

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: P163516

Luminaire Tested: **LDRL-SL3-E02-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163516
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-E02-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (42) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3072.1 lumens
Efficiency: N/A
Efficacy: 59.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

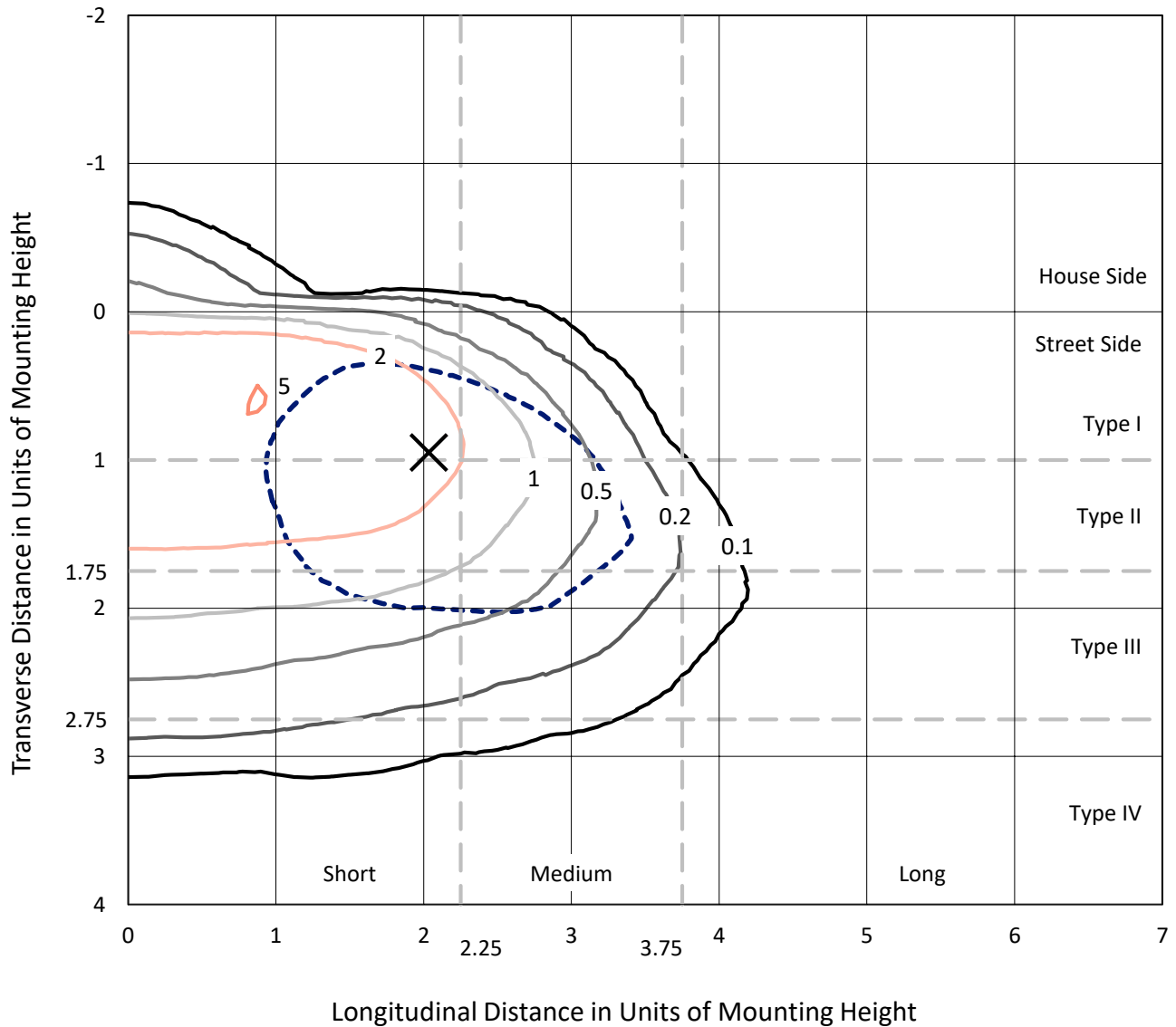
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

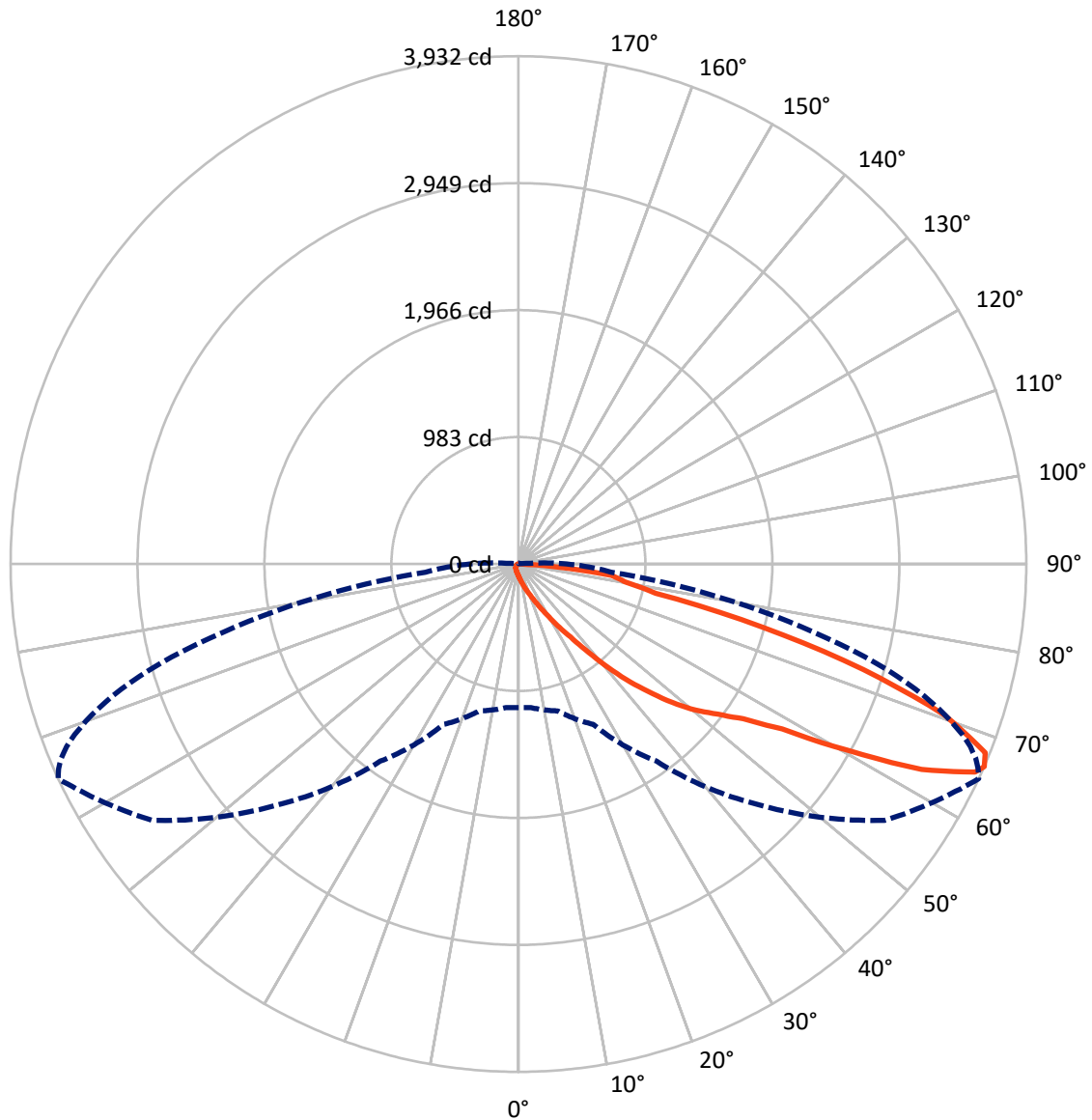
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.1 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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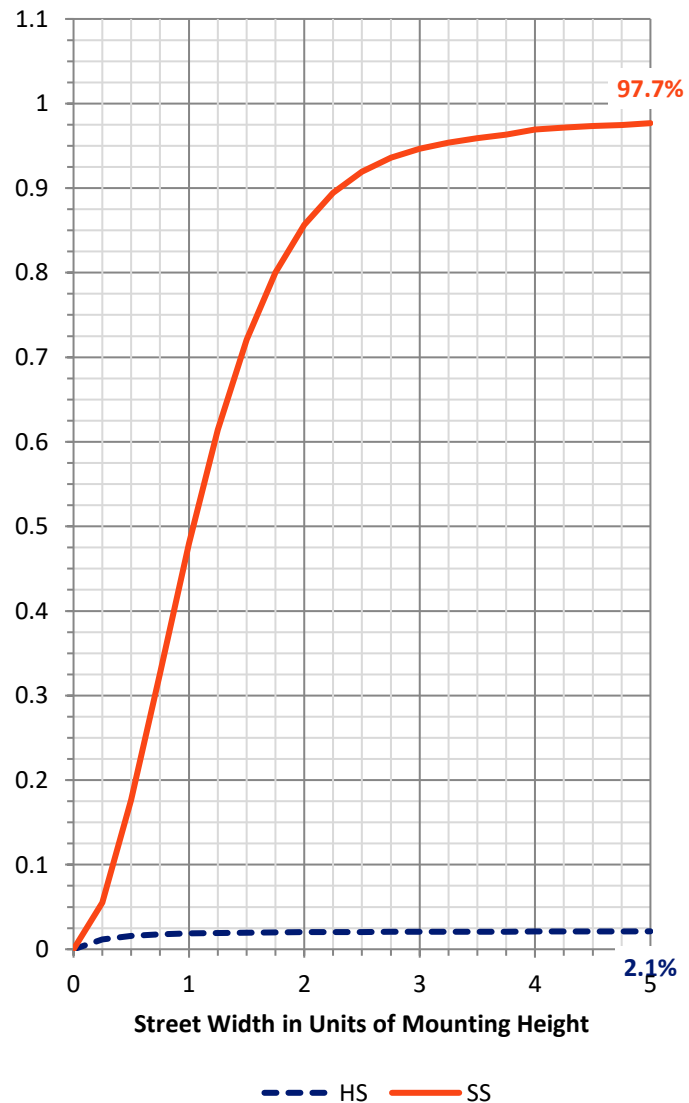
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	66.6	0.0	66.6
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	3005.6	0.0	3005.6
	% Fixture	97.8	0.0	97.8
Total	Lumens	3072.1	0.0	3072.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.4	0.3
10°-20°	44.0	1.4
20°-30°	94.9	3.1
30°-40°	202.7	6.6
40°-50°	448.3	14.6
50°-60°	759.8	24.7
60°-70°	1013.9	33.0
70°-80°	446.6	14.5
80°-90°	51.4	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°	3072.1	100.0
0°-180°	3072.1	100.0



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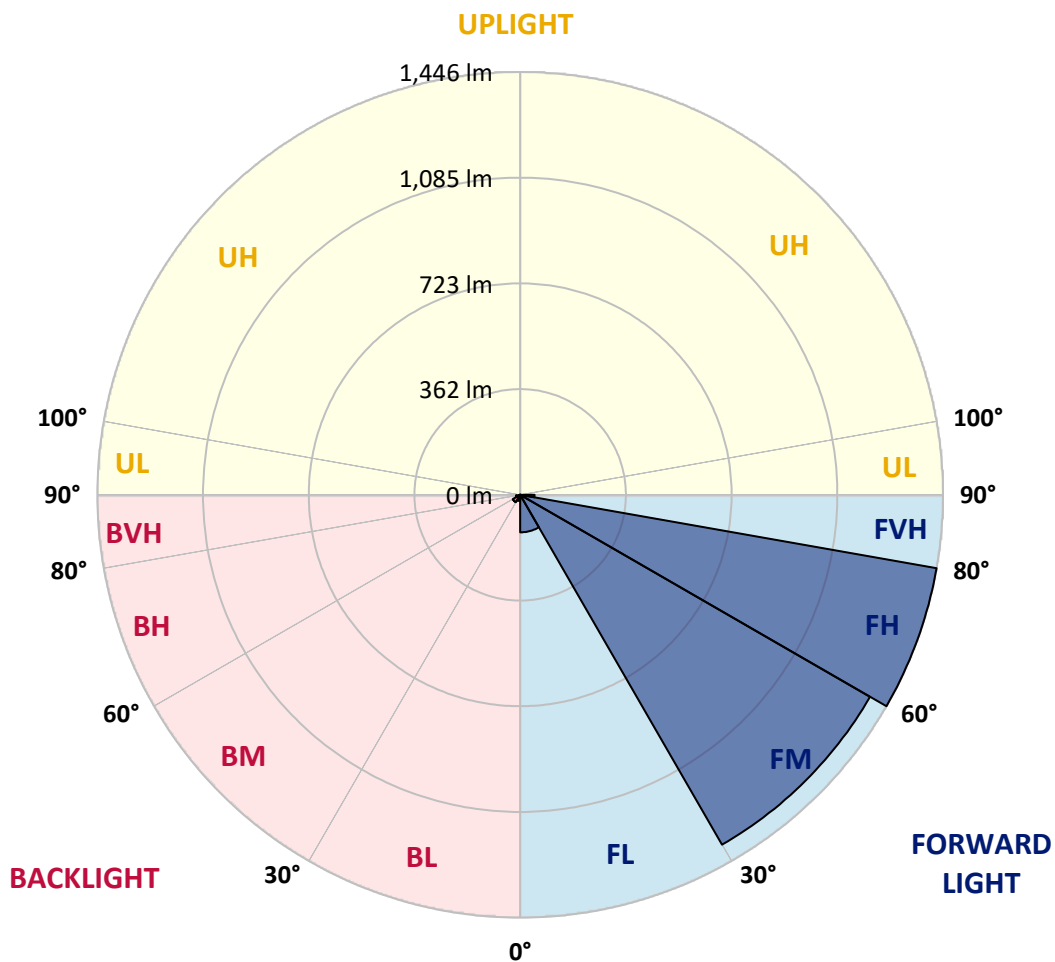
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	128.3	4.2			
FM	(30°-60°)	1381.6	45.0			
FH	(60°-80°)	1446.2	47.1			G1/1800
FVH	(80°-90°)	49.4	1.6			G1/100
BL	(0°-30°)	21.0	0.7	B0/110		
BM	(30°-60°)	29.2	1.0	B0/220		
BH	(60°-80°)	14.3	0.5	B0/110		G0/110
BVH	(80°-90°)	2.0	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°	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
2.5°	116.9	116.4	114.0	114.0	110.4	108.1	105.1	102.2	102.2	101.6	101.0
5°	154.8	151.2	150.6	144.1	138.8	131.1	124.0	114.6	113.4	112.2	111.6
7.5°	196.7	196.1	190.8	183.1	172.5	158.3	144.1	128.7	126.4	125.2	122.9
10°	251.0	248.1	241.0	228.0	212.0	193.1	170.1	145.9	142.9	140.6	139.4
12.5°	303.0	297.7	293.6	277.0	256.9	229.2	201.4	166.6	164.2	161.2	156.5
15°	351.4	346.7	339.6	325.4	303.0	268.2	235.6	193.1	187.2	183.1	179.6
17.5°	389.2	386.3	378.0	362.1	337.8	307.1	268.2	220.3	215.6	210.3	203.8
20°	425.3	421.1	408.1	386.3	360.3	336.7	306.5	255.7	249.2	242.7	235.6
22.5°	459.5	455.4	434.1	398.1	370.3	360.3	349.7	295.9	285.9	280.5	273.5
25°	507.3	498.5	465.4	408.1	370.9	378.6	396.9	347.9	338.4	330.7	319.5
27.5°	571.7	559.9	507.9	422.9	373.3	398.7	451.2	411.1	401.0	392.2	379.8
30°	644.4	636.7	574.7	458.3	390.4	428.2	512.1	491.4	479.6	469.0	454.2
32.5°	717.6	707.0	645.6	525.7	436.5	485.5	588.3	584.7	569.4	559.3	543.4
35°	782.0	776.7	731.2	636.1	541.6	585.9	689.8	694.0	680.4	669.8	652.1
37.5°	825.7	825.7	816.8	754.8	708.8	741.8	839.3	839.9	826.3	802.1	793.2
40°	848.1	854.6	886.5	898.3	896.0	938.5	1035.4	1024.7	1013.5	1001.1	971.6
42.5°	894.2	900.1	968.0	1049.5	1102.7	1158.8	1225.5	1222.0	1208.4	1186.0	1158.8
45°	972.2	979.8	1060.8	1190.1	1299.4	1379.1	1421.6	1405.1	1391.5	1370.2	1356.1
47.5°	1071.4	1086.2	1177.7	1337.8	1469.5	1601.2	1645.5	1601.8	1590.0	1573.4	1550.4
50°	1177.1	1191.3	1288.7	1471.8	1620.7	1777.8	1851.6	1777.8	1760.6	1755.3	1729.4
52.5°	1268.7	1280.5	1374.4	1575.2	1736.5	1920.7	2028.2	1930.7	1918.4	1900.6	1881.7
55°	1323.0	1332.5	1420.4	1624.8	1815.0	2049.5	2198.9	2113.3	2095.0	2087.9	2060.7
57.5°	1341.3	1350.8	1429.9	1631.3	1857.5	2167.0	2406.2	2409.2	2387.3	2361.9	2353.7
60°	1341.3	1351.9	1418.7	1615.4	1898.9	2292.2	2682.6	2928.9	2881.7	2876.9	2846.8
62.5°	1285.8	1295.8	1363.2	1566.4	1954.4	2461.2	3067.7	3502.4	3488.9	3458.1	3408.5
65°	1165.3	1171.2	1237.4	1441.1	1933.1	2616.5	3401.4	3884.0	3862.1	3801.9	3738.1
66°	1111.0	1115.7	1177.7	1369.7	1863.4	2637.8	3460.5	3931.8	3895.8	3845.0	3772.9
67.5°	1032.4	1040.7	1084.4	1236.8	1696.3	2563.9	3423.3	3898.1	3866.8	3805.4	3733.3
70°	689.3	683.4	837.5	949.2	1292.3	2089.1	3071.3	3500.1	3500.7	3471.7	3442.8
72.5°	327.2	330.7	375.6	584.1	845.8	1395.6	2444.6	2793.7	2833.8	2781.8	2745.8
75°	235.1	240.4	267.5	357.3	504.4	837.5	1584.7	1953.8	1955.0	1862.8	1780.7
77.5°	68.5	71.5	100.4	220.3	378.0	565.2	910.2	1086.2	1060.8	994.6	932.6
80°	28.4	28.4	29.5	70.3	151.8	383.9	636.7	836.3	833.4	808.0	771.3
82.5°	10.6	11.2	14.2	28.9	36.0	94.5	424.7	725.9	724.1	688.1	662.1
85°	1.2	1.2	3.5	12.4	13.6	17.7	85.1	320.1	318.4	320.1	280.5
87.5°	0.0	0.0	0.6	1.2	1.8	2.4	3.5	12.4	13.6	13.0	11.8
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°	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
2.5°	101.0	99.8	99.8	99.2	99.2	99.2	98.6	98.1	98.1	97.4	96.9
5°	110.4	109.3	108.7	107.5	106.9	106.3	105.1	104.5	103.4	102.8	102.2
7.5°	121.7	119.3	118.7	116.9	115.2	114.0	112.8	111.0	109.9	107.5	106.9
10°	135.8	132.9	130.5	128.2	126.4	123.4	121.7	119.3	116.9	115.2	113.4
12.5°	154.1	150.0	146.5	144.1	140.0	136.4	132.9	131.1	126.4	124.0	121.1
15°	174.2	169.5	165.4	160.6	157.7	151.8	147.0	141.8	139.4	135.2	130.5
17.5°	200.2	192.5	186.0	181.3	175.4	169.5	164.2	158.9	151.8	147.0	141.2
20°	228.0	221.5	212.6	204.4	197.3	190.2	182.5	175.4	168.9	161.2	154.1
22.5°	263.4	254.0	243.4	235.1	225.6	217.9	207.3	197.9	187.2	177.2	168.9
25°	308.3	295.9	285.9	274.0	262.8	251.0	238.0	226.2	212.6	203.2	189.0
27.5°	363.8	352.0	338.4	323.1	311.9	294.1	277.0	262.2	246.3	231.5	215.6
30°	434.7	417.6	403.4	388.6	366.2	349.0	329.0	308.9	287.0	272.3	248.1
32.5°	519.8	501.4	480.2	458.9	438.3	414.0	389.2	364.4	340.2	313.0	288.2
35°	623.7	601.9	577.6	554.6	522.7	496.7	465.4	431.2	404.0	372.7	341.4
37.5°	761.3	725.3	704.0	679.8	636.7	601.2	566.4	532.2	484.3	451.2	407.0
40°	933.8	912.5	877.7	838.7	799.7	753.0	705.8	660.3	604.8	558.8	507.3
42.5°	1136.4	1105.1	1069.6	1013.5	974.0	919.0	865.3	805.0	737.1	678.0	617.8
45°	1326.6	1289.3	1262.2	1206.1	1164.7	1099.7	1034.8	971.0	892.5	816.2	746.5
47.5°	1532.1	1501.4	1456.5	1411.0	1369.1	1295.8	1225.5	1148.2	1065.5	975.1	884.7
50°	1712.8	1688.6	1657.9	1603.0	1556.3	1494.9	1412.2	1327.7	1223.2	1133.4	1030.7
52.5°	1866.4	1847.5	1804.4	1765.4	1723.5	1665.6	1591.8	1510.8	1398.0	1299.4	1182.4
55°	2047.7	2034.1	1996.3	1972.1	1934.9	1879.4	1810.3	1735.3	1616.0	1508.5	1376.2
57.5°	2344.8	2334.2	2301.1	2291.0	2254.4	2206.0	2120.9	2040.6	1901.2	1767.7	1616.6
60°	2836.8	2815.5	2767.1	2742.3	2664.9	2599.9	2489.5	2379.1	2210.7	2040.6	1858.7
62.5°	3363.6	3304.0	3211.8	3132.7	3022.8	2910.0	2762.4	2593.4	2396.2	2194.2	1985.1
65°	3647.7	3546.1	3429.8	3304.0	3161.6	2995.6	2809.6	2607.0	2395.0	2181.8	1960.9
66°	3680.2	3565.6	3442.2	3302.2	3143.9	2967.3	2778.3	2565.7	2345.4	2137.5	1916.6
67.5°	3639.4	3519.5	3389.0	3233.7	3062.4	2879.3	2680.9	2459.9	2247.9	2037.1	1822.1
70°	3354.2	3234.9	3118.5	2954.9	2772.4	2588.1	2400.3	2153.4	1952.6	1758.9	1567.5
72.5°	2678.5	2597.6	2482.4	2342.4	2164.6	1948.5	1792.0	1571.1	1396.8	1209.0	1060.8
75°	1673.8	1559.9	1417.5	1239.1	1103.3	927.9	836.3	668.6	569.4	482.5	398.7
77.5°	855.8	770.2	670.4	570.0	473.7	378.0	292.3	206.7	139.4	96.9	72.0
80°	707.0	631.4	548.7	457.2	372.1	288.8	207.9	141.8	90.3	59.1	46.1
82.5°	584.1	520.4	446.5	361.5	287.6	226.8	157.7	102.8	63.8	41.4	32.5
85°	248.7	225.6	174.2	138.2	103.9	76.8	53.7	36.0	25.4	20.7	18.9
87.5°	10.6	11.8	11.2	8.8	6.5	6.5	5.9	4.7	4.7	4.7	4.7
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7
2.5°	96.9	96.3	95.7	95.7	95.1	94.5	91.0	88.0	84.5	82.1	79.7
5°	101.0	100.4	99.2	98.6	97.4	96.9	89.2	82.7	77.4	73.3	70.3
7.5°	105.1	104.5	102.8	101.0	100.4	99.2	86.8	78.5	71.5	66.7	63.8
10°	110.4	108.7	106.9	104.5	102.8	101.0	84.5	73.8	66.2	62.0	59.1
12.5°	118.1	115.2	112.2	109.3	106.9	103.9	83.3	69.7	62.0	57.3	54.3
15°	127.0	122.9	119.3	115.8	111.6	108.7	80.9	66.2	58.5	53.7	50.2
17.5°	135.2	130.5	125.2	119.9	115.8	111.6	78.5	62.6	54.9	50.2	46.7
20°	147.0	140.0	133.5	127.0	121.1	115.8	75.0	59.1	52.0	46.7	43.1
22.5°	160.1	151.8	143.5	134.7	127.0	119.9	72.0	56.1	49.0	43.7	39.6
25°	176.6	166.6	155.3	144.1	135.2	125.8	69.1	53.2	46.1	40.7	36.6
27.5°	199.6	185.4	173.1	158.9	145.3	134.7	66.7	50.8	43.1	37.8	33.6
30°	230.9	210.3	190.8	175.4	159.5	144.1	64.4	47.8	40.7	34.9	30.1
32.5°	265.8	241.6	219.1	196.1	176.0	158.3	62.0	45.5	37.8	31.9	27.8
35°	308.9	278.2	248.1	221.5	197.3	173.6	59.7	43.1	35.4	28.9	24.8
37.5°	370.9	332.5	293.0	258.7	227.4	196.1	57.9	40.7	32.5	26.0	21.8
40°	456.0	406.4	357.9	311.3	270.5	231.5	55.5	38.4	30.1	23.6	19.5
42.5°	548.1	487.9	424.1	371.5	315.4	266.4	53.2	36.0	27.8	21.3	17.1
45°	662.7	587.7	510.3	438.8	370.3	307.1	50.8	33.6	24.8	18.9	14.8
47.5°	787.9	692.2	604.8	515.0	433.5	357.9	47.8	31.9	22.4	16.5	13.0
50°	916.6	815.7	705.2	603.0	506.2	408.7	44.9	28.9	20.1	14.8	10.6
52.5°	1055.5	936.1	823.3	696.3	583.6	475.5	41.9	26.6	18.3	13.0	8.8
55°	1232.0	1098.6	966.3	823.9	688.1	552.8	39.0	23.6	15.9	11.2	7.1
57.5°	1454.1	1295.8	1133.4	972.8	808.0	654.4	36.6	20.7	13.6	9.5	5.9
60°	1663.8	1478.9	1282.2	1097.4	911.3	732.4	33.1	18.3	11.8	7.7	5.9
62.5°	1772.5	1561.6	1349.6	1145.8	947.4	760.1	29.5	15.3	10.0	6.5	5.3
65°	1745.9	1530.9	1325.4	1119.8	925.5	742.4	26.0	13.6	8.8	5.9	5.3
66°	1707.5	1494.9	1288.2	1092.7	907.2	723.5	24.2	13.0	8.3	5.9	4.7
67.5°	1623.6	1418.1	1220.8	1038.9	857.0	687.5	21.8	11.8	7.7	5.3	4.7
70°	1386.8	1200.1	1042.5	880.6	732.4	579.4	17.7	10.0	6.5	4.7	4.7
72.5°	917.8	790.9	685.7	590.0	493.2	382.7	14.8	8.3	5.3	4.7	4.1
75°	346.1	313.0	268.7	241.6	210.8	184.9	11.8	5.3	4.1	4.1	4.1
77.5°	61.4	56.7	50.2	46.1	42.5	39.0	9.5	3.5	3.5	4.1	4.1
80°	41.4	38.4	34.9	31.9	29.5	26.6	6.5	3.0	3.5	3.5	4.1
82.5°	29.5	27.8	26.0	23.6	21.8	19.5	4.1	3.0	3.5	3.5	3.5
85°	17.7	16.5	15.3	14.2	12.4	11.8	3.0	3.0	3.0	3.5	3.5
87.5°	4.7	4.1	4.7	4.7	3.5	4.1	2.4	2.4	2.4	3.0	3.0
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):

	145°	155°	165°	175°	180°
0°	92.7	92.7	92.7	92.7	92.7
2.5°	78.5	78.5	77.4	79.1	79.1
5°	67.9	67.9	67.3	67.9	67.9
7.5°	62.0	61.4	61.4	61.4	62.0
10°	56.7	56.1	56.1	56.1	56.1
12.5°	52.0	51.4	50.8	51.4	51.4
15°	47.8	46.7	46.7	46.7	46.7
17.5°	44.3	43.1	42.5	42.5	42.5
20°	40.7	39.0	39.0	39.0	39.0
22.5°	37.2	35.4	35.4	35.4	35.4
25°	33.6	31.9	31.9	31.9	31.9
27.5°	30.7	28.9	28.9	28.9	28.9
30°	27.2	26.0	26.0	26.6	26.0
32.5°	24.8	23.0	23.0	23.6	23.6
35°	21.8	20.7	20.7	20.7	20.7
37.5°	18.9	17.7	17.7	17.7	17.7
40°	16.5	15.3	14.8	15.3	15.3
42.5°	14.2	13.0	12.4	12.4	12.4
45°	12.4	10.6	10.0	10.6	10.6
47.5°	10.0	8.8	8.8	9.5	9.5
50°	7.7	7.7	8.3	9.5	9.5
52.5°	7.1	7.1	8.3	9.5	9.5
55°	6.5	7.1	8.3	8.8	9.5
57.5°	5.9	7.1	8.3	8.8	8.8
60°	5.9	6.5	7.7	8.8	8.8
62.5°	5.3	5.9	7.1	8.3	8.3
65°	5.3	5.9	7.1	8.3	8.3
66°	5.3	5.9	7.1	8.3	8.3
67.5°	5.3	5.9	7.1	8.3	8.3
70°	5.3	5.9	7.1	7.7	7.7
72.5°	4.7	5.3	6.5	7.7	7.7
75°	4.7	5.3	6.5	7.7	7.7
77.5°	4.7	5.3	6.5	7.7	7.7
80°	4.7	5.3	6.5	7.1	7.7
82.5°	4.1	5.3	5.9	7.1	7.1
85°	4.1	4.7	5.9	6.5	7.1
87.5°	3.5	4.1	4.7	5.9	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)