

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: INVUE

Report Number: P162443

Luminaire Tested: **ECM-F02-LED-E1-SL3-HSS-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162443
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F02-LED-E1-SL3-HSS-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2792.7 lumens
Efficiency: N/A
Efficacy: 50.8 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

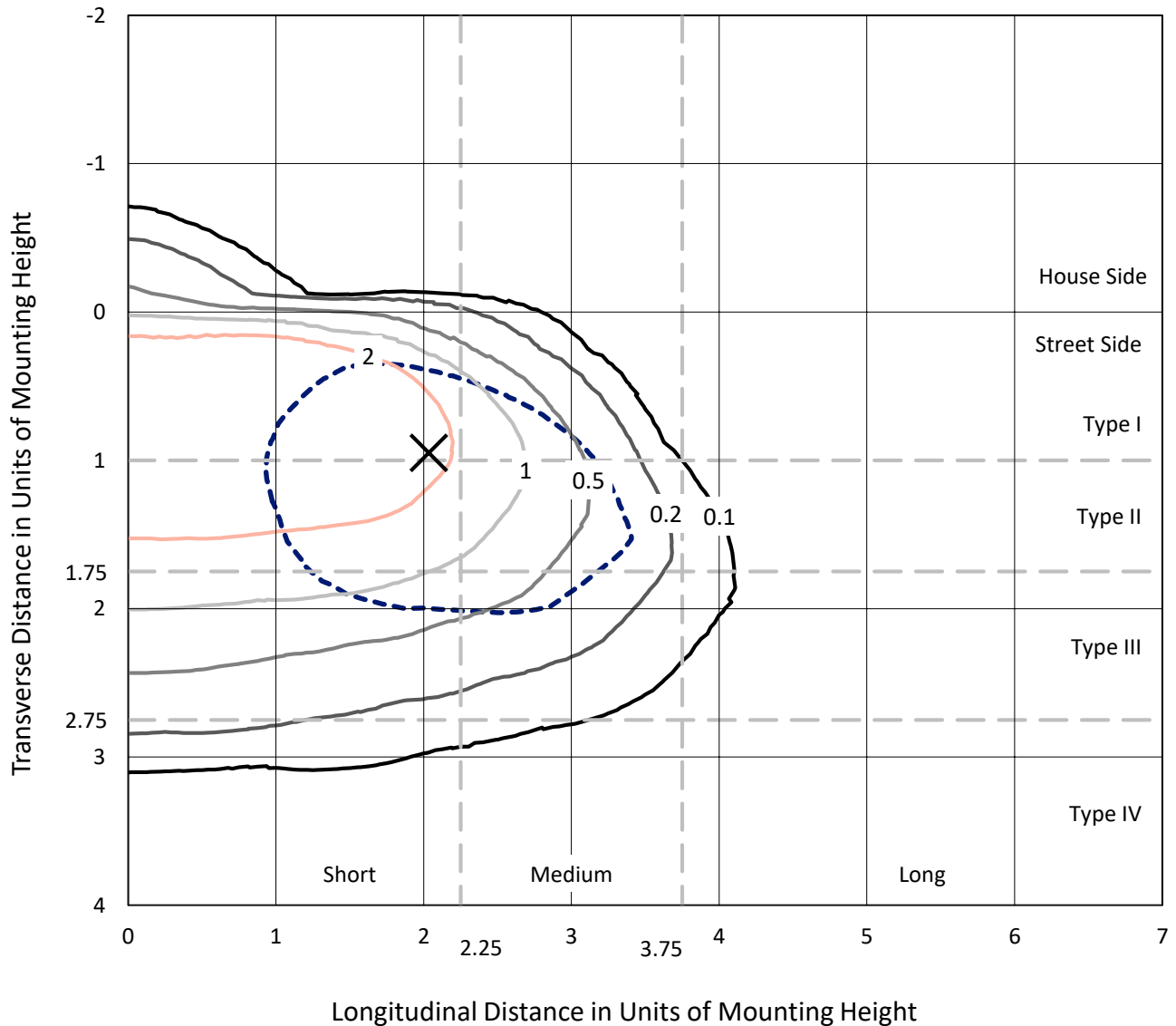
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

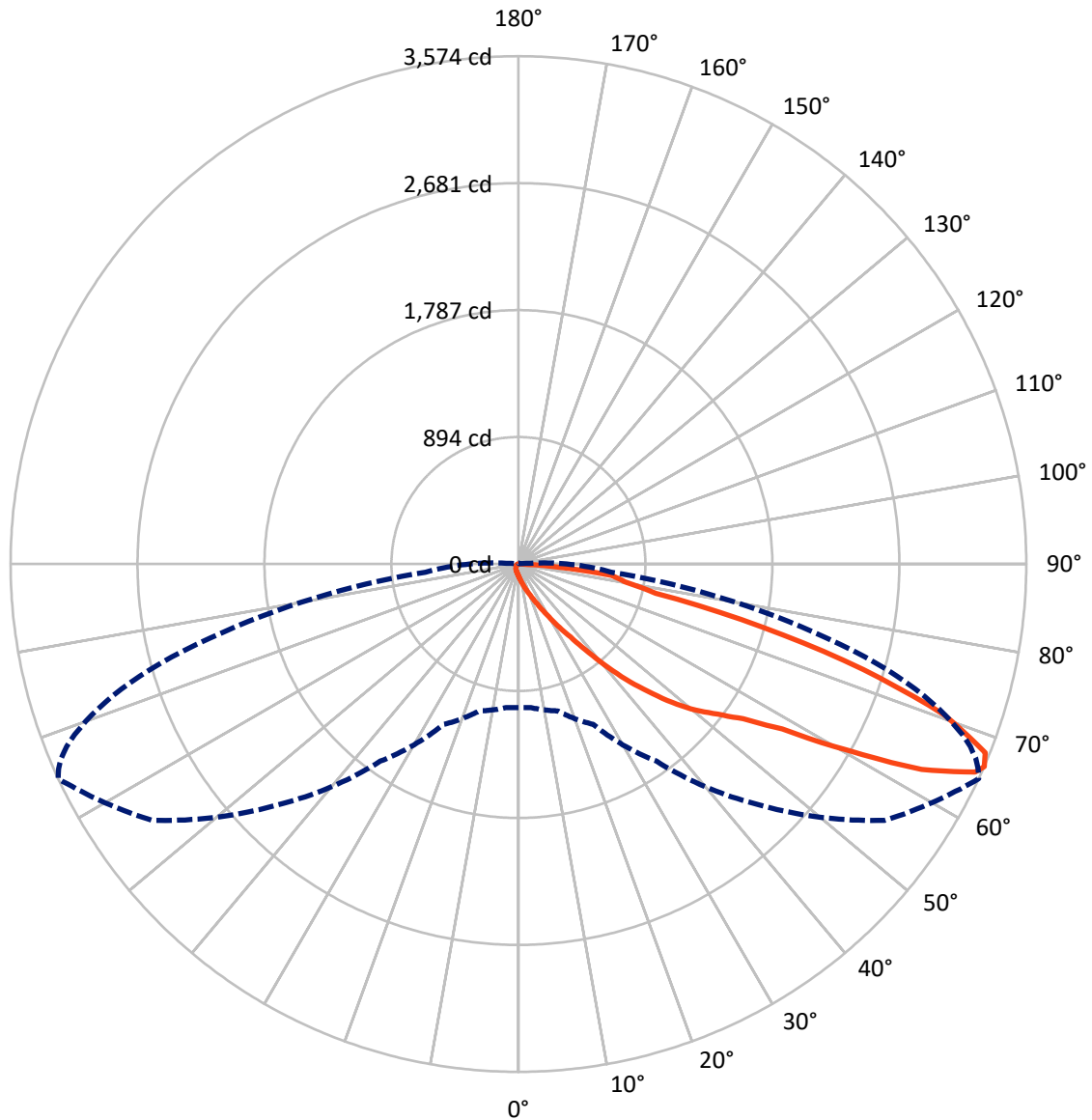
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.6 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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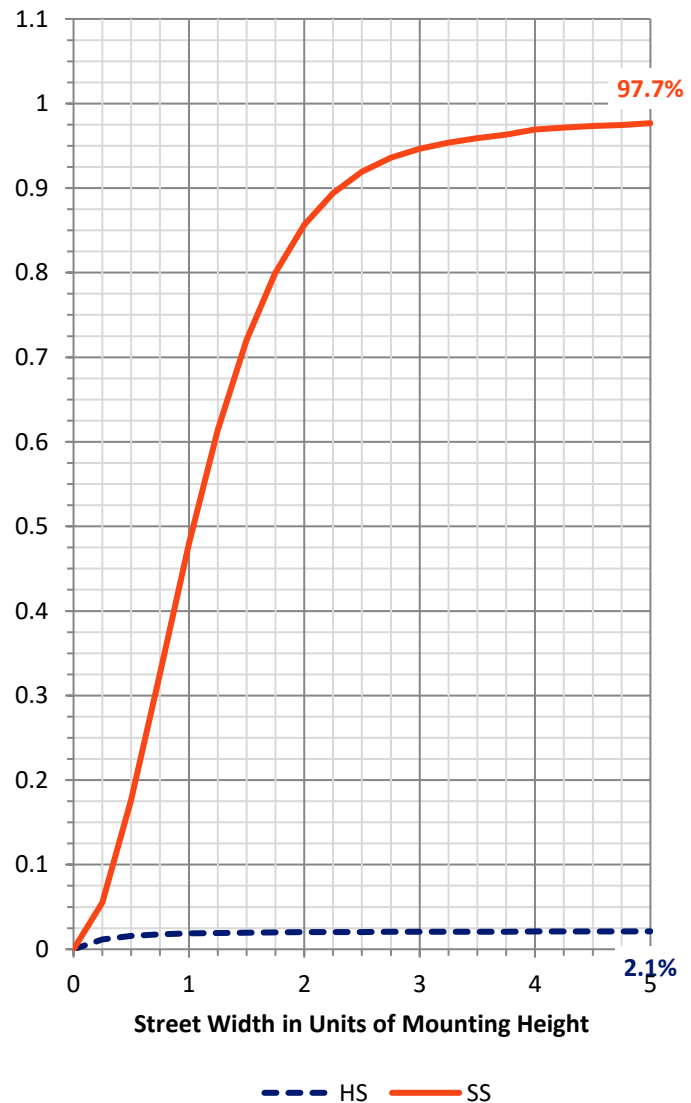
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	60.5	0.0	60.5
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	2732.2	0.0	2732.2
	% Fixture	97.8	0.0	97.8
Total	Lumens	2792.7	0.0	2792.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.4	0.3
10°-20°	40.0	1.4
20°-30°	86.3	3.1
30°-40°	184.3	6.6
40°-50°	407.6	14.6
50°-60°	690.7	24.7
60°-70°	921.7	33.0
70°-80°	406.0	14.5
80°-90°	46.8	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°	2792.7	100.0
0°-180°	2792.7	100.0

Coefficient of Utilization



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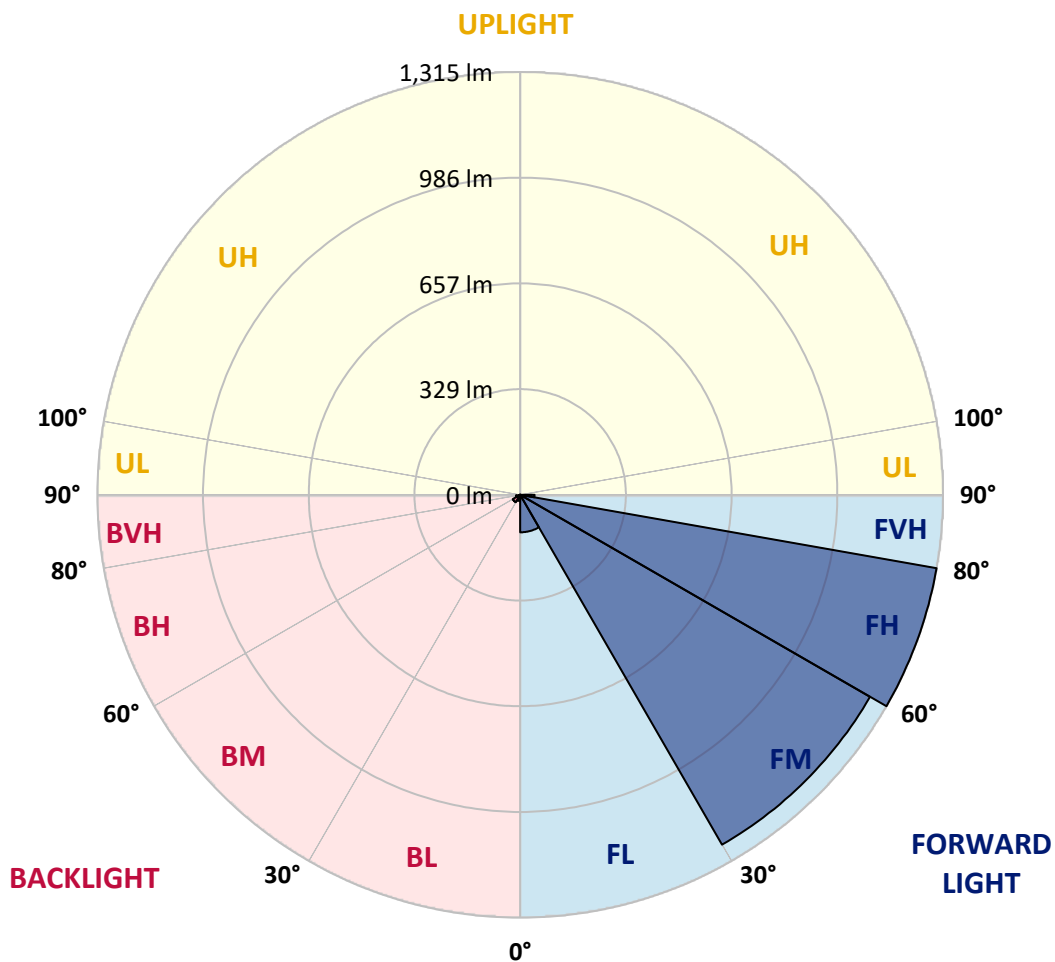
CATALOG NUMBER: ECM-F02-LED-E1-SL3-HSS-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	116.6	4.2			
FM	(30°-60°)	1256.0	45.0			
FH	(60°-80°)	1314.7	47.1			G1/1800
FVH	(80°-90°)	44.9	1.6			G1/100
BL	(0°-30°)	19.1	0.7	B0/110		
BM	(30°-60°)	26.6	1.0	B0/220		
BH	(60°-80°)	13.0	0.5	B0/110		G0/110
BVH	(80°-90°)	1.9	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°	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3
2.5°	106.3	105.8	103.6	103.6	100.4	98.3	95.6	92.9	92.9	92.3	91.8
5°	140.7	137.5	136.9	131.0	126.2	119.2	112.8	104.1	103.1	102.0	101.5
7.5°	178.8	178.3	173.4	166.4	156.8	143.9	131.0	117.1	114.9	113.8	111.7
10°	228.2	225.5	219.1	207.3	192.7	175.6	154.6	132.6	129.9	127.8	126.7
12.5°	275.4	270.6	266.8	251.8	233.6	208.3	183.1	151.4	149.3	146.6	142.3
15°	319.5	315.2	308.7	295.9	275.4	243.7	214.3	175.6	170.2	166.4	163.2
17.5°	353.9	351.1	343.6	329.1	307.1	279.2	243.7	200.2	196.0	191.2	185.2
20°	386.5	382.8	371.0	351.1	327.5	306.0	278.6	232.5	226.6	220.7	214.3
22.5°	417.7	413.9	394.6	361.9	336.6	327.5	317.8	269.0	259.9	255.0	248.6
25°	461.2	453.1	423.1	371.0	337.2	344.1	360.8	316.2	307.7	300.7	290.5
27.5°	519.7	509.0	461.8	384.4	339.3	362.4	410.2	373.7	364.6	356.5	345.2
30°	585.8	578.8	522.4	416.6	354.9	389.3	465.5	446.7	436.0	426.3	412.9
32.5°	652.4	642.7	586.9	477.9	396.8	441.3	534.8	531.6	517.6	508.5	494.0
35°	710.9	706.0	664.7	578.3	492.3	532.6	627.1	630.8	618.5	608.9	592.7
37.5°	750.6	750.6	742.5	686.2	644.3	674.4	762.9	763.5	751.1	729.1	721.1
40°	771.0	776.9	805.9	816.6	814.5	853.2	941.2	931.6	921.3	910.0	883.2
42.5°	812.9	818.3	880.0	954.1	1002.4	1053.4	1114.1	1110.9	1098.5	1078.1	1053.4
45°	883.8	890.7	964.3	1081.9	1181.2	1253.7	1292.4	1277.3	1265.0	1245.7	1232.7
47.5°	974.0	987.4	1070.6	1216.1	1335.8	1455.6	1495.8	1456.1	1445.3	1430.3	1409.4
50°	1070.1	1083.0	1171.6	1338.0	1473.3	1616.1	1683.2	1616.1	1600.5	1595.7	1572.1
52.5°	1153.3	1164.0	1249.4	1432.0	1578.5	1746.0	1843.7	1755.1	1743.9	1727.8	1710.6
55°	1202.7	1211.3	1291.3	1477.0	1649.9	1863.1	1998.9	1921.1	1904.4	1898.0	1873.3
57.5°	1219.3	1227.9	1299.9	1482.9	1688.6	1969.9	2187.4	2190.1	2170.2	2147.1	2139.6
60°	1219.3	1229.0	1289.6	1468.4	1726.2	2083.7	2438.7	2662.5	2619.6	2615.3	2587.9
62.5°	1168.9	1178.0	1239.2	1423.9	1776.7	2237.3	2788.7	3183.9	3171.5	3143.6	3098.5
65°	1059.3	1064.7	1124.8	1310.1	1757.3	2378.5	3092.1	3530.7	3510.8	3456.1	3398.1
66°	1009.9	1014.2	1070.6	1245.1	1693.9	2397.8	3145.8	3574.2	3541.5	3495.3	3429.8
67.5°	938.5	946.0	985.8	1124.3	1542.0	2330.7	3111.9	3543.6	3515.1	3459.3	3393.8
70°	626.6	621.2	761.4	862.8	1174.8	1899.0	2792.0	3181.7	3182.3	3156.0	3129.7
72.5°	297.4	300.7	341.5	531.0	768.9	1268.7	2222.3	2539.6	2576.1	2528.9	2496.1
75°	213.7	218.5	243.2	324.8	458.5	761.4	1440.5	1776.1	1777.2	1693.4	1618.8
77.5°	62.3	64.9	91.3	200.2	343.6	513.8	827.4	987.4	964.3	904.2	847.8
80°	25.8	25.8	26.8	63.9	138.0	349.0	578.8	760.3	757.6	734.5	701.2
82.5°	9.7	10.2	12.9	26.3	32.8	85.9	386.0	659.9	658.2	625.5	601.9
85°	1.1	1.1	3.2	11.3	12.4	16.1	77.3	291.0	289.4	291.0	255.0
87.5°	0.0	0.0	0.6	1.1	1.6	2.1	3.2	11.3	12.4	11.8	10.7
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°	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3
2.5°	91.8	90.8	90.8	90.2	90.2	90.2	89.7	89.1	89.1	88.6	88.0
5°	100.4	99.3	98.8	97.7	97.2	96.6	95.6	95.0	94.0	93.4	92.9
7.5°	110.6	108.5	107.9	106.3	104.7	103.6	102.6	100.9	99.8	97.7	97.2
10°	123.5	120.8	118.6	116.5	114.9	112.2	110.6	108.5	106.3	104.7	103.1
12.5°	140.1	136.4	133.2	131.0	127.2	124.0	120.8	119.2	114.9	112.8	110.1
15°	158.4	154.1	150.3	146.0	143.4	138.0	133.7	128.9	126.7	122.9	118.6
17.5°	182.0	175.0	169.1	164.8	159.5	154.1	149.3	144.5	138.0	133.7	128.3
20°	207.3	201.3	193.3	185.8	179.4	172.9	165.9	159.5	153.5	146.6	140.1
22.5°	239.4	230.9	221.2	213.7	205.1	198.1	188.4	179.9	170.2	161.1	153.5
25°	280.3	269.0	259.9	249.2	238.9	228.2	216.4	205.6	193.3	184.7	171.8
27.5°	330.8	320.0	307.7	293.7	283.5	267.4	251.8	238.4	223.9	210.5	196.0
30°	395.2	379.6	366.7	353.3	332.9	317.3	299.1	280.8	261.0	247.5	225.5
32.5°	472.5	455.8	436.5	417.2	398.4	376.4	353.9	331.3	309.2	284.6	262.0
35°	567.0	547.1	525.1	504.2	475.2	451.5	423.1	392.0	367.2	338.8	310.3
37.5°	692.1	659.3	640.0	618.0	578.8	546.6	514.9	483.7	440.3	410.2	369.9
40°	848.9	829.5	797.8	762.4	727.0	684.6	641.6	600.2	549.8	507.9	461.2
42.5°	1033.0	1004.6	972.3	921.3	885.4	835.4	786.6	731.8	670.0	616.4	561.6
45°	1205.9	1172.1	1147.4	1096.4	1058.8	999.7	940.6	882.7	811.3	742.0	678.7
47.5°	1392.8	1364.8	1324.0	1282.7	1244.6	1178.0	1114.1	1043.8	968.6	886.4	804.3
50°	1557.0	1535.0	1507.1	1457.2	1414.8	1358.9	1283.8	1207.0	1111.9	1030.3	936.9
52.5°	1696.6	1679.5	1640.3	1604.8	1566.7	1514.1	1447.0	1373.4	1270.8	1181.2	1074.9
55°	1861.5	1849.1	1814.8	1792.8	1758.9	1708.4	1645.6	1577.4	1469.0	1371.2	1251.0
57.5°	2131.5	2121.9	2091.8	2082.7	2049.4	2005.4	1928.1	1855.0	1728.3	1607.0	1469.5
60°	2578.8	2559.5	2515.4	2492.9	2422.5	2363.5	2263.1	2162.7	2009.7	1855.0	1689.6
62.5°	3057.7	3003.5	2919.7	2847.8	2747.9	2645.4	2511.1	2357.6	2178.2	1994.6	1804.6
65°	3316.0	3223.6	3117.9	3003.5	2874.1	2723.2	2554.1	2369.9	2177.2	1983.3	1782.5
66°	3345.5	3241.3	3129.1	3001.9	2858.0	2697.4	2525.6	2332.3	2132.1	1943.1	1742.3
67.5°	3308.5	3199.5	3080.8	2939.6	2783.9	2617.5	2437.0	2236.2	2043.5	1851.8	1656.4
70°	3049.1	2940.7	2834.9	2686.2	2520.3	2352.7	2182.0	1957.6	1775.0	1598.9	1425.0
72.5°	2434.9	2361.3	2256.6	2129.4	1967.8	1771.3	1629.0	1428.2	1269.8	1099.1	964.3
75°	1521.6	1418.0	1288.6	1126.4	1002.9	843.5	760.3	607.8	517.6	438.7	362.4
77.5°	778.0	700.1	609.4	518.1	430.6	343.6	265.8	187.9	126.7	88.0	65.5
80°	642.7	574.0	498.8	415.6	338.3	262.5	189.0	128.9	82.2	53.7	41.9
82.5°	531.0	473.0	405.9	328.6	261.5	206.2	143.4	93.4	58.0	37.6	29.5
85°	226.1	205.1	158.4	125.6	94.5	69.8	48.8	32.8	23.1	18.8	17.2
87.5°	9.7	10.7	10.2	8.1	5.9	5.9	5.4	4.3	4.3	4.3	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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3	84.3
2.5°	88.0	87.5	87.0	87.0	86.5	85.9	82.7	80.0	76.8	74.7	72.5
5°	91.8	91.3	90.2	89.7	88.6	88.0	81.1	75.2	70.3	66.6	63.9
7.5°	95.6	95.0	93.4	91.8	91.3	90.2	78.9	71.4	64.9	60.7	58.0
10°	100.4	98.8	97.2	95.0	93.4	91.8	76.8	67.1	60.1	56.4	53.7
12.5°	107.4	104.7	102.0	99.3	97.2	94.5	75.7	63.4	56.4	52.1	49.4
15°	115.4	111.7	108.5	105.2	101.5	98.8	73.6	60.1	53.1	48.8	45.6
17.5°	122.9	118.6	113.8	109.0	105.2	101.5	71.4	56.9	49.9	45.6	42.4
20°	133.7	127.2	121.4	115.4	110.1	105.2	68.2	53.7	47.3	42.4	39.2
22.5°	145.5	138.0	130.4	122.4	115.4	109.0	65.5	51.0	44.6	39.8	36.0
25°	160.5	151.4	141.2	131.0	122.9	114.4	62.8	48.3	41.9	37.0	33.3
27.5°	181.5	168.6	157.3	144.5	132.1	122.4	60.7	46.2	39.2	34.3	30.6
30°	209.9	191.2	173.4	159.5	145.0	131.0	58.5	43.5	37.0	31.7	27.4
32.5°	241.6	219.6	199.2	178.3	160.0	143.9	56.4	41.3	34.3	29.0	25.2
35°	280.8	252.9	225.5	201.3	179.4	157.8	54.2	39.2	32.2	26.3	22.5
37.5°	337.2	302.3	266.3	235.1	206.7	178.3	52.6	37.0	29.5	23.6	19.9
40°	414.5	369.4	325.4	283.0	245.9	210.5	50.5	34.9	27.4	21.5	17.7
42.5°	498.2	443.5	385.5	337.7	286.7	242.2	48.3	32.8	25.2	19.3	15.6
45°	602.4	534.2	463.9	398.9	336.6	279.2	46.2	30.6	22.5	17.2	13.4
47.5°	716.2	629.3	549.8	468.2	394.1	325.4	43.5	29.0	20.4	15.0	11.8
50°	833.3	741.5	641.1	548.2	460.1	371.5	40.8	26.3	18.2	13.4	9.7
52.5°	959.5	851.0	748.5	633.0	530.5	432.2	38.1	24.2	16.7	11.8	8.1
55°	1120.0	998.6	878.4	749.0	625.5	502.5	35.5	21.5	14.5	10.2	6.4
57.5°	1321.9	1178.0	1030.3	884.3	734.5	594.9	33.3	18.8	12.4	8.6	5.4
60°	1512.5	1344.4	1165.6	997.6	828.4	665.7	30.0	16.7	10.7	7.0	5.4
62.5°	1611.3	1419.6	1226.8	1041.6	861.2	691.0	26.8	13.9	9.1	5.9	4.9
65°	1587.1	1391.7	1204.8	1018.0	841.3	674.9	23.6	12.4	8.1	5.4	4.9
66°	1552.2	1358.9	1171.0	993.3	824.7	657.7	22.0	11.8	7.5	5.4	4.3
67.5°	1475.9	1289.1	1109.8	944.4	779.1	625.0	19.9	10.7	7.0	4.9	4.3
70°	1260.7	1091.0	947.7	800.5	665.7	526.7	16.1	9.1	5.9	4.3	4.3
72.5°	834.4	718.9	623.3	536.4	448.3	347.9	13.4	7.5	4.9	4.3	3.8
75°	314.6	284.6	244.3	219.6	191.7	168.1	10.7	4.9	3.8	3.8	3.8
77.5°	55.9	51.6	45.6	41.9	38.7	35.5	8.6	3.2	3.2	3.8	3.8
80°	37.6	34.9	31.7	29.0	26.8	24.2	5.9	2.7	3.2	3.2	3.8
82.5°	26.8	25.2	23.6	21.5	19.9	17.7	3.8	2.7	3.2	3.2	3.2
85°	16.1	15.0	13.9	12.9	11.3	10.7	2.7	2.7	2.7	3.2	3.2
87.5°	4.3	3.8	4.3	4.3	3.2	3.8	2.1	2.1	2.1	2.7	2.7
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°	84.3	84.3	84.3	84.3	84.3
2.5°	71.4	71.4	70.3	71.9	71.9
5°	61.7	61.7	61.2	61.7	61.7
7.5°	56.4	55.9	55.9	55.9	56.4
10°	51.6	51.0	51.0	51.0	51.0
12.5°	47.3	46.7	46.2	46.7	46.7
15°	43.5	42.4	42.4	42.4	42.4
17.5°	40.3	39.2	38.7	38.7	38.7
20°	37.0	35.5	35.5	35.5	35.5
22.5°	33.8	32.2	32.2	32.2	32.2
25°	30.6	29.0	29.0	29.0	29.0
27.5°	27.9	26.3	26.3	26.3	26.3
30°	24.7	23.6	23.6	24.2	23.6
32.5°	22.5	21.0	21.0	21.5	21.5
35°	19.9	18.8	18.8	18.8	18.8
37.5°	17.2	16.1	16.1	16.1	16.1
40°	15.0	13.9	13.4	13.9	13.9
42.5°	12.9	11.8	11.3	11.3	11.3
45°	11.3	9.7	9.1	9.7	9.7
47.5°	9.1	8.1	8.1	8.6	8.6
50°	7.0	7.0	7.5	8.6	8.6
52.5°	6.4	6.4	7.5	8.6	8.6
55°	5.9	6.4	7.5	8.1	8.6
57.5°	5.4	6.4	7.5	8.1	8.1
60°	5.4	5.9	7.0	8.1	8.1
62.5°	4.9	5.4	6.4	7.5	7.5
65°	4.9	5.4	6.4	7.5	7.5
66°	4.9	5.4	6.4	7.5	7.5
67.5°	4.9	5.4	6.4	7.5	7.5
70°	4.9	5.4	6.4	7.0	7.0
72.5°	4.3	4.9	5.9	7.0	7.0
75°	4.3	4.9	5.9	7.0	7.0
77.5°	4.3	4.9	5.9	7.0	7.0
80°	4.3	4.9	5.9	6.4	7.0
82.5°	3.8	4.9	5.4	6.4	6.4
85°	3.8	4.3	5.4	5.9	6.4
87.5°	3.2	3.8	4.3	5.4	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)