

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: P141733

Luminaire Tested: **ECM-F04-LED-E1-T2-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141733
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-T2-8030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (28) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8216.1 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

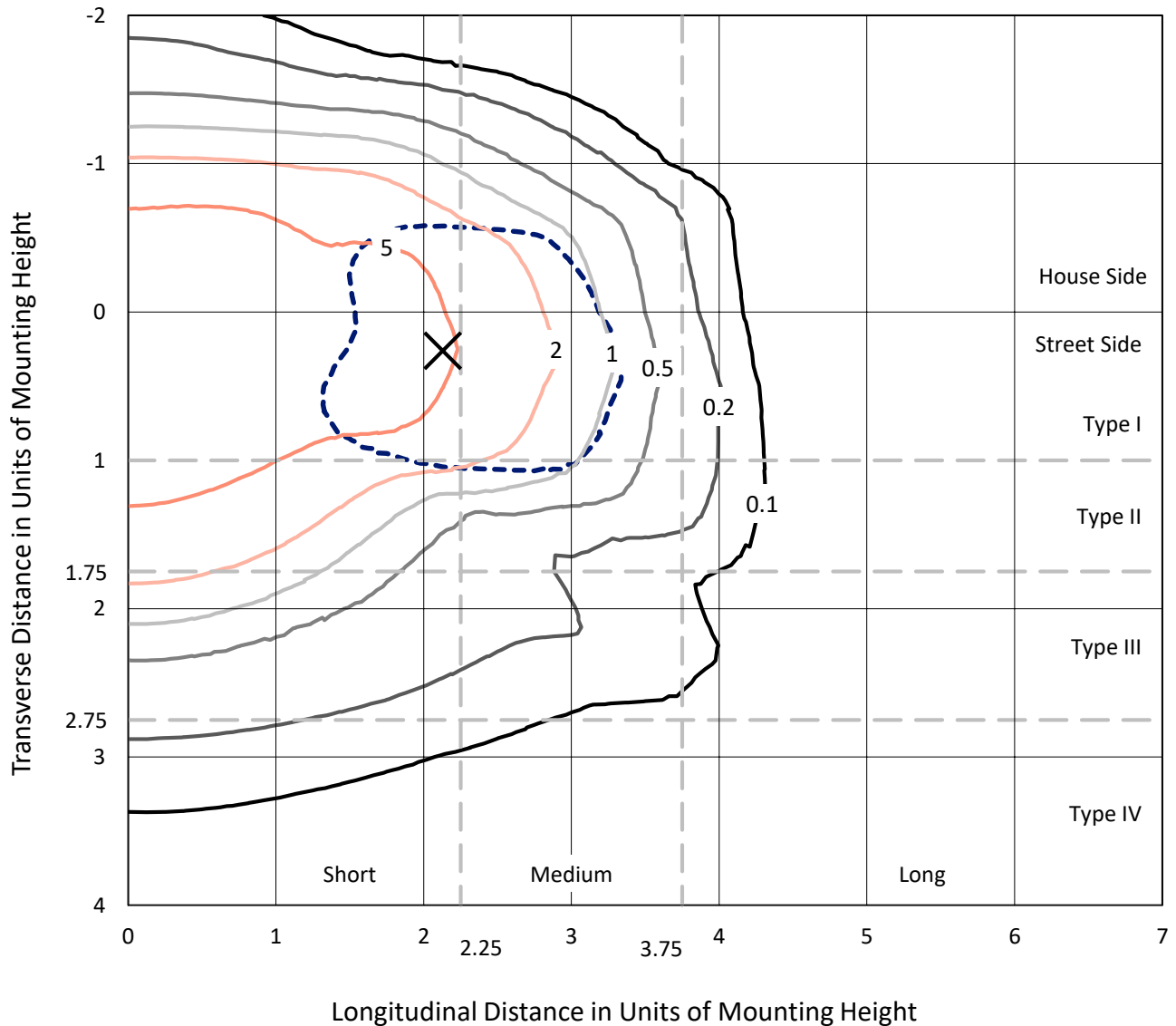
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

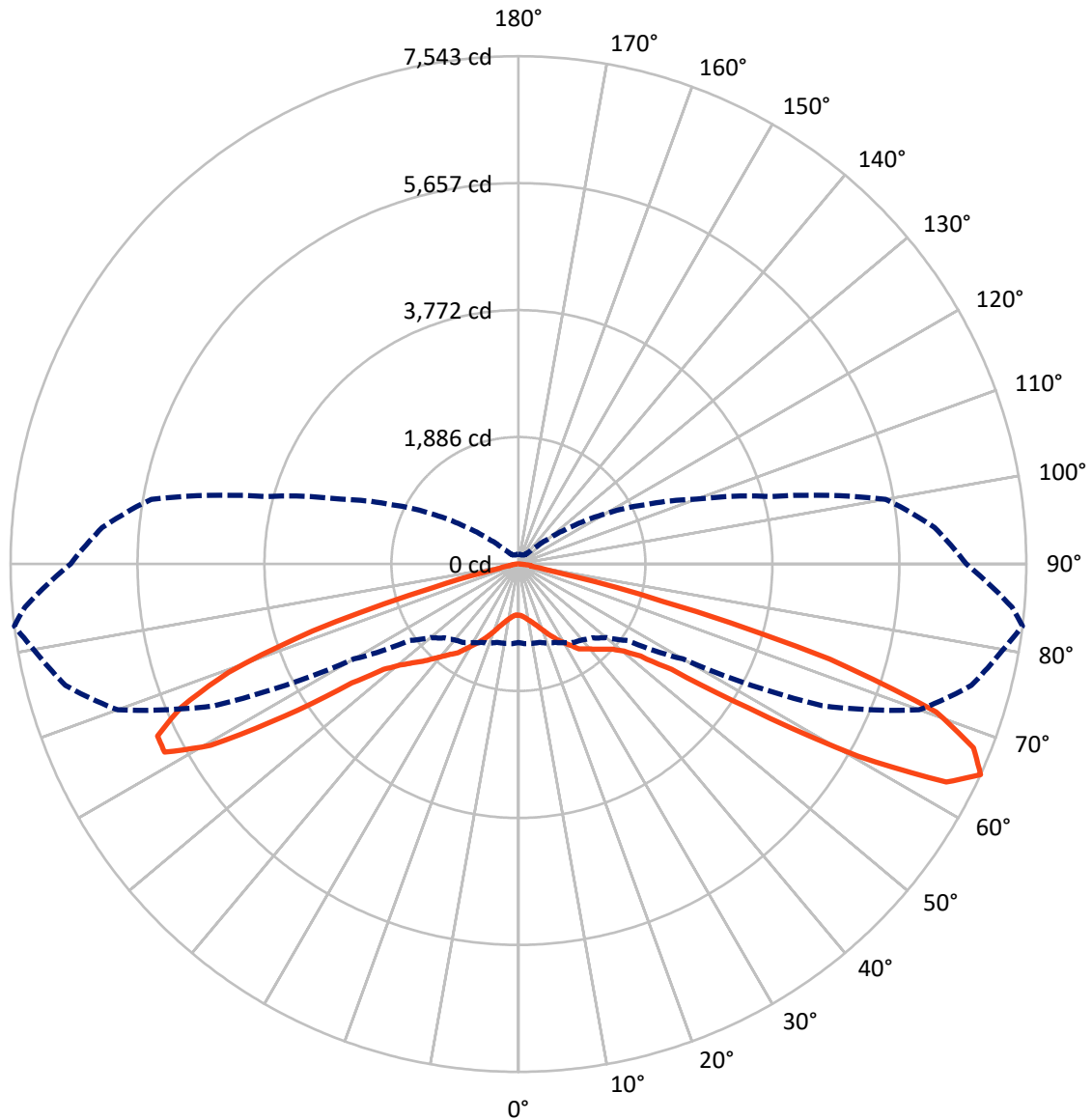
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.6 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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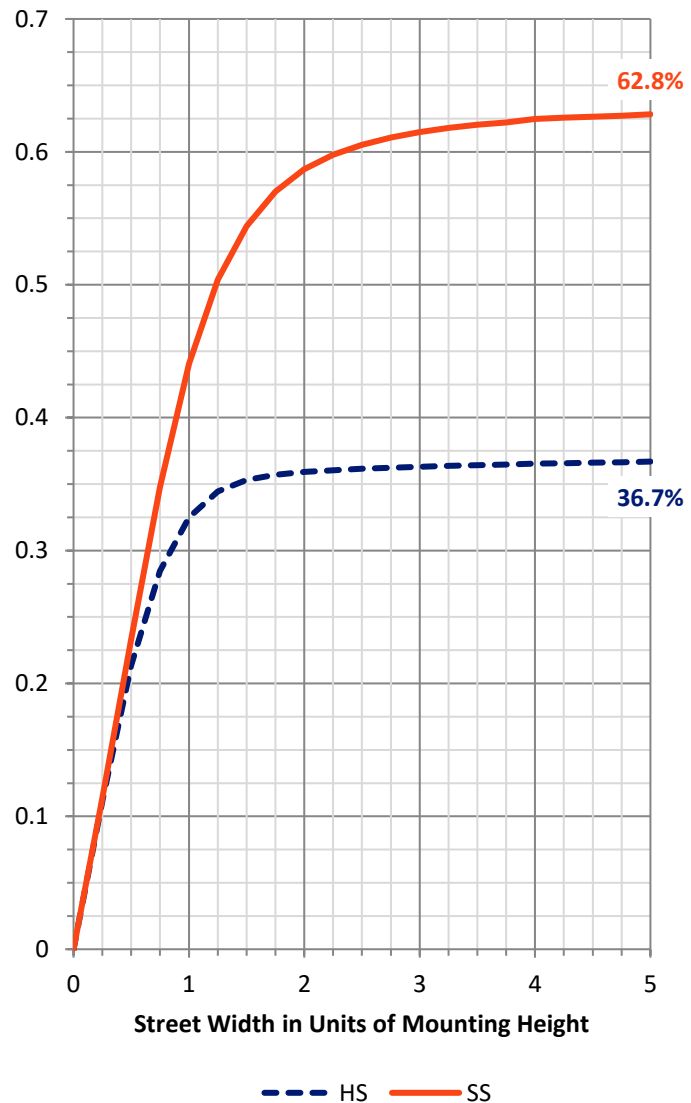
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3047.6	0.0	3047.6
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	5168.5	0.0	5168.5
	% Fixture	62.9	0.0	62.9
Total	Lumens	8216.1	0.0	8216.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	0.9
10°-20°	268.2	3.3
20°-30°	529.8	6.4
30°-40°	911.8	11.1
40°-50°	1375.6	16.7
50°-60°	1914.2	23.3
60°-70°	2209.5	26.9
70°-80°	803.0	9.8
80°-90°	127.5	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°	8216.1	100.0
0°-180°	8216.1	100.0

Coefficient of Utilization



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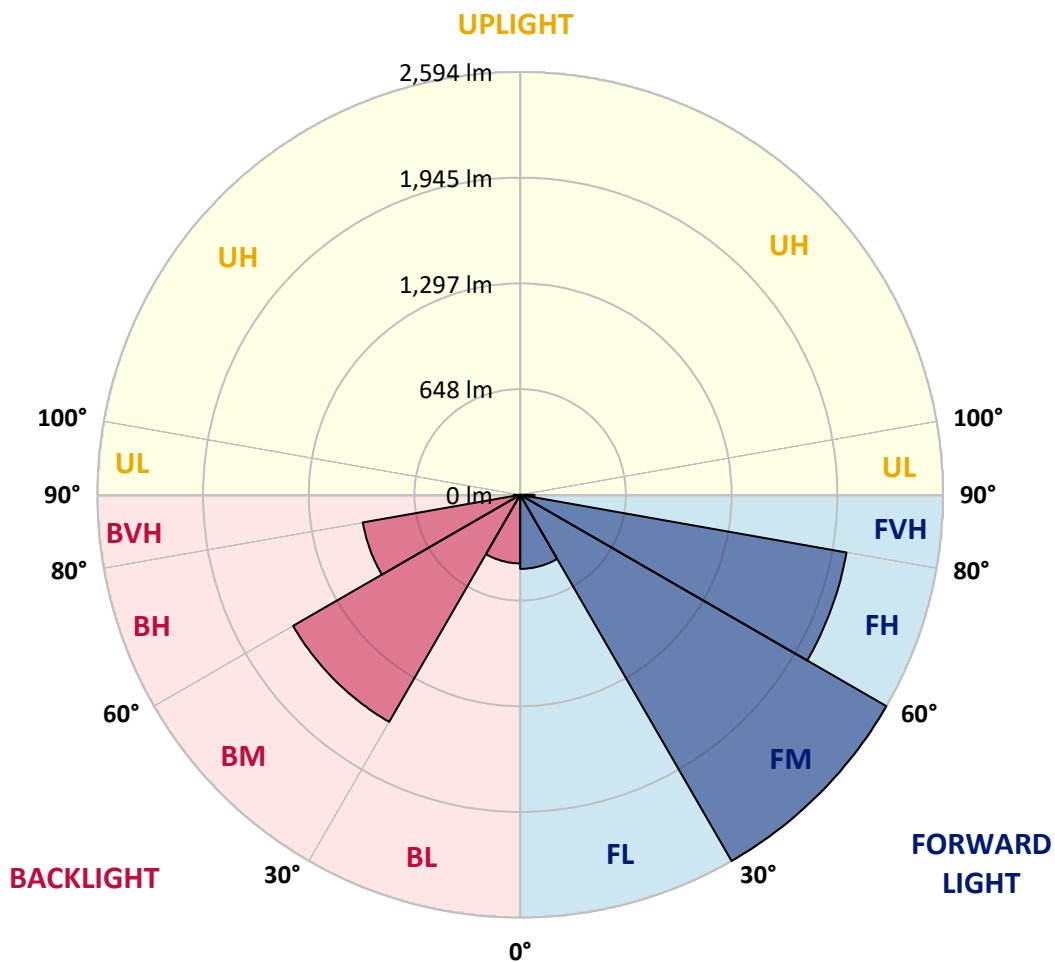
CATALOG NUMBER: ECM-F04-LED-E1-T2-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	454.2	5.5			
FM	(30°-60°)	2593.6	31.6			
FH	(60°-80°)	2032.6	24.7			G2/5000
FVH	(80°-90°)	88.1	1.1			G1/100
BL	(0°-30°)	420.3	5.1	B1/500		
BM	(30°-60°)	1608.0	19.6	B2/2500		
BH	(60°-80°)	979.9	11.9	B2/1000		G2/1000
BVH	(80°-90°)	39.4	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8
2.5°	798.0	799.9	798.0	798.0	797.1	796.1	796.1	795.2	793.3	791.5	790.6
5°	841.7	842.6	839.8	839.8	840.7	839.8	837.0	837.9	830.5	827.7	825.9
7.5°	890.0	892.8	889.0	887.2	886.2	884.4	881.6	877.0	871.4	866.7	864.0
10°	944.8	947.6	945.7	942.0	936.4	933.6	930.8	923.4	916.9	909.5	903.9
12.5°	1009.8	1010.7	1008.9	1001.4	997.7	989.4	980.1	971.7	962.4	951.3	942.0
15°	1073.9	1074.8	1072.0	1064.6	1060.0	1049.7	1036.7	1025.6	1009.8	996.8	984.7
17.5°	1123.1	1125.0	1119.4	1113.8	1107.3	1094.3	1082.3	1069.3	1052.5	1038.6	1026.5
20°	1139.9	1142.6	1138.9	1136.1	1132.4	1125.9	1113.8	1102.7	1087.8	1077.6	1068.3
22.5°	1132.4	1135.2	1133.4	1133.4	1133.4	1132.4	1126.9	1124.1	1114.8	1110.1	1108.3
25°	1121.3	1124.1	1122.2	1124.1	1127.8	1132.4	1132.4	1138.0	1137.1	1144.5	1149.1
27.5°	1150.1	1151.9	1147.3	1147.3	1151.0	1158.4	1156.6	1167.7	1169.6	1184.5	1198.4
30°	1250.4	1250.4	1243.0	1235.5	1238.3	1236.5	1234.6	1242.0	1242.0	1256.0	1262.5
32.5°	1400.0	1389.8	1388.8	1387.9	1381.4	1386.0	1371.2	1372.1	1365.6	1367.5	1364.7
35°	1564.4	1563.5	1559.8	1557.9	1555.1	1569.0	1557.9	1567.2	1544.0	1535.6	1519.8
37.5°	1708.4	1712.1	1714.9	1728.8	1735.3	1763.2	1769.7	1774.4	1750.2	1751.1	1715.8
40°	1853.3	1858.0	1868.2	1893.3	1911.8	1937.9	1949.9	1969.4	1971.3	1975.0	1949.0
42.5°	2011.2	2003.8	2017.7	2049.3	2072.6	2098.6	2114.4	2150.6	2171.0	2181.2	2185.0
45°	2138.5	2130.2	2136.7	2155.2	2176.6	2210.0	2244.4	2298.3	2342.0	2389.3	2415.3
47.5°	2204.5	2206.3	2211.0	2222.1	2237.0	2269.5	2317.8	2386.6	2457.2	2533.3	2601.1
50°	2225.8	2226.8	2233.3	2244.4	2258.4	2292.7	2342.9	2420.9	2506.4	2613.2	2717.3
52.5°	2232.3	2228.6	2235.1	2240.7	2250.0	2278.8	2326.2	2407.9	2504.5	2633.7	2787.9
55°	2208.2	2203.5	2214.7	2222.1	2229.6	2252.8	2289.0	2364.3	2464.6	2611.4	2813.0
57.5°	2115.3	2116.2	2132.0	2151.5	2171.0	2202.6	2250.0	2321.5	2420.9	2565.8	2791.6
60°	1958.3	1955.5	1975.0	1999.2	2032.6	2082.8	2141.3	2213.8	2296.4	2417.2	2639.2
62.5°	1673.1	1684.2	1690.7	1727.0	1728.8	1800.4	1838.5	1910.9	1981.5	2074.4	2274.1
65°	1164.9	1189.1	1195.6	1204.9	1248.6	1285.7	1347.0	1423.2	1469.6	1551.4	1700.0
67.5°	725.5	743.2	744.1	768.3	806.4	849.1	896.5	973.6	1044.2	1057.2	1131.5
70°	602.0	602.9	615.9	633.6	663.3	707.0	753.4	807.3	871.4	912.3	904.8
72.5°	498.9	504.4	513.7	531.4	563.9	602.9	662.4	731.1	811.0	892.8	965.2
75°	334.4	343.7	346.5	354.9	370.7	406.0	450.6	515.6	618.7	740.4	894.6
77.5°	177.4	179.3	185.8	192.3	200.7	222.0	250.8	284.3	352.1	457.1	638.2
80°	90.1	93.8	98.5	103.1	102.2	107.8	116.1	131.0	154.2	200.7	288.9
82.5°	32.5	41.8	54.8	61.3	61.3	63.2	66.0	68.7	66.9	74.3	92.9
85°	14.9	16.7	21.4	33.4	34.4	34.4	34.4	36.2	34.4	30.7	36.2
87.5°	0.0	2.8	2.8	8.4	9.3	8.4	9.3	12.1	9.3	7.4	6.5
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):

	55°	60°	65°	70°	75°	80°	83°	85°	90°	95°	100°
0°	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8
2.5°	785.9	784.1	779.4	777.6	772.0	768.3	766.4	764.6	761.8	758.0	755.3
5°	820.3	814.7	808.2	804.5	797.1	789.6	786.8	783.1	776.6	771.1	764.6
7.5°	856.5	850.0	842.6	834.2	826.8	818.4	814.7	811.0	801.7	794.3	785.0
10°	895.5	886.2	877.9	870.5	864.0	854.7	848.2	845.4	837.0	825.9	816.6
12.5°	932.7	922.5	914.1	904.8	898.3	890.9	884.4	881.6	875.1	864.9	857.4
15°	971.7	961.5	952.2	945.7	938.3	933.6	929.9	925.3	922.5	914.1	910.4
17.5°	1013.5	1004.2	995.9	990.3	987.5	986.6	985.6	983.8	981.0	975.4	972.6
20°	1060.9	1052.5	1049.7	1048.8	1049.7	1050.7	1052.5	1052.5	1053.5	1049.7	1048.8
22.5°	1106.4	1106.4	1111.1	1116.6	1122.2	1125.9	1128.7	1125.0	1125.9	1131.5	1136.1
25°	1156.6	1164.9	1177.0	1186.3	1194.7	1201.2	1204.9	1206.7	1208.6	1217.0	1225.3
27.5°	1210.5	1223.5	1241.1	1253.2	1269.0	1279.2	1286.6	1285.7	1288.5	1299.6	1314.5
30°	1277.3	1290.4	1308.9	1325.7	1347.0	1361.9	1364.7	1362.8	1366.5	1376.7	1406.5
32.5°	1371.2	1374.0	1386.0	1402.8	1426.0	1440.8	1443.6	1448.3	1456.6	1475.2	1511.5
35°	1503.1	1491.0	1490.1	1497.5	1519.8	1548.6	1551.4	1554.2	1557.9	1582.1	1630.4
37.5°	1681.5	1632.2	1602.5	1579.3	1582.1	1592.3	1597.8	1599.7	1609.0	1646.2	1727.9
40°	1905.3	1813.4	1747.4	1681.5	1657.3	1659.2	1661.0	1659.2	1677.7	1735.3	1842.2
42.5°	2150.6	2069.8	1954.6	1818.0	1749.3	1727.0	1729.8	1731.6	1760.4	1844.0	1962.9
45°	2410.7	2358.7	2224.9	2011.2	1863.5	1806.9	1805.0	1808.7	1856.1	1974.1	2099.5
47.5°	2639.2	2652.2	2553.8	2302.9	2049.3	1905.3	1893.3	1899.8	1976.9	2103.2	2230.5
50°	2820.4	2905.9	2898.4	2699.6	2350.3	2075.3	2032.6	2041.9	2132.9	2263.9	2378.2
52.5°	2956.9	3130.7	3242.1	3163.2	2859.4	2383.8	2273.2	2257.4	2371.7	2510.1	2580.7
55°	3048.0	3329.5	3622.1	3758.7	3635.1	3049.8	2760.9	2726.6	2850.1	3026.6	3057.3
57.5°	3108.4	3571.0	4200.9	4728.5	4896.7	4395.0	4032.7	3888.7	3978.8	4165.5	4125.6
60°	3008.0	3666.7	4899.4	5845.1	6323.6	6199.1	5795.9	5578.5	5410.4	5396.4	5174.4
62.5°	2623.4	3439.1	5182.8	6376.5	7049.1	7204.2	7132.7	6875.4	6410.0	6151.7	5650.1
65°	1978.7	2817.6	4981.2	6335.6	6966.4	7310.1	7543.3	7358.5	6652.4	6205.6	5538.6
67.5°	1264.3	1818.9	4143.3	5844.2	6436.9	6823.4	7289.7	7205.2	6303.1	5732.7	5007.2
70°	923.4	1007.9	2811.1	4946.8	5599.0	5939.0	6580.0	6542.8	5527.4	4886.4	4167.4
72.5°	1063.7	751.5	1541.2	3695.5	4199.9	4467.5	4834.4	4744.3	3861.8	3416.8	2907.7
75°	1199.3	840.7	868.6	2192.4	2346.6	2159.0	2209.1	1918.3	1496.6	1326.6	1307.1
77.5°	1009.8	1054.4	787.8	942.0	867.7	625.2	468.2	366.9	287.1	308.4	342.8
80°	587.1	1185.4	1042.3	490.5	550.0	437.5	195.1	161.6	133.8	135.6	137.5
82.5°	181.2	740.4	1466.9	599.2	544.4	616.8	179.3	109.6	88.3	99.4	112.4
85°	60.4	310.3	1176.1	628.9	352.1	328.9	79.0	53.9	44.6	62.2	88.3
87.5°	14.9	75.2	218.3	82.7	52.0	31.6	26.9	19.5	21.4	39.0	54.8
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°	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8	760.8
2.5°	753.4	750.6	747.8	746.0	743.2	743.2	740.4	740.4	736.7	734.8	734.8
5°	759.0	753.4	748.8	744.1	739.5	737.6	733.9	732.0	728.3	725.5	723.7
7.5°	777.6	770.1	764.6	759.0	753.4	750.6	746.9	743.2	742.3	740.4	738.5
10°	809.1	798.9	794.3	790.6	783.1	781.3	777.6	774.8	772.0	769.2	770.1
12.5°	850.0	842.6	840.7	833.3	831.4	828.7	823.1	821.2	813.8	808.2	805.4
15°	902.0	899.3	899.3	895.5	890.0	885.3	877.0	872.3	859.3	850.9	841.7
17.5°	970.8	968.0	968.9	965.2	958.7	950.3	941.1	927.1	907.6	892.8	874.2
20°	1050.7	1049.7	1051.6	1048.8	1040.5	1029.3	1007.0	986.6	959.6	932.7	912.3
22.5°	1139.9	1144.5	1146.4	1138.9	1129.6	1106.4	1082.3	1052.5	1016.3	981.0	952.2
25°	1234.6	1245.8	1252.3	1242.0	1230.9	1201.2	1164.9	1125.0	1073.9	1031.2	993.1
27.5°	1327.5	1350.7	1360.0	1354.5	1336.8	1295.0	1246.7	1193.7	1131.5	1074.8	1025.6
30°	1438.1	1468.7	1485.4	1477.1	1442.7	1387.9	1329.4	1257.8	1178.9	1111.1	1051.6
32.5°	1554.2	1592.3	1604.3	1586.7	1536.5	1467.8	1391.6	1304.3	1215.1	1137.1	1070.2
35°	1683.3	1718.6	1721.4	1687.0	1621.1	1533.7	1439.0	1334.0	1231.8	1144.5	1071.1
37.5°	1795.7	1831.0	1828.2	1777.1	1697.2	1588.6	1467.8	1340.5	1221.6	1122.2	1042.3
40°	1913.7	1952.7	1931.4	1865.4	1762.3	1623.9	1471.5	1318.2	1182.6	1073.9	986.6
42.5°	2038.2	2054.9	2016.8	1934.1	1801.3	1622.9	1439.9	1265.3	1121.3	1000.5	908.5
45°	2152.4	2139.4	2084.6	1974.1	1798.5	1583.0	1377.7	1199.3	1039.5	918.8	828.7
47.5°	2254.6	2213.8	2129.2	1974.1	1754.8	1512.4	1297.8	1113.8	955.0	833.3	744.1
50°	2365.2	2279.7	2147.8	1939.7	1675.9	1426.9	1213.2	1028.4	864.9	740.4	642.9
52.5°	2512.0	2358.7	2147.8	1877.5	1594.1	1340.5	1124.1	929.0	759.9	629.8	533.2
55°	2855.7	2524.0	2185.0	1843.1	1521.7	1249.5	1018.2	800.8	636.4	511.9	432.0
57.5°	3531.1	2886.3	2371.7	1906.3	1494.7	1151.0	881.6	658.6	502.6	398.5	331.6
60°	4093.1	3179.0	2523.1	1954.6	1451.1	1023.7	714.4	504.4	373.5	294.5	250.8
62.5°	4238.0	3182.7	2460.9	1829.2	1274.6	833.3	526.7	347.4	256.4	213.7	190.4
65°	3875.7	2814.8	2093.0	1491.9	970.8	578.8	329.8	210.9	170.9	156.1	146.8
67.5°	3257.9	2242.6	1551.4	1040.5	612.2	318.6	184.9	144.9	130.1	125.4	120.8
70°	2499.0	1575.6	1009.8	609.4	320.5	165.4	131.9	118.9	112.4	109.6	105.9
72.5°	1540.3	930.8	549.0	292.6	159.8	126.3	118.0	113.3	105.0	101.3	97.5
75°	654.0	399.5	227.6	148.6	128.2	120.8	114.3	108.7	102.2	96.6	92.9
77.5°	220.2	152.4	134.7	130.1	128.2	120.8	112.4	105.0	98.5	92.0	88.3
80°	133.8	121.7	124.5	123.6	128.2	119.8	108.7	100.3	92.9	86.4	81.8
82.5°	116.1	115.2	118.0	120.8	127.3	115.2	102.2	90.1	80.8	74.3	69.7
85°	100.3	102.2	104.0	105.9	109.6	97.5	82.7	71.5	64.1	55.7	52.0
87.5°	66.9	72.5	76.2	77.1	74.3	46.4	26.9	31.6	32.5	27.9	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):

	160°	165°	170°	175°	180°
0°	760.8	760.8	760.8	760.8	760.8
2.5°	732.0	731.1	733.9	731.1	731.1
5°	722.7	721.8	721.8	721.8	720.0
7.5°	737.6	736.7	735.8	735.8	734.8
10°	766.4	765.5	765.5	764.6	764.6
12.5°	800.8	797.1	796.1	794.3	795.2
15°	834.2	824.0	821.2	818.4	815.6
17.5°	860.2	848.2	841.7	836.1	836.1
20°	892.8	877.0	868.6	860.2	860.2
22.5°	929.9	908.5	897.4	888.1	884.4
25°	960.6	933.6	917.8	906.7	903.9
27.5°	983.8	949.4	929.0	916.0	912.3
30°	1002.4	963.4	939.2	925.3	919.7
32.5°	1014.4	971.7	945.7	931.8	926.2
35°	1007.9	962.4	930.8	914.1	910.4
37.5°	975.4	927.1	890.0	872.3	865.8
40°	916.0	864.0	824.9	803.6	799.9
42.5°	837.9	785.9	748.8	726.5	716.2
45°	754.3	700.5	665.2	644.7	632.6
47.5°	664.2	611.3	575.0	554.6	546.2
50°	569.5	518.4	487.7	465.4	457.1
52.5°	471.0	425.5	394.8	376.2	366.9
55°	377.2	340.0	314.0	301.9	295.4
57.5°	294.5	270.3	255.5	248.0	243.4
60°	228.5	216.5	210.9	205.3	206.2
62.5°	178.4	175.6	173.7	170.9	171.9
65°	144.0	142.1	143.1	142.1	143.1
67.5°	118.0	118.9	120.8	120.8	121.7
70°	104.0	105.0	106.8	106.8	106.8
72.5°	96.6	98.5	100.3	99.4	99.4
75°	91.0	95.7	99.4	95.7	92.0
77.5°	85.5	96.6	106.8	98.5	88.3
80°	78.0	102.2	114.3	99.4	84.5
82.5°	74.3	98.5	100.3	86.4	74.3
85°	68.7	111.5	116.1	79.0	56.7
87.5°	35.3	66.9	77.1	53.0	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)