

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-T2-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401866 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-T2-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7665.9 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type II - Medium
BUG Rating: B1 - U5 - G2

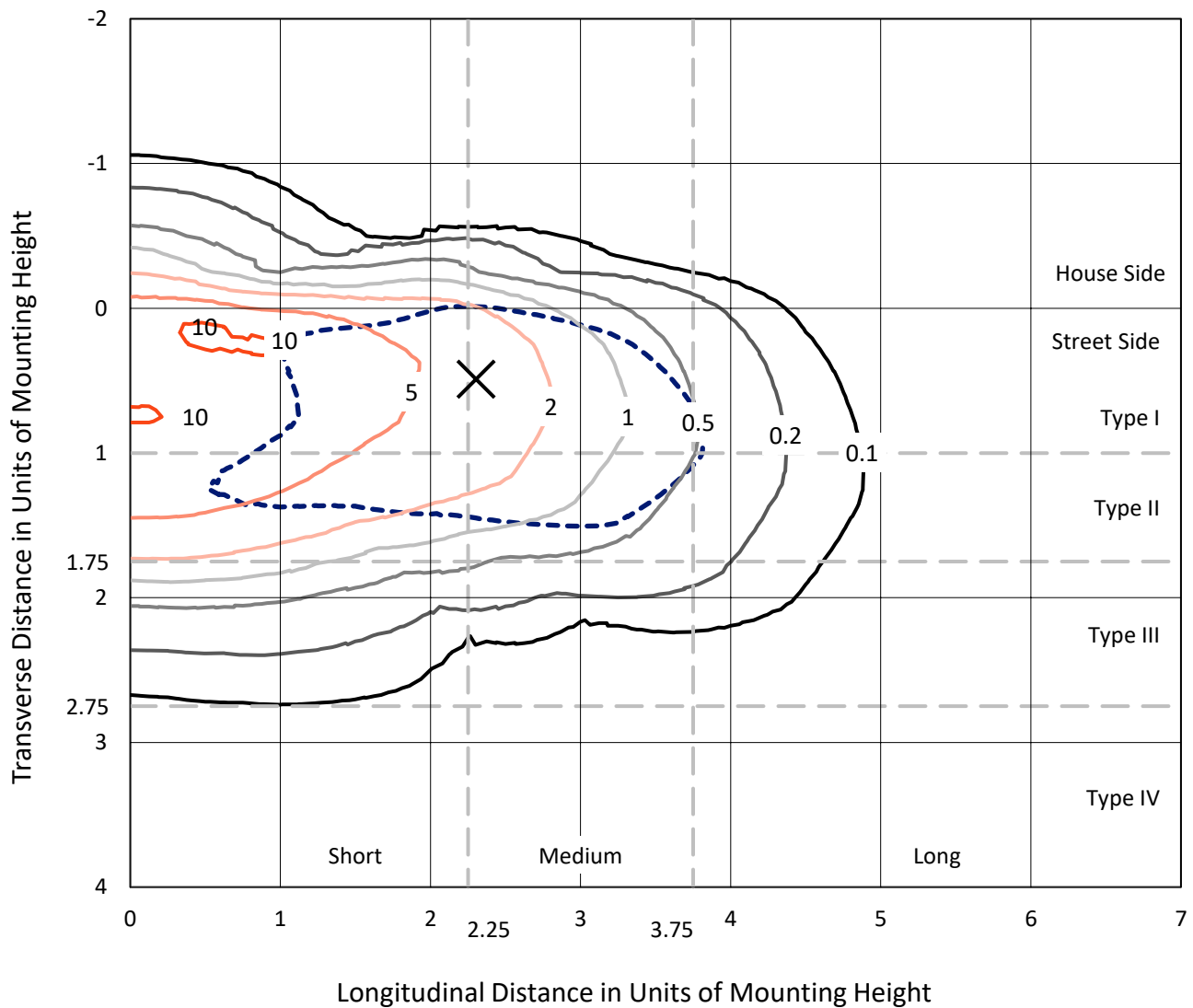
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

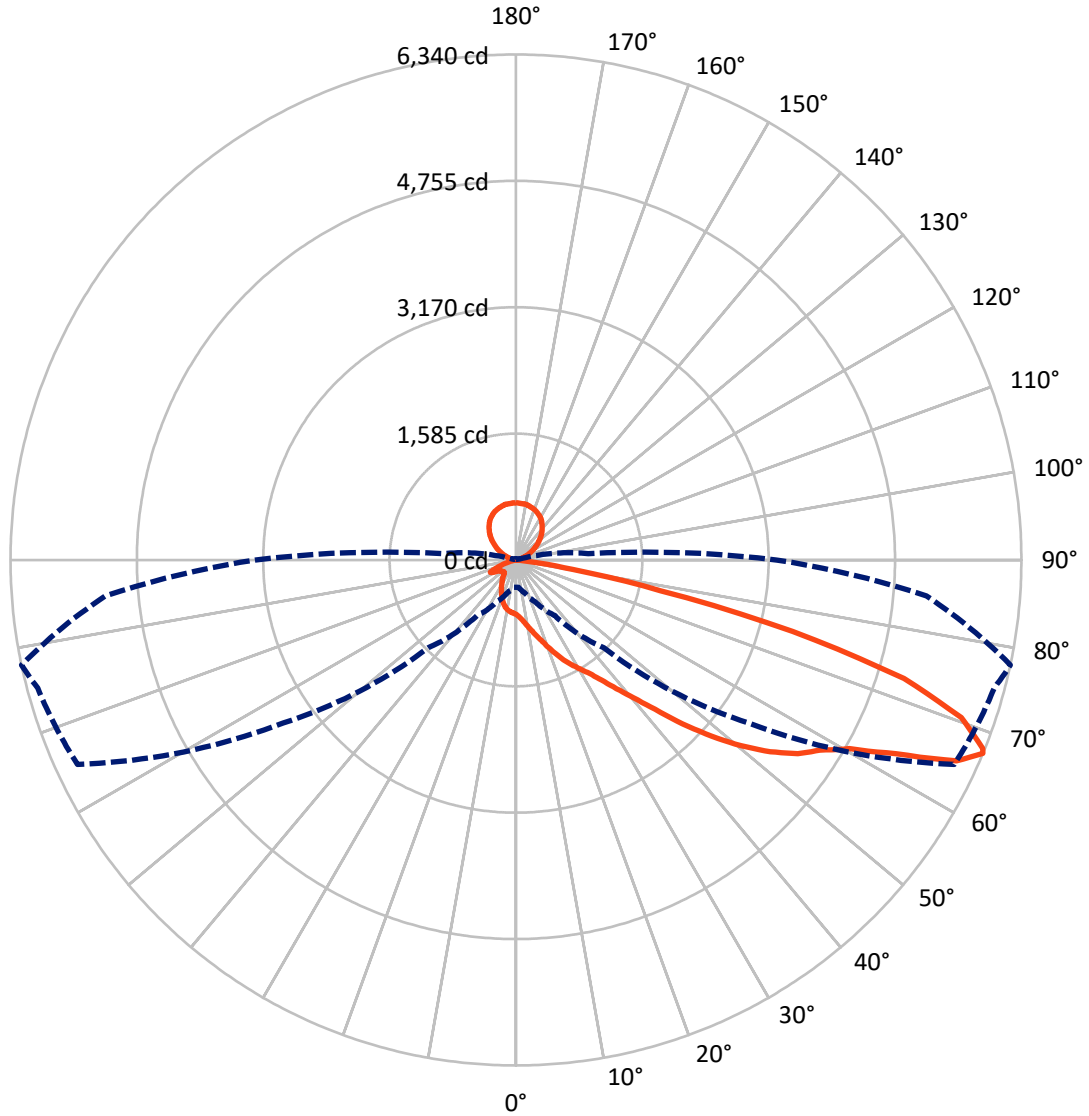
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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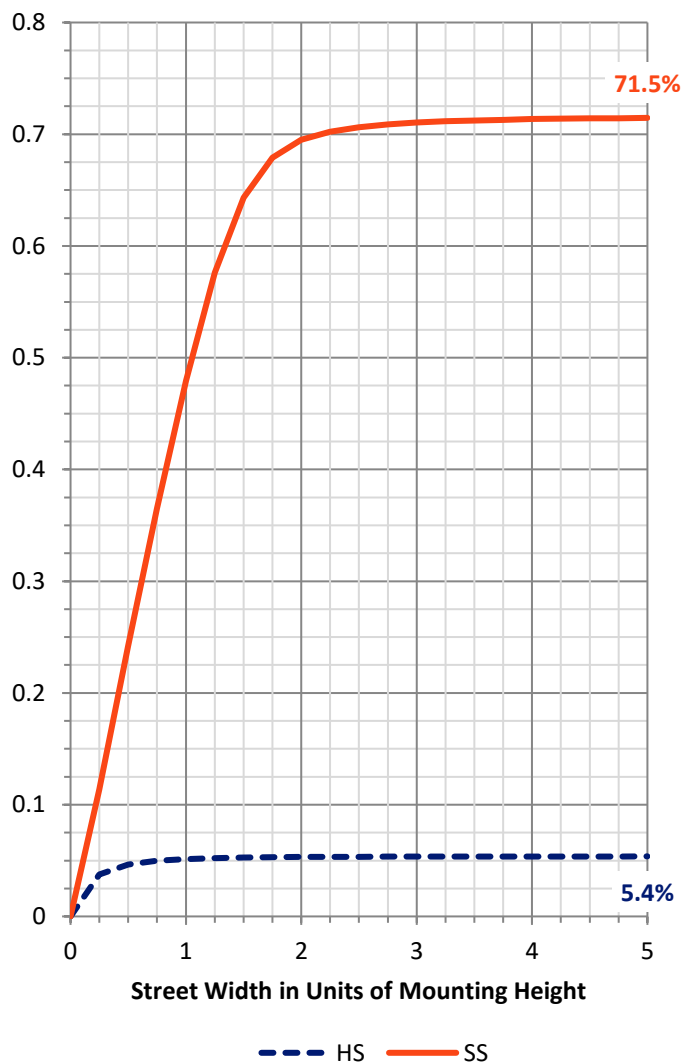
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	415.7	887.0	1302.6
	% Fixture	5.4	11.6	17.0
Street Side	Lumens	5476.3	887.0	6363.3
	% Fixture	71.4	11.6	83.0
Total	Lumens	5892.0	1773.9	7665.9
	% Fixture	76.9	23.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.9	0.9
10°-20°	188.9	2.5
20°-30°	333.7	4.4
30°-40°	588.4	7.7
40°-50°	1011.2	13.2
50°-60°	1522.3	19.9
60°-70°	1498.0	19.5
70°-80°	654.6	8.5
80°-90°	29.0	0.4
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.2
120°-130°	279.4	3.6
130°-140°	344.6	4.5
140°-150°	352.5	4.6
150°-160°	297.0	3.9
160°-170°	195.5	2.6
170°-180°	67.8	0.9
0°-90°	5892.0	76.9
0°-180°	7665.9	100.0

Coefficient of Utilization

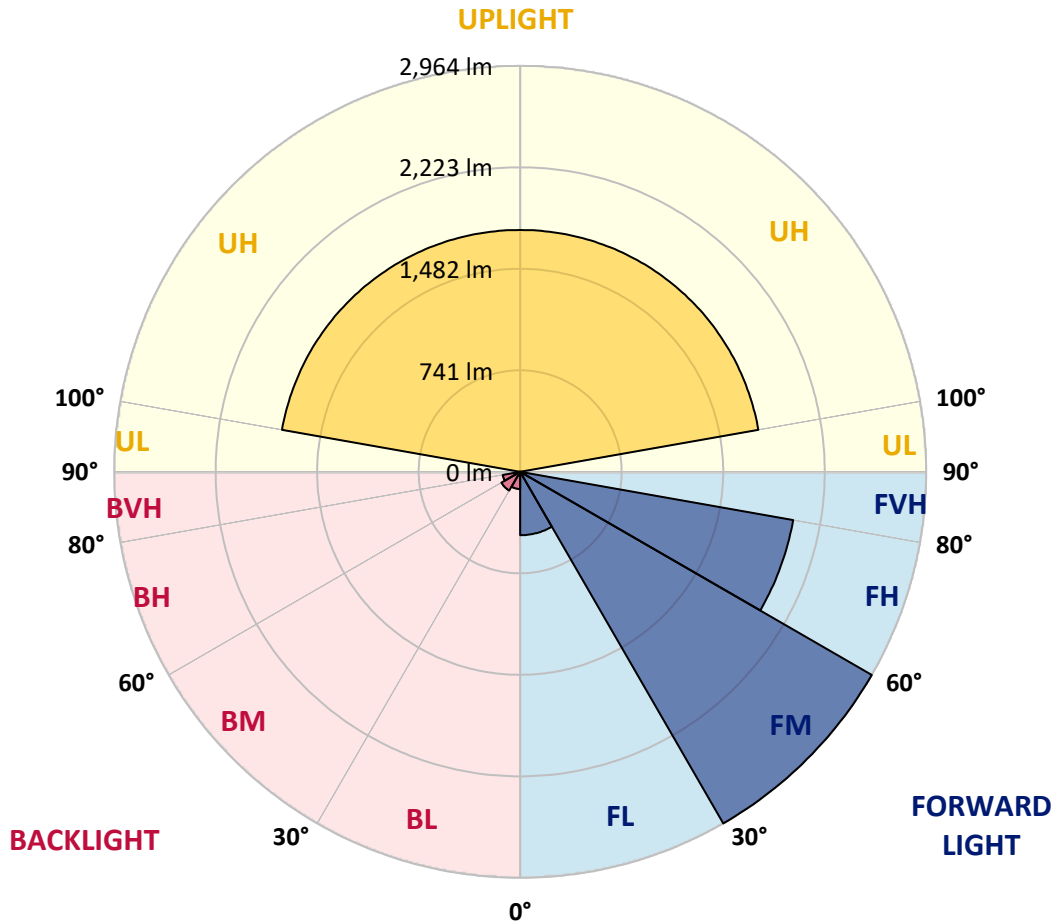


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	462.9	6.0			
FM (30°-60°)	2963.7	38.7			
FH (60°-80°)	2023.6	26.4			G2/5000
FVH (80°-90°)	26.0	0.3			G1/100
BL (0°-30°)	125.6	1.6	B1/500		
BM (30°-60°)	158.2	2.1	B0/220		
BH (60°-80°)	129.0	1.7	B1/500		G1/500
BVH (80°-90°)	3.0	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	23.0		U5	

BUG Rating: B1-U5-G2
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1
2.5°	784.8	788.1	783.7	780.4	771.5	760.5	749.4	732.8	715.1	708.4	697.4
5°	881.1	881.1	881.1	872.3	864.5	843.5	818.0	792.6	759.4	747.2	721.7
7.5°	932.1	933.2	936.5	936.5	932.1	917.7	890.0	861.2	811.4	794.8	753.8
10°	937.6	942.0	950.9	964.2	974.1	981.9	965.3	934.3	874.5	854.6	794.8
12.5°	923.2	925.4	939.8	964.2	996.3	1028.4	1029.5	1010.6	944.2	916.6	844.6
15°	890.0	893.3	914.3	953.1	1002.9	1060.5	1093.7	1088.1	1026.1	994.0	899.9
17.5°	836.9	840.2	866.7	924.3	997.4	1081.5	1152.3	1180.0	1106.9	1076.0	956.4
20°	834.6	835.7	845.7	888.9	975.2	1093.7	1209.9	1275.2	1205.5	1172.3	1022.8
22.5°	976.3	967.5	945.3	917.7	955.3	1090.3	1261.9	1375.9	1327.2	1275.2	1099.2
25°	1134.6	1137.9	1113.6	1048.3	1000.7	1084.8	1301.8	1490.0	1441.2	1389.2	1177.8
27.5°	1300.7	1295.1	1274.1	1214.3	1134.6	1124.7	1330.6	1581.8	1550.8	1487.7	1247.5
30°	1462.3	1457.9	1442.4	1381.5	1295.1	1227.6	1352.7	1664.9	1654.9	1585.2	1304.0
32.5°	1647.1	1654.9	1635.0	1555.3	1450.1	1367.1	1400.3	1752.3	1781.1	1695.8	1362.7
35°	1861.9	1861.9	1820.9	1747.9	1639.4	1523.2	1495.5	1848.6	1941.6	1849.7	1455.6
37.5°	2039.0	2053.4	2029.0	1923.9	1822.0	1700.3	1640.5	1967.0	2139.7	2046.7	1580.7
40°	2178.5	2202.8	2203.9	2099.9	2005.8	1926.1	1843.1	2134.2	2388.8	2269.2	1730.2
42.5°	2308.0	2312.4	2331.2	2271.5	2177.4	2156.3	2071.1	2332.3	2699.8	2559.3	1929.4
45°	2472.9	2481.8	2470.7	2426.4	2345.6	2373.3	2325.7	2583.6	3049.6	2931.2	2164.1
47.5°	2715.3	2736.4	2719.8	2640.1	2541.6	2593.6	2559.3	2833.8	3444.8	3300.9	2418.7
50°	2942.3	2958.9	2976.6	2951.1	2852.6	2802.8	2760.7	3098.4	3783.6	3661.8	2668.9
52.5°	2966.6	2982.1	3079.5	3169.2	3234.5	3103.9	2972.2	3366.2	4096.8	3995.0	2898.0
55°	2808.3	2818.3	2981.0	3158.1	3458.1	3502.4	3283.2	3630.8	4359.2	4289.4	3051.9
57.5°	2367.8	2409.8	2641.2	2912.4	3402.8	3739.3	3724.9	3938.5	4529.6	4497.5	3250.0
60°	1555.3	1601.8	1878.5	2289.2	2995.4	3676.2	4209.7	4400.1	4768.7	4804.2	3597.6
62.5°	805.9	860.1	1103.6	1467.8	2170.7	3201.3	4374.7	5158.4	5227.0	5347.7	4217.5
65°	460.5	471.6	593.3	860.1	1343.8	2292.5	4176.5	5908.9	5830.3	6074.9	5008.9
67°	342.0	342.0	427.3	584.5	851.2	1558.6	3562.2	6067.2	6210.0	6339.5	5168.3
67.5°	306.6	323.2	396.3	539.1	763.8	1382.6	3333.0	6025.1	6234.3	6315.1	5113.0
70°	210.3	221.4	284.5	386.3	514.7	719.5	2185.1	5328.9	6006.3	5924.4	4633.7
72.5°	126.2	130.6	188.2	277.8	384.1	385.2	1192.2	4044.8	5089.8	5088.6	3784.7
75°	78.6	83.0	110.7	186.0	269.0	241.3	551.3	2751.9	3655.1	3584.3	2536.0
77.5°	44.3	50.9	66.4	101.8	170.5	153.9	232.5	1542.0	1974.8	1853.0	1259.7
80°	17.7	21.0	37.6	48.7	96.3	91.9	95.2	542.4	799.2	720.6	421.7
82.5°	4.4	5.5	13.3	23.2	37.6	37.6	29.9	148.3	189.3	176.0	108.5
85°	0.0	0.0	1.1	1.1	1.1	2.2	7.7	16.6	19.9	23.2	17.7
87.5°	0.0	0.0	0.0	1.1	1.1	1.1	2.2	3.3	3.3	3.3	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	7.2	7.2	6.1	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.2	8.9	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	23.5	22.3	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	43.0	42.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	66.5	65.3	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	92.1	91.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	121.7	120.8	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.4	151.8	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	183.1	182.5	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	214.8	214.2	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	250.6	250.0	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	284.4	283.8	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	317.1	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.6	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.1	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	423.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.3	458.2	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.9	488.5	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	515.6	517.1	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.5	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	573.9	573.0	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	599.4	598.5	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	617.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	632.2	633.7	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	650.6	651.2	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	664.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	676.2	675.9	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.4	684.8	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	695.6	695.0	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	703.8	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	709.9	710.5	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	709.9	710.5	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	712.0	711.4	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	717.1	716.2	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°	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1	684.1
2.5°	688.5	680.8	665.3	648.7	632.1	618.8	607.7	592.2	590.0	590.0	590.0
5°	702.9	685.2	649.8	614.4	578.9	546.8	523.6	504.8	488.2	482.6	487.1
7.5°	723.9	691.8	629.9	567.9	512.5	467.1	433.9	407.4	395.2	388.5	383.0
10°	751.6	701.8	603.3	512.5	442.8	388.5	353.1	327.7	315.5	307.7	308.8
12.5°	781.5	709.6	570.1	452.7	375.3	325.4	295.6	274.5	254.6	242.4	245.7
15°	811.4	715.1	529.1	397.4	323.2	279.0	236.9	199.3	186.0	183.8	182.6
17.5°	844.6	714.0	483.7	345.4	279.0	217.0	174.9	170.5	169.4	169.4	168.3
20°	878.9	708.4	431.7	302.2	234.7	164.9	158.3	156.1	152.8	151.7	150.5
22.5°	916.6	698.5	384.1	264.6	174.9	150.5	141.7	135.0	129.5	126.2	127.3
25°	950.9	679.7	337.6	229.1	149.4	135.0	122.9	112.9	107.4	102.9	104.1
27.5°	974.1	646.5	297.8	184.9	137.3	119.6	105.2	95.2	87.4	84.1	84.1
30°	976.3	598.9	262.3	151.7	125.1	105.2	89.7	78.6	74.2	72.0	70.8
32.5°	974.1	550.2	235.8	139.5	114.0	91.9	76.4	68.6	64.2	62.0	62.0
35°	985.2	500.3	211.4	128.4	101.8	80.8	67.5	59.8	56.5	54.2	54.2
37.5°	1018.4	466.0	186.0	117.3	90.8	70.8	60.9	54.2	50.9	48.7	48.7
40°	1063.8	437.2	155.0	106.3	79.7	64.2	55.3	49.8	45.4	43.2	43.2
42.5°	1143.5	426.2	129.5	95.2	69.7	57.6	50.9	44.3	39.9	37.6	37.6
45°	1261.9	431.7	118.4	85.2	63.1	52.0	45.4	38.7	34.3	33.2	33.2
47.5°	1392.5	455.0	110.7	76.4	57.6	48.7	41.0	34.3	29.9	28.8	28.8
50°	1538.7	491.5	104.1	67.5	52.0	44.3	36.5	29.9	26.6	25.5	25.5
52.5°	1678.1	538.0	97.4	60.9	48.7	39.9	32.1	26.6	24.4	23.2	23.2
55°	1784.4	567.9	91.9	56.5	45.4	36.5	28.8	25.5	22.1	21.0	21.0
57.5°	1932.7	617.7	85.2	50.9	41.0	33.2	26.6	23.2	19.9	19.9	19.9
60°	2233.8	751.6	75.3	46.5	36.5	29.9	25.5	21.0	18.8	17.7	17.7
62.5°	2776.2	973.0	65.3	43.2	32.1	26.6	22.1	18.8	16.6	14.4	14.4
65°	3298.7	1064.9	55.3	37.6	28.8	23.2	19.9	16.6	12.2	10.0	10.0
67°	3269.9	911.0	46.5	32.1	24.4	21.0	16.6	13.3	8.9	5.5	5.5
67.5°	3192.4	847.9	45.4	31.0	23.2	19.9	16.6	12.2	7.7	4.4	4.4
70°	2713.1	593.3	35.4	24.4	19.9	17.7	13.3	8.9	4.4	2.2	2.2
72.5°	2203.9	470.5	27.7	19.9	16.6	13.3	11.1	5.5	3.3	1.1	1.1
75°	1558.6	288.9	24.4	17.7	13.3	10.0	8.9	5.5	3.3	2.2	1.1
77.5°	769.3	132.8	19.9	15.5	12.2	10.0	7.7	6.6	5.5	4.4	2.2
80°	225.8	43.2	13.3	11.1	11.1	10.0	8.9	7.7	6.6	5.5	3.3
82.5°	50.9	15.5	4.4	5.5	7.7	7.7	7.7	5.5	4.4	2.2	1.1
85°	6.6	3.3	3.3	3.3	4.4	4.4	3.3	2.2	2.2	0.0	0.0
87.5°	2.2	2.2	2.2	3.3	3.3	3.3	2.2	1.1	1.1	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°	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)