

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-T4W-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401880 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-T4W-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9558.9 lumens
Efficiency: N/A
Efficacy: 115.4 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: B2 - U5 - G2

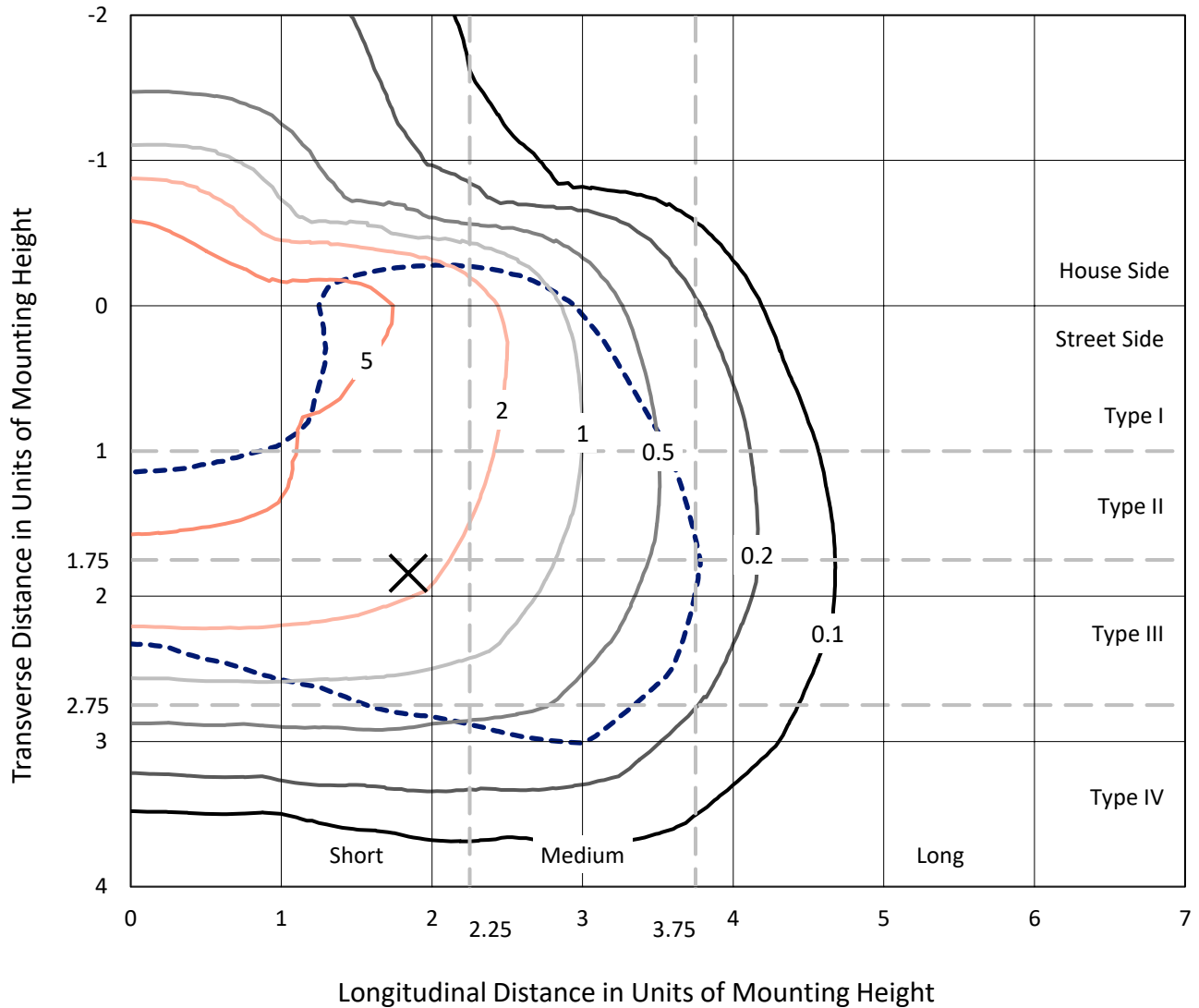
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

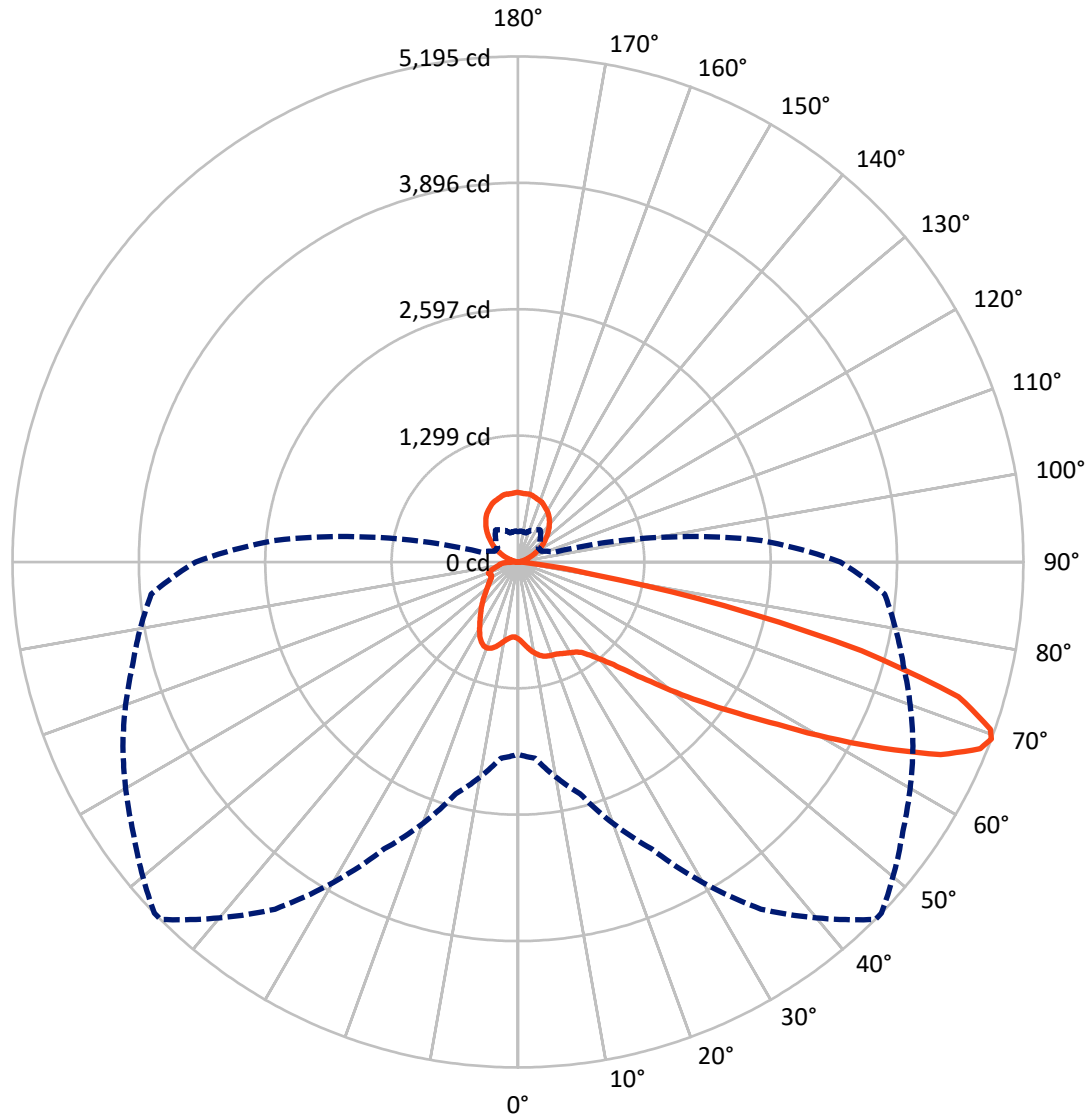
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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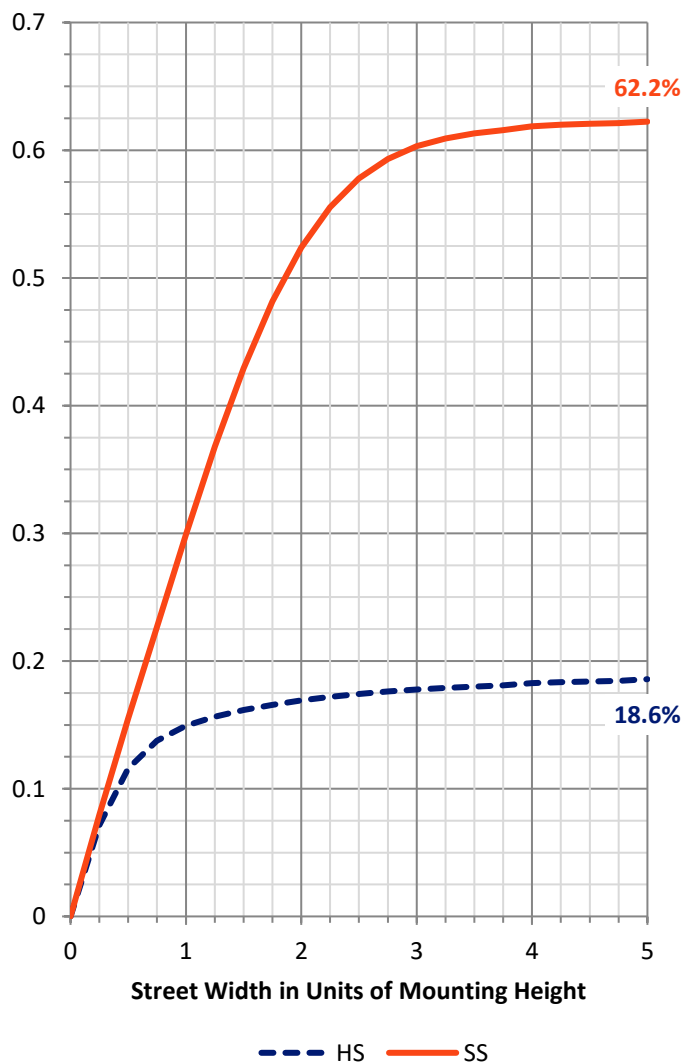
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1832.9	887.0	2719.8
	% Fixture	19.2	9.3	28.5
Street Side	Lumens	5952.1	887.0	6839.1
	% Fixture	62.3	9.3	71.5
Total	Lumens	7785.0	1773.9	9558.9
	% Fixture	81.4	18.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	0.8
10°-20°	266.8	2.8
20°-30°	450.8	4.7
30°-40°	652.3	6.8
40°-50°	985.0	10.3
50°-60°	1660.8	17.4
60°-70°	2284.8	23.9
70°-80°	1266.1	13.2
80°-90°	137.8	1.4
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	3.7
150°-160°	297.0	3.1
160°-170°	195.5	2.0
170°-180°	67.8	0.7
0°-90°	7785.0	81.4
0°-180°	9558.9	100.0

Coefficient of Utilization

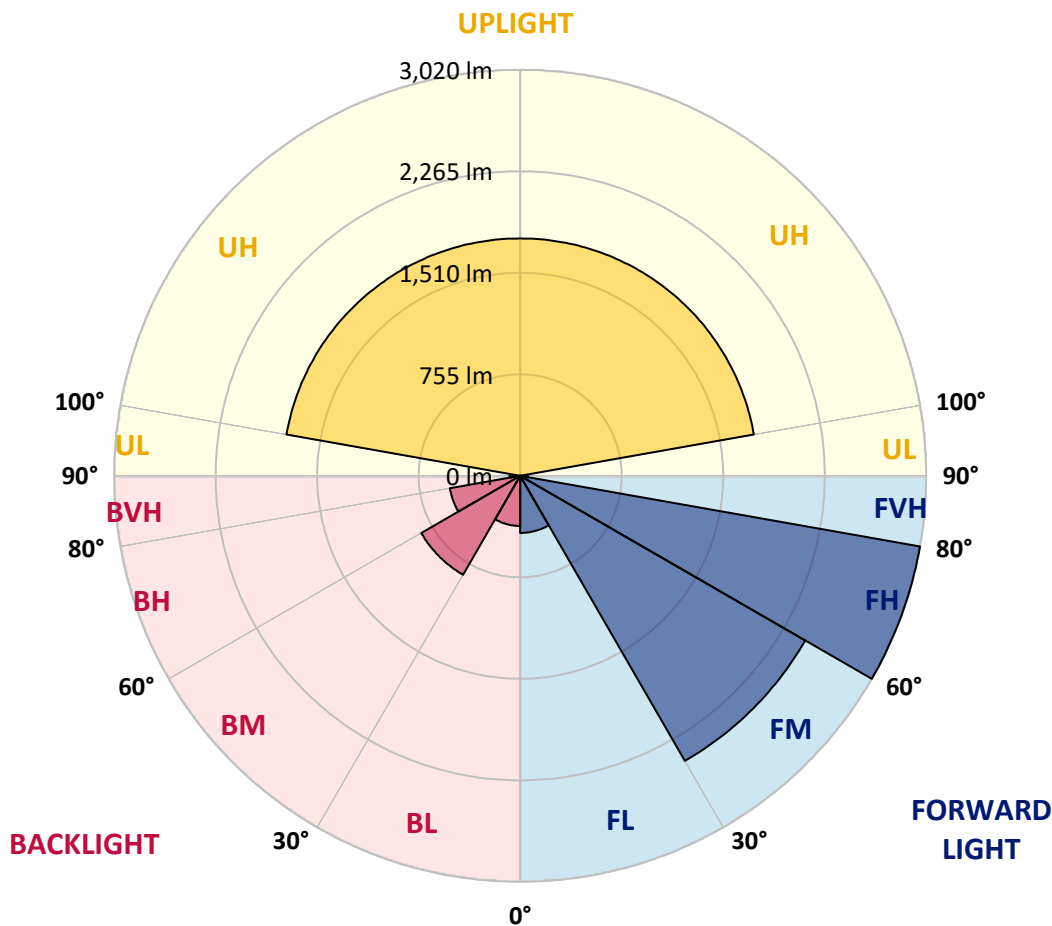


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	424.9	4.4			
FM (30°-60°)	2448.5	25.6			
FH (60°-80°)	3019.7	31.6			G2/5000
FVH (80°-90°)	59.0	0.6			G1/100
BL (0°-30°)	373.2	3.9	B1/500		
BM (30°-60°)	849.6	8.9	B1/1000		
BH (60°-80°)	531.2	5.6	B2/1000		G2/1000
BVH (80°-90°)	78.8	0.8			G1/100
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	18.5		U5	

BUG Rating: B2-U5-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2
2.5°	840.0	838.9	840.0	835.6	831.1	824.5	822.3	814.5	809.0	801.3	794.6
5°	902.0	905.3	904.2	898.7	880.9	867.7	867.7	851.1	833.4	816.8	801.3
7.5°	969.5	969.5	962.8	951.8	934.1	914.1	911.9	889.8	864.3	841.1	816.8
10°	1018.2	1020.4	1010.4	994.9	972.8	951.8	949.6	924.1	899.8	869.9	840.0
12.5°	1052.5	1052.5	1043.6	1029.2	1002.7	982.8	980.6	957.3	931.9	900.9	866.6
15°	1070.2	1068.0	1060.2	1044.7	1021.5	1004.9	1001.6	981.7	960.6	929.6	893.1
17.5°	1066.9	1066.9	1060.2	1044.7	1028.1	1014.9	1012.6	998.3	982.8	952.9	916.4
20°	1052.5	1051.4	1049.2	1037.0	1025.9	1020.4	1018.2	1011.5	1001.6	976.1	941.8
22.5°	1039.2	1038.1	1034.8	1027.0	1022.6	1025.9	1025.9	1024.8	1023.7	1003.8	970.6
25°	1047.0	1045.8	1039.2	1028.1	1027.0	1042.5	1043.6	1047.0	1049.2	1032.6	998.3
27.5°	1101.2	1097.9	1079.0	1050.3	1040.3	1060.2	1062.4	1072.4	1070.2	1052.5	1022.6
30°	1207.4	1208.5	1166.5	1104.5	1071.3	1080.2	1081.3	1092.3	1089.0	1074.6	1050.3
32.5°	1367.9	1367.9	1299.3	1205.2	1121.1	1103.4	1100.1	1110.0	1123.3	1104.5	1080.2
35°	1571.5	1566.0	1483.0	1338.0	1206.3	1143.2	1141.0	1136.6	1159.8	1142.1	1106.7
37.5°	1776.3	1756.4	1675.6	1516.2	1325.8	1220.7	1211.9	1198.6	1211.9	1174.2	1143.2
40°	1941.2	1937.9	1871.5	1709.9	1467.5	1314.8	1308.1	1249.5	1258.3	1228.5	1216.3
42.5°	2122.7	2124.9	2080.6	1917.9	1636.8	1442.1	1424.3	1333.6	1359.0	1348.0	1342.4
45°	2321.9	2319.7	2286.5	2116.0	1843.8	1619.1	1597.0	1485.2	1537.2	1530.6	1561.6
47.5°	2474.6	2486.8	2468.0	2347.3	2089.5	1833.8	1817.2	1681.1	1759.7	1812.8	1871.5
50°	2682.7	2681.6	2630.7	2580.9	2375.0	2108.3	2091.7	1940.1	2053.0	2130.4	2237.8
52.5°	2940.5	2931.7	2826.6	2808.8	2722.5	2408.2	2393.8	2235.6	2397.1	2464.7	2682.7
55°	3102.1	3101.0	3046.8	3077.8	3080.0	2742.4	2724.7	2584.2	2766.8	2844.3	3174.1
57.5°	3237.1	3238.3	3283.6	3392.1	3465.1	3148.6	3142.0	2970.4	3155.2	3263.7	3653.3
60°	3341.2	3363.3	3490.6	3738.5	3860.2	3666.6	3637.8	3456.3	3580.2	3623.4	4019.6
62.5°	3299.1	3327.9	3578.0	3943.2	4256.4	4215.5	4205.5	3943.2	3942.1	3920.0	4293.0
65°	2967.1	3029.1	3423.1	3935.5	4517.6	4773.3	4758.9	4402.5	4278.6	4167.9	4374.9
67.5°	2428.1	2441.4	2916.2	3634.5	4515.4	5124.1	5108.6	4736.7	4487.7	4216.6	4134.7
69°	1976.6	2025.3	2464.7	3253.7	4356.0	5194.9	5194.9	4829.7	4480.0	4100.4	3782.8
70°	1709.9	1712.1	2136.0	2950.5	4139.1	5152.9	5162.8	4829.7	4416.9	3948.8	3470.7
72.5°	801.3	851.1	1118.9	1925.7	3343.4	4736.7	4761.1	4511.0	4050.6	3402.0	2604.1
75°	240.2	249.0	373.0	913.0	1915.7	3648.8	3703.1	3752.9	3299.1	2504.5	1603.6
77.5°	142.8	141.7	180.4	309.9	886.5	2163.6	2188.0	2400.5	2140.4	1392.2	728.2
80°	69.7	71.9	96.3	150.5	332.0	785.8	864.3	1122.2	948.5	544.5	266.7
82.5°	23.2	25.5	39.8	60.9	140.6	253.4	280.0	351.9	303.2	198.1	114.0
85°	0.0	0.0	1.1	2.2	7.7	18.8	18.8	42.1	63.1	69.7	37.6
87.5°	0.0	0.0	1.1	1.1	2.2	2.2	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	6.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	9.5	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	22.3	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	41.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	65.3	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	90.7	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	117.2	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	146.8	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	178.5	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	210.3	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	248.9	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	283.6	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	317.4	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	348.3	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	381.0	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	414.9	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	447.6	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	479.2	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	508.7	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	537.2	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	564.1	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	588.7	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	607.0	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.1	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	642.2	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	659.7	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.3	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	678.6	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.3	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	700.0	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	706.4	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.7	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	710.9	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°	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2	790.2
2.5°	791.3	789.1	784.7	780.2	778.0	772.5	773.6	771.4	770.3	770.3	771.4
5°	793.5	790.2	783.6	779.1	774.7	772.5	778.0	780.2	782.4	782.4	783.6
7.5°	806.8	800.2	792.4	786.9	788.0	791.3	800.2	806.8	810.1	812.3	814.5
10°	828.9	821.2	810.1	809.0	811.2	820.1	832.3	842.2	851.1	856.6	856.6
12.5°	852.2	842.2	833.4	835.6	845.5	858.8	871.0	882.1	889.8	895.3	896.4
15°	877.6	867.7	858.8	864.3	880.9	896.4	907.5	911.9	915.3	920.8	921.9
17.5°	900.9	892.0	884.3	898.7	913.0	925.2	928.5	926.3	921.9	925.2	927.4
20°	925.2	917.5	913.0	928.5	938.5	939.6	930.7	920.8	909.7	909.7	910.8
22.5°	955.1	945.1	942.9	950.7	947.3	934.1	911.9	896.4	880.9	878.7	882.1
25°	983.9	973.9	972.8	967.3	938.5	904.2	874.3	856.6	844.4	845.5	852.2
27.5°	1012.6	1006.0	1007.1	977.2	913.0	861.0	821.2	806.8	810.1	812.3	819.0
30°	1041.4	1041.4	1045.8	977.2	877.6	800.2	762.5	761.4	770.3	776.9	784.7
32.5°	1074.6	1084.6	1076.8	965.1	830.0	738.2	708.3	710.5	720.5	731.5	738.2
35°	1106.7	1130.0	1107.8	937.4	764.7	681.7	657.4	654.1	661.8	671.8	675.1
37.5°	1157.6	1195.3	1134.4	894.2	697.2	631.9	607.6	598.7	591.0	598.7	597.6
40°	1246.2	1291.5	1154.3	822.3	631.9	585.5	560.0	543.4	524.6	508.0	508.0
42.5°	1387.8	1417.7	1165.4	734.9	566.6	539.0	513.5	489.2	460.4	430.5	430.5
45°	1619.1	1625.8	1169.8	641.9	506.9	492.5	465.9	442.7	405.1	375.2	368.5
47.5°	1927.9	1899.1	1180.9	552.3	454.9	451.5	429.4	402.8	361.9	334.2	330.9
50°	2342.9	2219.0	1229.6	480.3	412.8	416.1	399.5	368.5	329.8	309.9	305.5
52.5°	2810.0	2622.9	1267.2	422.8	376.3	386.2	374.1	344.2	311.0	294.4	291.1
55°	3320.2	3011.4	1258.3	384.0	348.6	359.7	355.3	329.8	299.9	285.5	282.2
57.5°	3736.3	3284.7	1180.9	349.7	320.9	336.4	340.9	320.9	293.3	280.0	276.7
60°	4048.4	3434.1	1021.5	320.9	298.8	317.6	329.8	315.4	292.2	284.4	281.1
62.5°	4190.0	3420.9	814.5	298.8	282.2	304.3	330.9	324.3	308.8	314.3	315.4
65°	4110.3	3253.7	610.9	282.2	272.3	306.6	349.7	349.7	326.5	336.4	337.5
67.5°	3702.0	2816.6	444.9	270.0	262.3	317.6	385.1	363.0	318.7	326.5	323.2
69°	3313.5	2520.0	381.8	263.4	254.5	323.2	400.6	365.2	309.9	318.7	309.9
70°	3028.0	2252.2	343.1	257.9	251.2	323.2	405.1	363.0	305.5	312.1	302.1
72.5°	2154.8	1563.8	282.2	246.8	239.1	298.8	397.3	350.8	293.3	285.5	266.7
75°	1252.8	864.3	240.2	234.6	211.4	262.3	377.4	337.5	281.1	266.7	253.4
77.5°	525.7	386.2	204.7	213.6	187.0	233.5	353.0	324.3	266.7	246.8	240.2
80°	213.6	192.6	170.4	184.8	162.7	205.8	325.4	302.1	245.7	225.8	215.8
82.5°	111.8	106.2	130.6	149.4	135.0	189.2	306.6	286.6	228.0	208.1	195.9
85°	33.2	44.3	74.2	101.8	102.9	170.4	297.7	265.6	198.1	171.5	169.3
87.5°	2.2	8.9	25.5	53.1	67.5	130.6	241.3	218.0	160.5	135.0	136.1
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)