

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-SL2-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401486 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-SL2-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6337.9 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Medium
BUG Rating: B1 - U5 - G1

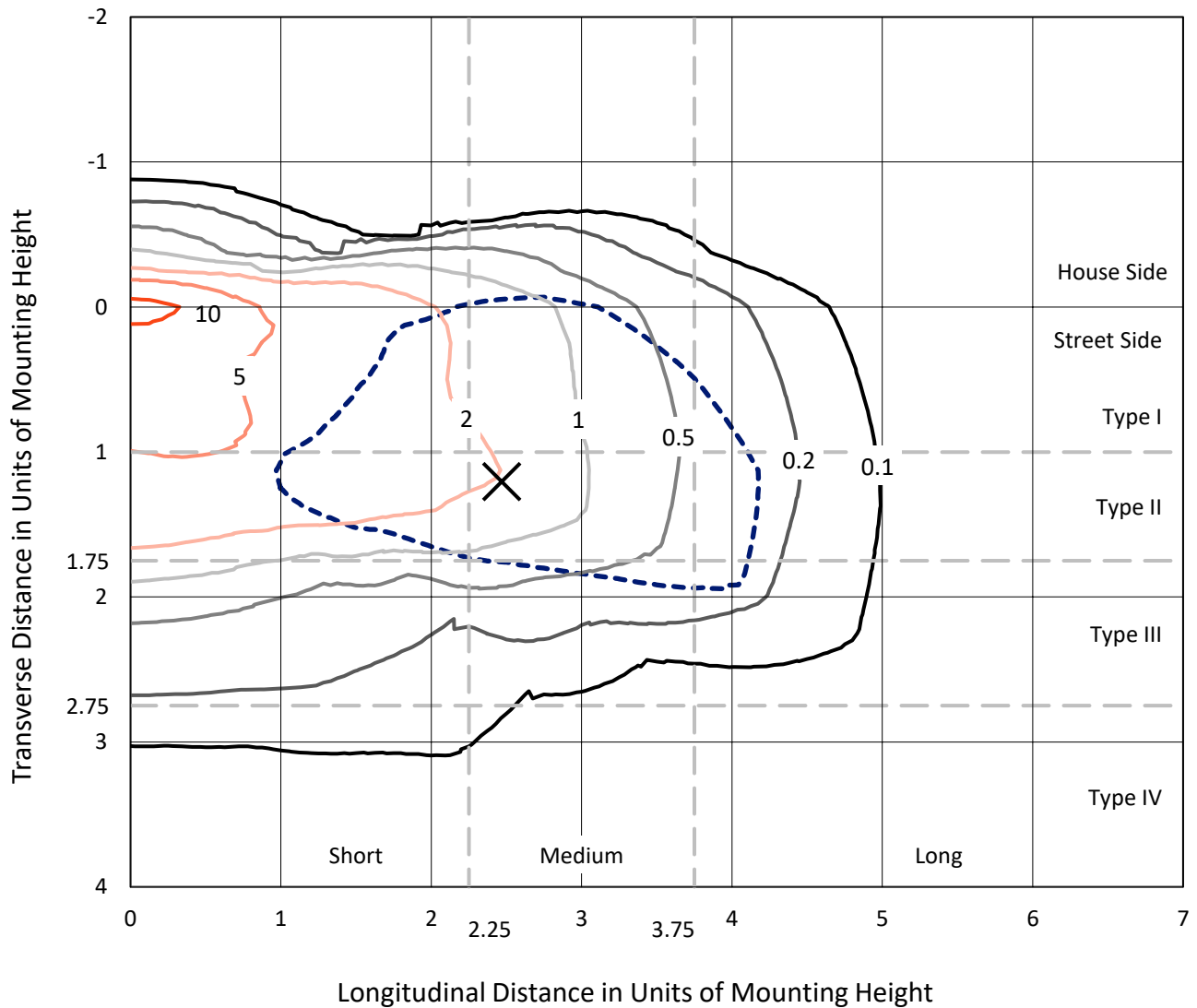
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

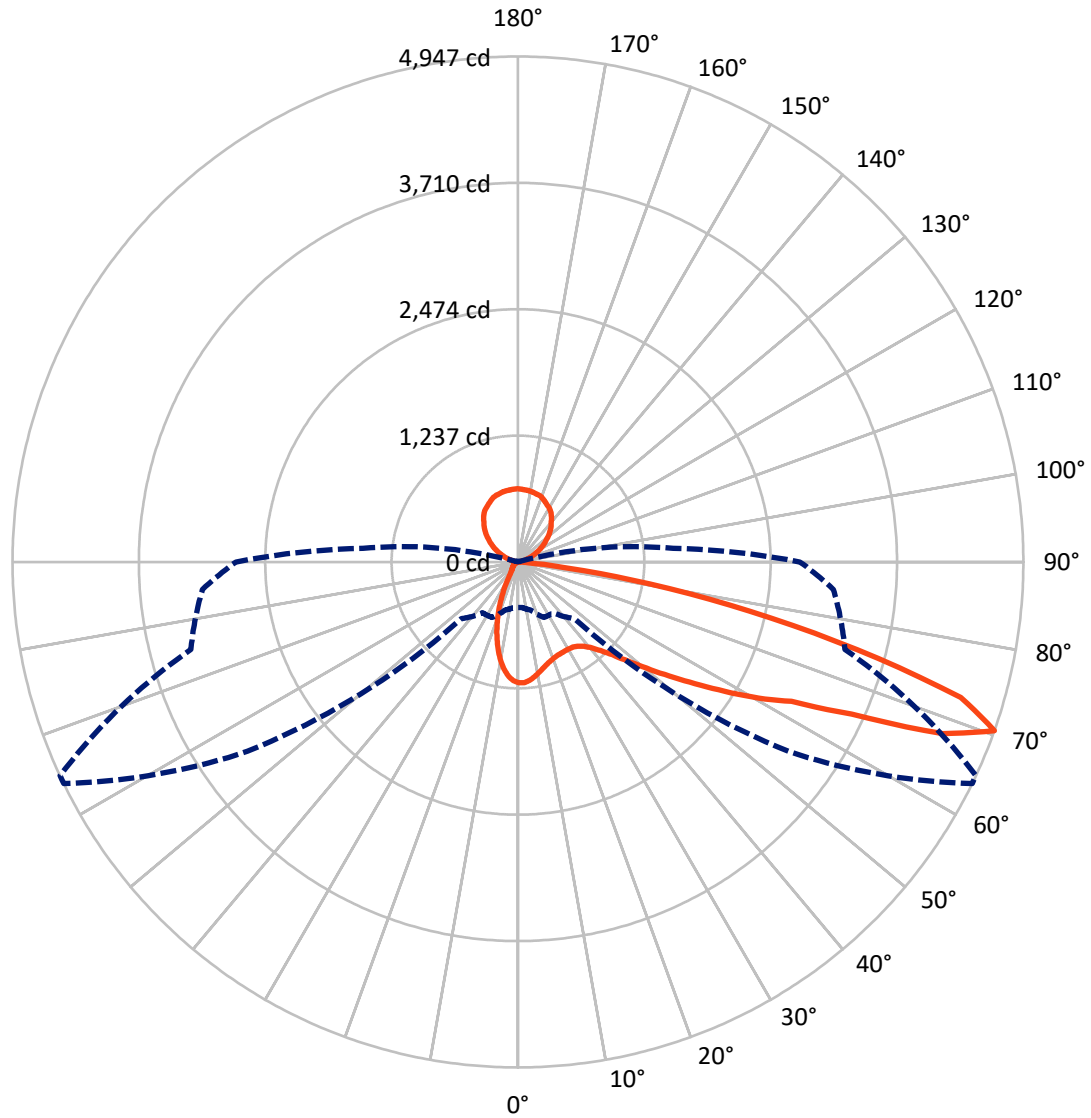
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.8 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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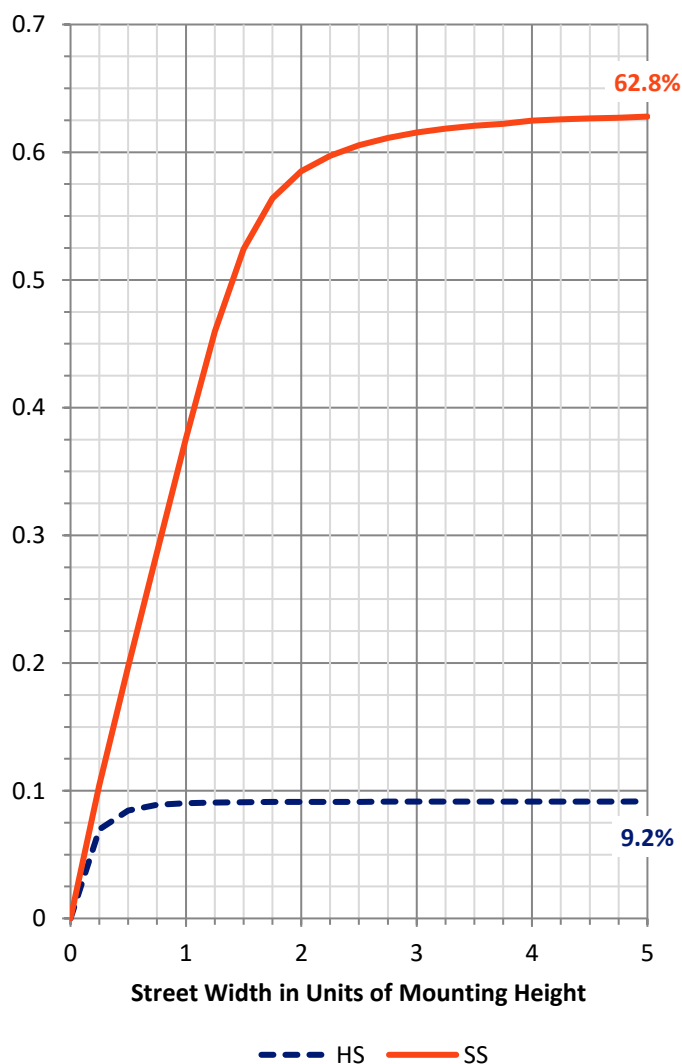
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	586.3	887.0	1473.2
	% Fixture	9.3	14.0	23.2
Street Side	Lumens	3977.7	887.0	4864.6
	% Fixture	62.8	14.0	76.8
Total	Lumens	4564.0	1773.9	6337.9
	% Fixture	72.0	28.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.6	1.6
10°-20°	220.9	3.5
20°-30°	304.3	4.8
30°-40°	419.0	6.6
40°-50°	624.5	9.9
50°-60°	986.5	15.6
60°-70°	1117.8	17.6
70°-80°	733.9	11.6
80°-90°	57.5	0.9
90°-100°	8.4	0.1
100°-110°	58.7	0.9
110°-120°	169.9	2.7
120°-130°	279.4	4.4
130°-140°	344.6	5.4
140°-150°	352.5	5.6
150°-160°	297.0	4.7
160°-170°	195.5	3.1
170°-180°	67.8	1.1
0°-90°	4564.0	72.0
0°-180°	6337.9	100.0

Coefficient of Utilization



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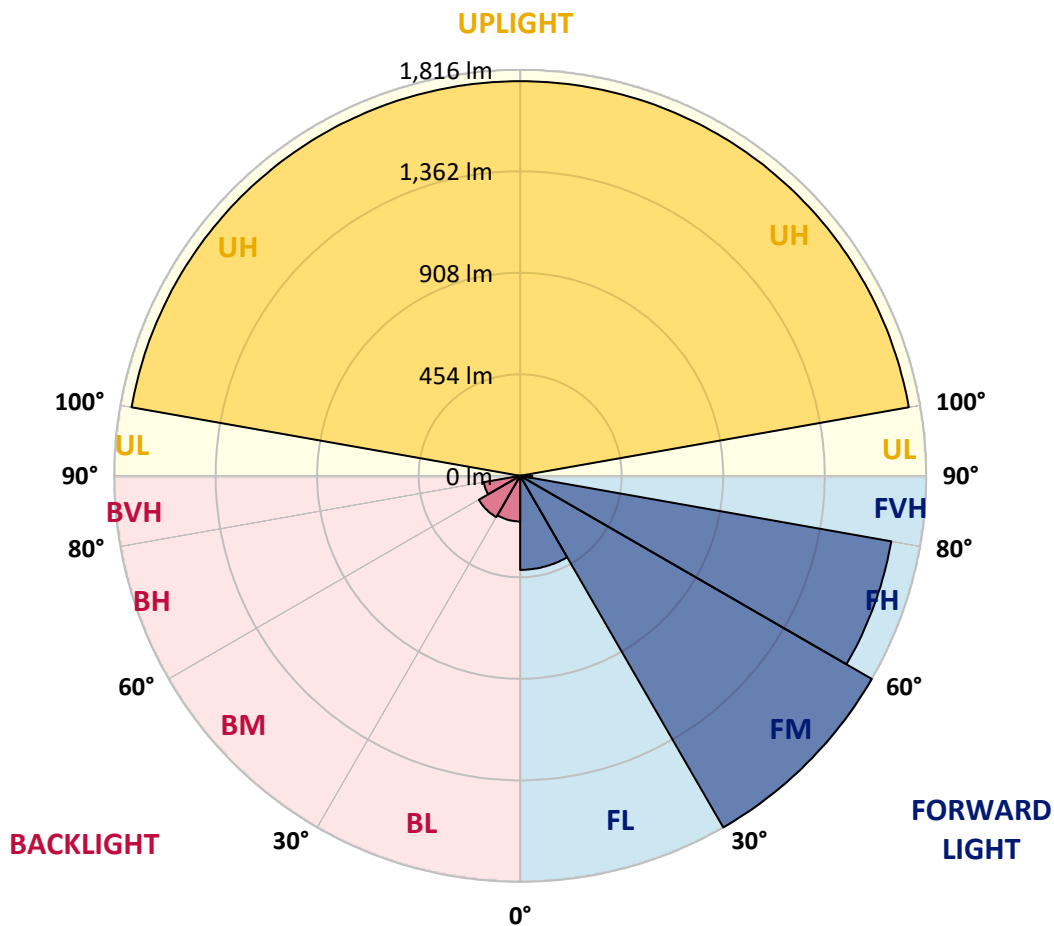
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	420.7	6.6			
FM (30°-60°)	1816.4	28.7			
FH (60°-80°)	1686.2	26.6			G1/1800
FVH (80°-90°)	54.4	0.9			G1/100
BL (0°-30°)	204.1	3.2	B1/500		
BM (30°-60°)	213.5	3.4	B0/220		
BH (60°-80°)	165.5	2.6	B1/500		G1/500
BVH (80°-90°)	3.2	0.1			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	27.9		U5	

BUG Rating: B1-U5-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4
2.5°	1148.5	1148.5	1154.2	1159.8	1163.0	1171.8	1178.2	1183.1	1183.1	1186.3	1180.6
5°	1072.3	1072.3	1077.1	1090.8	1105.2	1123.7	1144.5	1165.4	1169.4	1184.7	1183.9
7.5°	1001.7	1008.1	1016.1	1029.8	1045.0	1072.3	1101.2	1137.3	1141.3	1178.2	1186.3
10°	952.7	956.7	961.5	976.8	999.3	1030.6	1061.9	1104.4	1111.6	1167.0	1186.3
12.5°	913.4	914.2	921.4	938.3	959.9	990.4	1025.7	1072.3	1081.1	1146.9	1183.1
15°	885.3	884.5	892.5	908.6	929.4	960.7	995.2	1044.2	1053.8	1130.1	1182.2
17.5°	868.4	869.2	875.7	887.7	907.8	937.5	972.8	1020.9	1030.6	1116.4	1186.3
20°	868.4	868.4	872.4	878.1	893.3	919.8	954.3	1004.1	1013.7	1107.6	1191.9
22.5°	885.3	883.7	886.9	882.1	889.3	907.8	943.1	992.8	1003.3	1103.6	1200.7
25°	915.8	912.6	915.0	904.5	896.5	904.5	935.8	988.0	999.3	1104.4	1208.7
27.5°	958.3	958.3	953.5	939.1	919.0	910.2	935.0	984.8	996.0	1104.4	1214.4
30°	1017.7	1015.3	1008.1	993.6	962.3	932.6	943.1	984.8	996.0	1105.2	1216.0
32.5°	1077.1	1078.7	1082.7	1068.3	1025.7	971.2	962.3	992.0	1001.7	1104.4	1213.6
35°	1137.3	1138.1	1155.8	1157.4	1102.8	1033.0	995.2	1011.3	1017.7	1112.4	1215.2
37.5°	1190.3	1194.3	1228.8	1245.7	1200.7	1112.4	1047.4	1047.4	1050.6	1134.1	1224.8
40°	1249.7	1260.1	1301.8	1339.6	1321.9	1214.4	1123.7	1100.4	1102.0	1173.4	1246.5
42.5°	1318.7	1331.5	1386.1	1440.7	1439.9	1339.6	1220.0	1184.7	1186.3	1241.6	1290.6
45°	1406.2	1415.0	1484.0	1552.3	1566.7	1477.6	1341.2	1294.6	1296.2	1345.2	1376.5
47.5°	1512.9	1523.4	1590.0	1671.8	1708.8	1643.8	1498.5	1447.9	1443.1	1477.6	1500.1
50°	1652.6	1672.6	1712.0	1790.6	1879.7	1836.4	1683.1	1632.5	1626.1	1653.4	1660.6
52.5°	1785.8	1804.3	1820.3	1892.6	2065.1	2075.6	1909.4	1854.0	1847.6	1854.0	1862.9
55°	1805.9	1816.3	1828.4	1926.3	2215.2	2379.7	2167.1	2101.2	2082.8	2070.7	2100.4
57.5°	1646.2	1639.7	1679.9	1813.1	2240.1	2716.0	2515.4	2387.8	2370.1	2303.5	2273.8
60°	1303.4	1294.6	1332.3	1514.5	2100.4	2883.0	2998.6	2704.8	2661.5	2438.3	2409.4
62.5°	915.8	905.3	954.3	1061.9	1629.3	2850.1	3543.5	3005.0	2919.1	2557.9	2518.6
65°	705.5	700.7	727.2	751.2	994.4	2468.8	3843.7	3590.9	3413.5	2688.0	2637.4
67.5°	553.0	559.4	592.3	662.2	642.1	1538.6	3815.6	4485.0	4307.6	2927.1	2895.0
70°	444.6	446.3	487.2	598.7	606.0	783.4	3230.5	4947.3	4944.9	3313.2	3099.7
72.5°	268.9	276.1	342.7	517.7	611.6	599.6	2171.9	4533.2	4595.8	3403.1	2795.5
75°	129.2	136.4	177.4	347.5	607.6	583.5	1175.0	3432.0	3512.2	3051.5	2266.6
77.5°	48.2	54.6	81.9	170.2	450.3	534.5	618.0	2313.9	2377.3	2233.7	1535.4
80°	15.2	17.7	32.1	77.9	228.7	441.4	398.1	1305.0	1347.6	977.6	516.1
82.5°	1.6	2.4	8.8	26.5	88.3	224.7	233.6	491.2	512.9	191.0	104.3
85°	0.0	0.0	0.0	0.0	1.6	1.6	57.8	93.9	77.1	18.5	30.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.8	1.6	2.4	2.4	2.4	3.2
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	8.1	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.4	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.9	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.4	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.8	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.3	96.2	92.1	89.0
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.7	123.8	121.7	118.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.2	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	185.9	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.5	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.3	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.1	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.0	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.8	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.3	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	457.8	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.7	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.3	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	544.6	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.3	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	597.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.5	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	627.8	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.0	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.5	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	678.6	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.0	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.1	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.5	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.6	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	710.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	714.5	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°	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4	1181.4
2.5°	1179.8	1179.8	1174.2	1165.4	1154.2	1138.1	1134.1	1121.3	1121.3	1110.8	1109.2
5°	1181.4	1176.6	1158.2	1130.9	1093.2	1052.2	1026.5	998.5	974.4	959.1	960.7
7.5°	1181.4	1171.0	1134.1	1073.9	1003.3	932.6	878.9	816.3	787.4	768.1	776.9
10°	1178.2	1160.6	1096.4	1004.9	893.3	795.4	707.1	634.9	585.1	564.2	546.6
12.5°	1171.0	1145.3	1049.0	919.0	776.1	647.7	525.7	431.0	365.2	332.3	328.3
15°	1164.6	1129.3	993.6	825.1	643.7	475.9	339.5	248.8	192.6	179.8	181.4
17.5°	1163.0	1114.0	940.7	725.6	514.5	317.0	195.8	158.1	150.1	146.9	146.1
20°	1163.8	1100.4	882.9	626.8	364.4	197.4	148.5	139.7	136.4	134.8	134.0
22.5°	1167.0	1085.1	825.9	523.3	248.8	144.5	132.4	126.8	122.8	120.4	119.6
25°	1167.0	1068.3	762.5	413.3	162.9	126.8	118.8	111.6	105.9	102.7	102.7
27.5°	1164.6	1049.0	696.7	313.8	129.2	113.2	104.3	94.7	87.5	83.5	83.5
30°	1157.4	1025.7	633.3	219.1	113.2	101.1	89.9	77.9	69.0	65.0	63.4
32.5°	1146.9	1000.9	560.2	154.1	101.9	88.3	75.4	62.6	54.6	49.8	49.8
35°	1135.7	976.0	481.6	118.0	92.3	77.9	63.4	50.6	43.3	40.1	39.3
37.5°	1130.1	949.5	404.5	101.9	82.7	66.6	51.4	40.9	35.3	32.9	32.1
40°	1134.1	929.4	329.1	91.5	73.8	56.2	42.5	34.5	29.7	26.5	26.5
42.5°	1158.2	918.2	257.6	83.5	65.8	47.4	35.3	28.1	23.3	20.9	20.9
45°	1207.1	926.2	195.8	76.2	56.2	39.3	29.7	22.5	17.7	15.2	15.2
47.5°	1289.0	958.3	148.5	69.8	48.2	32.1	24.1	17.7	13.6	12.0	11.2
50°	1408.6	1021.7	116.4	63.4	40.1	27.3	20.1	13.6	10.4	8.8	8.8
52.5°	1581.1	1131.7	99.5	56.2	32.9	22.5	16.1	10.4	8.0	6.4	6.4
55°	1793.0	1271.3	89.9	49.8	26.5	18.5	12.8	8.0	5.6	4.8	4.0
57.5°	1964.8	1382.1	84.3	43.3	22.5	16.1	9.6	6.4	4.8	3.2	3.2
60°	2116.5	1453.5	74.6	36.1	19.3	12.8	8.0	4.8	3.2	2.4	2.4
62.5°	2239.3	1500.1	61.8	28.9	16.1	10.4	6.4	4.0	3.2	2.4	2.4
65°	2378.9	1537.8	50.6	22.5	13.6	8.8	5.6	3.2	2.4	2.4	2.4
67.5°	2652.6	1622.1	37.7	17.7	10.4	7.2	4.8	3.2	2.4	1.6	1.6
70°	2759.4	1523.4	29.7	14.4	8.0	6.4	4.8	3.2	1.6	1.6	1.6
72.5°	2348.4	1140.5	23.3	12.0	7.2	5.6	4.8	3.2	2.4	2.4	1.6
75°	1862.9	770.5	18.5	9.6	7.2	6.4	4.8	4.8	4.0	3.2	3.2
77.5°	1189.5	341.1	14.4	8.0	7.2	8.0	7.2	4.8	4.8	4.0	4.0
80°	354.8	81.9	10.4	6.4	5.6	6.4	7.2	4.8	3.2	2.4	2.4
82.5°	77.1	19.3	6.4	3.2	4.0	3.2	4.8	4.8	3.2	2.4	2.4
85°	25.7	7.2	4.0	3.2	2.4	2.4	2.4	2.4	2.4	2.4	1.6
87.5°	1.6	2.4	2.4	1.6	1.6	1.6	1.6	0.8	0.8	1.6	1.6
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
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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)