

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: P141776

Luminaire Tested: **EMM-F04-LED-E1-T2-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141776
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33682)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: EMM-F04-LED-E1-T2-7050
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9989 lumens
Efficiency: N/A
Efficacy: 97.7 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

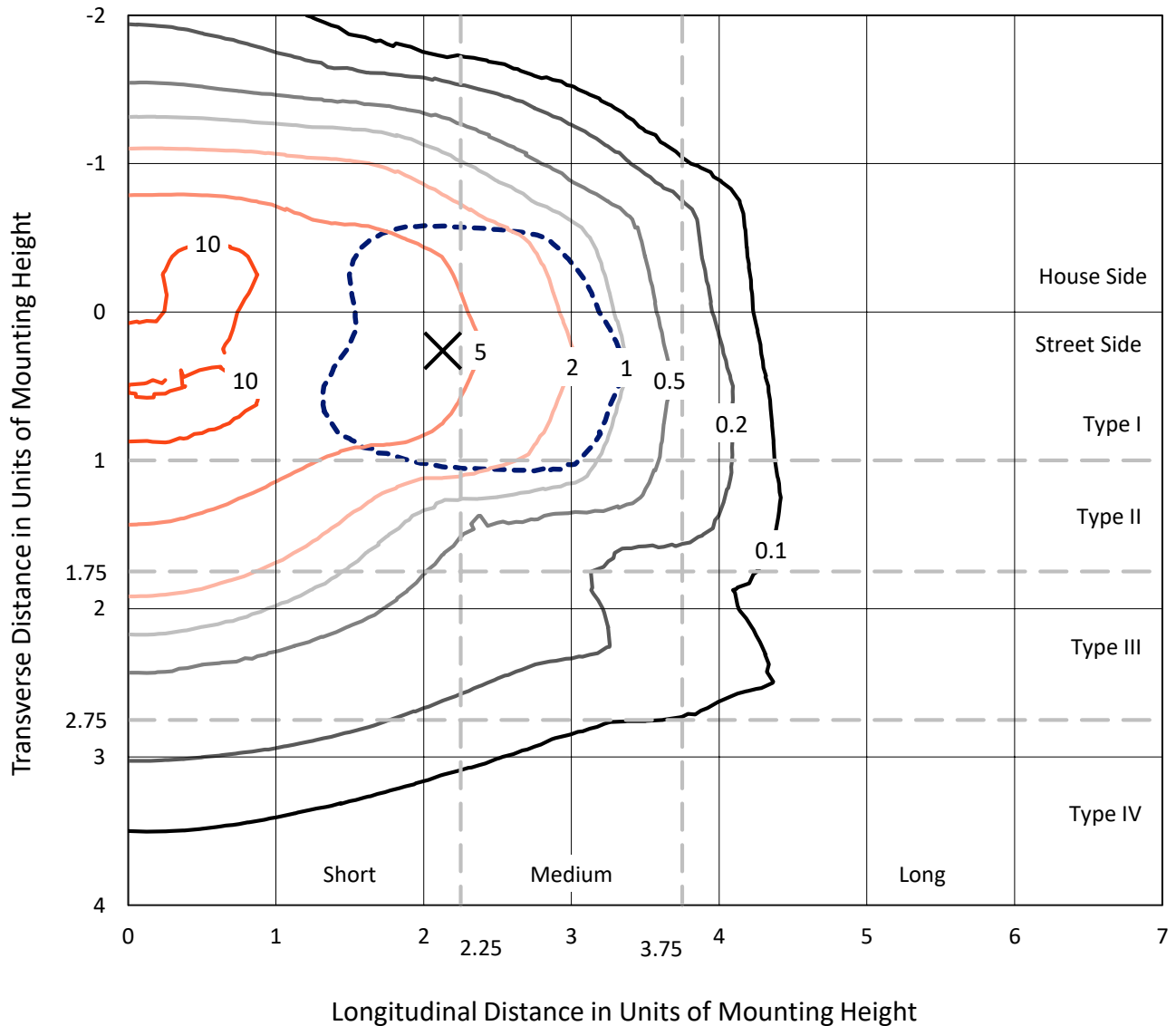
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

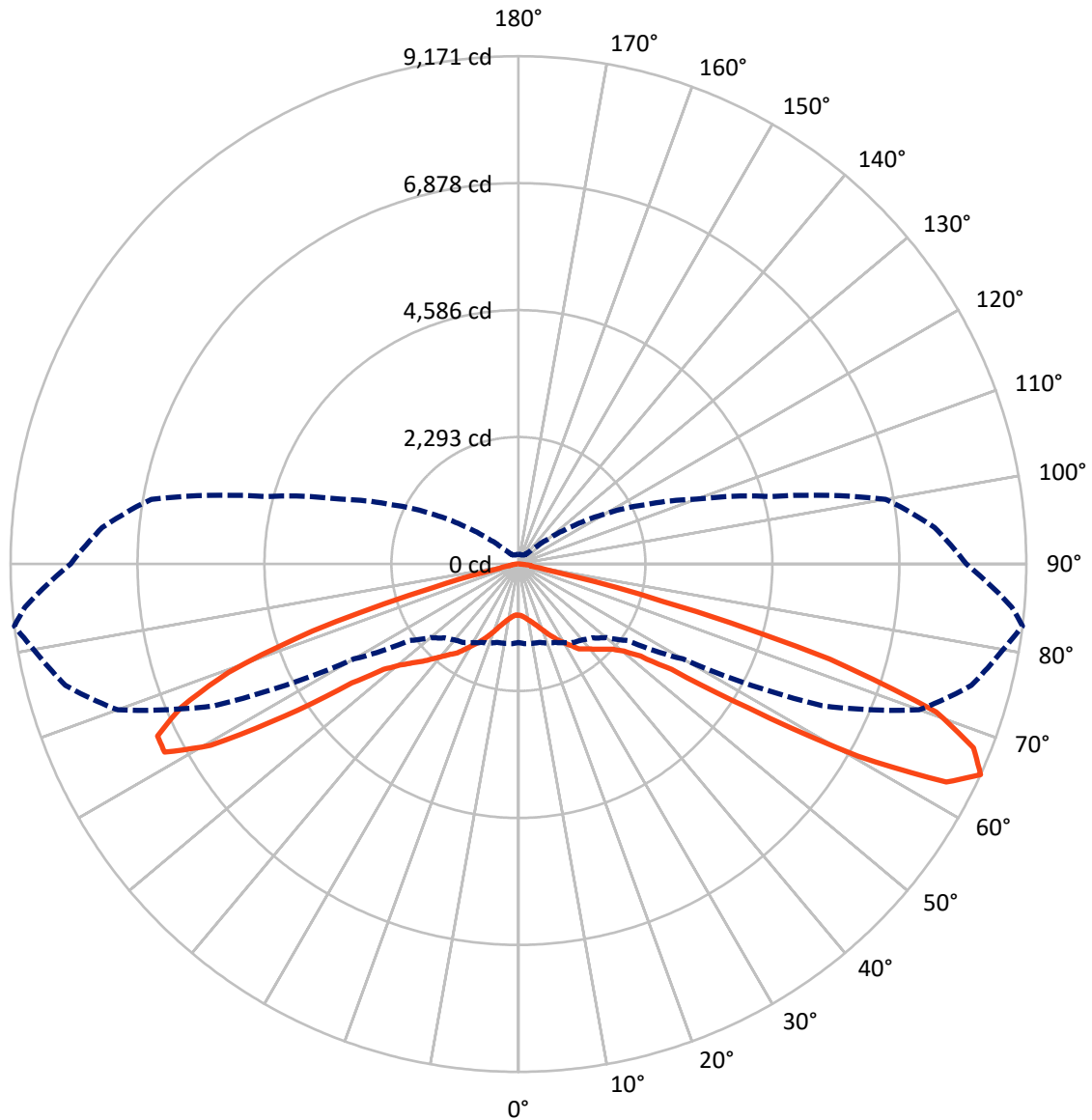
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.7 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3705.2	0.0	3705.2
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	6283.8	0.0	6283.8
	% Fixture	62.9	0.0	62.9
Total	Lumens	9989.0	0.0	9989.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.1	0.9
10°-20°	326.0	3.3
20°-30°	644.1	6.4
30°-40°	1108.5	11.1
40°-50°	1672.4	16.7
50°-60°	2327.3	23.3
60°-70°	2686.3	26.9
70°-80°	976.3	9.8
80°-90°	155.0	1.6
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°	9989.0	100.0
0°-180°	9989.0	100.0



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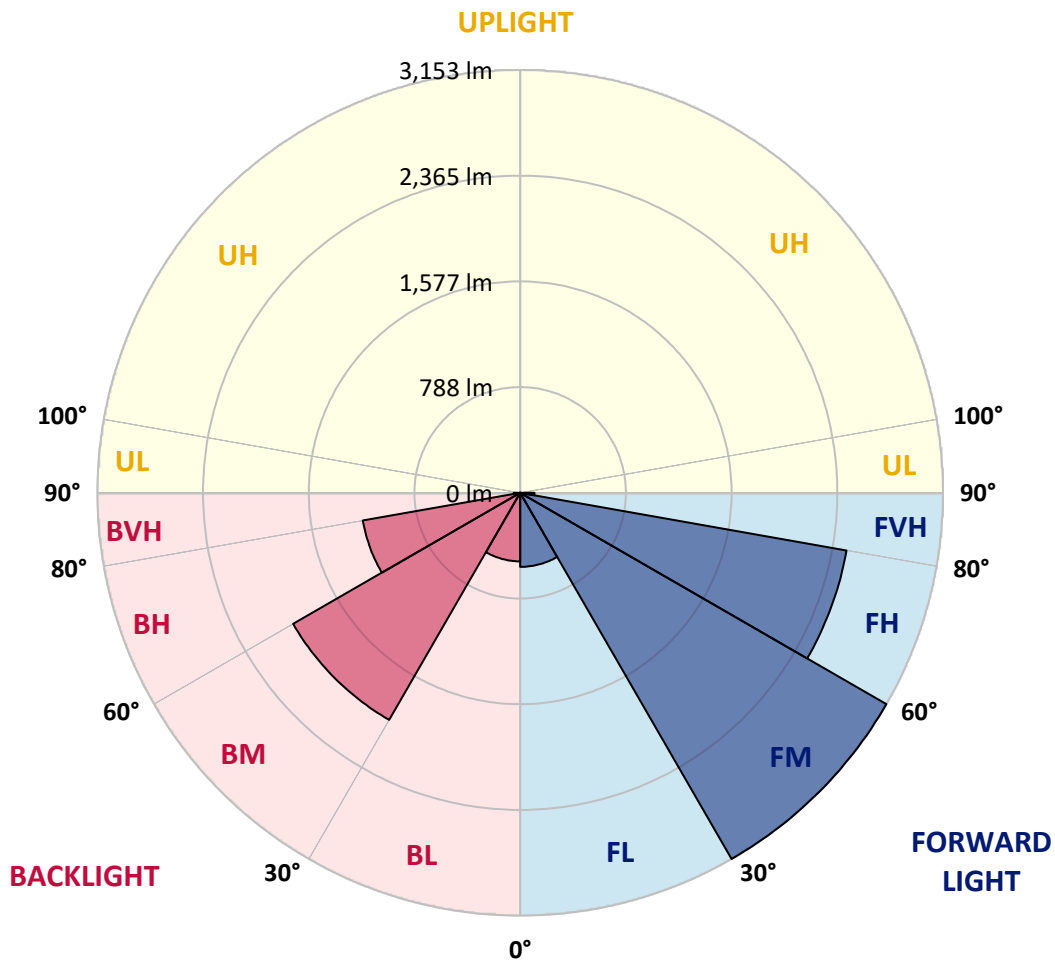
CATALOG NUMBER: EMM-F04-LED-E1-T2-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	552.2	5.5			
FM (30°-60°)	3153.3	31.6			
FH (60°-80°)	2471.2	24.7			G2/5000
FVH (80°-90°)	107.1	1.1			G2/225
BL (0°-30°)	511.0	5.1	B2/1000		
BM (30°-60°)	1955.0	19.6	B2/2500		
BH (60°-80°)	1191.3	11.9	B3/2500		G3/2500
BVH (80°-90°)	47.9	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0
2.5°	970.2	972.4	970.2	970.2	969.1	967.9	967.9	966.8	964.5	962.3	961.1
5°	1023.3	1024.4	1021.0	1021.0	1022.1	1021.0	1017.6	1018.7	1009.7	1006.3	1004.1
7.5°	1082.0	1085.4	1080.9	1078.6	1077.5	1075.2	1071.8	1066.2	1059.4	1053.8	1050.4
10°	1148.6	1152.0	1149.8	1145.2	1138.5	1135.1	1131.7	1122.7	1114.8	1105.7	1098.9
12.5°	1227.7	1228.8	1226.6	1217.5	1213.0	1202.8	1191.6	1181.4	1170.1	1156.5	1145.2
15°	1305.6	1306.8	1303.4	1294.3	1288.7	1276.3	1260.4	1246.9	1227.7	1211.9	1197.2
17.5°	1365.5	1367.7	1361.0	1354.2	1346.3	1330.5	1315.8	1300.0	1279.6	1262.7	1248.0
20°	1385.8	1389.2	1384.7	1381.3	1376.8	1368.9	1354.2	1340.6	1322.6	1310.1	1298.8
22.5°	1376.8	1380.2	1377.9	1377.9	1377.9	1376.8	1370.0	1366.6	1355.3	1349.7	1347.4
25°	1363.2	1366.6	1364.4	1366.6	1371.1	1376.8	1376.8	1383.6	1382.4	1391.5	1397.1
27.5°	1398.2	1400.5	1394.9	1394.9	1399.4	1408.4	1406.1	1419.7	1422.0	1440.0	1457.0
30°	1520.2	1520.2	1511.2	1502.1	1505.5	1503.3	1501.0	1510.1	1510.1	1527.0	1534.9
32.5°	1702.1	1689.6	1688.5	1687.4	1679.5	1685.1	1667.0	1668.2	1660.3	1662.5	1659.1
35°	1902.0	1900.8	1896.3	1894.1	1890.7	1907.6	1894.1	1905.4	1877.1	1867.0	1847.8
37.5°	2077.0	2081.5	2084.9	2101.9	2109.8	2143.7	2151.6	2157.2	2127.9	2129.0	2086.1
40°	2253.2	2258.9	2271.3	2301.8	2324.4	2356.0	2370.7	2394.4	2396.7	2401.2	2369.6
42.5°	2445.2	2436.2	2453.1	2491.5	2519.8	2551.4	2570.6	2614.6	2639.5	2651.9	2656.4
45°	2600.0	2589.8	2597.7	2620.3	2646.3	2686.9	2728.7	2794.2	2847.3	2904.9	2936.5
47.5°	2680.1	2682.4	2688.1	2701.6	2719.7	2759.2	2817.9	2901.5	2987.4	3080.0	3162.4
50°	2706.1	2707.3	2715.2	2728.7	2745.7	2787.4	2848.4	2943.3	3047.2	3177.1	3303.6
52.5°	2714.0	2709.5	2717.4	2724.2	2735.5	2770.5	2828.1	2927.5	3045.0	3201.9	3389.4
55°	2684.7	2679.0	2692.6	2701.6	2710.6	2738.9	2782.9	2874.4	2996.4	3174.8	3419.9
57.5°	2571.7	2572.9	2592.1	2615.8	2639.5	2677.9	2735.5	2822.5	2943.3	3119.5	3393.9
60°	2380.8	2377.5	2401.2	2430.5	2471.2	2532.2	2603.3	2691.4	2792.0	2938.8	3208.7
62.5°	2034.1	2047.7	2055.6	2099.6	2101.9	2188.8	2235.2	2323.2	2409.1	2522.0	2764.9
65°	1416.3	1445.7	1453.6	1464.9	1518.0	1563.1	1637.7	1730.3	1786.8	1886.2	2066.9
67.5°	882.1	903.5	904.7	934.0	980.3	1032.3	1089.9	1183.6	1269.5	1285.3	1375.7
70°	731.9	733.0	748.8	770.3	806.4	859.5	916.0	981.5	1059.4	1109.1	1100.1
72.5°	606.5	613.3	624.6	646.0	685.6	733.0	805.3	888.9	986.0	1085.4	1173.5
75°	406.6	417.9	421.3	431.4	450.6	493.6	547.8	626.8	752.2	900.2	1087.6
77.5°	215.7	218.0	225.9	233.8	244.0	269.9	304.9	345.6	428.1	555.7	775.9
80°	109.6	114.1	119.7	125.4	124.2	131.0	141.2	159.3	187.5	244.0	351.3
82.5°	39.5	50.8	66.6	74.5	74.5	76.8	80.2	83.6	81.3	90.4	112.9
85°	18.1	20.3	26.0	40.7	41.8	41.8	41.8	44.0	41.8	37.3	44.0
87.5°	0.0	3.4	3.4	10.2	11.3	10.2	11.3	14.7	11.3	9.0	7.9
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):

	55°	60°	65°	70°	75°	80°	83°	85°	90°	95°	100°
0°	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0
2.5°	955.5	953.2	947.6	945.3	938.6	934.0	931.8	929.5	926.1	921.6	918.2
5°	997.3	990.5	982.6	978.1	969.1	960.0	956.6	952.1	944.2	937.4	929.5
7.5°	1041.3	1033.4	1024.4	1014.2	1005.2	995.0	990.5	986.0	974.7	965.7	954.4
10°	1088.8	1077.5	1067.3	1058.3	1050.4	1039.1	1031.2	1027.8	1017.6	1004.1	992.8
12.5°	1134.0	1121.5	1111.4	1100.1	1092.2	1083.1	1075.2	1071.8	1063.9	1051.5	1042.5
15°	1181.4	1169.0	1157.7	1149.8	1140.7	1135.1	1130.6	1124.9	1121.5	1111.4	1106.8
17.5°	1232.2	1220.9	1210.8	1204.0	1200.6	1199.5	1198.3	1196.1	1192.7	1185.9	1182.5
20°	1289.8	1279.6	1276.3	1275.1	1276.3	1277.4	1279.6	1279.6	1280.8	1276.3	1275.1
22.5°	1345.2	1345.2	1350.8	1357.6	1364.4	1368.9	1372.3	1367.7	1368.9	1375.7	1381.3
25°	1406.1	1416.3	1431.0	1442.3	1452.5	1460.4	1464.9	1467.1	1469.4	1479.6	1489.7
27.5°	1471.7	1487.5	1508.9	1523.6	1542.8	1555.2	1564.3	1563.1	1566.5	1580.1	1598.1
30°	1553.0	1568.8	1591.4	1611.7	1637.7	1655.8	1659.1	1656.9	1661.4	1673.8	1710.0
32.5°	1667.0	1670.4	1685.1	1705.4	1733.7	1751.8	1755.1	1760.8	1771.0	1793.5	1837.6
35°	1827.4	1812.7	1811.6	1820.6	1847.8	1882.8	1886.2	1889.5	1894.1	1923.4	1982.2
37.5°	2044.3	1984.4	1948.3	1920.0	1923.4	1935.9	1942.6	1944.9	1956.2	2001.4	2100.7
40°	2316.5	2204.7	2124.5	2044.3	2014.9	2017.2	2019.4	2017.2	2039.8	2109.8	2239.7
42.5°	2614.6	2516.4	2376.3	2210.3	2126.7	2099.6	2103.0	2105.3	2140.3	2241.9	2386.5
45°	2930.9	2867.6	2705.0	2445.2	2265.6	2196.7	2194.5	2199.0	2256.6	2400.0	2552.5
47.5°	3208.7	3224.5	3104.8	2799.9	2491.5	2316.5	2301.8	2309.7	2403.4	2557.0	2711.8
50°	3429.0	3532.9	3523.8	3282.1	2857.5	2523.2	2471.2	2482.5	2593.2	2752.4	2891.4
52.5°	3595.0	3806.2	3941.7	3845.7	3476.4	2898.1	2763.7	2744.5	2883.4	3051.7	3137.6
55°	3705.7	4047.9	4403.7	4569.7	4419.5	3707.9	3356.7	3314.9	3465.1	3679.7	3717.0
57.5°	3779.1	4341.5	5107.3	5748.8	5953.2	5343.4	4902.9	4727.8	4837.4	5064.4	5015.8
60°	3657.1	4457.9	5956.6	7106.4	7688.1	7536.7	7046.5	6782.3	6577.8	6560.9	6290.9
62.5°	3189.5	4181.2	6301.1	7752.4	8570.1	8758.8	8671.8	8358.9	7793.1	7479.1	6869.2
65°	2405.7	3425.6	6056.0	7702.7	8469.6	8887.5	9171.0	8946.2	8087.9	7544.6	6733.7
67.5°	1537.2	2211.4	5037.3	7105.3	7825.8	8295.7	8862.7	8759.9	7663.2	6969.7	6087.7
70°	1122.7	1225.4	3417.7	6014.2	6807.1	7220.5	7999.8	7954.6	6720.1	5940.8	5066.6
72.5°	1293.2	913.7	1873.7	4492.9	5106.2	5431.4	5877.6	5768.0	4695.1	4154.1	3535.1
75°	1458.1	1022.1	1056.0	2665.5	2853.0	2624.8	2685.8	2332.3	1819.5	1612.8	1589.1
77.5°	1227.7	1281.9	957.8	1145.2	1054.9	760.1	569.2	446.1	349.0	375.0	416.8
80°	713.8	1441.2	1267.2	596.3	668.6	532.0	237.2	196.5	162.6	164.9	167.2
82.5°	220.2	900.2	1783.4	728.5	661.8	749.9	218.0	133.3	107.3	120.8	136.7
85°	73.4	377.2	1429.9	764.6	428.1	399.8	96.0	65.5	54.2	75.7	107.3
87.5°	18.1	91.5	265.4	100.5	63.2	38.4	32.8	23.7	26.0	47.4	66.6
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°	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0	925.0
2.5°	916.0	912.6	909.2	906.9	903.5	903.5	900.2	900.2	895.6	893.4	893.4
5°	922.7	916.0	910.3	904.7	899.0	896.8	892.3	890.0	885.5	882.1	879.8
7.5°	945.3	936.3	929.5	922.7	916.0	912.6	908.1	903.5	902.4	900.2	897.9
10°	983.7	971.3	965.7	961.1	952.1	949.9	945.3	941.9	938.6	935.2	936.3
12.5°	1033.4	1024.4	1022.1	1013.1	1010.8	1007.5	1000.7	998.4	989.4	982.6	979.2
15°	1096.7	1093.3	1093.3	1088.8	1082.0	1076.4	1066.2	1060.5	1044.7	1034.6	1023.3
17.5°	1180.3	1176.9	1178.0	1173.5	1165.6	1155.4	1144.1	1127.2	1103.5	1085.4	1062.8
20°	1277.4	1276.3	1278.5	1275.1	1265.0	1251.4	1224.3	1199.5	1166.7	1134.0	1109.1
22.5°	1385.8	1391.5	1393.7	1384.7	1373.4	1345.2	1315.8	1279.6	1235.6	1192.7	1157.7
25°	1501.0	1514.6	1522.5	1510.1	1496.5	1460.4	1416.3	1367.7	1305.6	1253.7	1207.4
27.5°	1614.0	1642.2	1653.5	1646.7	1625.3	1574.4	1515.7	1451.3	1375.7	1306.8	1246.9
30°	1748.4	1785.6	1806.0	1795.8	1754.0	1687.4	1616.2	1529.3	1433.3	1350.8	1278.5
32.5°	1889.5	1935.9	1950.5	1929.1	1868.1	1784.5	1691.9	1585.7	1477.3	1382.4	1301.1
35°	2046.5	2089.5	2092.8	2051.1	1970.9	1864.7	1749.5	1621.9	1497.6	1391.5	1302.2
37.5°	2183.2	2226.1	2222.7	2160.6	2063.5	1931.3	1784.5	1629.8	1485.2	1364.4	1267.2
40°	2326.6	2374.1	2348.1	2267.9	2142.5	1974.3	1789.0	1602.7	1437.8	1305.6	1199.5
42.5°	2478.0	2498.3	2452.0	2351.5	2190.0	1973.1	1750.6	1538.3	1363.2	1216.4	1104.6
45°	2616.9	2601.1	2534.5	2400.0	2186.6	1924.6	1675.0	1458.1	1263.8	1117.0	1007.5
47.5°	2741.1	2691.4	2588.7	2400.0	2133.5	1838.7	1577.8	1354.2	1161.1	1013.1	904.7
50°	2875.5	2771.6	2611.3	2358.3	2037.5	1734.8	1475.0	1250.3	1051.5	900.2	781.6
52.5°	3054.0	2867.6	2611.3	2282.6	1938.1	1629.8	1366.6	1129.4	923.9	765.8	648.3
55°	3471.9	3068.7	2656.4	2240.8	1850.0	1519.1	1237.9	973.6	773.7	622.3	525.2
57.5°	4293.0	3509.2	2883.4	2317.6	1817.3	1399.4	1071.8	800.8	611.0	484.5	403.2
60°	4976.3	3864.9	3067.5	2376.3	1764.2	1244.6	868.5	613.3	454.0	358.0	304.9
62.5°	5152.5	3869.4	2991.9	2223.9	1549.6	1013.1	640.4	422.4	311.7	259.8	231.5
65°	4712.0	3422.2	2544.6	1813.9	1180.3	703.6	400.9	256.4	207.8	189.7	178.5
67.5°	3960.9	2726.5	1886.2	1265.0	744.3	387.4	224.8	176.2	158.1	152.5	146.8
70°	3038.2	1915.5	1227.7	740.9	389.7	201.0	160.4	144.6	136.7	133.3	128.8
72.5°	1872.6	1131.7	667.5	355.8	194.3	153.6	143.4	137.8	127.6	123.1	118.6
75°	795.1	485.7	276.7	180.7	155.9	146.8	138.9	132.1	124.2	117.5	112.9
77.5°	267.7	185.2	163.8	158.1	155.9	146.8	136.7	127.6	119.7	111.8	107.3
80°	162.6	148.0	151.3	150.2	155.9	145.7	132.1	122.0	112.9	105.0	99.4
82.5°	141.2	140.0	143.4	146.8	154.7	140.0	124.2	109.6	98.3	90.4	84.7
85°	122.0	124.2	126.5	128.8	133.3	118.6	100.5	87.0	77.9	67.8	63.2
87.5°	81.3	88.1	92.6	93.7	90.4	56.5	32.8	38.4	39.5	33.9	30.5
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°	925.0	925.0	925.0	925.0	925.0
2.5°	890.0	888.9	892.3	888.9	888.9
5°	878.7	877.6	877.6	877.6	875.3
7.5°	896.8	895.6	894.5	894.5	893.4
10°	931.8	930.7	930.7	929.5	929.5
12.5°	973.6	969.1	967.9	965.7	966.8
15°	1014.2	1001.8	998.4	995.0	991.6
17.5°	1045.9	1031.2	1023.3	1016.5	1016.5
20°	1085.4	1066.2	1056.0	1045.9	1045.9
22.5°	1130.6	1104.6	1091.0	1079.7	1075.2
25°	1167.8	1135.1	1115.9	1102.3	1098.9
27.5°	1196.1	1154.3	1129.4	1113.6	1109.1
30°	1218.7	1171.2	1141.9	1124.9	1118.1
32.5°	1233.3	1181.4	1149.8	1132.8	1126.0
35°	1225.4	1170.1	1131.7	1111.4	1106.8
37.5°	1185.9	1127.2	1082.0	1060.5	1052.6
40°	1113.6	1050.4	1002.9	977.0	972.4
42.5°	1018.7	955.5	910.3	883.2	870.8
45°	917.1	851.6	808.7	783.8	769.1
47.5°	807.5	743.2	699.1	674.3	664.1
50°	692.3	630.2	593.0	565.8	555.7
52.5°	572.6	517.3	480.0	457.4	446.1
55°	458.6	413.4	381.7	367.1	359.2
57.5°	358.0	328.7	310.6	301.6	295.9
60°	277.8	263.2	256.4	249.6	250.7
62.5°	216.9	213.5	211.2	207.8	208.9
65°	175.1	172.8	173.9	172.8	173.9
67.5°	143.4	144.6	146.8	146.8	148.0
70°	126.5	127.6	129.9	129.9	129.9
72.5°	117.5	119.7	122.0	120.8	120.8
75°	110.7	116.3	120.8	116.3	111.8
77.5°	103.9	117.5	129.9	119.7	107.3
80°	94.9	124.2	138.9	120.8	102.8
82.5°	90.4	119.7	122.0	105.0	90.4
85°	83.6	135.5	141.2	96.0	68.9
87.5°	42.9	81.3	93.7	64.4	35.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)