

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: P142054

Luminaire Tested: **ECM-F04-LED-E1-T4-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P142054
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33685)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F04-LED-E1-T4-7030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8673.2 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 102.2
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

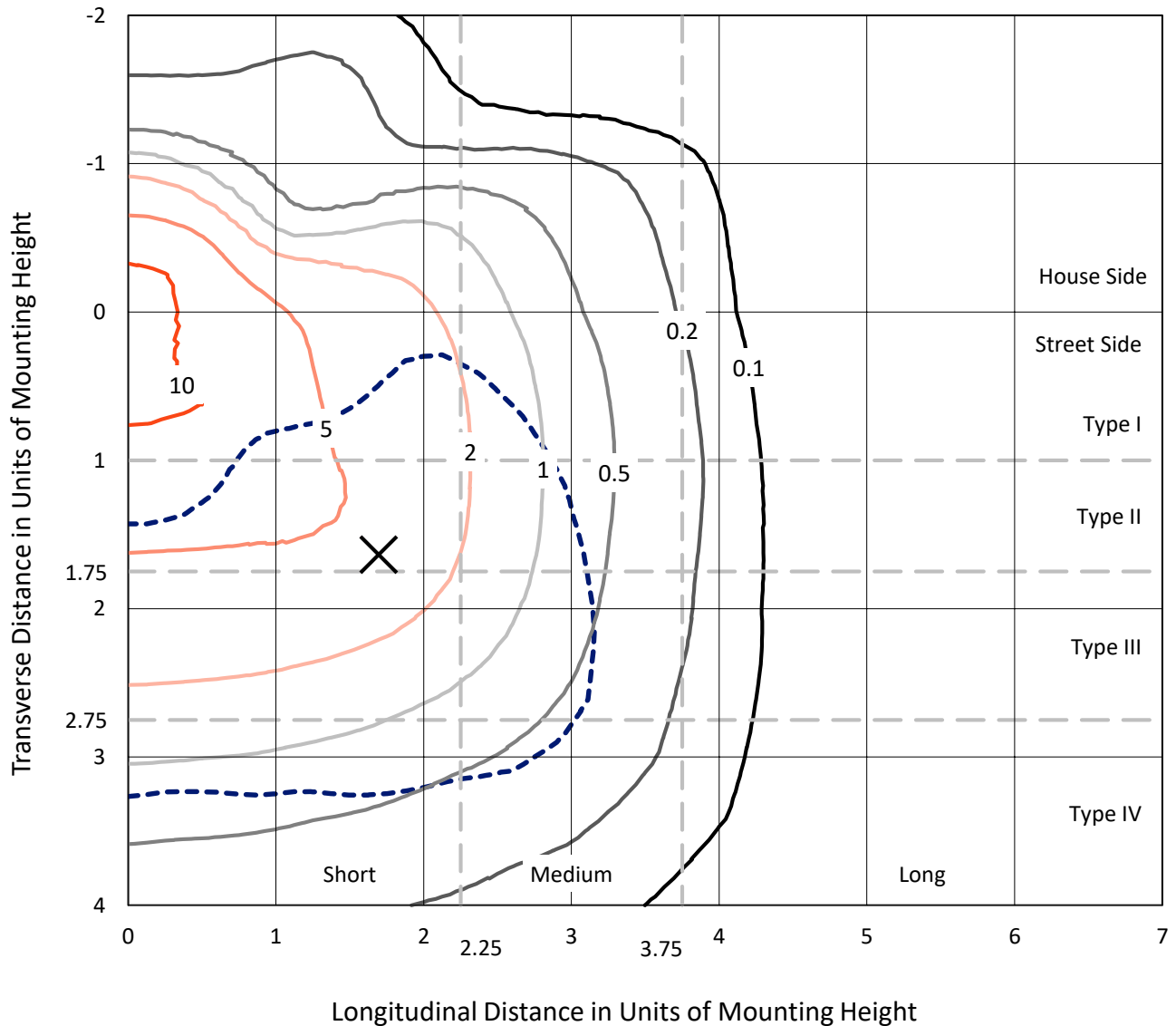


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

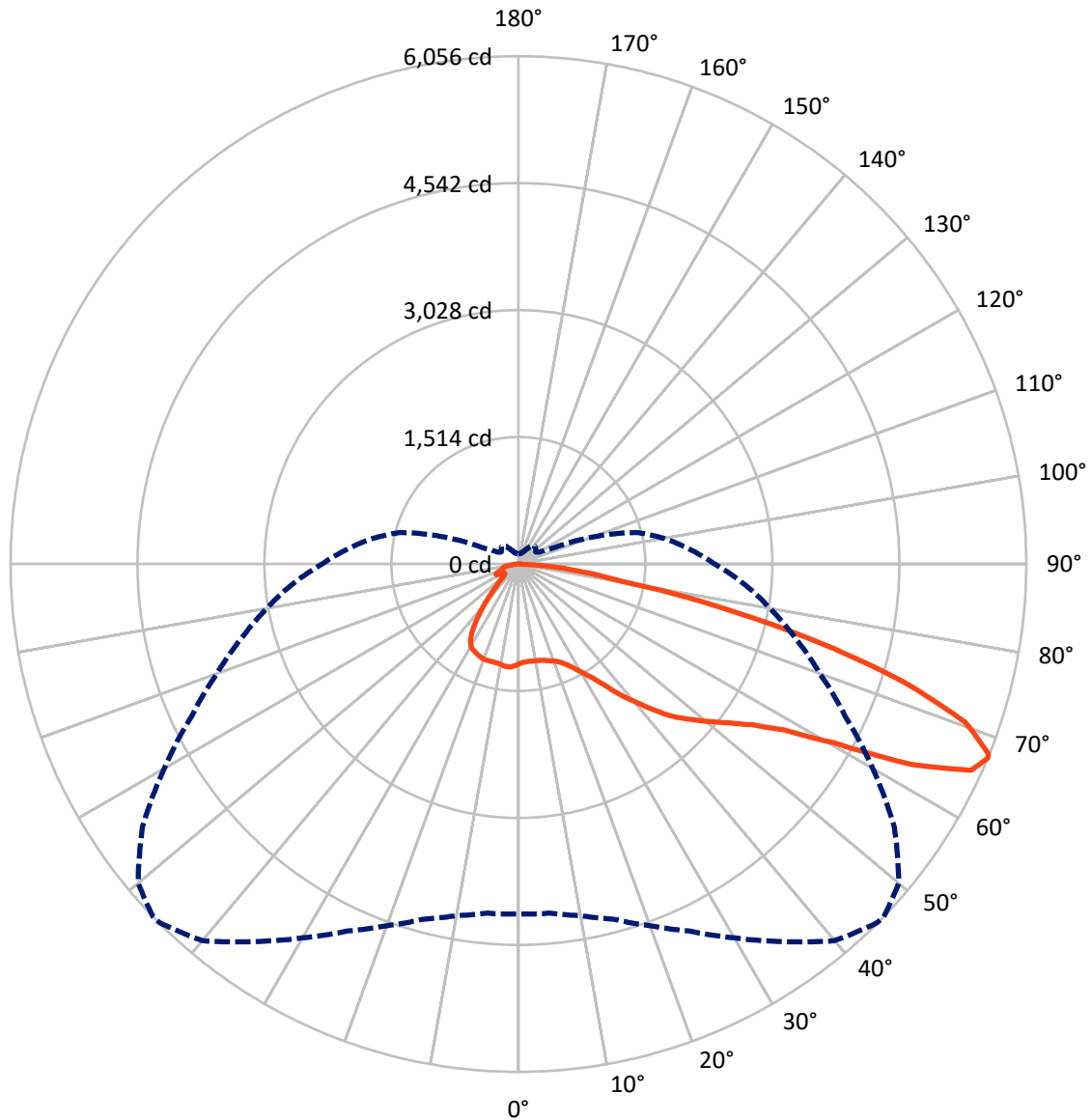


Based on 10 foot mounting height. Maximum calculated value = 12 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1723.6	0.0	1723.6
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	6949.7	0.0	6949.7
	% Fixture	80.1	0.0	80.1
Total	Lumens	8673.2	0.0	8673.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	1.3
10°-20°	341.4	3.9
20°-30°	574.0	6.6
30°-40°	858.3	9.9
40°-50°	1118.0	12.9
50°-60°	1531.2	17.7
60°-70°	2420.6	27.9
70°-80°	1501.5	17.3
80°-90°	214.0	2.5
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°	8673.2	100.0
0°-180°	8673.2	100.0



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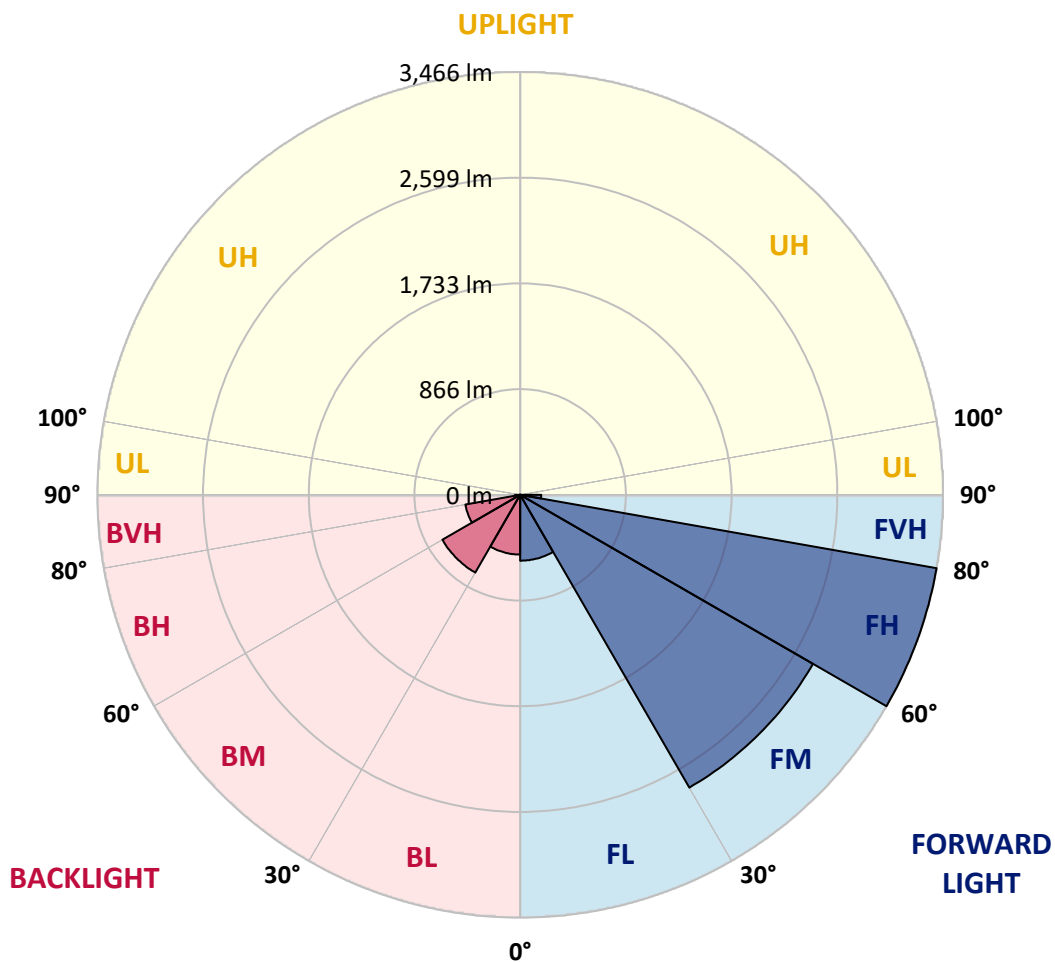
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	540.1	6.2			
FM	(30°-60°)	2771.4	32.0			
FH	(60°-80°)	3465.8	40.0			G2/5000
FVH	(80°-90°)	172.3	2.0			G2/225
BL	(0°-30°)	489.6	5.6	B1/500		
BM	(30°-60°)	736.1	8.5	B1/1000		
BH	(60°-80°)	456.3	5.3	B1/500		G1/500
BVH	(80°-90°)	41.7	0.5			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°	45°	46°
0°	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3
2.5°	1162.2	1165.2	1164.2	1163.2	1164.2	1165.2	1166.2	1169.2	1170.2	1171.2	1172.2
5°	1141.0	1144.1	1143.1	1145.1	1146.1	1150.1	1153.1	1158.1	1161.1	1165.2	1167.2
7.5°	1135.0	1137.0	1137.0	1139.0	1140.0	1144.1	1149.1	1155.1	1161.1	1167.2	1169.2
10°	1151.1	1152.1	1152.1	1151.1	1152.1	1154.1	1156.1	1161.1	1166.2	1171.2	1173.2
12.5°	1189.3	1186.3	1185.3	1182.3	1183.3	1179.2	1179.2	1178.2	1178.2	1179.2	1179.2
15°	1229.5	1227.5	1225.5	1220.5	1220.5	1214.4	1212.4	1208.4	1198.3	1194.3	1193.3
17.5°	1265.7	1263.7	1259.7	1255.7	1253.6	1245.6	1243.6	1236.5	1224.5	1215.4	1212.4
20°	1308.9	1303.9	1294.9	1292.8	1287.8	1278.8	1275.8	1266.7	1250.6	1237.6	1236.5
22.5°	1375.3	1367.2	1358.2	1351.2	1338.1	1329.0	1321.0	1308.9	1289.8	1274.8	1270.7
25°	1441.6	1438.6	1430.6	1420.5	1411.5	1401.4	1391.4	1373.3	1348.1	1329.0	1325.0
27.5°	1535.1	1528.1	1518.0	1502.0	1496.9	1479.8	1471.8	1456.7	1431.6	1407.5	1403.4
30°	1632.6	1625.6	1609.5	1595.5	1592.4	1574.3	1569.3	1553.2	1531.1	1507.0	1504.0
32.5°	1744.2	1737.2	1725.1	1717.1	1706.0	1696.0	1683.9	1668.8	1640.7	1620.6	1616.6
35°	1887.0	1881.0	1866.9	1872.9	1862.9	1859.9	1852.8	1827.7	1796.5	1772.4	1776.4
37.5°	1999.6	1998.6	2001.6	1998.6	2011.7	2024.7	2024.7	2026.7	2011.7	1985.5	1980.5
40°	2105.1	2104.1	2112.2	2121.2	2156.4	2177.5	2201.7	2210.7	2194.6	2174.5	2167.5
42.5°	2203.7	2201.7	2212.7	2245.9	2289.1	2328.3	2369.6	2404.7	2412.8	2390.7	2385.6
45°	2301.2	2304.2	2318.3	2355.5	2412.8	2464.1	2534.4	2575.6	2601.8	2589.7	2597.8
47.5°	2418.8	2421.8	2436.9	2481.1	2531.4	2595.7	2678.2	2748.6	2779.7	2779.7	2769.7
50°	2558.6	2572.6	2588.7	2618.9	2677.2	2740.5	2841.0	2911.4	2961.7	2959.7	2951.6
52.5°	2744.5	2747.6	2773.7	2797.8	2848.1	2912.4	3002.9	3099.4	3162.8	3156.7	3147.7
55°	2994.9	2982.8	2999.9	3023.0	3077.3	3133.6	3232.1	3343.7	3408.1	3388.9	3382.9
57.5°	3310.5	3300.5	3312.5	3340.7	3409.1	3455.3	3534.7	3637.3	3727.7	3743.8	3729.8
60°	3765.9	3765.9	3790.1	3850.4	3919.8	3989.1	4090.7	4214.3	4307.8	4330.9	4329.9
62.5°	4305.8	4340.0	4345.0	4423.4	4556.1	4675.8	4833.6	5051.8	5191.5	5291.0	5264.9
65°	4392.3	4403.3	4447.6	4569.2	4749.2	4961.3	5206.6	5493.1	5783.6	5927.4	5931.4
67°	4175.1	4179.1	4256.5	4384.2	4590.3	4829.6	5147.3	5496.1	5864.1	6050.0	6056.1
67.5°	4107.8	4099.7	4169.1	4302.8	4528.0	4797.4	5096.0	5462.9	5842.9	6042.0	6045.0
70°	3656.4	3660.4	3714.7	3863.5	4101.7	4354.1	4687.8	5064.8	5464.9	5646.9	5656.0
72.5°	3152.7	3126.6	3175.8	3334.7	3448.3	3694.6	4001.2	4285.7	4637.6	4809.5	4805.5
75°	2404.7	2332.4	2418.8	2511.3	2574.6	2818.9	3009.9	3206.0	3530.7	3661.4	3654.4
77.5°	1295.9	1292.8	1387.3	1459.7	1554.2	1774.4	1942.3	2065.9	2339.4	2403.7	2411.8
80°	703.7	729.9	786.2	866.6	943.0	1048.6	1146.1	1223.5	1313.0	1271.7	1262.7
82.5°	424.2	467.5	553.9	615.3	645.4	692.7	762.0	806.3	841.5	765.1	750.0
85°	67.4	121.6	312.7	374.0	406.2	428.3	443.3	472.5	431.3	404.1	411.2
87.5°	22.1	25.1	48.3	106.6	93.5	64.3	84.4	122.6	58.3	31.2	30.2
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°	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3
2.5°	1173.2	1174.2	1177.2	1181.3	1183.3	1188.3	1188.3	1192.3	1192.3	1195.3	1198.3
5°	1170.2	1175.2	1179.2	1185.3	1188.3	1195.3	1198.3	1204.4	1207.4	1211.4	1215.4
7.5°	1175.2	1182.3	1187.3	1194.3	1199.4	1206.4	1209.4	1214.4	1217.4	1222.5	1224.5
10°	1179.2	1186.3	1192.3	1200.4	1204.4	1209.4	1212.4	1216.4	1217.4	1220.5	1222.5
12.5°	1184.3	1187.3	1192.3	1199.4	1203.4	1206.4	1209.4	1212.4	1215.4	1215.4	1215.4
15°	1191.3	1188.3	1189.3	1195.3	1199.4	1201.4	1204.4	1206.4	1207.4	1207.4	1205.4
17.5°	1206.4	1198.3	1193.3	1193.3	1195.3	1197.3	1197.3	1194.3	1192.3	1189.3	1185.3
20°	1228.5	1215.4	1205.4	1200.4	1196.3	1191.3	1183.3	1173.2	1164.2	1156.1	1151.1
22.5°	1259.7	1246.6	1234.5	1223.5	1210.4	1193.3	1176.2	1155.1	1138.0	1125.0	1119.9
25°	1318.0	1298.9	1289.8	1272.7	1252.6	1225.5	1199.4	1170.2	1150.1	1132.0	1124.0
27.5°	1396.4	1381.3	1361.2	1352.2	1326.0	1294.9	1265.7	1230.5	1202.4	1180.3	1165.2
30°	1495.9	1485.9	1468.8	1453.7	1428.6	1400.4	1357.2	1318.0	1268.7	1229.5	1207.4
32.5°	1610.5	1595.5	1580.4	1561.3	1543.2	1506.0	1465.8	1406.4	1338.1	1270.7	1229.5
35°	1754.3	1739.2	1729.2	1699.0	1668.8	1628.6	1574.3	1504.0	1408.5	1318.0	1247.6
37.5°	1952.3	1920.2	1870.9	1827.7	1773.4	1712.1	1650.7	1566.3	1459.7	1342.1	1245.6
40°	2124.3	2077.0	2021.7	1947.3	1870.9	1790.5	1718.1	1626.6	1502.0	1362.2	1231.5
42.5°	2347.4	2266.0	2172.5	2074.0	1969.4	1872.9	1783.4	1678.9	1533.1	1363.2	1198.3
45°	2548.5	2448.0	2324.3	2190.6	2062.9	1945.3	1842.8	1727.1	1559.3	1359.2	1160.1
47.5°	2727.4	2609.8	2459.0	2298.2	2147.4	2014.7	1902.1	1780.4	1593.4	1372.3	1146.1
50°	2900.4	2765.6	2595.7	2400.7	2232.8	2088.1	1970.4	1839.7	1650.7	1416.5	1168.2
52.5°	3085.3	2921.5	2729.5	2509.3	2326.3	2176.5	2044.8	1911.1	1719.1	1475.8	1208.4
55°	3311.5	3125.6	2906.4	2663.1	2453.0	2286.1	2137.3	1996.6	1800.5	1549.2	1255.7
57.5°	3613.1	3425.1	3172.8	2892.3	2672.2	2474.1	2295.2	2136.3	1924.2	1650.7	1326.0
60°	4194.2	3962.0	3626.2	3321.6	3083.3	2850.1	2634.0	2416.8	2161.4	1855.8	1507.0
62.5°	5127.2	4803.4	4387.2	3963.0	3641.3	3332.7	3047.1	2764.6	2446.0	2103.1	1722.1
65°	5772.6	5372.5	4849.7	4317.9	3882.6	3505.6	3164.8	2829.0	2474.1	2147.4	1815.6
67°	5920.4	5473.0	4877.8	4300.8	3827.3	3418.1	3047.1	2697.3	2340.4	2043.8	1760.3
67.5°	5914.3	5468.0	4855.7	4264.6	3790.1	3386.9	3013.0	2645.0	2294.2	2003.6	1733.2
70°	5556.4	5108.1	4492.8	3904.7	3447.3	3046.1	2669.1	2348.4	1990.5	1755.3	1552.2
72.5°	4707.9	4317.9	3821.2	3292.4	2900.4	2541.5	2239.9	1925.2	1614.6	1457.7	1297.9
75°	3580.0	3234.1	2778.7	2391.7	2093.1	1843.8	1541.2	1334.1	1115.9	1008.3	951.0
77.5°	2365.5	1968.4	1653.8	1284.8	1065.6	869.6	685.6	543.9	454.4	477.5	521.8
80°	1251.6	993.3	734.9	569.0	439.3	341.8	271.4	203.1	147.8	172.9	217.2
82.5°	681.6	581.1	429.3	341.8	279.5	231.2	177.9	124.7	92.5	102.5	147.8
85°	389.1	341.8	265.4	207.1	181.0	147.8	101.5	68.4	66.4	71.4	91.5
87.5°	64.3	86.5	70.4	48.3	54.3	53.3	47.3	36.2	27.1	38.2	49.3
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°	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3	1188.3
2.5°	1200.4	1203.4	1207.4	1208.4	1207.4	1210.4	1215.4	1219.5	1216.4	1214.4	1219.5
5°	1219.5	1221.5	1226.5	1226.5	1227.5	1229.5	1232.5	1235.5	1231.5	1231.5	1233.5
7.5°	1227.5	1227.5	1232.5	1230.5	1230.5	1229.5	1232.5	1233.5	1227.5	1226.5	1227.5
10°	1222.5	1222.5	1224.5	1220.5	1219.5	1218.5	1218.5	1219.5	1213.4	1211.4	1214.4
12.5°	1215.4	1215.4	1213.4	1211.4	1209.4	1207.4	1209.4	1210.4	1206.4	1206.4	1207.4
15°	1203.4	1200.4	1199.4	1199.4	1200.4	1201.4	1205.4	1208.4	1205.4	1203.4	1203.4
17.5°	1183.3	1181.3	1184.3	1190.3	1197.3	1202.4	1208.4	1210.4	1203.4	1195.3	1189.3
20°	1153.1	1158.1	1169.2	1186.3	1201.4	1209.4	1209.4	1202.4	1186.3	1170.2	1162.2
22.5°	1121.9	1136.0	1160.1	1186.3	1204.4	1207.4	1196.3	1181.3	1159.1	1142.0	1127.0
25°	1126.0	1143.1	1167.2	1189.3	1201.4	1196.3	1176.2	1157.1	1131.0	1112.9	1090.8
27.5°	1168.2	1184.3	1196.3	1203.4	1199.4	1183.3	1160.1	1134.0	1104.9	1079.7	1053.6
30°	1202.4	1209.4	1208.4	1202.4	1187.3	1162.2	1135.0	1103.8	1068.7	1041.5	1007.3
32.5°	1208.4	1195.3	1175.2	1153.1	1133.0	1104.9	1073.7	1037.5	998.3	963.1	928.9
35°	1197.3	1148.1	1103.8	1059.6	1029.5	994.3	967.1	924.9	881.7	851.5	826.4
37.5°	1156.1	1070.7	1000.3	938.0	893.7	853.5	812.3	771.1	734.9	720.8	713.8
40°	1103.8	975.2	867.6	781.1	733.9	694.7	652.5	619.3	602.2	589.1	584.1
42.5°	1027.4	866.6	732.9	640.4	580.1	543.9	502.7	484.6	476.5	479.5	475.5
45°	956.1	753.0	585.1	482.6	441.3	407.2	387.0	379.0	375.0	373.0	376.0
47.5°	905.8	665.5	471.5	366.9	332.8	308.6	300.6	297.6	296.6	292.5	291.5
50°	893.7	614.3	386.0	285.5	259.4	246.3	242.3	239.3	237.3	234.2	227.2
52.5°	907.8	600.2	343.8	245.3	223.2	213.1	210.1	205.1	203.1	195.0	186.0
55°	931.9	605.2	330.8	234.2	212.1	201.1	197.0	195.0	188.0	178.9	167.9
57.5°	982.2	636.4	336.8	237.3	214.1	204.1	202.1	200.1	191.0	177.9	163.9
60°	1128.0	726.8	367.9	258.4	230.2	223.2	224.2	220.2	207.1	190.0	168.9
62.5°	1353.2	867.6	425.3	284.5	256.4	256.4	262.4	259.4	239.3	211.1	181.0
65°	1469.8	952.0	449.4	292.5	264.4	277.5	296.6	293.6	264.4	222.2	182.0
67°	1451.7	936.0	435.3	280.5	249.3	266.4	285.5	286.5	254.3	212.1	173.9
67.5°	1434.6	924.9	428.3	275.5	245.3	262.4	280.5	277.5	250.3	208.1	171.9
70°	1288.8	812.3	382.0	257.4	227.2	232.2	237.3	233.2	212.1	184.0	158.8
72.5°	1112.9	674.6	336.8	246.3	217.2	209.1	209.1	202.1	188.0	168.9	150.8
75°	848.5	524.8	295.6	234.2	205.1	193.0	191.0	186.0	173.9	159.8	143.8
77.5°	517.7	376.0	256.4	216.1	190.0	180.0	181.0	177.9	165.9	152.8	137.7
80°	259.4	243.3	215.1	188.0	171.9	161.9	162.9	156.8	146.8	136.7	124.7
82.5°	158.8	167.9	150.8	142.8	132.7	121.6	94.5	110.6	107.6	98.5	93.5
85°	105.6	104.6	94.5	83.4	76.4	66.4	59.3	60.3	66.4	68.4	68.4
87.5°	51.3	49.3	45.2	42.2	40.2	33.2	31.2	35.2	35.2	37.2	36.2
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°	1188.3	1188.3	1188.3	1188.3	1188.3
2.5°	1220.5	1222.5	1221.5	1224.5	1221.5
5°	1234.5	1234.5	1235.5	1236.5	1235.5
7.5°	1227.5	1226.5	1228.5	1230.5	1229.5
10°	1214.4	1215.4	1217.4	1220.5	1220.5
12.5°	1209.4	1210.4	1214.4	1217.4	1217.4
15°	1205.4	1206.4	1208.4	1212.4	1209.4
17.5°	1187.3	1183.3	1183.3	1186.3	1183.3
20°	1155.1	1149.1	1149.1	1148.1	1147.1
22.5°	1116.9	1101.8	1097.8	1092.8	1093.8
25°	1069.7	1049.6	1038.5	1032.5	1030.5
27.5°	1031.5	1008.3	997.3	988.2	985.2
30°	983.2	957.1	948.0	943.0	941.0
32.5°	912.8	889.7	877.6	874.6	868.6
35°	806.3	796.2	791.2	784.2	785.2
37.5°	699.7	696.7	684.6	688.6	684.6
40°	585.1	584.1	586.1	583.1	590.1
42.5°	477.5	474.5	479.5	476.5	479.5
45°	370.0	376.0	383.0	380.0	384.0
47.5°	283.5	284.5	282.5	284.5	286.5
50°	218.2	216.1	214.1	210.1	212.1
52.5°	180.0	172.9	167.9	164.9	163.9
55°	158.8	151.8	147.8	143.8	143.8
57.5°	152.8	143.8	137.7	134.7	133.7
60°	153.8	141.8	133.7	128.7	127.7
62.5°	157.8	141.8	130.7	125.7	123.7
65°	156.8	139.7	128.7	123.7	121.6
67°	151.8	136.7	127.7	122.6	121.6
67.5°	149.8	135.7	127.7	122.6	120.6
70°	142.8	132.7	125.7	120.6	118.6
72.5°	136.7	128.7	120.6	116.6	114.6
75°	130.7	122.6	115.6	111.6	110.6
77.5°	124.7	115.6	110.6	105.6	101.5
80°	113.6	103.5	96.5	88.5	86.5
82.5°	93.5	85.5	78.4	71.4	70.4
85°	69.4	66.4	60.3	54.3	54.3
87.5°	38.2	42.2	37.2	34.2	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)