

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: P163841

Luminaire Tested: **LDRL-SL4-F06-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163841
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-F06-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 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: 8929.1 lumens
Efficiency: N/A
Efficacy: 57.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

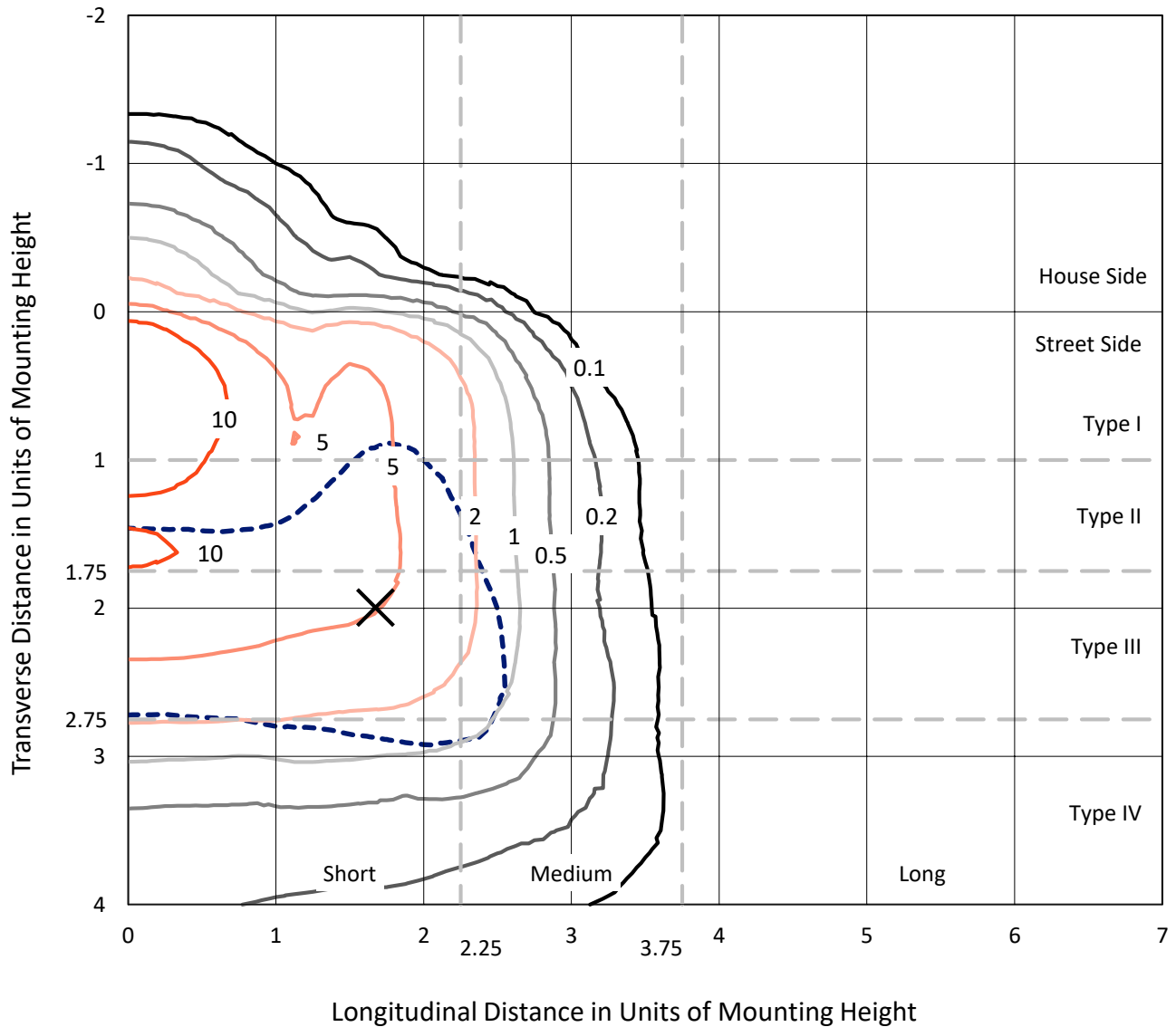
Input Watts (W): 156.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

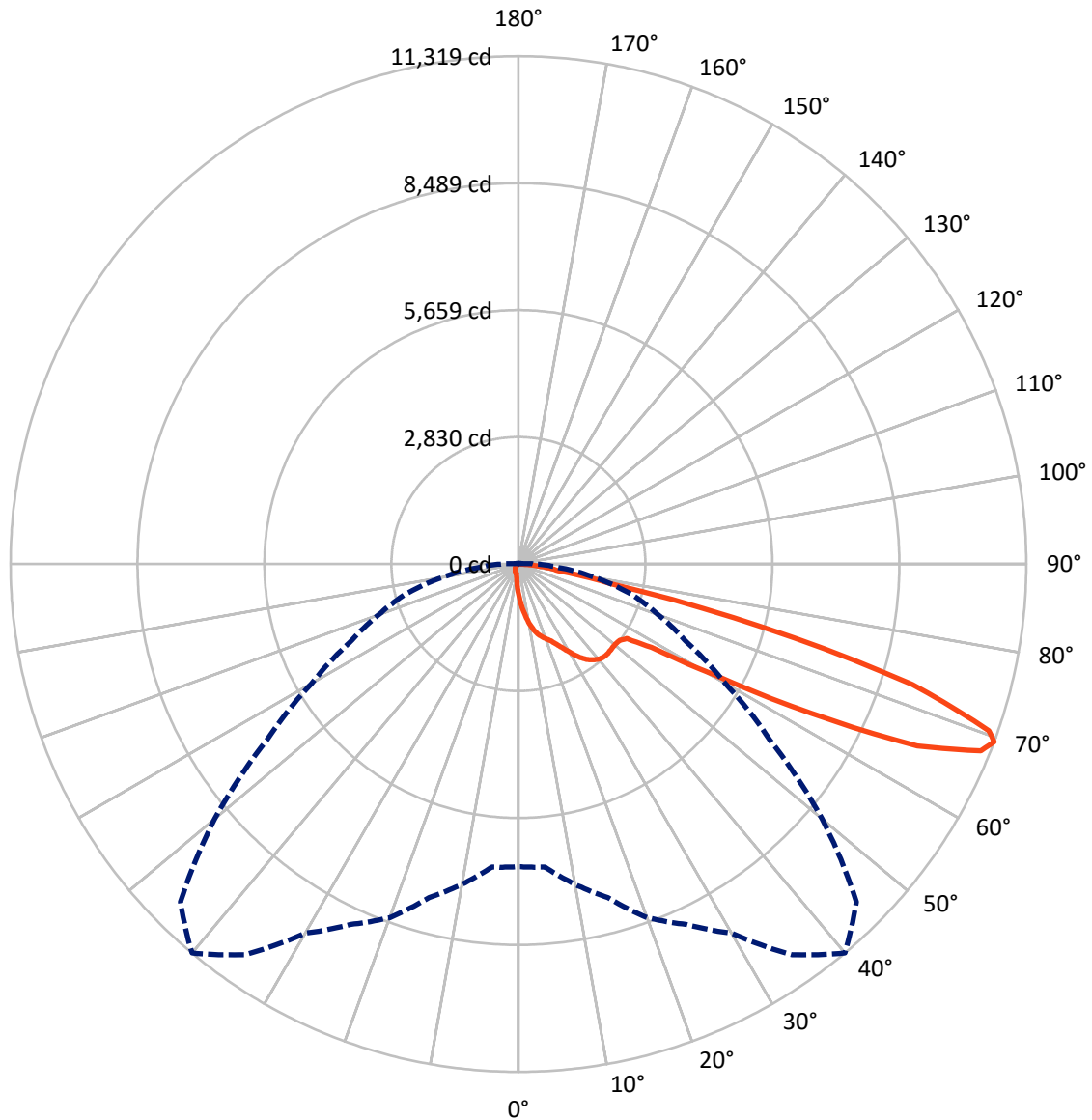


Based on 10 foot mounting height. Maximum calculated value = 20 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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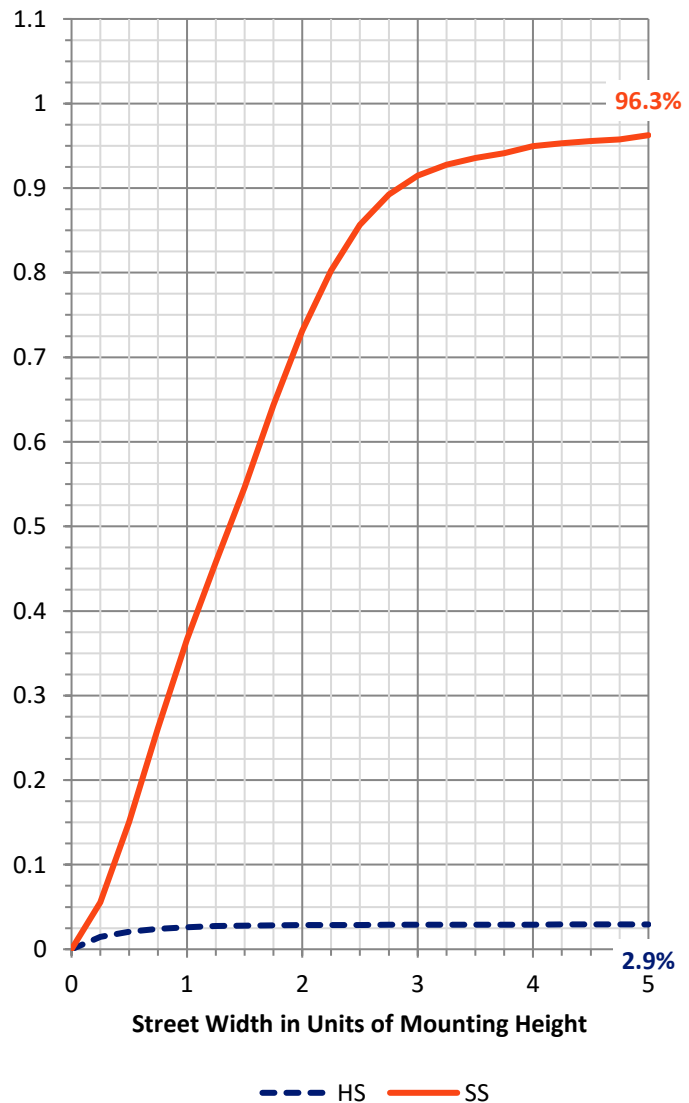
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	265.9	0.0	265.9
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	8663.2	0.0	8663.2
	% Fixture	97.0	0.0	97.0
Total	Lumens	8929.1	0.0	8929.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	0.8
10°-20°	239.0	2.7
20°-30°	457.4	5.1
30°-40°	760.6	8.5
40°-50°	1029.2	11.5
50°-60°	1609.6	18.0
60°-70°	3309.3	37.1
70°-80°	1331.6	14.9
80°-90°	123.2	1.4
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°	8929.1	100.0
0°-180°	8929.1	100.0



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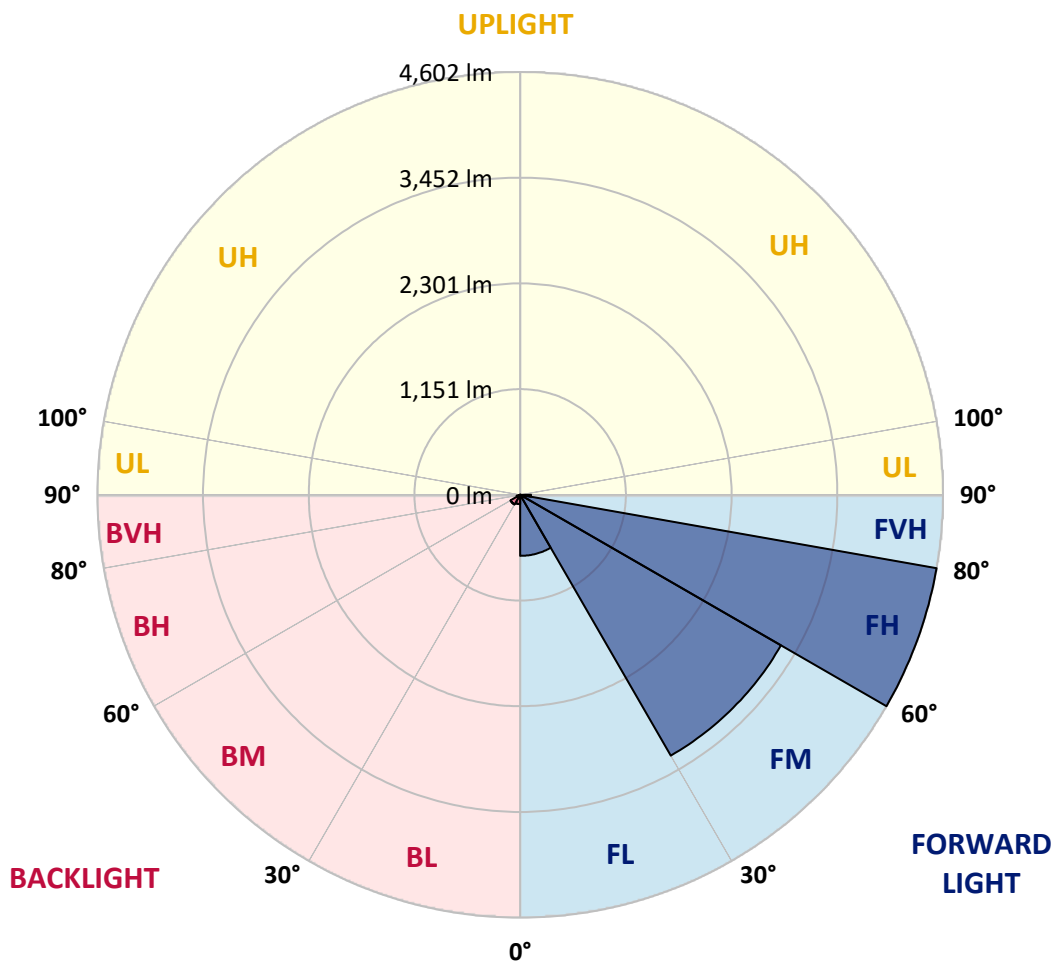
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	664.5	7.4			
FM (30°-60°)	3278.0	36.7			
FH (60°-80°)	4602.1	51.5			G2/5000
FVH (80°-90°)	118.6	1.3			G2/225
BL (0°-30°)	101.1	1.1	B0/110		
BM (30°-60°)	121.4	1.4	B0/220		
BH (60°-80°)	38.8	0.4	B0/110		G0/110
BVH (80°-90°)	4.6	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3
2.5°	899.5	889.3	877.6	877.6	863.0	863.0	854.2	830.9	827.9	814.8	801.6
5°	1148.3	1139.5	1124.8	1111.7	1100.0	1079.5	1064.8	1037.1	1006.4	977.1	950.8
7.5°	1391.0	1386.7	1360.4	1355.9	1336.9	1303.3	1274.0	1233.1	1180.4	1139.5	1091.2
10°	1616.3	1606.1	1600.2	1575.3	1547.6	1511.0	1465.7	1415.9	1354.5	1290.1	1221.4
12.5°	1794.7	1789.0	1762.6	1752.3	1723.1	1686.5	1629.4	1565.1	1503.7	1420.3	1339.9
15°	1927.8	1917.6	1900.1	1884.0	1848.9	1816.7	1764.1	1693.9	1619.2	1528.6	1432.0
17.5°	2039.0	2020.0	2015.6	1990.8	1954.2	1916.2	1857.6	1793.3	1705.5	1614.9	1509.6
20°	2188.2	2161.9	2153.1	2116.6	2074.1	2021.5	1954.2	1873.7	1781.6	1682.1	1573.9
22.5°	2363.8	2344.8	2325.8	2293.6	2239.5	2164.8	2066.8	1979.1	1862.1	1752.3	1635.3
25°	2612.4	2596.4	2565.6	2521.7	2454.4	2365.2	2246.8	2118.0	1980.5	1840.1	1702.6
27.5°	2853.8	2839.1	2817.3	2783.6	2707.5	2609.5	2463.2	2299.4	2125.4	1955.7	1803.5
30°	3080.5	3067.3	3045.4	3011.8	2944.5	2847.9	2682.6	2507.1	2290.7	2093.1	1910.3
32.5°	3324.7	3320.4	3295.5	3247.3	3188.8	3058.6	2878.7	2689.9	2470.5	2242.3	2028.8
35°	3601.3	3567.6	3544.2	3495.9	3396.5	3257.5	3046.9	2840.6	2609.5	2375.4	2137.0
37.5°	3835.3	3803.1	3773.9	3712.5	3591.0	3414.1	3175.5	2948.9	2710.5	2472.0	2229.2
40°	4006.4	3990.3	3955.2	3874.8	3738.8	3528.1	3270.6	3023.5	2783.6	2543.7	2303.8
42.5°	4133.7	4108.8	4069.3	3986.0	3825.0	3585.1	3308.7	3054.2	2817.3	2587.6	2352.1
45°	4180.5	4160.1	4123.4	4032.7	3858.7	3601.3	3307.2	3045.4	2818.7	2600.7	2384.2
47.5°	4152.7	4132.2	4100.1	4015.2	3844.1	3582.3	3280.9	3020.6	2804.0	2605.2	2413.5
50°	4060.5	4048.9	4024.0	3952.3	3798.7	3545.7	3257.5	3007.3	2801.1	2627.1	2454.4
52.5°	4051.7	4044.4	4013.7	3942.1	3785.6	3533.9	3254.5	3014.7	2826.0	2654.8	2483.7
55°	4951.4	4847.5	4614.9	4417.5	4092.7	3706.6	3402.3	3133.2	2931.3	2764.6	2644.6
57.5°	7037.2	6882.1	6576.5	6200.5	5454.5	4721.7	4135.2	3710.9	3501.8	3425.7	3471.1
60°	8014.3	7986.5	7938.3	7759.8	7378.0	6747.6	6045.5	5286.3	4982.1	4955.7	5047.9
62.5°	8478.0	8460.4	8475.1	8453.1	8334.7	8150.4	7948.5	7620.8	7319.5	7125.0	6712.5
65°	8691.5	8703.3	8786.6	8852.5	8867.1	8915.4	9063.1	9471.2	9769.6	9267.9	8122.6
67.5°	8148.9	8217.6	8409.2	8649.2	8929.9	9202.0	9640.8	10500.9	11113.8	10524.4	8897.8
69°	6746.1	6779.8	7247.8	7699.8	8385.9	8865.6	9501.9	10629.7	11318.6	10653.1	8836.4
70°	5311.2	5341.9	5843.6	6458.0	7617.9	8235.1	9067.5	10411.7	11127.0	10481.9	8520.4
72.5°	2396.0	2352.1	2529.1	2858.1	4119.1	5099.0	6554.5	8435.6	9180.1	8397.6	6374.6
75°	1673.3	1654.3	1673.3	1674.9	1870.8	2413.5	3045.4	4572.5	5655.0	4879.6	3045.4
77.5°	1296.0	1282.8	1269.7	1255.0	1278.5	1432.0	1493.4	1622.2	2106.4	1992.3	1161.4
80°	1025.4	1013.6	1045.8	1035.6	1035.6	1053.2	1041.5	993.2	902.5	836.7	748.9
82.5°	476.8	479.8	479.8	520.7	627.5	732.8	766.4	718.2	637.8	542.7	437.4
85°	45.3	51.2	86.3	133.1	264.7	298.4	299.8	248.6	248.6	196.0	158.0
87.5°	0.0	1.4	1.4	1.4	13.1	36.6	30.7	8.8	4.3	4.3	7.3
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3
2.5°	778.2	773.8	756.2	738.7	722.6	705.0	688.9	672.9	655.3	642.1	626.0
5°	909.9	877.6	841.1	806.0	770.9	734.3	696.2	662.6	627.5	595.4	564.6
7.5°	1043.0	980.1	930.3	867.4	810.3	753.3	700.7	646.6	596.8	550.0	506.1
10°	1155.6	1079.5	1002.0	921.5	839.6	763.6	690.4	626.0	560.2	503.2	449.0
12.5°	1247.7	1151.2	1056.1	955.2	863.0	766.4	675.8	598.2	520.7	456.4	400.8
15°	1331.1	1219.9	1105.8	988.8	871.8	762.1	661.1	564.6	485.6	412.5	349.6
17.5°	1398.4	1271.1	1142.4	1010.7	885.0	756.2	642.1	541.2	449.0	373.0	311.5
20°	1456.9	1323.8	1184.8	1037.1	893.8	754.8	626.0	511.9	416.8	336.4	276.4
22.5°	1511.0	1377.9	1228.7	1070.7	906.9	753.3	611.5	490.0	389.1	308.6	248.6
25°	1572.4	1432.0	1275.5	1105.8	930.3	759.1	602.7	472.5	364.2	282.3	226.7
27.5°	1641.2	1493.4	1331.1	1149.7	961.0	770.9	599.7	453.5	342.3	257.4	209.2
30°	1737.7	1566.6	1386.7	1193.6	988.8	784.0	596.8	441.7	320.3	238.4	191.6
32.5°	1822.5	1638.2	1448.1	1238.9	1019.5	797.2	595.4	425.6	299.8	219.4	178.4
35°	1911.8	1704.1	1500.8	1282.8	1045.8	811.8	593.9	413.9	280.8	200.4	165.3
37.5°	1989.3	1759.6	1541.7	1320.8	1075.1	825.0	595.4	403.7	263.3	184.3	153.5
40°	2055.1	1816.7	1587.1	1355.9	1105.8	845.4	596.8	393.5	245.7	169.6	143.3
42.5°	2113.7	1870.8	1635.3	1395.5	1140.9	868.9	605.6	384.7	231.1	156.5	133.1
45°	2159.0	1920.6	1688.0	1451.0	1197.9	906.9	621.7	378.8	216.5	144.8	124.3
47.5°	2205.8	1993.7	1777.2	1538.8	1281.4	966.9	649.5	377.4	204.8	136.0	117.0
50°	2270.1	2066.8	1856.2	1628.0	1357.5	1028.3	683.1	378.8	190.2	127.2	109.7
52.5°	2317.0	2141.5	1958.6	1783.1	1538.8	1215.5	813.3	405.2	182.9	120.0	100.9
55°	2593.4	2562.7	2567.1	2596.4	2407.7	2068.3	1360.4	585.1	215.0	136.0	99.4
57.5°	3656.8	3765.1	3828.0	3826.5	3514.9	2915.2	1827.0	751.9	239.9	158.0	118.4
60°	5055.2	4973.3	4857.7	4572.5	4158.5	3327.7	2043.5	808.9	207.7	125.8	108.2
62.5°	6291.2	5811.5	5385.8	4923.5	4380.9	3471.1	2087.4	804.5	181.4	95.1	76.1
65°	7062.1	6199.1	5511.5	4932.3	4293.1	3351.1	1974.7	738.7	153.5	77.5	62.9
67.5°	7246.4	5989.9	5017.2	4278.5	3586.6	2608.1	1449.6	555.8	120.0	64.3	55.6
69°	6844.1	5324.3	4157.1	3319.0	2609.5	1730.4	896.6	351.1	92.1	58.5	51.2
70°	6295.6	4631.0	3386.2	2663.6	1932.3	1215.5	627.5	247.2	74.6	54.1	46.8
72.5°	4050.3	2432.5	1664.5	1158.5	797.2	484.2	245.7	111.2	57.0	45.3	38.0
75°	1571.0	899.5	652.4	495.8	387.6	269.2	149.2	71.7	48.2	38.0	29.2
77.5°	773.8	592.4	484.2	332.1	193.1	120.0	80.4	55.6	39.4	27.8	19.0
80°	611.5	406.6	242.8	150.6	114.1	86.3	61.4	45.3	29.2	17.6	13.1
82.5°	313.1	171.1	125.8	102.4	84.9	67.3	49.8	32.2	19.0	11.7	10.2
85°	98.0	71.7	64.3	62.9	58.5	48.2	35.1	20.4	11.7	7.3	7.3
87.5°	7.3	10.2	13.1	10.2	11.7	10.2	13.1	8.8	5.9	5.9	4.3
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3	674.3
2.5°	614.4	596.8	580.7	570.5	551.5	544.1	536.8	533.9	520.7	523.7	511.9
5°	536.8	506.1	482.7	459.3	437.4	421.3	408.1	392.0	378.8	373.0	361.3
7.5°	466.6	427.2	396.4	371.5	345.2	324.7	307.2	295.5	283.7	272.1	266.2
10°	405.2	362.7	327.6	302.7	278.0	260.4	247.2	238.4	231.1	226.7	225.3
12.5°	348.2	307.2	275.0	253.1	234.1	225.3	219.4	215.0	213.5	212.1	212.1
15°	304.3	263.3	238.4	222.3	213.5	209.2	207.7	204.8	201.9	200.4	200.4
17.5°	263.3	232.5	215.0	206.2	201.9	199.0	196.0	193.1	190.2	188.6	188.6
20°	235.5	210.6	201.9	196.0	191.6	188.6	184.3	181.4	179.9	178.4	177.0
22.5°	213.5	197.4	191.6	187.2	181.4	177.0	174.1	171.1	168.2	166.8	165.3
25°	197.4	187.2	182.9	177.0	171.1	166.8	162.3	158.0	155.1	153.5	150.6
27.5°	185.8	178.4	172.6	165.3	159.4	155.1	150.6	146.3	143.3	140.4	139.0
30°	175.5	168.2	160.9	155.1	147.8	143.3	137.5	133.1	131.6	128.8	125.8
32.5°	165.3	158.0	150.6	143.3	136.0	130.2	127.2	121.4	118.4	117.0	114.1
35°	153.5	146.3	137.5	131.6	124.3	118.4	114.1	109.7	106.8	103.9	102.4
37.5°	143.3	134.5	125.8	118.4	112.6	106.8	102.4	98.0	95.1	92.1	90.7
40°	131.6	122.9	114.1	106.8	100.9	96.5	92.1	87.8	84.9	83.3	83.3
42.5°	121.4	111.2	102.4	96.5	92.1	86.3	81.9	77.5	76.1	74.6	76.1
45°	111.2	100.9	93.6	87.8	83.3	77.5	73.1	70.2	68.8	70.2	71.7
47.5°	102.4	92.1	84.9	80.4	76.1	71.7	67.3	64.3	64.3	67.3	70.2
50°	93.6	83.3	77.5	74.6	70.2	65.8	60.0	58.5	60.0	62.9	65.8
52.5°	84.9	73.1	68.8	67.3	62.9	58.5	54.1	52.7	54.1	57.0	55.6
55°	76.1	64.3	62.9	61.4	57.0	51.2	46.8	46.8	46.8	45.3	42.4
57.5°	73.1	57.0	55.6	54.1	49.8	43.9	41.0	38.0	36.6	32.2	30.7
60°	76.1	51.2	51.2	48.2	43.9	38.0	33.7	29.2	26.3	23.4	23.4
62.5°	61.4	46.8	45.3	42.4	36.6	30.7	26.3	21.9	20.4	19.0	19.0
65°	49.8	42.4	39.4	35.1	30.7	24.9	20.4	17.6	16.1	16.1	17.6
67.5°	45.3	38.0	33.7	29.2	24.9	19.0	16.1	14.7	14.7	16.1	16.1
69°	42.4	35.1	30.7	26.3	21.9	17.6	14.7	14.7	14.7	14.7	16.1
70°	39.4	33.7	29.2	24.9	19.0	14.7	13.1	13.1	14.7	14.7	16.1
72.5°	30.7	26.3	24.9	20.4	14.7	13.1	11.7	13.1	13.1	14.7	14.7
75°	23.4	19.0	19.0	16.1	11.7	10.2	10.2	11.7	11.7	13.1	13.1
77.5°	16.1	13.1	13.1	11.7	10.2	8.8	8.8	10.2	11.7	11.7	13.1
80°	11.7	10.2	8.8	10.2	8.8	7.3	8.8	10.2	10.2	11.7	11.7
82.5°	8.8	8.8	8.8	8.8	7.3	7.3	8.8	8.8	10.2	11.7	11.7
85°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	8.8	8.8	10.2	10.2
87.5°	4.3	4.3	4.3	5.9	5.9	7.3	7.3	7.3	7.3	8.8	8.8
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):

	165°	170°	175°	180°
0°	674.3	674.3	674.3	674.3
2.5°	509.0	507.6	501.7	503.2
5°	356.9	348.2	354.0	352.5
7.5°	261.8	260.4	258.9	261.8
10°	223.8	223.8	222.3	223.8
12.5°	210.6	210.6	210.6	210.6
15°	200.4	200.4	199.0	199.0
17.5°	188.6	188.6	188.6	187.2
20°	177.0	175.5	175.5	175.5
22.5°	163.9	162.3	162.3	162.3
25°	150.6	149.2	149.2	149.2
27.5°	137.5	136.0	134.5	134.5
30°	124.3	122.9	121.4	121.4
32.5°	111.2	109.7	108.2	108.2
35°	99.4	99.4	98.0	96.5
37.5°	89.2	89.2	89.2	89.2
40°	81.9	83.3	83.3	83.3
42.5°	77.5	79.0	80.4	81.9
45°	74.6	77.5	79.0	79.0
47.5°	73.1	74.6	76.1	76.1
50°	67.3	65.8	65.8	65.8
52.5°	54.1	51.2	49.8	48.2
55°	39.4	38.0	35.1	35.1
57.5°	27.8	27.8	26.3	26.3
60°	21.9	21.9	20.4	21.9
62.5°	19.0	19.0	19.0	19.0
65°	17.6	17.6	17.6	17.6
67.5°	17.6	17.6	17.6	17.6
69°	16.1	16.1	16.1	16.1
70°	16.1	16.1	16.1	16.1
72.5°	14.7	14.7	14.7	14.7
75°	13.1	14.7	14.7	14.7
77.5°	13.1	13.1	13.1	13.1
80°	11.7	11.7	13.1	13.1
82.5°	11.7	11.7	11.7	11.7
85°	10.2	10.2	11.7	11.7
87.5°	8.8	8.8	10.2	10.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)