

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: P163840

Luminaire Tested: **LDRL-SL4-F06-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163840
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-8030-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, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8251 lumens
Efficiency: N/A
Efficacy: 52.7 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

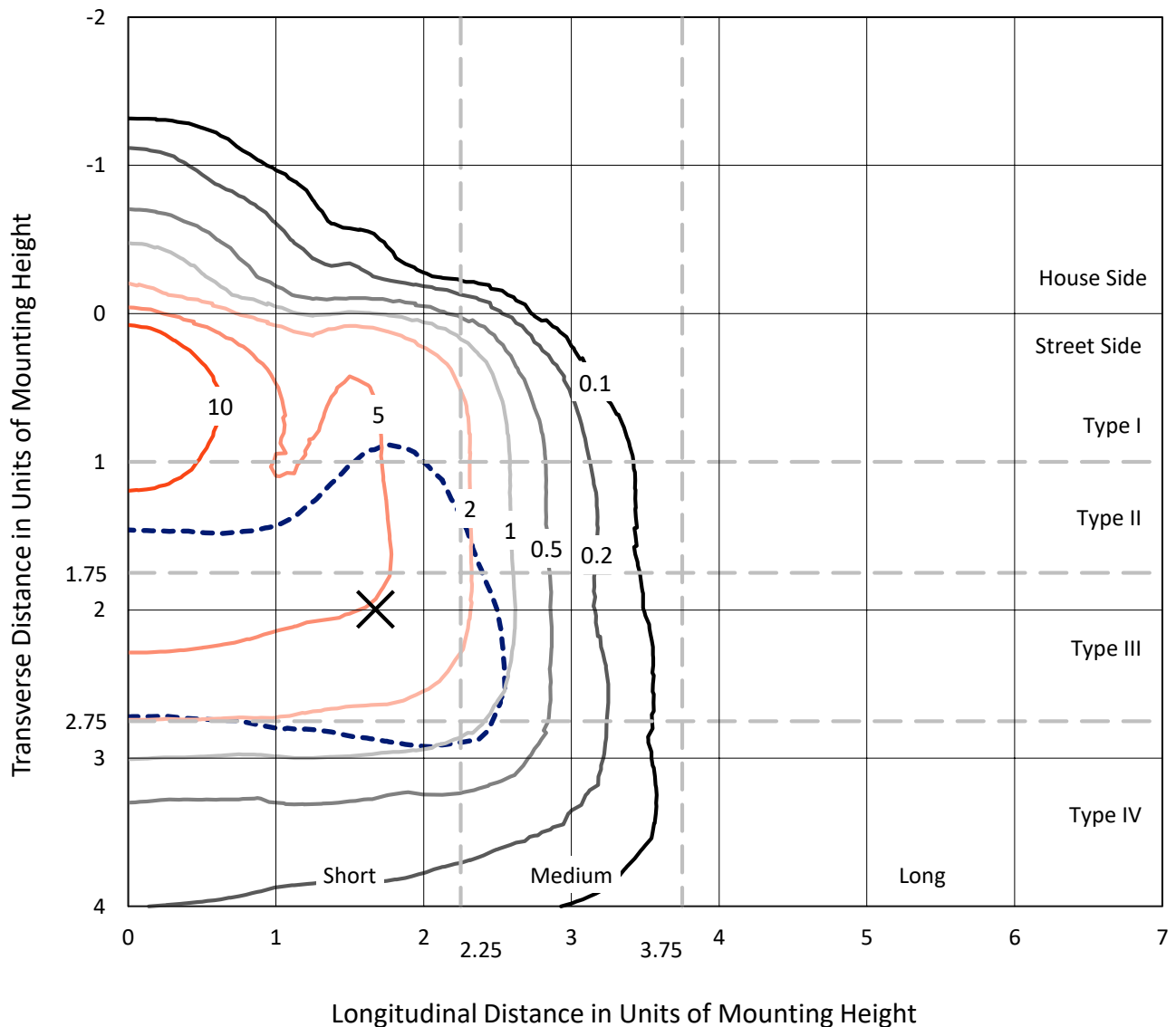


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Iso-Footcandle Lines of Horizontal Illumination

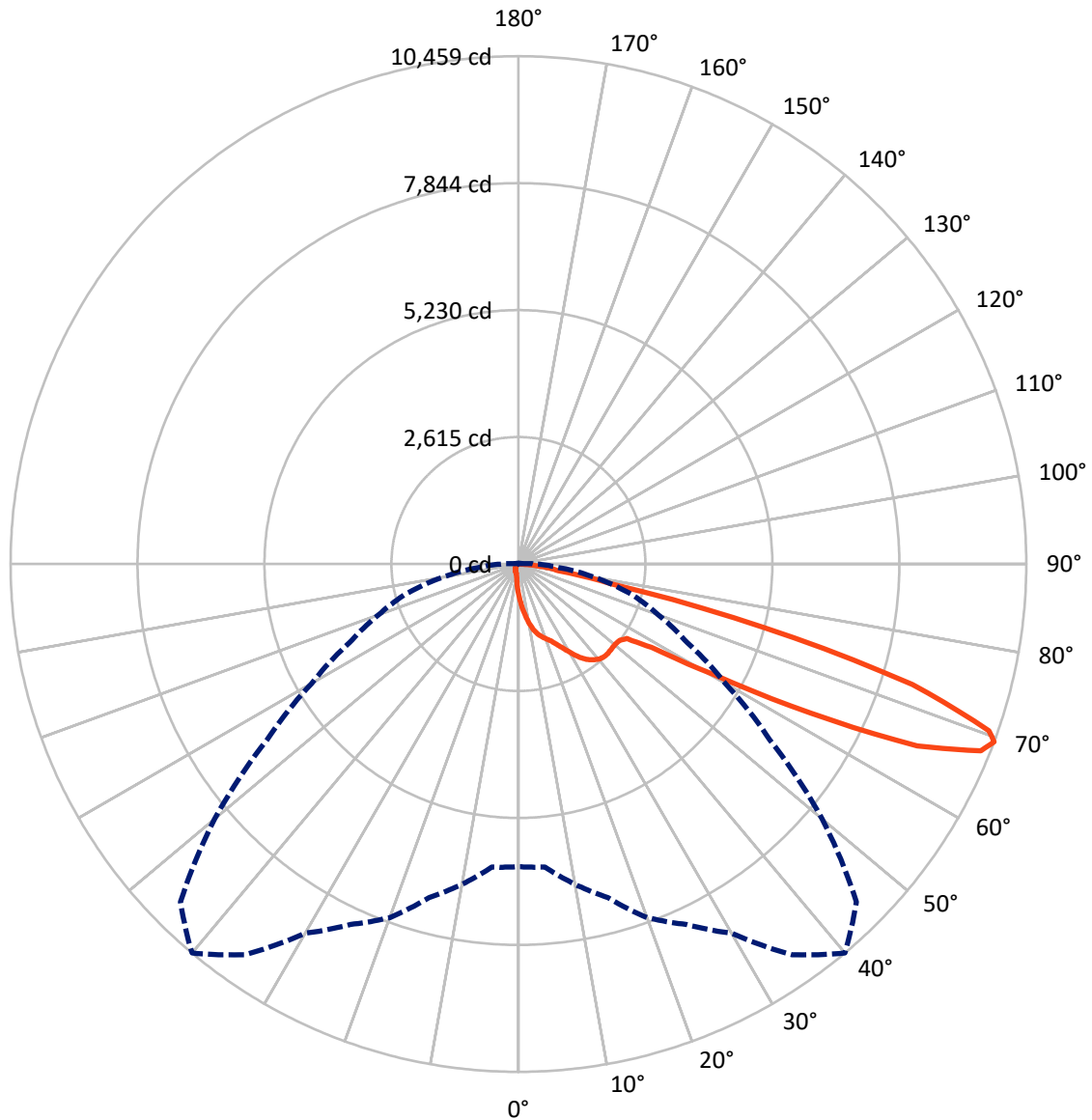
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.5 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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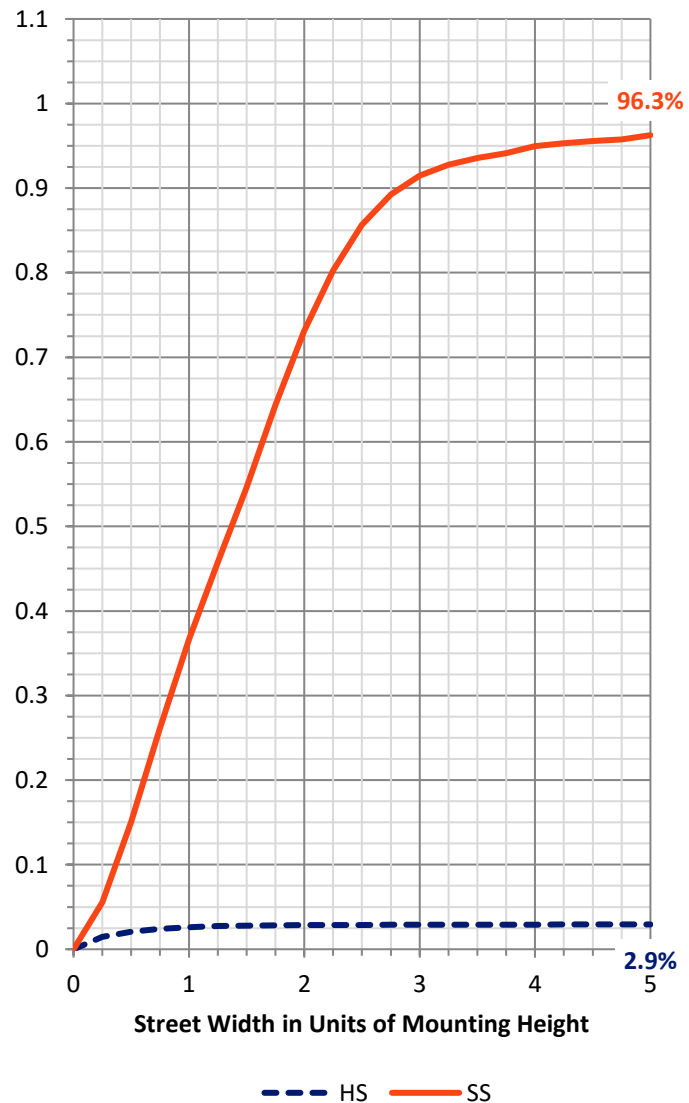
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	245.7	0.0	245.7
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	8005.4	0.0	8005.4
	% Fixture	97.0	0.0	97.0
Total	Lumens	8251.0	0.0	8251.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.0	0.8
10°-20°	220.8	2.7
20°-30°	422.6	5.1
30°-40°	702.8	8.5
40°-50°	951.1	11.5
50°-60°	1487.4	18.0
60°-70°	3058.0	37.1
70°-80°	1230.5	14.9
80°-90°	113.8	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°	8251.0	100.0
0°-180°	8251.0	100.0



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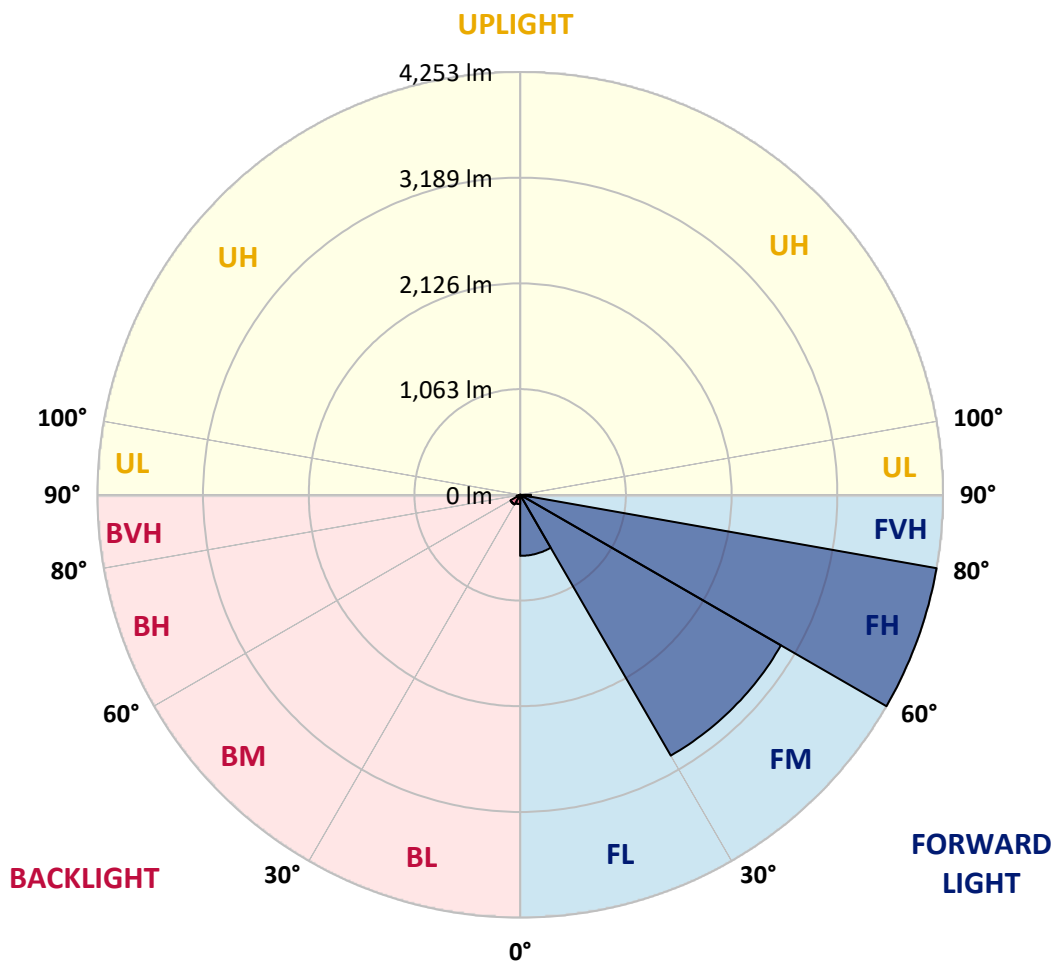
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	614.0	7.4			
FM (30°-60°)	3029.1	36.7			
FH (60°-80°)	4252.6	51.5			G2/5000
FVH (80°-90°)	109.6	1.3			G2/225
BL (0°-30°)	93.4	1.1	B0/110		
BM (30°-60°)	112.2	1.4	B0/220		
BH (60°-80°)	35.8	0.4	B0/110		G0/110
BVH (80°-90°)	4.2	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°	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1
2.5°	831.2	821.8	811.0	811.0	797.5	797.5	789.3	767.8	765.0	752.9	740.7
5°	1061.1	1053.0	1039.4	1027.3	1016.4	997.5	984.0	958.3	930.0	902.9	878.6
7.5°	1285.4	1281.4	1257.1	1253.0	1235.4	1204.3	1177.3	1139.4	1090.8	1053.0	1008.3
10°	1493.6	1484.1	1478.7	1455.7	1430.0	1396.3	1354.4	1308.4	1251.6	1192.2	1128.6
12.5°	1658.5	1653.1	1628.8	1619.2	1592.2	1558.5	1505.7	1446.3	1389.5	1312.5	1238.2
15°	1781.4	1772.0	1755.8	1740.9	1708.5	1678.8	1630.1	1565.2	1496.3	1412.5	1323.3
17.5°	1884.2	1866.6	1862.5	1839.6	1805.8	1770.7	1716.6	1657.1	1576.0	1492.2	1394.9
20°	2022.1	1997.7	1989.6	1955.8	1916.6	1868.0	1805.8	1731.4	1646.3	1554.4	1454.4
22.5°	2184.3	2166.7	2149.2	2119.4	2069.4	2000.4	1909.9	1828.8	1720.7	1619.2	1511.1
25°	2414.0	2399.2	2370.8	2330.2	2268.0	2185.6	2076.2	1957.2	1830.1	1700.3	1573.3
27.5°	2637.1	2623.5	2603.3	2572.2	2501.9	2411.3	2276.2	2124.8	1964.0	1807.2	1666.6
30°	2846.6	2834.4	2814.2	2783.1	2720.9	2631.7	2478.9	2316.7	2116.7	1934.2	1765.2
32.5°	3072.3	3068.3	3045.3	3000.7	2946.6	2826.3	2660.1	2485.7	2282.9	2072.1	1874.7
35°	3327.8	3296.7	3275.0	3230.5	3138.6	3010.1	2815.5	2624.9	2411.3	2195.1	1974.7
37.5°	3544.1	3514.3	3487.3	3430.5	3318.3	3154.8	2934.4	2725.0	2504.7	2284.3	2059.9
40°	3702.2	3687.3	3654.9	3580.5	3454.9	3260.2	3022.3	2793.9	2572.2	2350.6	2128.8
42.5°	3819.8	3796.8	3760.3	3683.3	3534.5	3312.9	3057.5	2822.3	2603.3	2391.1	2173.5
45°	3863.0	3844.1	3810.3	3726.5	3565.6	3327.8	3056.0	2814.2	2604.6	2403.2	2203.2
47.5°	3837.4	3818.4	3788.7	3710.3	3552.2	3310.2	3031.7	2791.2	2591.1	2407.3	2230.3
50°	3752.2	3741.4	3718.4	3652.2	3510.2	3276.4	3010.1	2779.0	2588.4	2427.6	2268.0
52.5°	3744.1	3737.3	3708.9	3642.7	3498.1	3265.6	3007.4	2785.7	2611.4	2453.2	2295.1
55°	4575.4	4479.4	4264.4	4082.0	3781.9	3425.1	3143.9	2895.3	2708.7	2554.7	2443.8
57.5°	6502.8	6359.5	6077.1	5729.7	5040.3	4363.1	3821.1	3429.1	3235.9	3165.6	3207.5
60°	7405.7	7380.0	7335.5	7170.5	6817.8	6235.2	5586.4	4884.9	4603.7	4579.4	4664.6
62.5°	7834.2	7818.0	7831.5	7811.2	7701.7	7531.4	7344.9	7042.1	6763.7	6583.9	6202.7
65°	8031.5	8042.4	8119.4	8180.2	8193.7	8238.3	8374.9	8751.9	9027.7	8564.1	7505.8
67.5°	7530.1	7593.6	7770.6	7992.4	8251.8	8503.2	8908.7	9703.5	10269.9	9725.1	8222.1
69°	6233.8	6264.9	6697.4	7115.1	7749.1	8192.4	8780.4	9822.5	10459.1	9844.1	8165.4
70°	4907.9	4936.2	5399.8	5967.5	7039.4	7609.8	8378.9	9621.1	10282.1	9685.9	7873.4
72.5°	2214.0	2173.5	2337.0	2641.1	3806.3	4711.8	6056.7	7795.0	8483.0	7759.9	5890.5
75°	1546.3	1528.7	1546.3	1547.7	1728.8	2230.3	2814.2	4225.2	5225.5	4509.1	2814.2
77.5°	1197.6	1185.4	1173.3	1159.7	1181.4	1323.3	1380.0	1499.0	1946.4	1841.0	1073.2
80°	947.5	936.7	966.4	957.0	957.0	973.2	962.4	917.8	834.0	773.1	692.0
82.5°	440.6	443.4	443.4	481.2	579.8	677.1	708.2	663.7	589.4	501.5	404.2
85°	41.9	47.3	79.8	123.0	244.6	275.7	277.1	229.8	229.8	181.1	146.0
87.5°	0.0	1.3	1.3	1.3	12.1	33.8	28.3	8.1	4.0	4.0	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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1
2.5°	719.1	715.0	698.8	682.6	667.7	651.5	636.6	621.8	605.6	593.4	578.5
5°	840.8	811.0	777.2	744.8	712.3	678.6	643.4	612.3	579.8	550.1	521.7
7.5°	963.8	905.6	859.7	801.6	748.8	696.1	647.5	597.5	551.5	508.3	467.7
10°	1067.8	997.5	925.9	851.6	775.9	705.6	638.0	578.5	517.7	464.9	414.9
12.5°	1153.0	1063.7	975.9	882.7	797.5	708.2	624.5	552.8	481.2	421.7	370.4
15°	1230.0	1127.3	1021.9	913.8	805.6	704.2	610.9	521.7	448.7	381.2	323.1
17.5°	1292.2	1174.6	1055.6	934.0	817.8	698.8	593.4	500.1	414.9	344.6	287.9
20°	1346.3	1223.3	1094.9	958.3	825.9	697.5	578.5	473.1	385.2	310.9	255.4
22.5°	1396.3	1273.3	1135.4	989.4	838.0	696.1	565.0	452.8	359.5	285.2	229.8
25°	1453.0	1323.3	1178.6	1021.9	859.7	701.5	556.9	436.6	336.5	260.9	209.5
27.5°	1516.6	1380.0	1230.0	1062.4	888.0	712.3	554.2	419.0	316.3	237.9	193.3
30°	1605.8	1447.6	1281.4	1103.0	913.8	724.5	551.5	408.2	296.0	220.3	177.1
32.5°	1684.1	1513.8	1338.2	1144.8	942.1	736.7	550.1	393.3	277.1	202.8	164.9
35°	1766.6	1574.7	1386.8	1185.4	966.4	750.1	548.8	382.5	259.5	185.2	152.8
37.5°	1838.2	1626.0	1424.6	1220.5	993.4	762.3	550.1	373.1	243.3	170.3	141.9
40°	1899.1	1678.8	1466.6	1253.0	1021.9	781.2	551.5	363.6	227.1	156.8	132.4
42.5°	1953.2	1728.8	1511.1	1289.5	1054.3	802.9	559.6	355.5	213.5	144.6	123.0
45°	1995.1	1774.8	1559.8	1340.8	1107.0	838.0	574.5	350.1	200.1	133.8	114.9
47.5°	2038.3	1842.3	1642.2	1421.9	1184.1	893.4	600.1	348.7	189.2	125.7	108.1
50°	2097.7	1909.9	1715.2	1504.4	1254.4	950.2	631.2	350.1	175.7	117.6	101.3
52.5°	2141.0	1978.8	1809.9	1647.7	1421.9	1123.2	751.6	374.4	169.0	110.9	93.2
55°	2396.5	2368.1	2372.1	2399.2	2224.8	1911.2	1257.1	540.7	198.7	125.7	91.9
57.5°	3379.1	3479.2	3537.3	3536.0	3248.0	2693.9	1688.2	694.8	221.6	146.0	109.4
60°	4671.3	4595.6	4488.8	4225.2	3842.7	3075.0	1888.3	747.5	192.0	116.2	100.0
62.5°	5813.4	5370.2	4976.8	4549.6	4048.2	3207.5	1928.8	743.4	167.6	87.9	70.3
65°	6525.8	5728.3	5093.0	4557.7	3967.1	3096.6	1824.8	682.6	141.9	71.7	58.1
67.5°	6696.1	5535.0	4636.2	3953.6	3314.2	2410.0	1339.5	513.6	110.9	59.4	51.3
69°	6324.4	4920.0	3841.4	3066.9	2411.3	1599.0	828.6	324.4	85.1	54.1	47.3
70°	5817.5	4279.3	3129.0	2461.3	1785.5	1123.2	579.8	228.4	68.9	50.0	43.2
72.5°	3742.7	2247.8	1538.1	1070.5	736.7	447.4	227.1	102.8	52.7	41.9	35.1
75°	1451.7	831.2	602.8	458.2	358.2	248.7	137.9	66.2	44.6	35.1	27.0
77.5°	715.0	547.4	447.4	306.8	178.4	110.9	74.3	51.3	36.5	25.7	17.6
80°	565.0	375.7	224.4	139.2	105.4	79.8	56.8	41.9	27.0	16.2	12.1
82.5°	289.3	158.1	116.2	94.6	78.4	62.2	46.0	29.8	17.6	10.8	9.4
85°	90.5	66.2	59.4	58.1	54.1	44.6	32.4	18.9	10.8	6.8	6.8
87.5°	6.8	9.4	12.1	9.4	10.8	9.4	12.1	8.1	5.4	5.4	4.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1	623.1
2.5°	567.7	551.5	536.6	527.2	509.6	502.8	496.0	493.4	481.2	483.9	473.1
5°	496.0	467.7	446.1	424.4	404.2	389.3	377.1	362.3	350.1	344.6	333.8
7.5°	431.2	394.7	366.3	343.3	319.0	300.1	283.9	273.1	262.2	251.4	246.0
10°	374.4	335.2	302.7	279.8	256.8	240.6	228.4	220.3	213.5	209.5	208.2
12.5°	321.7	283.9	254.1	233.9	216.3	208.2	202.8	198.7	197.3	196.0	196.0
15°	281.2	243.3	220.3	205.4	197.3	193.3	192.0	189.2	186.5	185.2	185.2
17.5°	243.3	214.9	198.7	190.5	186.5	183.9	181.1	178.4	175.7	174.3	174.3
20°	217.6	194.6	186.5	181.1	177.1	174.3	170.3	167.6	166.2	164.9	163.5
22.5°	197.3	182.4	177.1	173.0	167.6	163.5	160.9	158.1	155.4	154.1	152.8
25°	182.4	173.0	169.0	163.5	158.1	154.1	150.0	146.0	143.3	141.9	139.2
27.5°	171.6	164.9	159.5	152.8	147.3	143.3	139.2	135.2	132.4	129.8	128.4
30°	162.2	155.4	148.7	143.3	136.5	132.4	127.1	123.0	121.7	119.0	116.2
32.5°	152.8	146.0	139.2	132.4	125.7	120.3	117.6	112.2	109.4	108.1	105.4
35°	141.9	135.2	127.1	121.7	114.9	109.4	105.4	101.3	98.7	96.0	94.6
37.5°	132.4	124.3	116.2	109.4	104.1	98.7	94.6	90.5	87.9	85.1	83.8
40°	121.7	113.5	105.4	98.7	93.2	89.2	85.1	81.1	78.4	77.0	77.0
42.5°	112.2	102.8	94.6	89.2	85.1	79.8	75.7	71.7	70.3	68.9	70.3
45°	102.8	93.2	86.5	81.1	77.0	71.7	67.6	64.9	63.5	64.9	66.2
47.5°	94.6	85.1	78.4	74.3	70.3	66.2	62.2	59.4	59.4	62.2	64.9
50°	86.5	77.0	71.7	68.9	64.9	60.8	55.4	54.1	55.4	58.1	60.8
52.5°	78.4	67.6	63.5	62.2	58.1	54.1	50.0	48.7	50.0	52.7	51.3
55°	70.3	59.4	58.1	56.8	52.7	47.3	43.2	43.2	43.2	41.9	39.2
57.5°	67.6	52.7	51.3	50.0	46.0	40.6	37.9	35.1	33.8	29.8	28.3
60°	70.3	47.3	47.3	44.6	40.6	35.1	31.1	27.0	24.3	21.7	21.7
62.5°	56.8	43.2	41.9	39.2	33.8	28.3	24.3	20.2	18.9	17.6	17.6
65°	46.0	39.2	36.5	32.4	28.3	23.0	18.9	16.2	14.9	14.9	16.2
67.5°	41.9	35.1	31.1	27.0	23.0	17.6	14.9	13.5	13.5	14.9	14.9
69°	39.2	32.4	28.3	24.3	20.2	16.2	13.5	13.5	13.5	13.5	14.9
70°	36.5	31.1	27.0	23.0	17.6	13.5	12.1	12.1	13.5	13.5	14.9
72.5°	28.3	24.3	23.0	18.9	13.5	12.1	10.8	12.1	12.1	13.5	13.5
75°	21.7	17.6	17.6	14.9	10.8	9.4	9.4	10.8	10.8	12.1	12.1
77.5°	14.9	12.1	12.1	10.8	9.4	8.1	8.1	9.4	10.8	10.8	12.1
80°	10.8	9.4	8.1	9.4	8.1	6.8	8.1	9.4	9.4	10.8	10.8
82.5°	8.1	8.1	8.1	8.1	6.8	6.8	8.1	8.1	9.4	10.8	10.8
85°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	8.1	8.1	9.4	9.4
87.5°	4.0	4.0	4.0	5.4	5.4	6.8	6.8	6.8	6.8	8.1	8.1
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°	623.1	623.1	623.1	623.1
2.5°	470.4	469.0	463.6	464.9
5°	329.8	321.7	327.1	325.7
7.5°	242.0	240.6	239.2	242.0
10°	206.8	206.8	205.4	206.8
12.5°	194.6	194.6	194.6	194.6
15°	185.2	185.2	183.9	183.9
17.5°	174.3	174.3	174.3	173.0
20°	163.5	162.2	162.2	162.2
22.5°	151.4	150.0	150.0	150.0
25°	139.2	137.9	137.9	137.9
27.5°	127.1	125.7	124.3	124.3
30°	114.9	113.5	112.2	112.2
32.5°	102.8	101.3	100.0	100.0
35°	91.9	91.9	90.5	89.2
37.5°	82.4	82.4	82.4	82.4
40°	75.7	77.0	77.0	77.0
42.5°	71.7	73.0	74.3	75.7
45°	68.9	71.7	73.0	73.0
47.5°	67.6	68.9	70.3	70.3
50°	62.2	60.8	60.8	60.8
52.5°	50.0	47.3	46.0	44.6
55°	36.5	35.1	32.4	32.4
57.5°	25.7	25.7	24.3	24.3
60°	20.2	20.2	18.9	20.2
62.5°	17.6	17.6	17.6	17.6
65°	16.2	16.2	16.2	16.2
67.5°	16.2	16.2	16.2	16.2
69°	14.9	14.9	14.9	14.9
70°	14.9	14.9	14.9	14.9
72.5°	13.5	13.5	13.5	13.5
75°	12.1	13.5	13.5	13.5
77.5°	12.1	12.1	12.1	12.1
80°	10.8	10.8	12.1	12.1
82.5°	10.8	10.8	10.8	10.8
85°	9.4	9.4	10.8	10.8
87.5°	8.1	8.1	9.4	9.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)