

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-SA1F-740-U-T3-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401872 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-740-U-T3-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9700.9 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Short
BUG Rating: B2 - U5 - G2

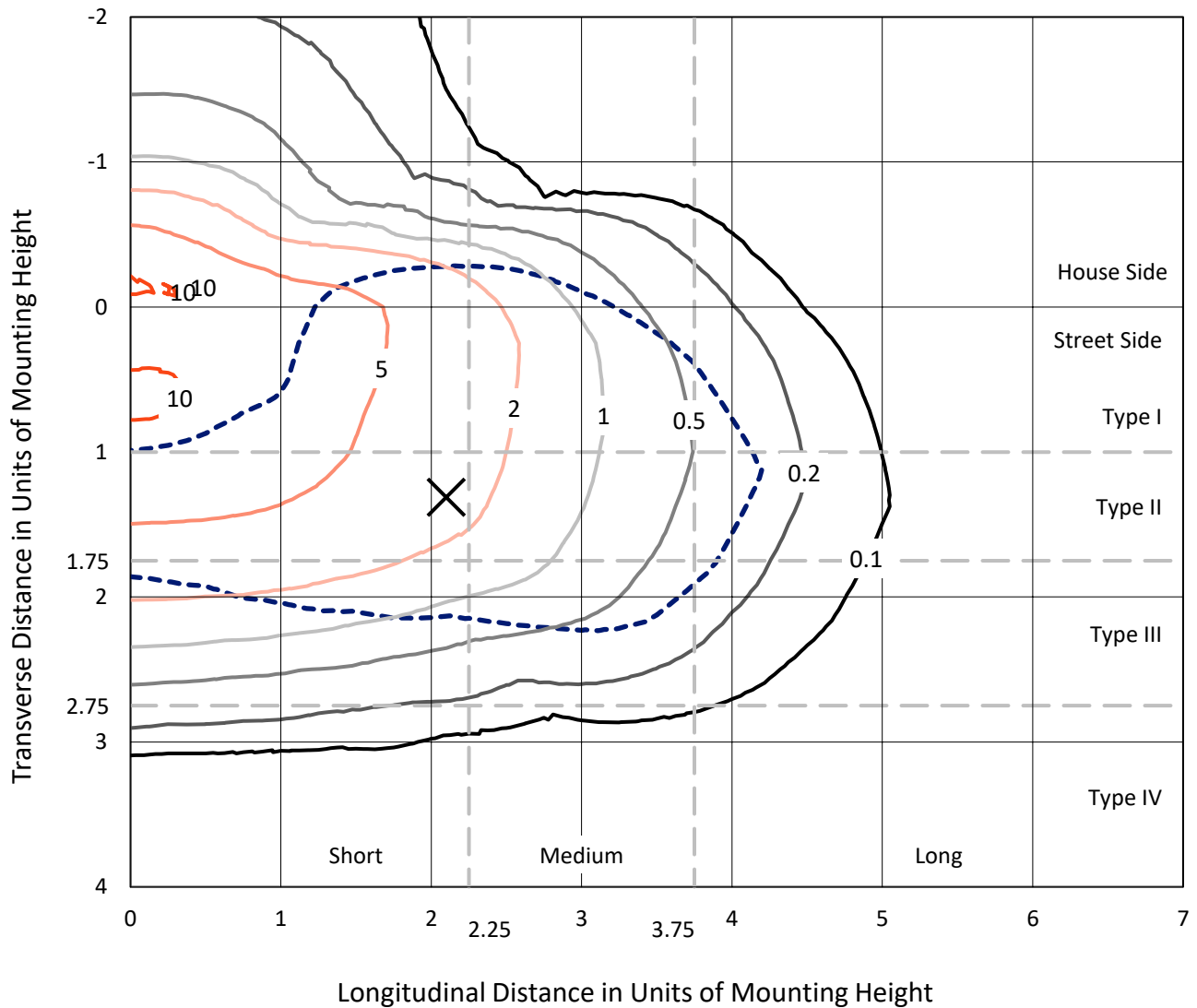
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

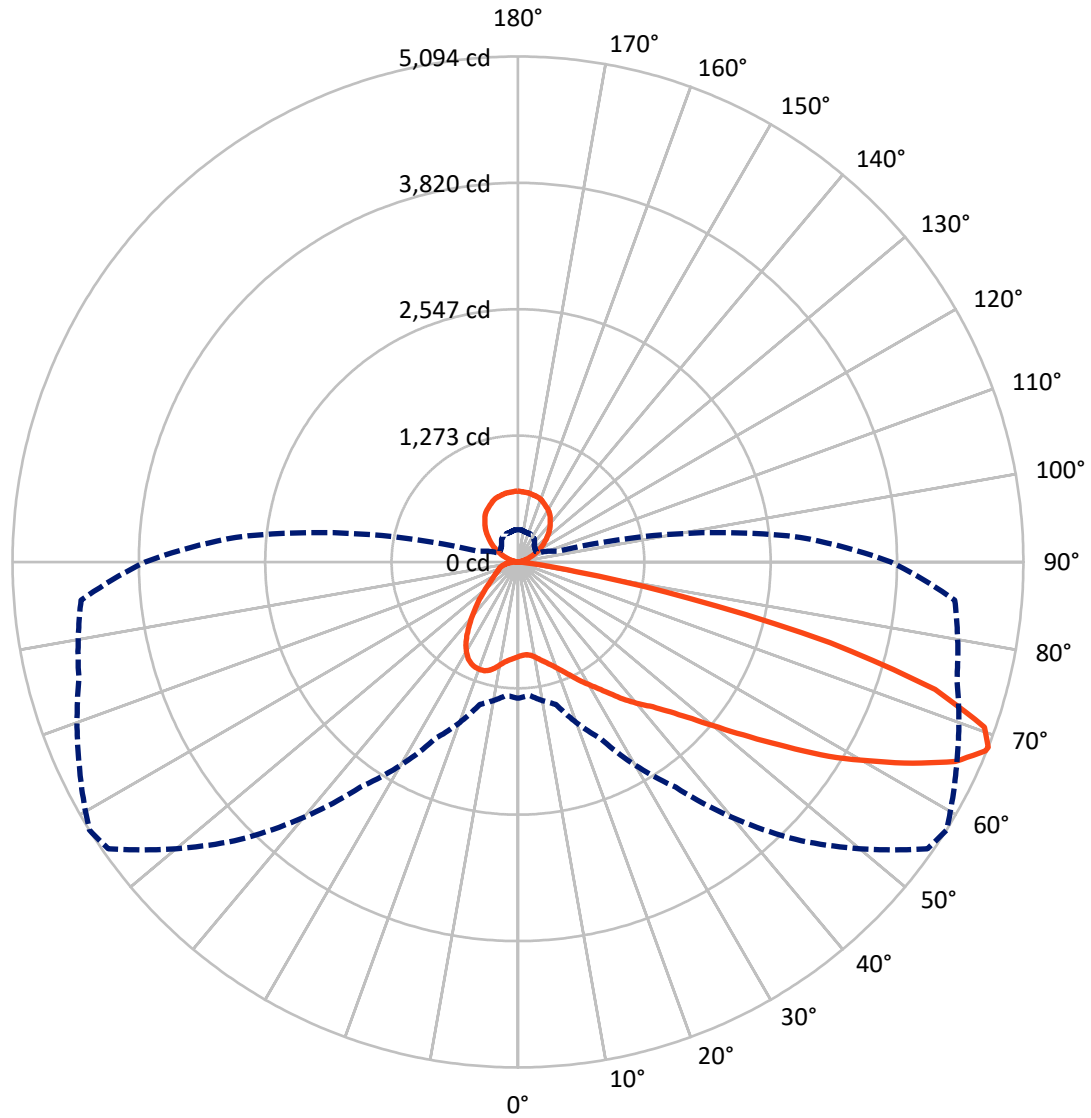
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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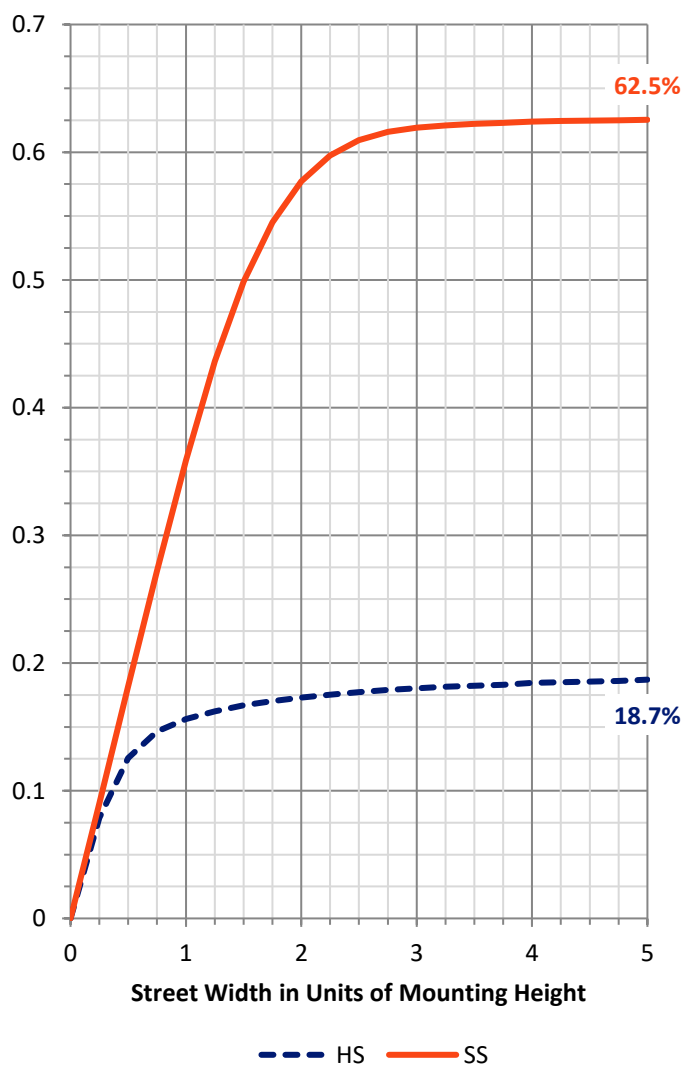
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1856.1	887.0	2743.0
	% Fixture	19.1	9.1	28.3
Street Side	Lumens	6070.9	887.0	6957.9
	% Fixture	62.6	9.1	71.7
Total	Lumens	7927.0	1773.9	9700.9
	% Fixture	81.7	18.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	1.0
10°-20°	306.7	3.2
20°-30°	551.5	5.7
30°-40°	810.2	8.4
40°-50°	1188.2	12.2
50°-60°	1776.1	18.3
60°-70°	2076.8	21.4
70°-80°	1023.9	10.6
80°-90°	99.9	1.0
90°-100°	8.4	0.1
100°-110°	58.7	0.6
110°-120°	169.9	1.8
120°-130°	279.4	2.9
130°-140°	344.6	3.6
140°-150°	352.5	3.6
150°-160°	297.0	3.1
160°-170°	195.5	2.0
170°-180°	67.8	0.7
0°-90°	7927.0	81.7
0°-180°	9700.9	100.0

Coefficient of Utilization



REPORT NUMBER:

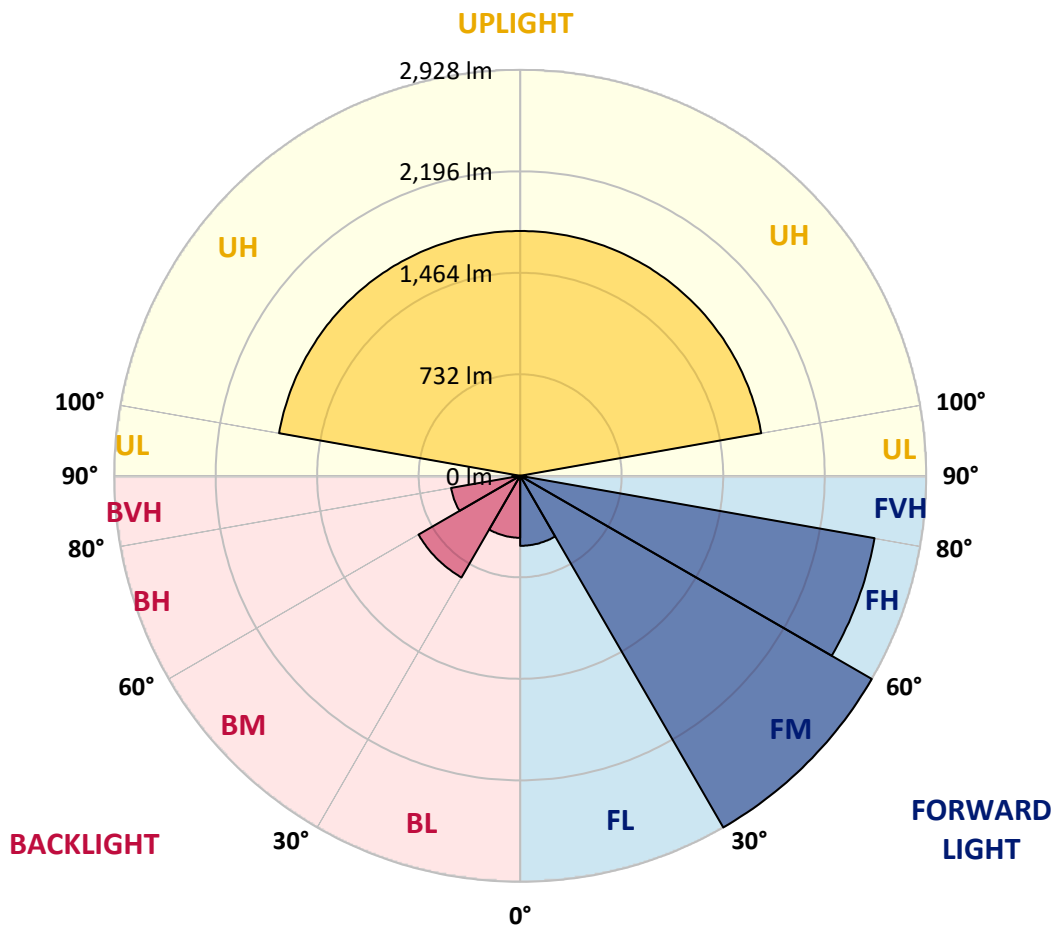
CATALOG NUMBER: ENT-SA1F-740-U-T3-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	505.0	5.2			
FM (30°-60°)	2927.9	30.2			
FH (60°-80°)	2595.0	26.7			G2/5000
FVH (80°-90°)	43.0	0.4			G1/100
BL (0°-30°)	446.9	4.6	B1/500		
BM (30°-60°)	846.5	8.7	B1/1000		
BH (60°-80°)	505.7	5.2	B2/1000		G2/1000
BVH (80°-90°)	56.9	0.6			G1/100
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	18.2		U5	

BUG Rating: B2-U5-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9
2.5°	928.7	928.7	932.0	933.1	935.3	937.5	939.7	940.9	944.2	948.6	950.8
5°	920.9	922.0	924.3	925.4	928.7	933.1	936.4	938.6	944.2	953.0	958.6
7.5°	938.6	942.0	943.1	944.2	945.3	948.6	948.6	949.7	955.2	964.1	971.8
10°	967.4	969.6	973.0	976.3	979.6	981.8	975.2	976.3	978.5	987.3	998.4
12.5°	1003.9	1003.9	1005.1	1009.5	1012.8	1019.4	1012.8	1012.8	1012.8	1020.6	1033.8
15°	1044.9	1042.7	1042.7	1047.1	1048.2	1052.7	1049.3	1049.3	1053.8	1061.5	1074.8
17.5°	1091.4	1094.7	1091.4	1089.2	1085.9	1088.1	1090.3	1092.5	1101.4	1113.5	1121.3
20°	1158.9	1164.4	1162.2	1153.4	1139.0	1132.3	1140.1	1144.5	1162.2	1176.6	1177.7
22.5°	1266.3	1263.0	1259.6	1244.1	1215.4	1197.7	1198.8	1205.4	1233.1	1255.2	1244.1
25°	1365.9	1369.2	1369.2	1347.1	1309.5	1272.9	1276.2	1279.6	1307.2	1327.2	1297.3
27.5°	1486.6	1484.3	1483.2	1453.3	1408.0	1372.5	1353.7	1362.6	1382.5	1390.3	1332.7
30°	1611.6	1620.5	1611.6	1569.6	1526.4	1481.0	1443.4	1441.2	1451.1	1450.0	1374.8
32.5°	1762.2	1754.4	1751.1	1702.4	1648.2	1588.4	1540.8	1533.0	1527.5	1519.8	1424.6
35°	1878.4	1888.4	1888.4	1846.3	1782.1	1723.4	1649.3	1642.6	1629.3	1603.9	1489.9
37.5°	2015.6	2013.4	2021.2	1972.5	1908.3	1851.8	1783.2	1764.4	1734.5	1696.9	1567.4
40°	2149.6	2155.1	2172.8	2114.2	2055.5	2011.2	1913.8	1879.5	1834.1	1799.8	1680.3
42.5°	2332.2	2340.0	2346.6	2297.9	2228.2	2188.3	2037.8	1994.6	1969.2	1962.5	1829.7
45°	2553.6	2566.9	2572.4	2528.1	2488.3	2393.1	2193.9	2154.0	2126.3	2155.1	2033.4
47.5°	2766.1	2759.5	2784.9	2783.8	2788.3	2674.2	2418.6	2358.8	2332.2	2405.3	2266.9
50°	2885.7	2895.6	2951.0	3007.4	3086.0	3004.1	2678.7	2618.9	2587.9	2678.7	2541.4
52.5°	2947.6	2960.9	3035.1	3193.4	3360.5	3321.8	2991.9	2925.5	2898.9	2987.5	2835.9
55°	2953.2	2960.9	3060.6	3306.3	3569.7	3581.9	3349.4	3286.4	3249.8	3307.4	3156.8
57.5°	2861.3	2838.1	3009.6	3322.9	3703.7	3853.1	3742.4	3697.0	3594.1	3656.1	3555.3
60°	2697.5	2720.7	2889.0	3254.3	3760.1	4064.5	4136.4	4067.8	3948.3	3973.7	3984.8
62.5°	2449.5	2479.4	2654.3	3094.9	3714.7	4243.8	4500.6	4466.3	4305.8	4292.5	4312.4
65°	2096.4	2078.7	2273.6	2746.2	3500.0	4303.6	4858.1	4843.8	4652.3	4496.2	4503.9
67.5°	1512.0	1495.4	1631.6	2119.7	2918.9	4081.1	5048.5	5080.6	4861.5	4585.8	4466.3
68°	1372.5	1349.3	1485.4	1959.2	2769.4	3952.7	5038.6	5093.9	4877.0	4580.3	4419.8
70°	790.3	752.7	884.4	1278.5	2038.9	3327.3	4834.9	4987.6	4840.4	4472.9	4115.4
72.5°	247.9	247.9	342.0	516.9	1000.6	2105.3	4136.4	4396.6	4427.6	4065.6	3420.3
75°	155.0	155.0	178.2	244.6	398.5	893.3	2853.6	3249.8	3517.7	3422.5	2493.8
77.5°	105.2	102.9	118.4	151.6	222.5	286.7	1432.3	1760.0	2151.8	2336.6	1458.9
80°	57.6	58.7	73.1	90.8	126.2	132.8	420.6	594.4	947.5	1110.2	553.4
82.5°	33.2	32.1	35.4	39.8	55.3	57.6	120.7	148.3	247.9	230.2	148.3
85°	0.0	1.1	1.1	1.1	2.2	5.5	15.5	23.2	37.6	52.0	36.5
87.5°	0.0	0.0	0.0	0.0	1.1	1.1	2.2	2.2	2.2	2.2	3.3
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	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.5	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	11.7	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	28.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	50.2	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	73.0	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.9	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.1	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	152.0	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	184.0	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	217.1	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	252.9	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	286.6	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	320.8	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.2	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	386.9	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	422.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	454.7	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.5	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	512.1	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	541.0	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	570.6	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	594.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	611.6	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	626.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	641.9	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	660.0	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	675.0	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	683.6	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	689.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	695.4	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	702.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	705.7	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	707.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	711.5	715.0	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°	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9	951.9
2.5°	953.0	956.4	961.9	966.3	968.5	966.3	974.1	973.0	975.2	975.2	977.4
5°	963.0	967.4	977.4	982.9	988.5	990.7	999.5	1001.7	1006.2	1008.4	1007.3
7.5°	977.4	982.9	995.1	1005.1	1012.8	1018.3	1032.7	1039.4	1046.0	1048.2	1050.4
10°	1003.9	1011.7	1025.0	1037.2	1048.2	1056.0	1068.1	1077.0	1083.6	1085.9	1088.1
12.5°	1039.4	1048.2	1064.8	1081.4	1093.6	1098.0	1096.9	1094.7	1094.7	1093.6	1094.7
15°	1080.3	1089.2	1110.2	1125.7	1126.8	1112.4	1092.5	1082.5	1080.3	1080.3	1081.4
17.5°	1127.9	1139.0	1152.3	1161.1	1140.1	1104.7	1081.4	1071.5	1069.3	1068.1	1065.9
20°	1182.2	1188.8	1193.2	1182.2	1135.7	1094.7	1068.1	1053.8	1042.7	1041.6	1037.2
22.5°	1239.7	1237.5	1232.0	1192.1	1123.5	1071.5	1034.9	1008.4	994.0	992.9	988.5
25°	1281.8	1272.9	1256.3	1194.3	1101.4	1033.8	981.8	939.7	920.9	912.1	914.3
27.5°	1309.5	1290.6	1261.9	1183.3	1062.6	976.3	903.2	847.9	820.2	815.8	819.1
30°	1342.7	1312.8	1266.3	1155.6	1007.3	895.5	800.3	744.9	729.4	721.7	723.9
32.5°	1382.5	1343.8	1280.7	1113.5	937.5	801.4	698.4	659.7	642.0	627.6	632.0
35°	1434.5	1385.8	1303.9	1053.8	849.0	701.8	625.4	590.0	557.9	542.4	543.5
37.5°	1495.4	1440.1	1323.8	984.0	752.7	626.5	562.3	520.2	480.4	450.5	445.0
40°	1592.8	1547.4	1340.4	906.5	660.8	564.5	500.3	452.7	415.1	385.2	381.9
42.5°	1755.5	1676.9	1341.6	813.6	582.2	511.4	449.4	397.4	355.3	329.9	328.7
45°	1947.0	1825.3	1318.3	713.9	513.6	458.3	404.0	345.3	321.0	304.4	302.2
47.5°	2173.9	1995.7	1267.4	621.0	454.9	406.2	357.5	322.1	304.4	292.2	292.2
50°	2432.9	2196.1	1216.5	541.3	398.5	364.2	331.0	312.1	298.9	287.8	286.7
52.5°	2725.2	2432.9	1199.9	460.5	352.0	325.4	322.1	304.4	293.3	285.6	283.4
55°	3073.8	2698.6	1215.4	397.4	315.5	309.9	316.6	302.2	294.4	282.3	278.9
57.5°	3476.7	2957.6	1198.8	344.2	290.0	295.5	309.9	302.2	295.5	280.0	275.6
60°	3856.4	3188.9	1085.9	300.0	265.7	277.8	301.1	292.2	282.3	278.9	276.7
62.5°	4060.1	3264.2	865.6	265.7	246.8	260.1	286.7	275.6	269.0	276.7	277.8
65°	4062.3	3179.0	636.5	240.2	231.3	244.6	272.3	269.0	273.4	291.1	294.4
67.5°	3836.5	2920.0	449.4	217.0	215.8	232.4	278.9	301.1	304.4	322.1	322.1
68°	3759.0	2855.8	417.3	213.6	212.5	232.4	284.5	306.6	308.8	325.4	324.3
70°	3334.0	2414.1	302.2	200.3	207.0	249.1	314.4	322.1	308.8	327.6	326.5
72.5°	2605.6	1785.4	225.8	186.0	197.0	245.7	316.6	308.8	288.9	293.3	287.8
75°	1761.1	1137.9	186.0	170.5	174.9	208.1	287.8	291.1	267.9	263.4	256.8
77.5°	922.0	533.5	150.5	151.6	156.1	180.4	256.8	264.5	243.5	230.2	228.0
80°	339.8	211.4	122.9	133.9	136.1	158.3	220.3	232.4	212.5	202.6	200.3
82.5°	124.0	105.2	101.8	117.3	115.1	135.0	192.6	201.5	180.4	170.5	164.9
85°	34.3	38.7	64.2	91.9	89.7	105.2	155.0	162.7	145.0	119.5	116.2
87.5°	2.2	7.7	25.5	54.2	56.5	65.3	111.8	122.9	107.4	88.6	87.4
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)