

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:

Luminaire Tested: **ENT-SA1D-740-U-SL2-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401488 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-740-U-SL2-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT
ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7350.9 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Medium
BUG Rating: B1 - U5 - G2

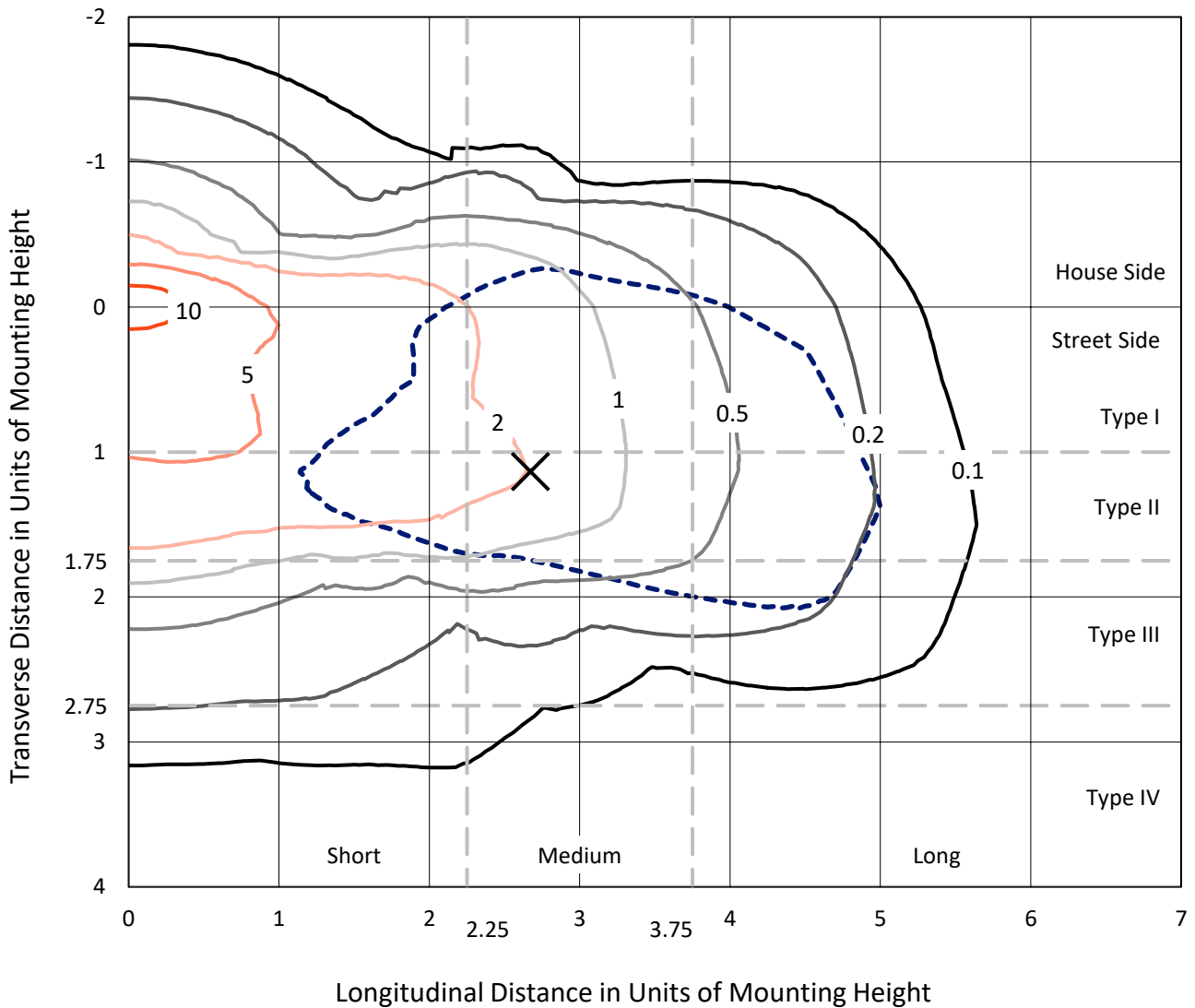
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

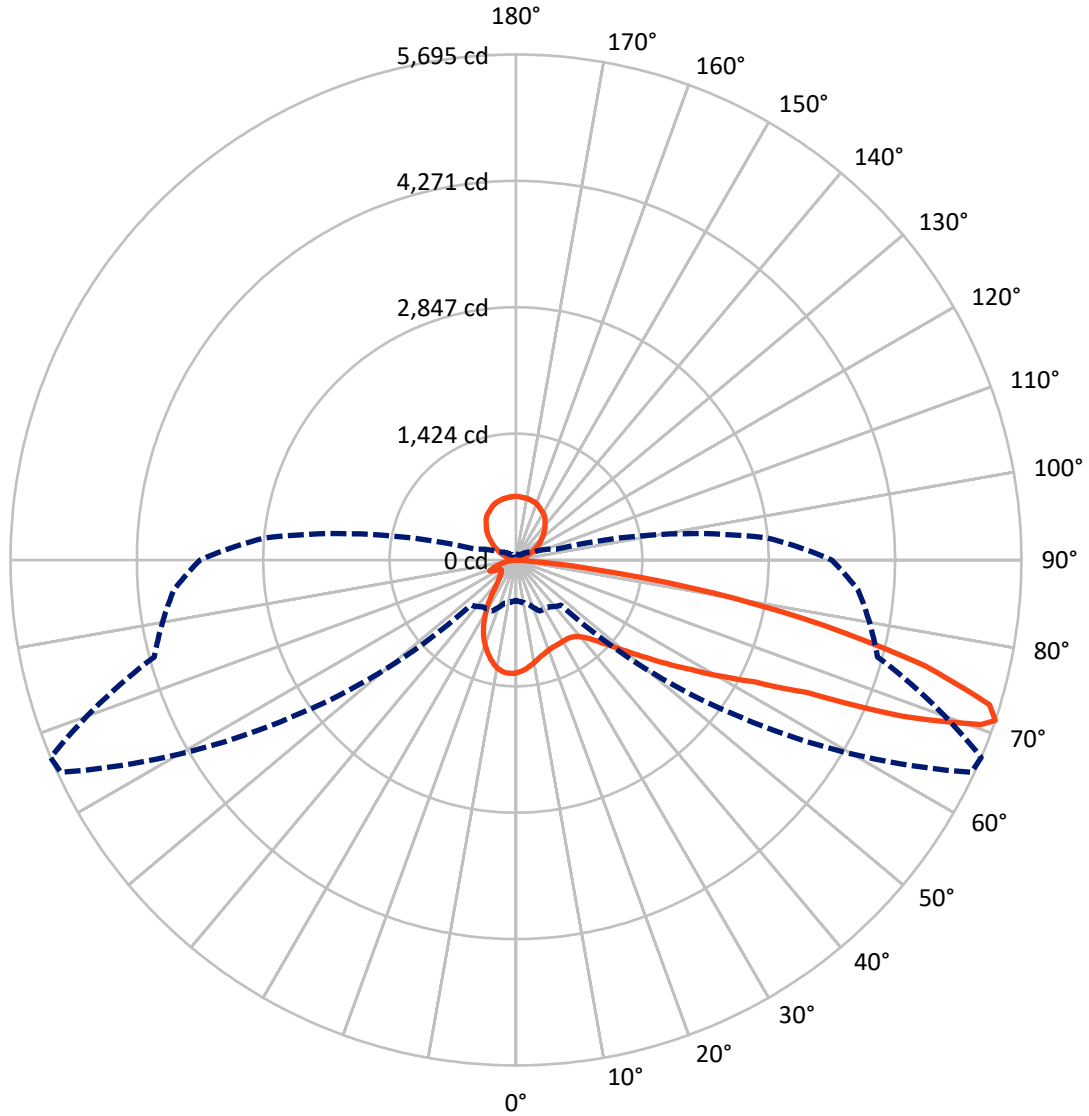
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.7 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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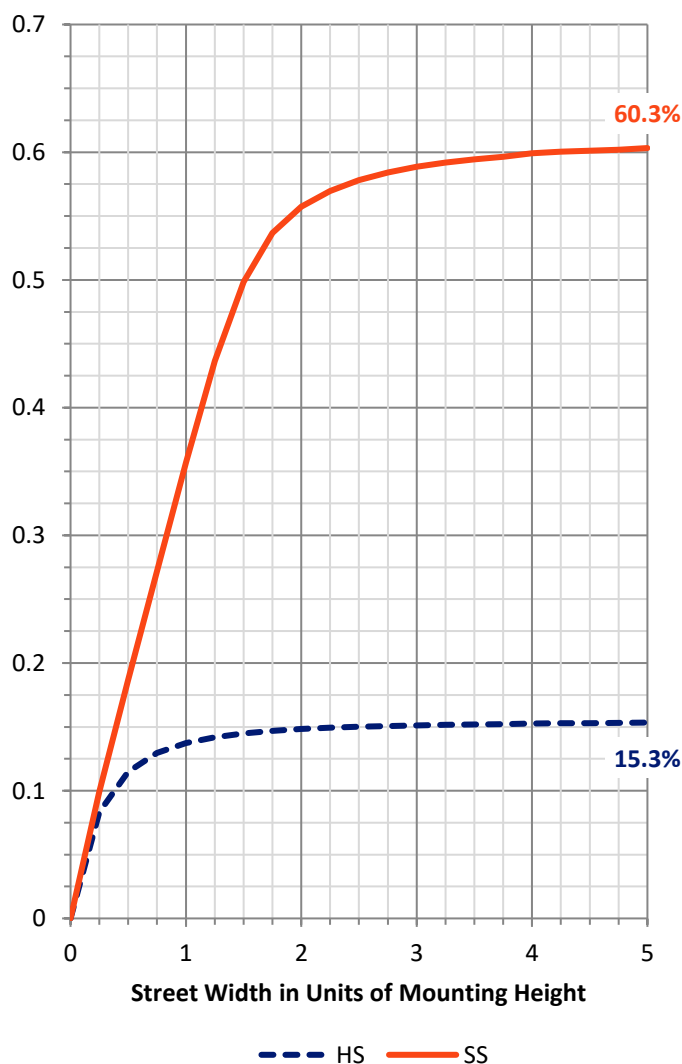
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1142.6	887.0	2029.5
	% Fixture	15.5	12.1	27.6
Street Side	Lumens	4434.4	887.0	5321.4
	% Fixture	60.3	12.1	72.4
Total	Lumens	5577.0	1773.9	7350.9
	% Fixture	75.9	24.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	1.5
10°-20°	276.9	3.8
20°-30°	373.9	5.1
30°-40°	492.4	6.7
40°-50°	701.4	9.5
50°-60°	1071.5	14.6
60°-70°	1337.9	18.2
70°-80°	1080.0	14.7
80°-90°	130.2	1.8
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.3
120°-130°	279.4	3.8
130°-140°	344.6	4.7
140°-150°	352.5	4.8
150°-160°	297.0	4.0
160°-170°	195.5	2.7
170°-180°	67.8	0.9
0°-90°	5577.0	75.9
0°-180°	7350.9	100.0

Coefficient of Utilization



REPORT NUMBER:

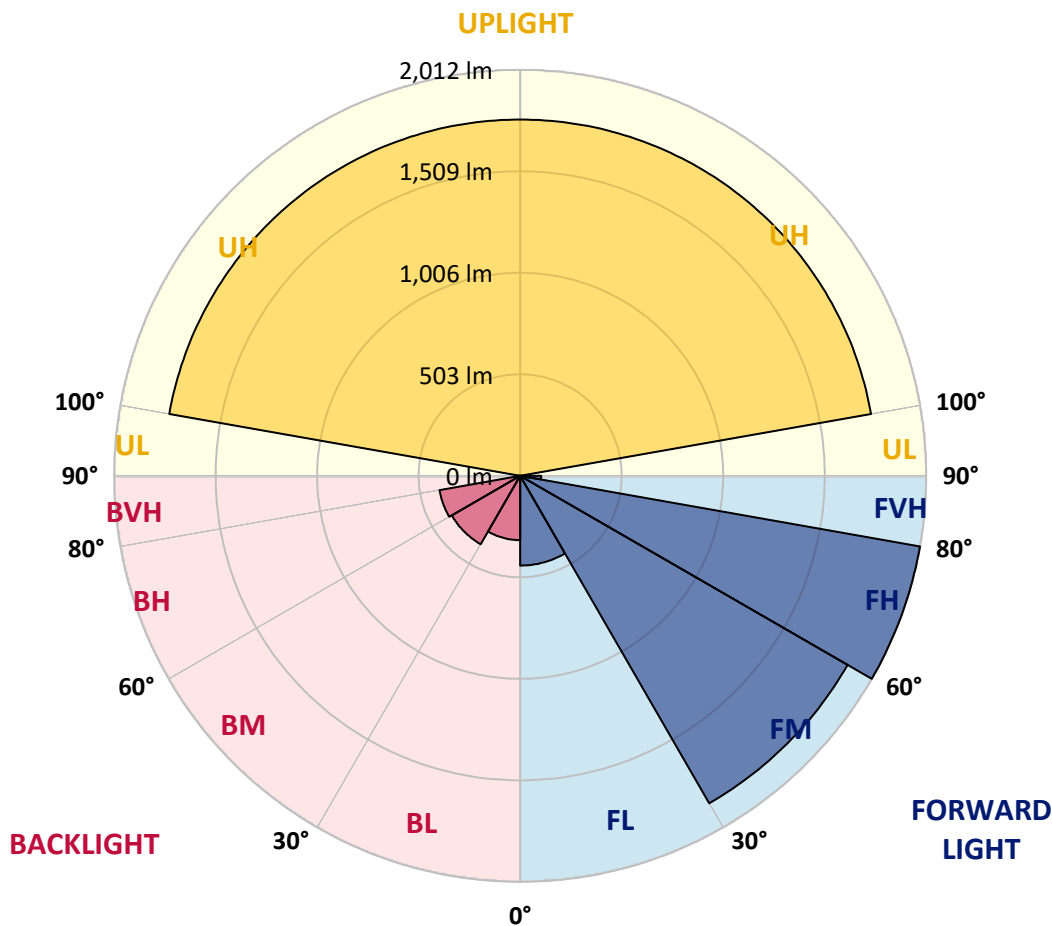
CATALOG NUMBER: ENT-SA1D-740-U-SL2-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	444.7	6.1			
FM	(30°-60°)	1874.0	25.5			
FH	(60°-80°)	2011.9	27.4			G2/5000
FVH	(80°-90°)	103.8	1.4			G2/225
BL	(0°-30°)	318.8	4.3	B1/500		
BM	(30°-60°)	391.4	5.3	B1/1000		
BH	(60°-80°)	406.0	5.5	B1/500		G1/500
BVH	(80°-90°)	26.4	0.4			G1/100
UL	(90°-100°)	8.4	0.1		U1/10	
UH	(100°-180°)	1765.5	24.0		U5	

BUG Rating: B1-U5-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7
2.5°	1199.4	1205.1	1205.9	1217.1	1221.1	1234.0	1241.2	1253.2	1254.8	1262.1	1266.9
5°	1121.6	1122.4	1127.2	1136.8	1152.1	1175.4	1193.0	1222.7	1228.4	1249.2	1267.7
7.5°	1051.7	1055.7	1063.8	1078.2	1095.9	1123.2	1150.5	1191.4	1199.4	1233.2	1268.5
10°	1004.4	1008.4	1014.8	1030.9	1048.5	1079.0	1111.9	1159.3	1168.1	1214.7	1266.1
12.5°	966.6	970.6	975.5	993.1	1012.4	1042.9	1076.6	1129.6	1138.4	1192.2	1260.5
15°	941.7	942.5	949.0	963.4	985.1	1014.8	1048.5	1103.1	1113.5	1174.6	1258.9
17.5°	926.5	928.1	933.7	944.9	964.2	993.1	1026.0	1081.4	1093.5	1160.1	1259.7
20°	927.3	928.9	932.1	936.1	949.8	974.7	1009.2	1065.4	1077.4	1151.3	1265.3
22.5°	944.1	944.9	945.7	940.1	944.9	962.6	996.3	1054.1	1067.0	1147.3	1271.7
25°	976.3	976.3	974.7	961.8	951.4	958.6	989.1	1050.1	1063.0	1144.1	1278.1
27.5°	1020.4	1023.6	1015.6	1000.3	976.3	964.2	987.5	1046.9	1059.8	1144.1	1281.3
30°	1080.6	1082.2	1079.0	1059.0	1019.6	986.7	992.3	1044.5	1057.3	1142.4	1282.1
32.5°	1141.6	1146.5	1150.5	1132.8	1085.4	1026.8	1011.6	1047.7	1059.0	1141.6	1279.7
35°	1203.5	1206.7	1225.9	1222.7	1171.3	1087.0	1042.9	1060.6	1070.2	1145.7	1281.3
37.5°	1256.4	1263.7	1291.8	1313.5	1273.3	1168.9	1096.7	1088.7	1094.3	1165.7	1290.2
40°	1313.5	1323.9	1365.6	1406.6	1388.9	1271.7	1173.0	1139.2	1137.6	1202.7	1311.8
42.5°	1377.7	1389.7	1443.5	1502.9	1508.5	1402.6	1274.9	1210.7	1209.1	1266.1	1359.2
45°	1453.1	1464.4	1537.4	1608.1	1642.6	1548.7	1400.2	1311.8	1312.6	1354.4	1434.7
47.5°	1546.3	1563.9	1634.6	1724.5	1786.3	1713.3	1551.9	1453.1	1446.7	1487.7	1558.3
50°	1677.1	1691.6	1750.2	1837.7	1946.1	1912.4	1743.0	1623.3	1618.5	1637.8	1723.7
52.5°	1814.4	1819.2	1847.3	1938.1	2120.3	2154.0	1978.2	1834.5	1816.0	1826.5	1929.2
55°	1822.5	1832.9	1851.4	1966.2	2276.9	2443.9	2237.5	2083.4	2059.3	2052.1	2162.9
57.5°	1655.5	1672.3	1696.4	1844.9	2283.3	2778.6	2606.0	2374.0	2330.7	2294.5	2412.5
60°	1301.4	1323.1	1367.2	1549.5	2120.3	2969.7	3221.0	2700.0	2661.4	2538.6	2656.6
62.5°	940.9	949.8	992.3	1074.2	1682.8	2981.0	3861.7	3125.5	3029.9	2776.2	2867.0
65°	757.9	772.3	785.2	784.4	996.3	2643.8	4287.2	3882.6	3594.3	3042.0	3098.2
67.5°	624.6	629.4	660.7	715.3	677.6	1633.0	4329.7	4988.9	4696.6	3400.0	3372.7
70°	521.8	523.5	554.8	652.7	648.7	843.0	3630.5	5625.5	5554.9	3987.7	3802.3
71°	456.8	470.5	505.0	631.8	645.5	720.2	3084.5	5659.2	5694.6	4218.1	3868.9
72.5°	359.7	359.7	408.6	579.7	651.1	664.8	2272.8	5475.4	5577.4	4479.9	3753.3
75°	211.1	209.5	236.0	403.8	665.6	662.3	1241.2	4550.5	4756.8	4527.2	3473.9
77.5°	118.8	121.2	135.7	224.8	528.3	635.9	712.9	3313.3	3556.6	3787.0	2937.6
80°	54.6	57.8	68.2	109.2	311.5	549.1	509.0	2151.6	2243.9	2276.1	1388.1
82.5°	14.5	16.1	20.9	41.7	120.4	374.1	376.5	900.8	930.5	537.9	297.9
85°	0.0	0.0	0.0	0.0	1.6	45.8	106.8	162.2	134.9	71.5	61.0
87.5°	0.0	0.0	0.0	0.0	0.0	1.6	2.4	3.2	3.2	3.2	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
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	7.0	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	8.0	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	10.0	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	26.0	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	47.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	70.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	95.3	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	123.4	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	153.2	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	185.6	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	218.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	254.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	288.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	321.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	425.1	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	458.1	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.1	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	513.9	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	574.7	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	598.6	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	614.4	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	628.9	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	646.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	663.3	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	678.6	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	686.2	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	693.2	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	700.5	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	705.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	708.3	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	711.2	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	715.5	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7	1271.7
2.5°	1270.9	1274.1	1279.7	1278.9	1277.3	1267.7	1273.3	1267.7	1266.9	1264.5	1265.3
5°	1274.1	1278.9	1282.1	1274.9	1262.9	1242.0	1234.8	1216.3	1204.3	1197.8	1194.6
7.5°	1278.9	1282.1	1280.5	1260.5	1229.2	1189.8	1156.1	1129.6	1101.5	1096.7	1095.1
10°	1278.9	1282.1	1269.3	1230.8	1177.0	1115.1	1063.8	1020.4	977.1	961.0	963.4
12.5°	1275.7	1277.3	1247.6	1185.8	1107.9	1023.6	951.4	879.9	824.5	790.8	784.4
15°	1273.3	1270.9	1218.7	1129.6	1026.0	921.7	812.5	716.1	650.3	606.1	600.5
17.5°	1273.3	1264.5	1184.2	1065.4	936.9	793.2	648.7	544.3	471.3	445.6	444.8
20°	1274.9	1255.6	1147.3	998.7	826.1	640.7	484.1	395.0	367.7	363.7	364.5
22.5°	1276.5	1243.6	1107.1	923.3	702.5	477.7	346.0	313.9	316.3	326.0	325.2
25°	1274.9	1227.5	1059.8	839.0	567.6	344.4	279.4	271.4	285.8	297.1	300.3
27.5°	1270.9	1206.7	1009.2	738.6	432.7	271.4	244.1	243.3	257.7	268.1	267.3
30°	1258.9	1181.8	950.6	632.6	312.3	231.2	220.0	222.4	232.0	241.7	241.7
32.5°	1246.0	1153.7	888.7	517.0	240.1	209.5	205.5	206.3	212.8	220.0	219.2
35°	1232.4	1126.4	825.3	396.6	210.3	196.7	195.1	194.3	196.7	198.3	198.3
37.5°	1224.3	1102.3	755.5	298.7	194.3	188.7	185.5	182.2	181.4	179.8	178.2
40°	1227.5	1086.2	688.0	231.2	184.7	179.8	175.0	170.2	167.0	165.4	164.6
42.5°	1250.0	1081.4	613.4	199.1	175.8	171.8	165.4	157.4	154.1	154.1	153.3
45°	1302.2	1095.9	543.5	183.0	167.8	163.0	152.5	146.9	144.5	145.3	145.3
47.5°	1384.1	1136.8	480.9	175.0	162.2	154.9	142.9	137.3	135.7	136.5	136.5
50°	1506.9	1213.9	416.7	167.8	155.8	146.1	135.7	129.3	126.8	126.8	126.8
52.5°	1686.8	1340.7	370.1	163.0	150.1	138.9	128.5	121.2	118.0	118.0	117.2
55°	1906.0	1506.1	352.4	159.8	142.9	132.5	121.2	114.0	109.2	107.6	108.4
57.5°	2146.0	1720.5	378.1	159.0	134.9	125.2	114.0	105.2	100.4	99.6	98.7
60°	2393.3	1933.2	452.0	154.9	128.5	116.4	106.0	97.9	93.1	91.5	90.7
62.5°	2606.8	2145.2	574.0	151.7	123.6	108.4	97.1	89.9	85.9	83.5	83.5
65°	2864.5	2388.5	760.3	155.8	121.2	100.4	89.1	82.7	79.5	77.1	77.1
67.5°	3216.2	2748.9	901.6	175.0	126.8	93.9	80.3	75.5	73.1	71.5	71.5
70°	3562.2	2951.3	627.0	205.5	141.3	88.3	72.3	69.0	67.4	65.8	65.8
71°	3557.4	2842.9	471.3	212.8	146.1	86.7	69.0	66.6	65.0	64.2	63.4
72.5°	3379.2	2584.4	338.0	206.3	143.7	81.9	65.0	62.6	61.0	61.0	60.2
75°	3030.7	2277.7	264.1	172.6	120.4	73.1	57.8	56.2	54.6	53.8	54.6
77.5°	2483.2	1822.5	207.9	136.5	91.5	60.2	51.4	49.0	48.2	47.4	48.2
80°	1140.8	794.0	151.7	106.0	68.2	48.2	43.4	42.6	41.7	40.9	40.9
82.5°	274.6	222.4	81.1	70.7	46.6	36.9	34.5	34.5	34.5	33.7	33.7
85°	60.2	60.2	32.9	32.9	28.1	25.7	27.3	27.3	27.3	25.7	25.7
87.5°	3.2	9.6	10.4	15.3	16.1	15.3	18.5	19.3	18.5	17.7	16.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)