

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: P163519

Luminaire Tested: **LDRL-SL3-E02-E-7060-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163519
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-7060-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) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3451.4 lumens
Efficiency: N/A
Efficacy: 66.2 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

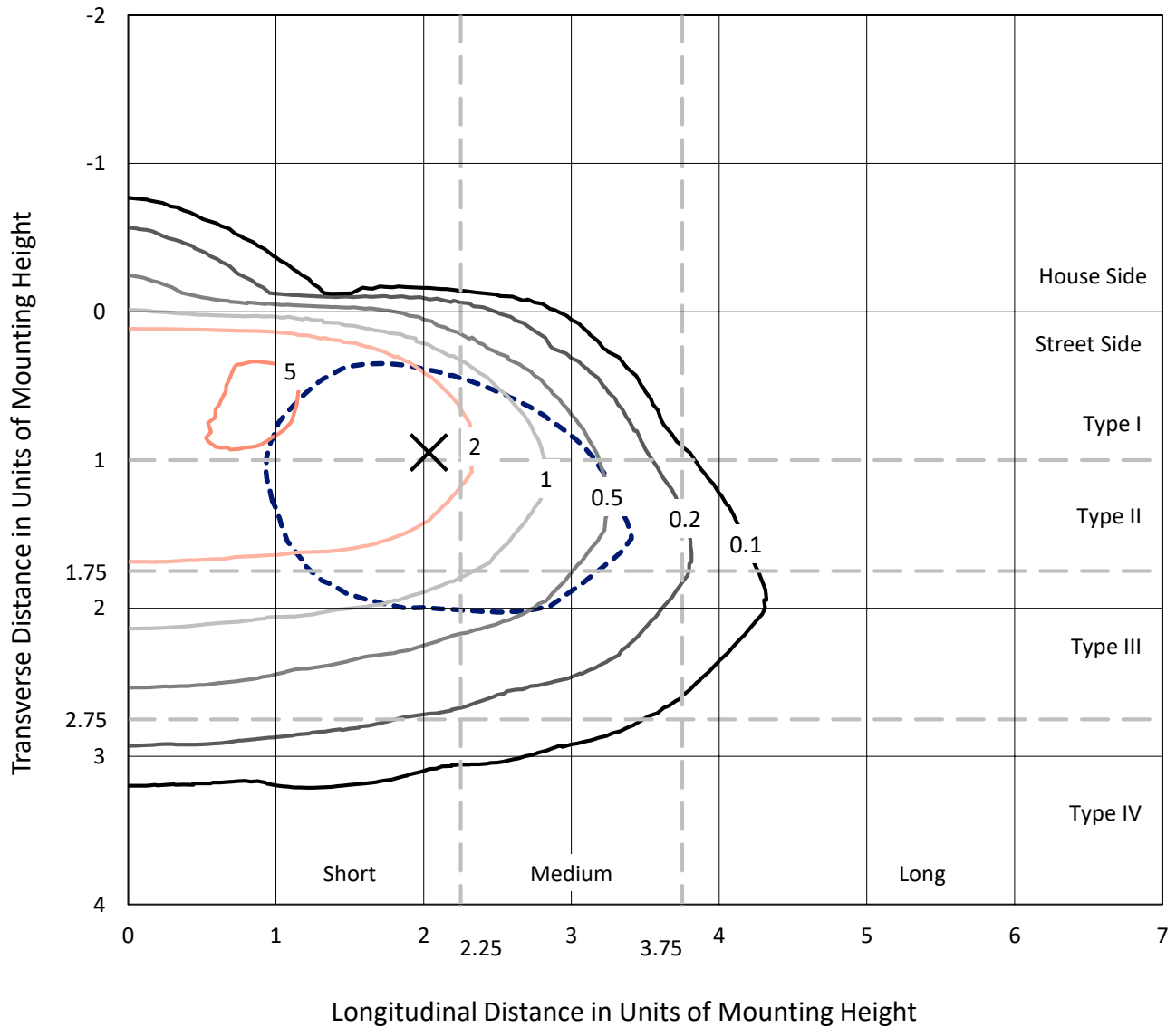


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

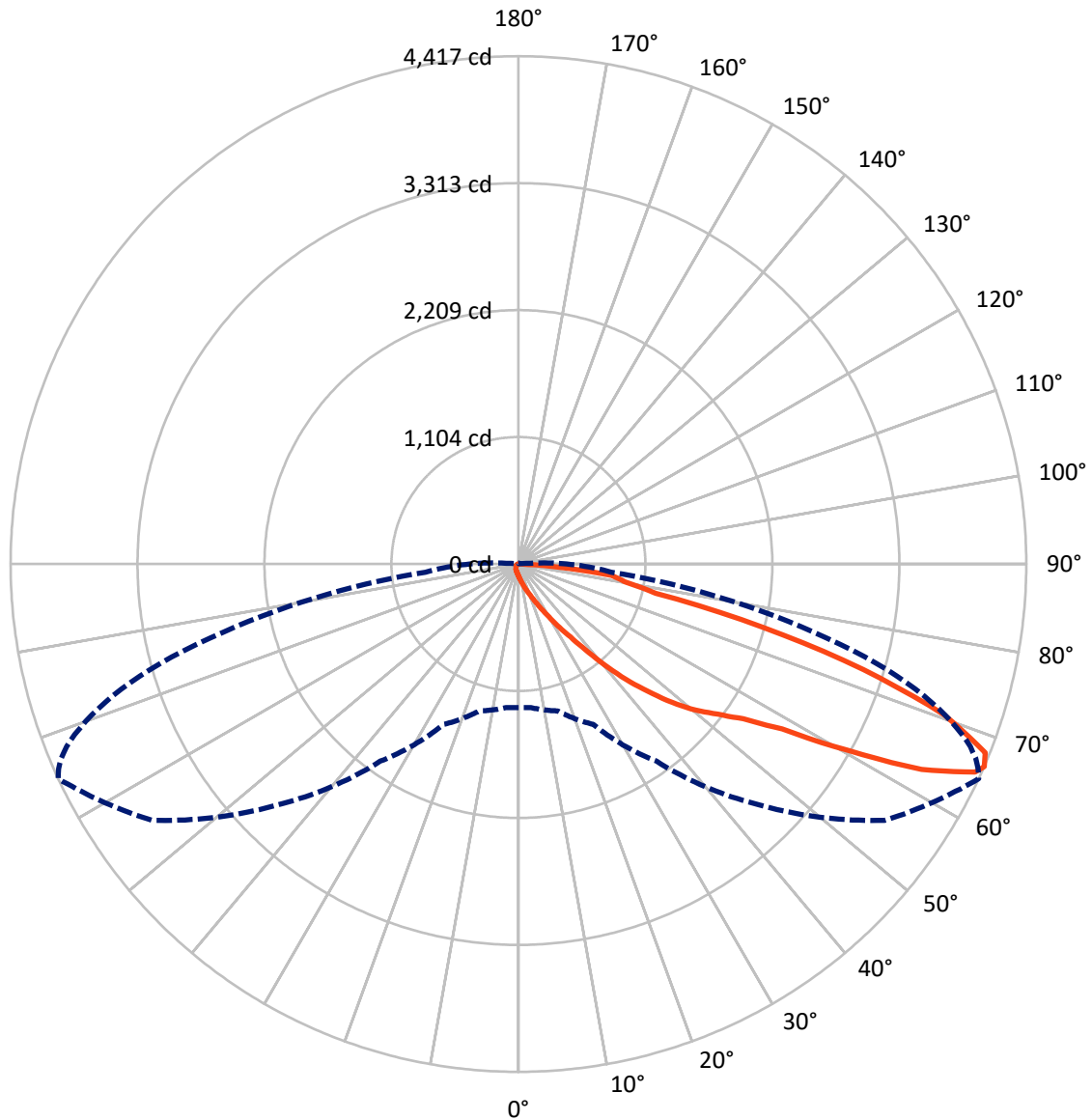


Based on 10 foot mounting height. Maximum calculated value = 5.7 fc
 Type III - Short - Non-Cutoff

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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	74.8	0.0	74.8
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	3376.6	0.0	3376.6
	% Fixture	97.8	0.0	97.8
Total	Lumens	3451.4	0.0	3451.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.7	0.3
10°-20°	49.4	1.4
20°-30°	106.6	3.1
30°-40°	227.8	6.6
40°-50°	503.7	14.6
50°-60°	853.6	24.7
60°-70°	1139.0	33.0
70°-80°	501.7	14.5
80°-90°	57.8	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°	3451.4	100.0
0°-180°	3451.4	100.0



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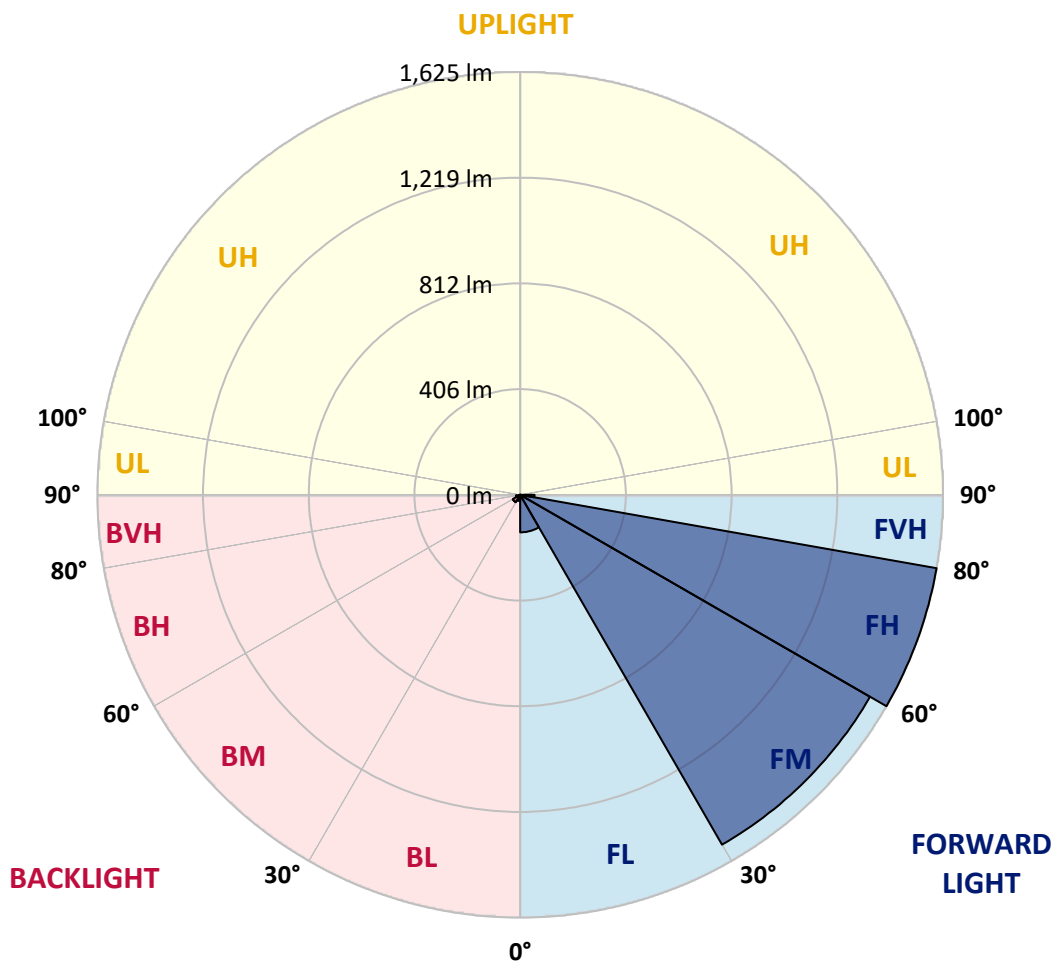
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	144.2	4.2			
FM	(30°-60°)	1552.2	45.0			
FH	(60°-80°)	1624.7	47.1			G1/1800
FVH	(80°-90°)	55.5	1.6			G1/100
BL	(0°-30°)	23.6	0.7	B0/110		
BM	(30°-60°)	32.8	1.0	B0/220		
BH	(60°-80°)	16.0	0.5	B0/110		G0/110
BVH	(80°-90°)	2.3	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°	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2
2.5°	131.4	130.7	128.1	128.1	124.1	121.4	118.1	114.8	114.8	114.1	113.4
5°	173.9	169.9	169.2	161.9	155.9	147.3	139.3	128.7	127.4	126.1	125.4
7.5°	220.9	220.3	214.3	205.7	193.8	177.8	161.9	144.6	142.0	140.7	138.0
10°	282.0	278.7	270.7	256.1	238.2	217.0	191.1	163.9	160.6	157.9	156.6
12.5°	340.4	334.4	329.8	311.2	288.6	257.5	226.3	187.1	184.5	181.1	175.8
15°	394.8	389.5	381.5	365.6	340.4	301.3	264.7	217.0	210.4	205.7	201.7
17.5°	437.3	434.0	424.7	406.7	379.5	345.1	301.3	247.5	242.2	236.2	228.9
20°	477.8	473.1	458.5	434.0	404.8	378.2	344.4	287.3	280.0	272.7	264.7
22.5°	516.3	511.6	487.7	447.2	416.0	404.8	392.8	332.4	321.2	315.2	307.2
25°	570.0	560.0	522.9	458.5	416.7	425.3	445.9	390.8	380.2	371.6	359.0
27.5°	642.3	629.0	570.6	475.1	419.3	447.9	506.9	461.8	450.5	440.6	426.7
30°	723.9	715.3	645.6	514.9	438.6	481.1	575.3	552.1	538.8	526.8	510.3
32.5°	806.2	794.2	725.3	590.5	490.4	545.4	660.9	656.9	639.7	628.4	610.5
35°	878.5	872.6	821.5	714.6	608.5	658.2	775.0	779.7	764.4	752.5	732.6
37.5°	927.6	927.6	917.7	848.0	796.3	833.4	942.9	943.6	928.3	901.1	891.2
40°	952.8	960.1	996.0	1009.2	1006.6	1054.4	1163.2	1151.2	1138.6	1124.7	1091.5
42.5°	1004.6	1011.2	1087.5	1179.1	1238.8	1301.9	1376.8	1372.8	1357.6	1332.4	1301.9
45°	1092.2	1100.8	1191.7	1337.0	1459.8	1549.4	1597.2	1578.6	1563.3	1539.4	1523.5
47.5°	1203.7	1220.2	1323.1	1502.9	1650.9	1798.8	1848.6	1799.5	1786.2	1767.7	1741.8
50°	1322.4	1338.4	1447.8	1653.5	1820.8	1997.3	2080.2	1997.3	1978.0	1972.1	1942.9
52.5°	1425.3	1438.6	1544.0	1769.7	1950.8	2157.8	2278.6	2169.1	2155.2	2135.3	2114.0
55°	1486.3	1497.0	1595.8	1825.4	2039.1	2302.5	2470.4	2374.2	2353.6	2345.6	2315.1
57.5°	1506.9	1517.5	1606.4	1832.7	2086.9	2434.5	2703.3	2706.6	2682.0	2653.5	2644.2
60°	1506.9	1518.8	1593.8	1814.8	2133.3	2575.2	3013.8	3290.5	3237.4	3232.1	3198.3
62.5°	1444.5	1455.8	1531.4	1759.7	2195.7	2765.0	3446.4	3934.8	3919.6	3885.0	3829.3
65°	1309.2	1315.8	1390.1	1619.0	2171.8	2939.5	3821.3	4363.5	4338.9	4271.2	4199.6
66°	1248.1	1253.4	1323.1	1538.7	2093.5	2963.4	3887.7	4417.2	4376.7	4319.7	4238.7
67.5°	1159.9	1169.1	1218.3	1389.5	1905.7	2880.4	3845.9	4379.4	4344.2	4275.2	4194.2
70°	774.3	767.7	940.9	1066.3	1451.8	2346.9	3450.4	3932.2	3932.8	3900.3	3867.8
72.5°	367.6	371.6	422.0	656.3	950.2	1567.9	2746.4	3138.6	3183.7	3125.3	3084.8
75°	264.1	270.1	300.6	401.5	566.7	940.9	1780.3	2195.0	2196.3	2092.8	2000.6
77.5°	77.0	80.3	112.8	247.5	424.7	635.0	1022.5	1220.2	1191.7	1117.4	1047.7
80°	31.9	31.9	33.2	79.0	170.5	431.3	715.3	939.6	936.3	907.7	866.6
82.5°	11.9	12.6	15.9	32.5	40.5	106.2	477.1	815.5	813.5	773.0	743.8
85°	1.3	1.3	4.0	13.9	15.3	19.9	95.6	359.6	357.7	359.6	315.2
87.5°	0.0	0.0	0.7	1.3	2.0	2.7	4.0	13.9	15.3	14.6	13.3
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°	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2
2.5°	113.4	112.1	112.1	111.5	111.5	111.5	110.8	110.2	110.2	109.5	108.8
5°	124.1	122.8	122.1	120.8	120.1	119.4	118.1	117.4	116.1	115.5	114.8
7.5°	136.7	134.1	133.4	131.4	129.4	128.1	126.7	124.7	123.4	120.8	120.1
10°	152.6	149.3	146.7	144.0	142.0	138.7	136.7	134.1	131.4	129.4	127.4
12.5°	173.2	168.5	164.5	161.9	157.2	153.3	149.3	147.3	142.0	139.3	136.0
15°	195.7	190.4	185.8	180.5	177.1	170.5	165.2	159.3	156.6	151.9	146.7
17.5°	224.9	216.3	209.0	203.7	197.1	190.4	184.5	178.5	170.5	165.2	158.6
20°	256.1	248.8	238.9	229.6	221.6	213.7	205.0	197.1	189.8	181.1	173.2
22.5°	295.9	285.3	273.4	264.1	253.5	244.8	232.9	222.3	210.4	199.1	189.8
25°	346.4	332.4	321.2	307.9	295.3	282.0	267.4	254.1	238.9	228.2	212.3
27.5°	408.8	395.5	380.2	363.0	350.4	330.4	311.2	294.6	276.7	260.1	242.2
30°	488.4	469.1	453.2	436.6	411.4	392.1	369.6	347.0	322.5	305.9	278.7
32.5°	583.9	563.3	539.4	515.6	492.4	465.2	437.3	409.4	382.2	351.7	323.8
35°	700.7	676.2	649.0	623.1	587.2	558.0	522.9	484.4	453.9	418.7	383.5
37.5°	855.3	814.8	790.9	763.8	715.3	675.5	636.3	597.9	544.1	506.9	457.2
40°	1049.0	1025.2	986.0	942.2	898.4	846.0	792.9	741.8	679.4	627.7	570.0
42.5°	1276.6	1241.5	1201.7	1138.6	1094.2	1032.5	972.1	904.4	828.1	761.7	694.1
45°	1490.3	1448.5	1418.0	1355.0	1308.5	1235.5	1162.5	1090.9	1002.6	917.0	838.7
47.5°	1721.2	1686.7	1636.3	1585.2	1538.1	1455.8	1376.8	1289.9	1197.0	1095.5	994.0
50°	1924.3	1897.1	1862.5	1800.9	1748.4	1679.4	1586.5	1491.6	1374.2	1273.4	1157.9
52.5°	2096.8	2075.6	2027.1	1983.3	1936.2	1871.2	1788.3	1697.3	1570.6	1459.8	1328.4
55°	2300.5	2285.2	2242.8	2215.6	2173.7	2111.4	2033.7	1949.5	1815.5	1694.7	1546.1
57.5°	2634.3	2622.3	2585.2	2573.9	2532.8	2478.3	2382.8	2292.5	2135.9	1986.0	1816.1
60°	3187.0	3163.1	3108.7	3080.8	2993.9	2920.9	2796.8	2672.8	2483.6	2292.5	2088.2
62.5°	3778.9	3711.8	3608.3	3519.4	3396.0	3269.3	3103.4	2913.6	2692.0	2465.1	2230.2
65°	4098.0	3983.9	3853.2	3711.8	3551.9	3365.5	3156.5	2928.9	2690.7	2451.1	2203.0
66°	4134.5	4005.8	3867.1	3709.9	3532.0	3333.6	3121.3	2882.4	2634.9	2401.4	2153.2
67.5°	4088.7	3954.0	3807.4	3632.9	3440.4	3234.8	3011.8	2763.6	2525.5	2288.5	2047.0
70°	3768.3	3634.2	3503.5	3319.7	3114.7	2907.7	2696.6	2419.3	2193.6	1976.0	1761.0
72.5°	3009.2	2918.2	2788.9	2631.6	2431.9	2189.0	2013.2	1765.0	1569.3	1358.3	1191.7
75°	1880.5	1752.4	1592.5	1392.1	1239.5	1042.4	939.6	751.1	639.7	542.1	447.9
77.5°	961.5	865.3	753.1	640.3	532.2	424.7	328.4	232.2	156.6	108.8	80.9
80°	794.2	709.3	616.4	513.6	418.0	324.5	233.6	159.3	101.5	66.4	51.8
82.5°	656.3	584.6	501.6	406.1	323.1	254.8	177.1	115.5	71.7	46.5	36.5
85°	279.3	253.5	195.7	155.3	116.8	86.3	60.4	40.5	28.5	23.2	21.2
87.5°	11.9	13.3	12.6	9.9	7.3	7.3	6.6	5.3	5.3	5.3	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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2	104.2
2.5°	108.8	108.2	107.5	107.5	106.8	106.2	102.2	98.9	94.9	92.2	89.6
5°	113.4	112.8	111.5	110.8	109.5	108.8	100.2	92.9	86.9	82.3	79.0
7.5°	118.1	117.4	115.5	113.4	112.8	111.5	97.5	88.2	80.3	75.0	71.7
10°	124.1	122.1	120.1	117.4	115.5	113.4	94.9	83.0	74.3	69.7	66.4
12.5°	132.7	129.4	126.1	122.8	120.1	116.8	93.5	78.3	69.7	64.4	61.0
15°	142.7	138.0	134.1	130.1	125.4	122.1	90.9	74.3	65.7	60.4	56.4
17.5°	151.9	146.7	140.7	134.7	130.1	125.4	88.2	70.3	61.7	56.4	52.4
20°	165.2	157.2	150.0	142.7	136.0	130.1	84.3	66.4	58.4	52.4	48.4
22.5°	179.8	170.5	161.2	151.3	142.7	134.7	80.9	63.0	55.1	49.1	44.5
25°	198.4	187.1	174.5	161.9	151.9	141.3	77.6	59.7	51.8	45.8	41.1
27.5°	224.3	208.3	194.4	178.5	163.2	151.3	75.0	57.1	48.4	42.5	37.8
30°	259.4	236.2	214.3	197.1	179.2	161.9	72.3	53.7	45.8	39.2	33.8
32.5°	298.6	271.4	246.2	220.3	197.8	177.8	69.7	51.1	42.5	35.8	31.2
35°	347.0	312.5	278.7	248.8	221.6	195.1	67.0	48.4	39.8	32.5	27.9
37.5°	416.7	373.6	329.1	290.6	255.5	220.3	65.0	45.8	36.5	29.2	24.5
40°	512.3	456.5	402.1	349.7	303.9	260.1	62.4	43.1	33.8	26.6	21.9
42.5°	615.8	548.1	476.4	417.4	354.3	299.3	59.7	40.5	31.2	23.9	19.2
45°	744.5	660.2	573.3	493.0	416.0	345.1	57.1	37.8	27.9	21.2	16.6
47.5°	885.2	777.7	679.4	578.6	487.0	402.1	53.7	35.8	25.2	18.6	14.6
50°	1029.8	916.4	792.3	677.5	568.7	459.2	50.4	32.5	22.6	16.6	11.9
52.5°	1185.8	1051.7	925.0	782.3	655.6	534.1	47.1	29.8	20.6	14.6	9.9
55°	1384.1	1234.2	1085.5	925.6	773.0	621.1	43.8	26.6	17.9	12.6	8.0
57.5°	1633.6	1455.8	1273.4	1092.8	907.7	735.2	41.1	23.2	15.3	10.6	6.6
60°	1869.2	1661.5	1440.5	1232.8	1023.8	822.8	37.1	20.6	13.3	8.6	6.6
62.5°	1991.3	1754.4	1516.2	1287.3	1064.3	854.0	33.2	17.2	11.3	7.3	6.0
65°	1961.4	1719.9	1489.0	1258.1	1039.8	834.1	29.2	15.3	9.9	6.6	6.0
66°	1918.3	1679.4	1447.2	1227.6	1019.2	812.8	27.2	14.6	9.3	6.6	5.3
67.5°	1824.1	1593.2	1371.5	1167.2	962.8	772.4	24.5	13.3	8.6	6.0	5.3
70°	1558.0	1348.3	1171.2	989.3	822.8	650.9	19.9	11.3	7.3	5.3	5.3
72.5°	1031.2	888.5	770.4	662.9	554.1	430.0	16.6	9.3	6.0	5.3	4.6
75°	388.9	351.7	301.9	271.4	236.9	207.7	13.3	6.0	4.6	4.6	4.6
77.5°	69.0	63.7	56.4	51.8	47.8	43.8	10.6	4.0	4.0	4.6	4.6
80°	46.5	43.1	39.2	35.8	33.2	29.8	7.3	3.3	4.0	4.0	4.6
82.5°	33.2	31.2	29.2	26.6	24.5	21.9	4.6	3.3	4.0	4.0	4.0
85°	19.9	18.6	17.2	15.9	13.9	13.3	3.3	3.3	3.3	4.0	4.0
87.5°	5.3	4.6	5.3	5.3	4.0	4.6	2.7	2.7	2.7	3.3	3.3
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°	104.2	104.2	104.2	104.2	104.2
2.5°	88.2	88.2	86.9	88.9	88.9
5°	76.3	76.3	75.6	76.3	76.3
7.5°	69.7	69.0	69.0	69.0	69.7
10°	63.7	63.0	63.0	63.0	63.0
12.5°	58.4	57.7	57.1	57.7	57.7
15°	53.7	52.4	52.4	52.4	52.4
17.5°	49.7	48.4	47.8	47.8	47.8
20°	45.8	43.8	43.8	43.8	43.8
22.5°	41.8	39.8	39.8	39.8	39.8
25°	37.8	35.8	35.8	35.8	35.8
27.5°	34.5	32.5	32.5	32.5	32.5
30°	30.5	29.2	29.2	29.8	29.2
32.5°	27.9	25.9	25.9	26.6	26.6
35°	24.5	23.2	23.2	23.2	23.2
37.5°	21.2	19.9	19.9	19.9	19.9
40°	18.6	17.2	16.6	17.2	17.2
42.5°	15.9	14.6	13.9	13.9	13.9
45°	13.9	11.9	11.3	11.9	11.9
47.5°	11.3	9.9	9.9	10.6	10.6
50°	8.6	8.6	9.3	10.6	10.6
52.5°	8.0	8.0	9.3	10.6	10.6
55°	7.3	8.0	9.3	9.9	10.6
57.5°	6.6	8.0	9.3	9.9	9.9
60°	6.6	7.3	8.6	9.9	9.9
62.5°	6.0	6.6	8.0	9.3	9.3
65°	6.0	6.6	8.0	9.3	9.3
66°	6.0	6.6	8.0	9.3	9.3
67.5°	6.0	6.6	8.0	9.3	9.3
70°	6.0	6.6	8.0	8.6	8.6
72.5°	5.3	6.0	7.3	8.6	8.6
75°	5.3	6.0	7.3	8.6	8.6
77.5°	5.3	6.0	7.3	8.6	8.6
80°	5.3	6.0	7.3	8.0	8.6
82.5°	4.6	6.0	6.6	8.0	8.0
85°	4.6	5.3	6.6	7.3	8.0
87.5°	4.0	4.6	5.3	6.6	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)