

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-T3-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401870 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-T3-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7755.9 lumens
Efficiency: N/A
Efficacy: 93.7 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

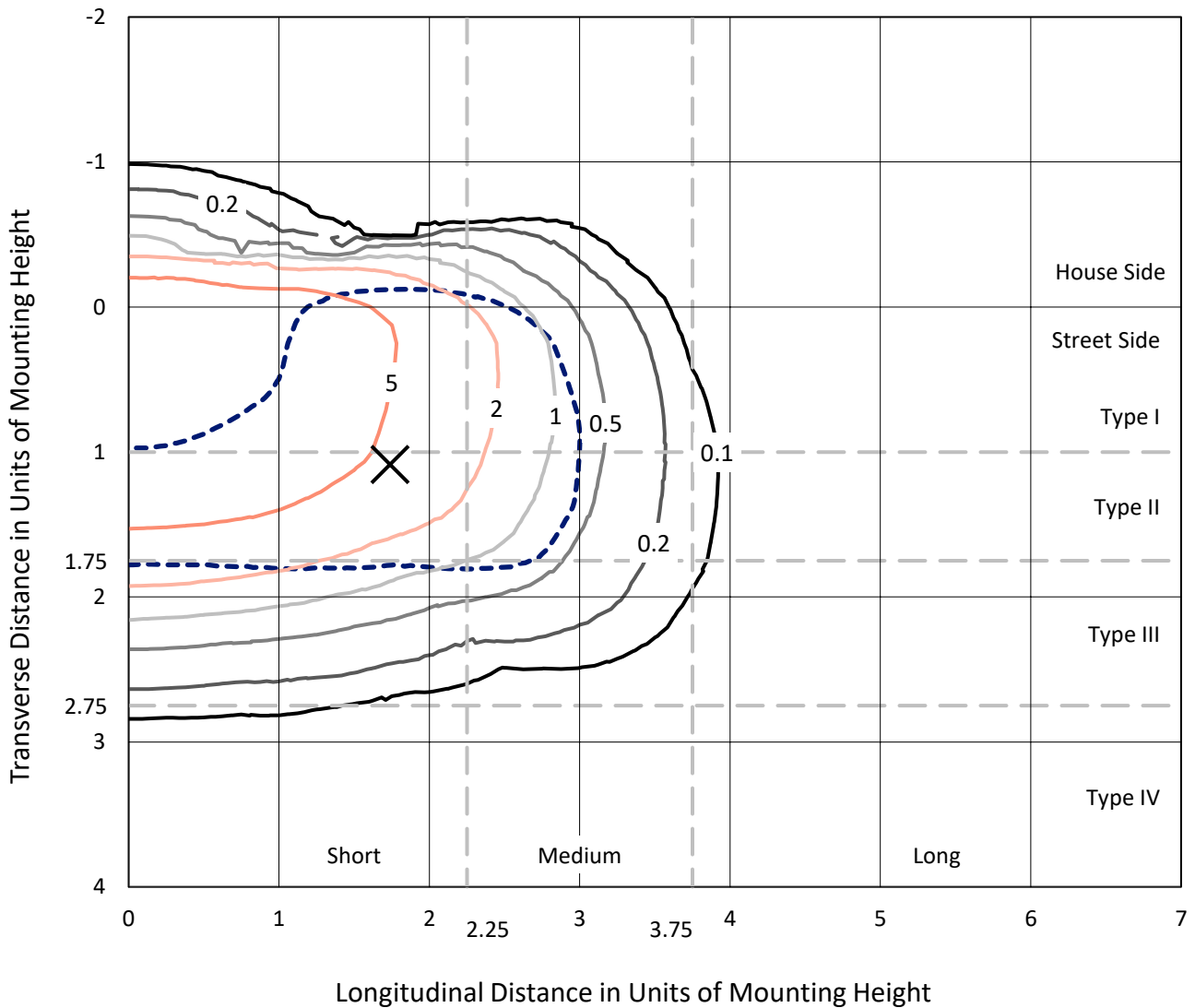
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

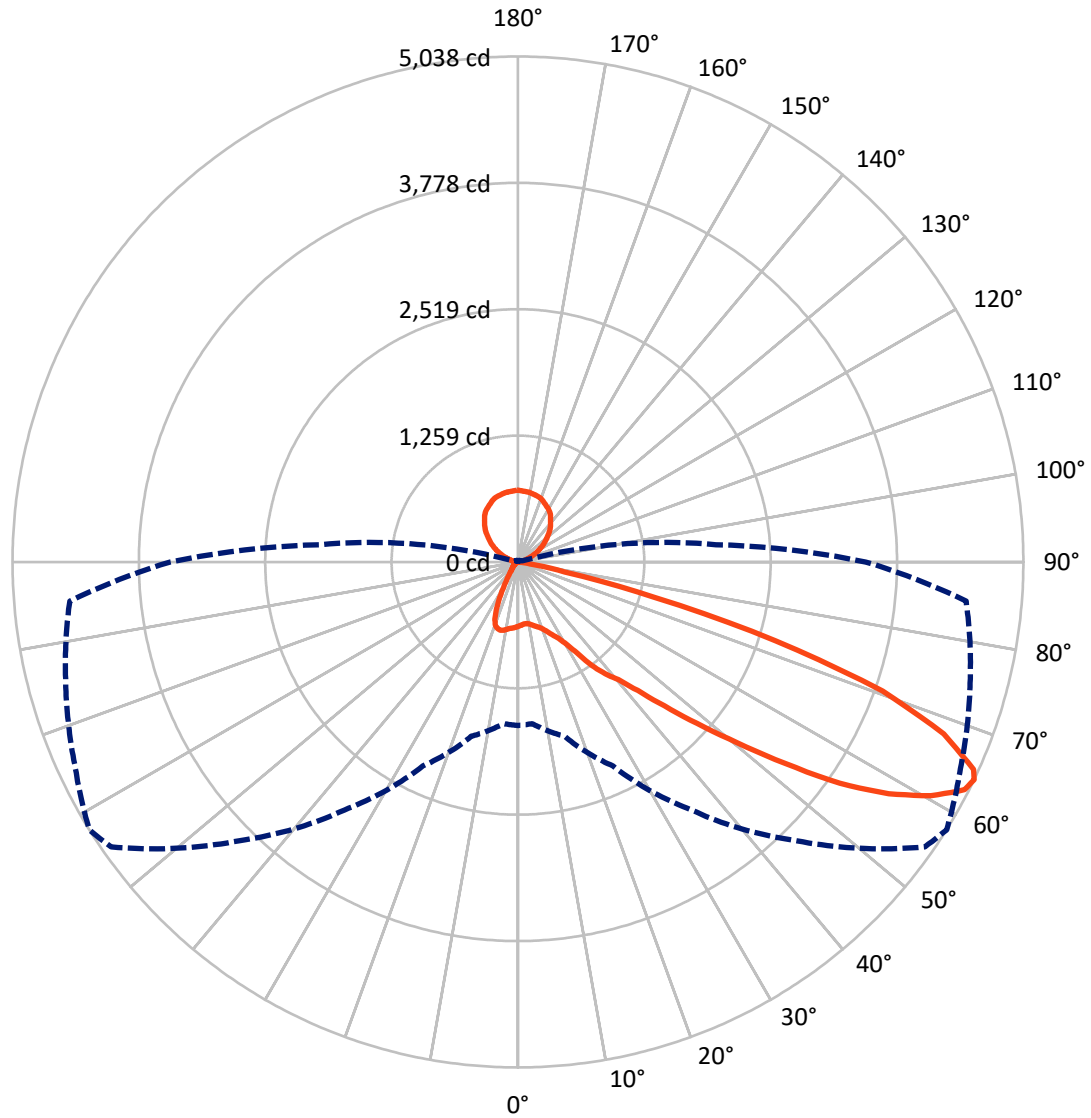
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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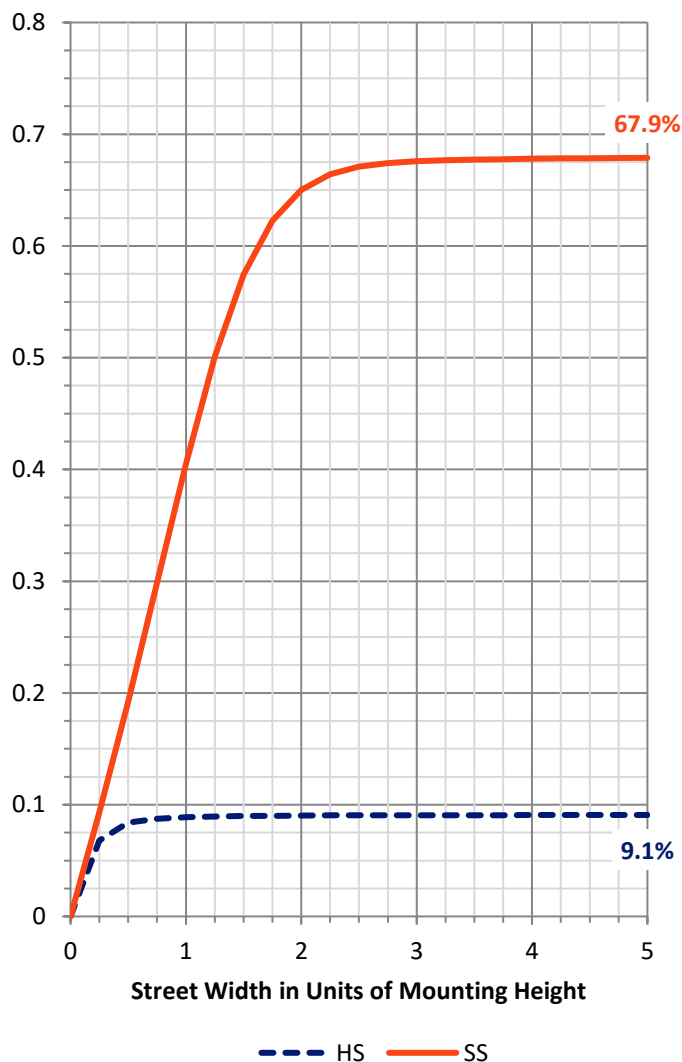
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	713.2	887.0	1600.1
	% Fixture	9.2	11.4	20.6
Street Side	Lumens	5268.8	887.0	6155.8
	% Fixture	67.9	11.4	79.4
Total	Lumens	5982.0	1773.9	7755.9
	% Fixture	77.1	22.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	0.8
10°-20°	176.5	2.3
20°-30°	317.2	4.1
30°-40°	555.9	7.2
40°-50°	1016.5	13.1
50°-60°	1738.9	22.4
60°-70°	1686.8	21.7
70°-80°	417.8	5.4
80°-90°	11.9	0.2
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	4.4
140°-150°	352.5	4.5
150°-160°	297.0	3.8
160°-170°	195.5	2.5
170°-180°	67.8	0.9
0°-90°	5982.0	77.1
0°-180°	7755.9	100.0

Coefficient of Utilization

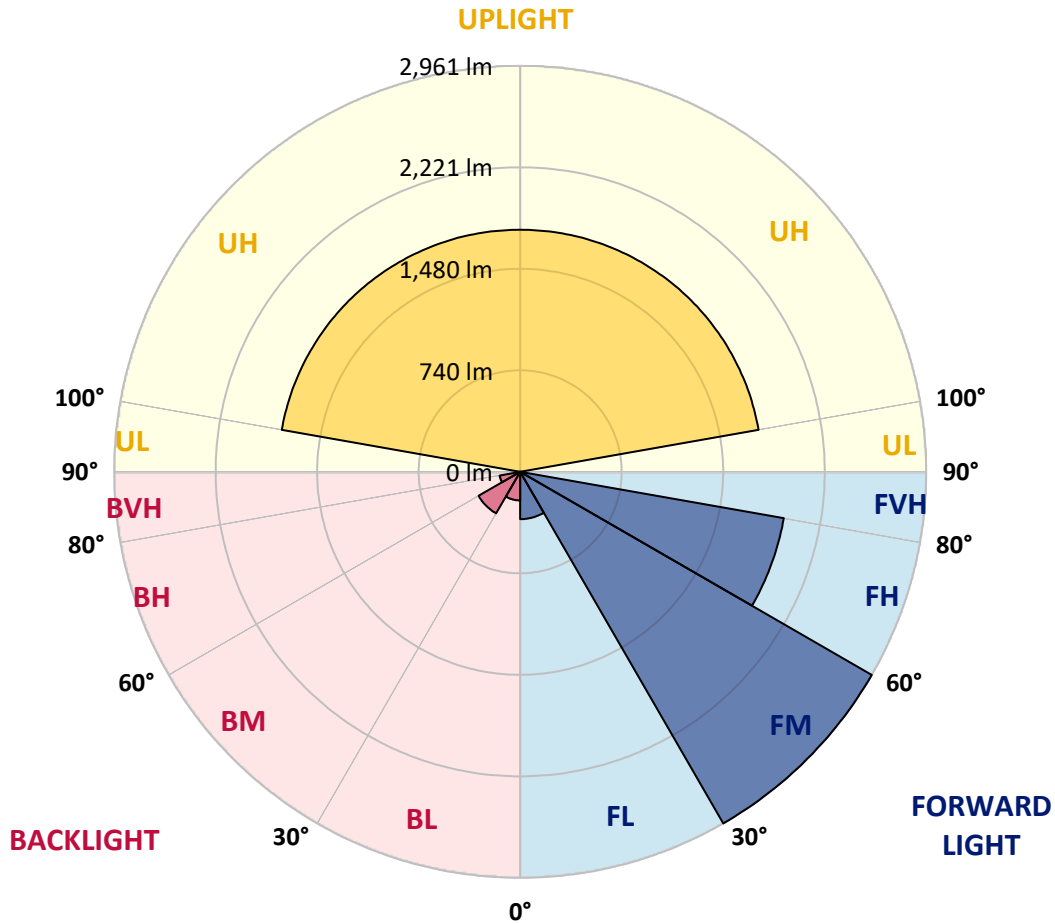


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	345.4	4.5			
FM (30°-60°)	2961.0	38.2			
FH (60°-80°)	1952.4	25.2			G2/5000
FVH (80°-90°)	10.1	0.1			G1/100
BL (0°-30°)	208.8	2.7	B1/500		
BM (30°-60°)	350.3	4.5	B1/1000		
BH (60°-80°)	152.3	2.0	B1/500		G1/500
BVH (80°-90°)	1.8	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	22.8		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°	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8
2.5°	614.2	614.2	616.4	617.5	620.9	624.2	628.6	629.7	631.9	637.5	639.7
5°	581.0	582.1	584.3	589.9	597.6	606.5	617.5	620.9	629.7	640.8	648.5
7.5°	567.7	568.8	572.2	578.8	588.8	602.0	615.3	619.7	631.9	649.6	660.7
10°	565.5	565.5	569.9	579.9	592.1	608.7	623.1	628.6	645.2	666.2	683.9
12.5°	565.5	565.5	571.0	583.2	597.6	618.6	638.6	646.3	665.1	691.7	713.8
15°	575.5	577.7	581.0	588.8	605.4	628.6	656.3	665.1	688.4	720.5	748.1
17.5°	646.3	644.1	633.0	623.1	619.7	639.7	672.9	685.0	719.3	760.3	790.2
20°	783.5	782.4	762.5	713.8	670.7	659.6	698.3	712.7	762.5	816.7	838.9
22.5°	949.5	955.1	924.1	858.8	770.3	713.8	735.9	755.9	820.1	885.3	898.6
25°	1114.4	1121.1	1092.3	1010.4	901.9	803.5	788.0	805.7	878.7	944.0	938.5
27.5°	1309.2	1303.7	1274.9	1181.9	1055.8	924.1	857.7	861.0	917.4	990.5	972.8
30°	1452.0	1444.2	1416.6	1353.5	1235.1	1084.6	957.3	947.3	963.9	1044.7	1025.9
32.5°	1582.6	1588.1	1567.1	1483.0	1371.2	1249.4	1106.7	1080.1	1073.5	1142.1	1111.1
35°	1712.0	1710.9	1703.2	1629.0	1519.5	1404.4	1284.9	1266.0	1263.8	1330.2	1246.1
37.5°	1867.0	1859.2	1844.8	1769.6	1682.2	1572.6	1445.3	1415.5	1409.9	1423.2	1324.7
40°	2033.0	2042.9	2019.7	1941.1	1846.0	1764.1	1585.9	1540.5	1502.9	1541.6	1478.5
42.5°	2279.8	2287.5	2246.6	2192.3	2069.5	1993.1	1812.8	1750.8	1733.1	1791.7	1720.9
45°	2589.6	2575.3	2547.6	2510.0	2408.1	2291.9	2103.8	2045.2	2026.3	2127.1	2010.8
47.5°	2830.9	2828.7	2829.8	2822.0	2806.6	2667.1	2443.6	2403.7	2384.9	2529.9	2401.5
50°	2983.6	2992.5	3030.1	3126.4	3197.2	3138.6	2876.3	2827.6	2813.2	2963.7	2790.0
52.5°	3098.7	3119.7	3182.8	3373.2	3600.0	3620.0	3403.1	3334.4	3301.2	3343.3	3102.0
55°	3157.4	3167.3	3263.6	3544.7	3900.0	4042.7	3952.0	3894.4	3760.5	3680.8	3468.4
57.5°	3020.1	3004.7	3170.7	3528.1	4054.9	4383.6	4422.3	4357.0	4142.3	4080.4	3913.2
60°	2660.5	2653.8	2840.9	3270.3	3919.9	4463.3	4770.9	4730.0	4533.0	4385.8	4228.6
62.5°	2029.7	2040.7	2238.8	2676.0	3438.5	4234.2	4964.6	4997.8	4788.6	4569.5	4462.2
64°	1630.1	1616.9	1798.4	2243.3	3016.8	3928.7	4950.2	5037.6	4866.1	4665.8	4483.2
65°	1369.0	1340.2	1513.9	1916.8	2660.5	3707.4	4848.4	4988.9	4871.6	4689.0	4406.8
67.5°	720.5	735.9	810.1	1164.2	1796.2	2803.2	4365.9	4578.4	4625.9	4371.4	3840.2
70°	323.2	325.4	373.0	594.3	993.8	1818.3	3511.5	3855.7	3882.3	3591.2	2782.2
72.5°	107.3	108.5	164.9	237.9	417.2	842.2	2371.6	2684.8	2742.4	2328.5	1509.5
75°	66.4	68.6	87.4	128.4	193.7	294.4	1201.9	1414.3	1426.5	1032.5	548.9
77.5°	42.1	44.3	53.1	76.4	106.2	111.8	394.0	477.0	540.1	371.8	170.4
80°	26.6	26.6	34.3	46.5	55.3	47.6	107.3	141.7	170.4	125.1	57.5
82.5°	10.0	10.0	17.7	25.5	23.2	16.6	28.8	37.6	65.3	62.0	27.7
85°	0.0	0.0	1.1	2.2	1.1	2.2	5.5	7.7	12.2	17.7	8.9
87.5°	0.0	0.0	0.0	0.0	1.1	1.1	2.2	2.2	2.2	2.2	2.2
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°	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8	640.8
2.5°	643.0	645.2	649.6	650.7	651.8	648.5	651.8	648.5	650.7	650.7	650.7
5°	652.9	656.3	659.6	660.7	659.6	651.8	654.1	648.5	647.4	647.4	647.4
7.5°	666.2	669.5	675.1	671.8	665.1	654.1	652.9	645.2	641.9	641.9	643.0
10°	690.6	693.9	696.1	689.5	676.2	659.6	647.4	630.8	623.1	619.7	619.7
12.5°	721.6	724.9	723.8	712.7	688.4	654.1	619.7	587.7	564.4	555.6	546.7
15°	754.8	759.2	757.0	733.7	687.3	626.4	560.0	484.7	438.2	408.4	402.8
17.5°	793.5	797.9	786.9	744.8	670.7	567.7	441.6	339.8	272.2	246.8	245.7
20°	841.1	838.9	812.3	745.9	640.8	459.3	295.5	212.5	183.7	177.1	176.0
22.5°	895.3	885.3	836.7	739.3	558.9	312.1	190.3	168.2	164.9	162.7	162.7
25°	926.3	908.6	845.5	720.5	430.5	199.2	161.6	157.1	152.7	148.3	147.2
27.5°	950.6	924.1	848.8	658.5	286.6	152.7	146.1	141.7	135.0	128.4	127.3
30°	994.9	955.1	854.4	550.0	176.0	130.6	127.3	119.5	109.6	102.9	100.7
32.5°	1074.6	1017.0	876.5	411.7	128.4	115.1	106.2	96.3	85.2	78.6	78.6
35°	1159.8	1075.7	887.6	271.1	111.8	100.7	87.4	75.3	65.3	59.8	58.7
37.5°	1238.4	1159.8	884.2	166.0	99.6	86.3	71.9	59.8	50.9	46.5	46.5
40°	1398.9	1307.0	838.9	114.0	87.4	73.0	58.7	46.5	40.9	37.6	37.6
42.5°	1627.9	1468.6	738.2	97.4	76.4	60.9	46.5	38.7	34.3	31.0	31.0
45°	1884.7	1646.7	588.8	87.4	66.4	50.9	38.7	32.1	27.7	26.6	26.6
47.5°	2221.1	1862.6	432.7	78.6	57.5	43.2	32.1	26.6	24.3	23.2	23.2
50°	2515.5	2037.4	295.5	68.6	50.9	36.5	27.7	24.3	22.1	21.0	21.0
52.5°	2783.3	2159.1	194.8	59.8	45.4	29.9	25.5	22.1	21.0	19.9	19.9
55°	3098.7	2252.1	131.7	52.0	39.8	27.7	24.3	22.1	19.9	19.9	18.8
57.5°	3366.5	2307.4	94.1	44.3	35.4	25.5	23.2	21.0	18.8	17.7	17.7
60°	3522.6	2242.1	68.6	38.7	31.0	23.2	21.0	18.8	17.7	16.6	16.6
62.5°	3565.7	2116.0	53.1	33.2	26.6	21.0	18.8	16.6	15.5	14.4	14.4
64°	3466.1	1981.0	45.4	28.8	23.2	18.8	17.7	15.5	13.3	11.1	11.1
65°	3325.6	1855.9	40.9	26.6	21.0	17.7	16.6	14.4	11.1	8.9	8.9
67.5°	2771.1	1479.6	33.2	22.1	16.6	15.5	13.3	11.1	7.7	5.5	5.5
70°	1967.7	1034.8	25.5	17.7	14.4	14.4	12.2	8.9	4.4	2.2	2.2
72.5°	1041.4	537.8	21.0	14.4	11.1	11.1	10.0	5.5	3.3	2.2	1.1
75°	364.1	177.1	17.7	12.2	10.0	7.7	6.6	4.4	3.3	2.2	1.1
77.5°	110.7	58.7	15.5	12.2	8.9	6.6	7.7	6.6	6.6	4.4	3.3
80°	35.4	21.0	8.9	7.7	8.9	8.9	7.7	6.6	7.7	5.5	4.4
82.5°	13.3	7.7	3.3	4.4	4.4	5.5	5.5	4.4	3.3	1.1	0.0
85°	4.4	3.3	2.2	3.3	3.3	3.3	2.2	2.2	1.1	0.0	0.0
87.5°	2.2	2.2	2.2	2.2	2.2	2.2	1.1	1.1	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°	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)