

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-T4FT-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401516 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-T4FT-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7179.9 lumens
Efficiency: N/A
Efficacy: 120.1 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

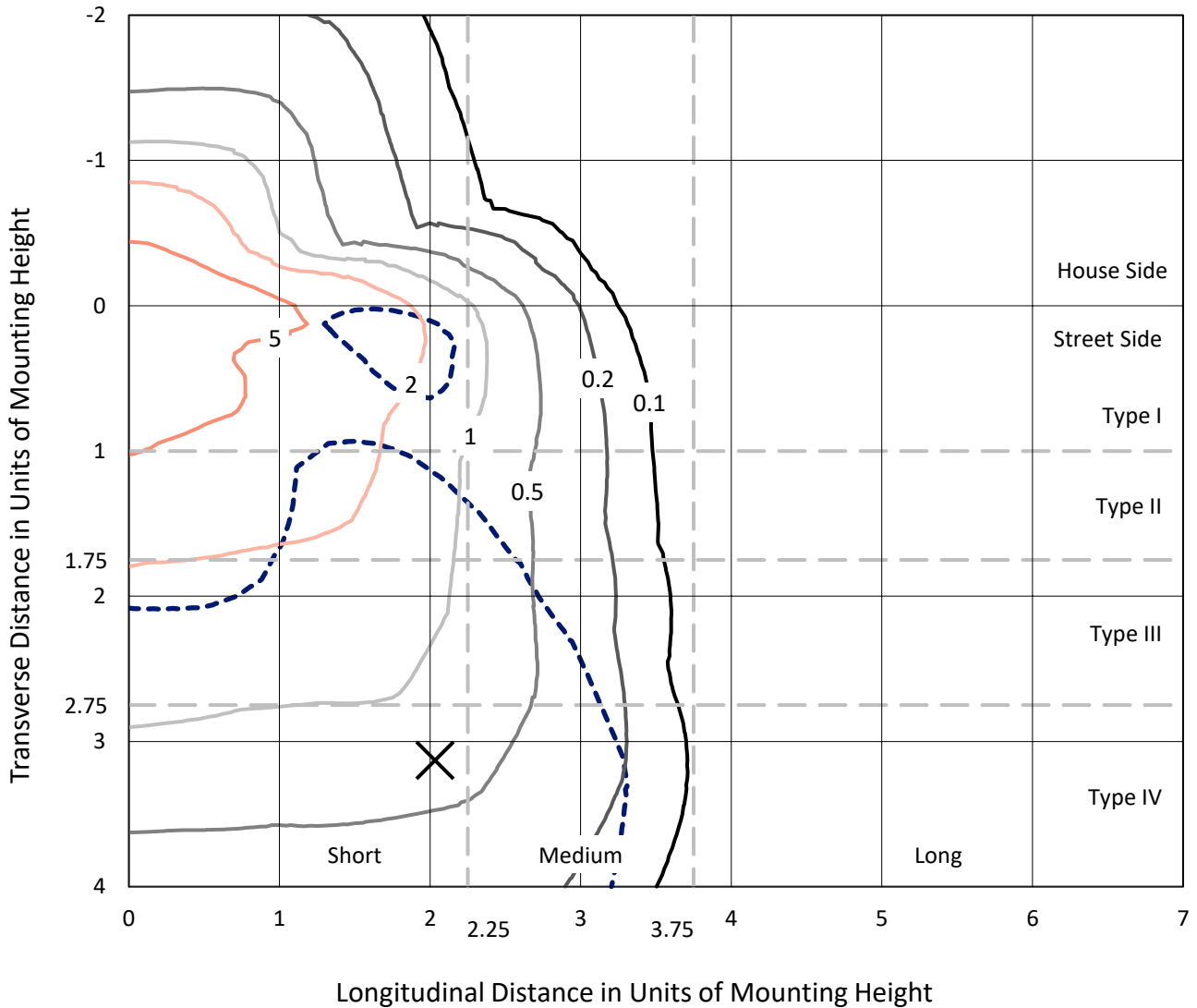
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

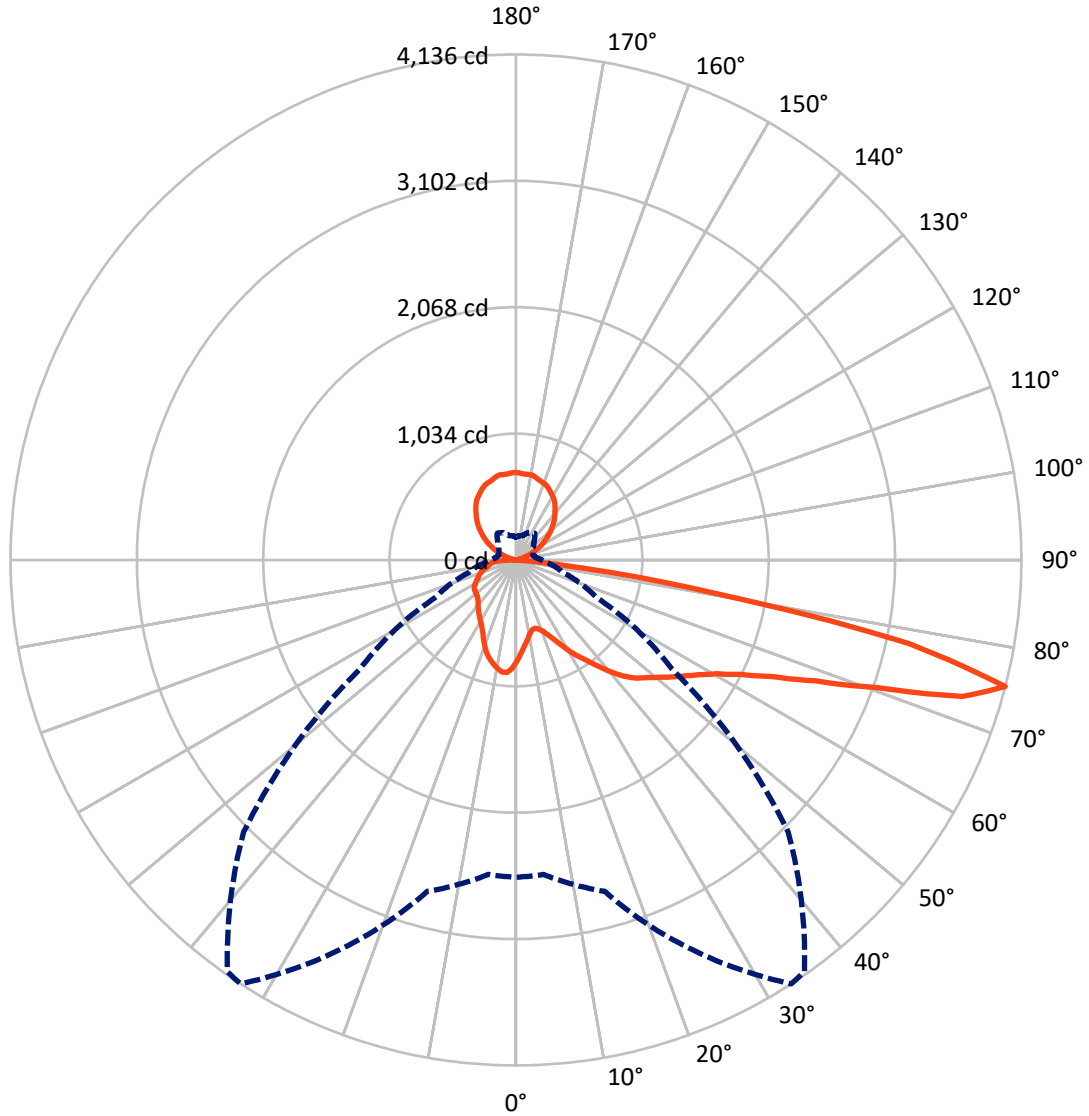
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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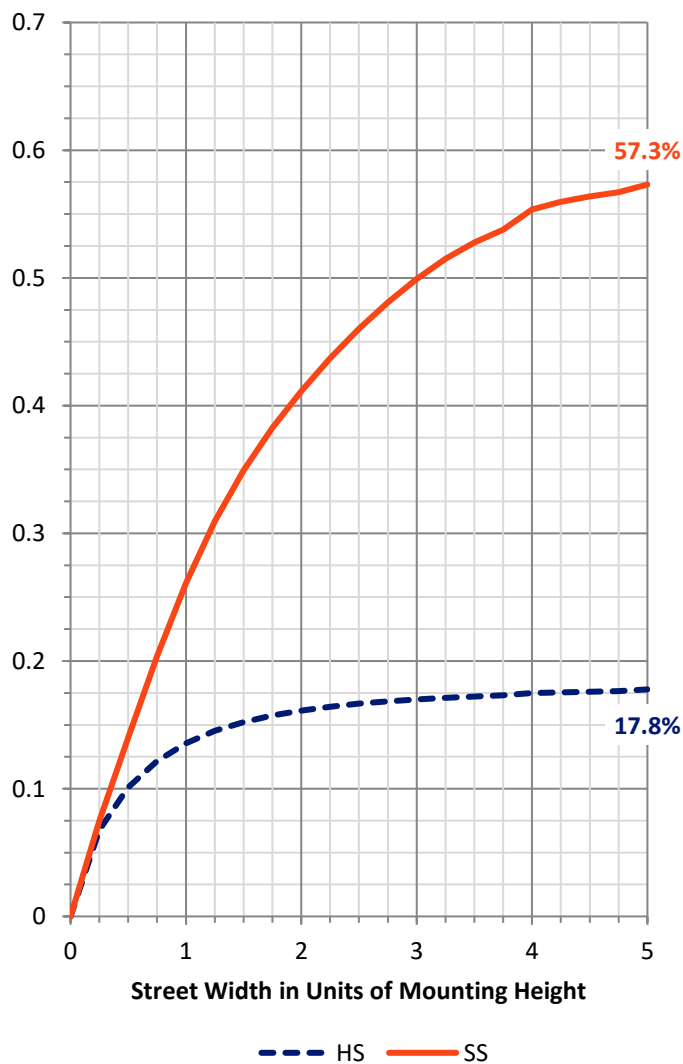
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1313.3	887.0	2200.2
	% Fixture	18.3	12.4	30.6
Street Side	Lumens	4092.7	887.0	4979.7
	% Fixture	57.0	12.4	69.4
Total	Lumens	5406.0	1773.9	7179.9
	% Fixture	75.3	24.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.1
10°-20°	217.7	3.0
20°-30°	361.9	5.0
30°-40°	539.9	7.5
40°-50°	754.2	10.5
50°-60°	1006.8	14.0
60°-70°	1248.3	17.4
70°-80°	1079.3	15.0
80°-90°	120.6	1.7
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	4.1
160°-170°	195.5	2.7
170°-180°	67.8	0.9
0°-90°	5406.0	75.3
0°-180°	7179.9	100.0

Coefficient of Utilization

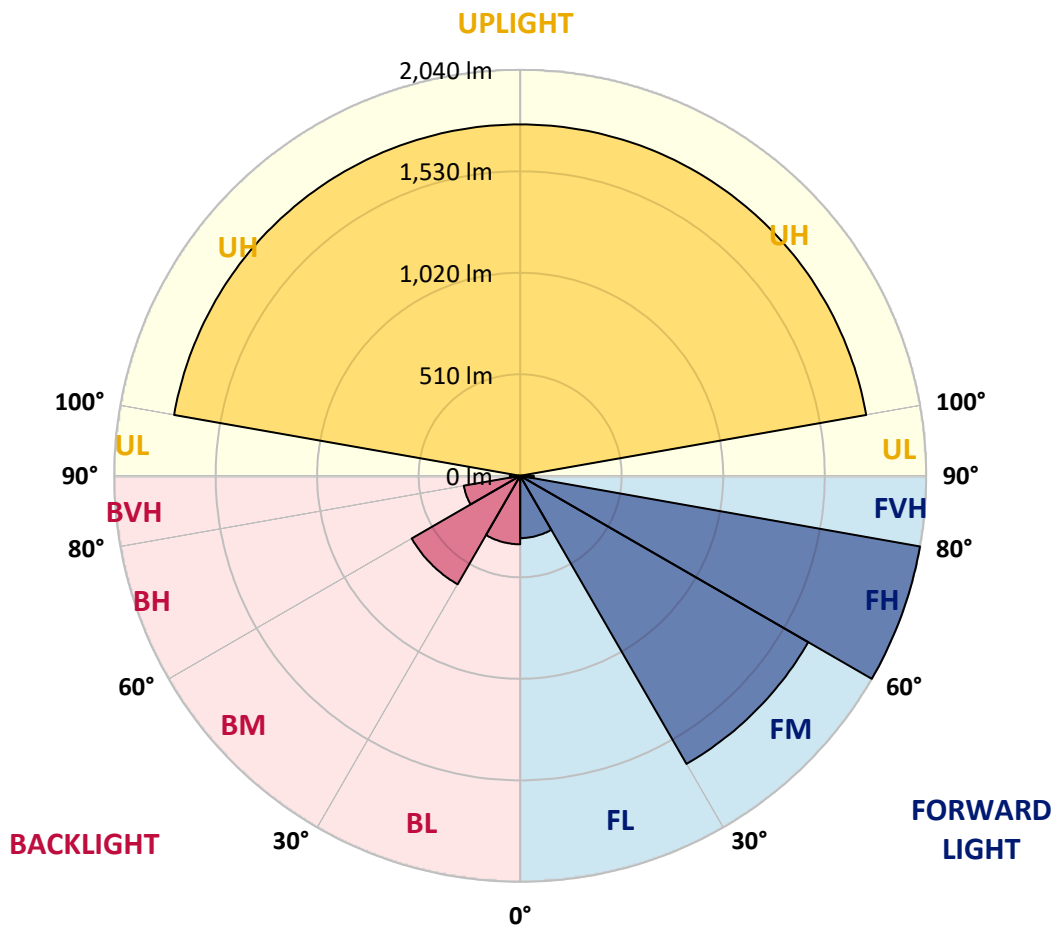


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	313.0	4.4			
FM	(30°-60°)	1671.6	23.3			
FH	(60°-80°)	2040.0	28.4			G2/5000
FVH	(80°-90°)	68.2	0.9			G1/100
BL	(0°-30°)	343.9	4.8	B1/500		
BM	(30°-60°)	629.3	8.8	B1/1000		
BH	(60°-80°)	287.6	4.0	B1/500		G1/500
BVH	(80°-90°)	52.5	0.7			G1/100
UL	(90°-100°)	8.4	0.1		U1/10	
UH	(100°-180°)	1765.5	24.6		U5	

BUG Rating: B1-U5-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4
2.5°	751.3	752.9	757.7	763.3	766.6	766.6	775.4	785.8	798.7	809.9	821.9
5°	688.7	691.1	695.1	702.3	711.2	712.8	730.4	748.9	772.2	797.1	821.1
7.5°	626.9	631.7	639.7	649.4	663.0	666.2	691.1	716.0	748.1	785.8	825.2
10°	579.5	582.7	586.8	600.4	617.3	622.9	655.8	687.1	731.2	777.8	830.0
12.5°	566.7	566.7	566.7	573.1	586.8	591.6	626.1	666.2	716.0	772.2	837.2
15°	585.2	584.3	575.5	570.7	578.7	582.7	612.4	651.8	708.0	773.8	850.8
17.5°	626.9	624.5	603.6	587.6	593.2	595.6	614.8	648.6	705.6	780.2	870.9
20°	681.5	675.9	643.7	619.7	618.9	620.5	634.9	658.2	709.6	791.4	892.6
22.5°	753.7	750.5	703.1	666.2	659.8	659.8	666.2	680.7	720.0	804.3	922.3
25°	846.8	838.0	781.0	731.2	716.8	712.8	712.0	712.0	738.5	823.5	959.2
27.5°	942.3	931.9	874.1	806.7	787.4	780.2	767.4	757.7	762.5	844.4	1003.3
30°	1028.2	1013.8	964.8	895.0	866.1	854.8	831.6	811.5	798.7	873.3	1061.9
32.5°	1075.6	1070.0	1036.3	972.8	939.9	935.1	896.6	870.1	847.6	911.0	1140.6
35°	1139.0	1131.8	1110.1	1057.9	1018.6	1006.6	977.7	946.4	910.2	961.6	1240.1
37.5°	1197.6	1193.6	1185.6	1149.4	1107.7	1095.7	1069.2	1036.3	987.3	1036.3	1351.7
40°	1257.0	1252.2	1249.0	1236.1	1206.4	1198.4	1185.6	1147.0	1081.2	1118.1	1461.7
42.5°	1343.7	1333.2	1299.5	1298.7	1301.1	1307.6	1308.4	1265.8	1183.9	1220.1	1558.0
45°	1456.9	1428.0	1352.5	1350.1	1378.2	1395.1	1436.0	1399.9	1290.7	1324.4	1665.6
47.5°	1514.6	1484.9	1407.1	1402.3	1439.2	1464.1	1565.2	1529.9	1401.5	1441.6	1777.1
50°	1542.7	1523.5	1455.3	1470.5	1508.2	1532.3	1688.0	1659.9	1516.3	1568.4	1917.6
52.5°	1582.1	1550.0	1501.8	1533.9	1590.1	1615.0	1798.0	1793.2	1613.4	1706.5	2071.7
55°	1568.4	1551.6	1560.4	1603.7	1674.4	1711.3	1908.8	1908.8	1712.1	1854.2	2224.2
57.5°	1579.7	1568.4	1641.5	1680.0	1769.1	1822.1	2042.0	2006.7	1795.6	1977.8	2327.0
60°	1675.2	1643.1	1700.1	1776.3	1891.1	1942.5	2194.5	2109.4	1863.8	2084.5	2345.4
62.5°	1843.7	1818.1	1823.7	1911.2	2059.7	2119.1	2345.4	2200.1	1909.6	2129.5	2276.4
65°	2123.1	2111.0	2042.0	2095.0	2299.7	2353.4	2534.0	2278.8	1896.7	2095.8	2094.2
67.5°	2498.7	2450.6	2357.5	2404.8	2640.8	2695.4	2761.2	2308.5	1813.2	1894.3	1683.2
70°	2810.2	2770.0	2727.5	2851.9	3123.2	3152.9	2998.0	2280.4	1610.2	1482.5	1128.6
72.5°	3008.4	2979.5	3018.9	3384.9	3819.1	3762.9	3231.6	2083.7	1256.2	907.8	564.3
75°	2596.7	2583.0	2807.8	3550.2	4136.2	4115.3	3150.5	1559.6	728.8	399.7	256.9
77.5°	1306.0	1454.4	1691.2	2518.8	3291.0	3295.0	2295.7	749.7	306.6	223.9	176.6
80°	367.6	372.4	564.3	1038.7	1643.1	1750.6	868.5	254.4	175.0	167.0	131.6
82.5°	87.5	81.1	144.5	307.4	551.4	573.9	260.9	91.5	97.9	104.3	81.1
85°	0.8	0.8	0.8	0.8	0.8	1.6	9.6	9.6	23.3	29.7	23.3
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	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	9.0	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	11.9	12.3	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	25.8	27.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	46.6	49.1	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	71.6	74.7	90.0	97.2	96.2	92.1	89.0
110°	67.5	69.6	75.7	89.0	101.2	104.3	116.6	122.8	123.8	121.7	118.7



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CATALOG NUMBER: ENT-SA1D-740-U-T4FT-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
112.5°	101.3	101.3	108.4	123.8	134.4	137.1	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	170.0	171.9	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	205.6	206.6	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	241.6	242.4	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	276.4	277.2	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	310.8	312.0	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	345.6	346.8	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	377.7	378.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	412.7	413.3	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	444.4	445.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	473.8	474.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	501.9	502.3	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	532.4	533.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.0	562.6	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.2	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	623.8	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	643.9	644.5	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.4	660.8	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.2	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	677.0	676.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	689.0	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.4	703.8	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.7	708.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	706.4	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	707.7	706.9	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.4	713.0	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°	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4	828.4
2.5°	827.6	835.6	848.4	859.7	869.3	876.5	887.8	889.4	892.6	894.2	895.8
5°	834.8	850.0	874.1	895.0	909.4	913.4	923.1	922.3	923.1	923.1	922.3
7.5°	844.4	865.3	899.0	922.3	930.3	927.9	925.5	916.7	909.4	906.2	902.2
10°	856.5	880.5	919.9	936.7	932.7	919.9	904.6	888.6	875.7	869.3	867.7
12.5°	868.5	899.8	936.7	941.5	925.5	902.2	876.5	858.9	842.0	833.2	833.2
15°	888.6	923.1	950.4	940.7	911.8	882.1	846.8	822.7	803.5	791.4	790.6
17.5°	912.6	949.6	964.8	936.7	895.0	853.2	810.7	779.4	754.5	742.5	735.3
20°	942.3	976.9	972.0	923.9	870.1	818.7	765.8	728.0	702.3	689.5	687.1
22.5°	976.1	1004.9	974.4	903.0	836.4	770.6	712.8	675.1	658.2	648.6	649.4
25°	1017.0	1039.5	975.3	878.1	788.2	707.2	656.6	638.9	636.5	632.5	634.1
27.5°	1068.4	1075.6	972.0	844.4	726.4	640.5	610.8	618.1	624.5	622.1	623.7
30°	1129.4	1118.9	964.8	795.5	650.2	579.5	581.1	597.2	606.0	603.6	604.4
32.5°	1200.8	1162.3	951.2	736.1	577.9	542.6	555.5	571.5	580.3	580.3	581.1
35°	1281.1	1214.4	924.7	659.0	527.4	520.1	531.4	544.2	549.8	546.6	549.0
37.5°	1365.4	1259.4	882.1	573.1	489.6	502.5	508.9	512.1	511.3	506.5	504.1
40°	1444.0	1294.7	805.9	488.0	458.3	484.0	487.2	478.4	468.0	459.1	453.5
42.5°	1504.2	1313.2	699.9	426.2	428.6	463.1	465.6	447.9	427.8	414.2	411.0
45°	1566.0	1319.6	594.8	376.5	396.5	442.3	448.7	424.6	397.3	381.3	378.9
47.5°	1636.7	1335.7	491.2	341.9	369.2	427.8	438.3	408.6	378.1	354.0	350.0
50°	1731.4	1366.2	413.4	315.5	350.0	420.6	435.1	395.7	357.2	330.7	327.5
52.5°	1851.8	1411.1	341.1	294.6	334.7	409.4	430.2	382.9	341.9	309.8	305.0
55°	1955.3	1428.0	294.6	276.9	318.7	395.7	426.2	378.1	325.1	289.0	283.3
57.5°	2002.7	1379.8	261.7	259.3	301.8	378.9	418.2	362.0	306.6	278.5	273.7
60°	1981.0	1260.2	236.8	243.2	282.5	357.2	397.3	346.0	293.8	270.5	265.7
62.5°	1884.7	1122.1	218.3	228.0	260.9	329.9	373.2	331.5	282.5	261.7	255.3
65°	1715.3	970.4	204.7	214.3	241.6	303.4	354.0	314.6	269.7	248.8	243.2
67.5°	1399.9	772.2	190.2	200.7	225.6	281.7	336.3	301.0	255.3	241.6	236.8
70°	926.3	519.3	176.6	187.0	209.5	260.9	317.9	286.6	241.6	232.8	226.4
72.5°	425.4	279.3	162.1	172.6	191.0	237.6	294.6	264.9	223.1	217.5	207.9
75°	210.3	171.8	144.5	154.1	168.6	209.5	267.3	246.4	206.3	196.7	185.4
77.5°	153.3	128.4	124.4	134.0	146.1	185.4	238.4	227.2	189.4	175.8	169.4
80°	114.0	99.5	104.3	114.0	125.2	167.8	223.1	212.7	175.0	161.3	156.5
82.5°	69.8	66.6	80.3	91.5	105.2	154.1	212.7	194.2	157.3	144.5	138.9
85°	20.1	24.1	40.9	59.4	74.6	124.4	198.3	170.2	132.4	110.8	106.8
87.5°	0.0	2.4	12.8	27.3	44.1	82.7	152.5	133.2	101.1	81.9	78.7
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
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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)