

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: P141894

Luminaire Tested: **ECM-F04-LED-E1-T3-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141894
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33683)
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-T3-7030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8855.7 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type III - 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

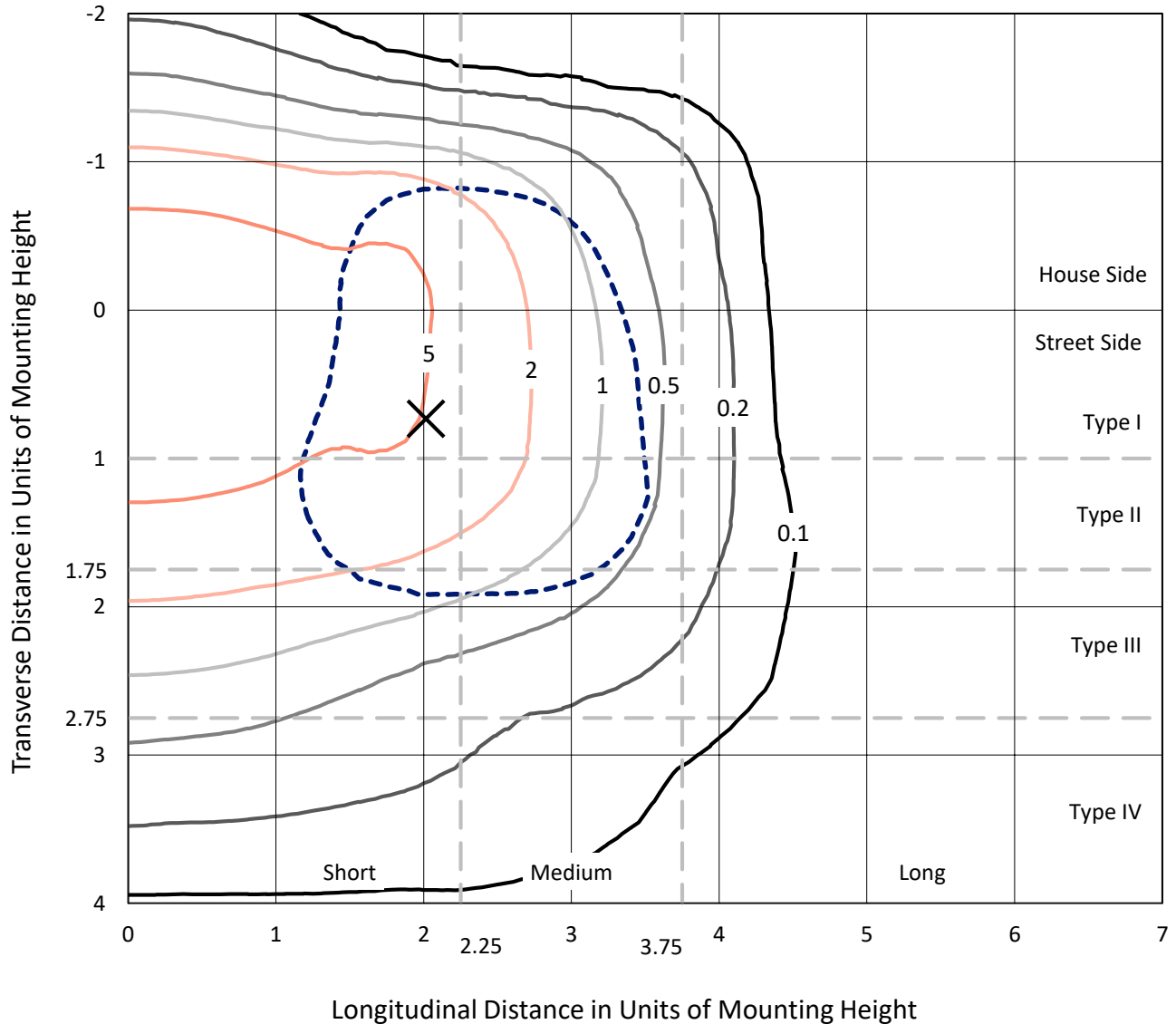


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

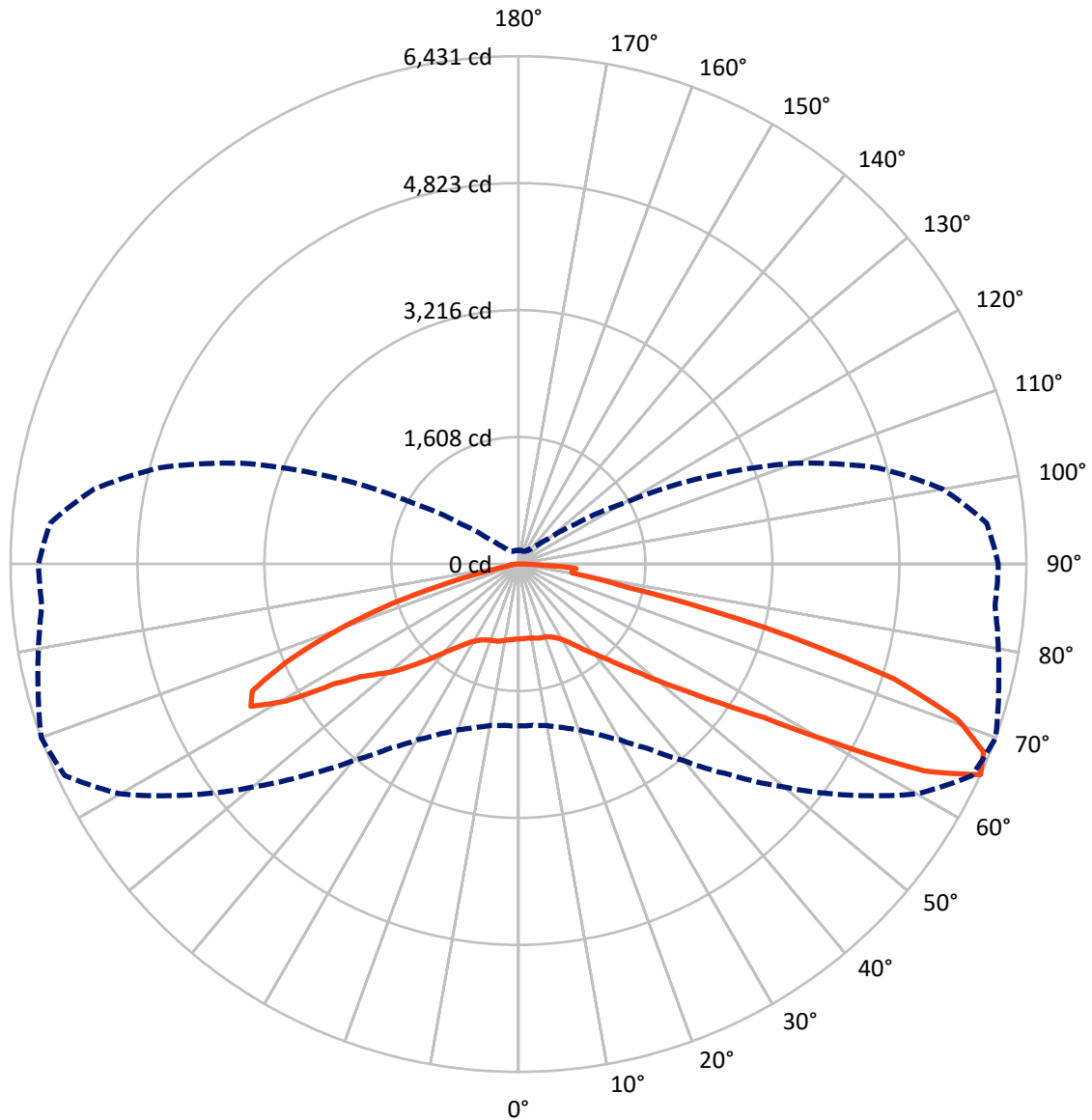


Based on 10 foot mounting height. Maximum calculated value = 9.6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2989.4	0.0	2989.4
	% Fixture	33.8	0.0	33.8
Street Side	Lumens	5866.2	0.0	5866.2
	% Fixture	66.2	0.0	66.2
Total	Lumens	8855.7	0.0	8855.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	1.0
10°-20°	270.6	3.1
20°-30°	465.2	5.3
30°-40°	745.6	8.4
40°-50°	1220.8	13.8
50°-60°	1910.8	21.6
60°-70°	2685.3	30.3
70°-80°	1270.8	14.4
80°-90°	195.2	2.2
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°	8855.7	100.0
0°-180°	8855.7	100.0



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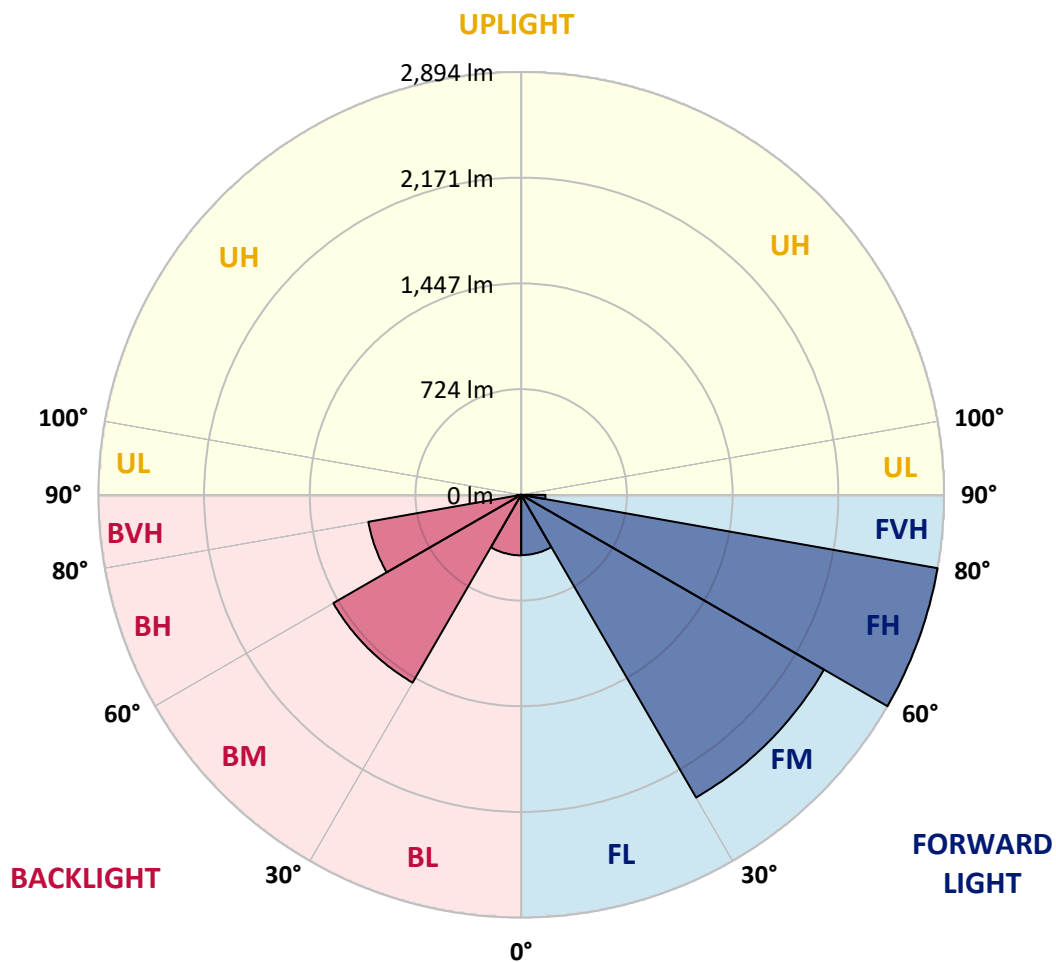
CATALOG NUMBER: ECM-F04-LED-E1-T3-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	412.6	4.7			
FM	(30°-60°)	2393.0	27.0			
FH	(60°-80°)	2894.2	32.7			G2/5000
FVH	(80°-90°)	166.4	1.9			G2/225
BL	(0°-30°)	414.5	4.7	B1/500		
BM	(30°-60°)	1484.2	16.8	B2/2500		
BH	(60°-80°)	1061.9	12.0	B3/2500		G3/2500
BVH	(80°-90°)	28.8	0.3			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0
2.5°	944.0	945.0	945.0	943.0	943.0	944.0	944.0	945.0	945.0	945.0	946.0
5°	944.0	945.0	945.0	944.0	943.0	945.0	944.0	945.0	945.0	945.0	945.0
7.5°	942.0	943.0	943.0	942.0	943.0	944.0	944.0	946.0	947.0	947.0	948.0
10°	931.9	932.9	933.9	933.9	936.0	939.0	940.0	944.0	945.0	948.0	950.0
12.5°	913.8	913.8	915.9	917.9	920.9	926.9	929.9	936.0	941.0	945.0	952.0
15°	897.8	897.8	899.8	900.8	906.8	910.8	916.9	923.9	932.9	941.0	952.0
17.5°	905.8	905.8	904.8	903.8	904.8	904.8	909.8	916.9	924.9	936.0	950.0
20°	937.0	936.0	931.9	929.9	928.9	924.9	921.9	920.9	924.9	932.9	947.0
22.5°	964.1	962.1	961.1	959.1	962.1	960.1	956.1	951.0	945.0	942.0	950.0
25°	980.2	981.2	981.2	981.2	987.2	989.2	991.3	985.2	978.2	968.1	969.1
27.5°	1002.3	1003.3	1001.3	1005.3	1012.4	1017.4	1022.4	1026.4	1022.4	1016.4	1009.3
30°	1049.6	1049.6	1046.5	1049.6	1055.6	1060.6	1067.7	1074.7	1074.7	1068.7	1061.6
32.5°	1098.8	1099.8	1099.8	1101.8	1110.9	1114.9	1125.0	1132.0	1137.0	1133.0	1137.0
35°	1158.1	1157.1	1160.1	1161.1	1175.2	1180.3	1200.4	1205.4	1213.4	1215.4	1218.5
37.5°	1256.7	1258.7	1252.6	1248.6	1260.7	1260.7	1286.8	1300.9	1298.9	1313.0	1323.0
40°	1415.5	1406.4	1403.4	1401.4	1408.5	1407.5	1406.4	1425.6	1434.6	1436.6	1441.6
42.5°	1591.4	1594.4	1591.4	1598.5	1598.5	1593.4	1589.4	1586.4	1603.5	1614.6	1616.6
45°	1797.5	1801.5	1795.5	1790.5	1803.6	1810.6	1810.6	1818.6	1832.7	1837.7	1834.7
47.5°	1962.4	1973.5	1968.4	1975.5	1996.6	2020.7	2052.9	2074.0	2089.1	2103.1	2125.3
50°	2111.2	2116.2	2128.3	2151.4	2182.6	2220.8	2273.0	2325.3	2355.5	2390.7	2416.8
52.5°	2201.7	2216.7	2234.8	2273.0	2325.3	2378.6	2459.0	2544.5	2620.9	2660.1	2691.3
55°	2255.9	2267.0	2291.1	2343.4	2416.8	2496.2	2596.8	2714.4	2815.9	2902.4	2969.7
57.5°	2253.9	2263.0	2296.2	2353.5	2440.9	2540.5	2666.1	2812.9	2962.7	3106.5	3233.1
60°	2210.7	2218.8	2251.9	2313.3	2408.8	2527.4	2678.2	2858.1	3061.2	3277.4	3499.5
62.5°	2144.4	2150.4	2179.5	2240.9	2337.4	2464.1	2641.0	2877.2	3165.8	3506.6	3937.9
65°	2050.9	2050.9	2078.0	2141.3	2233.8	2375.6	2570.6	2848.1	3247.2	3765.9	4393.3
67.5°	1913.1	1913.1	1935.2	1987.5	2059.9	2158.4	2353.5	2642.0	3063.2	3684.5	4418.4
70°	1652.8	1656.8	1656.8	1688.9	1721.1	1765.4	1857.8	2079.0	2474.1	3081.3	3803.1
72.5°	1211.4	1138.0	1195.3	1247.6	1283.8	1307.9	1361.2	1430.6	1629.6	2085.0	2738.5
75°	763.0	782.1	825.4	884.7	974.2	1066.6	1168.2	1211.4	1193.3	1247.6	1686.9
77.5°	462.4	446.4	488.6	577.1	677.6	803.3	993.3	1158.1	1252.6	1246.6	1194.3
80°	200.1	195.0	223.2	265.4	314.7	428.3	602.2	828.4	1079.7	1225.5	1203.4
82.5°	71.4	72.4	91.5	108.6	130.7	167.9	238.3	381.0	604.2	860.6	1063.6
85°	21.1	23.1	32.2	45.2	51.3	58.3	80.4	119.6	204.1	325.7	579.1
87.5°	6.0	7.0	9.0	16.1	15.1	14.1	16.1	25.1	19.1	16.1	80.4
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°	95°	100°	105°
0°	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0
2.5°	945.0	945.0	945.0	946.0	945.0	945.0	946.0	946.0	947.0	948.0	950.0
5°	944.0	944.0	945.0	945.0	945.0	946.0	947.0	948.0	950.0	953.0	956.1
7.5°	947.0	947.0	946.0	947.0	947.0	948.0	950.0	951.0	955.1	958.1	963.1
10°	950.0	950.0	951.0	952.0	952.0	954.1	957.1	958.1	962.1	968.1	973.2
12.5°	954.1	957.1	961.1	963.1	965.1	967.1	970.1	972.1	977.2	985.2	991.3
15°	957.1	964.1	968.1	973.2	976.2	977.2	980.2	984.2	989.2	997.3	1004.3
17.5°	957.1	966.1	972.1	977.2	982.2	985.2	988.2	992.3	999.3	1007.3	1014.4
20°	956.1	969.1	977.2	985.2	994.3	997.3	1002.3	1006.3	1014.4	1024.4	1029.5
22.5°	961.1	976.2	987.2	1001.3	1011.4	1019.4	1025.4	1032.5	1038.5	1045.5	1047.5
25°	976.2	991.3	1009.3	1026.4	1040.5	1052.6	1060.6	1066.6	1073.7	1076.7	1072.7
27.5°	1001.3	1012.4	1037.5	1062.6	1084.7	1099.8	1108.9	1116.9	1118.9	1125.0	1109.9
30°	1046.5	1051.6	1077.7	1113.9	1139.0	1164.2	1176.2	1184.3	1185.3	1181.3	1155.1
32.5°	1120.9	1111.9	1135.0	1183.3	1221.5	1242.6	1261.7	1266.7	1263.7	1250.6	1208.4
35°	1211.4	1197.3	1208.4	1278.8	1321.0	1352.2	1370.3	1375.3	1368.2	1345.1	1286.8
37.5°	1323.0	1318.0	1323.0	1390.4	1463.8	1492.9	1500.9	1507.0	1489.9	1447.7	1371.3
40°	1446.7	1447.7	1441.6	1503.0	1595.5	1637.7	1656.8	1643.7	1622.6	1562.3	1477.8
42.5°	1617.6	1611.5	1590.4	1645.7	1764.3	1807.6	1824.7	1814.6	1793.5	1717.1	1618.6
45°	1843.8	1823.7	1803.6	1832.7	1947.3	2003.6	2028.7	2021.7	1984.5	1892.0	1799.5
47.5°	2120.2	2099.1	2061.9	2056.9	2172.5	2238.9	2247.9	2236.8	2208.7	2116.2	2002.6
50°	2410.8	2404.7	2387.6	2347.4	2451.0	2517.3	2511.3	2503.3	2472.1	2354.5	2237.9
52.5°	2711.4	2723.4	2712.4	2684.2	2794.8	2821.9	2824.0	2799.8	2763.6	2655.1	2496.2
55°	3027.0	3072.3	3089.4	3111.5	3198.9	3194.9	3171.8	3114.5	3123.5	2999.9	2779.7
57.5°	3361.8	3500.5	3610.1	3659.4	3742.8	3767.0	3708.6	3727.7	3719.7	3592.0	3245.2
60°	3803.1	4134.9	4420.4	4596.3	4708.9	4665.7	4747.1	4751.2	4888.9	4608.4	4067.5
62.5°	4506.9	5116.1	5622.8	5774.6	5803.7	5793.7	5697.2	5793.7	5767.5	5425.7	4725.0
65°	5099.0	5823.8	6338.6	6431.1	6295.3	6170.7	6058.1	6077.2	5952.5	5457.9	4705.9
67.5°	5179.4	5901.3	6378.8	6352.6	6056.1	5824.9	5637.9	5491.1	5236.7	4789.4	4133.9
70°	4543.1	5308.1	5923.4	5903.3	5491.1	5182.4	4878.8	4657.7	4398.3	4052.5	3432.2
72.5°	3533.7	4215.3	4811.5	4966.3	4560.2	4219.3	3940.9	3659.4	3392.0	3063.2	2672.2
75°	2405.7	2918.5	3195.9	3238.2	2866.2	2610.8	2503.3	2273.0	1989.5	1919.2	1629.6
77.5°	1397.4	1594.4	1510.0	1397.4	1125.0	826.4	631.3	539.9	541.9	622.3	596.2
80°	1136.0	1081.7	853.5	684.6	465.5	237.3	158.8	136.7	137.7	159.8	154.8
82.5°	1171.2	1202.4	988.2	691.7	476.5	251.3	120.6	89.5	104.6	113.6	111.6
85°	867.6	1137.0	1019.4	733.9	511.7	267.4	78.4	49.3	69.4	84.4	90.5
87.5°	243.3	382.0	296.6	196.0	142.8	48.3	31.2	26.1	32.2	44.2	44.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0	949.0
2.5°	951.0	955.1	954.1	956.1	957.1	960.1	962.1	961.1	961.1	963.1	965.1
5°	959.1	964.1	964.1	967.1	970.1	974.2	977.2	975.2	976.2	978.2	980.2
7.5°	967.1	973.2	974.2	977.2	979.2	981.2	983.2	980.2	979.2	979.2	978.2
10°	977.2	983.2	982.2	982.2	981.2	979.2	975.2	968.1	963.1	960.1	958.1
12.5°	994.3	998.3	992.3	986.2	976.2	969.1	960.1	952.0	946.0	941.0	939.0
15°	1009.3	1007.3	1000.3	989.2	975.2	964.1	955.1	944.0	937.0	930.9	927.9
17.5°	1017.4	1010.4	1000.3	990.2	978.2	968.1	957.1	944.0	932.9	924.9	920.9
20°	1025.4	1014.4	1001.3	991.3	982.2	974.2	966.1	950.0	936.0	923.9	917.9
22.5°	1037.5	1022.4	1009.3	1000.3	991.3	983.2	975.2	960.1	945.0	928.9	919.9
25°	1054.6	1034.5	1025.4	1016.4	1006.3	998.3	987.2	973.2	957.1	938.0	924.9
27.5°	1081.7	1063.6	1053.6	1044.5	1032.5	1019.4	1007.3	988.2	973.2	951.0	933.9
30°	1120.9	1101.8	1092.8	1083.7	1069.7	1052.6	1035.5	1011.4	990.2	965.1	943.0
32.5°	1170.2	1160.1	1149.1	1134.0	1114.9	1093.8	1068.7	1036.5	1006.3	975.2	947.0
35°	1246.6	1229.5	1211.4	1196.3	1168.2	1139.0	1100.8	1053.6	1013.4	975.2	941.0
37.5°	1334.1	1316.0	1291.8	1264.7	1222.5	1176.2	1122.9	1063.6	1010.4	964.1	925.9
40°	1439.6	1416.5	1384.3	1333.1	1270.7	1201.4	1130.0	1055.6	993.3	940.0	895.7
42.5°	1579.4	1532.1	1469.8	1394.4	1305.9	1211.4	1120.9	1034.5	964.1	905.8	861.6
45°	1737.2	1661.8	1561.3	1448.7	1326.0	1207.4	1100.8	1000.3	920.9	856.5	810.3
47.5°	1907.1	1789.5	1641.7	1482.9	1328.0	1185.3	1061.6	949.0	859.6	791.2	733.9
50°	2099.1	1905.1	1698.0	1499.9	1315.0	1146.1	1005.3	875.6	783.1	701.7	649.4
52.5°	2264.0	2006.6	1737.2	1492.9	1268.7	1077.7	912.8	787.2	678.6	606.2	554.9
55°	2459.0	2105.1	1758.3	1457.7	1194.3	971.1	813.3	673.6	571.0	506.7	462.4
57.5°	2787.8	2272.0	1776.4	1386.3	1071.7	837.4	675.6	544.9	464.5	408.2	377.0
60°	3422.1	2595.7	1850.8	1279.8	915.9	676.6	521.8	426.3	356.9	319.7	297.6
62.5°	3837.3	2815.9	1817.6	1115.9	715.8	506.7	382.0	307.6	267.4	240.3	230.2
65°	3731.8	2593.7	1542.2	884.7	498.6	336.8	256.4	211.1	193.0	178.9	172.9
67.5°	3205.0	2092.1	1117.9	572.0	315.7	205.1	167.9	149.8	141.8	135.7	134.7
70°	2553.5	1474.8	664.5	303.6	174.9	135.7	119.6	112.6	109.6	109.6	109.6
72.5°	1852.8	849.5	326.7	163.9	117.6	103.5	96.5	94.5	93.5	93.5	94.5
75°	1058.6	367.9	167.9	112.6	96.5	89.5	85.5	85.5	85.5	85.5	86.5
77.5°	369.0	167.9	118.6	94.5	83.4	79.4	77.4	79.4	80.4	80.4	80.4
80°	134.7	118.6	101.5	82.4	74.4	70.4	70.4	73.4	75.4	73.4	72.4
82.5°	106.6	93.5	82.4	71.4	65.3	63.3	64.3	66.4	65.3	64.3	61.3
85°	81.4	61.3	57.3	53.3	52.3	52.3	56.3	57.3	53.3	51.3	48.3
87.5°	40.2	32.2	29.2	34.2	33.2	30.2	31.2	31.2	26.1	24.1	25.1
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):

	165°	170°	175°	180°
0°	949.0	949.0	949.0	949.0
2.5°	965.1	966.1	969.1	968.1
5°	979.2	980.2	982.2	982.2
7.5°	976.2	977.2	977.2	977.2
10°	953.0	953.0	955.1	955.1
12.5°	935.0	933.9	933.9	931.9
15°	923.9	921.9	922.9	919.9
17.5°	915.9	914.8	914.8	912.8
20°	912.8	910.8	909.8	907.8
22.5°	910.8	909.8	907.8	905.8
25°	915.9	910.8	909.8	907.8
27.5°	920.9	915.9	911.8	910.8
30°	925.9	916.9	911.8	909.8
32.5°	924.9	912.8	905.8	902.8
35°	913.8	898.8	889.7	886.7
37.5°	892.7	875.6	861.6	856.5
40°	862.6	840.5	827.4	820.3
42.5°	826.4	801.2	790.2	784.2
45°	767.1	747.0	733.9	728.9
47.5°	700.7	673.6	661.5	656.5
50°	615.3	593.1	583.1	576.1
52.5°	524.8	504.7	495.6	491.6
55°	437.3	427.3	413.2	410.2
57.5°	354.9	351.9	341.8	340.8
60°	288.5	283.5	276.5	276.5
62.5°	227.2	222.2	219.2	219.2
65°	174.9	173.9	171.9	170.9
67.5°	134.7	137.7	138.7	136.7
70°	112.6	113.6	113.6	113.6
72.5°	97.5	97.5	97.5	96.5
75°	88.5	88.5	86.5	85.5
77.5°	81.4	80.4	81.4	80.4
80°	71.4	70.4	68.4	66.4
82.5°	59.3	58.3	53.3	53.3
85°	46.2	43.2	39.2	35.2
87.5°	26.1	23.1	17.1	12.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)