

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: P141734

Luminaire Tested: **ECM-F04-LED-E1-T2-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141734
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: ECM-F04-LED-E1-T2-7030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8891.4 lumens
Efficiency: N/A
Efficacy: 87.0 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

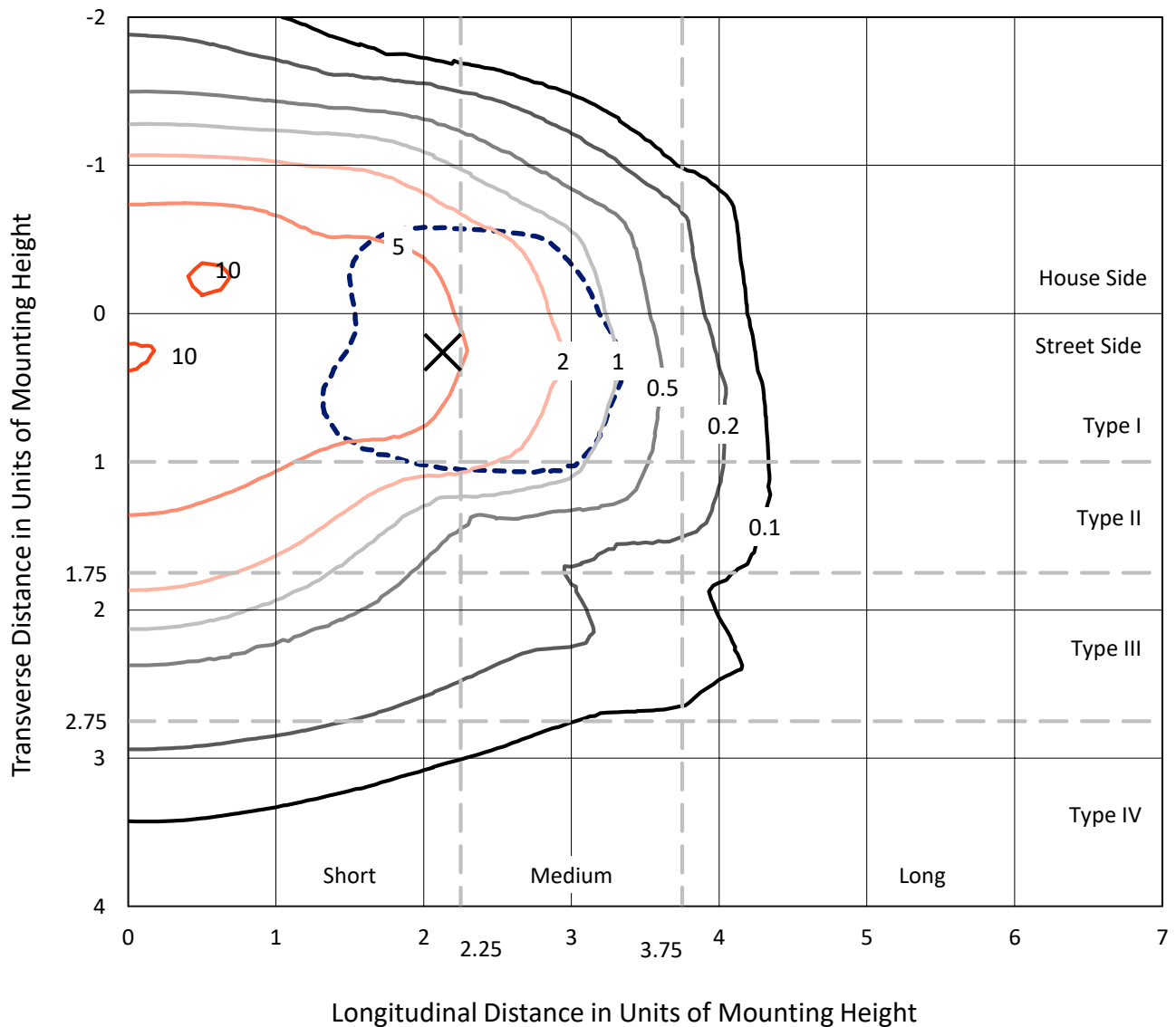


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

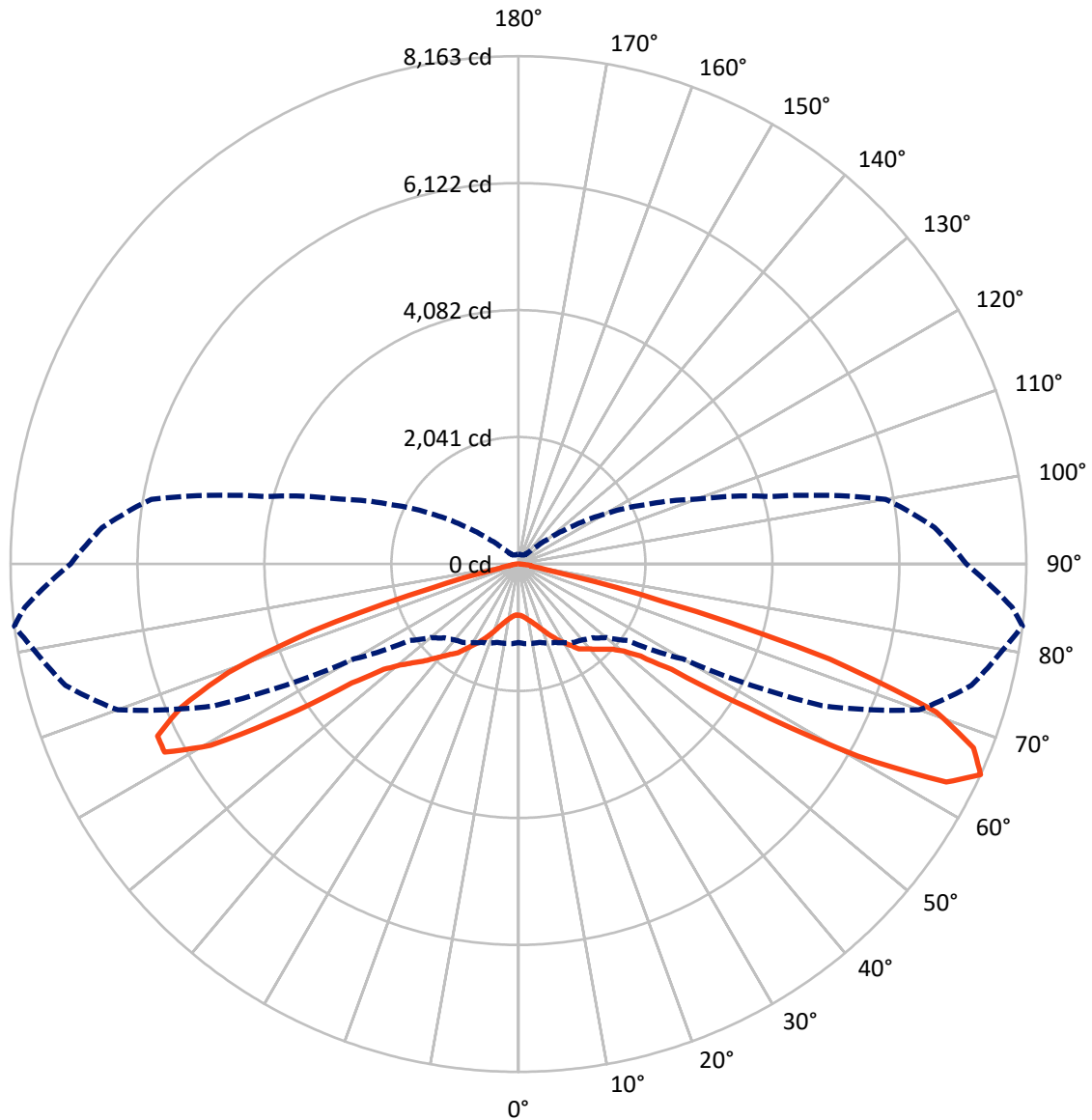


Based on 10 foot mounting height. Maximum calculated value = 10.4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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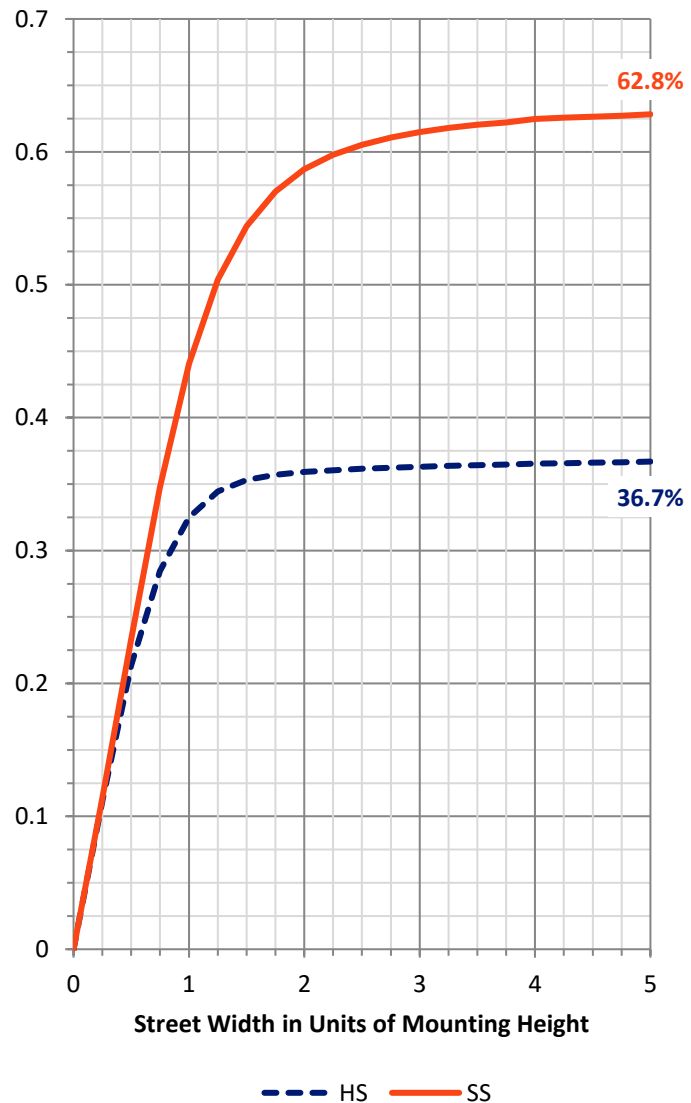
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3298.1	0.0	3298.1
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	5593.3	0.0	5593.3
	% Fixture	62.9	0.0	62.9
Total	Lumens	8891.4	0.0	8891.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	0.9
10°-20°	290.2	3.3
20°-30°	573.4	6.4
30°-40°	986.7	11.1
40°-50°	1488.6	16.7
50°-60°	2071.6	23.3
60°-70°	2391.1	26.9
70°-80°	869.0	9.8
80°-90°	138.0	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°	8891.4	100.0
0°-180°	8891.4	100.0



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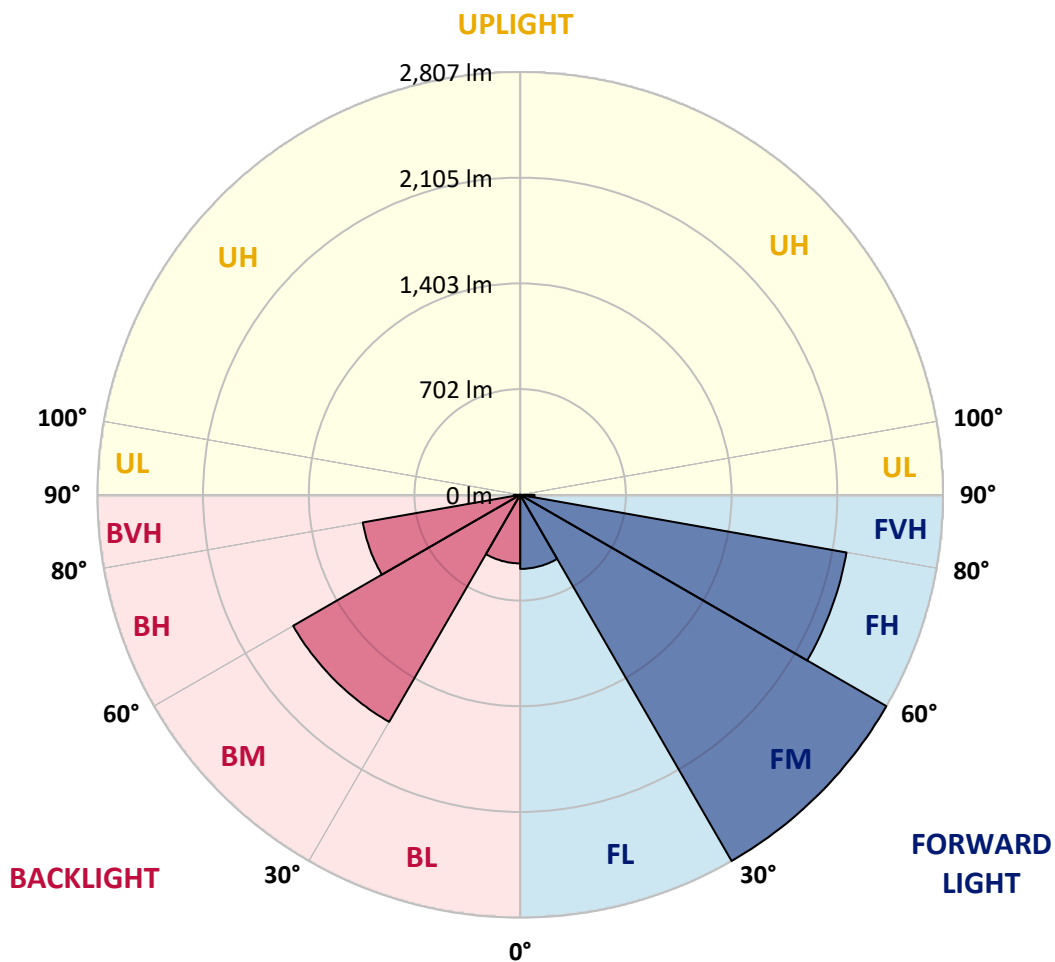
CATALOG NUMBER: ECM-F04-LED-E1-T2-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	491.5	5.5			
FM	(30°-60°)	2806.8	31.6			
FH	(60°-80°)	2199.7	24.7			G2/5000
FVH	(80°-90°)	95.3	1.1			G1/100
BL	(0°-30°)	454.8	5.1	B1/500		
BM	(30°-60°)	1740.2	19.6	B2/2500		
BH	(60°-80°)	1060.4	11.9	B3/2500		G3/2500
BVH	(80°-90°)	42.7	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4
2.5°	863.6	865.6	863.6	863.6	862.6	861.6	861.6	860.6	858.5	856.5	855.5
5°	910.8	911.8	908.8	908.8	909.8	908.8	905.8	906.8	898.8	895.7	893.7
7.5°	963.1	966.1	962.1	960.1	959.1	957.1	954.1	949.0	943.0	938.0	935.0
10°	1022.4	1025.4	1023.4	1019.4	1013.4	1010.4	1007.3	999.3	992.3	984.2	978.2
12.5°	1092.8	1093.8	1091.8	1083.7	1079.7	1070.7	1060.6	1051.6	1041.5	1029.5	1019.4
15°	1162.2	1163.2	1160.1	1152.1	1147.1	1136.0	1121.9	1109.9	1092.8	1078.7	1065.6
17.5°	1215.4	1217.4	1211.4	1205.4	1198.3	1184.3	1171.2	1157.1	1139.0	1124.0	1110.9
20°	1233.5	1236.5	1232.5	1229.5	1225.5	1218.5	1205.4	1193.3	1177.2	1166.2	1156.1
22.5°	1225.5	1228.5	1226.5	1226.5	1226.5	1225.5	1219.5	1216.4	1206.4	1201.4	1199.4
25°	1213.4	1216.4	1214.4	1216.4	1220.5	1225.5	1225.5	1231.5	1230.5	1238.6	1243.6
27.5°	1244.6	1246.6	1241.6	1241.6	1245.6	1253.6	1251.6	1263.7	1265.7	1281.8	1296.9
30°	1353.2	1353.2	1345.1	1337.1	1340.1	1338.1	1336.1	1344.1	1344.1	1359.2	1366.2
32.5°	1515.0	1504.0	1503.0	1502.0	1494.9	1499.9	1483.9	1484.9	1477.8	1479.8	1476.8
35°	1693.0	1692.0	1687.9	1685.9	1682.9	1698.0	1685.9	1696.0	1670.8	1661.8	1644.7
37.5°	1848.8	1852.8	1855.8	1870.9	1877.9	1908.1	1915.1	1920.2	1894.0	1895.0	1856.8
40°	2005.6	2010.6	2021.7	2048.9	2069.0	2097.1	2110.2	2131.3	2133.3	2137.3	2109.2
42.5°	2176.5	2168.5	2183.6	2217.7	2242.9	2271.0	2288.1	2327.3	2349.4	2360.5	2364.5
45°	2314.3	2305.2	2312.2	2332.4	2355.5	2391.7	2428.9	2487.2	2534.4	2585.7	2613.8
47.5°	2385.6	2387.6	2392.7	2404.7	2420.8	2456.0	2508.3	2582.7	2659.1	2741.5	2814.9
50°	2408.8	2409.8	2416.8	2428.9	2443.9	2481.1	2535.4	2619.9	2712.4	2828.0	2940.6
52.5°	2415.8	2411.8	2418.8	2424.8	2434.9	2466.1	2517.3	2605.8	2710.4	2850.1	3017.0
55°	2389.7	2384.6	2396.7	2404.7	2412.8	2437.9	2477.1	2558.6	2667.1	2826.0	3044.1
57.5°	2289.1	2290.1	2307.2	2328.3	2349.4	2383.6	2434.9	2512.3	2619.9	2776.7	3021.0
60°	2119.2	2116.2	2137.3	2163.5	2199.7	2253.9	2317.3	2395.7	2485.2	2615.9	2856.1
62.5°	1810.6	1822.7	1829.7	1868.9	1870.9	1948.3	1989.5	2068.0	2144.4	2244.9	2461.0
65°	1260.7	1286.8	1293.9	1303.9	1351.2	1391.4	1457.7	1540.2	1590.4	1678.9	1839.7
67.5°	785.2	804.3	805.3	831.4	872.6	918.9	970.1	1053.6	1130.0	1144.1	1224.5
70°	651.5	652.5	666.5	685.6	717.8	765.1	815.3	873.6	943.0	987.2	979.2
72.5°	539.9	545.9	555.9	575.0	610.2	652.5	716.8	791.2	877.6	966.1	1044.5
75°	361.9	372.0	375.0	384.0	401.1	439.3	487.6	558.0	669.5	801.2	968.1
77.5°	192.0	194.0	201.1	208.1	217.2	240.3	271.4	307.6	381.0	494.6	690.7
80°	97.5	101.5	106.6	111.6	110.6	116.6	125.7	141.8	166.9	217.2	312.7
82.5°	35.2	45.2	59.3	66.4	66.4	68.4	71.4	74.4	72.4	80.4	100.5
85°	16.1	18.1	23.1	36.2	37.2	37.2	37.2	39.2	37.2	33.2	39.2
87.5°	0.0	3.0	3.0	9.0	10.1	9.0	10.1	13.1	10.1	8.0	7.0
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°	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4
2.5°	850.5	848.5	843.5	841.5	835.4	831.4	829.4	827.4	824.4	820.3	817.3
5°	887.7	881.7	874.6	870.6	862.6	854.5	851.5	847.5	840.5	834.4	827.4
7.5°	926.9	919.9	911.8	902.8	894.7	885.7	881.7	877.6	867.6	859.6	849.5
10°	969.1	959.1	950.0	942.0	935.0	924.9	917.9	914.8	905.8	893.7	883.7
12.5°	1009.3	998.3	989.2	979.2	972.1	964.1	957.1	954.1	947.0	936.0	927.9
15°	1051.6	1040.5	1030.5	1023.4	1015.4	1010.4	1006.3	1001.3	998.3	989.2	985.2
17.5°	1096.8	1086.8	1077.7	1071.7	1068.7	1067.7	1066.6	1064.6	1061.6	1055.6	1052.6
20°	1148.1	1139.0	1136.0	1135.0	1136.0	1137.0	1139.0	1139.0	1140.0	1136.0	1135.0
22.5°	1197.3	1197.3	1202.4	1208.4	1214.4	1218.5	1221.5	1217.4	1218.5	1224.5	1229.5
25°	1251.6	1260.7	1273.7	1283.8	1292.8	1299.9	1303.9	1305.9	1307.9	1317.0	1326.0
27.5°	1309.9	1324.0	1343.1	1356.2	1373.3	1384.3	1392.4	1391.4	1394.4	1406.4	1422.5
30°	1382.3	1396.4	1416.5	1434.6	1457.7	1473.8	1476.8	1474.8	1478.8	1489.9	1522.1
32.5°	1483.9	1486.9	1499.9	1518.0	1543.2	1559.3	1562.3	1567.3	1576.3	1596.5	1635.7
35°	1626.6	1613.5	1612.5	1620.6	1644.7	1675.9	1678.9	1681.9	1685.9	1712.1	1764.3
37.5°	1819.6	1766.4	1734.2	1709.1	1712.1	1723.1	1729.2	1731.2	1741.2	1781.4	1869.9
40°	2061.9	1962.4	1891.0	1819.6	1793.5	1795.5	1797.5	1795.5	1815.6	1877.9	1993.6
42.5°	2327.3	2239.9	2115.2	1967.4	1893.0	1868.9	1871.9	1873.9	1905.1	1995.6	2124.3
45°	2608.8	2552.5	2407.8	2176.5	2016.7	1955.4	1953.3	1957.4	2008.6	2136.3	2272.0
47.5°	2856.1	2870.2	2763.6	2492.2	2217.7	2061.9	2048.9	2055.9	2139.3	2276.1	2413.8
50°	3052.2	3144.7	3136.6	2921.5	2543.5	2245.9	2199.7	2209.7	2308.2	2450.0	2573.6
52.5°	3199.9	3387.9	3508.6	3423.1	3094.4	2579.7	2460.0	2442.9	2566.6	2716.4	2792.8
55°	3298.5	3603.1	3919.8	4067.5	3933.8	3300.5	2987.8	2950.6	3084.3	3275.3	3308.5
57.5°	3363.8	3864.5	4546.1	5117.1	5299.1	4756.2	4364.1	4208.3	4305.8	4507.9	4464.6
60°	3255.2	3968.0	5302.1	6325.5	6843.2	6708.5	6272.2	6037.0	5855.0	5839.9	5599.7
62.5°	2839.0	3721.7	5608.7	6900.5	7628.4	7796.3	7718.9	7440.4	6936.7	6657.3	6114.4
65°	2141.3	3049.1	5390.6	6856.3	7538.9	7910.9	8163.2	7963.2	7199.1	6715.6	5993.7
67.5°	1368.2	1968.4	4483.7	6324.5	6965.9	7384.1	7888.8	7797.3	6821.1	6203.9	5418.7
70°	999.3	1090.8	3042.1	5353.4	6059.1	6427.0	7120.7	7080.5	5981.7	5288.0	4509.9
72.5°	1151.1	813.3	1667.8	3999.2	4545.1	4834.6	5231.7	5134.2	4179.1	3697.6	3146.7
75°	1297.9	909.8	940.0	2372.6	2539.5	2336.4	2390.7	2076.0	1619.6	1435.6	1414.5
77.5°	1092.8	1141.0	852.5	1019.4	939.0	676.6	506.7	397.1	310.6	333.8	371.0
80°	635.4	1282.8	1128.0	530.8	595.2	473.5	211.1	174.9	144.8	146.8	148.8
82.5°	196.0	801.2	1587.4	648.4	589.1	667.5	194.0	118.6	95.5	107.6	121.6
85°	65.3	335.8	1272.7	680.6	381.0	355.9	85.5	58.3	48.3	67.4	95.5
87.5°	16.1	81.4	236.3	89.5	56.3	34.2	29.2	21.1	23.1	42.2	59.3
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°	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4	823.4
2.5°	815.3	812.3	809.3	807.3	804.3	804.3	801.2	801.2	797.2	795.2	795.2
5°	821.4	815.3	810.3	805.3	800.2	798.2	794.2	792.2	788.2	785.2	783.1
7.5°	841.5	833.4	827.4	821.4	815.3	812.3	808.3	804.3	803.3	801.2	799.2
10°	875.6	864.6	859.6	855.5	847.5	845.5	841.5	838.4	835.4	832.4	833.4
12.5°	919.9	911.8	909.8	901.8	899.8	896.7	890.7	888.7	880.7	874.6	871.6
15°	976.2	973.2	973.2	969.1	963.1	958.1	949.0	944.0	929.9	920.9	910.8
17.5°	1050.6	1047.5	1048.6	1044.5	1037.5	1028.4	1018.4	1003.3	982.2	966.1	946.0
20°	1137.0	1136.0	1138.0	1135.0	1126.0	1113.9	1089.8	1067.7	1038.5	1009.3	987.2
22.5°	1233.5	1238.6	1240.6	1232.5	1222.5	1197.3	1171.2	1139.0	1099.8	1061.6	1030.5
25°	1336.1	1348.1	1355.2	1344.1	1332.1	1299.9	1260.7	1217.4	1162.2	1115.9	1074.7
27.5°	1436.6	1461.7	1471.8	1465.8	1446.7	1401.4	1349.1	1291.8	1224.5	1163.2	1109.9
30°	1556.2	1589.4	1607.5	1598.5	1561.3	1502.0	1438.6	1361.2	1275.8	1202.4	1138.0
32.5°	1681.9	1723.1	1736.2	1717.1	1662.8	1588.4	1506.0	1411.5	1315.0	1230.5	1158.1
35°	1821.6	1859.9	1862.9	1825.7	1754.3	1659.8	1557.2	1443.6	1333.1	1238.6	1159.1
37.5°	1943.3	1981.5	1978.5	1923.2	1836.7	1719.1	1588.4	1450.7	1322.0	1214.4	1128.0
40°	2071.0	2113.2	2090.1	2018.7	1907.1	1757.3	1592.4	1426.6	1279.8	1162.2	1067.7
42.5°	2205.7	2223.8	2182.6	2093.1	1949.3	1756.3	1558.3	1369.3	1213.4	1082.7	983.2
45°	2329.3	2315.3	2255.9	2136.3	1946.3	1713.1	1490.9	1297.9	1125.0	994.3	896.7
47.5°	2439.9	2395.7	2304.2	2136.3	1899.1	1636.7	1404.4	1205.4	1033.5	901.8	805.3
50°	2559.6	2467.1	2324.3	2099.1	1813.6	1544.2	1313.0	1112.9	936.0	801.2	695.7
52.5°	2718.4	2552.5	2324.3	2031.8	1725.1	1450.7	1216.4	1005.3	822.4	681.6	577.1
55°	3090.4	2731.5	2364.5	1994.6	1646.7	1352.2	1101.8	866.6	688.6	553.9	467.5
57.5°	3821.2	3123.5	2566.6	2062.9	1617.6	1245.6	954.1	712.8	543.9	431.3	358.9
60°	4429.5	3440.2	2730.5	2115.2	1570.3	1107.9	773.1	545.9	404.1	318.7	271.4
62.5°	4586.3	3444.2	2663.1	1979.5	1379.3	901.8	570.0	376.0	277.5	231.2	206.1
65°	4194.2	3046.1	2265.0	1614.6	1050.6	626.3	356.9	228.2	185.0	168.9	158.8
67.5°	3525.7	2426.9	1678.9	1126.0	662.5	344.8	200.1	156.8	140.7	135.7	130.7
70°	2704.3	1705.0	1092.8	659.5	346.8	178.9	142.8	128.7	121.6	118.6	114.6
72.5°	1666.8	1007.3	594.1	316.7	172.9	136.7	127.7	122.6	113.6	109.6	105.6
75°	707.7	432.3	246.3	160.9	138.7	130.7	123.7	117.6	110.6	104.6	100.5
77.5°	238.3	164.9	145.8	140.7	138.7	130.7	121.6	113.6	106.6	99.5	95.5
80°	144.8	131.7	134.7	133.7	138.7	129.7	117.6	108.6	100.5	93.5	88.5
82.5°	125.7	124.7	127.7	130.7	137.7	124.7	110.6	97.5	87.5	80.4	75.4
85°	108.6	110.6	112.6	114.6	118.6	105.6	89.5	77.4	69.4	60.3	56.3
87.5°	72.4	78.4	82.4	83.4	80.4	50.3	29.2	34.2	35.2	30.2	27.1
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):

	160°	165°	170°	175°	180°
0°	823.4	823.4	823.4	823.4	823.4
2.5°	792.2	791.2	794.2	791.2	791.2
5°	782.1	781.1	781.1	781.1	779.1
7.5°	798.2	797.2	796.2	796.2	795.2
10°	829.4	828.4	828.4	827.4	827.4
12.5°	866.6	862.6	861.6	859.6	860.6
15°	902.8	891.7	888.7	885.7	882.7
17.5°	930.9	917.9	910.8	904.8	904.8
20°	966.1	949.0	940.0	930.9	930.9
22.5°	1006.3	983.2	971.1	961.1	957.1
25°	1039.5	1010.4	993.3	981.2	978.2
27.5°	1064.6	1027.4	1005.3	991.3	987.2
30°	1084.7	1042.5	1016.4	1001.3	995.3
32.5°	1097.8	1051.6	1023.4	1008.3	1002.3
35°	1090.8	1041.5	1007.3	989.2	985.2
37.5°	1055.6	1003.3	963.1	944.0	937.0
40°	991.3	935.0	892.7	869.6	865.6
42.5°	906.8	850.5	810.3	786.2	775.1
45°	816.3	758.0	719.8	697.7	684.6
47.5°	718.8	661.5	622.3	600.2	591.1
50°	616.3	561.0	527.8	503.7	494.6
52.5°	509.7	460.4	427.3	407.2	397.1
55°	408.2	367.9	339.8	326.7	319.7
57.5°	318.7	292.5	276.5	268.4	263.4
60°	247.3	234.2	228.2	222.2	223.2
62.5°	193.0	190.0	188.0	185.0	186.0
65°	155.8	153.8	154.8	153.8	154.8
67.5°	127.7	128.7	130.7	130.7	131.7
70°	112.6	113.6	115.6	115.6	115.6
72.5°	104.6	106.6	108.6	107.6	107.6
75°	98.5	103.5	107.6	103.5	99.5
77.5°	92.5	104.6	115.6	106.6	95.5
80°	84.4	110.6	123.7	107.6	91.5
82.5°	80.4	106.6	108.6	93.5	80.4
85°	74.4	120.6	125.7	85.5	61.3
87.5°	38.2	72.4	83.4	57.3	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)