

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-T4W-ULG**

Issue Date: 3/30/2022

**Test Information**

Test Method: LM-79-08  
Report Number: REPORT IS A COMBINATION OF REPORTS P401520 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-T4W-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

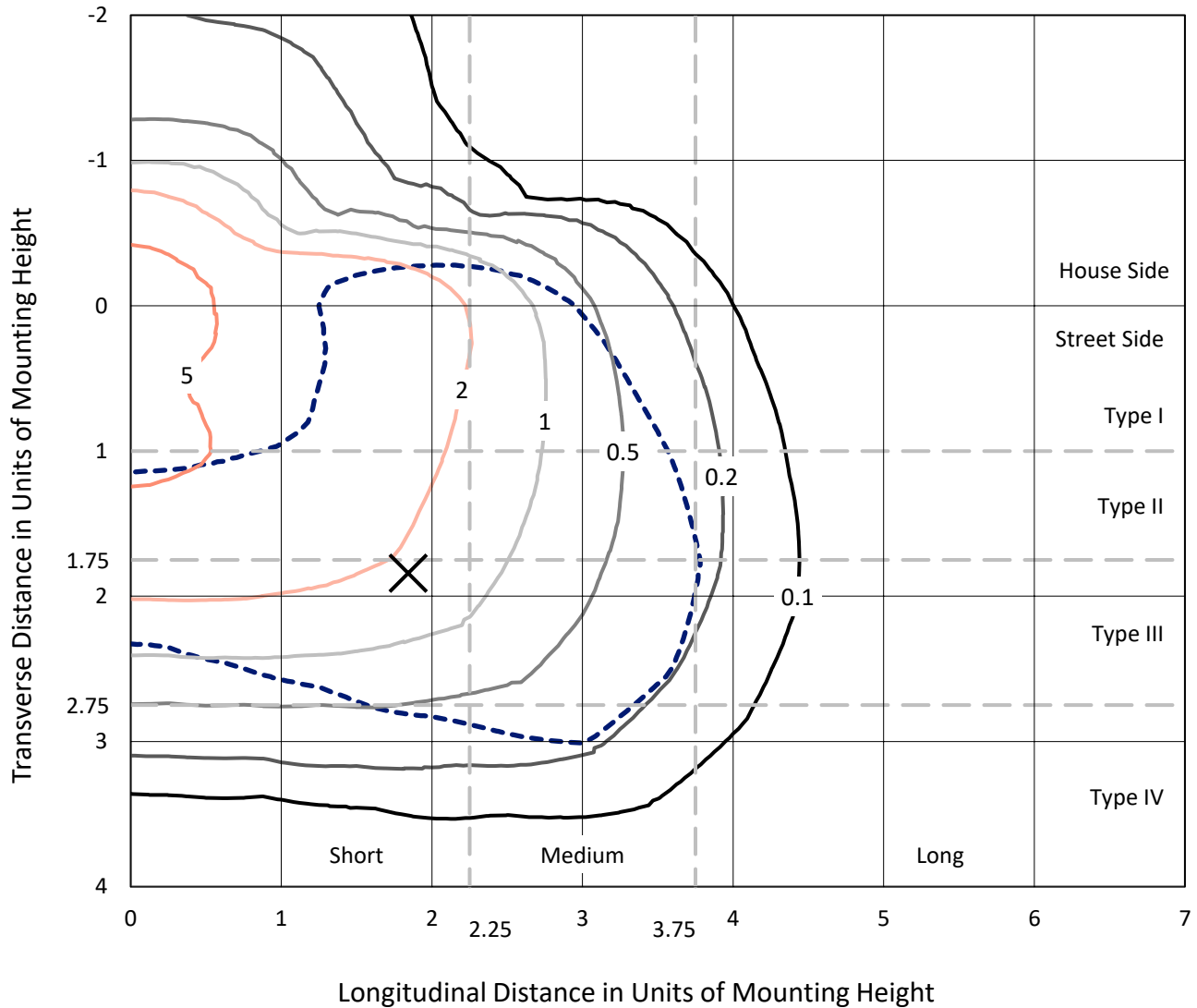
Lumens per Lamp: N/A  
Luminaire Lumens: 7419.9 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U5 - G2  
  
Input Watts (W): 59.8  
Input Voltage (V): NR  
Input Current (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

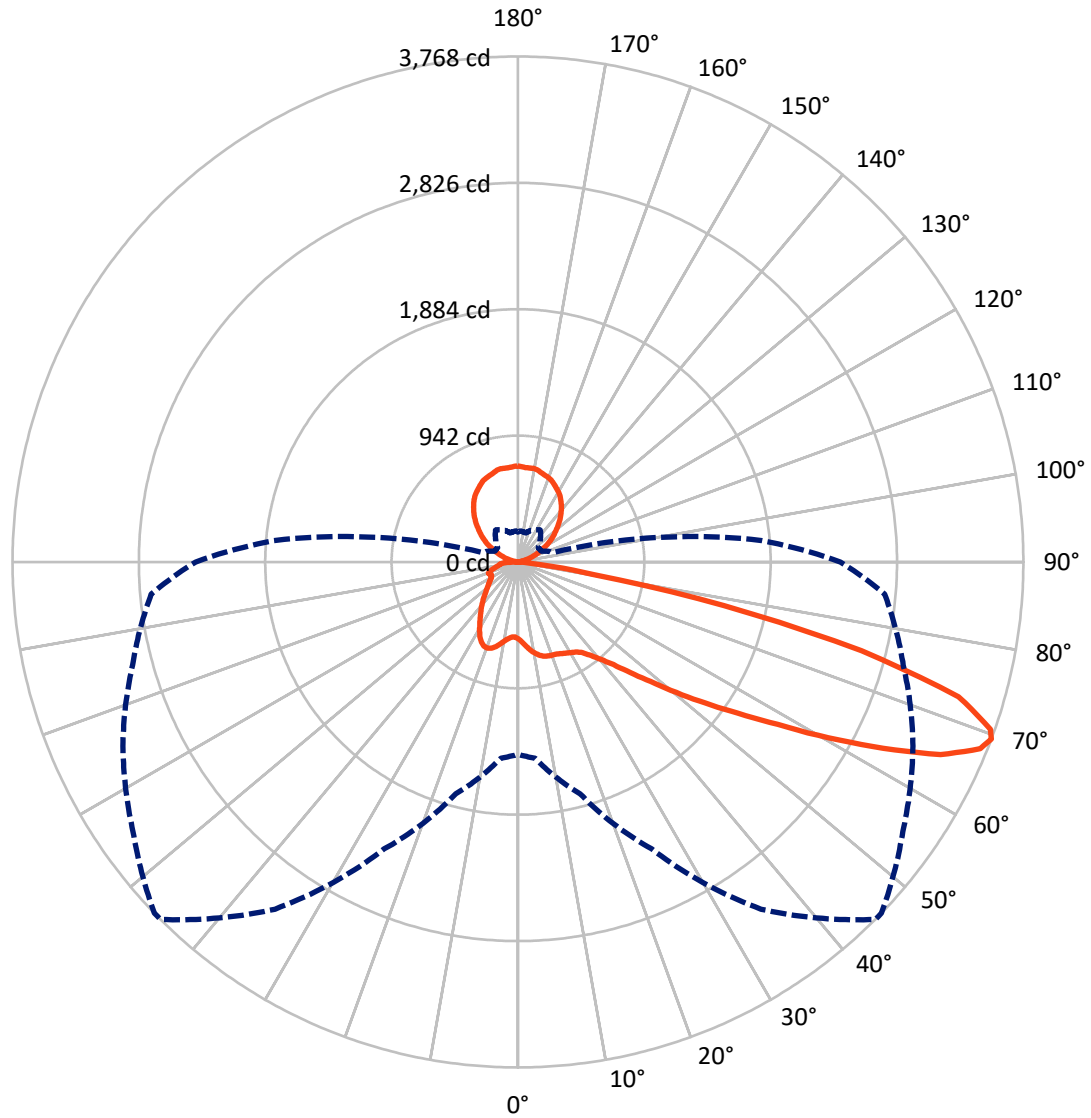
✕ Max cd  
 - - - 1/2 Max cd



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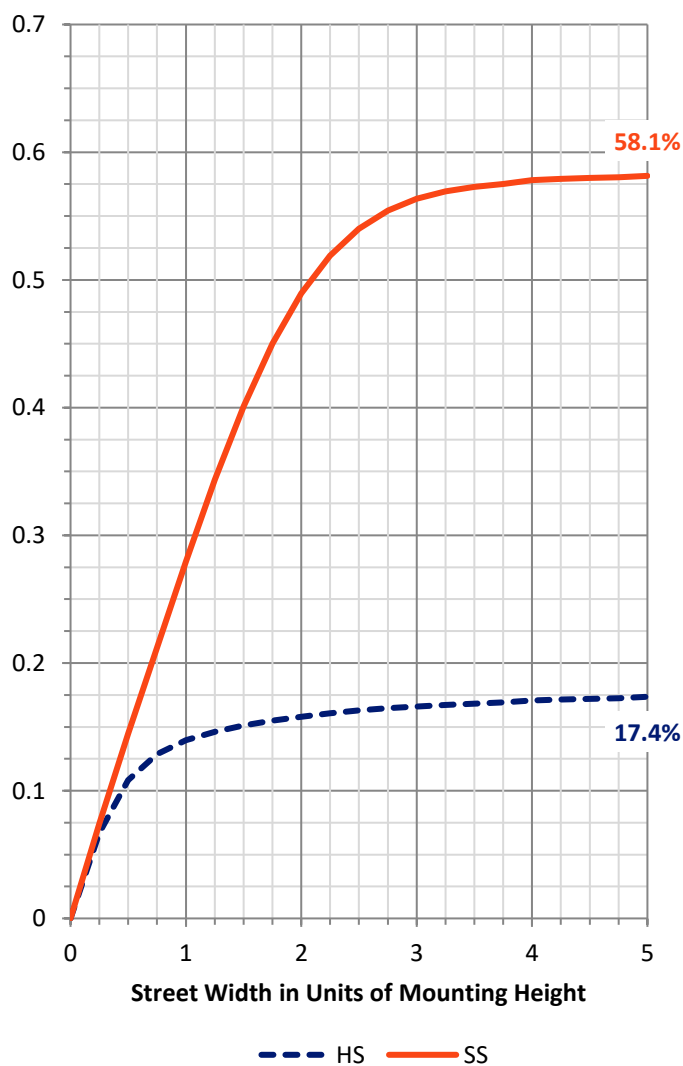
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1329.3	887.0	2216.2
	% Fixture	17.9	12.0	29.9
<b>Street Side</b>	Lumens	4316.7	887.0	5203.7
	% Fixture	58.2	12.0	70.1
<b>Total</b>	Lumens	5646.0	1773.9	7419.9
	% Fixture	76.1	23.9	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.4	0.8
10°-20°	193.5	2.6
20°-30°	327.0	4.4
30°-40°	473.1	6.4
40°-50°	714.3	9.6
50°-60°	1204.5	16.2
60°-70°	1657.1	22.3
70°-80°	918.2	12.4
80°-90°	100.0	1.3
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.3
120°-130°	279.4	3.8
130°-140°	344.6	4.6
140°-150°	352.5	4.8
150°-160°	297.0	4.0
160°-170°	195.5	2.6
170°-180°	67.8	0.9
0°-90°	5646.0	76.1
0°-180°	7419.9	100.0

**Coefficient of Utilization**

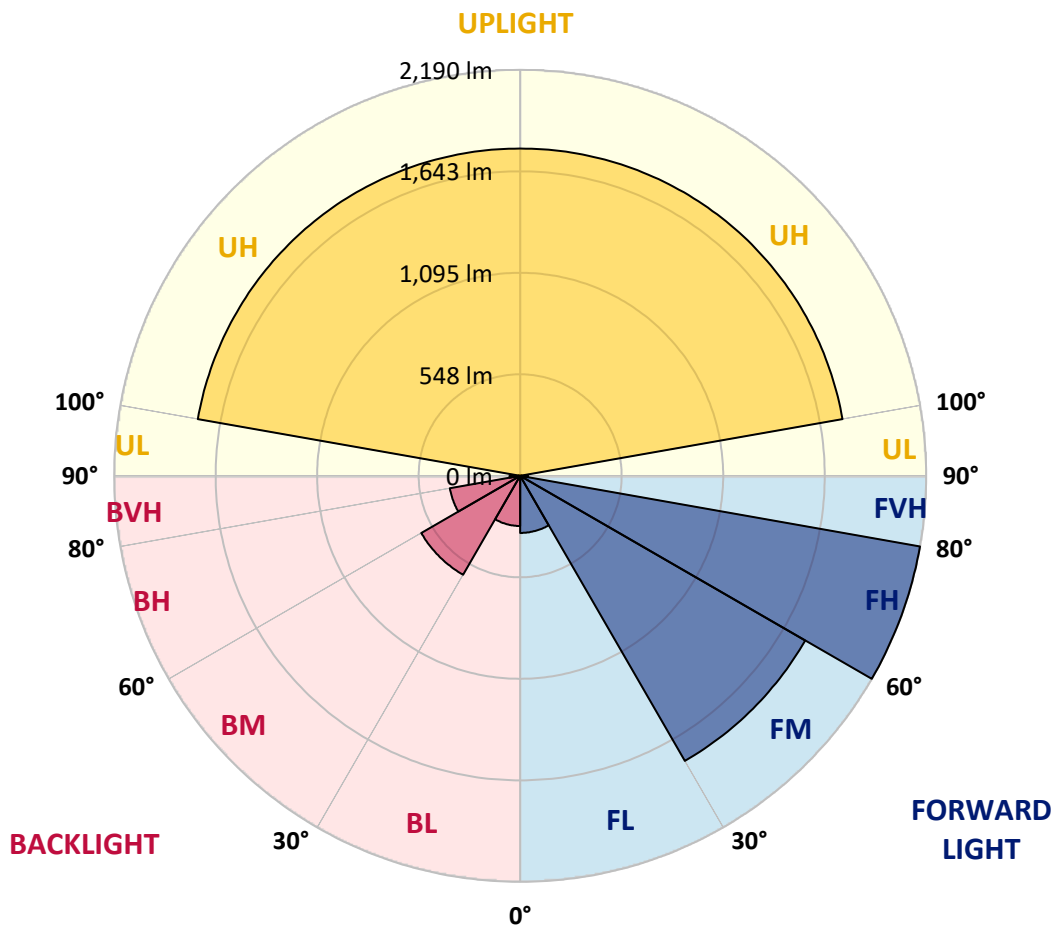


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	308.2	4.2			
FM (30°-60°)	1775.7	23.9			
FH (60°-80°)	2190.0	29.5			G2/5000
FVH (80°-90°)	42.8	0.6			G1/100
BL (0°-30°)	270.7	3.6	B1/500		
BM (30°-60°)	616.2	8.3	B1/1000		
BH (60°-80°)	385.3	5.2	B1/500		G1/500
BVH (80°-90°)	57.2	0.8			G1/100
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	23.8		U5	

**BUG Rating: B1-U5-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1
2.5°	609.2	608.4	609.2	606.0	602.8	598.0	596.4	590.7	586.7	581.1	576.3
5°	654.1	656.6	655.8	651.7	638.9	629.3	629.3	617.2	604.4	592.3	581.1
7.5°	703.1	703.1	698.3	690.3	677.4	663.0	661.4	645.3	626.9	610.0	592.3
10°	738.4	740.0	732.8	721.6	705.5	690.3	688.7	670.2	652.5	630.9	609.2
12.5°	763.3	763.3	756.9	746.5	727.2	712.7	711.1	694.3	675.8	653.3	628.5
15°	776.1	774.5	768.9	757.7	740.8	728.8	726.4	711.9	696.7	674.2	647.7
17.5°	773.7	773.7	768.9	757.7	745.6	736.0	734.4	724.0	712.7	691.1	664.6
20°	763.3	762.5	760.9	752.1	744.0	740.0	738.4	733.6	726.4	707.9	683.0
22.5°	753.7	752.9	750.5	744.8	741.6	744.0	744.0	743.2	742.4	728.0	703.9
25°	759.3	758.5	753.7	745.6	744.8	756.1	756.9	759.3	760.9	748.9	724.0
27.5°	798.6	796.2	782.6	761.7	754.5	768.9	770.5	777.8	776.1	763.3	741.6
30°	875.7	876.5	846.0	801.0	777.0	783.4	784.2	792.2	789.8	779.4	761.7
32.5°	992.1	992.1	942.3	874.1	813.1	800.2	797.8	805.0	814.7	801.0	783.4
35°	1139.7	1135.7	1075.5	970.4	874.9	829.1	827.5	824.3	841.2	828.3	802.6
37.5°	1288.2	1273.8	1215.2	1099.6	961.6	885.3	878.9	869.3	878.9	851.6	829.1
40°	1407.8	1405.4	1357.3	1240.1	1064.3	953.5	948.7	906.2	912.6	890.9	882.1
42.5°	1539.5	1541.1	1509.0	1391.0	1187.1	1045.8	1033.0	967.2	985.6	977.6	973.6
45°	1683.9	1682.3	1658.2	1534.6	1337.2	1174.3	1158.2	1077.1	1114.9	1110.0	1132.5
47.5°	1794.7	1803.5	1789.9	1702.4	1515.4	1330.0	1317.9	1219.2	1276.2	1314.7	1357.3
50°	1945.6	1944.8	1907.9	1871.7	1722.5	1529.0	1517.0	1407.0	1488.9	1545.1	1622.9
52.5°	2132.6	2126.2	2049.9	2037.1	1974.5	1746.5	1736.1	1621.3	1738.5	1787.5	1945.6
55°	2249.8	2249.0	2209.7	2232.1	2233.7	1988.9	1976.1	1874.2	2006.6	2062.8	2302.0
57.5°	2347.7	2348.5	2381.4	2460.1	2513.1	2283.5	2278.7	2154.3	2288.3	2367.0	2649.5
60°	2423.2	2439.2	2531.5	2711.3	2799.6	2659.1	2638.3	2506.6	2596.5	2627.8	2915.2
62.5°	2392.7	2413.5	2594.9	2859.8	3086.9	3057.2	3050.0	2859.8	2859.0	2842.9	3113.4
65°	2151.9	2196.8	2482.6	2854.2	3276.4	3461.8	3451.3	3192.9	3103.0	3022.7	3172.8
67.5°	1761.0	1770.6	2114.9	2635.9	3274.8	3716.2	3705.0	3435.3	3254.7	3058.0	2998.6
69°	1433.5	1468.8	1787.5	2359.8	3159.2	3767.6	3767.6	3502.7	3249.1	2973.8	2743.4
70°	1240.1	1241.7	1549.1	2139.8	3001.9	3737.1	3744.3	3502.7	3203.3	2863.8	2517.1
72.5°	581.1	617.2	811.5	1396.6	2424.8	3435.3	3452.9	3271.5	2937.6	2467.3	1888.6
75°	174.2	180.6	270.5	662.2	1389.4	2646.3	2685.6	2721.7	2392.7	1816.4	1163.0
77.5°	103.5	102.7	130.8	224.7	642.9	1569.2	1586.8	1740.9	1552.3	1009.7	528.1
80°	50.6	52.2	69.8	109.2	240.8	569.9	626.9	813.9	687.9	394.9	193.4
82.5°	16.9	18.5	28.9	44.1	101.9	183.8	203.1	255.2	219.9	143.7	82.7
85°	0.0	0.0	0.8	1.6	5.6	13.6	13.6	30.5	45.8	50.6	27.3
87.5°	0.0	0.0	0.8	0.8	1.6	1.6	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	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°	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1	573.1
2.5°	573.9	572.3	569.1	565.9	564.3	560.2	561.0	559.4	558.6	558.6	559.4
5°	575.5	573.1	568.3	565.1	561.8	560.2	564.3	565.9	567.5	567.5	568.3
7.5°	585.1	580.3	574.7	570.7	571.5	573.9	580.3	585.1	587.5	589.1	590.7
10°	601.2	595.6	587.5	586.7	588.3	594.8	603.6	610.8	617.2	621.2	621.2
12.5°	618.0	610.8	604.4	606.0	613.2	622.8	631.7	639.7	645.3	649.3	650.1
15°	636.5	629.3	622.8	626.9	638.9	650.1	658.2	661.4	663.8	667.8	668.6
17.5°	653.3	646.9	641.3	651.7	662.2	671.0	673.4	671.8	668.6	671.0	672.6
20°	671.0	665.4	662.2	673.4	680.6	681.4	675.0	667.8	659.8	659.8	660.6
22.5°	692.7	685.5	683.8	689.5	687.1	677.4	661.4	650.1	638.9	637.3	639.7
25°	713.5	706.3	705.5	701.5	680.6	655.8	634.1	621.2	612.4	613.2	618.0
27.5°	734.4	729.6	730.4	708.7	662.2	624.5	595.6	585.1	587.5	589.1	594.0
30°	755.3	755.3	758.5	708.7	636.5	580.3	553.0	552.2	558.6	563.5	569.1
32.5°	779.4	786.6	781.0	699.9	602.0	535.4	513.7	515.3	522.5	530.5	535.4
35°	802.6	819.5	803.4	679.8	554.6	494.4	476.8	474.4	480.0	487.2	489.6
37.5°	839.6	866.8	822.7	648.5	505.7	458.3	440.6	434.2	428.6	434.2	433.4
40°	903.8	936.7	837.1	596.4	458.3	424.6	406.1	394.1	380.4	368.4	368.4
42.5°	1006.5	1028.2	845.2	533.0	410.9	390.9	372.4	354.8	333.9	312.2	312.2
45°	1174.3	1179.1	848.4	465.5	367.6	357.2	337.9	321.1	293.8	272.1	267.3
47.5°	1398.2	1377.3	856.4	400.5	329.9	327.5	311.4	292.2	262.5	242.4	240.0
50°	1699.2	1609.3	891.7	348.3	299.4	301.8	289.8	267.3	239.2	224.7	221.5
52.5°	2037.9	1902.2	919.0	306.6	272.9	280.1	271.3	249.6	225.5	213.5	211.1
55°	2407.9	2184.0	912.6	278.5	252.8	260.9	257.6	239.2	217.5	207.1	204.7
57.5°	2709.7	2382.2	856.4	253.6	232.8	244.0	247.2	232.8	212.7	203.1	200.7
60°	2936.0	2490.6	740.8	232.8	216.7	230.4	239.2	228.8	211.9	206.3	203.9
62.5°	3038.8	2480.9	590.7	216.7	204.7	220.7	240.0	235.2	223.9	227.9	228.8
65°	2981.0	2359.8	443.1	204.7	197.4	222.3	253.6	253.6	236.8	244.0	244.8
67.5°	2684.8	2042.7	322.7	195.8	190.2	230.4	279.3	263.3	231.2	236.8	234.4
69°	2403.1	1827.6	276.9	191.0	184.6	234.4	290.6	264.9	224.7	231.2	224.7
70°	2196.0	1633.4	248.8	187.0	182.2	234.4	293.8	263.3	221.5	226.3	219.1
72.5°	1562.7	1134.1	204.7	179.0	173.4	216.7	288.1	254.4	212.7	207.1	193.4
75°	908.6	626.9	174.2	170.2	153.3	190.2	273.7	244.8	203.9	193.4	183.8
77.5°	381.3	280.1	148.5	154.9	135.6	169.4	256.0	235.2	193.4	179.0	174.2
80°	154.9	139.7	123.6	134.0	118.0	149.3	236.0	219.1	178.2	163.7	156.5
82.5°	81.1	77.1	94.7	108.4	97.9	137.3	222.3	207.9	165.3	150.9	142.1
85°	24.1	32.1	53.8	73.8	74.6	123.6	215.9	192.6	143.7	124.4	122.8
87.5°	1.6	6.4	18.5	38.5	49.0	94.7	175.0	158.1	116.4	97.9	98.7
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)