

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: P163545

Luminaire Tested: **LDRL-SL3-E05-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163545
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-E05-E-8030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (105) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7097 lumens
Efficiency: N/A
Efficacy: 55.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

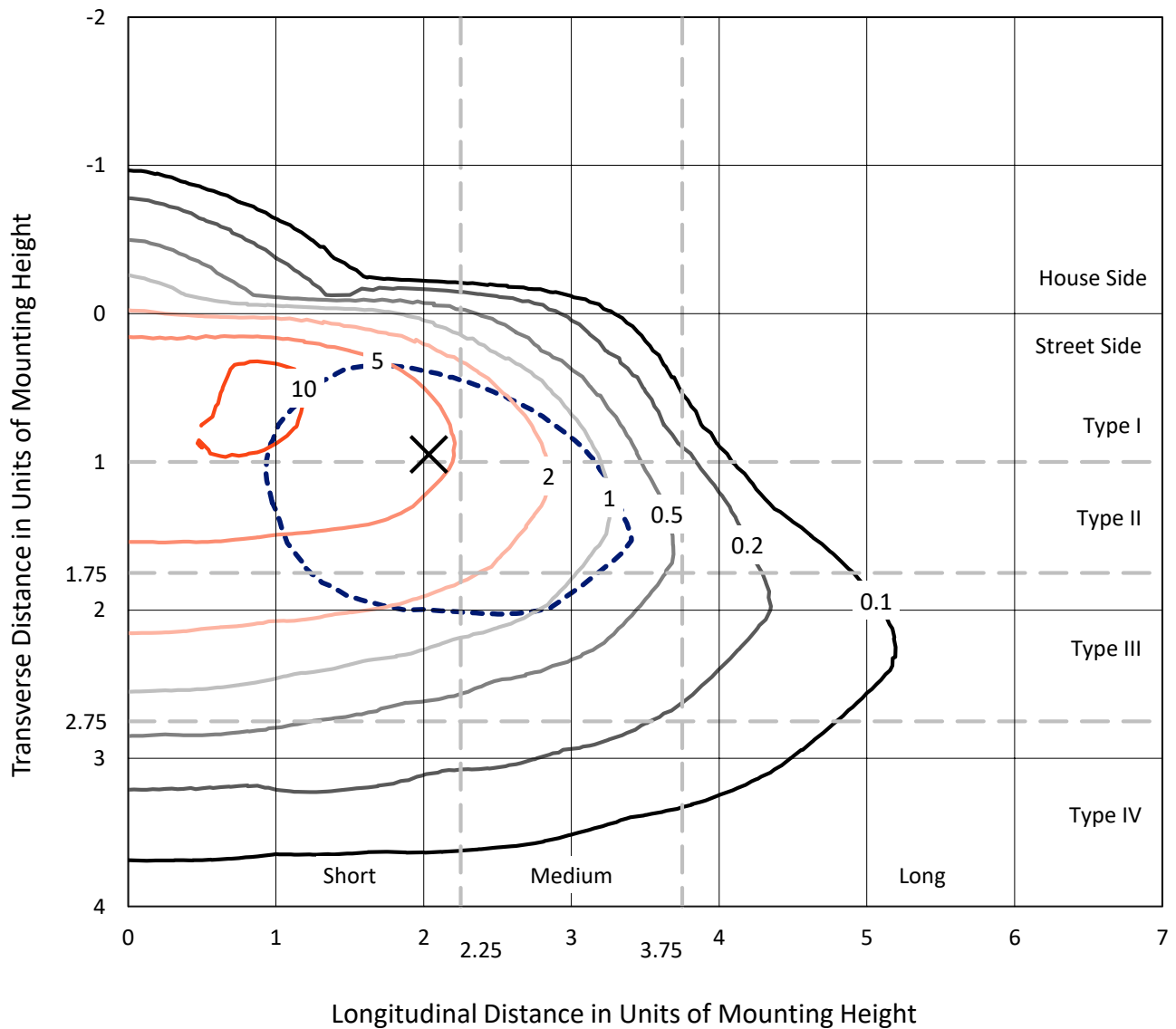
Input Watts (W): 127.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

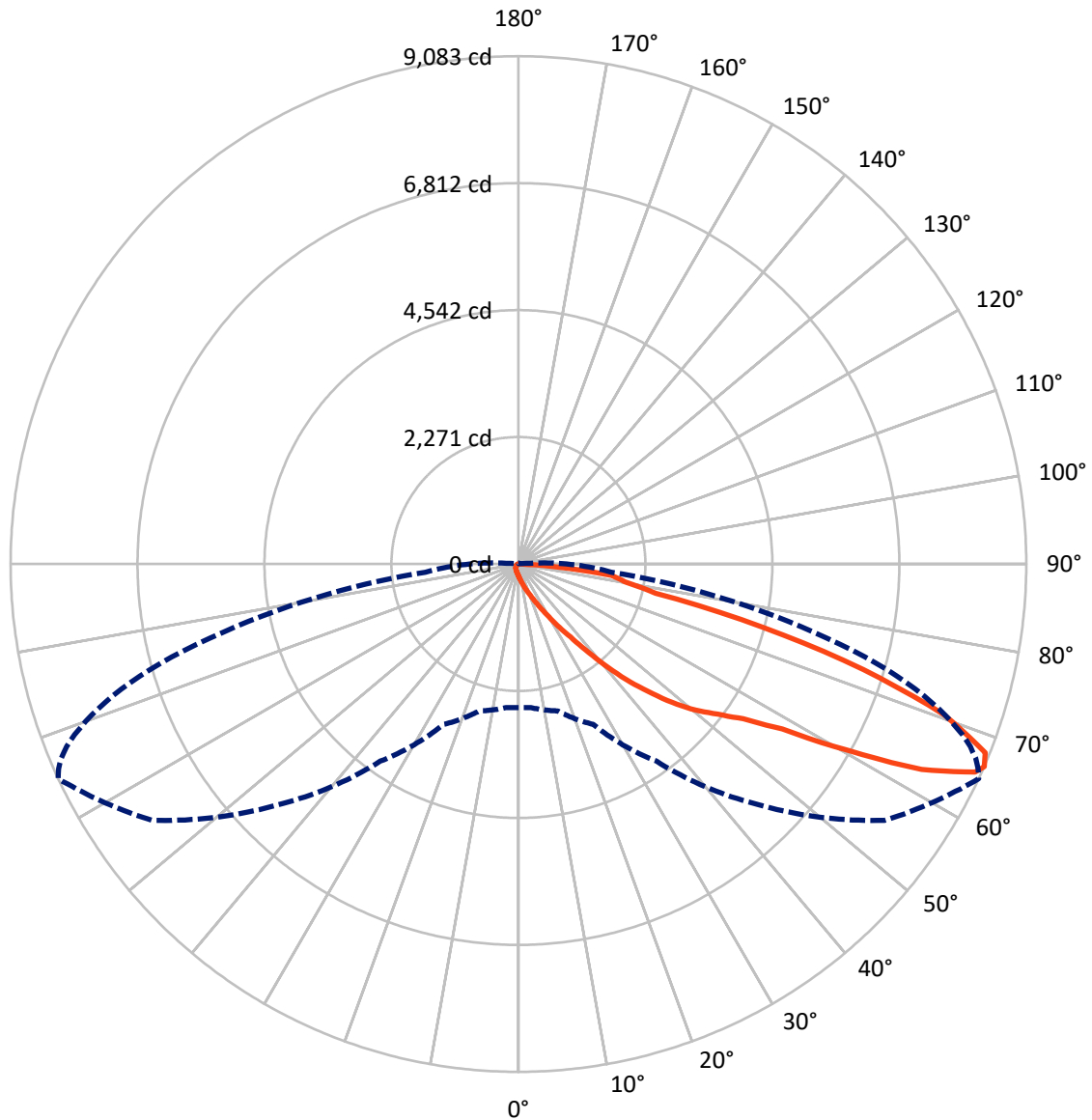
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.7 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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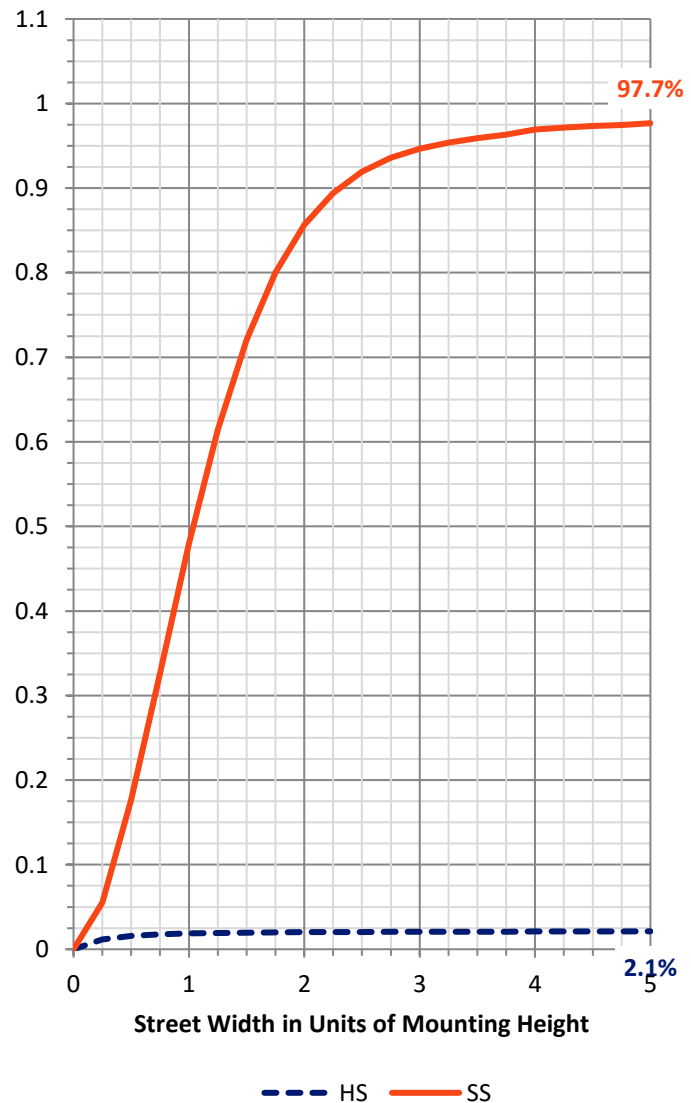
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	153.8	0.0	153.8
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	6943.3	0.0	6943.3
	% Fixture	97.8	0.0	97.8
Total	Lumens	7097.0	0.0	7097.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.0	0.3
10°-20°	101.7	1.4
20°-30°	219.3	3.1
30°-40°	468.3	6.6
40°-50°	1035.7	14.6
50°-60°	1755.2	24.7
60°-70°	2342.2	33.0
70°-80°	1031.7	14.5
80°-90°	118.8	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°	7097.0	100.0
0°-180°	7097.0	100.0



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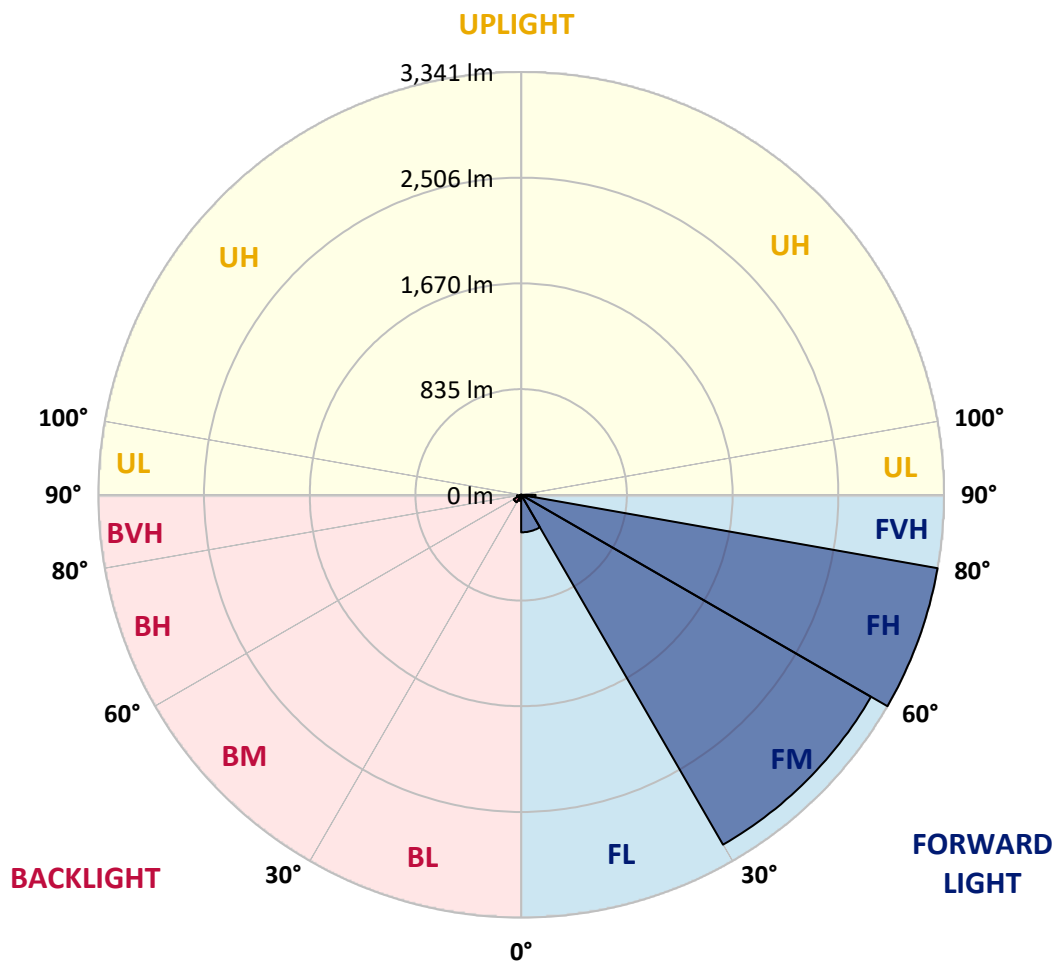
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	296.4	4.2			
FM	(30°-60°)	3191.8	45.0			
FH	(60°-80°)	3341.0	47.1			G2/5000
FVH	(80°-90°)	114.1	1.6			G2/225
BL	(0°-30°)	48.5	0.7	B0/110		
BM	(30°-60°)	67.5	1.0	B0/220		
BH	(60°-80°)	33.0	0.5	B0/110		G0/110
BVH	(80°-90°)	4.7	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2
2.5°	270.2	268.8	263.3	263.3	255.1	249.7	242.9	236.1	236.1	234.7	233.3
5°	357.5	349.3	347.9	333.0	320.6	302.9	286.5	264.7	262.0	259.3	257.8
7.5°	454.3	453.0	440.7	423.0	398.4	365.7	333.0	297.4	292.0	289.2	283.8
10°	579.9	573.1	556.7	526.7	489.9	446.1	393.0	337.0	330.2	324.8	322.0
12.5°	699.9	687.7	678.1	639.9	593.5	529.4	465.3	384.8	379.3	372.5	361.6
15°	811.8	800.9	784.6	751.8	699.9	619.5	544.4	446.1	432.5	423.0	414.8
17.5°	899.2	892.4	873.3	836.4	780.4	709.5	619.5	508.9	498.0	485.7	470.7
20°	982.4	972.9	942.8	892.4	832.3	777.7	708.1	590.8	575.8	560.7	544.4
22.5°	1061.6	1052.0	1002.8	919.6	855.5	832.3	807.8	683.5	660.4	648.1	631.7
25°	1172.1	1151.6	1075.2	942.8	856.9	874.6	916.9	803.6	781.8	764.1	738.2
27.5°	1320.8	1293.5	1173.4	976.9	862.3	921.0	1042.4	949.7	926.4	906.0	877.3
30°	1488.6	1470.8	1327.6	1058.8	901.9	989.2	1182.9	1135.3	1107.9	1083.3	1049.2
32.5°	1657.8	1633.2	1491.3	1214.3	1008.3	1121.6	1359.0	1350.8	1315.4	1292.2	1255.3
35°	1806.5	1794.2	1689.2	1469.5	1251.2	1353.5	1593.6	1603.2	1571.8	1547.3	1506.4
37.5°	1907.5	1907.5	1887.0	1743.8	1637.3	1713.7	1938.9	1940.3	1908.9	1852.9	1832.5
40°	1959.3	1974.3	2048.0	2075.3	2069.9	2168.1	2391.9	2367.3	2341.4	2312.7	2244.5
42.5°	2065.8	2079.4	2236.3	2424.6	2547.4	2677.1	2831.2	2823.0	2791.7	2739.8	2677.1
45°	2245.9	2263.6	2450.5	2749.3	3001.7	3186.0	3284.2	3246.0	3214.6	3165.5	3132.7
47.5°	2475.1	2509.2	2720.7	3090.4	3394.7	3699.0	3801.3	3700.4	3673.0	3634.9	3581.6
50°	2719.3	2752.1	2977.2	3400.2	3744.0	4106.9	4277.5	4106.9	4067.4	4055.1	3995.1
52.5°	2930.8	2958.1	3175.0	3639.0	4011.5	4437.1	4685.5	4460.3	4431.7	4390.8	4347.1
55°	3056.3	3078.2	3281.4	3753.6	4192.9	4734.6	5079.8	4882.0	4839.7	4823.3	4760.5
57.5°	3098.6	3120.5	3303.3	3768.6	4291.2	5006.1	5558.7	5565.5	5515.1	5456.4	5437.3
60°	3098.6	3123.2	3277.4	3731.7	4386.6	5295.4	6197.3	6766.3	6657.1	6646.2	6576.6
62.5°	2970.3	2993.6	3149.1	3618.5	4514.9	5685.6	7086.9	8091.1	8059.8	7988.8	7874.2
65°	2692.1	2705.7	2858.5	3329.2	4465.8	6044.5	7857.8	8972.6	8922.1	8782.9	8635.5
66°	2566.5	2577.5	2720.7	3164.1	4304.8	6093.6	7994.3	9083.0	8999.8	8882.5	8716.1
67.5°	2385.0	2404.1	2505.1	2857.2	3918.6	5923.0	7908.3	9005.3	8933.0	8791.1	8624.6
70°	1592.3	1578.7	1934.8	2192.7	2985.4	4826.0	7095.1	8085.7	8087.0	8020.2	7953.3
72.5°	755.9	764.1	867.8	1349.5	1953.8	3224.1	5647.4	6453.8	6546.6	6426.5	6343.3
75°	543.0	555.3	618.1	825.5	1165.2	1934.8	3660.8	4513.6	4516.3	4303.4	4113.8
77.5°	158.2	165.1	231.9	508.9	873.3	1305.7	2102.6	2509.2	2450.5	2297.7	2154.5
80°	65.5	65.5	68.2	162.4	350.7	886.9	1470.8	1932.1	1925.2	1866.6	1781.9
82.5°	24.6	25.9	32.7	66.8	83.2	218.3	981.1	1676.9	1672.8	1589.6	1529.6
85°	2.7	2.7	8.2	28.6	31.4	40.9	196.5	739.5	735.5	739.5	648.1
87.5°	0.0	0.0	1.4	2.7	4.1	5.5	8.2	28.6	31.4	30.0	27.3
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°	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2
2.5°	233.3	230.6	230.6	229.2	229.2	229.2	227.9	226.5	226.5	225.1	223.7
5°	255.1	252.4	251.1	248.3	247.0	245.6	242.9	241.5	238.8	237.4	236.1
7.5°	281.0	275.6	274.2	270.2	266.0	263.3	260.6	256.5	253.8	248.3	247.0
10°	313.8	307.0	301.6	296.1	292.0	285.2	281.0	275.6	270.2	266.0	262.0
12.5°	356.1	346.5	338.4	333.0	323.3	315.1	307.0	302.9	292.0	286.5	279.7
15°	402.5	391.6	382.1	371.1	364.3	350.7	339.7	327.5	322.0	312.4	301.6
17.5°	462.5	444.8	429.8	418.9	405.2	391.6	379.3	367.1	350.7	339.7	326.1
20°	526.7	511.6	491.2	472.1	455.8	439.4	421.6	405.2	390.3	372.5	356.1
22.5°	608.5	586.7	562.2	543.0	521.2	503.4	478.9	457.1	432.5	409.3	390.3
25°	712.2	683.5	660.4	633.1	607.2	579.9	549.9	522.6	491.2	469.3	436.6
27.5°	840.5	813.2	781.8	746.3	720.4	679.5	639.9	605.8	568.9	534.8	498.0
30°	1004.3	964.7	931.9	897.8	845.9	806.3	760.0	713.6	663.1	629.0	573.1
32.5°	1200.7	1158.4	1109.3	1060.1	1012.5	956.5	899.2	841.9	785.9	723.1	665.8
35°	1440.9	1390.4	1334.4	1281.2	1207.5	1147.5	1075.2	996.1	933.3	861.0	788.6
37.5°	1758.8	1675.5	1626.4	1570.5	1470.8	1389.0	1308.5	1229.4	1118.9	1042.4	940.1
40°	2157.2	2108.0	2027.5	1937.5	1847.4	1739.6	1630.5	1525.4	1397.1	1290.8	1172.1
42.5°	2625.1	2552.9	2471.0	2341.4	2250.0	2123.1	1998.9	1859.7	1702.8	1566.4	1427.2
45°	3064.5	2978.5	2915.8	2786.2	2690.6	2540.6	2390.5	2243.2	2061.7	1885.6	1724.6
47.5°	3539.4	3468.4	3364.7	3259.7	3162.8	2993.6	2831.2	2652.5	2461.4	2252.7	2043.9
50°	3956.9	3900.9	3829.9	3703.1	3595.3	3453.4	3262.4	3067.2	2825.8	2618.4	2381.0
52.5°	4311.6	4268.0	4168.4	4078.3	3981.4	3847.8	3677.2	3490.2	3229.6	3001.7	2731.6
55°	4730.5	4699.1	4611.8	4555.9	4469.9	4341.7	4182.0	4008.7	3733.1	3484.8	3179.1
57.5°	5416.8	5392.3	5315.9	5292.7	5208.1	5096.2	4899.7	4714.1	4392.1	4083.7	3734.5
60°	6553.4	6504.3	6392.4	6335.1	6156.3	6006.3	5751.1	5496.0	5107.1	4714.1	4293.9
62.5°	7770.5	7632.6	7419.8	7237.0	6983.2	6722.6	6381.5	5991.2	5535.5	5068.9	4585.9
65°	8426.7	8192.1	7923.3	7632.6	7303.8	6920.4	6490.6	6022.6	5532.8	5040.2	4530.0
66°	8501.8	8237.1	7951.9	7628.6	7262.9	6854.9	6418.3	5927.1	5418.2	4937.9	4427.6
67.5°	8407.7	8130.7	7829.1	7470.3	7074.6	6651.7	6193.2	5682.8	5193.1	4705.9	4209.3
70°	7748.7	7473.0	7204.2	6826.3	6404.7	5979.0	5545.1	4974.7	4510.8	4063.3	3621.2
72.5°	6187.7	6000.8	5734.7	5411.3	5000.6	4501.3	4139.7	3629.4	3226.9	2793.0	2450.5
75°	3866.8	3603.5	3274.7	2862.6	2548.8	2143.6	1932.1	1544.5	1315.4	1114.7	921.0
77.5°	1977.0	1779.2	1548.6	1316.7	1094.3	873.3	675.4	477.5	322.0	223.7	166.4
80°	1633.2	1458.6	1267.6	1056.1	859.6	667.2	480.3	327.5	208.7	136.5	106.4
82.5°	1349.5	1202.1	1031.5	835.0	664.5	523.9	364.3	237.4	147.4	95.5	75.0
85°	574.4	521.2	402.5	319.3	240.1	177.4	124.2	83.2	58.7	47.8	43.6
87.5°	24.6	27.3	25.9	20.4	15.0	15.0	13.7	10.9	10.9	10.9	10.9
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2	214.2
2.5°	223.7	222.4	221.0	221.0	219.7	218.3	210.2	203.3	195.1	189.6	184.2
5°	233.3	231.9	229.2	227.9	225.1	223.7	206.0	191.0	178.8	169.2	162.4
7.5°	242.9	241.5	237.4	233.3	231.9	229.2	200.5	181.5	165.1	154.2	147.4
10°	255.1	251.1	247.0	241.5	237.4	233.3	195.1	170.6	152.8	143.2	136.5
12.5°	272.9	266.0	259.3	252.4	247.0	240.1	192.3	161.0	143.2	132.3	125.5
15°	293.4	283.8	275.6	267.5	257.8	251.1	186.9	152.8	135.0	124.2	116.0
17.5°	312.4	301.6	289.2	277.0	267.5	257.8	181.5	144.7	126.9	116.0	107.8
20°	339.7	323.3	308.4	293.4	279.7	267.5	173.3	136.5	120.1	107.8	99.6
22.5°	369.8	350.7	331.5	311.1	293.4	277.0	166.4	129.6	113.3	100.9	91.4
25°	408.0	384.8	358.9	333.0	312.4	290.6	159.6	122.8	106.4	94.1	84.6
27.5°	461.2	428.4	399.8	367.1	335.7	311.1	154.2	117.3	99.6	87.4	77.7
30°	533.5	485.7	440.7	405.2	368.4	333.0	148.7	110.5	94.1	80.5	69.5
32.5°	614.0	558.0	506.2	453.0	406.6	365.7	143.2	105.1	87.4	73.7	64.1
35°	713.6	642.6	573.1	511.6	455.8	401.1	137.8	99.6	81.9	66.8	57.3
37.5°	856.9	768.2	676.8	597.6	525.3	453.0	133.7	94.1	75.0	60.0	50.5
40°	1053.4	938.8	826.9	719.1	624.9	534.8	128.3	88.7	69.5	54.6	45.0
42.5°	1266.2	1127.1	979.7	858.3	728.6	615.4	122.8	83.2	64.1	49.1	39.6
45°	1530.9	1357.6	1178.9	1013.8	855.5	709.5	117.3	77.7	57.3	43.6	34.1
47.5°	1820.2	1599.1	1397.1	1189.8	1001.5	826.9	110.5	73.7	51.8	38.2	30.0
50°	2117.6	1884.3	1629.2	1393.1	1169.3	944.2	103.7	66.8	46.4	34.1	24.6
52.5°	2438.3	2162.6	1902.0	1608.6	1348.1	1098.4	96.9	61.4	42.3	30.0	20.4
55°	2846.2	2537.9	2232.2	1903.4	1589.6	1277.1	90.1	54.6	36.8	25.9	16.4
57.5°	3359.3	2993.6	2618.4	2247.2	1866.6	1511.8	84.6	47.8	31.4	21.9	13.7
60°	3843.6	3416.6	2962.2	2535.1	2105.3	1691.9	76.4	42.3	27.3	17.7	13.7
62.5°	4094.7	3607.6	3117.7	2647.0	2188.6	1756.0	68.2	35.4	23.2	15.0	12.2
65°	4033.3	3536.7	3061.8	2587.0	2138.1	1715.1	60.0	31.4	20.4	13.7	12.2
66°	3944.6	3453.4	2975.8	2524.2	2095.8	1671.4	56.0	30.0	19.1	13.7	10.9
67.5°	3750.9	3276.0	2820.3	2400.1	1979.8	1588.2	50.5	27.3	17.7	12.2	10.9
70°	3203.7	2772.5	2408.2	2034.4	1691.9	1338.5	40.9	23.2	15.0	10.9	10.9
72.5°	2120.4	1827.0	1584.1	1363.0	1139.3	884.2	34.1	19.1	12.2	10.9	9.5
75°	799.6	723.1	620.8	558.0	487.1	427.1	27.3	12.2	9.5	9.5	9.5
77.5°	141.9	131.0	116.0	106.4	98.2	90.1	21.9	8.2	8.2	9.5	9.5
80°	95.5	88.7	80.5	73.7	68.2	61.4	15.0	6.8	8.2	8.2	9.5
82.5°	68.2	64.1	60.0	54.6	50.5	45.0	9.5	6.8	8.2	8.2	8.2
85°	40.9	38.2	35.4	32.7	28.6	27.3	6.8	6.8	6.8	8.2	8.2
87.5°	10.9	9.5	10.9	10.9	8.2	9.5	5.5	5.5	5.5	6.8	6.8
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):

	145°	155°	165°	175°	180°
0°	214.2	214.2	214.2	214.2	214.2
2.5°	181.5	181.5	178.8	182.8	182.8
5°	156.9	156.9	155.5	156.9	156.9
7.5°	143.2	141.9	141.9	141.9	143.2
10°	131.0	129.6	129.6	129.6	129.6
12.5°	120.1	118.7	117.3	118.7	118.7
15°	110.5	107.8	107.8	107.8	107.8
17.5°	102.3	99.6	98.2	98.2	98.2
20°	94.1	90.1	90.1	90.1	90.1
22.5°	85.9	81.9	81.9	81.9	81.9
25°	77.7	73.7	73.7	73.7	73.7
27.5°	71.0	66.8	66.8	66.8	66.8
30°	62.8	60.0	60.0	61.4	60.0
32.5°	57.3	53.2	53.2	54.6	54.6
35°	50.5	47.8	47.8	47.8	47.8
37.5°	43.6	40.9	40.9	40.9	40.9
40°	38.2	35.4	34.1	35.4	35.4
42.5°	32.7	30.0	28.6	28.6	28.6
45°	28.6	24.6	23.2	24.6	24.6
47.5°	23.2	20.4	20.4	21.9	21.9
50°	17.7	17.7	19.1	21.9	21.9
52.5°	16.4	16.4	19.1	21.9	21.9
55°	15.0	16.4	19.1	20.4	21.9
57.5°	13.7	16.4	19.1	20.4	20.4
60°	13.7	15.0	17.7	20.4	20.4
62.5°	12.2	13.7	16.4	19.1	19.1
65°	12.2	13.7	16.4	19.1	19.1
66°	12.2	13.7	16.4	19.1	19.1
67.5°	12.2	13.7	16.4	19.1	19.1
70°	12.2	13.7	16.4	17.7	17.7
72.5°	10.9	12.2	15.0	17.7	17.7
75°	10.9	12.2	15.0	17.7	17.7
77.5°	10.9	12.2	15.0	17.7	17.7
80°	10.9	12.2	15.0	16.4	17.7
82.5°	9.5	12.2	13.7	16.4	16.4
85°	9.5	10.9	13.7	15.0	16.4
87.5°	8.2	9.5	10.9	13.7	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)