

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: P139876

Luminaire Tested: **ENT-F02-LED-E1-GZW-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139876
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33649)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-F02-LED-E1-GZW-7050
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - WALL GRAZER WIDE
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4717.9 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

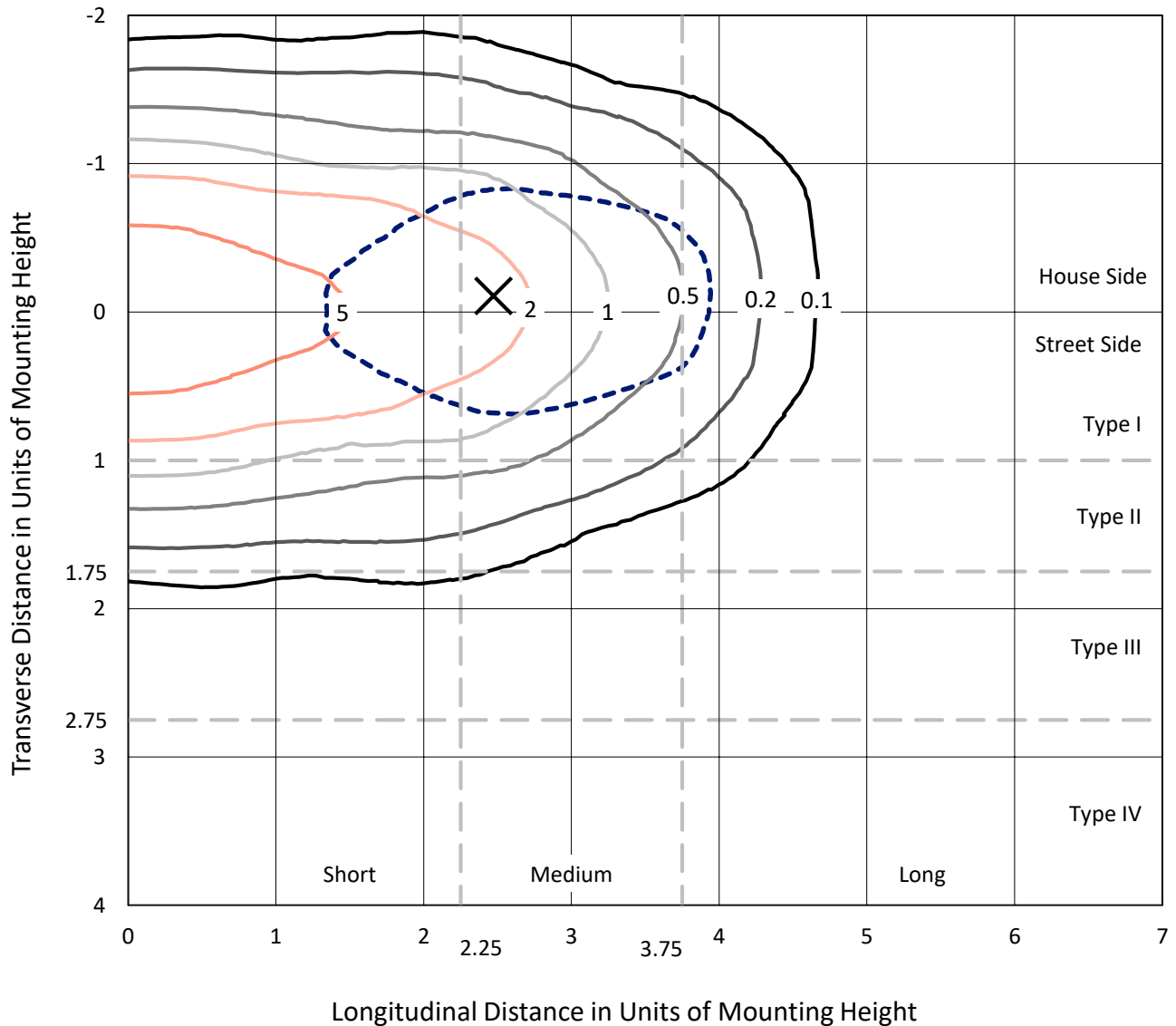
Input Watts (W): 49.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

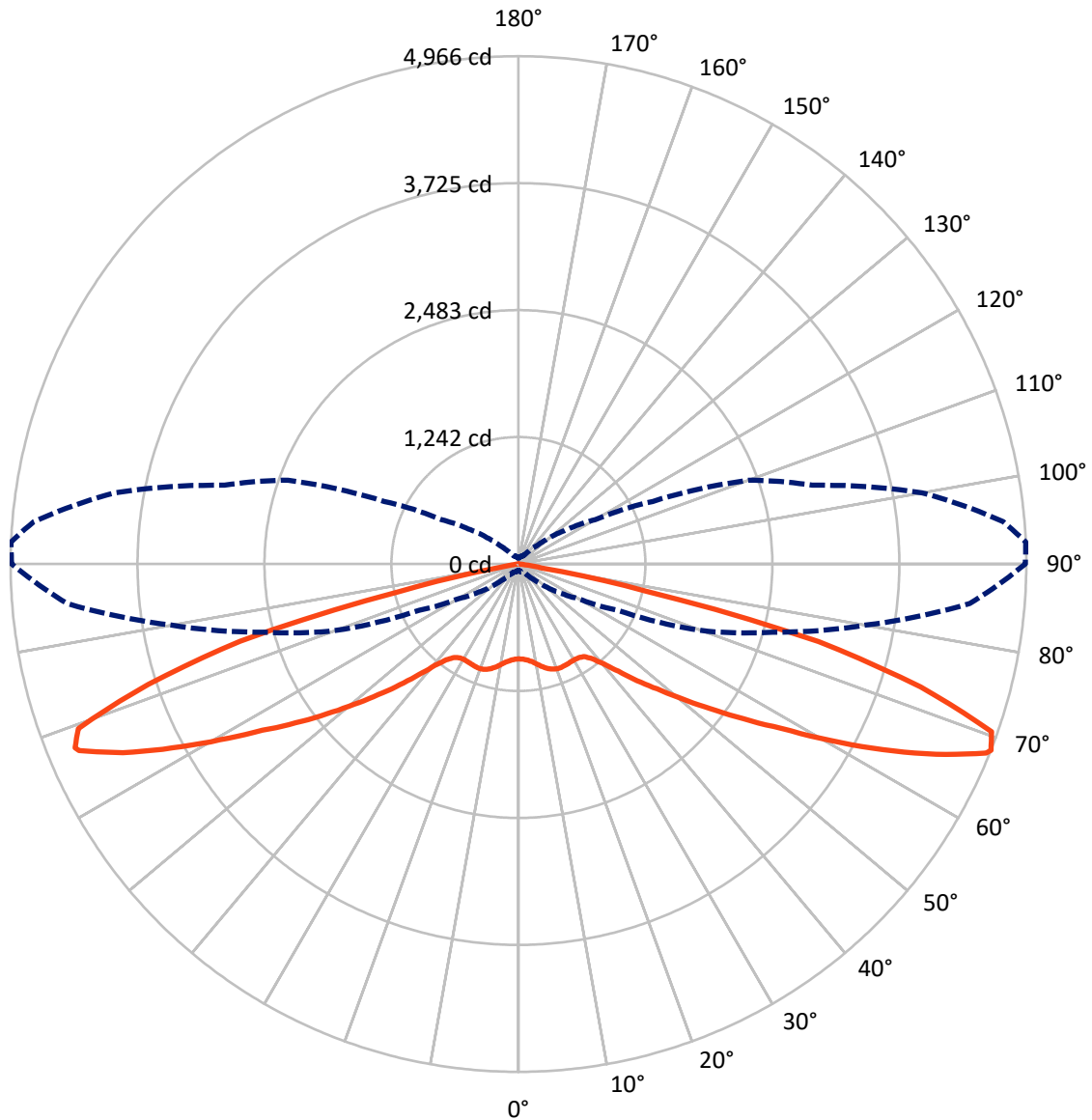
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.5 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 92.5-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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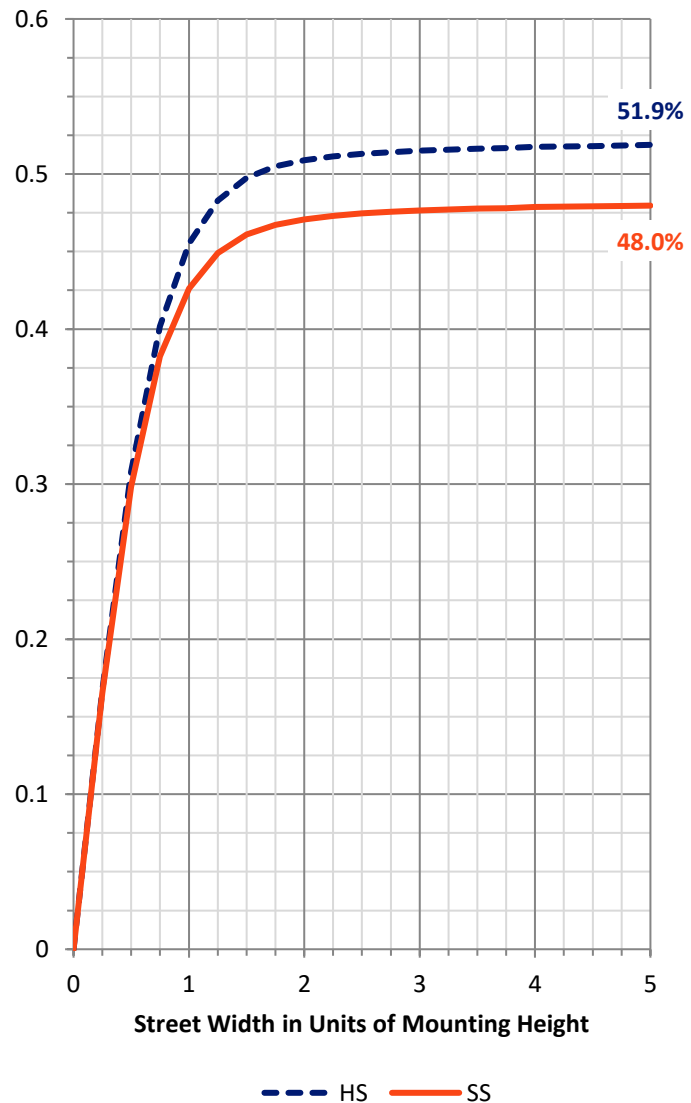
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2464.6	0.0	2464.6
	% Fixture	52.2	0.0	52.2
Street Side	Lumens	2253.3	0.0	2253.3
	% Fixture	47.8	0.0	47.8
Total	Lumens	4717.9	0.0	4717.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.2	1.9
10°-20°	288.5	6.1
20°-30°	467.9	9.9
30°-40°	581.6	12.3
40°-50°	723.1	15.3
50°-60°	889.5	18.9
60°-70°	1051.6	22.3
70°-80°	588.9	12.5
80°-90°	35.8	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	4717.9	100.0
0°-180°	4717.9	100.0



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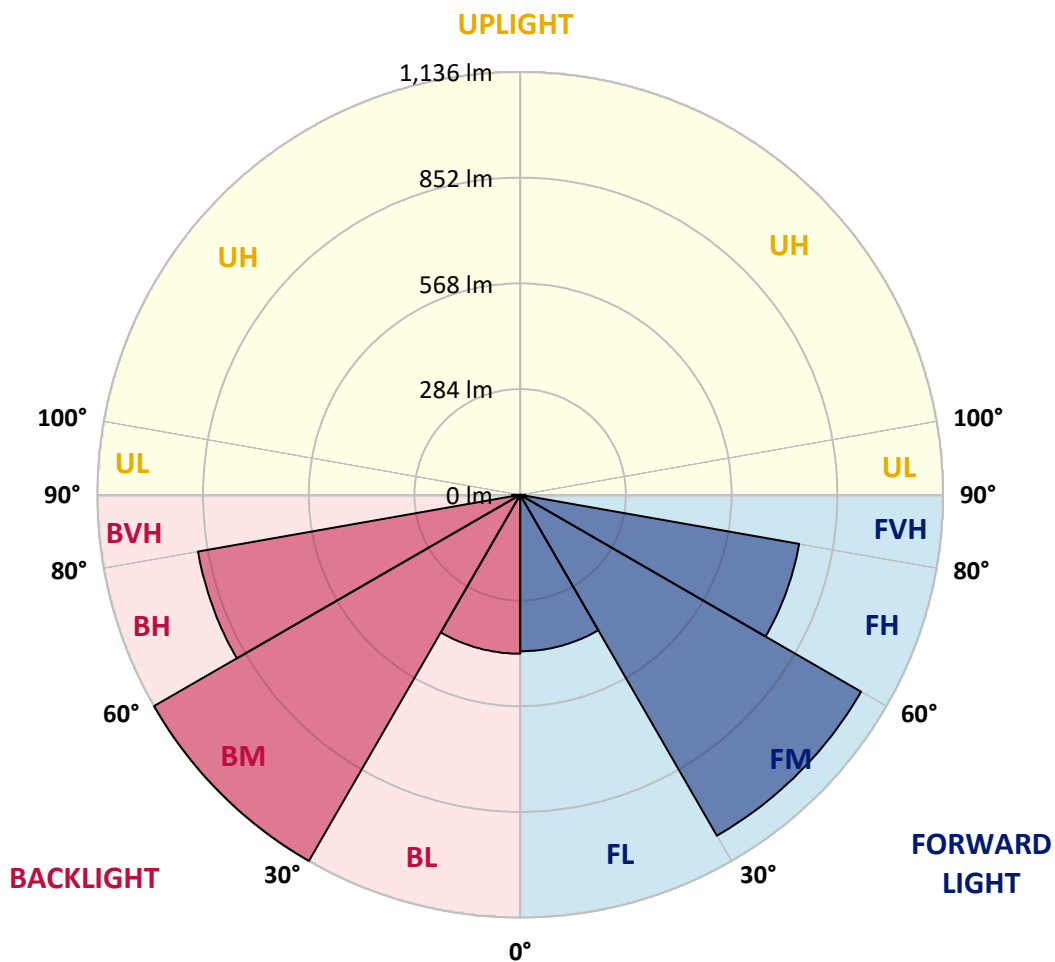
CATALOG NUMBER: ENT-F02-LED-E1-GZW-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	420.4	8.9			
FM (30°-60°)	1057.8	22.4			
FH (60°-80°)	761.4	16.1			G1/1800
FVH (80°-90°)	13.6	0.3			G1/100
BL (0°-30°)	427.0	9.1	B1/500		
BM (30°-60°)	1136.3	24.1	B2/2500		
BH (60°-80°)	879.1	18.6	B2/1000		G2/1000
BVH (80°-90°)	22.1	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5
2.5°	931.8	931.8	931.8	932.6	933.5	935.2	934.3	936.0	933.5	936.9	936.9
5°	942.8	943.6	944.5	944.5	946.2	947.0	946.2	948.7	946.2	949.6	950.4
7.5°	953.0	953.0	953.8	954.7	956.3	958.0	958.9	961.4	960.6	964.0	967.4
10°	960.6	959.7	960.6	962.3	966.5	969.1	972.4	975.8	977.5	980.9	986.0
12.5°	964.0	963.1	965.7	969.9	974.1	979.2	984.3	991.9	997.0	1002.1	1009.7
15°	962.3	962.3	965.7	970.7	979.2	988.5	997.9	1008.0	1017.3	1028.3	1036.0
17.5°	946.2	947.9	953.0	961.4	974.1	988.5	1003.8	1020.7	1036.0	1051.2	1061.4
20°	917.4	919.1	928.4	938.6	955.5	976.7	1000.4	1025.0	1048.7	1069.0	1083.4
22.5°	881.8	880.1	888.6	902.1	925.0	950.4	980.9	1017.3	1049.5	1078.3	1098.7
25°	826.7	826.7	836.1	853.0	877.6	908.9	946.2	992.8	1036.0	1073.2	1102.0
27.5°	768.3	769.1	781.0	795.4	823.4	853.0	896.2	950.4	1002.9	1052.1	1094.4
30°	709.8	712.4	722.6	737.0	766.6	797.9	842.0	895.4	952.1	1013.1	1070.7
32.5°	649.7	653.1	661.6	678.5	710.7	745.4	790.3	837.8	892.0	958.9	1033.4
35°	593.0	595.5	602.3	622.6	655.6	692.9	742.9	788.6	843.7	905.5	987.7
37.5°	539.6	542.1	549.8	570.9	604.0	641.2	690.4	742.0	798.8	859.8	941.1
40°	482.0	487.9	498.1	518.4	548.9	591.3	641.2	695.4	755.6	825.1	908.1
42.5°	429.5	434.5	443.9	461.7	492.2	537.0	589.6	645.5	710.7	789.5	883.5
45°	381.2	385.4	394.7	410.8	443.0	478.6	526.0	584.5	652.2	742.9	857.2
47.5°	334.6	338.8	349.0	368.5	394.7	429.5	471.8	523.5	586.2	678.5	807.3
50°	288.0	292.2	302.4	321.9	347.3	381.2	420.1	466.7	528.6	608.2	734.4
52.5°	237.2	241.4	251.6	271.1	295.6	327.8	367.6	415.9	473.5	548.9	653.1
55°	182.1	188.1	197.4	213.5	239.7	271.9	311.7	364.2	422.7	496.4	593.0
57.5°	131.3	135.5	146.5	159.3	181.3	215.2	250.7	304.9	370.2	445.6	541.3
60°	95.7	100.0	107.6	117.7	133.0	157.6	188.9	239.7	311.7	396.4	494.7
62.5°	79.6	83.0	90.6	100.8	109.3	121.1	139.8	178.7	249.0	343.1	446.4
65°	70.3	72.8	79.6	89.8	96.6	101.6	109.3	135.5	193.1	285.5	399.0
67.5°	62.7	65.2	70.3	78.8	86.4	88.9	93.2	111.0	151.6	232.1	349.0
68°	61.8	64.4	68.6	76.2	83.9	86.4	90.6	108.4	147.4	221.1	335.4
70°	57.6	59.3	63.5	69.5	75.4	77.1	82.2	100.0	138.1	193.1	271.9
72.5°	52.5	53.4	55.9	61.0	66.9	67.8	72.8	87.2	108.4	142.3	202.5
75°	44.0	44.9	48.3	52.5	55.9	57.6	59.3	66.1	73.7	88.1	119.4
77.5°	33.9	35.6	38.1	40.7	45.7	47.4	45.7	50.8	54.2	60.1	72.8
80°	20.3	20.3	22.9	25.4	28.0	32.2	30.5	35.6	38.1	41.5	49.1
82.5°	3.4	4.2	4.2	5.9	7.6	9.3	10.2	12.7	16.1	19.5	26.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	92.5°	95°	100°
0°	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5
2.5°	931.8	934.3	934.3	933.5	933.5	933.5	930.9	931.8	932.6	935.2	931.8
5°	945.3	947.9	947.0	946.2	946.2	946.2	942.8	943.6	944.5	946.2	942.8
7.5°	963.1	965.7	966.5	966.5	966.5	968.2	963.1	963.1	964.8	966.5	961.4
10°	989.4	989.4	991.9	993.6	995.3	997.0	993.6	991.9	995.3	995.3	989.4
12.5°	1013.9	1015.6	1019.9	1023.3	1024.1	1027.5	1027.5	1026.7	1029.2	1028.3	1021.6
15°	1041.9	1043.6	1047.0	1051.2	1052.1	1055.5	1055.5	1056.3	1058.8	1060.5	1050.4
17.5°	1068.2	1070.7	1070.7	1071.6	1073.2	1075.8	1077.5	1078.3	1080.9	1082.6	1072.4
20°	1090.2	1092.7	1088.5	1085.1	1081.7	1083.4	1086.8	1090.2	1091.9	1092.7	1080.0
22.5°	1107.1	1108.0	1101.2	1091.9	1082.6	1081.7	1086.0	1091.9	1093.6	1092.7	1074.9
25°	1116.4	1119.0	1112.2	1097.8	1080.9	1074.9	1079.2	1086.8	1090.2	1086.8	1065.6
27.5°	1116.4	1125.8	1122.4	1107.1	1084.3	1068.2	1070.7	1082.6	1085.1	1080.9	1056.3
30°	1108.0	1127.5	1131.7	1122.4	1098.7	1070.7	1067.3	1080.9	1084.3	1076.6	1052.1
32.5°	1091.0	1126.6	1143.6	1144.4	1125.8	1091.0	1074.1	1087.6	1090.2	1080.9	1060.5
35°	1067.3	1125.8	1158.8	1174.9	1169.0	1134.2	1104.6	1113.1	1111.4	1101.2	1093.6
37.5°	1041.1	1125.8	1180.8	1218.1	1231.6	1213.9	1174.9	1170.7	1174.9	1159.6	1155.4
40°	1012.3	1128.3	1212.2	1278.2	1318.9	1324.8	1290.1	1278.2	1283.3	1268.9	1274.8
42.5°	995.3	1131.7	1253.7	1348.5	1427.3	1487.5	1472.2	1436.6	1434.1	1435.8	1448.5
45°	986.8	1140.2	1295.2	1428.2	1538.3	1672.1	1686.5	1623.0	1626.4	1635.7	1655.2
47.5°	977.5	1156.3	1343.5	1511.2	1659.4	1847.5	1917.8	1832.2	1825.4	1860.2	1866.1
50°	943.6	1175.7	1398.5	1604.4	1786.5	2044.8	2155.8	2068.6	2070.3	2102.4	2090.6
52.5°	865.7	1176.6	1457.0	1697.5	1913.5	2239.7	2408.2	2350.6	2346.4	2377.7	2315.1
55°	758.1	1123.2	1504.4	1789.0	2033.8	2420.9	2669.1	2681.8	2673.4	2678.5	2542.9
57.5°	671.7	991.9	1509.5	1866.1	2135.5	2592.9	2936.8	3028.3	3029.1	3007.1	2766.5
60°	615.8	844.5	1443.4	1929.6	2254.1	2812.3	3285.8	3490.8	3502.7	3412.9	3065.6
62.5°	569.2	770.0	1307.0	1994.9	2390.4	3034.2	3661.9	3999.0	3999.9	3850.0	3395.1
65°	532.8	729.3	1157.1	1970.3	2495.5	3249.4	4060.0	4510.7	4488.7	4323.5	3707.6
67.5°	492.2	692.9	1087.6	1932.2	2585.3	3448.4	4410.7	4928.3	4934.2	4730.9	3997.3
68°	483.7	679.4	1069.9	1900.0	2575.1	3441.7	4429.4	4956.2	4966.4	4757.2	4010.1
70°	416.8	593.0	930.9	1659.4	2392.1	3257.9	4310.8	4877.5	4908.8	4675.0	3868.6
72.5°	277.8	410.0	621.8	1172.4	1843.2	2588.7	3528.9	4085.4	4111.7	3954.1	3213.0
75°	176.2	249.0	330.4	676.0	1238.4	1857.6	2660.7	2985.1	3028.3	2976.6	2405.7
77.5°	106.7	174.5	203.3	327.8	652.2	869.1	1202.0	1223.2	1272.3	1241.8	1246.9
80°	70.3	121.1	148.2	222.8	226.2	187.2	212.6	214.3	227.0	241.4	251.6
82.5°	39.8	73.7	103.3	152.5	134.7	69.5	59.3	61.8	63.5	65.2	77.1
85°	5.9	13.6	28.8	47.4	48.3	22.9	21.2	19.5	20.3	22.0	28.0
87.5°	0.0	0.0	0.0	0.0	0.8	1.7	2.5	2.5	2.5	5.1	5.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5	927.5
2.5°	930.9	930.1	930.9	928.4	930.9	930.1	930.1	930.1	929.2	930.1	930.1
5°	941.1	941.1	941.1	939.4	941.1	941.1	941.1	941.1	940.3	941.1	941.9
7.5°	960.6	960.6	959.7	957.2	958.9	958.9	958.0	956.3	954.7	955.5	954.7
10°	986.8	988.5	983.5	983.5	980.9	977.5	975.0	972.4	971.6	969.9	966.5
12.5°	1019.0	1018.2	1011.4	1008.9	1007.2	1000.4	995.3	992.8	989.4	985.1	980.1
15°	1047.8	1044.4	1039.4	1036.8	1034.3	1026.7	1019.9	1013.9	1009.7	1003.8	996.2
17.5°	1067.3	1063.9	1061.4	1060.5	1060.5	1053.8	1047.8	1040.2	1030.9	1019.9	1007.2
20°	1071.6	1071.6	1072.4	1077.5	1082.6	1080.0	1073.2	1063.9	1050.4	1032.6	1013.1
22.5°	1065.6	1069.0	1076.6	1089.3	1100.4	1101.2	1094.4	1080.9	1058.0	1032.6	1003.8
25°	1055.5	1064.8	1080.9	1098.7	1113.9	1113.9	1102.0	1082.6	1051.2	1014.8	976.7
27.5°	1050.4	1069.0	1091.9	1110.5	1120.7	1114.8	1093.6	1065.6	1022.4	975.8	931.8
30°	1056.3	1085.1	1109.7	1122.4	1124.1	1104.6	1068.2	1026.7	975.8	919.9	875.0
32.5°	1078.3	1113.1	1131.7	1134.2	1122.4	1086.0	1029.2	971.6	914.8	863.2	817.4
35°	1123.2	1152.9	1159.6	1149.5	1119.8	1058.8	977.5	909.8	858.9	809.8	762.4
37.5°	1196.1	1209.6	1196.9	1167.3	1111.4	1025.8	930.1	864.0	809.8	761.5	709.0
40°	1299.4	1284.2	1247.7	1189.3	1102.0	989.4	892.8	826.7	766.6	713.2	660.7
42.5°	1428.2	1374.8	1299.4	1214.7	1091.9	965.7	865.7	789.5	723.4	664.1	609.0
45°	1572.2	1473.1	1370.6	1243.5	1088.5	951.3	833.5	743.7	666.6	607.4	553.1
47.5°	1718.7	1577.3	1442.6	1274.8	1092.7	925.9	784.4	683.6	603.1	545.5	494.7
50°	1867.0	1694.2	1526.4	1315.5	1090.2	874.2	717.5	615.0	540.4	488.8	443.0
52.5°	2016.0	1818.7	1612.8	1351.9	1056.3	792.9	643.8	556.5	484.5	434.5	389.7
55°	2162.6	1939.8	1697.5	1362.9	958.0	707.3	581.9	498.1	426.9	376.1	327.0
57.5°	2301.5	2049.1	1756.8	1298.6	836.9	640.4	526.9	444.7	369.3	310.9	262.6
60°	2474.3	2153.3	1773.8	1142.7	740.3	584.5	476.9	382.9	298.2	236.3	192.3
62.5°	2663.2	2294.7	1747.5	993.6	683.6	535.4	415.1	310.0	227.9	167.7	134.7
65°	2802.1	2353.2	1614.5	914.0	648.0	487.1	349.0	240.6	157.6	115.2	102.5
67.5°	2986.8	2410.8	1477.3	875.0	609.0	424.4	269.4	173.7	122.0	95.7	88.1
68°	2974.1	2394.7	1448.5	864.9	597.2	402.4	254.1	170.3	118.6	93.2	85.6
70°	2802.1	2197.3	1257.9	766.6	494.7	313.4	218.5	155.0	109.3	84.7	77.9
72.5°	2299.0	1704.3	902.1	504.9	321.9	229.6	161.8	116.9	90.6	74.5	69.5
75°	1627.2	1065.6	452.3	290.5	202.5	133.0	91.5	75.4	66.9	59.3	59.3
77.5°	914.8	557.4	238.9	199.1	114.4	77.1	61.0	56.8	52.5	48.3	53.4
80°	298.2	290.5	176.2	136.4	79.6	56.8	47.4	44.9	42.4	38.1	47.4
82.5°	160.9	199.1	127.1	97.4	58.4	40.7	35.6	36.4	33.0	29.6	35.6
85°	72.0	94.9	84.7	67.8	36.4	22.9	18.6	22.0	19.5	17.8	16.9
87.5°	28.0	46.6	33.9	19.5	8.5	5.1	5.1	4.2	3.4	3.4	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	927.5	927.5	927.5	927.5	927.5
2.5°	927.5	927.5	926.7	925.9	924.2
5°	939.4	939.4	938.6	937.7	936.0
7.5°	952.1	951.3	950.4	949.6	947.9
10°	965.7	964.0	964.0	964.8	964.0
12.5°	979.2	976.7	974.1	973.3	975.8
15°	992.8	987.7	983.5	982.6	982.6
17.5°	1000.4	991.9	984.3	981.8	981.8
20°	998.7	983.5	973.3	968.2	969.1
22.5°	982.6	961.4	947.9	941.1	938.6
25°	948.7	923.3	906.4	897.1	897.9
27.5°	897.9	870.8	852.2	847.1	842.0
30°	837.8	810.7	792.0	781.0	781.9
32.5°	778.5	748.8	731.9	719.2	717.5
35°	721.7	689.5	669.2	659.9	658.2
37.5°	665.8	631.9	613.3	604.8	598.9
40°	614.1	583.6	561.6	548.9	546.4
42.5°	563.3	528.6	506.6	497.2	494.7
45°	505.7	472.7	453.2	445.6	443.9
47.5°	454.0	422.7	406.6	396.4	393.0
50°	404.1	374.4	355.8	346.5	344.8
52.5°	351.5	321.9	302.4	294.8	288.0
55°	293.9	262.6	243.1	229.6	224.5
57.5°	227.0	199.1	178.7	169.4	160.1
60°	162.6	138.1	122.0	114.4	107.6
62.5°	115.2	99.1	88.9	81.3	77.1
65°	94.9	87.2	76.2	69.5	66.1
67.5°	83.9	76.2	67.8	61.8	59.3
68°	82.2	74.5	66.1	60.1	58.4
70°	75.4	67.8	60.1	55.9	54.2
72.5°	66.9	61.0	54.2	50.0	48.3
75°	57.6	51.7	47.4	44.0	41.5
77.5°	50.8	42.4	40.7	37.3	35.6
80°	42.4	38.1	34.7	32.2	30.5
82.5°	34.7	28.8	24.6	22.0	21.2
85°	19.5	17.8	14.4	11.0	10.2
87.5°	1.7	0.8	0.8	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)