

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: P146589

Luminaire Tested: **LDRL-T3-E02-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146589
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33695)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T3-E02-E-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (42) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5454.2 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

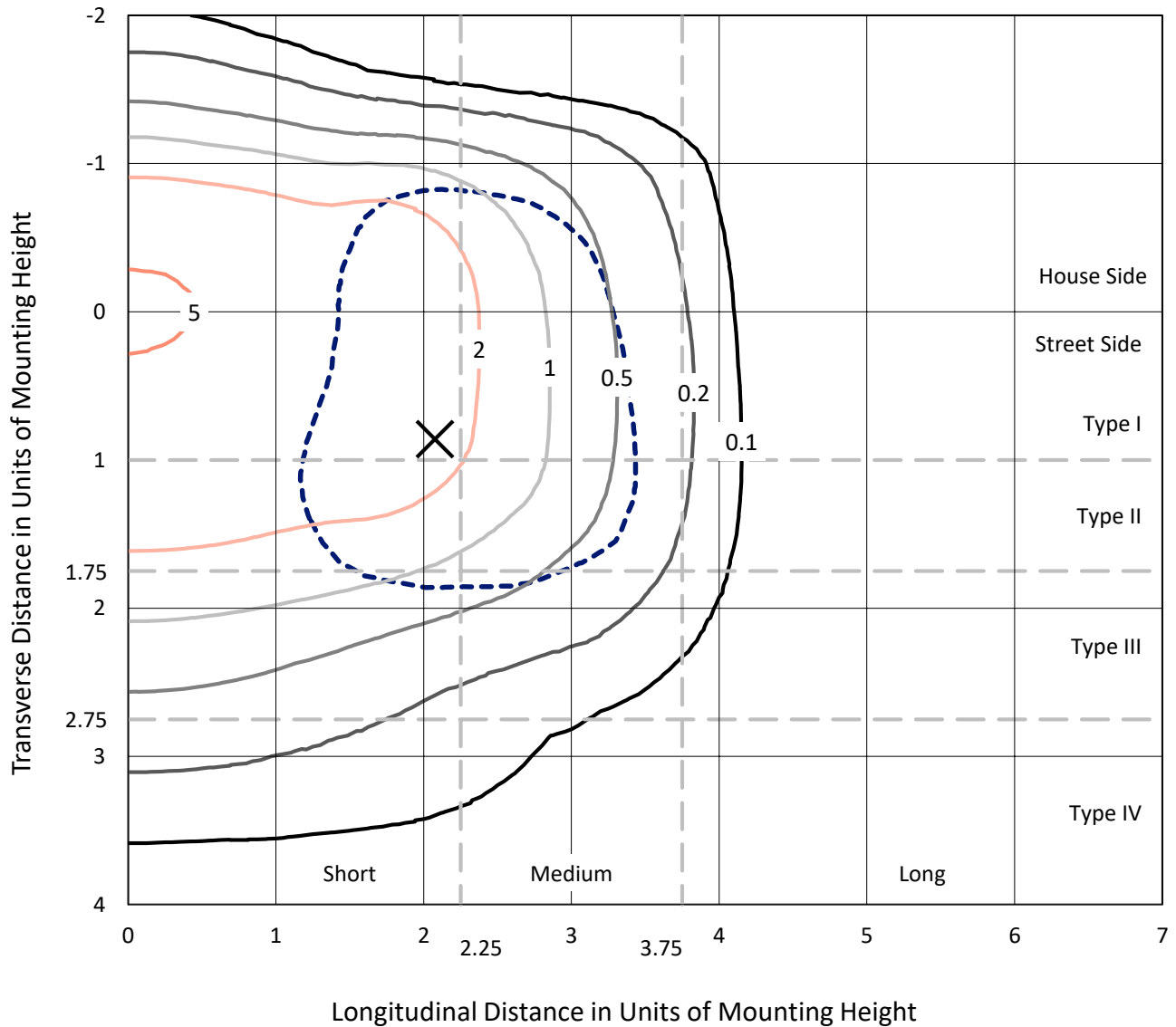
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

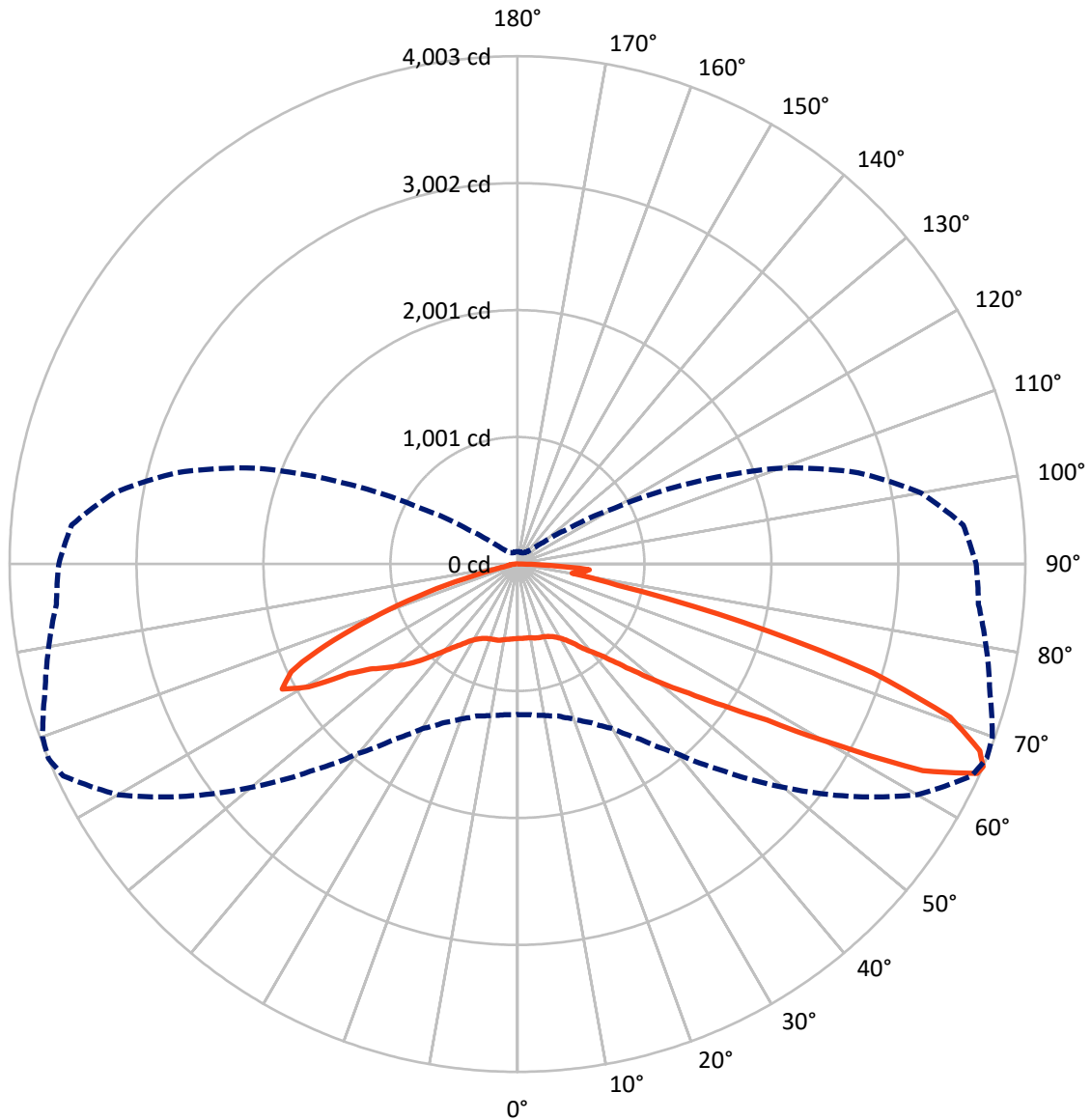
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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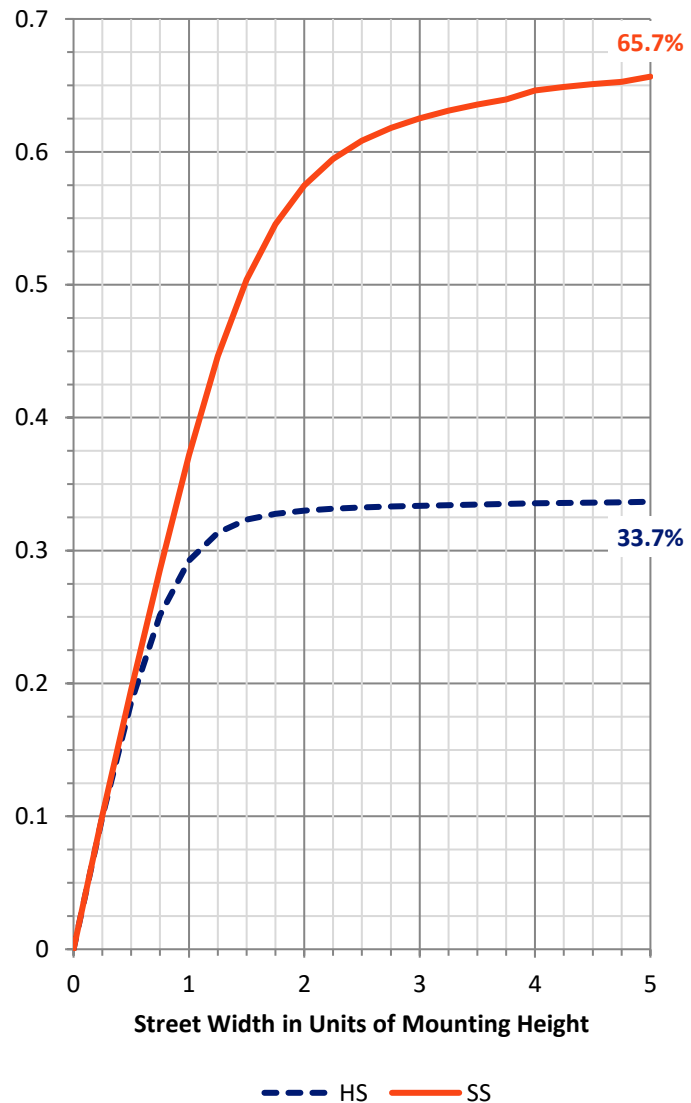
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1853.0	0.0	1853.0
	% Fixture	34.0	0.0	34.0
Street Side	Lumens	3601.2	0.0	3601.2
	% Fixture	66.0	0.0	66.0
Total	Lumens	5454.2	0.0	5454.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.4	1.0
10°-20°	167.1	3.1
20°-30°	287.3	5.3
30°-40°	462.1	8.5
40°-50°	761.6	14.0
50°-60°	1193.8	21.9
60°-70°	1652.1	30.3
70°-80°	747.7	13.7
80°-90°	126.1	2.3
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°	5454.2	100.0
0°-180°	5454.2	100.0



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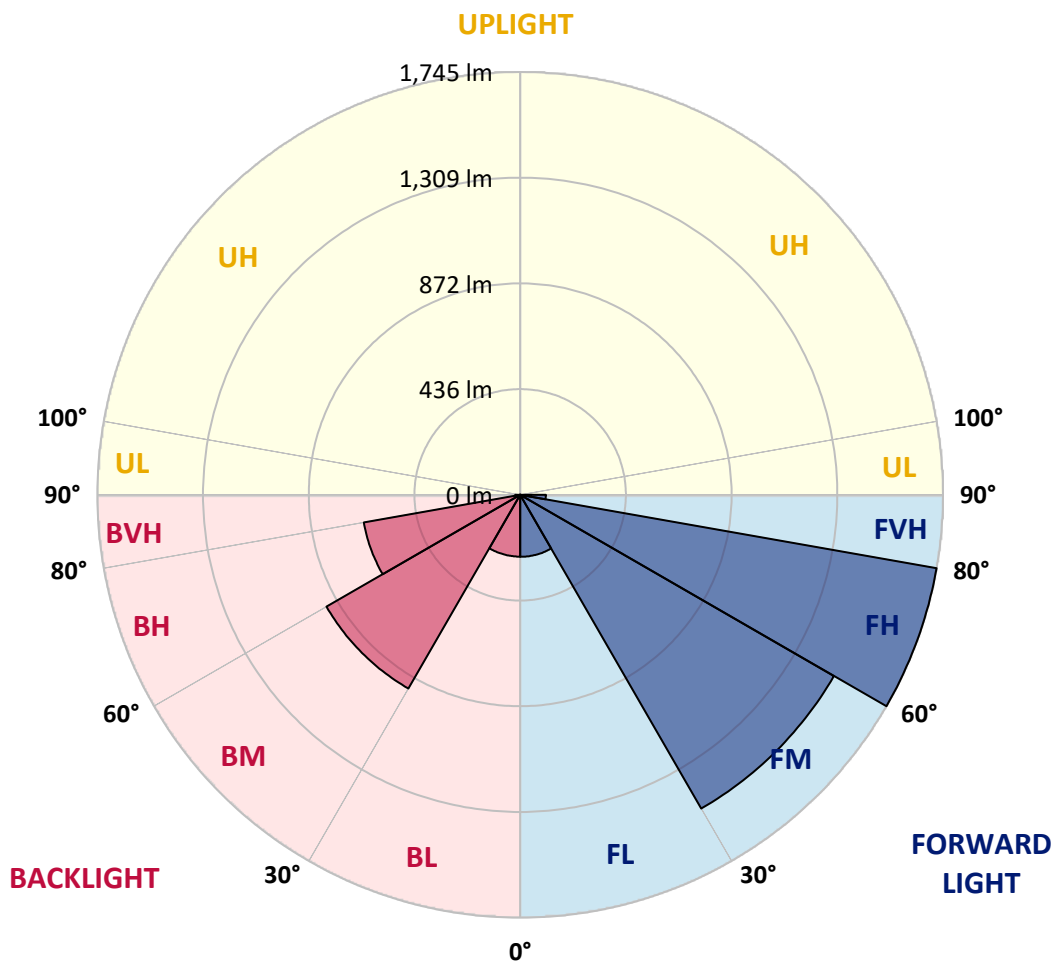
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	255.8	4.7			
FM	(30°-60°)	1494.7	27.4			
FH	(60°-80°)	1744.7	32.0			G1/1800
FVH	(80°-90°)	106.0	1.9			G2/225
BL	(0°-30°)	255.0	4.7	B1/500		
BM	(30°-60°)	922.8	16.9	B1/1000		
BH	(60°-80°)	655.1	12.0	B2/1000		G2/1000
BVH	(80°-90°)	20.1	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1
2.5°	586.4	586.0	585.6	585.6	585.3	585.6	586.0	586.4	586.0	586.4	586.0
5°	585.3	585.3	584.9	584.9	584.9	584.9	585.3	585.6	585.3	586.0	585.3
7.5°	580.5	582.7	582.0	582.7	583.4	584.2	584.5	585.3	586.4	587.1	586.4
10°	574.3	575.4	575.8	576.5	578.0	579.8	581.3	583.1	585.6	586.4	587.1
12.5°	563.0	564.5	565.5	567.0	569.2	572.1	574.7	577.6	582.0	584.9	587.5
15°	554.6	556.4	556.8	558.6	560.8	564.1	567.4	571.8	577.6	582.7	587.8
17.5°	560.1	560.8	560.1	560.1	560.8	562.3	564.8	568.5	574.7	580.9	587.1
20°	576.5	576.5	575.8	575.4	574.7	573.2	572.9	572.5	576.5	581.3	586.7
22.5°	592.2	592.2	591.9	593.3	592.9	592.9	591.9	590.0	588.2	587.5	591.1
25°	602.1	603.5	604.3	606.5	607.9	610.1	610.8	610.5	607.9	603.5	602.4
27.5°	618.2	619.3	620.0	622.5	625.5	628.0	630.6	633.9	633.9	629.8	624.4
30°	649.2	647.7	648.5	649.2	651.8	655.4	658.7	663.1	665.3	663.8	656.5
32.5°	678.1	679.5	680.3	682.5	685.0	690.5	694.5	699.6	704.4	705.1	701.5
35°	720.5	719.7	718.6	726.3	729.2	735.4	740.2	747.5	751.1	754.4	752.2
37.5°	787.3	785.1	783.7	785.8	789.9	793.9	800.8	806.3	812.5	820.2	817.6
40°	881.9	886.3	880.1	883.0	886.3	877.2	883.4	888.5	899.1	899.5	899.1
42.5°	1005.1	1008.3	1006.9	1008.7	1002.9	999.9	997.4	999.9	1013.1	1011.3	1002.5
45°	1128.2	1132.9	1131.8	1132.6	1143.9	1139.1	1143.1	1143.9	1157.4	1153.7	1147.2
47.5°	1233.4	1241.4	1243.3	1249.8	1265.2	1277.6	1294.8	1307.6	1314.1	1318.5	1323.6
50°	1316.7	1322.5	1332.8	1349.2	1371.5	1393.0	1431.8	1457.0	1480.0	1496.1	1512.5
52.5°	1371.9	1378.4	1394.1	1419.0	1451.1	1490.6	1535.9	1588.5	1637.1	1665.6	1690.1
55°	1394.5	1401.1	1420.4	1453.0	1495.7	1546.1	1611.2	1685.3	1750.0	1815.4	1853.0
57.5°	1381.4	1388.7	1410.9	1447.5	1499.0	1565.1	1645.9	1736.8	1831.5	1930.5	2006.1
60°	1342.6	1349.2	1374.4	1412.4	1471.2	1545.8	1642.6	1756.6	1889.5	2036.4	2180.0
62.5°	1289.3	1299.1	1321.4	1360.2	1418.6	1500.1	1610.4	1758.7	1949.5	2186.2	2465.7
65°	1221.3	1228.6	1248.4	1279.1	1343.4	1428.5	1545.0	1726.6	1975.8	2311.5	2710.5
66°	1186.3	1193.2	1211.5	1240.3	1299.1	1381.0	1497.5	1683.5	1946.5	2310.8	2736.4
67.5°	1124.5	1127.8	1141.0	1169.5	1207.8	1281.2	1389.4	1563.7	1822.7	2213.2	2664.1
70°	943.3	948.1	960.8	975.5	989.7	1016.0	1091.6	1206.7	1413.9	1788.3	2218.3
72.5°	652.5	659.8	673.7	700.7	723.0	756.3	785.8	824.2	892.9	1153.0	1587.0
75°	471.7	474.2	494.7	542.2	587.1	653.6	712.4	731.0	707.7	703.6	932.3
77.5°	281.3	285.0	314.6	362.4	409.2	499.4	620.0	713.1	764.7	746.4	705.8
80°	118.4	123.5	141.0	153.4	192.2	267.8	386.9	533.0	668.9	752.6	733.6
82.5°	38.0	44.2	52.2	63.2	74.5	99.7	154.5	231.3	365.3	544.7	669.7
85°	13.9	14.2	19.7	27.4	30.3	35.1	44.9	69.4	123.5	204.2	380.0
87.5°	5.5	6.6	7.7	10.6	11.0	11.3	12.8	16.4	16.1	13.9	72.0
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1
2.5°	586.4	587.1	586.7	587.1	587.1	586.4	586.4	587.8	586.7	587.5	587.5
5°	586.0	586.7	586.4	587.1	587.1	586.7	586.7	588.9	588.6	589.7	590.4
7.5°	587.5	587.8	587.5	587.5	588.6	588.2	588.6	589.3	591.1	592.9	594.4
10°	589.3	590.0	591.1	591.5	592.9	592.6	593.7	594.8	596.6	598.4	600.3
12.5°	591.9	594.0	597.3	598.1	599.5	600.6	602.4	603.5	605.0	607.9	610.1
15°	594.0	598.1	602.1	603.5	605.0	606.5	608.3	609.4	611.9	614.5	617.1
17.5°	594.8	599.5	604.6	606.5	607.9	610.5	612.7	614.9	617.8	621.1	624.0
20°	595.1	601.7	608.3	610.5	613.8	617.4	621.1	622.9	626.9	630.9	633.5
22.5°	598.4	606.5	615.6	619.6	622.9	629.5	634.2	637.2	641.9	645.2	646.3
25°	607.6	616.0	626.9	633.1	638.6	648.1	654.0	659.4	662.0	666.4	665.3
27.5°	624.0	630.6	644.8	653.2	660.2	672.6	683.9	689.0	693.1	695.2	692.7
30°	652.1	654.7	670.4	680.6	692.3	711.7	724.1	730.7	735.8	736.2	729.6
32.5°	694.1	690.1	704.0	718.6	734.0	757.4	774.2	781.1	785.1	785.5	770.9
35°	751.1	744.2	755.9	770.1	789.1	819.8	841.0	849.1	855.3	852.3	830.8
37.5°	823.1	822.7	828.2	846.5	868.0	907.5	929.8	934.2	933.8	925.0	892.5
40°	903.1	896.5	897.3	910.4	935.3	987.1	1018.2	1025.5	1023.0	1010.2	967.8
42.5°	1004.0	1001.0	991.2	998.1	1021.1	1084.3	1122.0	1129.3	1131.5	1110.3	1060.2
45°	1145.3	1142.8	1120.9	1122.3	1139.1	1205.6	1244.7	1256.8	1257.1	1237.0	1172.0
47.5°	1316.7	1314.5	1288.9	1281.6	1290.0	1349.2	1397.8	1400.3	1401.1	1373.3	1305.7
50°	1511.0	1504.8	1485.5	1477.8	1467.9	1533.3	1572.4	1572.1	1568.0	1537.4	1461.4
52.5°	1698.8	1712.7	1705.4	1690.4	1690.8	1737.9	1774.8	1754.4	1756.9	1727.7	1640.4
55°	1899.4	1934.8	1961.5	1967.0	1964.4	1988.5	2009.0	1972.5	1959.0	1954.2	1861.4
57.5°	2112.4	2203.0	2285.2	2319.5	2306.4	2350.6	2368.9	2330.9	2331.6	2368.9	2288.9
60°	2397.0	2625.7	2832.8	2897.1	2927.1	3000.2	2967.7	2965.5	3022.8	3071.0	2922.7
62.5°	2828.8	3207.7	3538.3	3586.2	3610.3	3626.7	3612.1	3572.3	3631.5	3637.3	3408.6
65°	3156.2	3600.8	3920.5	3980.4	3976.0	3892.3	3811.2	3731.6	3730.9	3672.4	3377.9
66°	3191.6	3638.1	3949.7	4002.7	3983.3	3854.3	3751.3	3647.9	3614.7	3527.0	3228.1
67.5°	3114.2	3573.0	3882.5	3930.0	3888.7	3692.5	3552.2	3412.3	3362.2	3240.2	2935.5
70°	2662.2	3135.0	3548.9	3617.6	3568.6	3308.2	3100.3	2946.5	2810.2	2690.0	2438.6
72.5°	2064.2	2417.8	2855.9	2927.5	2931.5	2727.6	2493.4	2345.8	2187.3	2066.7	1878.2
75°	1354.0	1621.4	1862.1	1838.0	1845.0	1684.6	1545.0	1422.3	1278.7	1183.7	1093.8
77.5°	791.3	887.0	865.1	805.2	754.8	593.3	424.5	291.5	254.3	265.2	299.2
80°	687.9	634.2	496.5	436.6	397.1	269.6	145.0	102.3	89.9	91.0	96.4
82.5°	740.5	768.3	630.6	519.1	452.7	317.5	170.6	85.1	61.4	71.6	78.9
85°	574.7	731.4	674.4	569.9	479.3	337.6	174.3	54.1	36.5	49.0	61.7
87.5°	163.7	259.0	207.1	183.0	147.6	100.8	41.6	21.6	19.7	25.6	35.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1	587.1
2.5°	587.8	587.8	588.9	589.3	589.7	589.7	590.4	590.4	590.8	592.2	591.9
5°	591.5	592.6	594.0	594.8	595.9	596.2	597.3	597.3	598.4	599.5	599.2
7.5°	595.9	597.0	598.1	599.2	600.3	601.7	601.3	601.0	600.6	599.9	599.2
10°	602.1	603.2	604.3	603.9	603.2	602.4	599.5	596.2	594.8	591.9	589.7
12.5°	612.3	613.4	612.3	609.4	605.4	600.6	594.4	588.9	585.6	581.3	578.7
15°	620.0	621.1	618.9	613.8	607.2	601.0	592.6	585.6	579.8	575.0	571.4
17.5°	625.8	625.1	620.3	614.5	607.6	602.4	594.8	587.1	580.2	573.6	568.5
20°	634.2	630.2	623.3	616.0	609.0	604.6	598.4	591.5	584.2	574.7	568.1
22.5°	645.2	637.9	628.8	621.4	614.9	610.5	604.3	597.7	590.8	579.8	570.7
25°	660.9	649.2	638.6	630.9	625.1	620.7	613.0	606.1	598.4	587.5	575.8
27.5°	682.8	666.0	655.1	647.4	641.5	636.4	626.6	618.2	608.3	597.3	583.4
30°	711.3	690.9	678.8	672.2	666.0	658.7	648.1	635.7	622.9	608.3	593.3
32.5°	746.8	723.7	712.4	705.8	697.8	687.9	674.1	657.6	638.6	619.3	600.6
35°	797.2	770.9	758.4	747.1	735.4	720.8	700.0	676.2	651.0	625.8	602.8
37.5°	847.2	822.7	807.4	795.7	777.4	753.7	724.8	692.0	658.3	626.2	598.4
40°	918.1	889.6	871.7	850.9	821.3	784.4	742.4	698.2	656.5	617.8	584.9
42.5°	1005.1	972.5	945.9	908.2	862.2	808.9	750.8	694.5	643.7	599.2	563.0
45°	1115.0	1072.6	1028.1	968.9	898.4	823.8	750.4	681.7	621.8	571.4	535.6
47.5°	1243.3	1183.7	1108.8	1018.6	922.1	827.5	738.7	658.7	588.9	533.4	492.1
50°	1375.1	1288.9	1182.6	1056.9	934.2	818.4	712.8	621.1	545.8	482.6	438.0
52.5°	1537.7	1404.0	1249.5	1082.9	929.1	791.3	669.7	568.1	487.7	426.0	374.8
55°	1731.3	1536.3	1313.0	1097.1	906.4	742.7	604.3	498.7	414.3	358.0	312.0
57.5°	2051.8	1743.4	1421.5	1118.3	861.8	670.4	524.6	415.4	336.1	288.3	251.4
60°	2604.1	2168.3	1651.0	1170.5	800.1	567.4	423.4	325.5	260.1	221.8	195.8
62.5°	2989.6	2425.9	1774.5	1152.6	695.2	446.8	313.1	232.7	189.6	164.4	146.9
65°	2914.7	2324.3	1625.8	979.1	544.7	316.0	208.2	157.5	133.0	117.3	108.5
66°	2780.2	2212.1	1512.5	879.0	472.4	263.4	171.7	130.4	114.4	103.0	97.2
67.5°	2535.1	1979.8	1309.0	705.5	353.6	194.4	130.4	101.6	92.8	87.0	82.9
70°	2098.9	1565.5	901.3	416.9	187.1	108.9	82.9	74.9	70.9	68.3	68.0
72.5°	1609.3	1123.1	521.3	201.7	100.1	72.3	63.6	60.6	59.2	58.5	58.5
75°	994.1	633.5	233.1	101.2	69.0	59.2	55.2	53.7	53.3	53.3	53.3
77.5°	349.6	220.7	104.5	74.2	60.6	53.3	50.1	49.3	50.1	50.1	50.1
80°	96.4	85.1	75.6	65.8	54.8	49.3	46.4	46.0	47.5	47.9	46.4
82.5°	75.3	70.9	64.7	58.8	50.1	44.9	43.5	44.2	44.9	43.8	41.6
85°	64.3	61.4	45.3	45.3	40.6	39.1	38.7	39.5	39.1	36.2	33.2
87.5°	36.5	32.1	24.5	26.7	28.5	29.2	24.5	26.3	25.9	23.0	21.6
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):

	160°	165°	170°	175°	180°
0°	587.1	587.1	587.1	587.1	587.1
2.5°	592.6	592.6	593.3	593.3	592.9
5°	599.9	599.9	601.0	600.3	600.6
7.5°	598.4	597.0	597.0	596.2	595.9
10°	588.2	585.6	584.2	584.9	583.8
12.5°	576.5	574.3	572.9	572.5	572.1
15°	569.2	566.6	565.5	564.8	564.8
17.5°	565.2	562.3	560.8	559.7	559.3
20°	563.4	559.7	557.5	556.4	555.7
22.5°	564.1	559.7	556.8	555.3	554.6
25°	567.0	561.5	557.9	556.0	555.0
27.5°	572.1	564.8	560.8	558.2	556.8
30°	578.3	568.1	562.3	558.6	557.1
32.5°	582.4	568.5	561.2	555.7	554.2
35°	581.6	564.5	555.0	548.0	546.9
37.5°	574.3	553.9	542.2	533.0	531.9
40°	558.6	537.8	524.3	515.1	512.9
42.5°	536.7	515.1	500.5	492.1	489.2
45°	504.5	478.2	464.7	457.8	453.8
47.5°	459.2	434.4	419.4	413.6	408.5
50°	407.7	380.3	369.4	362.8	356.9
52.5°	347.1	323.7	315.3	309.1	304.3
55°	288.3	271.8	261.9	255.4	255.7
57.5°	231.6	221.8	216.3	209.3	210.1
60°	182.3	173.9	173.9	169.5	168.1
62.5°	139.2	135.9	134.8	133.3	130.8
65°	105.6	105.6	105.9	105.9	104.5
66°	95.0	96.1	97.5	97.5	95.7
67.5°	82.2	83.7	85.1	85.9	85.9
70°	68.0	69.8	70.5	71.2	70.9
72.5°	59.6	61.0	61.0	61.4	60.6
75°	54.1	54.8	55.2	54.4	54.1
77.5°	50.1	50.4	50.1	49.7	49.3
80°	45.3	44.9	43.8	42.4	42.0
82.5°	39.1	37.6	36.9	34.7	34.3
85°	31.4	29.6	28.1	25.2	23.7
87.5°	20.8	20.1	19.0	13.9	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)