

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-SL4-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401496 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-SL4-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT
ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7126.9 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U5 - G2

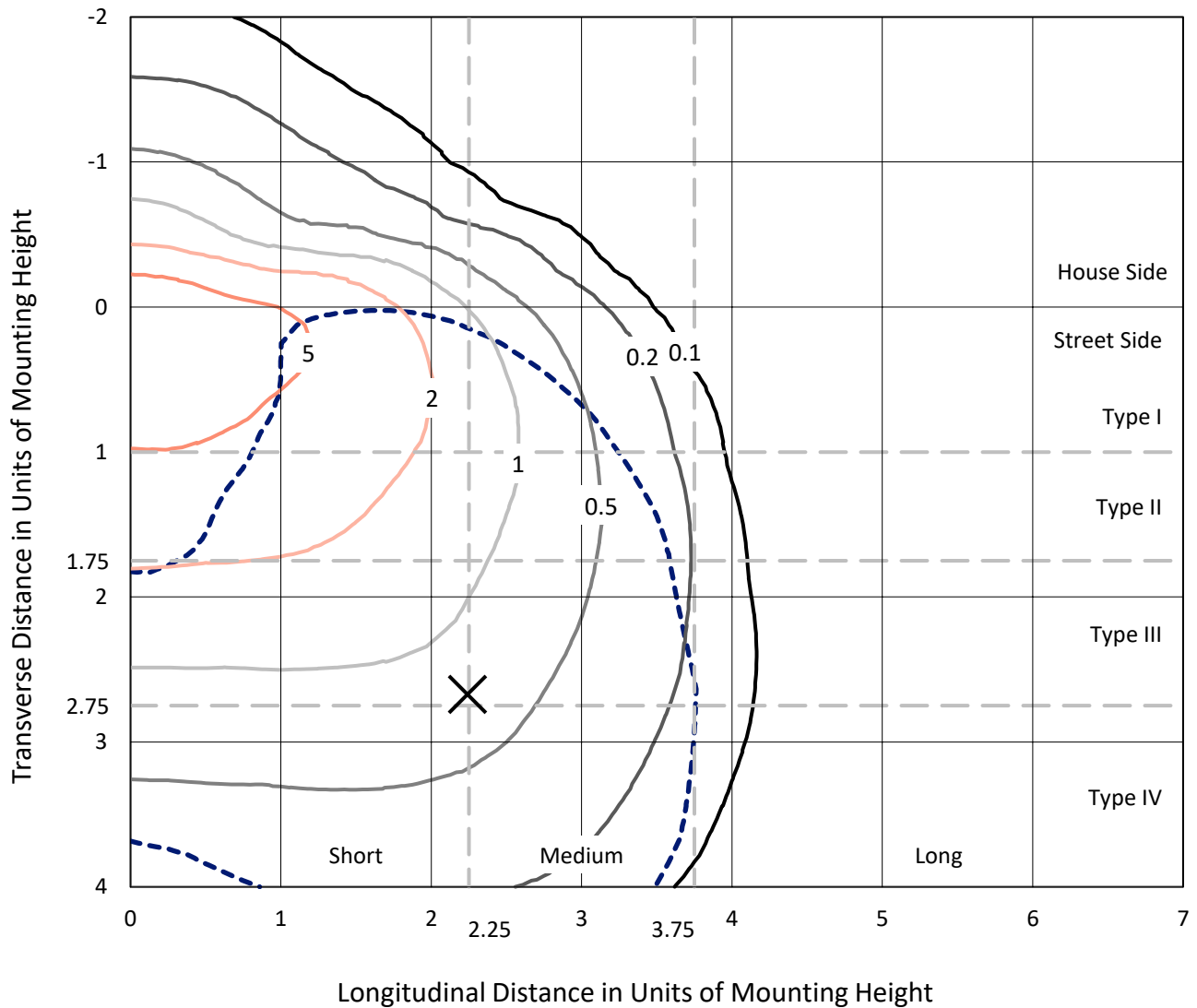
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

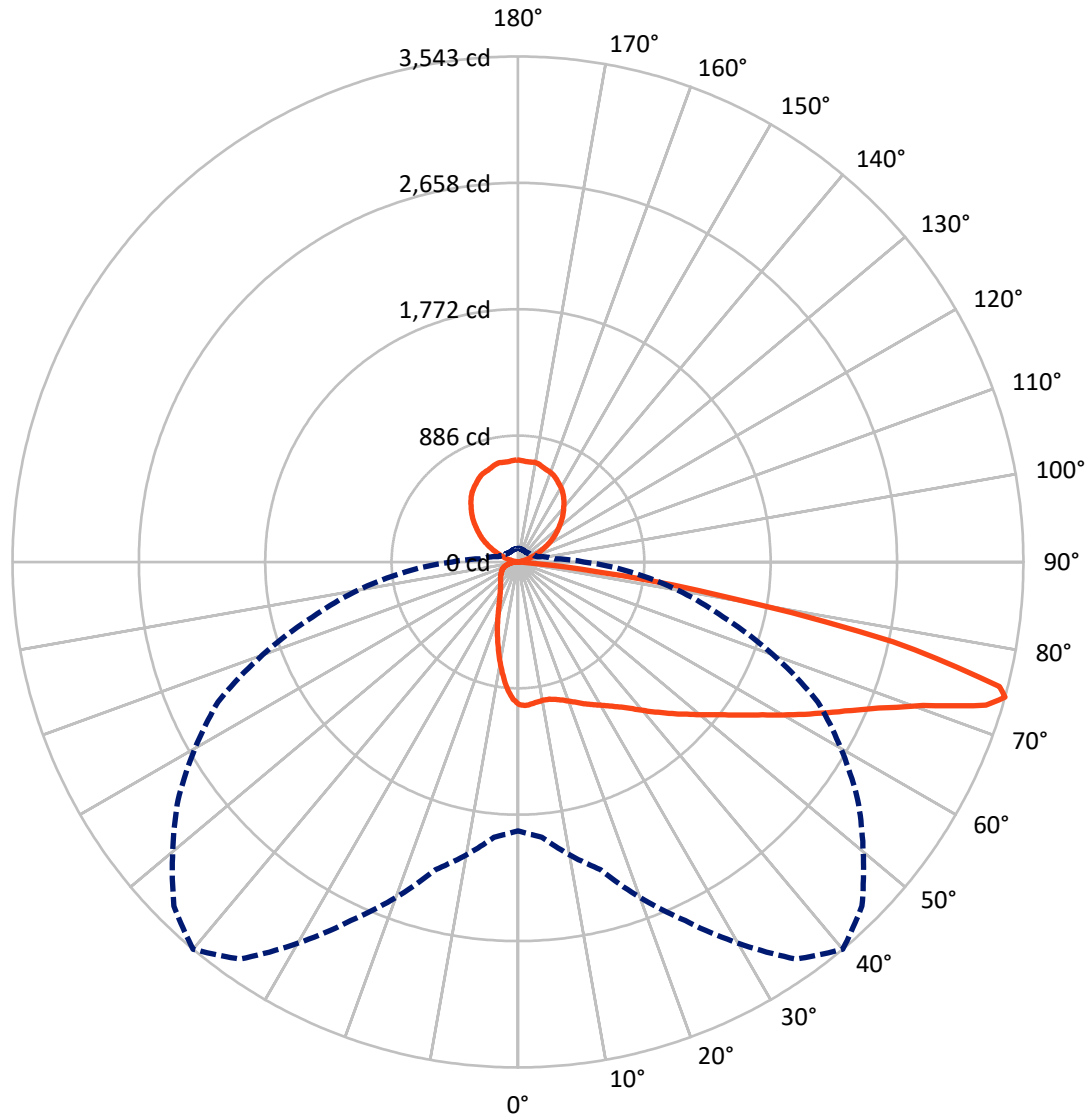
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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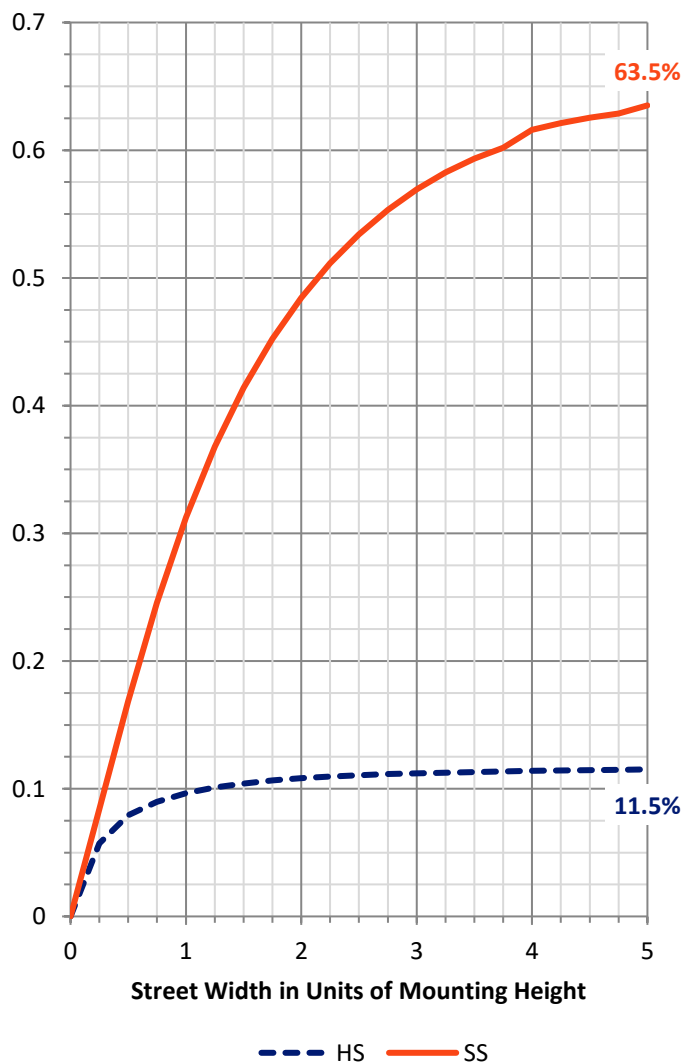
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	834.6	887.0	1721.6
	% Fixture	11.7	12.4	24.2
Street Side	Lumens	4518.4	887.0	5405.3
	% Fixture	63.4	12.4	75.8
Total	Lumens	5353.0	1773.9	7126.9
	% Fixture	75.1	24.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.2	1.2
10°-20°	227.2	3.2
20°-30°	348.4	4.9
30°-40°	503.2	7.1
40°-50°	723.9	10.2
50°-60°	999.6	14.0
60°-70°	1260.3	17.7
70°-80°	1092.8	15.3
80°-90°	109.4	1.5
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.4
120°-130°	279.4	3.9
130°-140°	344.6	4.8
140°-150°	352.5	4.9
150°-160°	297.0	4.2
160°-170°	195.5	2.7
170°-180°	67.8	1.0
0°-90°	5353.0	75.1
0°-180°	7126.9	100.0

Coefficient of Utilization

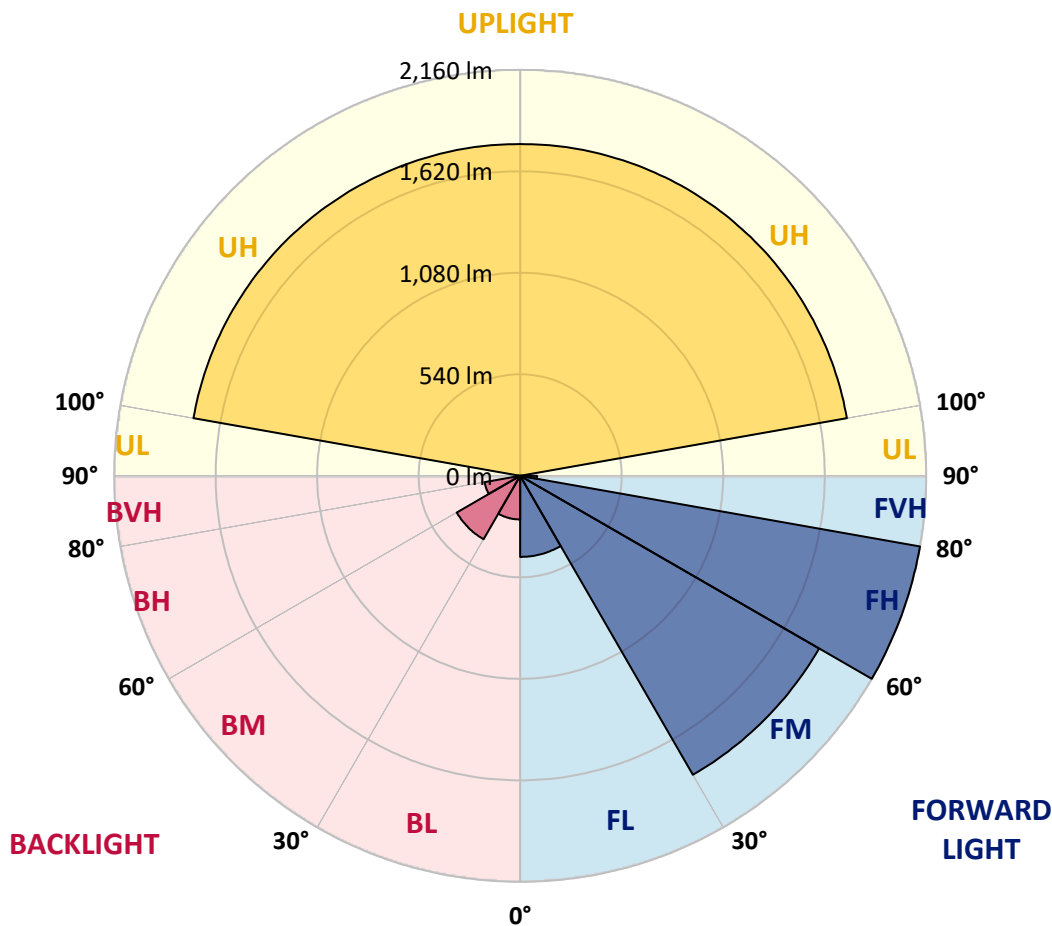


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	431.5	6.1			
FM (30°-60°)	1836.9	25.8			
FH (60°-80°)	2160.5	30.3			G2/5000
FVH (80°-90°)	89.4	1.3			G1/100
BL (0°-30°)	232.3	3.3	B1/500		
BM (30°-60°)	389.8	5.5	B1/1000		
BH (60°-80°)	192.6	2.7	B1/500		G1/500
BVH (80°-90°)	19.9	0.3			G1/100
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	24.8		U5	

BUG Rating: B1-U5-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2
2.5°	1012.0	1011.2	1013.7	1012.0	1009.6	1008.0	1007.2	1002.4	1000.8	996.0	989.6
5°	1008.0	1008.0	1008.0	1006.4	1001.6	1000.0	998.4	991.2	986.4	978.3	966.3
7.5°	994.4	996.8	996.0	995.2	991.2	989.6	987.2	978.3	971.9	959.9	944.6
10°	981.5	981.5	982.4	985.6	984.0	984.8	984.0	974.3	965.5	950.2	931.0
12.5°	963.1	966.3	971.1	979.9	984.0	987.2	987.2	979.9	970.3	951.9	929.4
15°	951.9	955.9	967.9	984.0	993.6	999.2	1000.8	992.0	979.9	961.5	936.6
17.5°	947.0	951.9	974.3	996.8	1013.7	1018.5	1019.3	1009.6	996.8	974.3	945.4
20°	951.9	957.5	987.2	1017.7	1037.7	1041.7	1043.3	1029.7	1013.7	992.0	954.3
22.5°	970.3	978.3	1011.2	1044.2	1065.0	1070.6	1069.0	1049.8	1033.7	1010.4	965.5
25°	1010.4	1015.3	1045.0	1080.3	1096.3	1102.7	1098.7	1077.1	1056.2	1032.9	981.5
27.5°	1057.0	1063.4	1094.7	1121.2	1131.6	1133.2	1129.2	1106.8	1083.5	1064.2	1006.4
30°	1113.2	1118.8	1144.5	1164.5	1165.3	1166.1	1163.7	1138.1	1118.8	1103.5	1042.5
32.5°	1172.6	1173.4	1199.9	1209.5	1203.1	1205.5	1203.1	1175.0	1161.3	1156.5	1089.9
35°	1227.1	1227.9	1255.2	1258.4	1248.0	1248.8	1253.6	1220.7	1220.7	1232.0	1160.5
37.5°	1279.3	1281.7	1305.8	1302.6	1298.6	1305.8	1312.2	1284.1	1300.2	1332.3	1246.4
40°	1318.6	1324.2	1356.4	1354.7	1363.6	1370.8	1376.4	1362.0	1387.7	1450.3	1352.3
42.5°	1344.3	1355.6	1401.3	1412.5	1427.8	1440.6	1450.3	1449.5	1494.4	1581.1	1464.7
45°	1370.8	1382.0	1443.0	1470.3	1496.0	1516.1	1534.5	1544.2	1615.6	1719.1	1595.5
47.5°	1402.9	1412.5	1480.8	1534.5	1567.4	1594.7	1627.6	1648.5	1739.2	1859.6	1716.7
50°	1451.9	1458.3	1519.3	1602.7	1644.5	1682.2	1723.1	1765.7	1872.4	2003.2	1822.6
52.5°	1515.3	1519.3	1564.2	1671.8	1738.4	1778.5	1839.5	1895.7	2008.0	2133.2	1909.3
55°	1587.5	1584.3	1618.8	1754.4	1832.3	1892.5	1967.9	2024.9	2150.9	2246.4	1978.3
57.5°	1659.7	1657.3	1684.6	1833.9	1951.1	2021.7	2099.5	2159.7	2281.7	2352.3	2028.1
60°	1728.7	1719.9	1758.4	1927.0	2094.7	2175.8	2245.6	2301.0	2405.3	2428.6	2054.6
62.5°	1789.7	1789.7	1845.9	2041.8	2266.5	2339.5	2394.9	2431.8	2523.3	2484.8	2044.2
65°	1845.9	1853.1	1933.4	2170.2	2444.6	2519.3	2567.4	2581.9	2640.5	2487.2	1955.9
67.5°	1909.3	1920.6	2033.7	2320.2	2650.1	2729.6	2771.3	2766.5	2723.9	2450.3	1766.5
70°	1971.1	1989.6	2158.1	2513.7	2903.7	3011.3	3057.0	2962.3	2767.3	2245.6	1467.1
72.5°	2016.1	2047.4	2260.1	2707.1	3267.3	3432.6	3414.2	3016.1	2564.2	1850.7	1110.0
74°	1884.4	1936.6	2232.0	2773.7	3398.1	3543.4	3410.9	2909.3	2319.4	1490.4	786.5
75°	1731.2	1781.7	2089.9	2747.2	3423.0	3488.0	3245.6	2721.5	2080.3	1154.9	513.6
77.5°	1281.7	1321.0	1605.2	2166.2	2707.1	2687.8	2416.6	1844.3	1024.9	348.3	216.7
80°	565.8	595.5	792.1	1089.9	1466.3	1460.7	1360.4	847.5	330.7	182.2	132.4
82.5°	170.9	170.1	227.9	317.8	557.0	567.4	482.3	292.1	158.1	75.4	64.2
85°	0.8	0.8	0.8	0.8	2.4	20.9	17.7	56.2	28.9	13.6	23.3
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0
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	6.1	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	16.9	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	34.2	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	56.8	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	82.4	90.0	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	110.4	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	141.7	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	175.0	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	208.2	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	245.5	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	280.3	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	314.6	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.3	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.8	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	446.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	476.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	505.4	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	535.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.1	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.7	588.2	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	643.4	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.3	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	677.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	702.2	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	707.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	706.3	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.0	711.0	709.9	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°	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2	999.2
2.5°	985.6	984.8	982.4	976.7	972.7	960.7	964.7	956.7	955.9	954.3	953.5
5°	960.7	957.5	947.8	936.6	923.8	903.7	897.3	885.2	878.0	875.6	877.2
7.5°	935.0	927.8	909.3	885.2	859.6	829.9	808.2	791.3	779.3	775.3	769.7
10°	918.9	906.9	875.6	835.5	793.7	752.0	715.9	691.0	672.6	658.1	658.1
12.5°	913.3	897.3	851.5	792.9	732.8	673.4	621.2	588.3	557.0	541.7	539.3
15°	916.5	894.1	831.5	754.4	674.2	597.1	532.9	485.6	455.9	437.4	443.8
17.5°	919.8	891.7	810.6	713.5	617.2	528.1	453.5	399.7	363.6	353.9	349.9
20°	923.8	886.8	784.1	669.3	558.6	461.5	382.8	328.3	301.0	288.9	288.9
22.5°	929.4	880.4	756.8	620.4	498.4	396.5	323.4	282.5	260.8	253.6	253.6
25°	937.4	876.4	728.7	571.4	441.4	345.1	284.1	252.0	240.8	236.0	235.2
27.5°	952.7	877.2	701.5	521.7	385.2	301.8	256.0	235.2	226.3	223.9	223.1
30°	975.9	885.2	672.6	468.7	335.5	268.9	236.8	222.3	216.7	215.1	215.1
32.5°	1008.0	899.7	648.5	421.4	298.6	242.4	220.7	211.1	207.9	206.3	207.1
35°	1057.8	924.6	619.6	378.0	264.0	223.9	207.9	200.6	198.2	198.2	199.0
37.5°	1122.8	963.1	591.5	337.9	240.8	207.9	195.8	191.8	189.4	191.0	191.8
40°	1204.7	1008.8	565.0	301.8	221.5	195.0	185.4	182.2	181.4	183.0	184.6
42.5°	1292.9	1064.2	540.9	272.1	206.3	184.6	176.6	175.0	174.2	175.0	177.4
45°	1395.7	1127.6	520.9	249.6	195.0	175.8	168.5	166.9	166.1	167.7	169.3
47.5°	1490.4	1184.6	504.8	234.4	185.4	169.3	162.1	159.7	159.7	159.7	161.3
50°	1567.4	1229.5	495.2	223.9	177.4	162.1	155.7	153.3	152.5	151.7	152.5
52.5°	1634.0	1263.3	492.0	217.5	170.9	155.7	149.3	147.7	146.1	144.5	145.3
55°	1678.2	1280.1	485.6	211.9	165.3	148.5	142.9	141.3	139.6	137.2	137.2
57.5°	1703.9	1278.5	471.1	208.7	162.1	142.1	136.4	136.4	134.8	130.8	131.6
60°	1706.3	1250.4	435.8	204.7	159.7	135.6	129.2	130.8	130.8	127.6	127.6
62.5°	1665.3	1176.6	367.6	194.2	156.5	130.8	123.6	127.6	129.2	126.0	126.0
65°	1539.3	1002.4	295.3	179.0	148.5	125.2	117.2	125.2	130.0	127.6	126.8
67.5°	1297.8	793.7	244.0	162.1	139.6	118.0	110.8	121.2	127.6	127.6	126.8
70°	1041.7	602.7	200.6	143.7	126.0	109.2	103.5	112.4	118.0	119.6	119.6
72.5°	717.5	368.4	162.9	123.6	110.8	98.7	93.9	99.5	102.7	105.9	105.1
74°	463.1	258.4	142.9	112.4	101.1	90.7	88.3	90.7	92.3	95.5	96.3
75°	309.8	211.1	133.2	104.3	95.5	85.1	83.5	85.9	87.5	89.9	89.9
77.5°	178.2	150.9	107.5	86.7	79.5	73.0	72.2	73.0	75.4	77.8	77.0
80°	123.6	114.8	85.1	67.4	62.6	59.4	60.2	61.0	65.0	65.8	65.0
82.5°	74.6	82.7	60.2	50.6	47.4	46.5	49.0	50.6	53.8	54.6	53.8
85°	29.7	39.3	29.7	28.1	31.3	34.5	38.5	40.9	42.5	42.5	42.5
87.5°	0.0	5.6	7.2	11.2	17.7	20.9	27.3	29.7	31.3	30.5	29.7
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)