

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: P146846

Luminaire Tested: **LDRL-T4-F01-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146846
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33696)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T4-F01-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (7) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2489.2 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

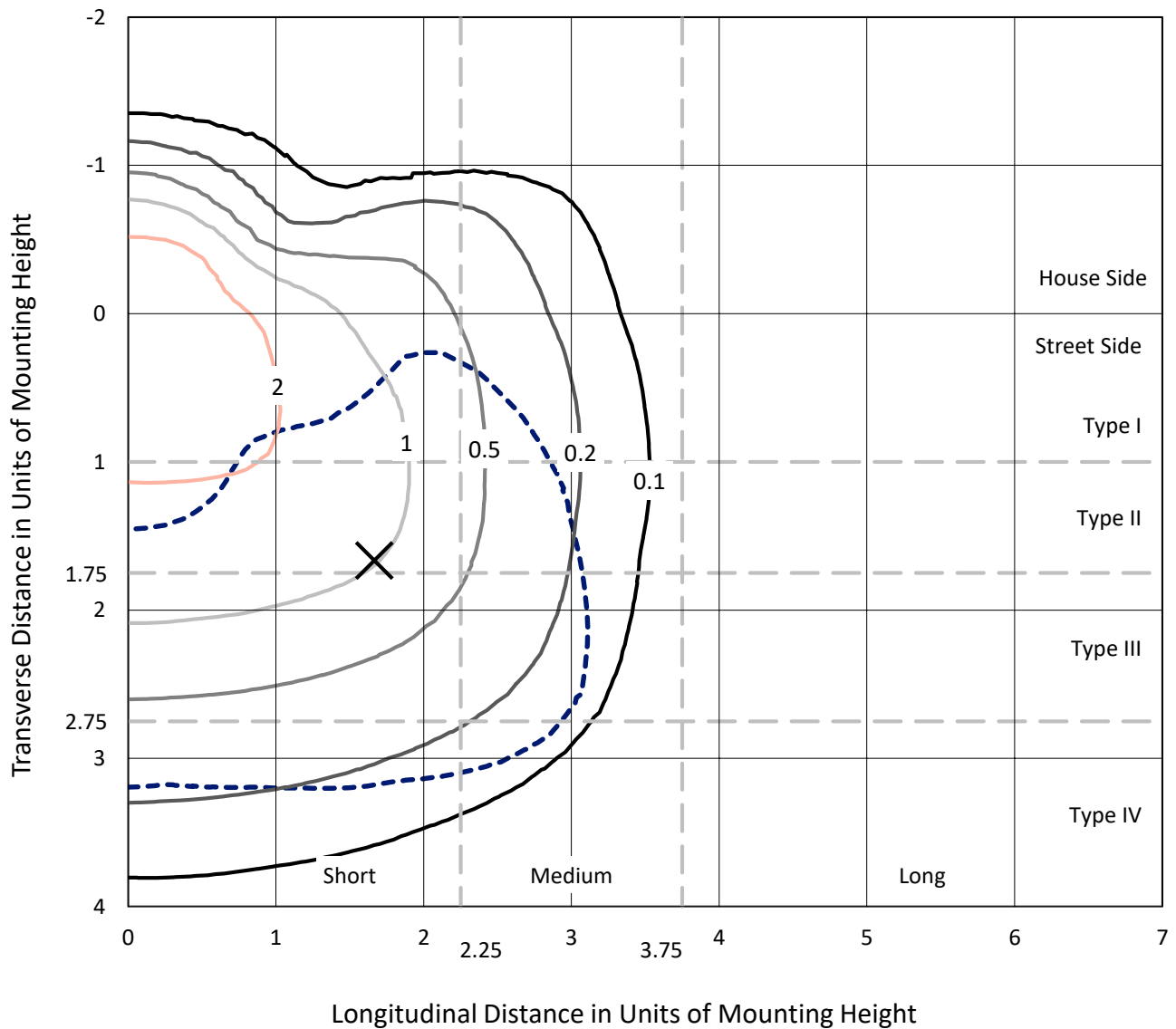
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

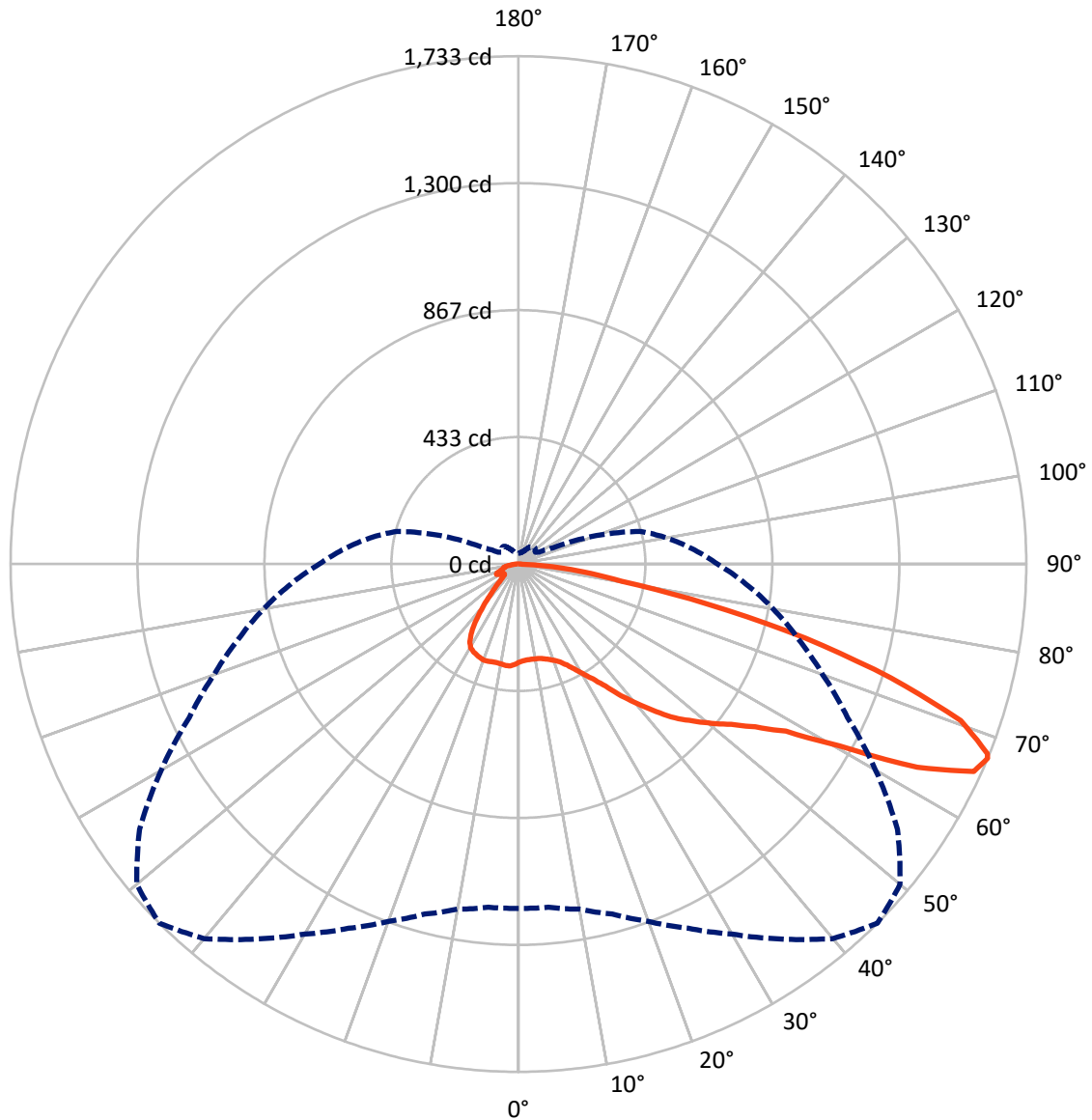
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	504.4	0.0	504.4
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	1984.8	0.0	1984.8
	% Fixture	79.7	0.0	79.7
Total	Lumens	2489.2	0.0	2489.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	1.3
10°-20°	97.0	3.9
20°-30°	164.8	6.6
30°-40°	247.7	10.0
40°-50°	322.1	12.9
50°-60°	442.2	17.8
60°-70°	697.6	28.0
70°-80°	421.5	16.9
80°-90°	63.9	2.6
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°	2489.2	100.0
0°-180°	2489.2	100.0



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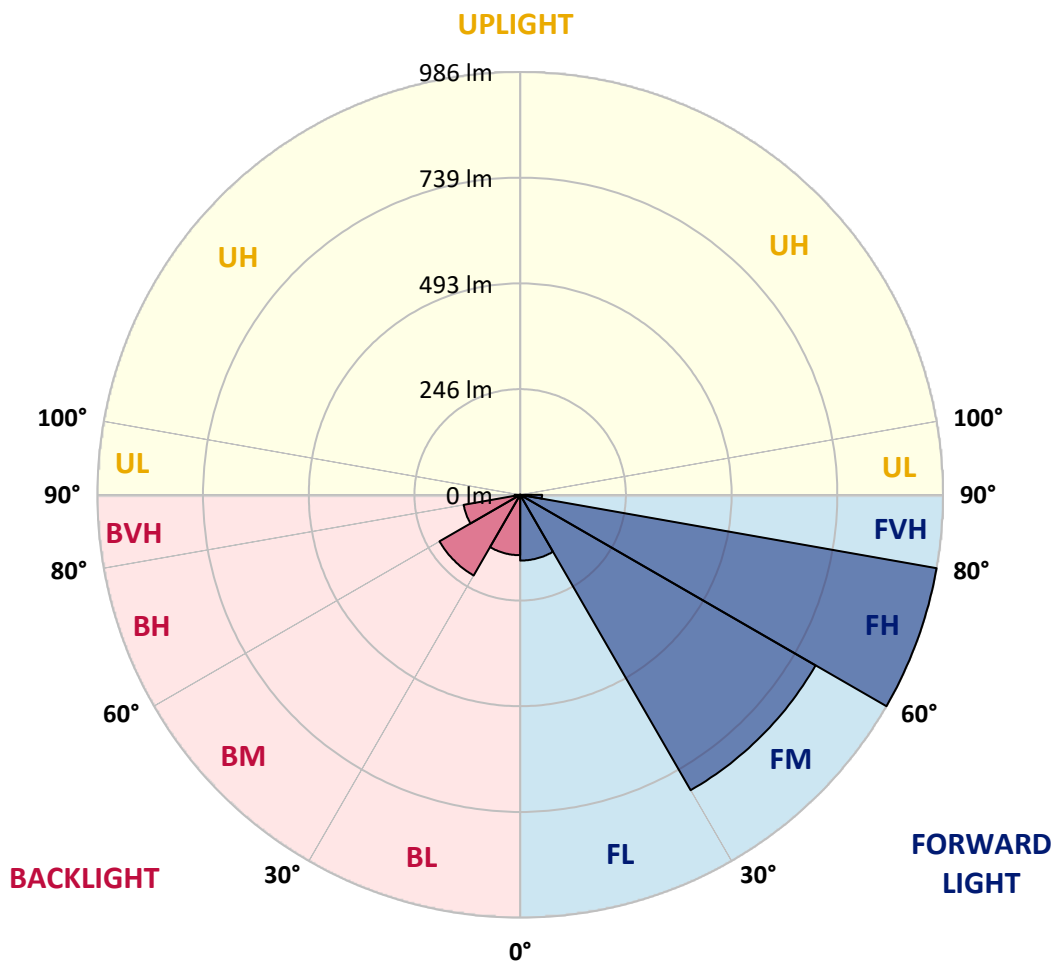
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	153.3	6.2			
FM	(30°-60°)	795.0	31.9			
FH	(60°-80°)	985.5	39.6			G1/1800
FVH	(80°-90°)	51.0	2.0			G1/100
BL	(0°-30°)	140.8	5.7	B1/500		
BM	(30°-60°)	217.0	8.7	B0/220		
BH	(60°-80°)	133.7	5.4	B1/500		G1/500
BVH	(80°-90°)	12.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1
2.5°	327.6	328.3	327.8	327.8	328.0	328.2	328.5	329.2	329.3	330.4	330.5
5°	321.0	321.2	321.2	321.4	322.4	323.2	324.1	325.3	326.3	328.2	329.3
7.5°	318.7	319.3	319.2	319.5	320.5	321.4	322.4	324.1	326.6	328.2	329.9
10°	322.6	323.1	322.6	322.7	322.9	323.8	324.1	325.3	327.3	328.7	330.2
12.5°	331.5	331.5	331.0	330.7	330.2	330.4	329.7	329.5	330.5	330.7	330.9
15°	343.4	344.8	343.1	341.7	341.0	340.4	338.2	337.3	337.1	335.6	334.1
17.5°	355.4	355.8	354.8	353.2	352.2	350.7	348.8	347.1	345.1	342.7	339.7
20°	368.8	369.0	367.6	365.4	364.2	362.4	360.0	357.1	354.6	350.9	347.5
22.5°	387.5	387.3	384.6	382.7	381.0	378.8	375.4	371.5	367.5	363.1	358.3
25°	408.8	408.8	406.9	403.9	403.0	399.8	396.1	391.5	387.3	381.0	375.3
27.5°	433.2	433.4	430.0	428.3	426.4	423.0	420.5	416.9	411.2	404.9	399.0
30°	462.2	461.3	458.6	455.0	454.4	451.7	448.1	445.6	438.4	434.0	427.4
32.5°	489.6	491.0	490.3	486.2	486.9	484.2	481.1	479.3	471.8	467.6	461.5
35°	530.6	531.8	532.8	531.3	532.1	530.6	528.1	523.2	517.1	511.5	503.0
37.5°	562.5	563.6	564.3	568.0	573.5	578.7	581.1	578.6	578.9	570.4	559.1
40°	588.5	591.4	595.5	602.6	613.5	623.4	628.9	633.1	635.3	627.3	612.6
42.5°	614.6	617.7	623.3	634.6	649.5	663.9	675.3	688.3	690.7	688.7	676.1
45°	641.9	645.5	652.4	665.3	682.7	701.5	719.8	738.3	747.6	749.2	733.9
47.5°	674.8	679.9	686.3	700.9	717.8	739.0	761.9	785.6	800.1	800.1	782.5
50°	715.8	721.5	727.0	741.5	758.5	780.3	806.8	833.2	853.0	854.2	832.8
52.5°	773.2	774.1	777.3	790.7	805.4	829.8	854.9	885.5	908.4	909.4	884.9
55°	843.0	843.0	846.7	857.9	871.6	891.8	917.7	951.8	975.8	981.1	949.6
57.5°	934.8	938.2	940.1	953.1	962.4	983.8	1005.5	1042.6	1073.2	1076.6	1044.6
60°	1084.3	1077.8	1088.2	1099.7	1121.5	1137.1	1174.0	1211.3	1250.5	1259.8	1225.4
62.5°	1231.5	1238.4	1251.1	1272.0	1309.4	1344.3	1397.2	1453.8	1514.6	1527.1	1500.8
65°	1240.6	1244.9	1262.5	1298.4	1349.6	1411.7	1484.6	1569.8	1660.4	1707.4	1663.3
67°	1174.9	1176.1	1196.1	1236.9	1298.2	1371.9	1458.2	1562.2	1668.6	1733.1	1700.3
67.5°	1154.1	1156.3	1175.9	1217.6	1279.6	1355.0	1442.9	1549.8	1658.7	1726.2	1696.5
70°	1031.7	1031.7	1052.9	1094.9	1153.0	1226.6	1318.6	1426.5	1544.9	1601.7	1576.4
72.5°	878.2	872.7	896.5	928.4	975.8	1040.0	1114.1	1199.3	1288.4	1329.7	1319.7
75°	638.4	648.9	661.2	684.8	725.9	776.6	820.0	896.0	966.0	1011.7	999.7
77.5°	348.3	352.4	386.6	400.7	436.8	474.4	522.0	575.3	630.4	659.2	647.5
80°	207.0	215.0	235.3	252.1	271.6	300.2	334.8	346.5	357.3	356.6	335.4
82.5°	130.8	140.4	162.5	176.9	187.0	203.6	222.4	237.2	240.4	224.5	199.9
85°	21.2	35.1	91.7	107.7	114.2	123.2	137.1	143.3	133.8	116.9	121.1
87.5°	8.3	10.0	28.0	35.4	37.4	19.7	34.1	40.0	20.3	10.3	23.4
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1
2.5°	331.5	332.4	333.2	334.3	334.6	335.4	337.0	336.8	338.0	338.5	339.3
5°	330.9	332.7	334.1	336.0	336.6	338.5	340.5	341.2	342.7	343.9	344.9
7.5°	332.2	334.3	336.0	338.2	339.7	341.2	342.7	344.6	345.9	346.8	347.5
10°	332.7	334.9	337.0	338.8	340.5	341.7	343.4	344.9	346.3	346.8	347.0
12.5°	332.9	334.4	336.5	338.5	340.0	341.5	342.7	344.4	345.4	345.6	345.3
15°	334.3	334.4	335.8	338.2	339.7	341.2	342.0	342.9	343.6	343.1	342.6
17.5°	338.3	337.1	337.1	338.3	339.2	339.8	340.0	339.8	339.2	338.2	337.3
20°	344.9	342.6	340.7	340.0	338.7	337.0	334.8	332.7	330.2	329.0	328.8
22.5°	355.3	351.7	348.3	344.9	340.5	335.6	330.5	326.1	322.6	320.7	320.9
25°	372.9	367.6	363.7	357.8	350.7	343.7	337.1	331.2	327.0	323.6	324.3
27.5°	396.6	390.7	387.3	380.5	372.4	363.6	355.8	347.6	341.5	337.3	338.2
30°	424.4	422.7	417.1	410.3	402.7	392.7	381.0	368.8	357.8	350.9	349.5
32.5°	457.9	456.1	450.0	444.2	434.4	423.4	408.1	388.8	371.5	358.3	352.6
35°	499.3	494.7	487.2	481.6	470.6	456.4	436.8	410.7	384.4	364.6	350.2
37.5°	550.8	539.4	527.1	512.5	496.2	478.9	456.2	425.7	393.2	365.1	339.5
40°	599.9	581.6	561.1	538.1	518.2	497.4	473.9	439.0	399.1	361.5	323.4
42.5°	654.6	626.2	598.4	566.7	540.6	515.9	488.9	448.3	400.3	351.9	302.6
45°	707.3	670.7	633.4	594.3	561.1	533.7	503.0	456.2	400.0	341.7	281.9
47.5°	754.2	710.5	664.4	620.4	581.8	551.6	518.1	467.1	404.6	338.8	268.2
50°	798.1	747.6	693.6	644.6	602.6	571.8	537.2	484.2	418.6	345.4	266.2
52.5°	843.3	788.5	726.6	673.9	630.1	594.3	559.4	506.0	438.3	359.0	270.7
55°	902.3	839.3	773.4	714.9	664.6	626.2	585.8	532.5	459.5	374.7	279.4
57.5°	990.1	916.4	841.5	778.6	720.5	672.6	628.4	567.2	494.5	398.5	298.3
60°	1147.6	1066.0	979.2	897.1	830.1	774.1	717.8	641.9	559.2	452.3	341.9
62.5°	1405.0	1292.0	1172.0	1063.9	971.9	896.0	816.8	725.6	629.2	517.7	407.8
65°	1559.6	1403.8	1251.1	1125.8	1017.0	919.8	823.9	725.9	632.6	535.2	437.4
67°	1578.8	1407.8	1238.9	1105.4	988.9	883.0	779.0	678.8	595.3	513.7	429.3
67.5°	1573.0	1399.7	1227.4	1092.6	974.8	872.3	770.0	667.5	586.2	504.5	423.2
70°	1459.5	1289.9	1119.5	988.4	875.5	770.7	673.9	571.3	508.4	450.0	379.7
72.5°	1211.3	1079.0	936.2	826.9	729.5	638.7	553.6	467.8	417.3	375.9	326.5
75°	898.2	776.9	656.1	590.4	514.9	442.2	376.4	312.9	293.4	283.6	254.5
77.5°	554.7	445.7	354.8	295.3	234.8	184.0	146.4	119.1	124.2	144.5	153.8
80°	276.1	204.0	157.9	125.5	101.5	82.0	60.1	44.0	52.7	62.5	70.8
82.5°	166.2	131.3	103.9	87.9	71.5	55.2	39.1	29.8	33.0	44.4	48.8
85°	103.2	82.7	66.1	55.2	45.7	33.9	22.2	22.0	23.4	29.5	33.7
87.5°	30.3	20.5	16.3	16.9	18.8	15.6	11.7	10.0	12.4	16.9	19.0
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°	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1	335.1
2.5°	339.5	340.7	341.2	341.4	341.5	342.6	342.6	343.6	343.9	343.9	344.3
5°	345.9	347.1	347.6	347.8	348.1	348.7	348.5	349.2	349.5	349.3	349.3
7.5°	348.3	348.7	348.7	349.2	349.7	349.2	348.8	349.2	349.0	349.2	349.2
10°	347.5	347.1	347.1	346.8	347.3	346.3	346.3	346.6	346.5	346.8	347.3
12.5°	345.4	345.3	344.8	344.6	345.3	344.6	344.8	345.3	345.6	346.3	347.1
15°	342.6	342.0	342.0	342.7	344.4	344.9	345.6	346.5	346.6	347.0	347.3
17.5°	337.6	338.5	340.5	342.9	346.1	347.3	347.6	347.1	345.4	344.1	342.7
20°	330.9	334.6	339.8	344.9	348.8	348.7	346.5	343.2	339.2	336.3	334.4
22.5°	325.1	332.4	340.5	346.6	349.2	345.9	340.9	336.0	331.2	327.0	323.2
25°	329.2	336.1	343.1	346.8	346.6	341.0	334.3	328.8	322.4	316.5	310.2
27.5°	342.4	346.6	348.7	347.5	343.9	336.5	329.0	321.4	313.1	306.0	298.7
30°	351.4	351.4	349.3	344.6	338.3	330.0	320.9	311.0	301.2	292.9	284.6
32.5°	348.5	341.9	336.0	329.5	322.4	313.4	302.9	292.2	281.1	271.4	264.3
35°	336.0	321.7	309.4	300.2	292.7	282.1	269.9	257.7	248.5	241.9	237.9
37.5°	313.6	290.9	272.9	261.7	250.2	239.2	225.2	219.6	211.4	207.4	205.8
40°	286.5	253.3	230.7	216.3	204.1	190.4	180.9	177.4	174.3	173.5	172.8
42.5°	255.3	213.8	187.0	172.1	157.4	147.4	143.2	141.0	140.4	140.4	141.3
45°	223.0	173.7	142.8	130.8	118.6	113.3	112.3	111.3	111.5	111.0	111.3
47.5°	197.9	139.4	107.7	96.7	90.5	88.8	87.6	87.2	87.2	86.4	85.4
50°	184.8	116.6	84.5	75.9	72.3	71.2	71.2	70.5	69.1	68.3	66.1
52.5°	181.4	104.7	73.2	65.7	62.7	61.7	60.7	59.6	57.6	55.7	53.2
55°	184.2	101.0	69.6	62.7	59.3	58.1	57.3	55.6	52.7	50.0	47.1
57.5°	195.5	103.3	71.0	63.5	60.5	59.6	58.8	56.2	52.7	48.8	45.6
60°	226.5	114.5	76.7	68.1	65.6	65.7	64.5	61.3	56.2	50.7	45.9
62.5°	266.5	130.1	84.2	74.5	74.2	75.9	75.9	70.3	62.0	53.5	47.1
65°	289.4	135.0	85.2	75.4	78.3	83.2	82.8	75.4	64.0	53.5	46.6
67°	283.6	129.8	81.0	70.5	73.9	79.5	78.8	71.7	61.0	51.3	45.2
67.5°	279.0	128.1	80.0	69.3	72.7	77.3	77.3	70.1	59.6	50.7	44.7
70°	245.7	113.2	74.9	64.7	64.7	65.9	65.1	60.0	52.9	46.6	42.7
72.5°	204.8	98.9	70.8	61.5	58.3	57.6	56.4	52.9	48.3	43.9	40.5
75°	158.7	87.6	67.6	58.1	53.9	52.3	51.2	48.5	44.9	41.2	38.3
77.5°	111.1	75.1	63.4	55.2	50.7	49.5	47.6	44.6	41.7	38.5	35.7
80°	69.0	62.0	55.2	49.8	45.1	43.4	41.0	38.3	35.9	34.1	32.0
82.5°	49.1	45.6	41.2	38.3	33.4	28.3	30.3	30.5	29.0	27.8	27.3
85°	32.9	29.6	27.4	24.9	22.0	19.8	20.3	21.9	22.0	21.5	21.5
87.5°	18.0	15.2	14.7	15.2	13.2	12.5	12.7	14.1	14.2	14.2	14.4
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):

	165°	170°	175°	180°
0°	335.1	335.1	335.1	335.1
2.5°	344.4	344.9	344.8	345.1
5°	349.7	350.0	349.8	350.0
7.5°	348.8	349.5	349.8	349.3
10°	347.5	348.5	349.2	349.2
12.5°	347.8	349.5	350.5	350.5
15°	347.5	348.8	349.2	349.2
17.5°	342.2	342.2	342.4	341.7
20°	333.1	332.1	331.7	330.5
22.5°	320.0	317.7	316.1	315.3
25°	305.1	301.4	299.0	297.7
27.5°	292.7	289.5	287.2	285.8
30°	279.0	275.3	273.9	272.9
32.5°	259.2	255.6	254.6	253.8
35°	233.5	232.3	229.6	227.7
37.5°	203.6	202.1	201.1	200.4
40°	172.5	172.6	171.8	170.3
42.5°	141.3	143.0	141.3	141.0
45°	111.0	112.8	112.8	113.3
47.5°	85.6	85.2	85.9	86.1
50°	64.7	63.7	63.4	62.9
52.5°	51.3	50.1	49.5	48.6
55°	45.2	43.9	43.2	43.0
57.5°	43.2	41.5	40.5	40.3
60°	42.7	40.3	39.0	38.6
62.5°	42.7	39.8	38.3	37.8
65°	42.2	39.3	37.9	37.4
67°	41.5	39.0	37.6	37.3
67.5°	41.2	38.8	37.6	37.1
70°	40.3	38.3	36.9	36.4
72.5°	38.5	36.8	35.4	35.1
75°	36.4	34.9	34.1	33.7
77.5°	34.1	32.7	31.7	30.8
80°	30.5	29.0	27.4	27.1
82.5°	25.9	24.2	23.0	22.9
85°	20.8	19.5	18.1	18.1
87.5°	14.6	13.7	12.9	12.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)