

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: P141935

Luminaire Tested: **EMM-F04-LED-E1-T3**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141935
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: EMM-F04-LED-E1-T3
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9695.8 lumens
Efficiency: N/A
Efficacy: 94.9 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

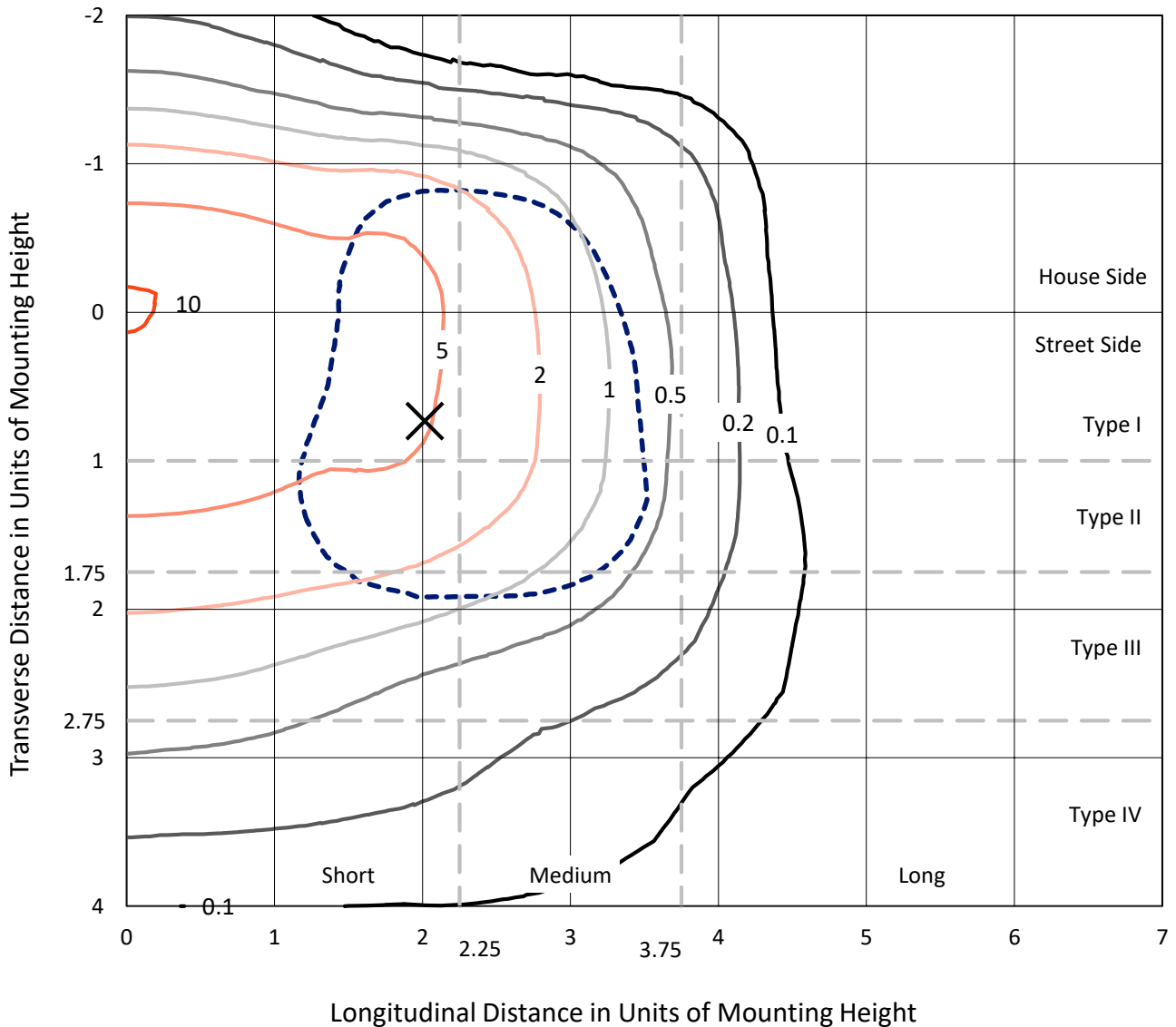
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

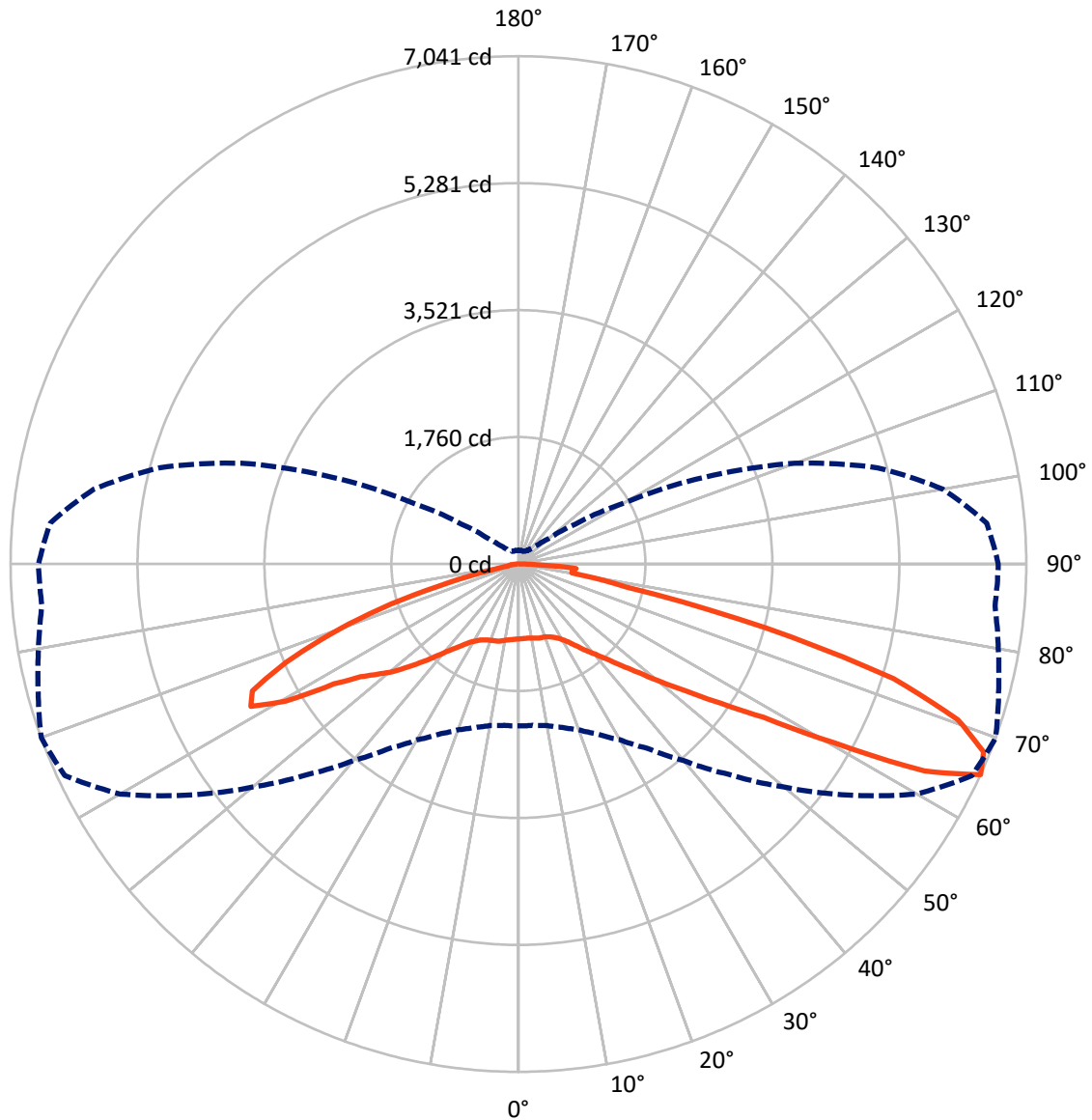
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.5 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	3273.0	0.0	3273.0
	% Fixture	33.8	0.0	33.8
Street Side	Lumens	6422.8	0.0	6422.8
	% Fixture	66.2	0.0	66.2
Total	Lumens	9695.8	0.0	9695.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	1.0
10°-20°	296.2	3.1
20°-30°	509.3	5.3
30°-40°	816.4	8.4
40°-50°	1336.6	13.8
50°-60°	2092.1	21.6
60°-70°	2940.1	30.3
70°-80°	1391.4	14.4
80°-90°	213.8	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°	9695.8	100.0
0°-180°	9695.8	100.0

Coefficient of Utilization



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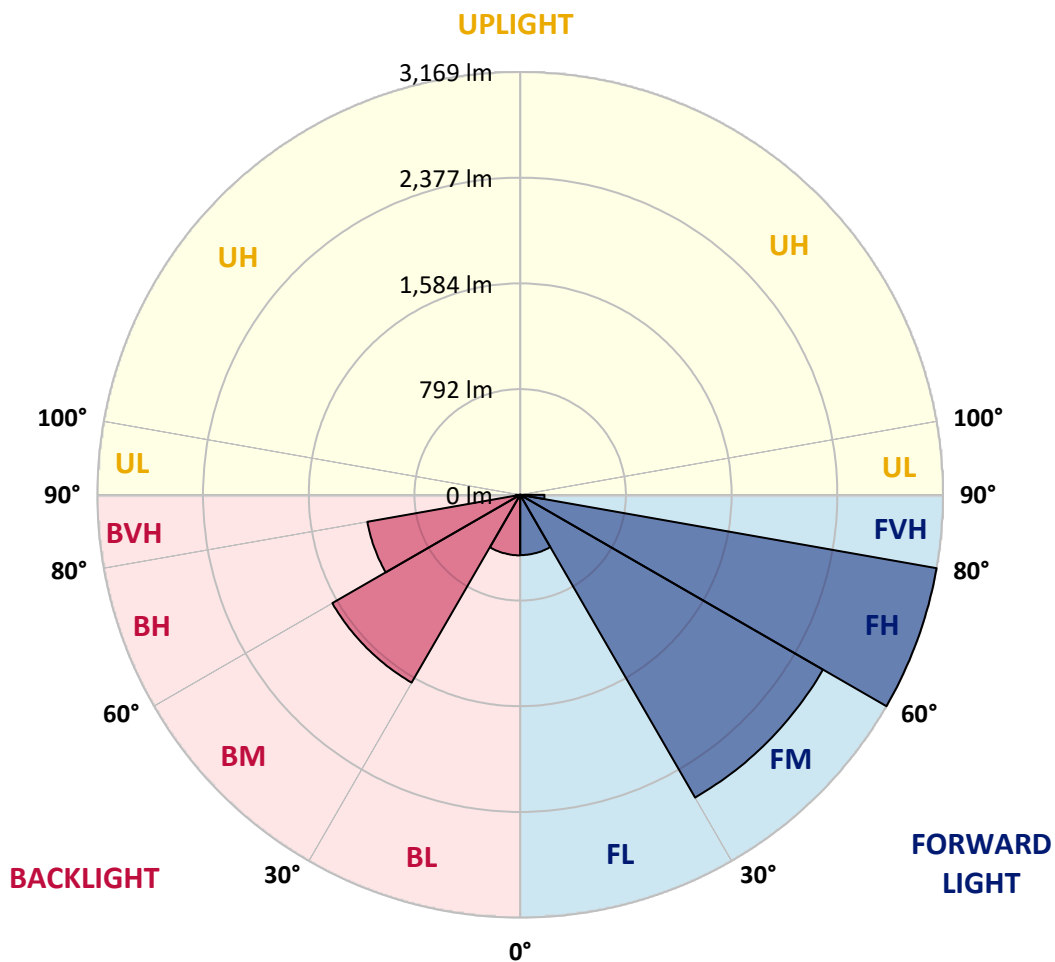
CATALOG NUMBER: EMM-F04-LED-E1-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	451.7	4.7			
FM	(30°-60°)	2620.1	27.0			
FH	(60°-80°)	3168.8	32.7			G2/5000
FVH	(80°-90°)	182.2	1.9			G2/225
BL	(0°-30°)	453.8	4.7	B1/500		
BM	(30°-60°)	1625.0	16.8	B2/2500		
BH	(60°-80°)	1162.6	12.0	B3/2500		G3/2500
BVH	(80°-90°)	31.6	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°	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1
2.5°	1033.6	1034.7	1034.7	1032.5	1032.5	1033.6	1033.6	1034.7	1034.7	1034.7	1035.8
5°	1033.6	1034.7	1034.7	1033.6	1032.5	1034.7	1033.6	1034.7	1034.7	1034.7	1034.7
7.5°	1031.4	1032.5	1032.5	1031.4	1032.5	1033.6	1033.6	1035.8	1036.9	1036.9	1038.0
10°	1020.3	1021.4	1022.6	1022.6	1024.8	1028.1	1029.2	1033.6	1034.7	1038.0	1040.2
12.5°	1000.5	1000.5	1002.7	1004.9	1008.2	1014.8	1018.1	1024.8	1030.3	1034.7	1042.4
15°	982.9	982.9	985.1	986.2	992.8	997.2	1003.8	1011.5	1021.4	1030.3	1042.4
17.5°	991.7	991.7	990.6	989.5	990.6	990.6	996.1	1003.8	1012.6	1024.8	1040.2
20°	1025.9	1024.8	1020.3	1018.1	1017.0	1012.6	1009.3	1008.2	1012.6	1021.4	1036.9
22.5°	1055.6	1053.4	1052.3	1050.1	1053.4	1051.2	1046.8	1041.3	1034.7	1031.4	1040.2
25°	1073.2	1074.3	1074.3	1074.3	1080.9	1083.1	1085.3	1078.7	1071.0	1060.0	1061.1
27.5°	1097.4	1098.5	1096.3	1100.7	1108.4	1113.9	1119.4	1123.8	1119.4	1112.8	1105.1
30°	1149.1	1149.1	1145.8	1149.1	1155.7	1161.2	1168.9	1176.6	1176.6	1170.0	1162.3
32.5°	1203.1	1204.2	1204.2	1206.4	1216.3	1220.7	1231.7	1239.4	1244.9	1240.5	1244.9
35°	1268.0	1266.9	1270.2	1271.3	1286.7	1292.2	1314.2	1319.7	1328.5	1330.7	1334.0
37.5°	1375.9	1378.1	1371.5	1367.1	1380.3	1380.3	1408.9	1424.3	1422.1	1437.5	1448.5
40°	1549.8	1539.9	1536.6	1534.4	1542.1	1541.0	1539.9	1560.8	1570.7	1572.9	1578.4
42.5°	1742.4	1745.7	1742.4	1750.1	1750.1	1744.6	1740.2	1736.9	1755.6	1767.7	1769.9
45°	1968.1	1972.5	1965.9	1960.3	1974.7	1982.4	1982.4	1991.2	2006.6	2012.1	2008.8
47.5°	2148.6	2160.7	2155.2	2162.9	2186.0	2212.4	2247.6	2270.7	2287.3	2302.7	2326.9
50°	2311.5	2317.0	2330.2	2355.5	2389.6	2431.4	2488.7	2545.9	2578.9	2617.5	2646.1
52.5°	2410.5	2427.0	2446.9	2488.7	2545.9	2604.3	2692.3	2785.9	2869.5	2912.5	2946.6
55°	2470.0	2482.1	2508.5	2565.7	2646.1	2733.0	2843.1	2971.9	3083.1	3177.7	3251.5
57.5°	2467.8	2477.7	2514.0	2576.7	2672.5	2781.5	2919.1	3079.8	3243.8	3401.2	3539.9
60°	2420.4	2429.2	2465.6	2532.7	2637.3	2767.2	2932.3	3129.3	3351.6	3588.3	3831.5
62.5°	2347.8	2354.4	2386.3	2453.5	2559.1	2697.8	2891.5	3150.2	3466.1	3839.2	4311.4
65°	2245.4	2245.4	2275.1	2344.5	2445.8	2601.0	2814.5	3118.3	3555.3	4123.2	4810.1
67.5°	2094.6	2094.6	2118.8	2176.1	2255.3	2363.2	2576.7	2892.6	3353.8	4034.1	4837.6
70°	1809.6	1814.0	1814.0	1849.2	1884.4	1932.8	2034.1	2276.2	2708.8	3373.6	4163.9
72.5°	1326.3	1246.0	1308.7	1366.0	1405.6	1432.0	1490.3	1566.3	1784.2	2282.9	2998.3
75°	835.4	856.3	903.7	968.6	1066.6	1167.8	1279.0	1326.3	1306.5	1366.0	1847.0
77.5°	506.3	488.7	534.9	631.8	741.9	879.5	1087.5	1268.0	1371.5	1364.9	1307.6
80°	219.0	213.5	244.4	290.6	344.5	468.9	659.3	907.0	1182.2	1341.8	1317.5
82.5°	78.1	79.3	100.2	118.9	143.1	183.8	260.9	417.2	661.5	942.2	1164.5
85°	23.1	25.3	35.2	49.5	56.1	63.8	88.1	131.0	223.4	356.6	634.0
87.5°	6.6	7.7	9.9	17.6	16.5	15.4	17.6	27.5	20.9	17.6	88.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1
2.5°	1034.7	1034.7	1034.7	1035.8	1034.7	1034.7	1035.8	1035.8	1036.9	1038.0	1040.2
5°	1033.6	1033.6	1034.7	1034.7	1034.7	1035.8	1036.9	1038.0	1040.2	1043.5	1046.8
7.5°	1036.9	1036.9	1035.8	1036.9	1036.9	1038.0	1040.2	1041.3	1045.7	1049.0	1054.5
10°	1040.2	1040.2	1041.3	1042.4	1042.4	1044.6	1047.9	1049.0	1053.4	1060.0	1065.5
12.5°	1044.6	1047.9	1052.3	1054.5	1056.7	1058.9	1062.2	1064.4	1069.9	1078.7	1085.3
15°	1047.9	1055.6	1060.0	1065.5	1068.8	1069.9	1073.2	1077.6	1083.1	1091.9	1099.6
17.5°	1047.9	1057.8	1064.4	1069.9	1075.4	1078.7	1082.0	1086.4	1094.1	1102.9	1110.6
20°	1046.8	1061.1	1069.9	1078.7	1088.6	1091.9	1097.4	1101.8	1110.6	1121.6	1127.1
22.5°	1052.3	1068.8	1080.9	1096.3	1107.3	1116.1	1122.7	1130.4	1137.0	1144.7	1146.9
25°	1068.8	1085.3	1105.1	1123.8	1139.2	1152.4	1161.2	1167.8	1175.5	1178.8	1174.4
27.5°	1096.3	1108.4	1135.9	1163.4	1187.7	1204.2	1214.1	1222.9	1225.1	1231.7	1215.2
30°	1145.8	1151.3	1180.0	1219.6	1247.1	1274.6	1287.8	1296.6	1297.7	1293.3	1264.7
32.5°	1227.3	1217.4	1242.7	1295.5	1337.4	1360.5	1381.4	1386.9	1383.6	1369.3	1323.0
35°	1326.3	1310.9	1323.0	1400.1	1446.3	1480.4	1500.3	1505.8	1498.1	1472.7	1408.9
37.5°	1448.5	1443.0	1448.5	1522.3	1602.6	1634.5	1643.3	1649.9	1631.2	1585.0	1501.4
40°	1583.9	1585.0	1578.4	1645.5	1746.8	1793.0	1814.0	1799.6	1776.5	1710.5	1618.0
42.5°	1771.0	1764.4	1741.3	1801.8	1931.7	1979.1	1997.8	1986.8	1963.6	1880.0	1772.1
45°	2018.7	1996.7	1974.7	2006.6	2132.1	2193.7	2221.2	2213.5	2172.8	2071.5	1970.3
47.5°	2321.4	2298.3	2257.5	2252.0	2378.6	2451.3	2461.2	2449.1	2418.2	2317.0	2192.6
50°	2639.5	2632.9	2614.2	2570.1	2683.5	2756.2	2749.5	2740.7	2706.6	2577.8	2450.2
52.5°	2968.6	2981.8	2969.7	2938.9	3059.9	3089.7	3091.9	3065.4	3025.8	2906.9	2733.0
55°	3314.2	3363.7	3382.5	3406.7	3502.4	3498.0	3472.7	3410.0	3419.9	3284.5	3043.4
57.5°	3680.7	3832.6	3952.6	4006.5	4097.9	4124.3	4060.5	4081.4	4072.6	3932.8	3553.1
60°	4163.9	4527.2	4839.8	5032.4	5155.7	5108.3	5197.5	5201.9	5352.7	5045.6	4453.4
62.5°	4934.4	5601.5	6156.2	6322.4	6354.3	6343.3	6237.7	6343.3	6314.7	5940.5	5173.3
65°	5582.7	6376.4	6939.9	7041.2	6892.6	6756.1	6632.8	6653.7	6517.2	5975.7	5152.4
67.5°	5670.8	6461.1	6983.9	6955.3	6630.6	6377.5	6172.7	6012.0	5733.5	5243.7	4526.1
70°	4974.1	5811.7	6485.3	6463.3	6012.0	5674.1	5341.7	5099.5	4815.6	4436.9	3757.8
72.5°	3869.0	4615.2	5267.9	5437.5	4992.8	4619.6	4314.7	4006.5	3713.8	3353.8	2925.7
75°	2634.0	3195.3	3499.1	3545.4	3138.1	2858.5	2740.7	2488.7	2178.3	2101.2	1784.2
77.5°	1530.0	1745.7	1653.3	1530.0	1231.7	904.8	691.2	591.1	593.3	681.3	652.7
80°	1243.8	1184.4	934.5	749.6	509.6	259.8	173.9	149.7	150.8	175.0	169.5
82.5°	1282.3	1316.4	1082.0	757.3	521.7	275.2	132.1	98.0	114.5	124.4	122.2
85°	949.9	1244.9	1116.1	803.5	560.3	292.8	85.9	53.9	75.9	92.5	99.1
87.5°	266.4	418.3	324.7	214.6	156.3	52.8	34.1	28.6	35.2	48.4	48.4
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1	1039.1
2.5°	1041.3	1045.7	1044.6	1046.8	1047.9	1051.2	1053.4	1052.3	1052.3	1054.5	1056.7
5°	1050.1	1055.6	1055.6	1058.9	1062.2	1066.6	1069.9	1067.7	1068.8	1071.0	1073.2
7.5°	1058.9	1065.5	1066.6	1069.9	1072.1	1074.3	1076.5	1073.2	1072.1	1072.1	1071.0
10°	1069.9	1076.5	1075.4	1075.4	1074.3	1072.1	1067.7	1060.0	1054.5	1051.2	1049.0
12.5°	1088.6	1093.0	1086.4	1079.8	1068.8	1061.1	1051.2	1042.4	1035.8	1030.3	1028.1
15°	1105.1	1102.9	1095.2	1083.1	1067.7	1055.6	1045.7	1033.6	1025.9	1019.2	1015.9
17.5°	1113.9	1106.2	1095.2	1084.2	1071.0	1060.0	1047.9	1033.6	1021.4	1012.6	1008.2
20°	1122.7	1110.6	1096.3	1085.3	1075.4	1066.6	1057.8	1040.2	1024.8	1011.5	1004.9
22.5°	1135.9	1119.4	1105.1	1095.2	1085.3	1076.5	1067.7	1051.2	1034.7	1017.0	1007.1
25°	1154.6	1132.6	1122.7	1112.8	1101.8	1093.0	1080.9	1065.5	1047.9	1027.0	1012.6
27.5°	1184.4	1164.5	1153.5	1143.6	1130.4	1116.1	1102.9	1082.0	1065.5	1041.3	1022.6
30°	1227.3	1206.4	1196.5	1186.6	1171.1	1152.4	1133.7	1107.3	1084.2	1056.7	1032.5
32.5°	1281.2	1270.2	1258.1	1241.6	1220.7	1197.6	1170.0	1134.8	1101.8	1067.7	1036.9
35°	1364.9	1346.2	1326.3	1309.8	1279.0	1247.1	1205.3	1153.5	1109.5	1067.7	1030.3
37.5°	1460.6	1440.8	1414.4	1384.7	1338.5	1287.8	1229.5	1164.5	1106.2	1055.6	1013.7
40°	1576.2	1550.9	1515.7	1459.5	1391.3	1315.3	1237.2	1155.7	1087.5	1029.2	980.7
42.5°	1729.2	1677.5	1609.2	1526.7	1429.8	1326.3	1227.3	1132.6	1055.6	991.7	943.3
45°	1902.0	1819.5	1709.4	1586.1	1451.8	1321.9	1205.3	1095.2	1008.2	937.8	887.2
47.5°	2088.0	1959.2	1797.4	1623.5	1454.0	1297.7	1162.3	1039.1	941.1	866.3	803.5
50°	2298.3	2085.8	1859.1	1642.2	1439.7	1254.8	1100.7	958.7	857.4	768.3	711.1
52.5°	2478.8	2197.0	1902.0	1634.5	1389.1	1180.0	999.4	861.8	743.0	663.7	607.6
55°	2692.3	2304.9	1925.1	1596.0	1307.6	1063.3	890.5	737.5	625.2	554.8	506.3
57.5°	3052.2	2487.6	1944.9	1517.9	1173.3	916.9	739.7	596.6	508.5	446.9	412.8
60°	3746.8	2842.0	2026.4	1401.2	1002.7	740.8	571.3	466.7	390.7	350.0	325.8
62.5°	4201.4	3083.1	1990.1	1221.8	783.7	554.8	418.3	336.8	292.8	263.1	252.1
65°	4085.8	2839.8	1688.5	968.6	545.9	368.7	280.7	231.1	211.3	195.9	189.3
67.5°	3509.0	2290.6	1224.0	626.3	345.6	224.5	183.8	164.0	155.2	148.6	147.5
70°	2795.8	1614.7	727.6	332.4	191.5	148.6	131.0	123.3	120.0	120.0	120.0
72.5°	2028.6	930.1	357.7	179.4	128.8	113.4	105.7	103.5	102.4	102.4	103.5
75°	1159.0	402.9	183.8	123.3	105.7	98.0	93.6	93.6	93.6	93.6	94.7
77.5°	404.0	183.8	129.9	103.5	91.4	87.0	84.8	87.0	88.1	88.1	88.1
80°	147.5	129.9	111.2	90.3	81.5	77.0	77.0	80.4	82.6	80.4	79.3
82.5°	116.7	102.4	90.3	78.1	71.5	69.3	70.4	72.6	71.5	70.4	67.1
85°	89.2	67.1	62.7	58.3	57.2	57.2	61.6	62.7	58.3	56.1	52.8
87.5°	44.0	35.2	31.9	37.4	36.3	33.0	34.1	34.1	28.6	26.4	27.5
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):

	165°	170°	175°	180°
0°	1039.1	1039.1	1039.1	1039.1
2.5°	1056.7	1057.8	1061.1	1060.0
5°	1072.1	1073.2	1075.4	1075.4
7.5°	1068.8	1069.9	1069.9	1069.9
10°	1043.5	1043.5	1045.7	1045.7
12.5°	1023.7	1022.6	1022.6	1020.3
15°	1011.5	1009.3	1010.4	1007.1
17.5°	1002.7	1001.6	1001.6	999.4
20°	999.4	997.2	996.1	993.9
22.5°	997.2	996.1	993.9	991.7
25°	1002.7	997.2	996.1	993.9
27.5°	1008.2	1002.7	998.3	997.2
30°	1013.7	1003.8	998.3	996.1
32.5°	1012.6	999.4	991.7	988.4
35°	1000.5	984.0	974.1	970.8
37.5°	977.4	958.7	943.3	937.8
40°	944.4	920.2	905.9	898.2
42.5°	904.8	877.3	865.2	858.5
45°	839.8	817.8	803.5	798.0
47.5°	767.2	737.5	724.3	718.8
50°	673.6	649.4	638.4	630.7
52.5°	574.6	552.6	542.6	538.2
55°	478.8	467.8	452.4	449.1
57.5°	388.5	385.2	374.2	373.1
60°	315.9	310.4	302.7	302.7
62.5°	248.8	243.3	240.0	240.0
65°	191.5	190.4	188.2	187.1
67.5°	147.5	150.8	151.9	149.7
70°	123.3	124.4	124.4	124.4
72.5°	106.8	106.8	106.8	105.7
75°	96.9	96.9	94.7	93.6
77.5°	89.2	88.1	89.2	88.1
80°	78.1	77.0	74.8	72.6
82.5°	64.9	63.8	58.3	58.3
85°	50.6	47.3	42.9	38.5
87.5°	28.6	25.3	18.7	13.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)