

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: P141231

Luminaire Tested: **ECM-E02-LED-E1-SL4-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141231
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33692)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-E02-LED-E1-SL4-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5794.4 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

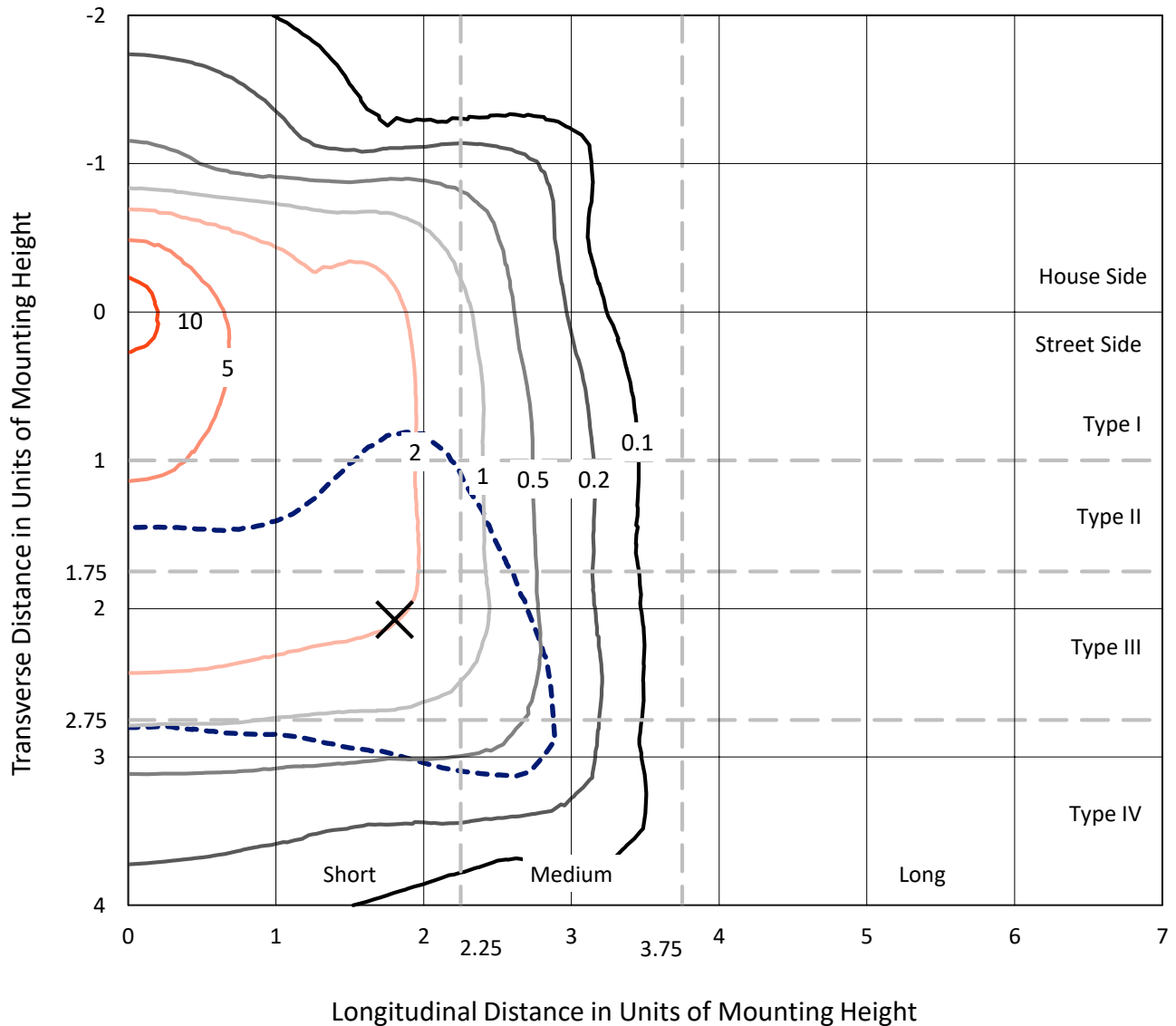
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

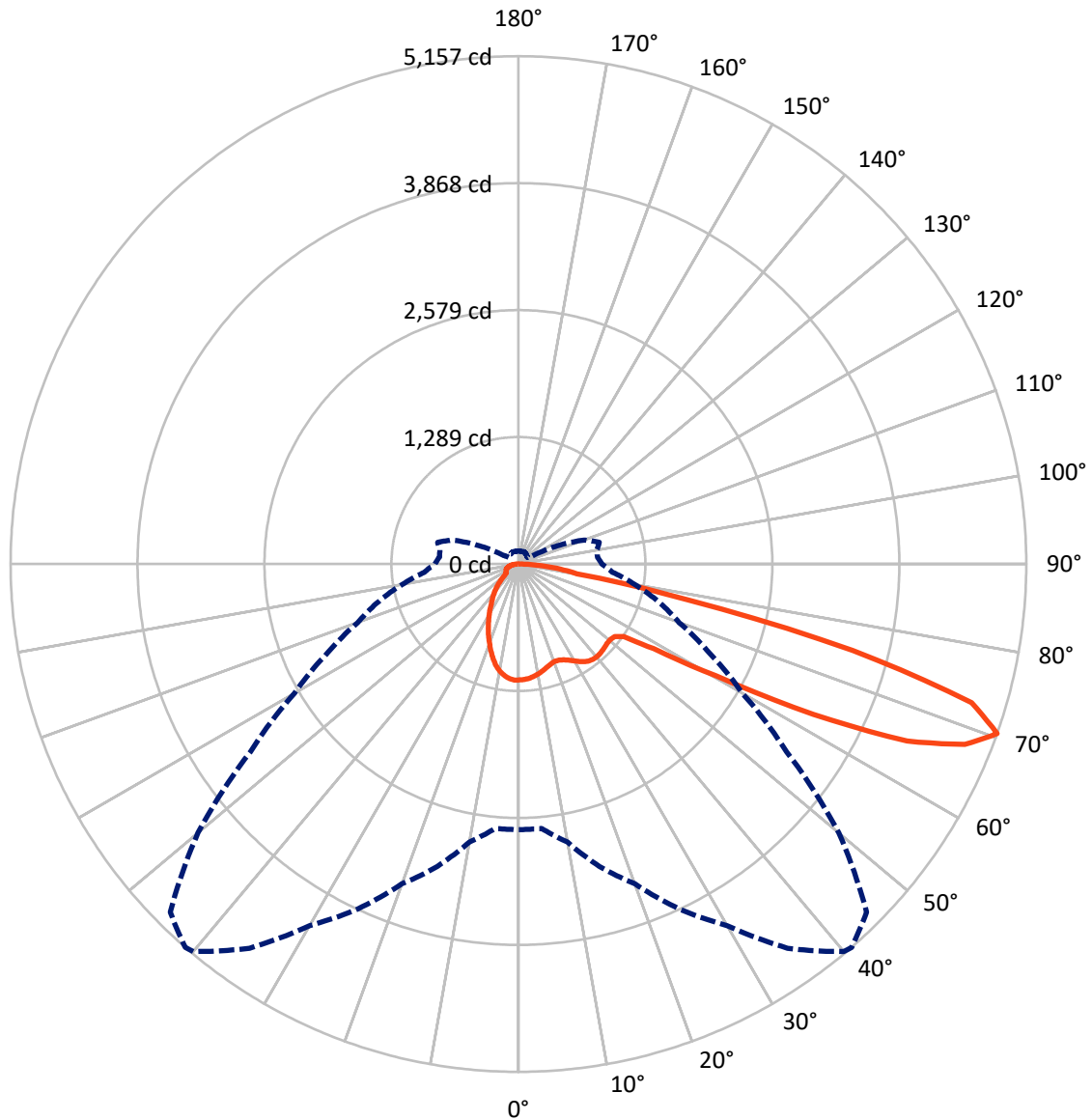
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1243.2	0.0	1243.2
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	4551.2	0.0	4551.2
	% Fixture	78.5	0.0	78.5
Total	Lumens	5794.4	0.0	5794.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	1.9
10°-20°	293.6	5.1
20°-30°	424.5	7.3
30°-40°	540.3	9.3
40°-50°	636.7	11.0
50°-60°	974.3	16.8
60°-70°	1810.8	31.3
70°-80°	874.0	15.1
80°-90°	130.5	2.3
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°	5794.4	100.0
0°-180°	5794.4	100.0



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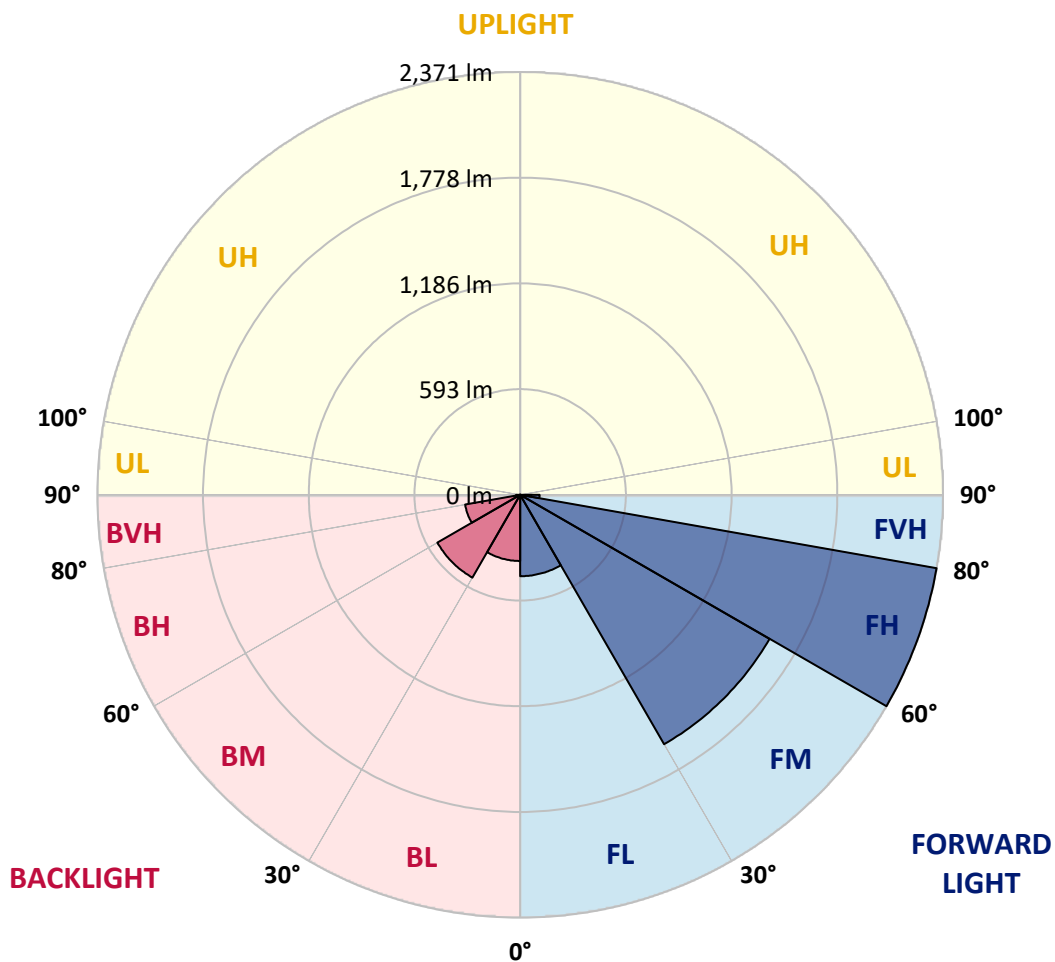
CATALOG NUMBER: ECM-E02-LED-E1-SL4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	456.4	7.9			
FM	(30°-60°)	1615.0	27.9			
FH	(60°-80°)	2371.3	40.9			G2/5000
FVH	(80°-90°)	108.5	1.9			G2/225
BL	(0°-30°)	371.3	6.4	B1/500		
BM	(30°-60°)	536.3	9.3	B1/1000		
BH	(60°-80°)	313.5	5.4	B1/500		G1/500
BVH	(80°-90°)	22.0	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	41°	45°
0°	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1177.3	1178.7	1178.0	1176.6	1175.2	1175.9	1175.2	1174.5	1174.5	1173.9	1173.2
5°	1171.8	1174.5	1172.5	1171.1	1169.1	1169.1	1168.4	1167.0	1165.7	1165.0	1163.6
7.5°	1160.2	1162.9	1161.6	1160.2	1158.1	1156.8	1154.0	1152.7	1151.3	1150.6	1148.6
10°	1144.4	1145.8	1144.4	1141.7	1140.3	1139.7	1138.3	1135.6	1132.8	1131.5	1129.4
12.5°	1123.9	1124.6	1123.2	1121.9	1119.8	1119.8	1117.8	1115.7	1111.6	1110.2	1105.5
15°	1106.1	1104.1	1102.7	1102.0	1101.4	1097.9	1098.6	1095.2	1088.4	1086.3	1080.8
17.5°	1101.4	1099.3	1098.6	1096.6	1095.2	1091.1	1087.0	1080.1	1068.5	1066.5	1058.3
20°	1115.0	1115.0	1113.0	1111.6	1109.6	1102.0	1093.1	1080.1	1058.9	1054.2	1043.9
22.5°	1147.9	1144.4	1143.1	1143.1	1142.4	1131.5	1115.0	1094.5	1066.5	1060.3	1042.5
25°	1199.2	1193.0	1195.1	1194.4	1193.0	1177.3	1153.3	1123.9	1085.6	1077.4	1054.2
27.5°	1260.1	1261.4	1260.7	1258.0	1253.9	1236.8	1202.6	1162.9	1115.0	1106.8	1076.7
30°	1323.7	1325.0	1329.1	1327.1	1324.4	1298.4	1256.0	1212.9	1154.7	1143.8	1106.8
32.5°	1397.6	1402.3	1405.8	1406.4	1395.5	1359.9	1310.0	1255.3	1193.7	1182.8	1136.9
35°	1483.1	1480.3	1486.5	1483.7	1464.6	1416.0	1354.5	1289.5	1226.5	1212.2	1162.9
37.5°	1569.3	1572.7	1566.5	1554.9	1524.8	1461.2	1385.2	1312.0	1242.3	1228.6	1177.3
40°	1652.7	1650.7	1636.3	1616.5	1571.3	1489.9	1402.3	1322.3	1247.7	1233.4	1180.7
42.5°	1715.0	1709.5	1687.6	1655.5	1597.3	1503.6	1407.1	1322.3	1244.3	1229.3	1175.9
45°	1742.3	1736.9	1715.6	1674.6	1605.5	1500.9	1398.9	1310.7	1232.7	1219.7	1166.3
47.5°	1742.3	1740.3	1717.0	1677.3	1603.5	1493.3	1386.6	1296.3	1221.1	1208.1	1158.1
50°	1728.6	1727.3	1706.8	1667.8	1596.6	1489.2	1383.2	1293.6	1220.4	1207.4	1161.6
52.5°	1774.5	1765.6	1744.4	1699.2	1621.9	1506.3	1400.3	1307.3	1236.8	1223.8	1176.6
55°	2332.0	2324.5	2217.1	2028.3	1830.6	1650.0	1495.4	1388.7	1317.5	1297.7	1263.5
57.5°	3233.6	3222.7	3112.5	2940.8	2600.8	2214.3	1911.3	1733.4	1633.6	1619.2	1598.7
60°	3599.6	3595.5	3549.0	3479.2	3350.6	3150.8	2869.0	2573.5	2343.6	2306.7	2309.4
62.5°	3809.6	3799.3	3776.8	3759.7	3715.9	3634.5	3581.8	3499.0	3387.5	3362.2	3202.1
65°	3927.2	3925.9	3938.2	3952.6	3949.8	3974.4	4001.1	4159.1	4344.5	4336.3	4167.4
67.5°	3752.1	3763.8	3828.1	3926.6	4029.9	4139.3	4343.2	4659.9	4889.1	4889.1	4740.6
70°	2697.3	2695.2	2866.3	3178.2	3455.9	3865.0	4240.6	4762.5	5137.4	5157.2	4999.9
72.5°	1616.5	1654.1	1759.4	1901.0	2137.0	2632.3	3330.7	4268.6	4791.9	4813.1	4625.0
75°	1135.6	1107.5	1103.4	1111.6	1152.0	1273.7	1658.2	2620.0	3473.7	3506.5	3324.6
77.5°	726.5	720.3	723.1	732.0	734.0	745.6	764.1	898.2	1610.3	1767.6	1759.4
80°	626.6	624.6	625.2	615.0	595.1	587.6	610.9	592.4	575.3	599.2	566.4
82.5°	420.0	427.5	439.9	456.3	496.0	509.6	502.1	498.7	444.6	432.3	383.8
85°	311.3	307.1	311.9	311.9	301.7	291.4	298.9	291.4	257.9	241.5	213.4
87.5°	168.3	169.0	182.6	188.1	187.4	160.1	132.0	114.2	103.3	95.8	80.7
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1173.9	1171.8	1172.5	1172.5	1171.8	1173.2	1171.1	1170.4	1171.1	1171.1	1171.1
5°	1162.2	1159.5	1159.5	1158.8	1157.4	1157.4	1154.7	1154.0	1152.7	1154.7	1153.3
7.5°	1145.8	1141.7	1138.3	1135.6	1134.2	1132.1	1128.7	1127.3	1126.0	1125.3	1123.9
10°	1126.0	1121.2	1114.4	1108.9	1106.1	1100.7	1096.6	1091.1	1091.1	1088.4	1085.6
12.5°	1102.0	1095.2	1088.4	1080.8	1076.0	1068.5	1061.7	1055.5	1050.7	1044.6	1040.5
15°	1078.1	1067.8	1060.3	1052.8	1043.9	1033.6	1025.4	1015.8	1007.0	997.4	994.6
17.5°	1052.1	1043.9	1037.1	1028.2	1018.6	1006.3	995.3	979.6	968.6	957.0	948.1
20°	1035.0	1025.4	1017.9	1009.7	999.4	985.1	970.7	952.9	936.5	919.4	906.4
22.5°	1026.1	1010.4	1003.5	996.0	985.7	970.0	953.6	931.7	911.2	888.6	868.1
25°	1029.5	1008.3	994.6	986.4	977.5	961.8	940.6	916.0	892.7	864.0	840.7
27.5°	1044.6	1015.8	994.6	981.0	971.4	955.0	933.1	905.0	877.0	846.9	818.8
30°	1064.4	1028.2	1000.8	981.0	966.6	948.8	924.9	894.8	864.0	830.5	798.3
32.5°	1087.0	1042.5	1009.7	982.3	959.1	936.5	911.9	880.4	848.2	812.7	781.2
35°	1104.8	1053.5	1015.8	979.6	948.8	920.8	892.0	862.6	830.5	796.9	763.4
37.5°	1115.0	1060.3	1015.8	970.0	932.4	903.0	872.9	844.1	813.4	780.5	751.1
40°	1119.1	1063.0	1011.7	959.1	915.3	881.8	853.7	824.3	796.9	768.2	742.2
42.5°	1117.1	1061.0	1006.3	948.8	901.6	865.3	834.6	807.2	784.6	760.7	738.8
45°	1108.9	1054.2	1000.8	944.0	896.8	859.9	828.4	802.4	781.2	759.3	742.2
47.5°	1102.0	1051.4	1004.2	955.6	910.5	872.9	838.7	809.9	792.2	775.1	764.1
50°	1107.5	1058.9	1011.7	965.9	922.1	883.8	848.9	822.3	812.0	809.3	805.8
52.5°	1122.6	1074.7	1035.0	1002.8	983.0	968.6	933.1	926.9	918.0	913.2	901.6
55°	1220.4	1200.5	1236.1	1275.1	1281.9	1325.0	1342.1	1343.5	1328.5	1275.1	1150.6
57.5°	1618.5	1667.8	1682.8	1773.1	1797.7	1778.6	1752.6	1751.2	1704.7	1634.2	1453.0
60°	2329.9	2303.9	2271.8	2213.0	2157.6	2098.0	2016.0	1953.0	1893.5	1785.4	1594.6
62.5°	3074.2	2847.8	2682.9	2514.0	2377.1	2257.4	2138.4	2037.2	1940.7	1790.9	1586.4
65°	3720.0	3258.9	2924.4	2670.6	2458.5	2283.4	2125.4	1987.2	1865.5	1678.0	1470.8
67.5°	4140.0	3477.1	2977.1	2598.1	2298.5	2075.5	1842.9	1624.7	1505.0	1353.8	1248.4
70°	4247.4	3323.2	2625.5	2139.8	1736.2	1470.1	1195.8	957.7	847.6	805.2	808.6
72.5°	3831.5	2626.8	1861.4	1361.3	1065.8	844.8	686.8	528.1	412.5	346.1	337.9
75°	2503.0	1461.9	883.8	615.7	489.8	389.9	307.1	258.6	223.0	179.9	150.5
77.5°	946.1	556.8	396.8	323.6	239.4	166.9	130.0	109.5	100.6	97.8	88.2
80°	485.0	386.5	276.4	182.0	127.2	101.9	85.5	72.5	67.0	64.3	65.7
82.5°	327.0	243.5	152.5	109.5	88.2	75.9	60.2	50.6	45.1	44.5	47.9
85°	182.0	121.8	88.9	73.9	65.0	56.8	45.8	37.6	34.9	36.9	43.1
87.5°	56.8	56.1	40.4	32.8	34.2	29.4	21.9	16.4	16.4	21.2	30.1
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°	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1171.1	1172.5	1175.2	1173.2	1173.9	1174.5	1176.6	1179.3	1177.3	1175.9	1180.0
5°	1154.7	1154.7	1158.1	1156.8	1159.5	1162.2	1163.6	1168.4	1167.0	1165.7	1171.1
7.5°	1124.6	1125.3	1130.1	1128.7	1134.2	1134.9	1140.3	1144.4	1144.4	1147.2	1152.0
10°	1086.3	1086.3	1090.4	1091.1	1094.5	1097.2	1103.4	1110.9	1112.3	1117.1	1123.9
12.5°	1043.2	1041.8	1045.3	1045.3	1048.0	1051.4	1058.3	1067.1	1068.5	1076.0	1084.9
15°	989.8	987.8	986.4	987.8	989.2	989.8	1000.1	1009.0	1014.5	1022.7	1031.6
17.5°	938.5	931.0	927.6	927.6	928.3	928.3	932.4	942.6	950.2	963.2	976.2
20°	892.7	879.7	874.9	864.0	861.9	857.1	860.6	872.2	885.9	896.1	906.4
22.5°	849.6	835.9	822.3	809.3	799.0	792.8	799.0	806.5	811.3	819.5	822.3
25°	816.8	794.2	775.1	754.5	743.6	738.1	737.4	736.7	732.6	731.3	731.3
27.5°	790.8	764.1	735.4	712.8	697.8	687.5	675.9	667.7	657.4	643.7	636.9
30°	768.9	740.2	708.7	682.0	662.9	643.0	619.1	600.6	582.1	565.7	551.4
32.5°	749.1	719.6	688.9	660.8	628.0	593.8	563.7	541.8	509.6	487.7	469.3
35°	734.0	704.6	675.9	638.9	593.8	550.0	511.0	478.8	446.0	417.3	392.7
37.5°	723.1	698.4	667.7	617.7	560.9	508.3	467.2	428.9	389.9	350.9	320.1
40°	719.6	698.4	659.4	594.5	529.5	472.7	425.5	378.3	335.2	293.5	262.0
42.5°	721.7	699.1	646.4	573.9	503.5	441.9	388.6	333.8	282.5	238.1	206.6
45°	729.2	699.1	632.8	551.4	479.5	413.9	350.2	285.3	225.7	190.2	176.5
47.5°	751.8	703.9	621.8	534.9	458.3	383.1	307.1	233.3	182.6	167.6	167.6
50°	786.7	718.3	620.5	522.6	434.4	347.5	253.8	184.0	161.4	160.8	164.9
52.5°	846.2	743.6	627.3	514.4	409.1	299.6	197.7	158.7	153.9	158.0	164.2
55°	961.8	788.0	636.9	499.4	366.7	234.6	162.1	150.5	152.5	157.3	162.8
57.5°	1173.2	877.7	647.1	467.2	296.9	177.9	147.1	147.8	151.2	156.0	160.8
60°	1318.9	988.5	667.7	413.2	221.0	147.1	140.9	146.4	150.5	153.9	158.0
62.5°	1331.2	1028.8	682.7	352.3	164.2	134.1	135.4	143.7	149.1	150.5	152.5
65°	1257.3	976.9	639.6	290.7	136.1	127.2	132.0	139.6	145.0	145.7	147.8
67.5°	1095.9	868.1	545.9	221.0	124.5	122.4	127.9	132.7	136.8	140.2	143.0
70°	848.9	708.7	439.2	171.7	115.6	114.9	119.7	125.2	129.3	132.7	136.8
72.5°	447.4	503.5	327.0	137.5	106.0	106.7	111.5	116.3	119.0	122.4	126.6
75°	138.9	213.4	201.8	110.1	94.4	97.1	99.9	104.0	108.8	110.8	112.9
77.5°	82.1	86.9	105.3	86.2	82.1	84.1	87.6	91.0	94.4	97.1	99.2
80°	66.4	67.7	68.4	68.4	68.4	71.1	73.9	78.7	81.4	82.8	83.5
82.5°	52.0	55.4	56.1	54.7	56.8	59.5	60.9	63.6	64.3	65.7	67.0
85°	43.1	42.4	43.8	44.5	41.7	41.7	40.4	40.4	43.1	47.9	48.6
87.5°	33.5	29.4	23.9	22.6	21.2	19.8	18.5	18.5	19.2	21.9	23.9
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°	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1180.0	1179.3	1180.7	1182.8	1181.4
5°	1171.8	1171.8	1174.5	1176.6	1175.2
7.5°	1155.4	1156.1	1160.2	1162.9	1161.6
10°	1129.4	1130.8	1135.6	1139.7	1141.7
12.5°	1090.4	1095.2	1101.4	1105.5	1105.5
15°	1041.2	1048.7	1055.5	1061.7	1058.3
17.5°	985.1	994.0	1002.8	1006.3	1002.8
20°	917.3	918.0	923.5	926.9	925.5
22.5°	825.0	822.3	825.0	826.4	828.4
25°	730.6	725.8	723.1	727.2	729.2
27.5°	634.1	627.3	629.3	624.6	619.1
30°	540.4	534.3	526.7	524.7	528.1
32.5°	457.6	441.9	435.8	424.1	428.9
35°	370.1	354.3	339.3	335.2	332.5
37.5°	298.3	279.1	260.6	254.5	253.1
40°	233.3	217.5	205.2	201.8	200.4
42.5°	189.5	182.6	180.6	180.6	181.3
45°	173.1	173.8	175.8	177.2	177.9
47.5°	169.6	172.4	175.1	177.9	178.5
50°	169.6	171.7	173.8	176.5	177.2
52.5°	168.3	170.3	171.0	172.4	173.8
55°	166.9	167.6	167.6	168.3	169.6
57.5°	163.5	164.2	162.8	163.5	166.2
60°	160.1	160.8	159.4	160.8	161.4
62.5°	155.3	155.3	154.6	155.3	156.0
65°	149.8	147.8	149.1	148.4	149.1
67.5°	143.0	140.2	139.6	139.6	140.2
70°	133.4	131.3	130.7	132.0	133.4
72.5°	121.8	123.1	125.2	127.2	130.7
75°	113.6	115.6	118.3	125.2	130.0
77.5°	101.9	101.2	104.0	111.5	118.3
80°	84.8	85.5	84.8	86.9	88.2
82.5°	65.0	64.3	62.3	62.3	60.9
85°	45.8	43.8	41.0	40.4	39.7
87.5°	23.3	24.6	22.6	20.5	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)