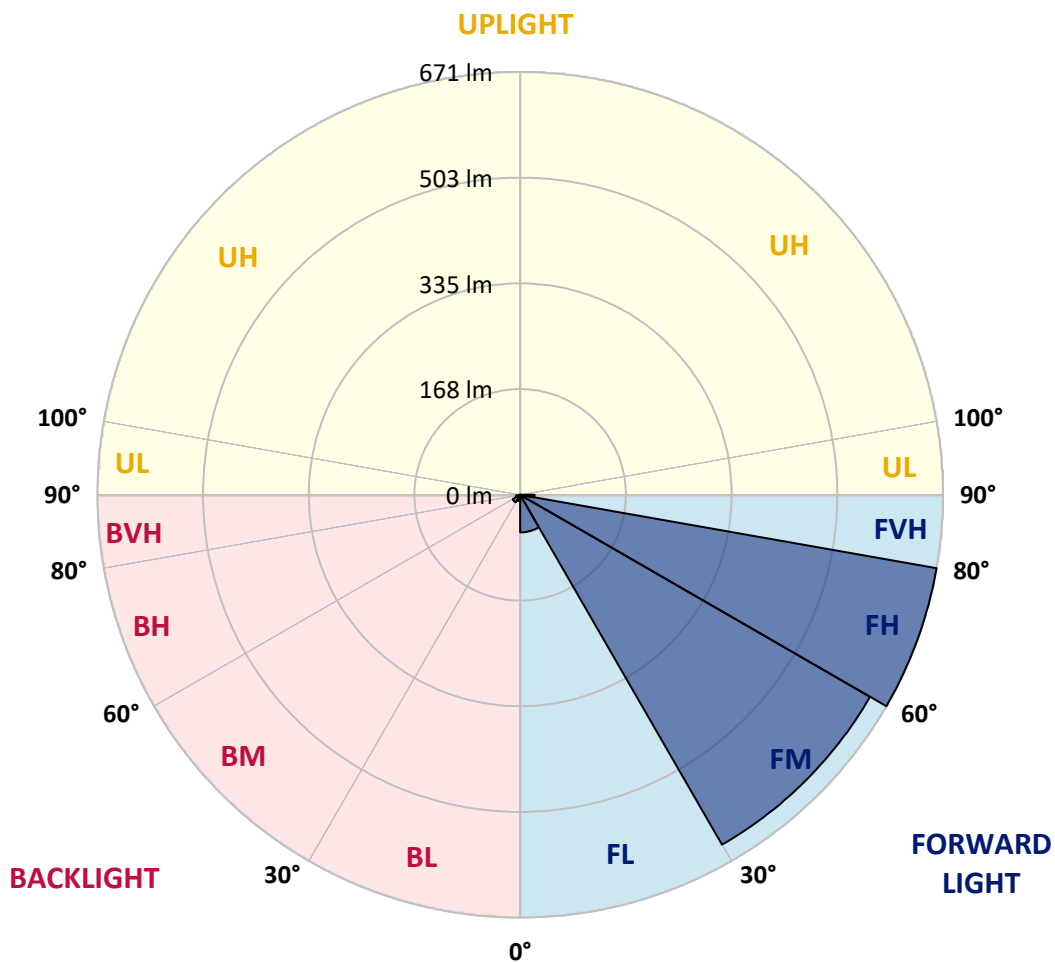
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	59.5	4.2			
FM	(30°-60°)	640.7	45.0			
FH	(60°-80°)	670.6	47.1			G1/1800
FVH	(80°-90°)	22.9	1.6			G1/100
BL	(0°-30°)	9.7	0.7	B0/110		
BM	(30°-60°)	13.6	1.0	B0/220		
BH	(60°-80°)	6.6	0.5	B0/110		G0/110
BVH	(80°-90°)	0.9	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°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	54.2	54.0	52.9	52.9	51.2	50.1	48.8	47.4	47.4	47.1	46.8
5°	71.8	70.1	69.8	66.8	64.4	60.8	57.5	53.1	52.6	52.0	51.8
7.5°	91.2	90.9	88.5	84.9	80.0	73.4	66.8	59.7	58.6	58.1	57.0
10°	116.4	115.0	111.7	105.7	98.3	89.6	78.9	67.6	66.3	65.2	64.6
12.5°	140.5	138.0	136.1	128.5	119.1	106.3	93.4	77.2	76.1	74.8	72.6
15°	163.0	160.8	157.5	150.9	140.5	124.4	109.3	89.6	86.8	84.9	83.3
17.5°	180.5	179.1	175.3	167.9	156.7	142.4	124.4	102.2	100.0	97.5	94.5
20°	197.2	195.3	189.3	179.1	167.1	156.1	142.1	118.6	115.6	112.6	109.3
22.5°	213.1	211.2	201.3	184.6	171.7	167.1	162.1	137.2	132.6	130.1	126.8
25°	235.3	231.2	215.8	189.3	172.0	175.6	184.1	161.3	156.9	153.4	148.2
27.5°	265.1	259.6	235.5	196.1	173.1	184.9	209.2	190.6	186.0	181.9	176.1
30°	298.8	295.2	266.5	212.5	181.0	198.6	237.5	227.9	222.4	217.5	210.6
32.5°	332.8	327.8	299.4	243.8	202.4	225.1	272.8	271.1	264.0	259.4	252.0
35°	362.6	360.2	339.1	295.0	251.2	271.7	319.9	321.8	315.5	310.6	302.4
37.5°	382.9	382.9	378.8	350.0	328.7	344.0	389.2	389.5	383.2	371.9	367.8
40°	393.3	396.3	411.1	416.6	415.5	435.2	480.1	475.2	470.0	464.2	450.5
42.5°	414.7	417.4	448.9	486.7	511.3	537.4	568.3	566.7	560.4	550.0	537.4
45°	450.8	454.4	491.9	551.9	602.5	639.5	659.2	651.6	645.3	635.4	628.8
47.5°	496.8	503.7	546.1	620.3	681.4	742.5	763.0	742.8	737.3	729.6	718.9
50°	545.9	552.4	597.6	682.5	751.5	824.4	858.6	824.4	816.4	814.0	801.9
52.5°	588.3	593.8	637.3	730.5	805.2	890.7	940.5	895.3	889.6	881.4	872.6
55°	613.5	617.9	658.7	753.5	841.7	950.4	1019.7	980.0	971.5	968.2	955.6
57.5°	622.0	626.4	663.1	756.5	861.4	1004.9	1115.8	1117.2	1107.0	1095.3	1091.4
60°	622.0	626.9	657.9	749.1	880.5	1062.9	1244.0	1358.2	1336.3	1334.1	1320.1
62.5°	596.2	600.9	632.1	726.4	906.3	1141.3	1422.6	1624.1	1617.8	1603.6	1580.6
65°	540.4	543.1	573.8	668.3	896.4	1213.3	1577.3	1801.1	1790.9	1763.0	1733.4
66°	515.2	517.4	546.1	635.1	864.1	1223.2	1604.7	1823.2	1806.5	1783.0	1749.6
67.5°	478.8	482.6	502.9	573.5	786.6	1188.9	1587.4	1807.6	1793.1	1764.6	1731.2
70°	319.6	316.9	388.4	440.1	599.3	968.7	1424.2	1623.0	1623.3	1609.9	1596.5
72.5°	151.7	153.4	174.2	270.9	392.2	647.2	1133.6	1295.5	1314.1	1290.0	1273.3
75°	109.0	111.5	124.1	165.7	233.9	388.4	734.8	906.0	906.6	863.8	825.8
77.5°	31.8	33.1	46.6	102.2	175.3	262.1	422.1	503.7	491.9	461.2	432.5
80°	13.1	13.1	13.7	32.6	70.4	178.0	295.2	387.8	386.5	374.7	357.7
82.5°	4.9	5.2	6.6	13.4	16.7	43.8	196.9	336.6	335.8	319.1	307.0
85°	0.5	0.5	1.6	5.7	6.3	8.2	39.4	148.4	147.6	148.4	130.1
87.5°	0.0	0.0	0.3	0.5	0.8	1.1	1.6	5.7	6.3	6.0	5.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	46.8	46.3	46.3	46.0	46.0	46.0	45.7	45.5	45.5	45.2	44.9
5°	51.2	50.7	50.4	49.8	49.6	49.3	48.8	48.5	47.9	47.7	47.4
7.5°	56.4	55.3	55.0	54.2	53.4	52.9	52.3	51.5	50.9	49.8	49.6
10°	63.0	61.6	60.5	59.4	58.6	57.2	56.4	55.3	54.2	53.4	52.6
12.5°	71.5	69.6	67.9	66.8	64.9	63.3	61.6	60.8	58.6	57.5	56.1
15°	80.8	78.6	76.7	74.5	73.1	70.4	68.2	65.7	64.6	62.7	60.5
17.5°	92.8	89.3	86.3	84.1	81.3	78.6	76.1	73.7	70.4	68.2	65.5
20°	105.7	102.7	98.6	94.8	91.5	88.2	84.6	81.3	78.3	74.8	71.5
22.5°	122.1	117.8	112.8	109.0	104.6	101.1	96.1	91.8	86.8	82.2	78.3
25°	143.0	137.2	132.6	127.1	121.9	116.4	110.4	104.9	98.6	94.2	87.6
27.5°	168.7	163.2	156.9	149.8	144.6	136.4	128.5	121.6	114.2	107.4	100.0
30°	201.6	193.6	187.1	180.2	169.8	161.9	152.6	143.2	133.1	126.3	115.0
32.5°	241.0	232.5	222.7	212.8	203.2	192.0	180.5	169.0	157.8	145.2	133.7
35°	289.2	279.1	267.9	257.2	242.4	230.3	215.8	199.9	187.3	172.8	158.3
37.5°	353.0	336.3	326.5	315.2	295.2	278.8	262.7	246.8	224.6	209.2	188.7
40°	433.0	423.1	407.0	388.9	370.8	349.2	327.3	306.2	280.4	259.1	235.3
42.5°	526.9	512.4	496.0	470.0	451.6	426.2	401.2	373.3	341.8	314.4	286.5
45°	615.1	597.9	585.3	559.3	540.1	510.0	479.9	450.3	413.8	378.5	346.2
47.5°	710.5	696.2	675.4	654.3	634.9	600.9	568.3	532.4	494.1	452.2	410.3
50°	794.3	783.0	768.8	743.3	721.7	693.2	654.9	615.7	567.2	525.6	477.9
52.5°	865.5	856.7	836.7	818.6	799.2	772.4	738.1	700.6	648.3	602.5	548.3
55°	949.6	943.3	925.7	914.5	897.2	871.5	839.5	804.7	749.4	699.5	638.2
57.5°	1087.3	1082.4	1067.1	1062.4	1045.4	1023.0	983.5	946.3	881.6	819.7	749.6
60°	1315.5	1305.6	1283.2	1271.6	1235.8	1205.6	1154.4	1103.2	1025.1	946.3	861.9
62.5°	1559.8	1532.1	1489.4	1452.7	1401.7	1349.4	1281.0	1202.6	1111.1	1017.5	920.5
65°	1691.5	1644.4	1590.5	1532.1	1466.1	1389.1	1302.9	1208.9	1110.6	1011.7	909.3
66°	1706.6	1653.4	1596.2	1531.3	1457.9	1376.0	1288.4	1189.8	1087.6	991.2	888.8
67.5°	1687.7	1632.1	1571.5	1499.5	1420.1	1335.2	1243.2	1140.7	1042.4	944.6	844.9
70°	1555.4	1500.1	1446.1	1370.2	1285.6	1200.2	1113.1	998.6	905.5	815.6	726.9
72.5°	1242.1	1204.5	1151.1	1086.2	1003.8	903.5	831.0	728.5	647.7	560.6	491.9
75°	776.2	723.3	657.3	574.6	511.6	430.3	387.8	310.0	264.0	223.8	184.9
77.5°	396.9	357.1	310.9	264.3	219.7	175.3	135.6	95.9	64.6	44.9	33.4
80°	327.8	292.8	254.4	212.0	172.5	133.9	96.4	65.7	41.9	27.4	21.4
82.5°	270.9	241.3	207.1	167.6	133.4	105.2	73.1	47.7	29.6	19.2	15.1
85°	115.3	104.6	80.8	64.1	48.2	35.6	24.9	16.7	11.8	9.6	8.8
87.5°	4.9	5.5	5.2	4.1	3.0	3.0	2.7	2.2	2.2	2.2	2.2
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	44.9	44.6	44.4	44.4	44.1	43.8	42.2	40.8	39.2	38.1	37.0
5°	46.8	46.6	46.0	45.7	45.2	44.9	41.4	38.3	35.9	34.0	32.6
7.5°	48.8	48.5	47.7	46.8	46.6	46.0	40.3	36.4	33.1	31.0	29.6
10°	51.2	50.4	49.6	48.5	47.7	46.8	39.2	34.2	30.7	28.7	27.4
12.5°	54.8	53.4	52.0	50.7	49.6	48.2	38.6	32.3	28.7	26.6	25.2
15°	58.9	57.0	55.3	53.7	51.8	50.4	37.5	30.7	27.1	24.9	23.3
17.5°	62.7	60.5	58.1	55.6	53.7	51.8	36.4	29.0	25.5	23.3	21.6
20°	68.2	64.9	61.9	58.9	56.1	53.7	34.8	27.4	24.1	21.6	20.0
22.5°	74.2	70.4	66.5	62.4	58.9	55.6	33.4	26.0	22.7	20.3	18.3
25°	81.9	77.2	72.0	66.8	62.7	58.3	32.0	24.6	21.4	18.9	17.0
27.5°	92.6	86.0	80.3	73.7	67.4	62.4	31.0	23.5	20.0	17.5	15.6
30°	107.1	97.5	88.5	81.3	73.9	66.8	29.9	22.2	18.9	16.2	14.0
32.5°	123.2	112.0	101.6	90.9	81.6	73.4	28.7	21.1	17.5	14.8	12.9
35°	143.2	129.0	115.0	102.7	91.5	80.5	27.7	20.0	16.4	13.4	11.5
37.5°	172.0	154.2	135.9	120.0	105.4	90.9	26.8	18.9	15.1	12.0	10.1
40°	211.4	188.4	166.0	144.3	125.4	107.4	25.8	17.8	14.0	11.0	9.0
42.5°	254.2	226.2	196.7	172.3	146.3	123.5	24.6	16.7	12.9	9.9	7.9
45°	307.3	272.5	236.6	203.5	171.7	142.4	23.5	15.6	11.5	8.8	6.8
47.5°	365.4	321.0	280.4	238.8	201.0	166.0	22.2	14.8	10.4	7.7	6.0
50°	425.1	378.2	327.0	279.6	234.7	189.5	20.8	13.4	9.3	6.8	4.9
52.5°	489.4	434.1	381.8	322.9	270.6	220.5	19.4	12.3	8.5	6.0	4.1
55°	571.3	509.4	448.1	382.1	319.1	256.4	18.1	11.0	7.4	5.2	3.3
57.5°	674.3	600.9	525.6	451.1	374.7	303.5	17.0	9.6	6.3	4.4	2.7
60°	771.5	685.8	594.6	508.9	422.6	339.6	15.3	8.5	5.5	3.6	2.7
62.5°	821.9	724.1	625.8	531.3	439.3	352.5	13.7	7.1	4.7	3.0	2.5
65°	809.6	709.9	614.6	519.3	429.2	344.3	12.0	6.3	4.1	2.7	2.5
66°	791.8	693.2	597.3	506.7	420.7	335.5	11.2	6.0	3.8	2.7	2.2
67.5°	752.9	657.6	566.1	481.8	397.4	318.8	10.1	5.5	3.6	2.5	2.2
70°	643.1	556.5	483.4	408.4	339.6	268.7	8.2	4.7	3.0	2.2	2.2
72.5°	425.6	366.7	318.0	273.6	228.7	177.5	6.8	3.8	2.5	2.2	1.9
75°	160.5	145.2	124.6	112.0	97.8	85.7	5.5	2.5	1.9	1.9	1.9
77.5°	28.5	26.3	23.3	21.4	19.7	18.1	4.4	1.6	1.6	1.9	1.9
80°	19.2	17.8	16.2	14.8	13.7	12.3	3.0	1.4	1.6	1.6	1.9
82.5°	13.7	12.9	12.0	11.0	10.1	9.0	1.9	1.4	1.6	1.6	1.6
85°	8.2	7.7	7.1	6.6	5.7	5.5	1.4	1.4	1.4	1.6	1.6
87.5°	2.2	1.9	2.2	2.2	1.6	1.9	1.1	1.1	1.1	1.4	1.4
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):

	145°	155°	165°	175°	180°
0°	43.0	43.0	43.0	43.0	43.0
2.5°	36.4	36.4	35.9	36.7	36.7
5°	31.5	31.5	31.2	31.5	31.5
7.5°	28.7	28.5	28.5	28.5	28.7
10°	26.3	26.0	26.0	26.0	26.0
12.5°	24.1	23.8	23.5	23.8	23.8
15°	22.2	21.6	21.6	21.6	21.6
17.5°	20.5	20.0	19.7	19.7	19.7
20°	18.9	18.1	18.1	18.1	18.1
22.5°	17.2	16.4	16.4	16.4	16.4
25°	15.6	14.8	14.8	14.8	14.8
27.5°	14.2	13.4	13.4	13.4	13.4
30°	12.6	12.0	12.0	12.3	12.0
32.5°	11.5	10.7	10.7	11.0	11.0
35°	10.1	9.6	9.6	9.6	9.6
37.5°	8.8	8.2	8.2	8.2	8.2
40°	7.7	7.1	6.8	7.1	7.1
42.5°	6.6	6.0	5.7	5.7	5.7
45°	5.7	4.9	4.7	4.9	4.9
47.5°	4.7	4.1	4.1	4.4	4.4
50°	3.6	3.6	3.8	4.4	4.4
52.5°	3.3	3.3	3.8	4.4	4.4
55°	3.0	3.3	3.8	4.1	4.4
57.5°	2.7	3.3	3.8	4.1	4.1
60°	2.7	3.0	3.6	4.1	4.1
62.5°	2.5	2.7	3.3	3.8	3.8
65°	2.5	2.7	3.3	3.8	3.8
66°	2.5	2.7	3.3	3.8	3.8
67.5°	2.5	2.7	3.3	3.8	3.8
70°	2.5	2.7	3.3	3.6	3.6
72.5°	2.2	2.5	3.0	3.6	3.6
75°	2.2	2.5	3.0	3.6	3.6
77.5°	2.2	2.5	3.0	3.6	3.6
80°	2.2	2.5	3.0	3.3	3.6
82.5°	1.9	2.5	2.7	3.3	3.3
85°	1.9	2.2	2.7	3.0	3.3
87.5°	1.6	1.9	2.2	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)