

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: P141731

Luminaire Tested: **ECM-E04-LED-E1-T2-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141731
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-E04-LED-E1-T2-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12100.2 lumens
Efficiency: N/A
Efficacy: 124.5 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

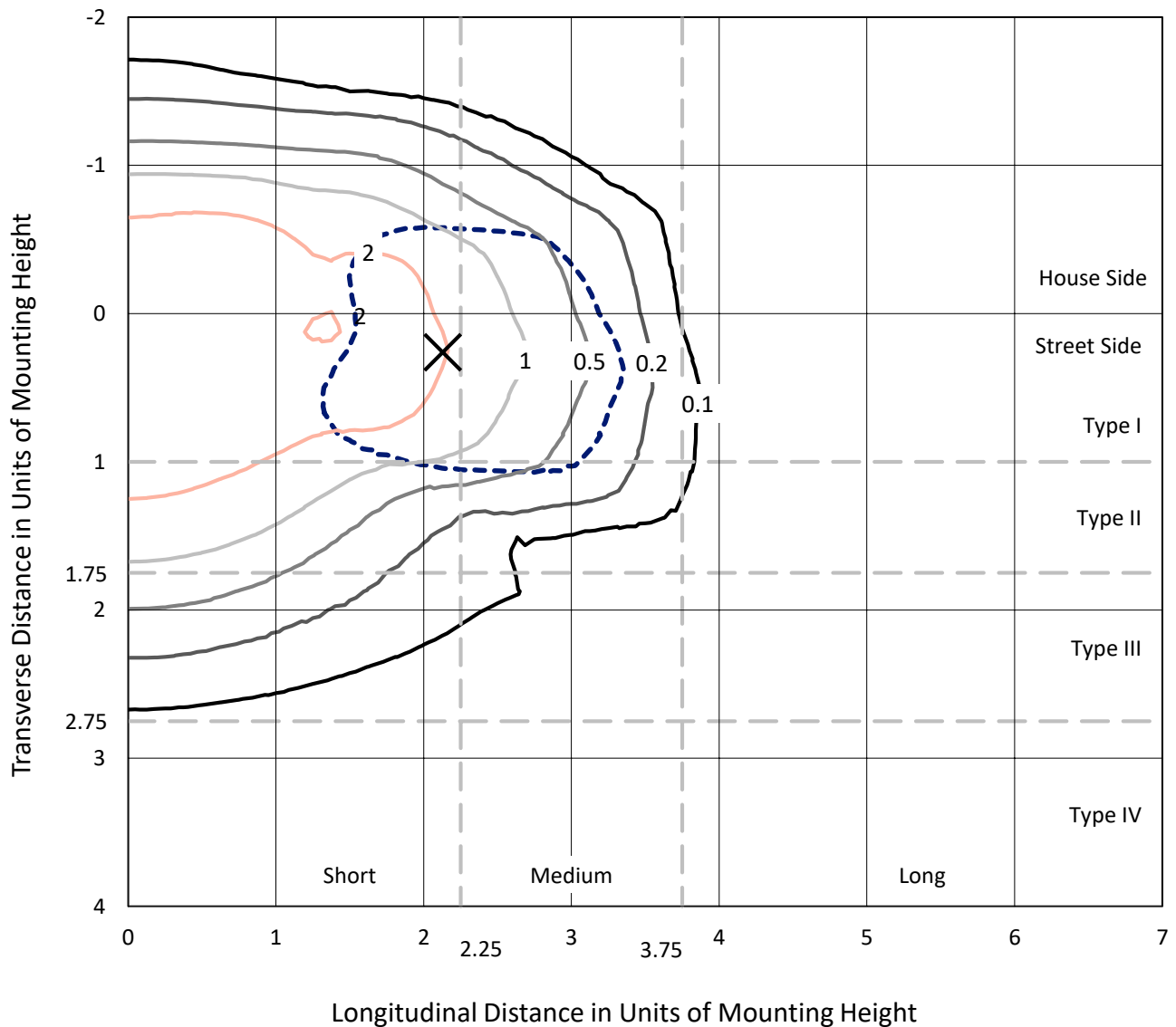
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

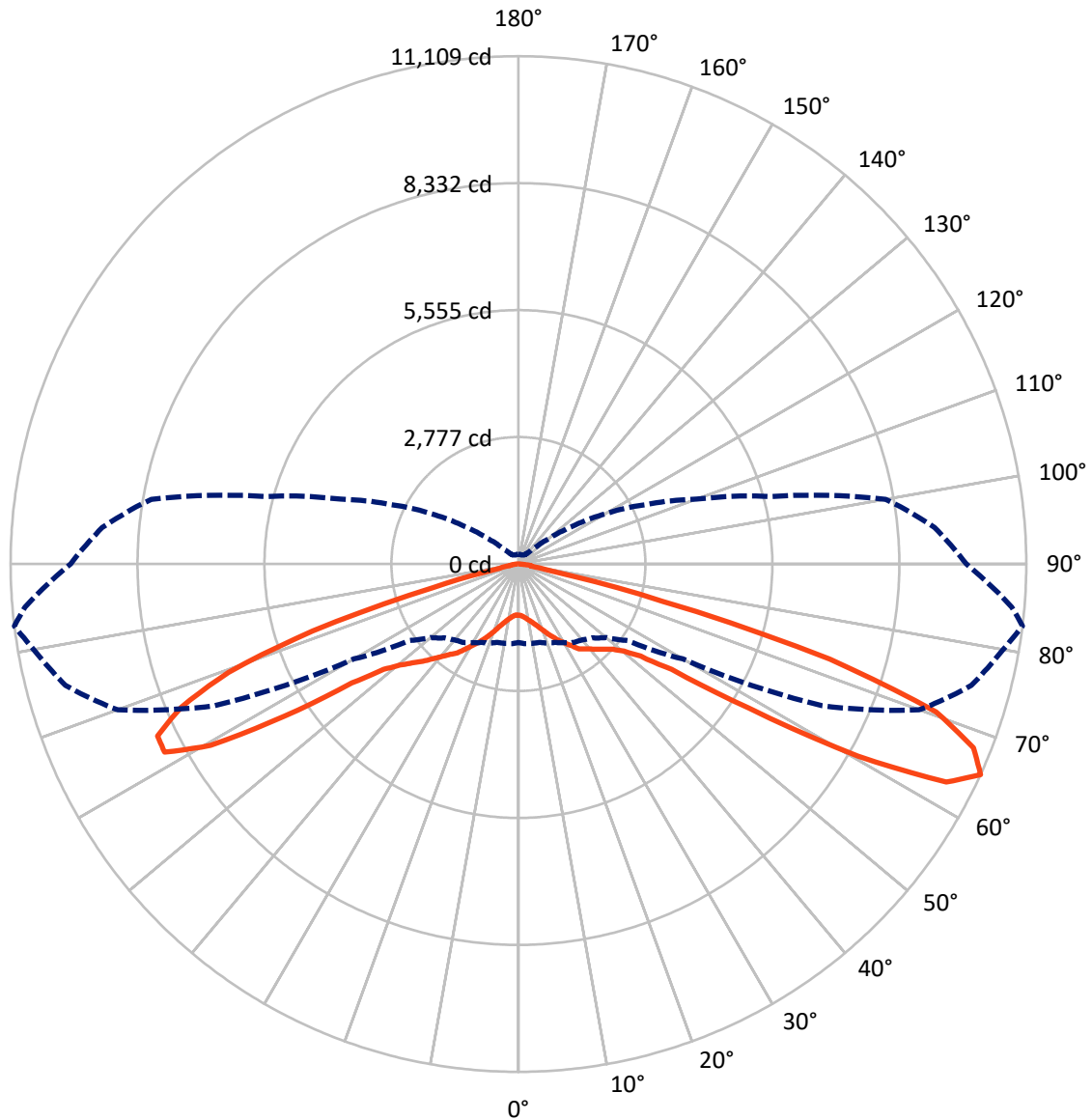
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.5 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	4488.3	0.0	4488.3
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	7611.9	0.0	7611.9
	% Fixture	62.9	0.0	62.9
Total	Lumens	12100.2	0.0	12100.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	0.9
10°-20°	394.9	3.3
20°-30°	780.3	6.4
30°-40°	1342.8	11.1
40°-50°	2025.9	16.7
50°-60°	2819.2	23.3
60°-70°	3254.0	26.9
70°-80°	1182.6	9.8
80°-90°	187.8	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°	12100.2	100.0
0°-180°	12100.2	100.0

Coefficient of Utilization



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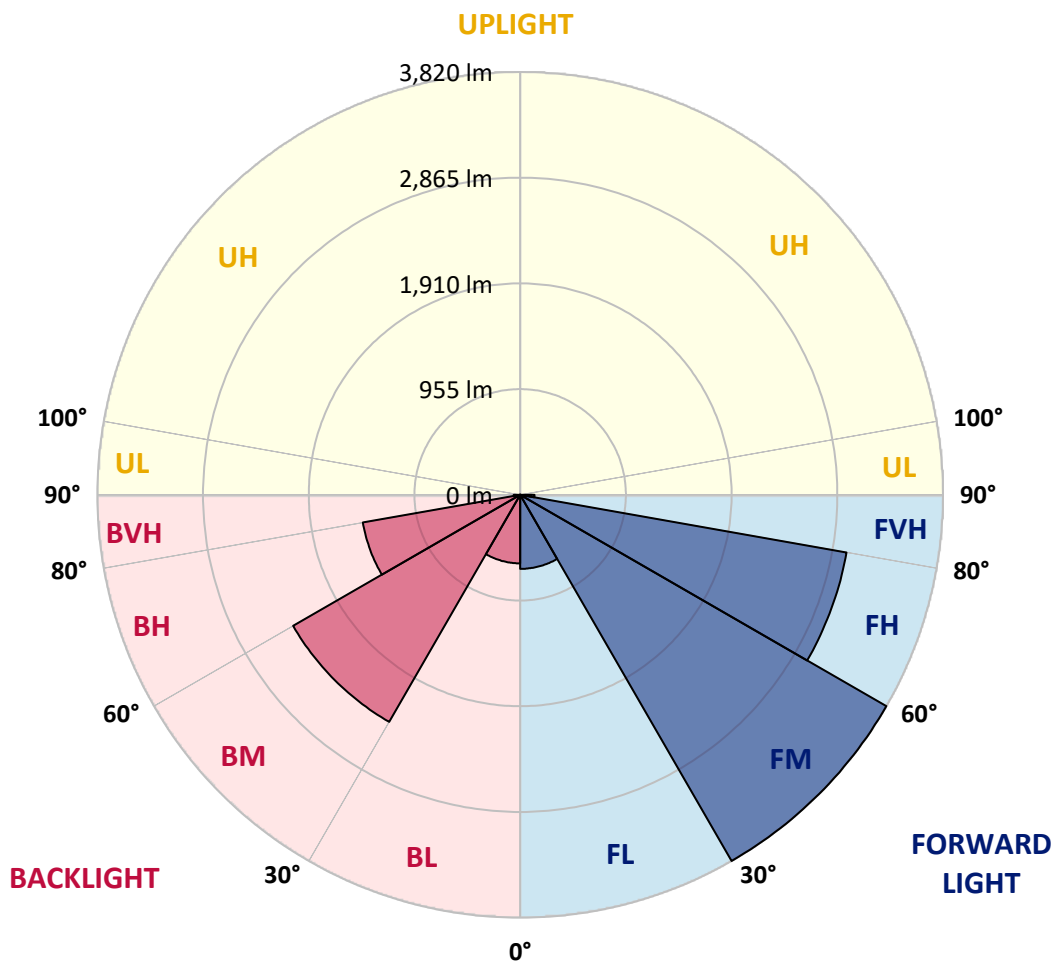
CATALOG NUMBER: ECM-E04-LED-E1-T2-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	668.9	5.5			
FM (30°-60°)	3819.7	31.6			
FH (60°-80°)	2993.5	24.7			G2/5000
FVH (80°-90°)	129.7	1.1			G2/225
BL (0°-30°)	619.0	5.1	B2/1000		
BM (30°-60°)	2368.2	19.6	B2/2500		
BH (60°-80°)	1443.1	11.9	B3/2500		G3/2500
BVH (80°-90°)	58.1	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°	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5
2.5°	1175.2	1178.0	1175.2	1175.2	1173.9	1172.5	1172.5	1171.1	1168.4	1165.7	1164.3
5°	1239.5	1240.9	1236.8	1236.8	1238.2	1236.8	1232.7	1234.1	1223.1	1219.0	1216.3
7.5°	1310.7	1314.8	1309.3	1306.6	1305.2	1302.5	1298.4	1291.5	1283.3	1276.5	1272.4
10°	1391.4	1395.5	1392.8	1387.3	1379.1	1375.0	1370.9	1359.9	1350.4	1339.4	1331.2
12.5°	1487.2	1488.5	1485.8	1474.9	1469.4	1457.1	1443.4	1431.1	1417.4	1401.0	1387.3
15°	1581.6	1582.9	1578.8	1567.9	1561.0	1546.0	1526.8	1510.4	1487.2	1468.0	1450.2
17.5°	1654.1	1656.8	1648.6	1640.4	1630.8	1611.7	1593.9	1574.7	1550.1	1529.6	1511.8
20°	1678.7	1682.8	1677.3	1673.2	1667.8	1658.2	1640.4	1624.0	1602.1	1587.0	1573.4
22.5°	1667.8	1671.9	1669.1	1669.1	1669.1	1667.8	1659.6	1655.5	1641.8	1634.9	1632.2
25°	1651.3	1655.5	1652.7	1655.5	1660.9	1667.8	1667.8	1676.0	1674.6	1685.5	1692.4
27.5°	1693.8	1696.5	1689.7	1689.7	1695.1	1706.1	1703.3	1719.8	1722.5	1744.4	1764.9
30°	1841.5	1841.5	1830.6	1819.6	1823.7	1821.0	1818.3	1829.2	1829.2	1849.7	1859.3
32.5°	2061.8	2046.7	2045.4	2044.0	2034.4	2041.3	2019.4	2020.7	2011.2	2013.9	2009.8
35°	2303.9	2302.6	2297.1	2294.4	2290.3	2310.8	2294.4	2308.1	2273.8	2261.5	2238.3
37.5°	2516.0	2521.5	2525.6	2546.1	2555.7	2596.7	2606.3	2613.1	2577.6	2578.9	2527.0
40°	2729.4	2736.3	2751.3	2788.3	2815.6	2853.9	2871.7	2900.5	2903.2	2908.7	2870.4
42.5°	2962.0	2951.1	2971.6	3018.1	3052.3	3090.6	3113.9	3167.2	3197.3	3212.4	3217.9
45°	3149.5	3137.1	3146.7	3174.1	3205.6	3254.8	3305.4	3384.8	3449.1	3518.9	3557.2
47.5°	3246.6	3249.3	3256.2	3272.6	3294.5	3342.4	3413.5	3514.8	3618.7	3730.9	3830.8
50°	3278.1	3279.4	3289.0	3305.4	3325.9	3376.6	3450.5	3565.4	3691.2	3848.6	4001.8
52.5°	3287.6	3282.2	3291.7	3300.0	3313.6	3356.0	3425.8	3546.2	3688.5	3878.7	4105.8
55°	3252.1	3245.2	3261.6	3272.6	3283.5	3317.7	3371.1	3481.9	3629.7	3845.8	4142.7
57.5°	3115.3	3116.6	3139.9	3168.6	3197.3	3243.9	3313.6	3419.0	3565.4	3778.8	4111.3
60°	2884.0	2879.9	2908.7	2944.2	2993.5	3067.4	3153.6	3260.3	3382.0	3559.9	3886.9
62.5°	2464.0	2480.4	2490.0	2543.4	2546.1	2651.5	2707.6	2814.3	2918.2	3055.1	3349.2
65°	1715.6	1751.2	1760.8	1774.5	1838.8	1893.5	1983.8	2096.0	2164.4	2284.8	2503.7
67.5°	1068.5	1094.5	1095.9	1131.5	1187.5	1250.5	1320.3	1433.8	1537.8	1556.9	1666.4
70°	886.6	887.9	907.1	933.1	976.9	1041.2	1109.6	1188.9	1283.3	1343.5	1332.6
72.5°	734.7	742.9	756.6	782.6	830.5	887.9	975.5	1076.7	1194.4	1314.8	1421.5
75°	492.5	506.2	510.3	522.6	545.9	597.9	663.5	759.3	911.2	1090.4	1317.5
77.5°	261.3	264.1	273.6	283.2	295.5	327.0	369.4	418.7	518.5	673.1	939.9
80°	132.7	138.2	145.0	151.9	150.5	158.7	171.0	192.9	227.1	295.5	425.5
82.5°	47.9	61.6	80.7	90.3	90.3	93.0	97.1	101.2	98.5	109.5	136.8
85°	21.9	24.6	31.5	49.3	50.6	50.6	50.6	53.4	50.6	45.1	53.4
87.5°	0.0	4.1	4.1	12.3	13.7	12.3	13.7	17.8	13.7	10.9	9.6
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-E04-LED-E1-T2-7050

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	83°	85°	90°	95°	100°
0°	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5
2.5°	1157.4	1154.7	1147.9	1145.1	1136.9	1131.5	1128.7	1126.0	1121.9	1116.4	1112.3
5°	1208.1	1199.9	1190.3	1184.8	1173.9	1162.9	1158.8	1153.3	1143.8	1135.6	1126.0
7.5°	1261.4	1251.8	1240.9	1228.6	1217.6	1205.3	1199.9	1194.4	1180.7	1169.8	1156.1
10°	1318.9	1305.2	1292.9	1281.9	1272.4	1258.7	1249.1	1245.0	1232.7	1216.3	1202.6
12.5°	1373.6	1358.6	1346.3	1332.6	1323.0	1312.0	1302.5	1298.4	1288.8	1273.7	1262.8
15°	1431.1	1416.0	1402.3	1392.8	1381.8	1375.0	1369.5	1362.7	1358.6	1346.3	1340.8
17.5°	1492.6	1479.0	1466.6	1458.4	1454.3	1453.0	1451.6	1448.9	1444.8	1436.5	1432.4
20°	1562.4	1550.1	1546.0	1544.6	1546.0	1547.4	1550.1	1550.1	1551.5	1546.0	1544.6
22.5°	1629.5	1629.5	1636.3	1644.5	1652.7	1658.2	1662.3	1656.8	1658.2	1666.4	1673.2
25°	1703.3	1715.6	1733.4	1747.1	1759.4	1769.0	1774.5	1777.2	1780.0	1792.3	1804.6
27.5°	1782.7	1801.8	1827.8	1845.6	1868.9	1883.9	1894.9	1893.5	1897.6	1914.0	1935.9
30°	1881.2	1900.3	1927.7	1952.3	1983.8	2005.7	2009.8	2007.1	2012.5	2027.6	2071.4
32.5°	2019.4	2023.5	2041.3	2065.9	2100.1	2122.0	2126.1	2132.9	2145.2	2172.6	2226.0
35°	2213.7	2195.9	2194.5	2205.4	2238.3	2280.7	2284.8	2288.9	2294.4	2329.9	2401.1
37.5°	2476.3	2403.8	2360.0	2325.8	2329.9	2345.0	2353.2	2355.9	2369.6	2424.3	2544.7
40°	2806.1	2670.6	2573.5	2476.3	2440.8	2443.5	2446.2	2443.5	2470.9	2555.7	2713.0
42.5°	3167.2	3048.2	2878.6	2677.5	2576.2	2543.4	2547.5	2550.2	2592.6	2715.8	2890.9
45°	3550.3	3473.7	3276.7	2962.0	2744.5	2661.0	2658.3	2663.8	2733.5	2907.3	3092.0
47.5°	3886.9	3906.0	3761.0	3391.6	3018.1	2806.1	2788.3	2797.8	2911.4	3097.5	3284.9
50°	4153.7	4279.5	4268.6	3975.8	3461.4	3056.4	2993.5	3007.2	3141.3	3334.2	3502.4
52.5°	4354.8	4610.6	4774.8	4658.5	4211.1	3510.6	3347.8	3324.6	3492.9	3696.7	3800.7
55°	4488.9	4903.4	5334.4	5535.5	5353.5	4491.6	4066.1	4015.5	4197.5	4457.4	4502.6
57.5°	4577.8	5259.1	6186.7	6963.8	7211.5	6472.7	5939.1	5727.0	5859.7	6134.7	6075.9
60°	4430.0	5400.1	7215.6	8608.3	9312.9	9129.6	8535.8	8215.7	7968.1	7947.5	7620.5
62.5°	3863.6	5064.9	7632.9	9390.9	10381.5	10609.9	10504.6	10125.6	9440.2	9059.8	8321.0
65°	2914.1	4149.6	7336.0	9330.7	10259.7	10765.9	11109.3	10837.0	9797.3	9139.2	8156.9
67.5°	1862.0	2678.8	6101.9	8607.0	9479.8	10049.0	10735.8	10611.3	9282.8	8442.8	7374.3
70°	1359.9	1484.4	4140.0	7285.3	8245.8	8746.5	9690.5	9635.8	8140.4	7196.4	6137.5
72.5°	1566.5	1106.8	2269.7	5442.5	6185.4	6579.4	7119.8	6987.1	5687.4	5032.0	4282.3
75°	1766.3	1238.2	1279.2	3228.8	3455.9	3179.6	3253.4	2825.2	2204.1	1953.7	1925.0
77.5°	1487.2	1552.8	1160.2	1387.3	1277.8	920.8	689.5	540.4	422.8	454.2	504.8
80°	864.7	1745.7	1535.1	722.4	809.9	644.4	287.3	238.1	197.0	199.7	202.5
82.5°	266.8	1090.4	2160.3	882.5	801.7	908.4	264.1	161.4	130.0	146.4	165.5
85°	88.9	457.0	1732.1	926.2	518.5	484.3	116.3	79.4	65.7	91.7	130.0
87.5°	21.9	110.8	321.5	121.8	76.6	46.5	39.7	28.7	31.5	57.5	80.7
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°	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5	1120.5
2.5°	1109.6	1105.5	1101.4	1098.6	1094.5	1094.5	1090.4	1090.4	1084.9	1082.2	1082.2
5°	1117.8	1109.6	1102.7	1095.9	1089.0	1086.3	1080.8	1078.1	1072.6	1068.5	1065.8
7.5°	1145.1	1134.2	1126.0	1117.8	1109.6	1105.5	1100.0	1094.5	1093.1	1090.4	1087.7
10°	1191.7	1176.6	1169.8	1164.3	1153.3	1150.6	1145.1	1141.0	1136.9	1132.8	1134.2
12.5°	1251.8	1240.9	1238.2	1227.2	1224.5	1220.4	1212.2	1209.4	1198.5	1190.3	1186.2
15°	1328.5	1324.4	1324.4	1318.9	1310.7	1303.8	1291.5	1284.7	1265.5	1253.2	1239.5
17.5°	1429.7	1425.6	1427.0	1421.5	1411.9	1399.6	1385.9	1365.4	1336.7	1314.8	1287.4
20°	1547.4	1546.0	1548.7	1544.6	1532.3	1515.9	1483.1	1453.0	1413.3	1373.6	1343.5
22.5°	1678.7	1685.5	1688.3	1677.3	1663.7	1629.5	1593.9	1550.1	1496.7	1444.8	1402.3
25°	1818.3	1834.7	1844.3	1829.2	1812.8	1769.0	1715.6	1656.8	1581.6	1518.6	1462.5
27.5°	1955.1	1989.3	2003.0	1994.7	1968.8	1907.2	1836.0	1758.1	1666.4	1582.9	1510.4
30°	2117.9	2163.0	2187.7	2175.3	2124.7	2044.0	1957.8	1852.5	1736.2	1636.3	1548.7
32.5°	2288.9	2345.0	2362.8	2336.8	2262.9	2161.7	2049.5	1920.9	1789.5	1674.6	1576.1
35°	2479.1	2531.1	2535.2	2484.5	2387.4	2258.8	2119.2	1964.6	1814.2	1685.5	1577.5
37.5°	2644.6	2696.6	2692.5	2617.3	2499.6	2339.5	2161.7	1974.2	1799.1	1652.7	1535.1
40°	2818.4	2875.8	2844.4	2747.2	2595.4	2391.5	2167.1	1941.4	1741.6	1581.6	1453.0
42.5°	3001.7	3026.3	2970.2	2848.5	2652.8	2390.1	2120.6	1863.4	1651.3	1473.5	1338.0
45°	3170.0	3150.8	3070.1	2907.3	2648.7	2331.3	2029.0	1766.3	1530.9	1353.1	1220.4
47.5°	3320.5	3260.3	3135.8	2907.3	2584.4	2227.3	1911.3	1640.4	1406.4	1227.2	1095.9
50°	3483.3	3357.4	3163.1	2856.7	2468.1	2101.5	1786.8	1514.5	1273.7	1090.4	946.8
52.5°	3699.5	3473.7	3163.1	2765.0	2347.7	1974.2	1655.5	1368.1	1119.1	927.6	785.3
55°	4205.7	3717.2	3217.9	2714.4	2241.0	1840.1	1499.5	1179.3	937.2	753.8	636.2
57.5°	5200.3	4250.8	3492.9	2807.4	2201.3	1695.1	1298.4	970.0	740.2	586.9	488.4
60°	6028.0	4681.8	3715.9	2878.6	2137.0	1507.7	1052.1	742.9	550.0	433.7	369.4
62.5°	6241.5	4687.2	3624.2	2693.9	1877.1	1227.2	775.7	511.7	377.6	314.7	280.5
65°	5707.9	4145.5	3082.4	2197.2	1429.7	852.4	485.7	310.6	251.7	229.8	216.2
67.5°	4798.1	3302.7	2284.8	1532.3	901.6	469.3	272.3	213.4	191.5	184.7	177.9
70°	3680.3	2320.4	1487.2	897.5	472.0	243.5	194.3	175.1	165.5	161.4	156.0
72.5°	2268.4	1370.9	808.6	431.0	235.3	186.1	173.8	166.9	154.6	149.1	143.7
75°	963.2	588.3	335.2	218.9	188.8	177.9	168.3	160.1	150.5	142.3	136.8
77.5°	324.2	224.4	198.4	191.5	188.8	177.9	165.5	154.6	145.0	135.4	130.0
80°	197.0	179.2	183.3	182.0	188.8	176.5	160.1	147.8	136.8	127.2	120.4
82.5°	171.0	169.6	173.8	177.9	187.4	169.6	150.5	132.7	119.0	109.5	102.6
85°	147.8	150.5	153.2	156.0	161.4	143.7	121.8	105.3	94.4	82.1	76.6
87.5°	98.5	106.7	112.2	113.6	109.5	68.4	39.7	46.5	47.9	41.0	36.9
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):

	160°	165°	170°	175°	180°
0°	1120.5	1120.5	1120.5	1120.5	1120.5
2.5°	1078.1	1076.7	1080.8	1076.7	1076.7
5°	1064.4	1063.0	1063.0	1063.0	1060.3
7.5°	1086.3	1084.9	1083.6	1083.6	1082.2
10°	1128.7	1127.3	1127.3	1126.0	1126.0
12.5°	1179.3	1173.9	1172.5	1169.8	1171.1
15°	1228.6	1213.5	1209.4	1205.3	1201.2
17.5°	1266.9	1249.1	1239.5	1231.3	1231.3
20°	1314.8	1291.5	1279.2	1266.9	1266.9
22.5°	1369.5	1338.0	1321.6	1307.9	1302.5
25°	1414.7	1375.0	1351.7	1335.3	1331.2
27.5°	1448.9	1398.2	1368.1	1349.0	1343.5
30°	1476.2	1418.8	1383.2	1362.7	1354.5
32.5°	1494.0	1431.1	1392.8	1372.2	1364.0
35°	1484.4	1417.4	1370.9	1346.3	1340.8
37.5°	1436.5	1365.4	1310.7	1284.7	1275.1
40°	1349.0	1272.4	1214.9	1183.4	1178.0
42.5°	1234.1	1157.4	1102.7	1069.9	1054.8
45°	1110.9	1031.6	979.6	949.5	931.7
47.5°	978.2	900.2	846.9	816.8	804.5
50°	838.7	763.4	718.3	685.4	673.1
52.5°	693.6	626.6	581.5	554.1	540.4
55°	555.5	500.7	462.4	444.6	435.1
57.5°	433.7	398.1	376.2	365.3	358.5
60°	336.6	318.8	310.6	302.4	303.7
62.5°	262.7	258.6	255.8	251.7	253.1
65°	212.1	209.3	210.7	209.3	210.7
67.5°	173.8	175.1	177.9	177.9	179.2
70°	153.2	154.6	157.3	157.3	157.3
72.5°	142.3	145.0	147.8	146.4	146.4
75°	134.1	140.9	146.4	140.9	135.4
77.5°	125.9	142.3	157.3	145.0	130.0
80°	114.9	150.5	168.3	146.4	124.5
82.5°	109.5	145.0	147.8	127.2	109.5
85°	101.2	164.2	171.0	116.3	83.5
87.5°	52.0	98.5	113.6	78.0	42.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)