

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: P141093

Luminaire Tested: **ECM-F04-LED-E1-SL3-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141093
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33691)
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-SL3-8030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (28) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8065.1 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

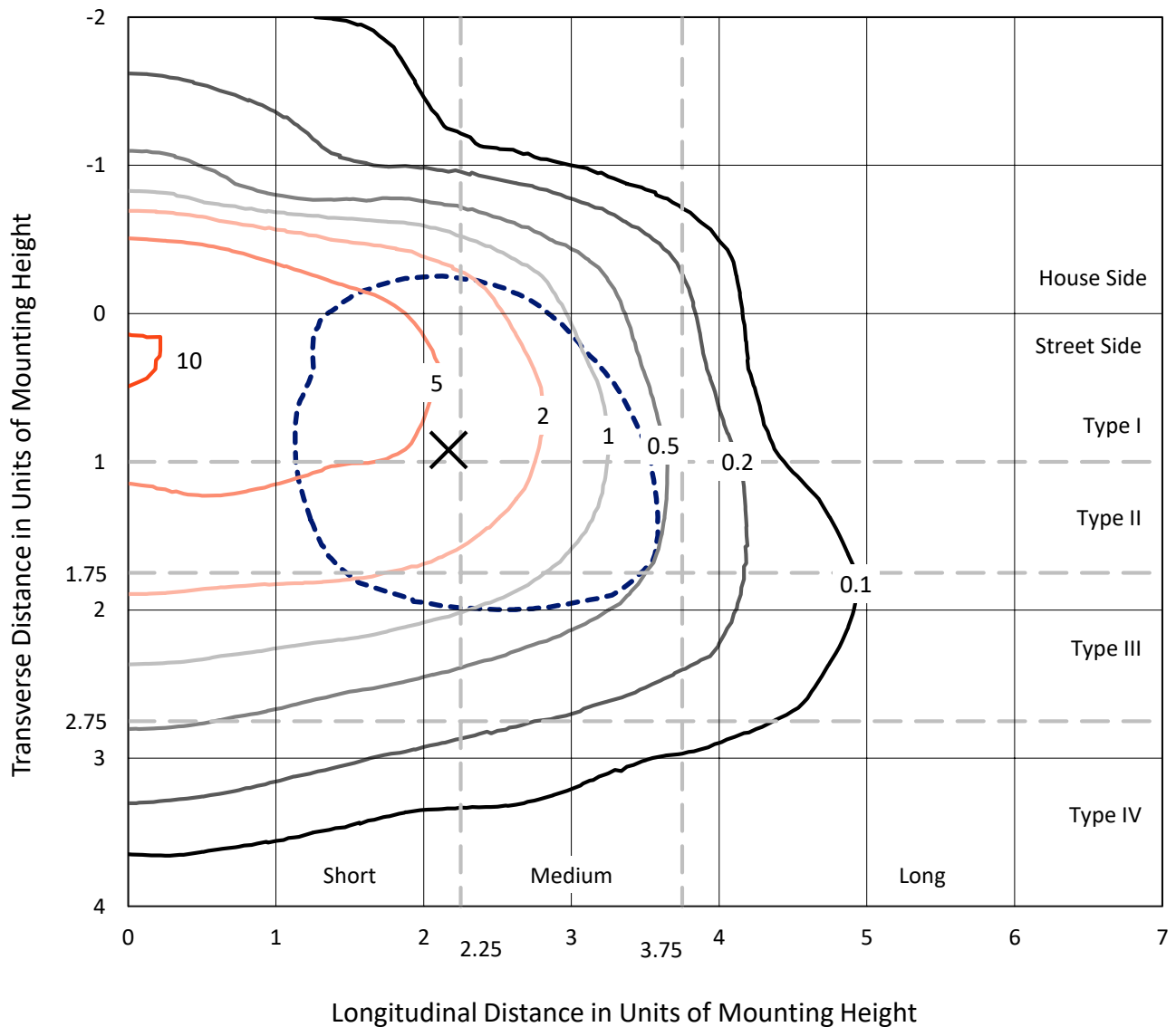
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

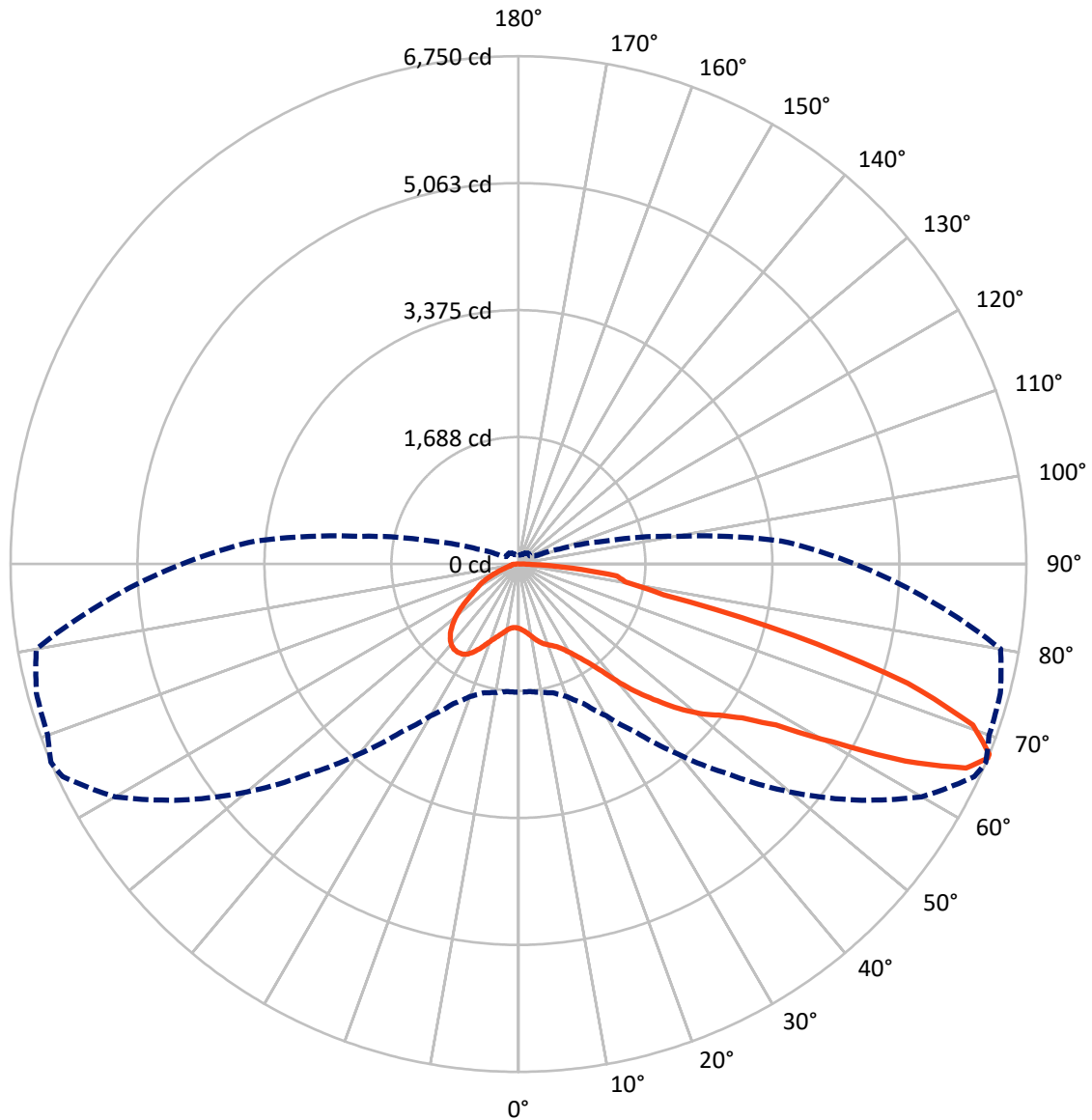
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1855.4	0.0	1855.4
	% Fixture	23.0	0.0	23.0
Street Side	Lumens	6209.7	0.0	6209.7
	% Fixture	77.0	0.0	77.0
Total	Lumens	8065.1	0.0	8065.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.8	1.1
10°-20°	296.6	3.7
20°-30°	527.9	6.5
30°-40°	758.9	9.4
40°-50°	1156.7	14.3
50°-60°	1689.6	20.9
60°-70°	2276.6	28.2
70°-80°	1117.7	13.9
80°-90°	155.4	1.9
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°	8065.1	100.0
0°-180°	8065.1	100.0



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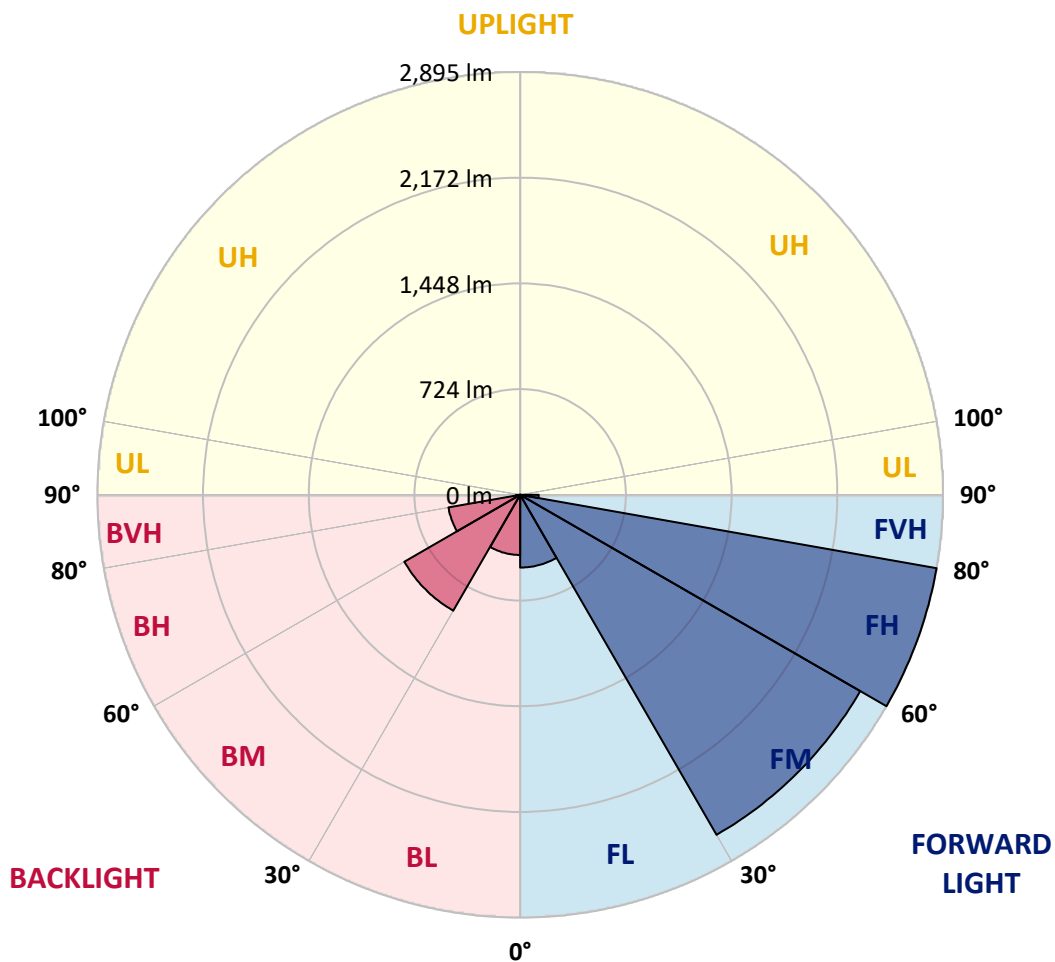
CATALOG NUMBER: ECM-F04-LED-E1-SL3-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	498.2	6.2			
FM	(30°-60°)	2688.7	33.3			
FH	(60°-80°)	2895.4	35.9			G2/5000
FVH	(80°-90°)	127.4	1.6			G2/225
BL	(0°-30°)	412.0	5.1	B1/500		
BM	(30°-60°)	916.5	11.4	B1/1000		
BH	(60°-80°)	498.9	6.2	B1/500		G1/500
BVH	(80°-90°)	28.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6
2.5°	900.2	895.5	899.3	898.3	895.5	891.8	893.7	890.9	889.0	886.2	883.5
5°	958.7	955.9	954.1	951.3	949.4	946.6	944.8	940.1	933.6	929.0	925.3
7.5°	1016.3	1015.4	1012.6	1008.9	1001.4	999.6	993.1	988.4	982.9	973.6	966.1
10°	1084.1	1083.2	1078.5	1073.0	1064.6	1056.3	1048.8	1037.7	1026.5	1018.2	1011.7
12.5°	1165.9	1161.2	1151.9	1144.5	1135.2	1122.2	1110.1	1097.1	1081.3	1068.3	1060.9
15°	1247.6	1242.0	1234.6	1224.4	1210.5	1192.8	1175.2	1155.7	1131.5	1114.8	1104.6
17.5°	1314.5	1310.8	1302.4	1288.5	1274.6	1253.2	1230.0	1203.0	1173.3	1148.2	1132.4
20°	1362.8	1359.1	1346.1	1329.4	1310.8	1286.6	1261.6	1231.8	1196.5	1165.9	1148.2
22.5°	1383.3	1377.7	1362.8	1340.5	1315.4	1285.7	1258.8	1233.7	1201.2	1177.9	1159.4
25°	1389.8	1383.3	1363.7	1335.9	1303.4	1265.3	1234.6	1215.1	1195.6	1187.2	1180.7
27.5°	1386.0	1380.5	1359.1	1324.7	1281.1	1236.5	1204.0	1190.0	1191.0	1206.7	1214.2
30°	1373.0	1366.5	1347.0	1308.9	1262.5	1214.2	1185.4	1180.7	1202.1	1242.0	1271.8
32.5°	1351.7	1347.0	1331.2	1298.7	1256.9	1215.1	1194.7	1204.9	1242.0	1304.3	1355.4
35°	1346.1	1345.2	1337.7	1320.1	1289.4	1262.5	1254.1	1282.9	1344.2	1429.7	1494.7
37.5°	1345.2	1349.8	1353.5	1353.5	1347.0	1345.2	1370.2	1410.2	1501.2	1608.1	1714.0
40°	1363.7	1372.1	1390.7	1414.8	1438.1	1471.5	1522.6	1597.8	1692.6	1822.7	1954.6
42.5°	1421.3	1439.9	1471.5	1513.3	1573.7	1635.9	1718.6	1812.4	1934.1	2065.1	2196.1
45°	1533.7	1560.7	1583.9	1649.9	1729.8	1803.2	1910.9	2034.5	2168.2	2332.7	2473.9
47.5°	1682.4	1701.9	1750.2	1819.9	1917.4	2022.4	2126.4	2234.2	2394.9	2566.8	2737.7
50°	1831.0	1845.9	1897.0	1978.7	2106.9	2222.1	2341.0	2447.9	2586.3	2768.4	2935.6
52.5°	1941.6	1962.0	2006.6	2086.5	2230.5	2361.5	2497.1	2615.1	2771.1	2934.7	3109.3
55°	2017.7	2030.8	2071.6	2149.7	2285.3	2434.9	2588.1	2733.1	2918.9	3103.7	3277.4
57.5°	2029.8	2042.8	2080.0	2148.7	2280.6	2437.6	2613.2	2790.7	3015.5	3259.8	3487.4
60°	2015.9	2026.1	2058.6	2115.3	2239.8	2411.6	2620.7	2843.6	3120.4	3435.4	3760.5
62.5°	1953.6	1963.9	1993.6	2040.0	2150.6	2336.4	2598.4	2921.6	3270.0	3665.8	4142.3
65°	1836.6	1843.1	1871.0	1908.1	2019.6	2208.2	2497.1	2905.9	3388.0	3926.8	4543.6
67°	1703.8	1701.0	1732.5	1769.7	1871.9	2045.6	2328.0	2730.3	3294.2	3947.2	4711.8
67.5°	1662.9	1670.3	1701.0	1727.0	1826.4	1994.5	2264.9	2662.5	3214.3	3900.8	4709.0
70°	1373.0	1387.0	1403.7	1420.4	1507.7	1631.3	1830.1	2214.7	2660.6	3310.9	4275.2
72.5°	942.0	914.1	926.2	920.6	947.6	1025.6	1164.0	1502.2	1856.1	2415.3	3173.4
75°	477.5	508.2	504.4	527.7	565.7	615.0	679.1	805.4	1083.2	1412.1	1963.9
77.5°	267.5	260.1	286.1	291.7	314.0	366.0	479.4	645.6	772.9	907.6	1110.1
80°	121.7	134.7	143.1	130.1	134.7	145.8	189.5	297.3	499.8	760.8	875.1
82.5°	67.8	72.5	84.5	85.5	89.2	92.0	99.4	115.2	155.1	314.0	617.8
85°	42.7	44.6	56.7	62.2	65.0	65.0	65.0	68.7	79.0	92.9	159.8
87.5°	15.8	16.7	26.0	34.4	35.3	33.4	31.6	36.2	33.4	34.4	52.0
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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CATALOG NUMBER: ECM-F04-LED-E1-SL3-8030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67°	70°	75°	80°	85°	90°	95°	100°
0°	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6
2.5°	881.6	877.9	874.2	873.2	870.5	868.6	864.0	860.2	856.5	853.7	850.9
5°	916.9	909.5	903.0	900.2	896.5	891.8	882.5	876.0	870.5	864.9	859.3
7.5°	956.9	947.6	938.3	934.6	929.0	920.6	910.4	903.0	893.7	885.3	877.9
10°	1001.4	991.2	983.8	980.1	975.4	963.4	956.9	943.8	933.6	922.5	913.2
12.5°	1049.7	1045.1	1034.9	1031.2	1026.5	1018.2	1008.9	997.7	984.7	972.6	961.5
15°	1093.4	1086.0	1079.5	1078.5	1075.8	1071.1	1059.0	1047.0	1035.8	1020.0	1010.7
17.5°	1120.4	1117.6	1116.6	1115.7	1113.8	1111.1	1105.5	1092.5	1082.3	1069.3	1056.3
20°	1137.1	1139.9	1144.5	1148.2	1150.1	1151.9	1149.1	1136.1	1125.9	1114.8	1103.6
22.5°	1154.7	1162.2	1174.2	1179.8	1186.3	1195.6	1193.7	1185.4	1179.8	1166.8	1158.4
25°	1179.8	1194.7	1215.1	1222.5	1234.6	1246.7	1249.5	1244.8	1239.3	1230.0	1230.0
27.5°	1222.5	1243.9	1270.8	1286.6	1298.7	1315.4	1321.0	1318.2	1319.2	1313.6	1326.6
30°	1289.4	1319.2	1355.4	1372.1	1387.0	1406.5	1410.2	1415.8	1412.1	1422.3	1438.1
32.5°	1390.7	1427.8	1465.0	1480.8	1493.8	1514.2	1526.3	1522.6	1535.6	1542.1	1564.4
35°	1546.8	1583.9	1612.7	1615.5	1630.4	1641.5	1652.7	1648.9	1684.2	1698.2	1710.3
37.5°	1762.3	1793.9	1811.5	1805.0	1787.4	1808.7	1823.6	1845.9	1868.2	1893.3	1848.7
40°	2041.9	2092.1	2084.6	2075.3	2041.9	2046.5	2053.0	2065.1	2102.3	2093.9	1966.7
42.5°	2307.6	2358.7	2350.3	2340.1	2295.5	2272.3	2289.9	2311.3	2331.7	2252.8	2063.3
45°	2576.1	2622.5	2582.6	2596.5	2556.6	2546.3	2580.7	2592.8	2569.6	2424.6	2145.0
47.5°	2854.8	2904.9	2885.4	2871.5	2842.7	2839.9	2859.4	2878.0	2786.0	2549.1	2206.3
50°	3068.4	3142.7	3132.5	3124.2	3092.6	3088.9	3135.3	3148.3	2983.0	2681.0	2267.6
52.5°	3232.9	3329.5	3348.0	3336.9	3329.5	3331.3	3465.1	3445.6	3217.1	2840.8	2339.2
55°	3427.0	3527.3	3595.2	3609.1	3627.7	3654.6	3919.4	3890.6	3540.3	3071.2	2414.4
57.5°	3684.3	3870.1	3972.3	4035.5	4086.6	4261.2	4597.5	4487.0	3988.1	3368.5	2503.6
60°	4063.4	4432.2	4644.0	4804.7	4905.9	5210.7	5618.5	5211.6	4508.3	3725.2	2620.7
62.5°	4671.8	5273.8	5678.9	5769.9	5812.6	6102.5	6394.2	5766.2	4883.7	3961.2	2639.2
65°	5261.7	6014.2	6487.1	6540.0	6508.4	6586.5	6668.2	5782.9	4796.3	3849.7	2421.9
67°	5469.8	6188.9	6685.9	6750.0	6657.1	6632.0	6507.5	5478.2	4470.3	3507.8	2119.0
67.5°	5458.7	6168.4	6684.0	6749.0	6657.1	6617.1	6434.1	5355.6	4342.1	3424.2	2060.5
70°	5031.4	5713.2	6287.3	6409.0	6357.9	6252.0	5765.3	4536.2	3597.9	2809.2	1588.6
72.5°	4084.7	4821.4	5276.6	5411.3	5447.5	5175.4	4293.7	3175.3	2593.7	2007.5	1151.9
75°	2742.4	3474.4	3846.9	3779.1	3558.9	3095.4	2266.7	1675.0	1421.3	1167.7	712.5
77.5°	1555.1	2119.9	2091.1	1974.1	1788.3	1323.8	642.9	348.4	332.6	388.3	301.9
80°	1038.6	1307.1	1396.3	1441.8	1431.6	979.1	265.7	134.7	116.1	116.1	114.3
82.5°	866.7	1129.6	1279.2	1319.2	1229.0	744.1	158.9	88.3	70.6	79.0	88.3
85°	365.1	569.5	753.4	724.6	576.0	289.8	80.8	46.4	46.4	61.3	77.1
87.5°	88.3	131.0	184.9	179.3	144.0	66.9	40.9	28.8	28.8	47.4	66.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6	855.6
2.5°	850.0	846.3	846.3	842.6	840.7	838.9	837.9	838.9	836.1	833.3	834.2
5°	854.7	849.1	846.3	839.8	836.1	832.4	829.6	828.7	824.0	821.2	821.2
7.5°	870.5	863.0	857.4	850.0	842.6	837.0	832.4	829.6	823.1	818.4	817.5
10°	903.0	892.8	884.4	873.2	863.0	855.6	847.2	842.6	835.2	830.5	828.7
12.5°	951.3	936.4	923.4	906.7	894.6	883.5	878.8	871.4	868.6	865.8	866.7
15°	996.8	979.1	967.1	954.1	940.1	933.6	924.3	923.4	924.3	919.7	919.7
17.5°	1043.2	1029.3	1015.4	1010.7	997.7	993.1	986.6	982.9	974.5	966.1	955.9
20°	1091.6	1084.1	1078.5	1073.0	1070.2	1059.0	1042.3	1022.8	995.9	971.7	951.3
22.5°	1153.8	1149.1	1150.1	1145.4	1130.6	1102.7	1064.6	1023.7	980.1	941.1	910.4
25°	1232.8	1237.4	1231.8	1208.6	1165.9	1109.2	1050.7	993.1	935.5	889.0	847.2
27.5°	1333.1	1329.4	1303.4	1243.9	1170.5	1089.7	1014.4	945.7	877.0	823.1	771.1
30°	1442.7	1415.8	1348.0	1255.1	1151.9	1054.4	961.5	881.6	801.7	738.5	680.0
32.5°	1553.3	1476.2	1366.5	1242.0	1119.4	1004.2	900.2	806.4	714.4	643.8	576.0
35°	1636.9	1513.3	1363.7	1214.2	1070.2	938.3	817.5	701.4	594.5	510.0	441.3
37.5°	1714.0	1533.7	1345.2	1171.4	1002.4	850.9	700.5	575.0	467.3	382.7	323.3
40°	1761.3	1531.9	1308.9	1100.8	908.5	722.7	559.2	430.1	335.4	273.1	240.6
42.5°	1789.2	1512.4	1246.7	1007.0	779.4	578.8	412.5	296.3	238.7	211.8	196.9
45°	1803.2	1470.6	1169.6	881.6	623.3	413.4	284.3	213.7	190.4	183.0	179.3
47.5°	1794.8	1412.1	1059.0	740.4	464.5	283.3	203.4	180.2	172.8	169.1	168.1
50°	1775.3	1335.9	942.9	587.1	329.8	203.4	170.9	164.4	161.6	160.7	158.9
52.5°	1747.4	1245.8	810.1	455.2	234.1	169.1	159.8	157.0	155.1	152.4	151.4
55°	1701.0	1134.3	674.4	335.4	187.7	159.8	155.1	154.2	150.5	147.7	145.8
57.5°	1645.2	1015.4	546.2	262.9	172.8	156.1	153.3	152.4	148.6	144.9	141.2
60°	1617.4	931.8	449.6	227.6	170.0	157.9	156.1	154.2	149.6	144.0	139.3
62.5°	1548.6	841.7	387.4	216.5	173.7	164.4	163.5	159.8	153.3	147.7	140.3
65°	1371.2	714.4	329.8	205.3	179.3	174.6	176.5	171.9	164.4	155.1	143.1
67°	1158.4	580.6	278.7	196.9	185.8	188.6	191.4	188.6	176.5	162.6	146.8
67.5°	1100.8	540.7	264.8	194.2	187.7	191.4	196.0	193.2	180.2	164.4	148.6
70°	827.7	387.4	209.9	183.9	194.2	204.4	213.7	212.7	199.7	180.2	155.1
72.5°	572.3	264.8	170.0	171.9	188.6	207.2	219.2	224.8	211.8	188.6	158.9
75°	344.7	169.1	143.1	155.1	171.9	190.4	209.9	211.8	196.9	173.7	148.6
77.5°	169.1	121.7	118.0	122.6	138.4	154.2	162.6	152.4	143.1	127.3	118.0
80°	102.2	95.7	93.8	104.0	113.3	110.5	104.0	95.7	91.0	87.3	83.6
82.5°	85.5	86.4	88.3	90.1	88.3	78.0	66.9	61.3	57.6	57.6	58.5
85°	87.3	89.2	81.8	75.2	66.9	55.7	45.5	39.0	39.9	40.9	40.9
87.5°	67.8	65.0	57.6	47.4	38.1	27.9	22.3	18.6	20.4	19.5	21.4
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):

	160°	165°	170°	175°	180°
0°	855.6	855.6	855.6	855.6	855.6
2.5°	834.2	833.3	834.2	834.2	835.2
5°	819.4	817.5	817.5	818.4	818.4
7.5°	815.6	813.8	813.8	814.7	813.8
10°	828.7	827.7	829.6	828.7	828.7
12.5°	867.7	867.7	871.4	873.2	871.4
15°	920.6	918.8	921.5	922.5	923.4
17.5°	950.3	942.0	939.2	941.1	937.3
20°	933.6	919.7	914.1	913.2	906.7
22.5°	886.2	865.8	857.4	853.7	846.3
25°	819.4	795.2	784.1	774.8	770.1
27.5°	739.5	709.7	693.9	686.5	683.7
30°	639.1	610.3	587.1	575.0	571.3
32.5°	527.7	485.9	461.7	446.8	436.6
35°	393.9	353.9	336.3	325.1	312.1
37.5°	286.1	262.0	247.1	239.7	236.9
40°	221.1	209.0	201.6	200.7	199.7
42.5°	191.4	185.8	184.9	183.0	181.2
45°	176.5	174.6	175.6	172.8	170.9
47.5°	166.3	165.4	165.4	163.5	162.6
50°	157.9	157.9	157.0	156.1	156.1
52.5°	150.5	151.4	151.4	149.6	149.6
55°	144.0	144.0	144.9	144.0	144.0
57.5°	139.3	138.4	139.3	139.3	139.3
60°	136.6	134.7	133.8	134.7	134.7
62.5°	133.8	131.0	130.1	130.1	131.0
65°	133.8	129.1	127.3	127.3	126.3
67°	134.7	127.3	123.6	121.7	120.8
67.5°	134.7	126.3	121.7	120.8	119.8
70°	134.7	122.6	116.1	111.5	111.5
72.5°	133.8	118.9	108.7	104.0	102.2
75°	127.3	112.4	103.1	97.5	95.7
77.5°	106.8	97.5	92.9	88.3	87.3
80°	80.8	76.2	72.5	62.2	57.6
82.5°	57.6	54.8	48.3	44.6	41.8
85°	40.9	38.1	35.3	31.6	31.6
87.5°	22.3	21.4	20.4	18.6	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)