

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-T3-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401512 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-T3-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7521.9 lumens
Efficiency: N/A
Efficacy: 125.8 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: B1 - U5 - G2

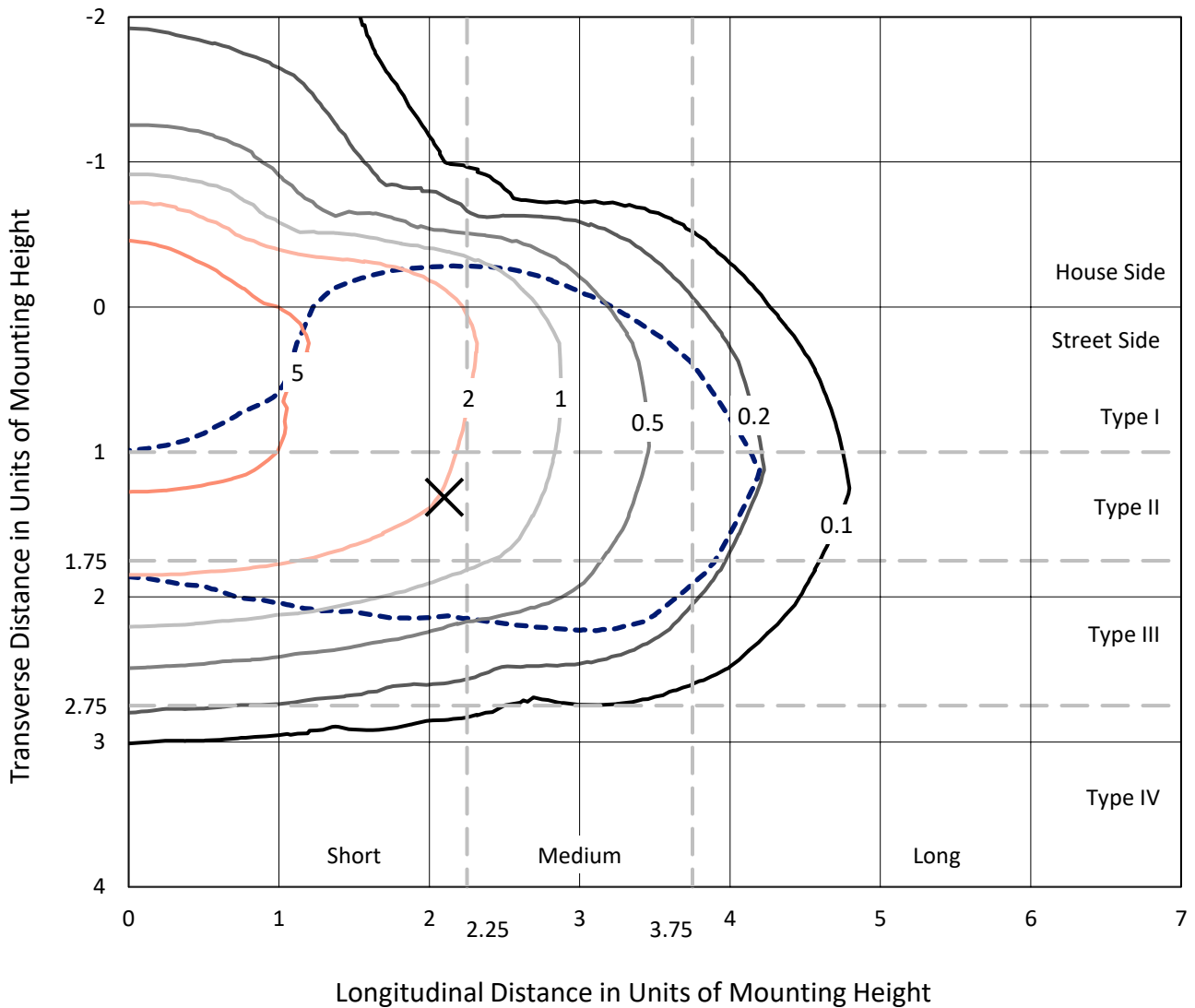
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

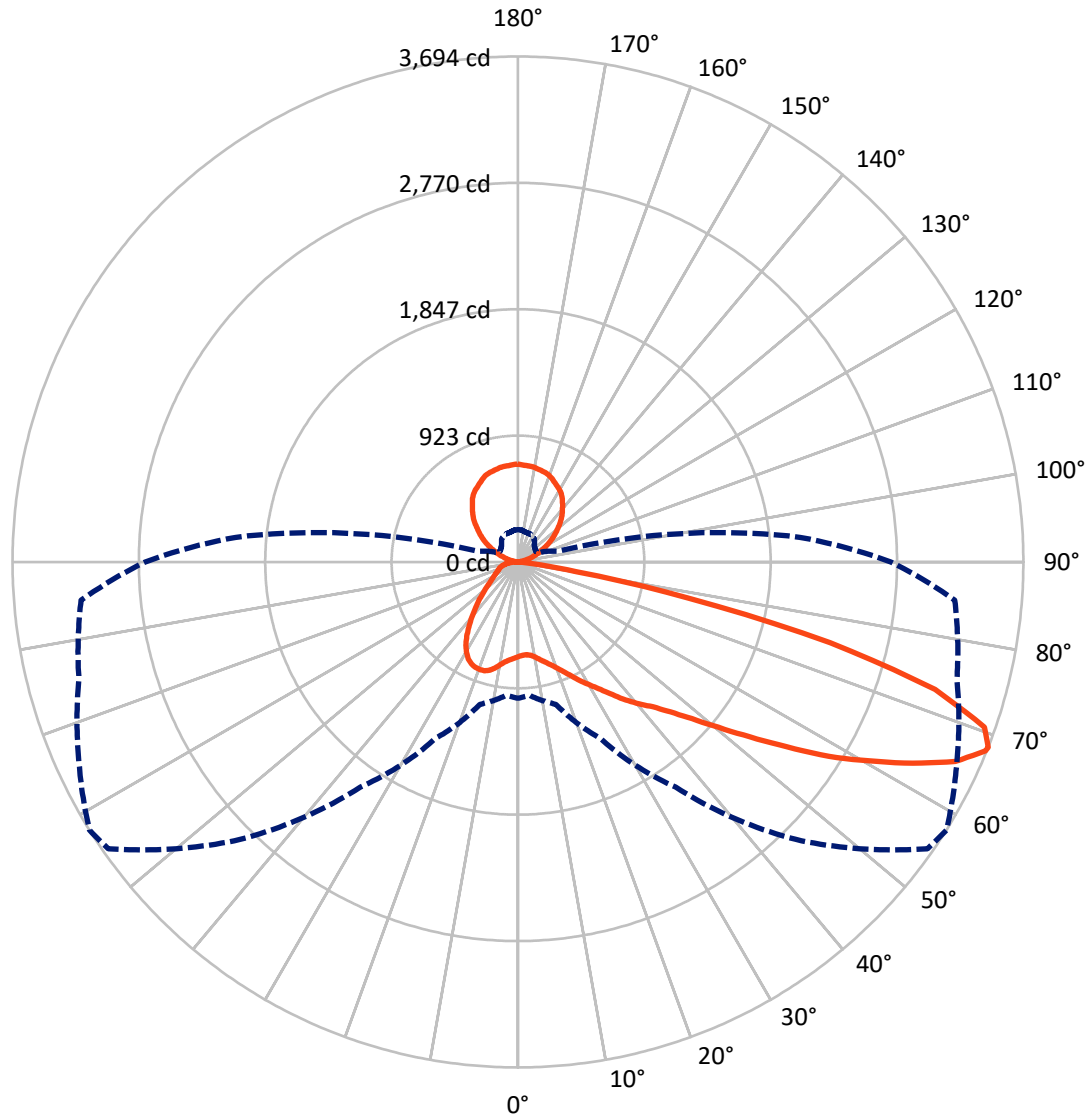
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 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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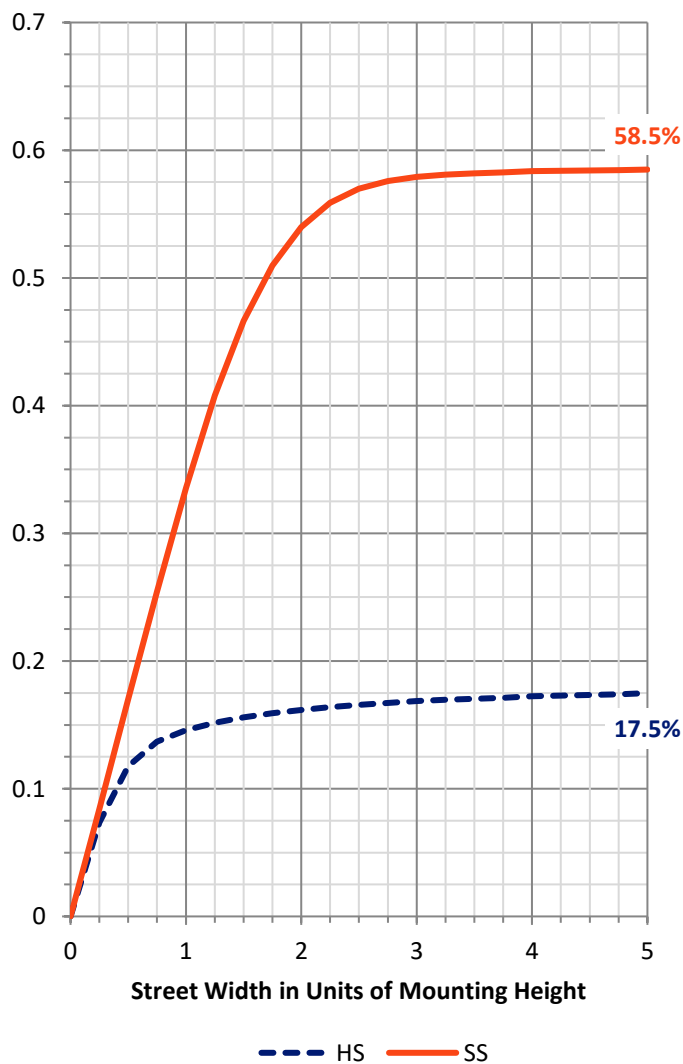
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1345.9	887.0	2232.8
	% Fixture	17.9	11.8	29.7
Street Side	Lumens	4402.1	887.0	5289.1
	% Fixture	58.5	11.8	70.3
Total	Lumens	5748.0	1773.9	7521.9
	% Fixture	76.4	23.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	0.9
10°-20°	222.4	3.0
20°-30°	399.9	5.3
30°-40°	587.5	7.8
40°-50°	861.6	11.5
50°-60°	1287.9	17.1
60°-70°	1505.9	20.0
70°-80°	742.5	9.9
80°-90°	72.5	1.0
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.3
120°-130°	279.4	3.7
130°-140°	344.6	4.6
140°-150°	352.5	4.7
150°-160°	297.0	3.9
160°-170°	195.5	2.6
170°-180°	67.8	0.9
0°-90°	5748.0	76.4
0°-180°	7521.9	100.0

Coefficient of Utilization



REPORT NUMBER:

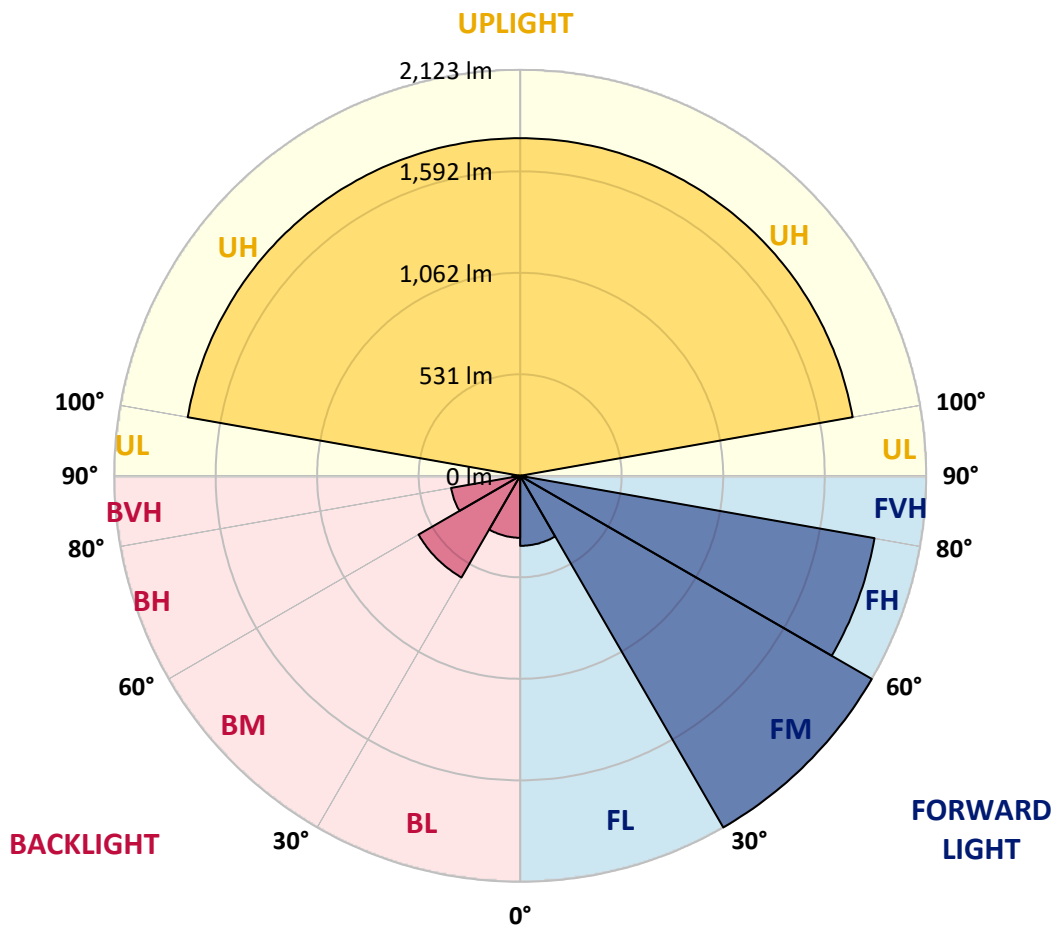
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	366.2	4.9			
FM	(30°-60°)	2123.1	28.2			
FH	(60°-80°)	1881.7	25.0			G2/5000
FVH	(80°-90°)	31.2	0.4			G1/100
BL	(0°-30°)	324.1	4.3	B1/500		
BM	(30°-60°)	613.8	8.2	B1/1000		
BH	(60°-80°)	366.7	4.9	B1/500		G1/500
BVH	(80°-90°)	41.3	0.5			G1/100
UL	(90°-100°)	8.4	0.1		U1/10	
UH	(100°-180°)	1765.5	23.5		U5	

BUG Rating: B1-U5-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3
2.5°	673.4	673.4	675.8	676.6	678.2	679.8	681.4	682.2	684.6	687.8	689.5
5°	667.8	668.6	670.2	671.0	673.4	676.6	679.0	680.6	684.6	691.1	695.1
7.5°	680.6	683.0	683.8	684.6	685.4	687.8	687.8	688.7	692.7	699.1	704.7
10°	701.5	703.1	705.5	707.9	710.3	711.9	707.1	707.9	709.5	715.9	724.0
12.5°	728.0	728.0	728.8	732.0	734.4	739.2	734.4	734.4	734.4	740.0	749.7
15°	757.7	756.1	756.1	759.3	760.1	763.3	760.9	760.9	764.1	769.7	779.3
17.5°	791.4	793.8	791.4	789.8	787.4	789.0	790.6	792.2	798.6	807.4	813.1
20°	840.3	844.4	842.8	836.3	825.9	821.1	826.7	829.9	842.8	853.2	854.0
22.5°	918.2	915.8	913.4	902.1	881.3	868.4	869.2	874.1	894.1	910.2	902.1
25°	990.4	992.8	992.8	976.8	949.5	923.0	925.4	927.8	947.9	962.3	940.7
27.5°	1077.9	1076.3	1075.5	1053.8	1020.9	995.3	981.6	988.0	1002.5	1008.1	966.4
30°	1168.6	1175.0	1168.6	1138.1	1106.8	1073.9	1046.6	1045.0	1052.2	1051.4	996.9
32.5°	1277.8	1272.2	1269.8	1234.4	1195.1	1151.8	1117.3	1111.6	1107.6	1102.0	1033.0
35°	1362.1	1369.3	1369.3	1338.8	1292.2	1249.7	1195.9	1191.1	1181.5	1163.0	1080.3
37.5°	1461.6	1460.0	1465.6	1430.3	1383.7	1342.8	1293.0	1279.4	1257.7	1230.4	1136.5
40°	1558.7	1562.7	1575.6	1533.0	1490.5	1458.4	1387.7	1362.9	1329.9	1305.1	1218.4
42.5°	1691.1	1696.7	1701.6	1666.2	1615.7	1586.8	1477.6	1446.3	1427.9	1423.1	1326.7
45°	1851.7	1861.3	1865.3	1833.2	1804.3	1735.3	1590.8	1561.9	1541.8	1562.7	1474.4
47.5°	2005.8	2000.9	2019.4	2018.6	2021.8	1939.1	1753.7	1710.4	1691.1	1744.1	1643.8
50°	2092.4	2099.7	2139.8	2180.7	2237.7	2178.3	1942.4	1899.0	1876.5	1942.4	1842.8
52.5°	2137.4	2147.0	2200.8	2315.6	2436.8	2408.7	2169.5	2121.3	2102.1	2166.3	2056.3
55°	2141.4	2147.0	2219.3	2397.4	2588.5	2597.3	2428.7	2383.0	2356.5	2398.2	2289.1
57.5°	2074.8	2057.9	2182.3	2409.5	2685.6	2793.9	2713.7	2680.8	2606.1	2651.1	2578.0
60°	1956.0	1972.9	2094.8	2359.7	2726.5	2947.2	2999.4	2949.6	2863.0	2881.4	2889.4
62.5°	1776.2	1797.9	1924.7	2244.1	2693.6	3077.3	3263.5	3238.6	3122.2	3112.6	3127.0
65°	1520.2	1507.3	1648.6	1991.3	2537.9	3120.6	3522.7	3512.3	3373.4	3260.3	3265.9
67.5°	1096.4	1084.3	1183.1	1537.0	2116.5	2959.3	3660.8	3684.0	3525.1	3325.3	3238.6
68°	995.3	978.4	1077.1	1420.6	2008.2	2866.2	3653.5	3693.7	3536.4	3321.3	3204.9
70°	573.1	545.8	641.3	927.0	1478.4	2412.7	3505.9	3616.6	3509.9	3243.4	2984.2
72.5°	179.8	179.8	248.0	374.8	725.6	1526.6	2999.4	3188.0	3210.5	2948.0	2480.1
75°	112.4	112.4	129.2	177.4	288.9	647.7	2069.2	2356.5	2550.7	2481.7	1808.3
77.5°	76.2	74.6	85.9	110.0	161.3	207.9	1038.6	1276.2	1560.3	1694.3	1057.9
80°	41.7	42.5	53.0	65.8	91.5	96.3	305.0	431.0	687.0	805.0	401.3
82.5°	24.1	23.3	25.7	28.9	40.1	41.7	87.5	107.6	179.8	166.9	107.6
85°	0.0	0.8	0.8	0.8	1.6	4.0	11.2	16.9	27.3	37.7	26.5
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	1.6	1.6	1.6	2.4
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°	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°	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3	690.3
2.5°	691.1	693.5	697.5	700.7	702.3	700.7	706.3	705.5	707.1	707.1	708.7
5°	698.3	701.5	708.7	712.7	716.7	718.3	724.8	726.4	729.6	731.2	730.4
7.5°	708.7	712.7	721.6	728.8	734.4	738.4	748.8	753.7	758.5	760.1	761.7
10°	728.0	733.6	743.2	752.1	760.1	765.7	774.5	781.0	785.8	787.4	789.0
12.5°	753.7	760.1	772.1	784.2	793.0	796.2	795.4	793.8	793.8	793.0	793.8
15°	783.4	789.8	805.0	816.3	817.1	806.6	792.2	785.0	783.4	783.4	784.2
17.5°	817.9	825.9	835.5	842.0	826.7	801.0	784.2	776.9	775.3	774.5	772.9
20°	857.2	862.0	865.2	857.2	823.5	793.8	774.5	764.1	756.1	755.3	752.1
22.5°	898.9	897.3	893.3	864.4	814.7	776.9	750.5	731.2	720.8	720.0	716.7
25°	929.4	923.0	911.0	866.0	798.6	749.7	711.9	681.4	667.8	661.4	663.0
27.5°	949.5	935.9	915.0	858.0	770.5	707.9	654.9	614.8	594.7	591.5	593.9
30°	973.6	951.9	918.2	837.9	730.4	649.3	580.3	540.2	528.9	523.3	524.9
32.5°	1002.5	974.4	928.6	807.4	679.8	581.1	506.5	478.4	465.5	455.1	458.3
35°	1040.2	1004.9	945.5	764.1	615.6	508.9	453.5	427.8	404.5	393.3	394.1
37.5°	1084.3	1044.2	959.9	713.5	545.8	454.3	407.7	377.2	348.3	326.7	322.7
40°	1155.0	1122.1	972.0	657.3	479.2	409.3	362.8	328.3	301.0	279.3	276.9
42.5°	1273.0	1216.0	972.8	589.9	422.2	370.8	325.9	288.1	257.6	239.2	238.4
45°	1411.8	1323.5	955.9	517.7	372.4	332.3	293.0	250.4	232.8	220.7	219.1
47.5°	1576.4	1447.1	919.0	450.3	329.9	294.6	259.2	233.6	220.7	211.9	211.9
50°	1764.2	1592.4	882.1	392.5	288.9	264.1	240.0	226.3	216.7	208.7	207.9
52.5°	1976.1	1764.2	870.0	333.9	255.2	236.0	233.6	220.7	212.7	207.1	205.5
55°	2228.9	1956.8	881.3	288.1	228.7	224.7	229.6	219.1	213.5	204.7	202.3
57.5°	2521.0	2144.6	869.2	249.6	210.3	214.3	224.7	219.1	214.3	203.1	199.9
60°	2796.3	2312.4	787.4	217.5	192.6	201.5	218.3	211.9	204.7	202.3	200.7
62.5°	2944.0	2366.9	627.7	192.6	179.0	188.6	207.9	199.9	195.0	200.7	201.5
65°	2945.6	2305.1	461.5	174.2	167.7	177.4	197.4	195.0	198.2	211.1	213.5
67.5°	2781.9	2117.3	325.9	157.3	156.5	168.6	202.3	218.3	220.7	233.6	233.6
68°	2725.7	2070.8	302.6	154.9	154.1	168.6	206.3	222.3	223.9	236.0	235.2
70°	2417.5	1750.5	219.1	145.3	150.1	180.6	227.9	233.6	223.9	237.6	236.8
72.5°	1889.4	1294.6	163.7	134.8	142.9	178.2	229.6	223.9	209.5	212.7	208.7
75°	1277.0	825.1	134.8	123.6	126.8	150.9	208.7	211.1	194.2	191.0	186.2
77.5°	668.6	386.9	109.2	110.0	113.2	130.8	186.2	191.8	176.6	166.9	165.3
80°	246.4	153.3	89.1	97.1	98.7	114.8	159.7	168.6	154.1	146.9	145.3
82.5°	89.9	76.2	73.8	85.1	83.5	97.9	139.7	146.1	130.8	123.6	119.6
85°	24.9	28.1	46.6	66.6	65.0	76.2	112.4	118.0	105.1	86.7	84.3
87.5°	1.6	5.6	18.5	39.3	40.9	47.4	81.1	89.1	77.9	64.2	63.4
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)