

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: P163512

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P163512  
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-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) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1388.3 lumens  
Efficiency: N/A  
Efficacy: 53.6 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

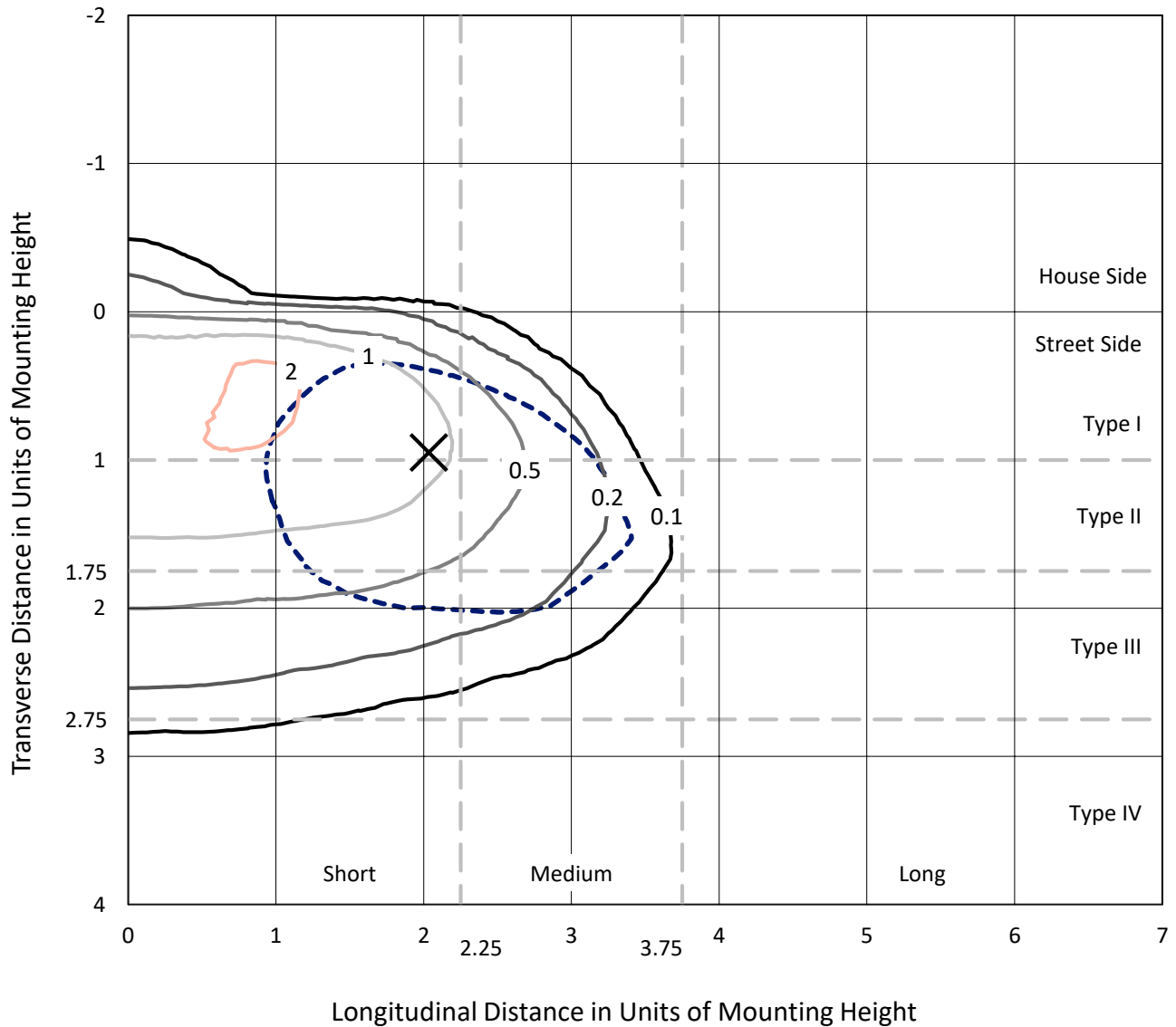
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

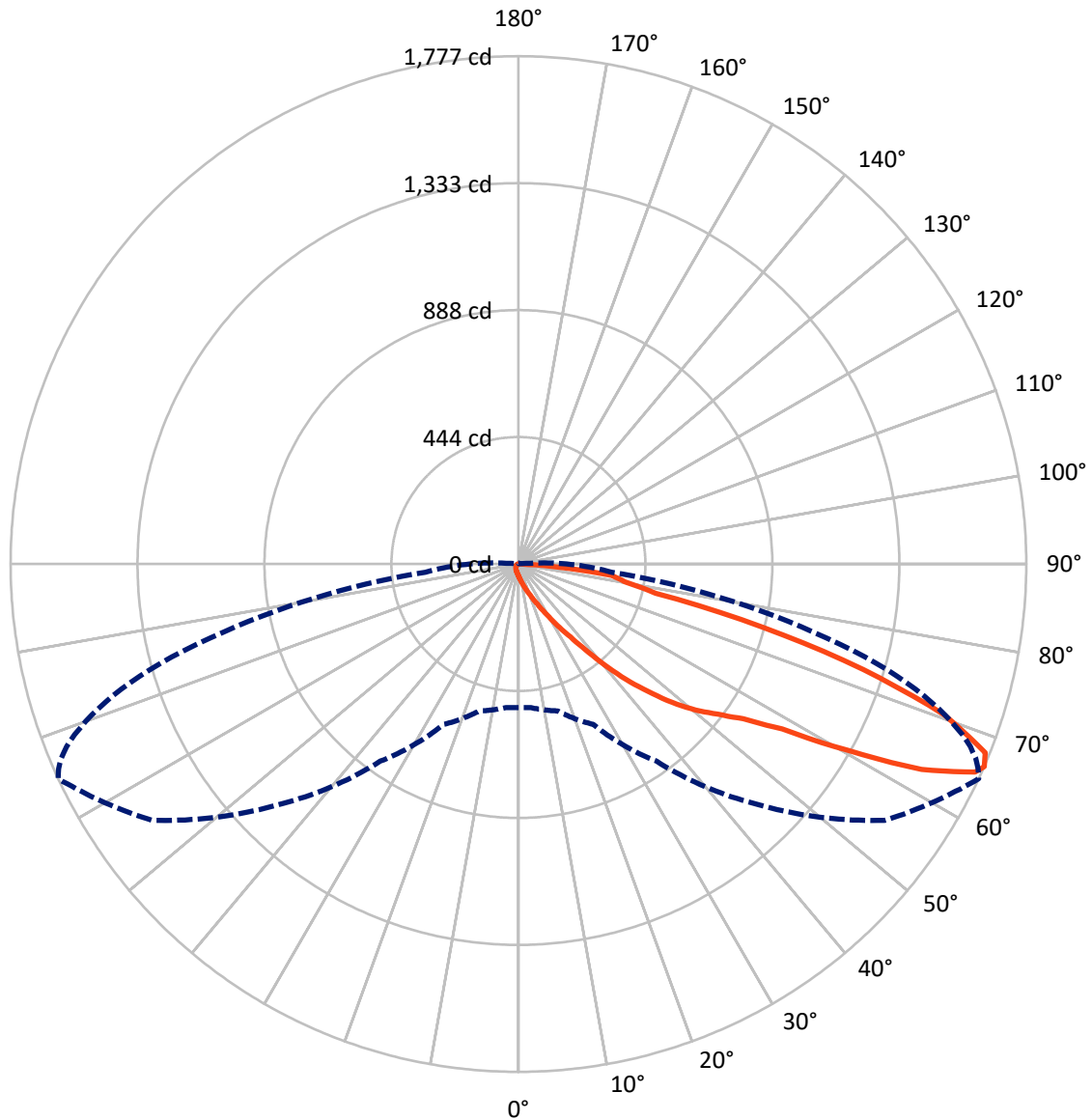
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.3 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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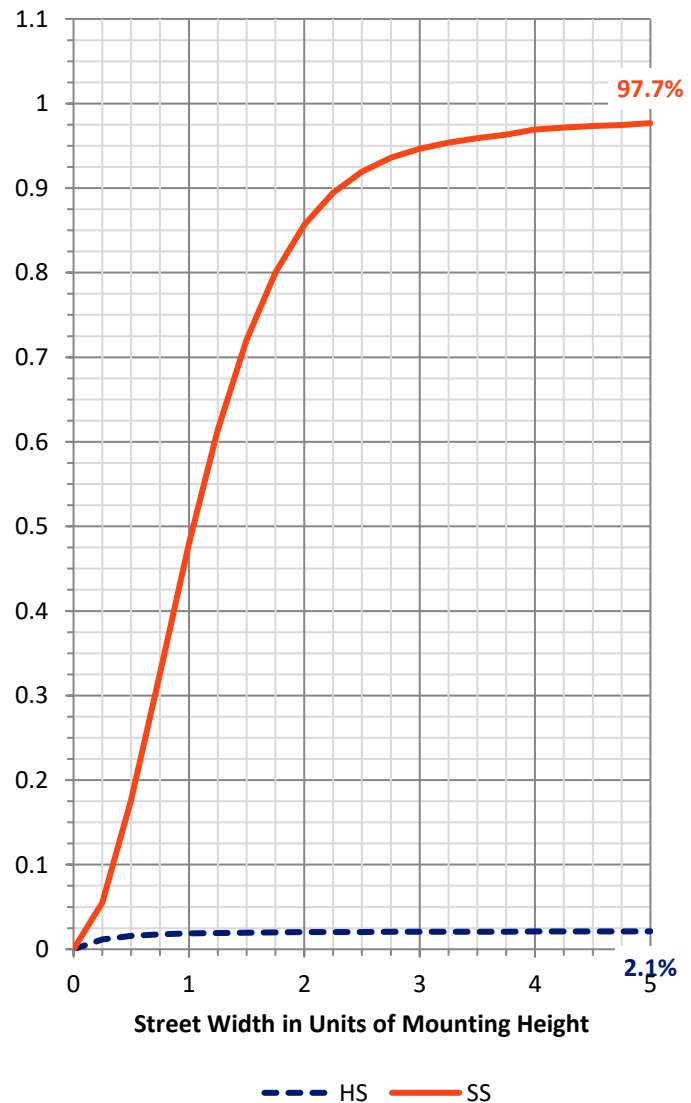
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	30.1	0.0	30.1
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	1358.3	0.0	1358.3
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	1388.3	0.0	1388.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.7	0.3
10°-20°	19.9	1.4
20°-30°	42.9	3.1
30°-40°	91.6	6.6
40°-50°	202.6	14.6
50°-60°	343.4	24.7
60°-70°	458.2	33.0
70°-80°	201.8	14.5
80°-90°	23.2	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°	1388.3	100.0
0°-180°	1388.3	100.0



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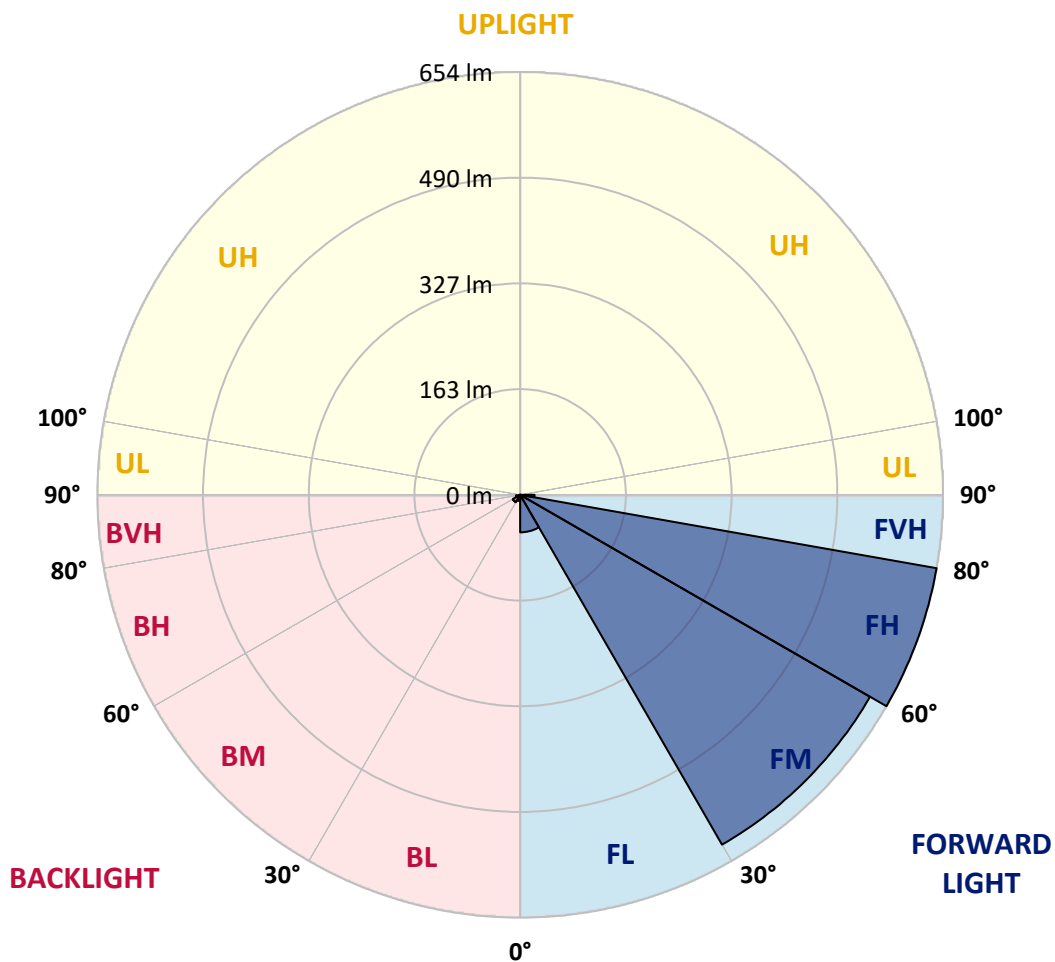
CATALOG NUMBER: LDRL-SL3-F01-E-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	58.0	4.2			
FM	(30°-60°)	624.4	45.0			
FH	(60°-80°)	653.6	47.1			G0/660
FVH	(80°-90°)	22.3	1.6			G1/100
BL	(0°-30°)	9.5	0.7	B0/110		
BM	(30°-60°)	13.2	1.0	B0/220		
BH	(60°-80°)	6.4	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°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
2.5°	52.9	52.6	51.5	51.5	49.9	48.8	47.5	46.2	46.2	45.9	45.6
5°	69.9	68.3	68.1	65.1	62.7	59.3	56.1	51.8	51.2	50.7	50.4
7.5°	88.9	88.6	86.2	82.8	77.9	71.5	65.1	58.2	57.1	56.6	55.5
10°	113.4	112.1	108.9	103.0	95.8	87.3	76.9	65.9	64.6	63.5	63.0
12.5°	136.9	134.5	132.7	125.2	116.1	103.6	91.0	75.3	74.2	72.9	70.7
15°	158.8	156.7	153.5	147.1	136.9	121.2	106.5	87.3	84.6	82.8	81.1
17.5°	175.9	174.6	170.8	163.6	152.7	138.8	121.2	99.6	97.4	95.0	92.1
20°	192.2	190.3	184.4	174.6	162.8	152.1	138.5	115.6	112.6	109.7	106.5
22.5°	207.7	205.8	196.2	179.9	167.4	162.8	158.0	133.7	129.2	126.8	123.6
25°	229.3	225.3	210.3	184.4	167.6	171.1	179.4	157.2	152.9	149.5	144.4
27.5°	258.4	253.0	229.5	191.1	168.7	180.2	203.9	185.8	181.2	177.2	171.6
30°	291.2	287.7	259.7	207.1	176.4	193.5	231.4	222.1	216.7	211.9	205.3
32.5°	324.3	319.5	291.7	237.6	197.3	219.4	265.9	264.3	257.3	252.8	245.6
35°	353.4	351.0	330.4	287.5	244.8	264.8	311.8	313.6	307.5	302.7	294.7
37.5°	373.2	373.2	369.1	341.1	320.3	335.2	379.3	379.6	373.4	362.5	358.5
40°	383.3	386.2	400.6	406.0	404.9	424.1	467.9	463.1	458.0	452.4	439.1
42.5°	404.1	406.8	437.5	474.3	498.3	523.7	553.8	552.2	546.1	536.0	523.7
45°	439.3	442.8	479.4	537.8	587.2	623.3	642.5	635.0	628.9	619.2	612.8
47.5°	484.2	490.9	532.2	604.6	664.1	723.6	743.6	723.9	718.5	711.1	700.7
50°	532.0	538.4	582.4	665.2	732.4	803.4	836.8	803.4	795.7	793.3	781.5
52.5°	573.3	578.7	621.1	711.9	784.7	868.0	916.6	872.5	866.9	858.9	850.4
55°	597.9	602.2	641.9	734.3	820.2	926.2	993.7	955.0	946.8	943.6	931.3
57.5°	606.2	610.4	646.2	737.2	839.5	979.3	1087.4	1088.8	1078.9	1067.4	1063.7
60°	606.2	611.0	641.1	730.0	858.1	1035.9	1212.3	1323.6	1302.3	1300.2	1286.5
62.5°	581.1	585.6	616.0	707.9	883.2	1112.2	1386.4	1582.8	1576.7	1562.8	1540.4
65°	526.6	529.3	559.2	651.3	873.6	1182.4	1537.2	1755.2	1745.4	1718.1	1689.3
66°	502.1	504.2	532.2	619.0	842.1	1192.1	1563.9	1776.9	1760.6	1737.6	1705.1
67.5°	466.6	470.3	490.1	558.9	766.6	1158.7	1547.1	1761.7	1747.5	1719.8	1687.2
70°	311.5	308.8	378.5	428.9	584.0	944.1	1388.0	1581.8	1582.0	1568.9	1555.9
72.5°	147.9	149.5	169.8	264.0	382.2	630.7	1104.8	1262.5	1280.7	1257.2	1240.9
75°	106.2	108.6	120.9	161.5	227.9	378.5	716.1	883.0	883.5	841.9	804.8
77.5°	31.0	32.3	45.4	99.6	170.8	255.4	411.3	490.9	479.4	449.5	421.5
80°	12.8	12.8	13.3	31.8	68.6	173.5	287.7	378.0	376.6	365.1	348.6
82.5°	4.8	5.1	6.4	13.1	16.3	42.7	191.9	328.0	327.2	311.0	299.2
85°	0.5	0.5	1.6	5.6	6.1	8.0	38.4	144.7	143.9	144.7	126.8
87.5°	0.0	0.0	0.3	0.5	0.8	1.1	1.6	5.6	6.1	5.9	5.3
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°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
2.5°	45.6	45.1	45.1	44.8	44.8	44.8	44.6	44.3	44.3	44.0	43.8
5°	49.9	49.4	49.1	48.6	48.3	48.0	47.5	47.2	46.7	46.4	46.2
7.5°	55.0	53.9	53.6	52.9	52.0	51.5	51.0	50.2	49.6	48.6	48.3
10°	61.4	60.0	59.0	57.9	57.1	55.8	55.0	53.9	52.9	52.0	51.2
12.5°	69.7	67.8	66.2	65.1	63.3	61.7	60.0	59.3	57.1	56.1	54.7
15°	78.7	76.6	74.7	72.6	71.3	68.6	66.5	64.1	63.0	61.1	59.0
17.5°	90.5	87.0	84.1	81.9	79.3	76.6	74.2	71.8	68.6	66.5	63.8
20°	103.0	100.1	96.1	92.4	89.2	86.0	82.5	79.3	76.3	72.9	69.7
22.5°	119.0	114.8	110.0	106.2	102.0	98.5	93.7	89.4	84.6	80.1	76.3
25°	139.3	133.7	129.2	123.8	118.8	113.4	107.6	102.2	96.1	91.8	85.4
27.5°	164.4	159.1	152.9	146.0	140.9	132.9	125.2	118.5	111.3	104.6	97.4
30°	196.5	188.7	182.3	175.6	165.5	157.7	148.7	139.6	129.7	123.1	112.1
32.5°	234.9	226.6	217.0	207.4	198.1	187.1	175.9	164.7	153.7	141.5	130.3
35°	281.9	272.0	261.0	250.6	236.2	224.5	210.3	194.9	182.6	168.4	154.3
37.5°	344.1	327.8	318.2	307.2	287.7	271.7	256.0	240.5	218.9	203.9	183.9
40°	422.0	412.4	396.6	379.0	361.4	340.3	319.0	298.4	273.3	252.5	229.3
42.5°	513.5	499.4	483.4	458.0	440.2	415.3	391.0	363.8	333.1	306.4	279.2
45°	599.5	582.7	570.4	545.0	526.4	497.0	467.6	438.8	403.3	368.9	337.4
47.5°	692.4	678.5	658.2	637.7	618.7	585.6	553.8	518.9	481.5	440.7	399.8
50°	774.1	763.1	749.2	724.4	703.3	675.6	638.2	600.0	552.8	512.2	465.8
52.5°	843.5	834.9	815.4	797.8	778.9	752.7	719.3	682.8	631.8	587.2	534.4
55°	925.4	919.3	902.2	891.2	874.4	849.3	818.1	784.2	730.3	681.7	621.9
57.5°	1059.7	1054.9	1039.9	1035.4	1018.8	996.9	958.5	922.2	859.2	798.9	730.6
60°	1282.0	1272.4	1250.5	1239.3	1204.3	1175.0	1125.1	1075.1	999.1	922.2	840.0
62.5°	1520.1	1493.1	1451.5	1415.7	1366.1	1315.1	1248.4	1172.0	1082.9	991.6	897.1
65°	1648.5	1602.6	1550.0	1493.1	1428.8	1353.8	1269.7	1178.2	1082.3	986.0	886.2
66°	1663.2	1611.4	1555.6	1492.3	1420.8	1341.0	1255.6	1159.5	1059.9	966.0	866.1
67.5°	1644.7	1590.6	1531.6	1461.4	1384.0	1301.2	1211.5	1111.7	1015.9	920.6	823.4
70°	1515.8	1461.9	1409.3	1335.4	1252.9	1169.6	1084.8	973.2	882.4	794.9	708.4
72.5°	1210.5	1173.9	1121.9	1058.6	978.2	880.6	809.8	710.0	631.3	546.4	479.4
75°	756.4	704.9	640.6	560.0	498.6	419.3	378.0	302.1	257.3	218.1	180.2
77.5°	386.8	348.1	303.0	257.6	214.1	170.8	132.1	93.4	63.0	43.8	32.6
80°	319.5	285.3	248.0	206.6	168.2	130.5	94.0	64.1	40.8	26.7	20.8
82.5°	264.0	235.2	201.8	163.4	130.0	102.5	71.3	46.4	28.8	18.7	14.7
85°	112.4	102.0	78.7	62.5	47.0	34.7	24.3	16.3	11.5	9.3	8.5
87.5°	4.8	5.3	5.1	4.0	2.9	2.9	2.7	2.1	2.1	2.1	2.1
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°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
2.5°	43.8	43.5	43.2	43.2	43.0	42.7	41.1	39.8	38.2	37.1	36.0
5°	45.6	45.4	44.8	44.6	44.0	43.8	40.3	37.4	35.0	33.1	31.8
7.5°	47.5	47.2	46.4	45.6	45.4	44.8	39.2	35.5	32.3	30.2	28.8
10°	49.9	49.1	48.3	47.2	46.4	45.6	38.2	33.4	29.9	28.0	26.7
12.5°	53.4	52.0	50.7	49.4	48.3	47.0	37.6	31.5	28.0	25.9	24.6
15°	57.4	55.5	53.9	52.3	50.4	49.1	36.6	29.9	26.4	24.3	22.7
17.5°	61.1	59.0	56.6	54.2	52.3	50.4	35.5	28.3	24.8	22.7	21.1
20°	66.5	63.3	60.3	57.4	54.7	52.3	33.9	26.7	23.5	21.1	19.5
22.5°	72.3	68.6	64.9	60.9	57.4	54.2	32.6	25.4	22.2	19.7	17.9
25°	79.8	75.3	70.2	65.1	61.1	56.8	31.2	24.0	20.8	18.4	16.5
27.5°	90.2	83.8	78.2	71.8	65.7	60.9	30.2	22.9	19.5	17.1	15.2
30°	104.4	95.0	86.2	79.3	72.1	65.1	29.1	21.6	18.4	15.8	13.6
32.5°	120.1	109.2	99.0	88.6	79.5	71.5	28.0	20.6	17.1	14.4	12.5
35°	139.6	125.7	112.1	100.1	89.2	78.5	27.0	19.5	16.0	13.1	11.2
37.5°	167.6	150.3	132.4	116.9	102.8	88.6	26.2	18.4	14.7	11.7	9.9
40°	206.1	183.6	161.8	140.7	122.2	104.6	25.1	17.4	13.6	10.7	8.8
42.5°	247.7	220.5	191.7	167.9	142.5	120.4	24.0	16.3	12.5	9.6	7.7
45°	299.5	265.6	230.6	198.3	167.4	138.8	22.9	15.2	11.2	8.5	6.7
47.5°	356.1	312.8	273.3	232.7	195.9	161.8	21.6	14.4	10.1	7.5	5.9
50°	414.2	368.6	318.7	272.5	228.8	184.7	20.3	13.1	9.1	6.7	4.8
52.5°	477.0	423.1	372.1	314.7	263.7	214.9	19.0	12.0	8.3	5.9	4.0
55°	556.8	496.5	436.7	372.3	311.0	249.8	17.6	10.7	7.2	5.1	3.2
57.5°	657.2	585.6	512.2	439.6	365.1	295.7	16.5	9.3	6.1	4.3	2.7
60°	751.9	668.4	579.5	495.9	411.9	331.0	14.9	8.3	5.3	3.5	2.7
62.5°	801.0	705.7	609.9	517.8	428.1	343.5	13.3	6.9	4.5	2.9	2.4
65°	789.0	691.9	599.0	506.1	418.3	335.5	11.7	6.1	4.0	2.7	2.4
66°	771.7	675.6	582.1	493.8	410.0	327.0	10.9	5.9	3.7	2.7	2.1
67.5°	733.8	640.9	551.7	469.5	387.3	310.7	9.9	5.3	3.5	2.4	2.1
70°	626.7	542.4	471.1	398.0	331.0	261.8	8.0	4.5	2.9	2.1	2.1
72.5°	414.8	357.4	309.9	266.6	222.9	173.0	6.7	3.7	2.4	2.1	1.9
75°	156.4	141.5	121.5	109.2	95.3	83.5	5.3	2.4	1.9	1.9	1.9
77.5°	27.8	25.6	22.7	20.8	19.2	17.6	4.3	1.6	1.6	1.9	1.9
80°	18.7	17.4	15.8	14.4	13.3	12.0	2.9	1.3	1.6	1.6	1.9
82.5°	13.3	12.5	11.7	10.7	9.9	8.8	1.9	1.3	1.6	1.6	1.6
85°	8.0	7.5	6.9	6.4	5.6	5.3	1.3	1.3	1.3	1.6	1.6
87.5°	2.1	1.9	2.1	2.1	1.6	1.9	1.1	1.1	1.1	1.3	1.3
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°	41.9	41.9	41.9	41.9	41.9
2.5°	35.5	35.5	35.0	35.8	35.8
5°	30.7	30.7	30.4	30.7	30.7
7.5°	28.0	27.8	27.8	27.8	28.0
10°	25.6	25.4	25.4	25.4	25.4
12.5°	23.5	23.2	22.9	23.2	23.2
15°	21.6	21.1	21.1	21.1	21.1
17.5°	20.0	19.5	19.2	19.2	19.2
20°	18.4	17.6	17.6	17.6	17.6
22.5°	16.8	16.0	16.0	16.0	16.0
25°	15.2	14.4	14.4	14.4	14.4
27.5°	13.9	13.1	13.1	13.1	13.1
30°	12.3	11.7	11.7	12.0	11.7
32.5°	11.2	10.4	10.4	10.7	10.7
35°	9.9	9.3	9.3	9.3	9.3
37.5°	8.5	8.0	8.0	8.0	8.0
40°	7.5	6.9	6.7	6.9	6.9
42.5°	6.4	5.9	5.6	5.6	5.6
45°	5.6	4.8	4.5	4.8	4.8
47.5°	4.5	4.0	4.0	4.3	4.3
50°	3.5	3.5	3.7	4.3	4.3
52.5°	3.2	3.2	3.7	4.3	4.3
55°	2.9	3.2	3.7	4.0	4.3
57.5°	2.7	3.2	3.7	4.0	4.0
60°	2.7	2.9	3.5	4.0	4.0
62.5°	2.4	2.7	3.2	3.7	3.7
65°	2.4	2.7	3.2	3.7	3.7
66°	2.4	2.7	3.2	3.7	3.7
67.5°	2.4	2.7	3.2	3.7	3.7
70°	2.4	2.7	3.2	3.5	3.5
72.5°	2.1	2.4	2.9	3.5	3.5
75°	2.1	2.4	2.9	3.5	3.5
77.5°	2.1	2.4	2.9	3.5	3.5
80°	2.1	2.4	2.9	3.2	3.5
82.5°	1.9	2.4	2.7	3.2	3.2
85°	1.9	2.1	2.7	2.9	3.2
87.5°	1.6	1.9	2.1	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)